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KANSAS FARMER.

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Table of Contents

Advertising, a few points on.....	824
Alfalfa and alsike.....	814
Alfalfa dying out.....	815
Alfalfa for seed, when to cut.....	814
Alfalfa in the orchard.....	815
Alfalfa problem, an.....	814
American Poland-China Record.....	818
Asparagus from seed, big crop of.....	825
Birds say, what the.....	821
Boy of his size, a.....	821
Bromus inermis.....	814
Butter, the keeping quality of.....	827
Calves that topped the market, feeding the.....	813
Capitalized greed.....	813
Cattle mange or Texas itch.....	816
Cider-vinegar.....	828
Correspondence agricultural college, purposes of the.....	823
Correspondence agricultural school, a.....	823
Country eggs, a dozen.....	822
Dairy needs, some.....	827
Farm paper, the real.....	823
Fertilizer law, the new.....	815
Foods, beauty-making.....	880
Frogs, queer things about.....	880
Generous rains.....	824
Grange department.....	822
Grasses for pasture, mixed.....	814
"Hardscrabble".....	823
Hard wheats better? are the.....	815
Hessian fly methods of combating the.....	824
Home, definitions of.....	830
Kansas farmer in the old country, a.....	822
Low-headed fruit-tree, economy and value of the.....	828
Mares for the production of mules, the kind of.....	817
Marjorie's Dick.....	821
Mixed grasses for pasture, late-sown.....	814
Observations, an old observer's.....	827
Our pilgrimage.....	820
Pasture-grasses for bottom-land.....	815
Paul Revere's ride (poem).....	820
Payment of genius, on the.....	822
Rabies, or hydrophobia.....	816
St. Joseph horse show.....	818
Scientific expedition of the Department of Systematic Entomology, in charge of Dr. F. H. Snow.....	823
Silo, how to build a.....	826
State fair, butter and cheese exhibit at the.....	827
State fair, live stock premiums at the.....	824
State fair, the Missouri.....	818
Suppose (poem).....	821
State fair premium list, the.....	824
There's money in it.....	825
Wheat and Hessian fly, volunteer.....	814
When to cut timothy-English blue-grass.....	814
When to sell.....	833
Wild morning-glories.....	815
Winter eggs, prepare for.....	833
Winter oats.....	815

Woman's question, a (poem).....822
"Woman's vocation four K's".....822
World's fair, horticulture at the.....828

If it were possible to give the corn a good cultivating now to keep the abundant moisture down among the corn roots, no other assurance of a big yield would be needed.

Referring to the KANSAS FARMER editorial on "Railroading in the Clouds," published in our issue of July 30, Chief F. D. Coburn, of the Live-Stock Department, Louisiana Purchase Exposition, says, "As an example of word-painting it is quite beyond the ordinary. . . . I would indeed be glad to number this talent among my own possessions."

That there is a coal trust with its grip upon every consumer is demonstrated to the satisfaction, or dissatisfaction of every householder who inquires about his winter supply of fuel. Prices have been raised at the beginning of August and notice has been given of a further rise September 1. The prospect seems to be that it will cost at least twice as much to keep warm next winter as it cost two years ago. What are we going to do about it?

This week ought to see thousands of acres of Kansas wheat stubble plowed under. The disk or the harrow should pass over each day's plowing before the teams leave the field. Thorough work of this kind followed by a harrowing after each rain until seeding-time will assure plenty of moisture in the soil to produce a healthy fall growth of the wheat. Besides providing strong roots to push next season's crop this will furnish abundance of the best winter pasture.

The World's Fair Commissioners of Oklahoma have appointed Mr. J. B. Kent, of Chandler, as their official photographer for the Territory. No photographs except those made by Mr. Kent will be given a place in the territorial exhibit. Mr. Kent has obligated himself to visit any portion of Oklahoma and make five photographs, 14 by 17 inches in size, for \$10. The pictures to be equal in excellence to the standard fixed by the commissioners. The KANSAS FARMER is of the opinion that the Kansas commissioners could very profitably do something of the same sort. Perhaps one official photographer would not be able to do the work required in this State, but a number could be appointed, each in his section, to furnish the required photographs necessary for an exhibit of the greatest State in the Union.

The teaching of agriculture in the public schools is now being seriously considered in Oklahoma as well as elsewhere. Nothing in the way of a new study could be added to the school curriculum that would be of greater benefit to the rising generation than the teaching of the sciences underlying agriculture. The country boys and girls have plenty of experience in the "how," but they need instruction in the "why." Questions as to the chemistry of the soils, feeding of animals, the useful and noxious purposes of

bacteria, etc., could be profitably taught in the ordinary school course to the advantage of the coming men and women who will have in charge the world's greatest industry and the foundation on which all prosperity rests. May the good work go on until a lot of nonsense has been dropped out of our public school courses and instruction in agriculture and allied arts and sciences substituted therefor.

BLOCKS OF TWO.

The regular subscription price for 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 secure the paper at half price. While the subscription price will remain at one dollar a year, every old subscriber is authorized to send his own renewal for one year and one new subscription for one year with 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.

THE MISSOURI STATE FAIR.

Although but two years old the Missouri State Fair has already assumed rank as one of the best, most comprehensive, and cleanest State fairs in the Union. Not only does it illustrate the resources of the great State of Missouri, but it is a display of the resources of the West as well. Missouri has the largest number of pure-bred registered Hereford cattle of any State and has long been famous for her Short-horns and other breeds. This great fair is managed by men who believe that a State fair should be an illustration of the State and not a place for the gathering of all the fakes, thugs, pickpockets, and disreputable characters that can be brought together to attract attention away from the object of the fair. The State fair should be the pictures to illustrate the great volume of the State. It should be dignified and clean. It should be so conducted that the farmer can take his family and come away with only pleasant and profitable recollections of it. Missouri has this kind of a State fair. It is located at Sedalia, the fifth city of the State, on the main line of both the Missouri Pacific and the Missouri, Kansas, and Texas railways. This makes the Missouri State Fair easily accessible to visitors from Kansas who will find it well worth their while to attend.

ALFALFA IN THE ORCHARD.

EDITOR KANSAS FARMER:—Please have some one answer in your paper whether or not it would be injurious to an orchard to seed it to alfalfa.
C. C. JACKSON.

Pottawatomie County.

This question has been often asked and the answer has nearly always been against seeding the orchard to alfalfa. Several years ago a Colorado writer declared in favor of the practice where the orchard could be irrigated. He was met by a storm of disapproval and challenges to show ex-

amples in which the practice did not prove disastrous to the orchard. The editor of the KANSAS FARMER wrote him a personal letter asking the grounds for his statement. No answer was received. Those who challenged the propriety of the proposed method cited numerous experiences in which attempts to grow alfalfa and orchard on the same ground at the same time had resulted disastrously to the orchard. From that day to this, so far as the editor has observed, no one has cited a successful experience with the proposed plan.

Every one who has ever grown alfalfa knows that it is a gross feeder and a heavy drinker. When there is little available plant-food or moisture in the soil it takes all; when there is much it takes much. The exception is that well established alfalfa, while making tremendous drafts upon the soil for nitrogen, returns to the soil more of this element of fertility than it takes. Again, alfalfa roots go into the deeper portions of the soil and are thought to find mineral elements of fertility which are brought up for the use of the plant. When an alfalfa field is plowed up, these large roots decay leaving in the soil in available form not only the fertility brought from below but also a large amount gathered from the air as well as much humus-making material.

If any reader has had experience with alfalfa as an orchard crop, the editor will be much pleased to receive a full account of it for publication.

CAPITALIZED GREED.

With a reputation for the most thorough investigation of all elements of industrial enterprises to be merged into the greater corporations popularly called trusts, and a reputation for undertaking only that which he could carry to successful completion, J. Pierpont Morgan was, until very recently, looked upon as the wizard of Wall Street. The consolidations which he organized became great producers and great payers of dividends. Investors in stocks and bonds are always interested, first, in the question of dividends, and second, in the question of future selling values of the stocks and bonds. The name of Morgan was readily taken as a guaranty of dividends and dividends regularly made assured good selling prices for the securities. That dividends resulted from the two sources, efficiency of production and monopoly of the market, mattered not to the buyers of stocks. If there was a third source for money used to pay dividends, namely, cash realized from the sale of stocks, the ordinary buyer was not advised of it.

Certain it is that enormous amounts of stocks and bonds were put upon the market and sold. The old complaints of watered stocks seemed dry compared with the floods issued in capitalization of the newer consolidations. Presently there came a revolt against the purchase of these securities, and the magic name of Morgan, together with all the buying the interested speculators found it safe to do, could not stay the downward course of prices of shares. It used to be fashionable to

(Continued on page 824.)

Agricultural Matters.

REPLIES FROM THE AGRICULTURIST OF THE KANSAS EXPERIMENT STATION.

Late-sown Mixed Grasses for Pasture.

I want to turn a wheat field into a pasture; what kind of grass shall I sow? Is a mixture good? Can I sow it August next, as alfalfa?

Marion County. C. R. BEELER.

It is rather a difficult matter to advise as to what grass or mixture of grasses will succeed best as pasture in your locality. At this station we have been sowing a mixture of orchard-grass, meadow fescue, and red clover, which has proved to be a good pasture mixture. Orchard-grass has proven to make better pasture than the meadow fescue (English blue-grass). *Bromus inermis*, however, appears to make better pasture than any of the others. It may be rather early to recommend the sowing of *Bromus inermis* in a large way, still I hardly think that you will make a mistake by seeding a part of the ground with the Brome-grass. It will be advisable to sow a little red clover also, say three or four pounds per acre with sixteen or eighteen pounds of the Brome-grass.

The usual practice has been to sow the *Bromus inermis* early in the spring. We secured a good catch at this station last fall by seeding early in September. If the fall is favorably wet and you can get the ground in good condition I would recommend fall seeding as by this method you will secure the use of the land for pasture practically a year sooner than you will from spring seeding. Orchard-grass or meadow fescue may be seeded in the fall although spring seeding is usually preferable for red clover. At this station we are experimenting with a mixture of alfalfa and *Bromus inermis* for pasture. There is no doubt but what alfalfa and *Bromus inermis* will make an excellent pasture for hogs, even better than alfalfa alone, but it is a question yet whether it will make a safe pasture for cattle or not. Some that have tried it claim that the cattle will take no injury when feeding upon the mixed pasture, but farther trials will have to be made before the statement can be given as a fact. I refer you to press bulletin No. 125, recently published, which gives some suggestions as to methods of grass seeding.

A. M. TENEYOK.

Volunteer Wheat and Hessian Fly. Campbell Method.

It being nearly time to prepare the ground for wheat again and as the Hessian fly is very bad in this locality I would be pleased to have you tell me how to prepare the ground, when and how to plow and sow, so as to get rid of this pest. To prepare the ground I intended to burn the stubble, but this I can not do as the weeds are too many.

I intend, however, to list (not plow) the ground quite deep, then let it lay a month or so or until the volunteer wheat comes up well, then relist, thus killing the volunteer wheat, then let the ground rest about two weeks, after which I would harrow it three or four times to make it smooth and level and kill every bit of volunteer wheat, then in the first week in October put disk drill in the field, sowing one and one-fourth bushels to the acre. I think the volunteer wheat is the root of all evil in the Hessian fly question, and this a very good way to rid the fields of the same. If you have a better way, which I suppose you have, or can tell where I can get some literature on the subject, we as a locality would be very grateful to you.

What is the Campbell system of wheat-raising? E. R. FALGREN. McPherson County.

The plan which you outline for preparing your wheat ground previous to sowing will doubtless be a good one. Early plowing and disking to kill the volunteer wheat would seem to be better than listing, yet your experience is probably more reliable than my recommendation. At this station we have found it rather difficult to thoroughly

level a piece of ground prepared in this way. If the ground settles after the second listing it usually is necessary to disk and then level up the furrow by crossing with a float, still it may not cost you any more to treat the ground in this way than to plow and kill the volunteer wheat by disking.

The Campbell method of wheat culture as recommended by Mr. Campbell consists briefly in disking the land immediately after harvest, early, deep plowing followed by the subsurface packer and cultivating either with the disk or Acme harrow once or twice before seeding to wheat. The ground may be harrowed again before the wheat comes up, and after the wheat is well up, Mr. Campbell's method is to harrow it with the weeder or weed harrow. He also puts the weeder onto the field again in the spring, and keeps the soil mulch until the wheat is eight or ten inches high. The whole plan of the work is for the conservation of soil moisture, although the killing of the weeds and the cleaning of the ground is also a result of the work.

There are three essential steps in the conservation of soil moisture so far as cultivation is concerned. First, prepare the ground to receive and hold the water; this is accomplished by disking after harvesting and by early, deep plowing to increase the water reservoir; second, put the ground in a condition to draw the water which has been stored in the deeper soil, back to the germinating seed and growing plant by capillarity. The subsurface packer firms the bottom of the furrow and reestablishes the capillary connection with the subsoil below. Early plowing so that the land may settle before seeding also tends to accomplish the same results; third, keep a mulch of mellow, loose soil over the surface by cultivation which breaks the capillary tubes and acts as a blanket to keep the water in the soil beneath from escaping to the air. Mr. Campbell's system of culture tends to carry out these three essential steps. For more detailed information in regard to the Campbell method of culture I refer you to his Soil Culture Manual, published by H. W. Campbell, the author, Holredge, Neb.

A. M. TENEYOK.

An Alfalfa Problem.

On September 5 last year I sowed about twenty-five pounds of alfalfa to the acre on ground that had been plowed early and was settled by the August rains. The ground is low, part of it is gravelly and part a rich black loam and part is gravelly and clayey. I got a good stand and it was about four inches high when winter came on. A little of it was dead this spring but not much. This spring it started out slowly, grew about 6 or 8 inches, stopped growing (I suppose on account of wet weather) and commenced to bloom, the lower leaves began to fall off and new shoots grew up from bottom, so I mowed it and left it on the ground. It hasn't grown any since to amount to anything. The ground seemed to be perfectly clean in the spring but the crab-grass grew up fast after I mowed it. I examined it to see if it lacked the alfalfa bacteria and I don't believe that it has very much. I send you two plants that have some small projections on them, one has some little knots on the main root and the other has two projections on the end of a small root. I live 22 miles north of Emporia in Lyon County. Can you tell me what I had better do with this? There are two acres and I would like to save it. I have about half an acre that I sowed this spring which is the same way.

Lyon County. HARRY W. LEAVELL.

I refer you to article in KANSAS FARMER, July 30, answering questions similar to the ones you ask. The trouble mentioned seems to have affected alfalfa sown last fall and this spring worse than old seedings. We have a field at this station seeded last fall which is in very much the condition which you describe. Frequent cutting of the alfalfa as soon as it begins to turn yellow, and harrowing the ground immediately after cutting, perhaps disking it if the ground is very hard, are the only suggestions which

I can make at this time. We are trying some of these experiments at the station. It may be that the soil is lacking in alfalfa bacteria although in the field at this station we have found a considerable number of tubercles on the roots of the young plants. I find no tubercles on the roots of the plants which you sent in. If there were any they have been broken off in transit. It may be advisable for you to treat the field with injected soil from an old alfalfa field. The spring-sown alfalfa may be clipped in the same way and harrowed with the straight-toothed harrow after mowing. It is advisable to mow rather high as close cutting tends to weaken the plants. Remove the crop when cut if it is possible. Leaving the crop on the ground will only increase the tendency to disease. The spots on the leaves are simply beds of spores which readily infect the new growth.

A. M. TENEYOK.

Mixed Grasses for Pastures.

I have some land which I wish to seed this fall for permanent pasture and would like some advice through the KANSAS FARMER as to the best varieties to sow. One part is to be for hogs and horses the other for cattle and horses. English blue-grass does fairly well here. How about *Bromus inermis*? Alfalfa does well.

Marion County. R. MAROLD. You will find an answer to a letter similar to yours in the KANSAS FARMER published July 23.

That part of the pasture which you intend for hogs and horses may be seeded to alfalfa or a mixture of *Bromus inermis* and alfalfa; for horses and cattle, *Bromus inermis* alone or mixed with a little red clover, or else a mixture of meadow fescue, orchard-grass and red clover will probably be a safer pasture than alfalfa and *Bromus inermis*. There is little doubt but that *Bromus inermis* will do well in your locality. A. M. TENEYOK.

When to Cut Alfalfa for Seed.

Please tell me some rule or way by which I may know when to cut alfalfa for seed. I tried last year and seed all shelled off. C. W. HALLOWELL. Washington County.

There is no exact rule by which you may know perfectly when to cut alfalfa for seed. The general rule is to cut the crop when the pods have turned brown and when the stems are still green but before the shelling of the seed begins. You doubtless left the alfalfa too long last season, the pods were probably dry and the straw dead and brown before you cut it. Try cutting a little earlier this season and by practice and judgment you will be able to harvest the crop at the best time for saving the largest amount of seed.

A. M. TENEYOK.

Alfalfa and Alsike.

I live in Missouri and would like to know what time to seed and how to prepare the ground for seeding both alfalfa and alsike clover.

JAS. B. MARTIN.

Henry County, Mo.

In your locality doubtless fall seeding of alfalfa will be preferable to spring seeding. As a rule, however, I would prefer to sow alsike clover in the early spring. This season will also be favorable for seeding alfalfa. Alsike clover is often sown with some grain as a nurse crop but you will be more sure of getting a stand if you seed the clover on well prepared, clean land. Alfalfa is almost always sown without a nurse crop. In this locality it is usual to sow from 18 to 30 pounds of alfalfa seed per acre, while 4 to 6 pounds of alsike clover is enough to sow. For either crop, the ground should be well prepared and in good condition as regards moisture and tilth when the seed is sown. The seed may be sown broadcast and harrowed in, or, with alfalfa the drill is often used.

Do not sow until the last of August or the first of September, but the ground may be plowed at once and kept cultivated until seeding time. In case you are growing a grain crop on the ground, plow as soon as the crop



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is harvested and by the use of a subsurface packer and harrow put the ground in good condition to save the soil moisture. Frequent cultivation until seeding-time will destroy the weeds and develop the plant-food which is necessary to give the young seedling plants a vigorous start. In case you are growing corn or some cultivated crop, if you remove the crop early enough, the seed-bed may be prepared by thorough disking and harrowing. This method of preparing a seed-bed is also applicable to spring seeding. In case you plow the land for spring seeding, fall plowing is preferable to spring plowing, as the fall-plowed land will settle and be in better condition of tilth at seeding-time than spring-plowed. Alfalfa and alsike clover should not be covered deeply, say an inch to an inch and a half, and the ground should not be too loose and mellow, neither should it be hard and compact.

A. M. TENEYOK.

Bromus inermis.

I wish to ask a few questions in regard to *Bromus inermis*. How long is it after it blooms before I can cut it for seed, and will it yield two crops of seed in a year? I have some started and think it is fine grass.

WILLIAM HOCHENBURG.

Jewell County.

Bromus inermis should be cut for seed when it has reached the brown stage. If you will observe the grass, you will notice that it turns from green to purple and finally to brown during its different stages of maturing. A few days standing after the seed is ripe does not harm it any but if any dropping of seed is noticed the grass should be cut at once. Our method is to harvest the crop with the self-binder, put it up in rather small shocks, well capped, and thrash from the field. The ordinary separator may be used in thrashing. Run it at a rather low rate of speed and shut off the wind. The seed will be rather chaffy as it comes from the machine but it may be readily cleaned with the ordinary fanning mill. *Bromus inermis* will only bear one crop of seed in a year. You will doubtless get a heavy second growth which will make excellent pasture or perhaps may be cut for hay. The *Bromus inermis* straw if saved in good condition will make good feed for cattle and horses.

I am pleased to note your favorable report of this grass. I have been recommending it for planting in the central and western counties of Kansas and shall be pleased to hear farther in regard to your success in growing it. A. M. TENEYOK.

When to Cut Timothy—English Blue-grass.

Kindly advise me the very earliest date to cut timothy. I know that it is understood that the time is when the flower falls. Does that mean from all of it? Could it be cut any sooner, i. e., before the flower falls, and be marketable? How long after the flower falls can it go before cutting and baling for market?

I have a quarter-section, three miles



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west of Colony, Anderson County, 50 acres in timothy, 70 acres or more of wild grass, 10 acres cultivated that grew millet last year and nothing this year. I thought of putting in English blue-grass in August on the ten acres. I had thought of sowing alfalfa but I live 40 miles away, too far for the attention it needs. Do you know anything better under the circumstances than English blue-grass? GEO. D. MITCHELL.

Franklin County.

The best time to cut timothy for hay is when it has stopped blooming and a few of the blooms are falling off. The hay may be cut from the time the first blooms begin to fall to the time when the dry spots begin to appear in the straw above the first joint and most of the blooms have turned brown. The general experience is that early mowing weakens the plants and kills out the grass. It is also recommended not to cut lower than the second joint above the root tubers.

The early mowed timothy makes the sweetest and most nutritious hay. The crop is mowed after the stems have become hard the hay is of little value.

You are located in the English blue-grass district. I believe that you will find this crop a profitable one to grow for pasture and for seed. It is perhaps not so good a hay grass as orchard-grass or timothy and clover. If your purpose is to grow grass for hay, perhaps you might better sow orchard-grass or timothy and clover, or it may be well for you to try the *Bromus inermis* in your locality. This grass is more hardy than timothy, perhaps as good a producer, and makes a splendid hay, and is excellent for pasture. I would recommend that in either case you seed a little red clover with the other grasses. The clover adds richness to the hay and fertility to the soil and acts as a "host plant" to feed the other grasses. Your plan of sowing English blue-grass in August is a good one provided the soil is in fit condition to receive and germinate the seed. Alfalfa will certainly be a valuable crop to grow if you are in a position to harvest and feed the hay.

A. M. TENEYCK.

Alfalfa Dying Out.

Mr. J. L. Stratton, of Franklin County, Kansas, has been trying for a number of years to secure a stand of alfalfa on his farm, but thus far has not succeeded as well as he desires. The farm is a rich black loam, which grows wonderful crops of red clover and corn, but which is underlaid by a dense clay subsoil. This year he succeeded in raising one crop, which he mowed, and after mowing, used the field for hog pasture. Apparently the alfalfa is disappearing and the question as to whether the cause of his lack of success was due to the quality of the subsoil, or whether it was due to lack of bacteria, was submitted to Professor TenEyck, of the State Agricultural College, who replies as follows:

It is rather difficult to give suggestions which will be of value on the subject which you mention. From the fact that the black loam is underlaid by a heavy clay it may be that the land is not well drained. If this is the case it would be one reason why alfalfa does not grow well. This season's experience has demonstrated that alfalfa must have well-drained land. We notice the poor growth on many fields, and the yellow leaves and feeble plants in all the low spots, due largely, doubtless, to the very wet spring and the poor drainage.

Perhaps the alfalfa roots do not penetrate the dense clay subsoil you mention and the room for root-growth is reduced to such extent that the alfalfa can not secure feeding ground to supply it with the necessary elements of plant-food. On the other hand it is very likely that there is a lack of the alfalfa bacteria in the soil. A careful examination of the plants should show the presence or absence of tubercles on the roots, and in their absence I would suggest that infected soil be spread over the field or a part of the field to note its effect.

Some have benefited their alfalfa by liming the soil. Alfalfa does not do well in soil that is old and inclined to

become acid. Liming reduces the acidity and favors the growth of the alfalfa. It is worthy of a trial in the soil you mention. The pasturing of hogs on the alfalfa is usually a bad practice as far as the best growth of the crop is concerned and may partly account for the poor second growth.

I suggest that more care be taken in sowing; thoroughly clean the land before the alfalfa is seeded, and sow in the fall instead of the spring. After the alfalfa is a year old, disk and harrow the field early each spring and after the last cutting in the fall.

A. M. TENEYCK.

Pasture-Grasses for Bottom-Land.

I have the misfortune of having about 300 acres of flooded river bottom-land which I wish to seed down this fall, and use for pasture for a few years.

I am anxious to sow the kind of grasses that will afford the best pasture and if you will send me some information along these lines I will be very thankful for the favor.

Shawnee County. T. W. ANDREWS.

We have found a mixture of English blue-grass 15 pounds, orchard-grass 15 pounds, with 3 or 4 pounds of red clover per acre to make a good pasture. You are located in the English blue-grass district and a mixture of English blue-grass and orchard-grass would make good pasture. The *Bromus inermis* is also a good pasture-grass. At this station we find it, as far as it has been tested, superior to the English blue-grass and orchard-grass. It is well to seed a little red clover with *Bromus inermis*.

We are making some trials of alfalfa and *Bromus inermis* for pasture but the experiments have not progressed far enough to give definite results. The two grasses seem to grow well together and I believe can be recommended as being excellent pasture for horses and hogs. Some who have tried growing alfalfa and *Bromus* in this way claim that cattle will not be injured by feeding upon such pasture. Experiments, however, need to be conducted to substantiate these reports.

Timothy and clover ought to grow well in your locality and would make good meadow although for pasture they can not be recommended as being superior to English blue-grass, orchard-grass, or *Bromus inermis*. It would be my recommendation that you sow largely of the English blue-grass and orchard-grass, and try the *Bromus inermis*.

If the land is low and inclined to be wet, a mixture of red top and alsike clover will doubtless succeed better than the grasses mentioned above.

A. M. TENEYCK.

Are the Hard Wheats Better?

As there is some claim made that the new hard wheats are superior to the old varieties in a dry climate, I want to ask some advice in regard to the best varieties in Kansas, west of Kiowa County, and over 2,000 feet altitude. Would like to have yield in bushels, and if they should be fall or spring planted; also the address of some grower who has seed to sell.

Texas.

G. C. B.

This inquiry has been referred to the branch station a little early to be answered from actual experiments, as our first harvest is just cut. However, there is no doubt but what the new hard wheats are superior to the old varieties that were grown from fifteen to twenty-five years ago. If they were not, Kansas would not hold the station she now does among the wheat-producing States. The station here has 165 varieties of the hardier winter wheats under experiment at present. It will be several years before we will be able to speak with much authority regarding any of these. There are a number that are very promising, and will doubtless be improvements over the Turkey wheat now so largely grown in this section. The yield is a very variable factor. There are so many conditions to be accounted for. This year has been an exceptionally good one. There are some fields that are too poor to be worth the cutting, and others will make from thirty to forty bushels per acre.



husker and shredder is a "Little Giant" when it comes to considering the amount of work it will do in a day. Every corn grower can well afford to own the McCormick "Little Giant" husker and shredder. The machine has capacity enough for several farms where two or more want to join together in the purchase. The stover from the McCormick is relished by the stock.

B. L. Rees, Topeka, Kans.

W. W. Weeks, Wichita, Kans.

GENERAL AGENTS FOR
McCORMICK MACHINES.

Thrashing is but just begun, and some of the average fields are yielding about sixteen bushels per acre. As soon as thrashing is completed at the station, the yields of the different varieties will be published.

J. G. HANEY, Supt.

Fort Hays Branch Experiment Station.

Wild Morning Glories.

Do you know of any way to exterminate the wild morning-glory that is proving to be of so much damage to fields in parts of the country?

Ellis County.

F. D. S.

Wild morning-glory plants are very hard to deal with. We know of no easy or satisfactory means of getting rid of them. They are sustained by large, fleshy, underground roots or stems which enable them to live a long time even if they are not allowed to have leaves above the ground. However, if they were not allowed to produce leaves for a whole year they would doubtless be killed. This could be accomplished by frequent plowings, or with the hoe. But just as soon as they begin to produce leaves they begin storing food in the underground stems and it will take longer to get rid of them. By plowing them under in the latter part of May or the first of June and starting a vigorous crop, such as cane or millet, and plowing again as soon as the crop is taken off, will greatly weaken them. If such a method were followed, it is my opinion that they could be destroyed.

J. G. HANEY, Supt.

Fort Hays Branch Experiment Station.

Winter Oats.

I live in Miami County, in the eastern tier of counties, and generally we have a fair crop of oats, but they are light this year and I would like to know how winter oats would do here, when and how much to sow per acre and where they can be bought and the best kind to sow?

RAY S. LOW.

Miami County.

Winter oats would undoubtedly do very well in Miami County, providing the coming winter is not too severe. Sometimes however the winter oats are entirely killed out by the winter frost and there seems to be some risk in sowing them in this climate.

I know of only one variety, namely,

the Winter Turf Oats, which may be secured of F. Barteldes, Lawrence, Kans., or the Iowa Seed Co., Des Moines, Iowa.

Winter oats should preferably be sown the latter half of September, but may be sown any time during the fall.

The amount of seed per acre depends somewhat on local conditions, and whether it is intended to pasture the crop in the fall. If intended for pasture, sow at least three bushels per acre otherwise two and one-half bushels per acre.

V. M. SHOESMITH.

[We have yet to hear of a successful crop of winter oats in Kansas.—EDITOR.]

The New Fertilizer Law.

The following is a law enacted by the Kansas Legislature in its 1903 session, regulating the manufacture and sale of commercial fertilizers, and became effective and in force upon its publication in the statute book, June 1, 1903:

Section 1. Any person or company who shall offer, sell, or expose for sale in this State any commercial fertilizer shall affix to every package, in a conspicuous place on the outside thereof, a plainly printed certificate stating the number of net pounds in the package sold or offered for sale, the name of the trade-mark under which the article is sold, the name of the manufacturer and place of manufacture, and a chemical analysis stating the percentage of nitrogen, or its equivalent in ammonia, in an available form, of potash soluble in water, and of phosphoric acid in an available form (soluble or reverted), as well as the total phosphoric acid.

Sec. 2. Before any commercial fertil-

SEED WHEAT

It always Pays to plant the Best. Our varieties grown from pure stock imported by us, cost but little more than common sorts, but will yield 45 to

60 Bushels Per Acre

Write for our Free Seed Wheat Catalog with full descriptions of our New "MALAKOFF," the grandest new variety of wheat ever introduced; requires less seed per acre; stools better; stands up better; gives larger yield and better quality of grain; stiff straw; rust proof and never attacked by fly; as hardy as Eye. Price, \$1.50 per bushel. Mammoth Winter Rye, 80¢ per bu. Baga Free. Ask for prices on Timothy, Clover and other seeds.

RATEKINS' SEED HOUSE, Shenandoah, Ia.

izer is sold or offered for sale, the manufacturer, importer, or party who causes it to be sold or offered for sale within the State of Kansas shall file with the secretary of the Kansas State Board of Agriculture a certified copy of the certificate referred to in section 1 of this act, and shall deposit with said secretary a sealed glass jar containing not less than one pound of the fertilizer, accompanied with an affidavit that it is a fair average sample.

Sec. 3. The manufacturer, importer, or agent of any commercial fertilizer shall pay annually, on or before May 1, a license fee of \$20 on each brand for the privilege of selling or offering for sale within the State, said fee to be paid to the secretary of the Kansas State Board of Agriculture; provided, that whenever the manufacturer or importer shall have paid the license fee herein required for any person acting as agent for such manufacturer or importer, such agent shall not be required to pay the fee named in this section.

Sec. 4. All analyses of commercial fertilizers sold within the State shall be made by or under the direction of the secretary of the Kansas State Board of Agriculture, and paid for out of the funds arising from license fees, as provided for in section 3. At least one analysis of each fertilizer sold shall be annually made.

Sec. 5. Said secretary shall publish annually a correct report of all analyses made and certificates filed, together with a statement of the moneys received on account of license fees and expended for analyses, and any surplus arising from license permits shall be placed to the credit of the agricultural fund.

Sec. 6. Any person or party who shall offer or expose for sale or sell any commercial fertilizer without complying with the provisions of sections 1, 2, and 3 of this act, or shall permit an analysis to be attached to any package of such fertilizer stating that it contains a larger percentage of any one or more of the constituents named in said section 1 than it really does contain, shall be subjected to a penalty of not less than \$200 for the first offense, and not less than \$500 for every subsequent offense, to be recovered in a civil action, and the offender in all cases shall also be liable for damages sustained by the purchasers of such fertilizers; provided, however, that a deficiency of 1 per cent of the nitrogen, potash, or phosphoric acid claimed to be contained shall not be considered as evidence of fraudulent intent.

Sec. 7. Suit may be brought for the recovery of penalties under the provisions of this act in the district court of the county where the fertilizer was offered for sale or sold, or where it was manufactured; and all penalties so recovered shall be paid into the State treasury, to the credit of the general revenue fund.

Sec. 8. The secretary of the Kansas State Board of Agriculture, or any person by him deputized, is hereby empowered to select from any package of commercial fertilizer exposed for sale in any county in Kansas a quantity not to exceed two pounds, which quantity shall be for analysis, to compare with the sample deposited with said secretary, as provided in section 2 of this act, and with the printed certificate found on the given package found on sale.

Sec. 9. All suits for the recovery of fines under the provisions of this act shall be brought by the secretary of the Kansas State Board of Agriculture, in the name of the State of Kansas.

Sec. 10. Whoever sells, exposes for sale or offers for sale any commercial fertilizer without having complied with the provisions of sections 1, 2, and 3 of this act shall be fined in any sum not exceeding \$200, or imprisonment not more than thirty days, or both, and said fine or imprisonment, or both, shall not be a bar to the recovery of the civil penalty provided for by sections 6 and 7 of this act.

Sec. 11. This act shall take effect and be in force from and after its passage, and publication in the statute book.

F. D. COVART, Secretary.

The Stock Interest.

THOROUGHBRED STOCK SALES.

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

September 1, 1903—Horses and Jacks, L. M. Monroes & Son, Smithton, Mo.
September 1 and 2, 1903—100 head of Herefords, at Hamline, Minn. C. R. Thomas, Secretary.
September 3, 1903—Central Missouri Hereford Breeders' Association, Macon, Mo.
October 2, 1903—Poland-Chinas, J. R. Killough & Sons, Ottawa, Kans.
October 3, 1903—A. E. Burleigh, Kansas City, disperson sale Polled Durham.
October 7 and 8, 1903—Combination sale of Poland-Chinas and Shorthorns. Poland-Chinas on the 7th, Shorthorns on the 8th. James P. Lahr, Sabetha, Kans., Manager.
October 9, 1903—Sabetha Combination Sale Co., Sabetha, Duroc-Jerseys.
October 3, 1903—John Cameron, Lebanon, Kans., Poland-China swine.
October 12, 1903—C. O. Hoag, Centerville, Kans., Poland-China hogs.
October 14, 1903—A. G. Lamb, Eldorado, Poland-China.
October 15, 1903—Central Missouri Hereford Breeders' Association, at Salsbury, Mo. S. L. Brock, Secretary, Macon, Mo.
October 16, 1903—W. S. Wilson, Manager, Shorthorns and Herefords, at Monroe City, Mo.
October 19, 1903—Oak Grove, Mo., Poland-Chinas. E. R. Axtine.
October 19-24, 1903—American Royal, Kansas City, sale by Galloway Breeders' Association.
October 22, 1903—100 head of Herefords, at Kansas City, Mo. C. R. Thomas, Secretary.
October 24, 1903—Newton Bros. Whiting, Kans., Duroc-Jersey swine.
October 27, 1903—Duroc-Jerseys, Peter Blocher, Richland, Kans.
November 3, 1903—O. B. Smith & Son, Cuba, Kans., Poland-Chinas.
November 10-11, 1903—Marshall County Hereford breeders' annual sale at Blue Rapids, Kans.
November 13, 1903—Central Missouri Hereford Breeders' Association, animal sale; S. L. Brock, Macon, Mo., Secretary.
November 17, 18, 19, 1903—Armour Funkhouser, Herefords, at Kansas City, Mo.
December 2, 1903—American Galloway Breeders' Association sale, at International Exposition, Chicago.
December 3, 1903—100 head of Herefords, at Chicago, Ill. C. R. Thomas, Secretary.
February 4, 5, 6, 7, 1904—Percherons, Shorthorns, Herefords, and Poland-Chinas, at Wichita, Kans., J. C. Robinson, Towanda, Kans., Manager.

Rabies, or Hydrophobia.

PRESS BULLETIN, KANSAS EXPERIMENT STATION.

Rabies, commonly called hydrophobia, has been unusually common among cattle in Kansas, at least seven outbreaks having been reported during the past year. Rabies does not occur most frequently during hot weather, as is generally believed, the greatest losses occurring during the fall and spring, but it may occur at any season of the year. The disease seems to appear periodically, some years no outbreaks being reported, and other years the losses are frequent and severe.

Rabies is a disease of the nervous system that is transmitted from one animal to another by direct inoculation through a wound, usually a bite from a rabid animal. It is possible that food or water contaminated by an animal affected with rabies may infect animals having sores in the mouth or digestive tract, or the infected saliva being deposited upon an open wound or irritated mucous membrane may cause the disease.

The disease, as observed during the past year, has been among cattle, except in one instance where two horses died. The loss among cattle has varied from five to twenty-seven head. In one herd of sixteen head, eleven died from rabies.

In four out of the seven outbreaks reported, a dog supposed to be rabid was known to have bitten or been among the affected cattle. The disease usually occurs in from five to ten days after the animals are bitten, and, among cattle, they may continue to develop the disease for from eight to ten weeks after the first case occurs.

The symptoms vary considerably even among cattle. The affected animal becomes nervous and excited, in many cases vicious, attacking persons and smaller animals, particularly. In some instances they will dash at a person but suddenly stop a few feet away. There is a peculiar wild or vacant stare. Affected cattle will often push and maul other animals in the herd, and there is a tendency to lick the genital organs of other cattle. As the disease progresses they become more excited and will often emit a hoarse bellow frequently or almost continuously. In many cases there is often violent straining as if to pass dung, the rectum often being everted. Paralysis often occurs, and is first noticed in a wobbling, uncertain gait, and later the hind quarters give way and the animal is unable to rise. In a few cases the animals will fall in convulsions. In all cases animals will eat and drink water until paralysis of the

throat makes it difficult or impossible. There is frequent shaking and swinging of the head and opening of the jaws, with dripping of a rosy or frothy saliva from the mouth. There is a tendency in rabid animals, to eat dirt, dung, sticks, etc.

Post-mortem examination shows no signs of disease, although the body is unusually stiff and rigid and the stomach contains dirt and other foreign material.

There is no treatment for rabid animals, as death always occurs. Affected animals should be isolated, or destroyed at once to put them out of misery, and to prevent possible infection of others. Water tanks and mangers should be emptied and thoroughly disinfected by using a strong solution of concentrated lye, or a 5 per cent solution of carbolic acid. Food contaminated with saliva should be burned. Suspected dogs should be destroyed. Persons should exercise utmost caution to avoid being bitten or infected through wounds on the hands while caring for infected animals.

Persons knowing of rabies are asked to report to this department, giving all the information possible regarding the outbreak, as a future bulletin is contemplated treating the disease in detail.

N. S. MAYO.

Manhattan, Kans.

Cattle Mange or Texas Itch.

PRESS BULLETIN OKLAHOMA EXPERIMENT STATION.

That this disease exists in western Oklahoma is quite certain as a portion of the Territory has been placed under quarantine. As a general rule Oklahoma has been very free from this disease as it has only been reported once or twice and then in small herds. Neighboring States have been to a certain extent troubled with this disease. This is especially true of portions of Kansas, Nebraska, and Colorado.

To successfully cope with the trouble the stockman should know exactly what is causing the trouble, the history of the disease and especially the means of preventing its spread. The last is of great importance to those who do not have the disease among their cattle as they will be able in a great measure to keep their cattle healthy. In many cases the presence of lice on stock may be mistaken for mange as lousy cattle will rub a great deal and are unthrifty, but an examination will determine this, as the lice and nits are easily found.

Mange is a very contagious disease and will spread rapidly among cattle and can be communicated from cattle to horses and vice versa. The disease is always caused by a very small mite that lives either in or on the skin, depending on the species. There are several varieties of mange mites but mention will be made only of those that cause the greatest amount of trouble to cattle and horses. There are two varieties of the mite affecting cattle; one that lives on the surface of the skin (*Psoroptes communis* var. *bovis*) and generally spreads over the greater portion of the body, while the other variety (*Symptotes bovis*) is very rare and is generally found at the base of the tail but through neglect may spread along the back or down the thighs.

The effect of these mange mites is to produce an intense irritation of the skin by piercing it to obtain food. This causes an intense itching, the cattle rub a great deal, and in many cases the hair is completely removed from portions of the body. Crusts and scabs form on the body and in chronic cases the skin becomes thickened, dry, and insensible. Both varieties of the mites found upon cattle are large enough to be seen with the naked eye and one can be certain whether it is a mange or not by scraping off some of the scales and scabs and placing them on dark paper in the sun. If the disease is mange or itch you will be able to see very small objects moving on the paper or over the scabs.

The mite causing the greatest amount of trouble to horses is the *Sarcoptes* equi. These mites burrow into the skin and are very minute in size, so small that it is necessary to use a magnifying glass to be sure of their



GOMBAULT'S CAUSTIC BALSAM

A safe, speedy and positive cure for

Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam 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 circulars, testimonials, etc. Address THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio.

presence. On account of the mite burrowing into the skin the disease is more difficult to cure in the horse than in cattle. The disease is generally first seen on the nose or some portion of the head and extends back over the neck and body until in neglected cases the disease will spread over the entire body of the animal. The disease is easily carried from one animal to another by harness, blankets, or in fact any article that may be used on a diseased animal and then brought in contact with animals that do not have the disease. Probably the most common way of spreading the disease is by saddle blankets as the disease is frequently seen on the back where it is located from the blanket. This particular mange mite of the horse is easily transferred to man, and such cases are very common where the disease is among horses that are continually handled.

From a sanitary point of view mange is a very important disease as it is easily spread by contact with diseased animals or by coming in contact with fences, cars, etc., where diseased cattle have been. It is not a fatal disease, as it is very seldom that it kills except in case of weak animals, where the disease has been for some time, but in all cases it prevents good growth and is easily spread through the herd. The disease is more common during the early spring than any other season and can be easily recognized at this time, but it will almost entirely disappear through the summer with just enough of the infection left over to spread among the cattle during the winter.

Treatment: Where the disease exists to any extent the only practical thing to do is to construct a dipping vat and dip the stock in some solution that will kill the mange parasite. There are a number of commercial preparations that can be used to dip cattle in, such as Zenoleum, Chloro-



YOU will make MORE Money from your breeding and feeding of live stock if you mix more brains with the labor of your hands. Our courses cover "Judging Live Stock for the Market and Dairy" and "Breeding, Feeding and Care of Animals" prepared by such eminent men as Prof. W. J. Kennedy, Dr. A. T. Peters, etc., etc. You study at home, thus saving time and money. Special courses in "Veterinary Science" and "Sanitation and Prevention of Diseases." Ask for "The 100% Farmer" which we mail free. Correspondence Agr'l College, 421 Mebr. St., Sioux City, Ia.

HOG CHOLERA

is making its appearance again.

Dr. Snoddy's Specific prevents, also cures it. Death to worms. Never fails. It is a success. Book and prices free.

DR. S. C. SNODDY, Nashville, Tenn.

naphthaleum, or Lincoln disinfectant. These are all used for dipping purposes and will prove effective in one and one-half to two per cent solutions. Vats constructed on the same plan as those used to destroy ticks will be found best for this purpose. Among the various remedies that may be prepared at home the tobacco and sulfur dip and the kerosene emulsion will be found to be very effective and cheap. The ingredients for these can be obtained at any general store and where there are only a few head of cattle to handle it will be cheaper to make a few gallons of either of the above dips and spray or mop them.

Kerosene emulsion: Hard soap, 1/2 pound; kerosene (cheap grade), 2 gallons; water, 1 gallon. Cut the soap into shavings and boil in the water until the soap is dissolved. Remove from the fire and add the kerosene and churn or spray back until the mixture is thoroughly emulsified. To this emulsion add six gallons of water, mix or spray back again, and use this for spraying.

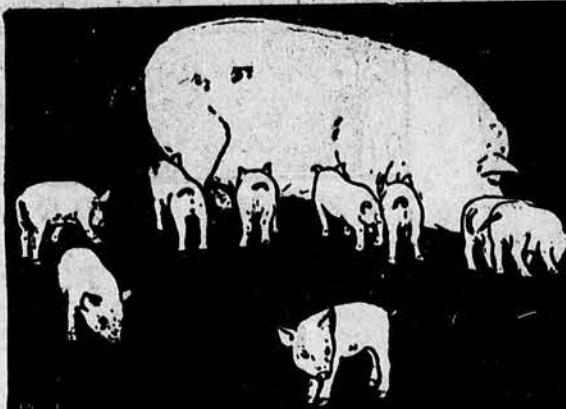
Tobacco dip: Tobacco leaves or plug, 1 pound; sulfur, 1 pound; water, 6 gallons. Place the tobacco in one gallon of water and allow to stand for twenty-four hours, then bring the water to the boiling point, remove from the fire and allow to stand over night. Mix the sulfur with another gallon of water and when ready to dip or spray remove the tobacco leaves from the infusion, mix this with the sulfur water and add four gallons of water. In using any of the dips or sprays it is necessary to thoroughly wet the animal so as to soften the crusts and scabs and allow the solution to reach the parasite. One treatment is generally sufficient for cattle as the mite is on the surface of the skin, but in horses, where the mite is generally burrowed in the skin, the treatment should be repeated in twelve to fifteen days.

Feeding the Calves that Topped the Market.

EDITOR KANSAS FARMER:—Your favor of recent date asking for my experience in the production of baby beef is at hand. Would say that I began feeding a bunch of grade Herefords on November 17, 1902. At that time they averaged 388 pounds and varied in age from 4 to 12 months. There were thirteen heifers and twenty steers in the bunch. The average cost of fourteen head was \$3.30 per hundredweight, and the others were valued at the same. The calves were all vaccinated with the double black-leg vaccine which the Agricultural College sends out. Twenty-two of them were dehorned on December 30. This cut them down in flesh some, as was shown by the low average daily gain per head of only 1.85 pounds during the period from December 24 to January 23. This in part may have been due to the stormy weather at that time. The wet, stormy weather lowered the gains in one or two other months.

After feeding the bunch for 187 days the thirty-three head averaged 766 1/2 pounds, which is a gain of 378 1/2 pounds, or a little better than 2 pounds per day per head. Two days after this weighing five of the bunch were shipped to Kansas City, and a week later the remaining twenty-eight head were shipped to St. Louis and were sold there on Wednesday, June 3, at 5 cents per pound, which was the top price for that day.

During the first month I only fed about half feed, yet the calves made a daily gain per head of 2.6 pounds. I gradually increased the amount of feed until some of the calves seemed to get enough before all of the feed was cleaned up. Never during the feeding-period did I give more feed than the calves would clean up in a half or three-quarters of an hour after feeding. The feed-troughs I used were fourteen inches deep and two and one-half feet wide at the top. In feeding I put sheaf oats in the trough first, and poured the shelled corn, bran, and cottonseed-meal on this roughage. I fed a dozen bundles of oats at a feed, all of which was cleaned up before the calves left the troughs. The feed I combined in such a way that they furnished a good variety and a balanced



HOW'S YOUR BROOD SOWS THIS YEAR?

HAMBURG, IOWA, Jan. 23, 1903.

International Stock Food Co., Minneapolis, Minn.
DEAR SIR:—The "International Stock Food" which I have been using for two years has proven entirely satisfactory. I fed it to my brood sows before and after farrowing and it gave excellent results. I gave it a good test on some shoats last fall. Three of the smallest were placed by themselves and fed two measures of "International Stock Food" three times every day. The other lot was fed "International Stock Food" three times per week and all had same feed and water. At end of 60 days the three weighed 20 pounds apiece more than the others. Respectfully,
W. J. WOODLAND, Breeder Duroc-Jersey Hogs.

We have thousands of similar testimonials and will pay you \$1000 cash to prove that they are not genuine and uncalculated.

Owned "International Stock Food Farm," which is located 12 miles from Minneapolis and contains 650 acres. We feed "International Stock Food" every day to all our World Champion Stallions, Dan Patch 1:29 1/4 and Directum 2:05 1/4; to our Yorks Stallions, Bacon Mann, Coats, Wenz Horses, Carria and Hogs. "INTERNATIONAL STOCK FOOD" IS FEEDS FOR ONE CENT—It is Prepared from Roots, Herbs, Seeds and Berries and Won the Highest Medal at Paris Exposition in 1900 as a High-Class vegetable, medicinal preparation to be fed to stock in small amounts as an addition to the regular feed. It is a Great Aid in Growing or Fattening stock because it increases the appetite and Aids Digestion and Assimilation so that each animal obtains more nutrition from the grain eaten. We positively guarantee that its use will make you extra money over the usual Plan of Growing and Fattening stock. "International Stock Food" can be fed in safety to Horses, Cattle, Sheep, Goats, Hogs, Cows, Calves, Lambs or Pigs. It is absolutely Harmless even if taken into the Human system. You insist on eating medicinal ingredients with your Own food at every meal. Salt is a stomach tonic and worm medicine. Pepper is a powerful stimulating tonic, Mustard is a remedy for dyspepsia. Vinegar is a diuretic. You eat these medicinal ingredients almost with every mouthful of your food, and it is proven that these Medicines promote health and strength for people and animals, and improve their digestion. "International Stock Food" contains pure vegetable medicinal ingredients that are just as safe and as necessary an addition to the regular feed of your stock if you desire to keep them in the best possible condition. "International Stock Food" is endorsed by Every High-Class Farm Paper. It purifies the blood, stimulates and permanently strengthens the entire system so that disease is prevented or cured. "International Stock Food" is sold on a "Spot Cash Guarantee" by Fifty Thousand Dealers throughout the World. Your Money will be Promptly Refunded in Any case of failure. It will make your Calves or Pigs grow Amazingly and has the Largest sale in the World for keeping them healthy. Beware of the many Cheap and Inferior Imitations. No Chemist can separate all the Different powdered Roots, Herbs, Berries and Seeds that we use. Any One claiming to do so must be an Ignoramus or a Falsifier.

WHAT PEOPLE SAY ABOUT THIS BOOK.

INTERNATIONAL STOCK FOOD CO.,

Dear Sir:—I received your "International Stock Book" and was more than pleased with it. It is worth more than \$10.00 to me. Very truly yours,

HAW CLAIRE, WIS.

It is worth more than \$10.00 to me. Very truly yours, RICHARD J. MORRISSEY.

INTERNATIONAL STOCK FOOD CO.,

Dear Sir:—Your "International Stock Book" duly received, and it is the best thing of its class that I have ever seen. There is a volume of useful articles in it from start to finish. Respectfully,

ODessa, Mo.

GEO. W. NULL.

A \$3000.00 STOCK BOOK FREE

IT CONTAINS 183 LARGE ENGRAVINGS OF HORSES, CATTLE, SHEEP, POULTRY, ETC.

The Cover of this Book is a Beautiful Live Stock Picture. Printed in Six Brilliant Colors. Size of the book is 6 1/2 by 9 1/2 inches. It cost us \$3000 to have our Artists and Engravers make these Engravings. It describes common Diseases, and tells how to treat them. It also gives Description, History and Illustrations of the Different Breeds of Horses, Cattle, Sheep, Goats, Hogs and Poultry. It contains Life Engravings of many very noted Animals, and also testimonials. The Editor of This Paper Will Tell You That You Ought To Have This Stock Book In Your Library For Reference. It Contains a Finely Illustrated Veterinary Department That Will Save You Hundreds of Dollars.

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ration. Among the feeds used were sheaf oats, prairie hay, cow-pea hay, a little alfalfa, shelled corn, bran, and cottonseed-meal. The cow-pea hay was relished even better than the alfalfa. I would sometimes feed the former while the calves were eating their grain, and when I did some of the calves would generally leave the grain for the hay. The calves consumed about as many pounds of roughage as grain during the entire feeding period. I furnished good water in a tank and in the winter I warmed the water with a tank-heater. I also kept salt by them. The handling of the calves is a point worth mentioning. I always treated them kindly so that they all become gentle, and some would come up to me to be petted.

In conclusion, I would say that I think that the calves put on a pound of gain with about one-half the feed that it takes to put the same gain on a 3-year-old steer during the same period of feeding. W. R. HILDRETH, Labette County.

The Kind of Mares for the Production of Mules.

The many especial uses to which mules are put and the great demand in general for them at the present time, insures a good price for mules of every grade, of good size, and might serve to make the matter of weight less important. But it is the big team mule that pays best always, and is surest of a steady market. It is a general impression here that only the big mares should raise mules in order to insure good farm-purpose sizes. This is not true where the big producing jack is to be had. The mammoth-bred Spanish jack stock of the right kind crossed to any of our average size roadster stock will beget mules of an average of from 1,000 to 1,150 pounds weight, with as many above as below these figures; in short, good farm purpose sizes.

To the brood mare in general set aside to mother the mule, the same rules of reproduction will apply as though she reproduced her own kind. The tested brood mares and those young and vigorous will usually bring good mules from even deficient sires. The practice has often been to use the vicious or the old heart-broken mares to raise mules, with the result that the progeny often inherited these tendencies. The female is most apt to impart the temperament. This is no doubt true as to brood mares and perhaps to

all animal kind. As the nice tempered mules are so much desired in this part of the country it behooves the breeder to use the obedient, quiet tempered mares for this purpose. They can not be too good. By this kind of selection that stubborn phase of the mule's disposition can be almost bred out.

The brood mare of obtuse sensibilities should be avoided, as she will bring the mule that will not respond to the whip. On the other hand, the mare that is most apt to reproduce her own temperament is the crazy-headed, wild, irresponsible beast of unbalanced, nervous organism. The headstrong trait of the ass crossed on this temperament is objectionable. Mettle, courage, ambition, gentleness, docility are always traits to be desired in the dam.

There is now an opportunity to raise mules of great size from our draft mares and grade draft mares that have become so common in recent years. Nearly all the big mules that have ever been raised in the United States have been from the lightest strains of horses. The dependence has all been on the jacks to produce big mules. Using the draft mares for mule-raising is a comparatively new thing, so it is easy to realize that if the approved strain of jack stock is crossed in this way unusual sizes may be had in the mules.

But the most potent factor by far in the production of mules of size and quality is the jack stock used. These animals have been bred for some centuries with the sole idea of reproducing the hybrid (mule) with greatest perfection. And the first aim has been to perpetuate the power to beget size. This power seems to have been established more as a trait than as a quality of size, attributable to the parent stock. Jacks are not uncommon that reproduce mules of great size and fine quality, but when crossed to their own kind beget inferior progeny in all respects. On the contrary, not all good jack sires are good mule producers.

As a common illustration, in mule raising sections, a 14-hand sire will be used, with dams not over 15 or 15 1/2 hands average, and will often produce mules of an average height of 16 and 16 1/2 hands. The pure blood of the jack is the most important thing, and as of horses, there are families of especial merit. On the whole, the richly bred jack of the mammoth Spanish strain is so much superior to the come-by-chance sort heretofore mostly used

in Ohio, as to be beyond comparison.

The American jack stock breeders have pedigreed their stock from the best individuals without regard to strain of blood. As a consequence the typical jacks of this country have a blending of several breeds of foreign stock. The chief of these strains are the Catalonian, Mammoth, Poitou and Maltese. The American breeders claim that this mingling of blood strains, together with careful selection, has produced the best jack stock in the world. How true this claim may be I would not attempt to say. However, it can not be denied that in the ability to be-

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get mules of spirit, docility, size and finish the best American jack stock is an assured success. Any community having access to one of these jacks should improve the opportunity to raise mules. For a change, let the mare that is the owner's pride produce this foal. She will be as fond of it as though the blood of the Arab horse flowed in its veins, and it will as surely reflect her good traits.—Ohio Farmer.

St. Joseph Horse Show.

In all large cities the horse-show is the principal event socially and otherwise, and is an entertainment that caters alike to all classes of people. This year, August 18, 19, 20, and 21, St. Joseph, Mo., will endeavor to eclipse anything ever given in the West. The merchants have subscribed to the extent of about \$4,000 in cash to be given away as premiums in forty-six different classes, which will be shown in five performances, four nights and one matinee. It is not the intention or desire of the management of this show to make this feature a speculative one. All they want is to make expenses and attract the people to their city. Large lists of entries have been received from all over the Middle West, and beautiful horses and rigs will be there in abundance. The show will be given in a large tent 350 by 150 feet made expressly for the purpose, and which will be brilliantly lighted with 38 arc and 600 incandescent lights. The interior arrangements will be on the order of a coliseum. There will be an arena 200 by 75 feet, encircled by a promenade, boxes, lodges, reserved and general admission seats. This show given as it is during the latter part of August will afford merchants an opportunity to combine business with pleasure, as St. Joseph is considered one of the best jobbing towns on the Missouri River.

All railroads entering St. Joseph have given a one and a third fare rate.

American Poland-China Record.

We are in receipt of Vols. 30 and 31 of the American Poland-China Record. The notice of the completion of both of these books was sent out at one time. This indicates better than anything else the amount of business coming to this popular record. It is rare, indeed, that any live-stock record is able to announce the completion of two books at one time. The volumes are substantial books of 1,000 pages each and contain about nine thousand pedigrees. This makes three books issued since the annual meeting in February.

It will be remembered that the American recently removed its secretary's office from West Liberty, Iowa, to the Live Stock Record Building at the Union Stock Yards in Chicago. Secretary McFadden informs us that he has about reached the point where the work is up to date after the delay incident to the move. He states that there has been a very substantial increase in business up to the present time as compared to last year, and everything points to the fact that the move to Chicago will prove to be a good one, and that the American will greatly increase its business thereby.

At the time of the removal to Chicago it was announced that a share of American Record stock would be exchanged for a share of stock in any of the other Poland-China records, and this has already resulted in several exchanges of this kind.

Volume 32 is almost completed, and those with pedigrees they would like to have in this book should forward them at once, addressing W. H. McFadden, secretary, Live Stock Record Building, Union Stock Yards, Chicago.

The George H. Adams' Hereford Sale.

The Geo. H. Adams' dispersion sale of pure-bred Herefords was held at the home farm at Linwood, Kans., on Tuesday and Wednesday, July 28 and 29. It was characterized by good attendance, spirited bidding and very satisfactory prices. Buyers were present from Kansas, Missouri, Texas, Arkansas, and Illinois. As is true in all dispersion sales, there were a number of aged cows and a few unattractive calves which served to reduce the average. This herd was established in 1880 and the splendid results attained at this sale were not only due to the skill and energy of Geo. H. Adams, but to that veteran Hereford breeder, Geo. Morgan,

who has managed the herd. The direct returns from the sale served as a splendid index to the esteem in which good Hereford cattle are held over the country, as well as to compliment the splendid sale management of T. F. B. Sotham, of Waverly Farm, Chillicothe, Mo. In spite of the fact that Mr. Adams was lying very ill at his house during the sale, and in spite of the fact that Manager Geo. Morgan was really too ill to appear on the grounds, Mr. Sotham handled the sale admirably in every respect and thereby won an added feather to his already well-plumed cap.

The top price of the sale was \$770 which was paid by T. F. B. Sotham for Lulu 85019 and twin calves. She was sired by Orpheus by Wild Tom out of Luminous 76027 by Post Obitt 76080.

The top price for bulls was paid by Wm. Acker, Vermillion, Kans., for Abercrombie 85007 by Climax 60942 and a grandson of The Grove 3d. Abercrombie's dam is Bellemond 10th 60930 by Wild Tom. Mr. Acker paid \$580 for this bull and secured the best thing offered in the sale.

The sale was cried by Col. R. E. Edmondson, of Kansas City, who was assisted in the ring by Col. Harry W. Graham, D. D. Rogers, S. W. Kidd and O. F. Updegraff. A feature of the occasion was the barbecue dinner furnished by Mr. Adams. The menu included barbecued mutton and beef, with the usual fillings for a most excellent sale lunch. Special train service was provided on the Union Pacific between Kansas City and Linwood on both days.

The sales were as follows:

FEMALES.

Ruth 26022, A. W. Jaggard, Bonner Springs, Kans.	775
Miranda 90979, and bull calf Argentine 161823, J. C. Yancy, Batesville, Ark.	506
Pinion Girl 65013, Capt. John Hutson, Canon, Tex.	175
Gentle Mary 19th 65894, T. C. Pointing, Mowqua, Ill.	125
Emma 80027, T. C. Pointing.	180
Madge 80011, Capt. Jno. Hutson.	100
Constance 80005, Capt. Jno. Hutson.	80
Esther 80008, T. F. B. Sotham, Chillicothe, Mo.	185
Ophelia 85023, Capt. Jno. Hutson.	100
Valeria 85027, Capt. Jno. Hutson.	135
Eleanor 96370, T. C. Pointing.	130
Gratia 96374, Capt. Jno. Hutson.	95
Martha 96627, T. F. B. Sotham.	180
Rowena 98783, Capt. Jno. Hutson.	175
Nordica 105201, J. C. Yancy.	150
Adrice 133267, G. H. Hoxie, Thornton, Ill.	125
Aurelia 139040, T. C. Pointing.	105
Miss Kodak 89318, E. H. Hoxie.	330
Wynetta 92729, G. H. Hoxie.	150
Sapho 107588, G. H. Hoxie.	130
Flo Flo 107584, T. C. Pointing.	130
Sophia 2d 115948 (and bull calf), Capt. John Hutson.	325
Assurance 133269 (and bull calf), T. C. Pointing.	140
Aubrey 142054, Capt. John Hutson.	110
Aurora 145521, G. H. Hoxie.	290
Ashton Beau Real 2d 148796, Capt. John Hutson.	200
Arrance 148794, G. H. Hoxie.	130
Amber 152738, T. F. B. Sotham.	110
Agate 152737, C. B. Smith, Fayette, Mo.	110
Attention 152739, Capt. John Hutson.	150
Addie Dewey 152738, G. H. Hoxie.	125
Almede 2d 154582, G. H. Hoxie.	130
Alethea 154580, C. B. Smith.	105
Azelea 157428, G. H. Hoxie.	160
Sophia 80022 (and bull calf), W. N. Grimes, Ohlman, Ill.	150
Hebe 85017, W. B. Carwin, Essex, Iowa	40
Consuela 85011 (and bull calf), T. F. B. Sotham.	155
Penelope 85024, Ed Rice, Vine, Kans.	100
Lulu 85019 (and twin heifer calves), T. F. B. Sotham.	770
Vasti 90013 (and bull calf), W. N. Grimes.	150
Agnes 90001, Capt. John Hutson.	135
Stella 90012, T. C. Pointing.	60
Eudora 96372, C. B. Smith.	165
Eugenia 96373 (and bull calf), W. N. Grimes.	150
Clarine 96368 (and cow calf), Capt. John Hutson.	140
Minnie Perkins 98783 (and cow calf), G. H. Hoxie.	175
Felicia 98777 (and bull calf), W. B. Carwin.	85
Beluah 98773, Capt. John Hutson.	100
Renetta 105206, T. C. Pointing.	100
Patti 105204, Ed Rice.	120
Viola 105207, Capt. John Hutson.	170
Imp. Winfred 76075 (and cow calf by Abercrombie), T. F. B. Sotham.	525
Luminous 76027, W. N. Grimes.	600
Camilla 65883, C. B. Smith.	115
Mignon 65902, C. B. Smith.	250
Orphan Girl 75013, Ed Rice.	100
Vesta 75019, John Hutson.	175
Florence 70022 (and bull calf, Capt. John Hutson).	260
Kate 70024, Ed Rice.	125
Antonia Maid 70012, Ed Rice.	125
Ashton's Daughter 70015, Ed Rice.	140
Columbia Girl 70020, T. C. Pointing.	90
Ashton Wilton 70017, W. B. Carwin.	100
Peasant Girl 70090 (and heifer calf), Ed Rice.	215
Ashton Beau 71013 (and bull calf), Capt. John Hutson.	175
Celeste 80004, Capt. John Hutson.	90
Bedstone Maid 21243, F. B. Hines, Alton, Ill.	55
Duchess of Marloy 2d 27596, W. B. Carwin.	50
Belle Horace 30933, Capt. John Hutson.	80
Bessie 38999, W. Lambing, Linwood, Kans.	65
Prudence 43276, F. B. Hines.	70
Mab 41454, F. B. Hines.	80
Eva 43115, W. B. Carwin.	80
Columbia 41493, F. B. Hines.	95
Miss Minnie 2d 42377, W. B. Carwin.	100
Waneta 43004 (and heifer calf), T. C. Pointing.	85
Machacha 45003 (and heifer calf), T. C. Pointing.	85
Miss White Shoulders 68567, Ed Rice.	125
Belle Monde 10th 60930 (and twin heifer calves), T. F. B. Sotham.	700
La Gorita Maid 65011 (and cow calf), Capt. John Hutson.	275
Sweet Briar 65017, W. B. Carwin.	65
White Shoulders 3d 70033, T. F. B. Sotham.	75
Dolly 2d 72735, Ed Rice.	90
Nilsen 3d 72748 (and cow calf), T. F. B. Sotham.	180
Dora 72737, T. F. B. Sotham.	150
Anita 142048, C. B. Smith.	215
Annie Winifred 142051, T. F. B. Sotham.	225
Alpood 145517, T. F. B. Sotham.	125
Acaminta 148795, J. C. Yancy.	110
Assurance 2d 154583, Capt. John Hutson.	70
Alethea 154580, T. C. Pointing.	85
Aurelia 2d 157423, J. C. Yancy.	65
Alto 2d 158603, Capt. John Hutson.	100
Anxiety Lass 158607, T. C. Pointing.	105

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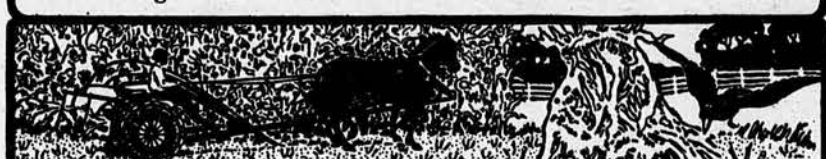
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Deering Corn Binders gather all of the corn. They do not waste. They are constructed on the grain binder principle; the corn is bound while in a horizontal position in the same manner as a sheaf of wheat. They do not knock off ears.

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are money-makers for the farmer. Ask the nearest Deering agent for a "Deering Corn Annual."



The New Way—DEERING CORN BINDER in the Field

BULLS.

Orpheus 71100, J. C. Yancy.	280
Dewey 90009, Ed Rice.	405
Abe Dewey 154581, W. B. Carwin.	65
Arnold 2d 157426, Capt. John Hutson.	85
Arcade 158608, Capt. John Hutson.	80
Autumn 158610, A. W. Jaggard.	50
Abercrombie 85007, Wm. Acker, Vermillion, Kans.	580
Orpheus 2d 105203, W. N. Grimes.	400
Ambition 158604, T. C. Pointing.	210
Akron 161621, J. C. Yancy.	85
Advance 157420, J. C. Yancy.	60
Ainsworth 2d, C. B. Smith.	75
Arlon 159899, W. B. Carwin.	85
Anchor 161622, J. R. Noble, Otterville, Ill.	205

GENERAL AVERAGES.

33 females brought.	\$14,850.00
Average.	159.67
14 bulls brought.	2,660.00
Average.	190.00
107 head brought.	17,510.00
General average.	163.64

UNREGISTERED AND GRADE COWS.

25 cows and 25 calves, W. N. Grimes, \$27.75 each.	
34 head dry cows and 1 steer, S. Stern, Gardner, Kans., \$25.25 each.	
33 head bred cows, S. Stern, \$26.25 each.	
17 cows and 17 calves, N. P. Goode, Lenexa, Kans., \$26.25 each.	
110 cows and 85 calves, Capt. John Hutson, \$25 each.	
19 unregistered pure-bred cows and 8 calves, E. S. Cisco, Linwood, Kans., \$31.25 each.	
28 head unrecorded cows, including Addie 154579, J. C. Yancy, \$25 each.	

Central Missouri Hereford Breeders' Association.

In central Missouri there exists a farmers' organization which has for its object the improvement of live stock generally and of Hereford cattle in particular. This association has organized a series of sales this fall to be held at convenient locations within their territory and at different dates. The first of these sales will be held at Moberly, Mo., on Thursday September 3, when fifty head of well-bred registered Hereford cattle will be offered for sale. In connection with this sale, prizes will be offered for the best yearling bull and the best yearling heifer in the sale. This is a novel feature which will add interest, as the purchaser of a prize-winner will have the satisfaction of knowing that he has taken away with him the best one in fifty. Mr. S. L. Brock, Macon, Mo., is the secretary of the association and will be glad to furnish catalogues and other information to any interested parties. After the magnificent sale held by Geo. H. Adams at Linwood, Kans., there is no doubt about the keenness with which Hereford men are looking after their own interests by buying good stock when they can get it. This sale will be handled in the ring by Col. Jas. W. Sparks, assisted by Col. Rogers and Graham. Here is an opportunity for Hereford men: a good offering of good cattle, good management by the secretary, and excellent ring work by the auctioneers promises a sale that will be remembered. This sale is advertised on page 833.

American Royal Special Prizes.

General Manager C. R. Thomas informs us that the Kansas City Live Stock Exchange has voted \$600 to be given to the management of the American Royal Live Stock Show to be awarded in prizes at this year's exhibition. The money is to be divided equally among the Herefords, Shorthorns, Galloways and Aberdeen-Angus. A committee from the exchange and the directors of the show will, at a later date, determine the classes for which the money will be offered. A portion of the money will be set aside for a substantial prize for the grand champion steer of all breeds, competition to be limited to the championship winners of the several breeds. It is expected that this prize will result in a good deal of good-natured rivalry among the four breeds. The action of the exchange was the result of the efforts of T. J. Wornall, secretary and treasurer of the American Royal.

Gossip About Stock.

Better methods, better breeding, more careful feeding, all help to make the increasing profits of the stock-raiser. The dipping of cattle, hogs, and sheep, is now accepted as absolutely essential to successful cattle farming. The Rex Stock Co., of Omaha, Neb., have in their Lime & Sulphur Dip, an article that has the approval of the U. S. Government. Write them.

Last December during the International Live Stock Exposition at Chicago, we stood beside J. C. Leach, of Carbondale, Kans., and saw him pay \$205 for Decatur Queen, the first prize and champion Duroc-Jersey sow of the show. We learn that Mr. Leach has had the misfortune to lose this great sow and we feel that we express the sympathy of all Duroc-Jersey breeders when we say the loss is a severe one which can not be made good.

One of the best and most convenient hotels in Kansas City is the Blossom House, situated just across Union Avenue from the Union Depot, and equipped in the most modern and up-to-date style, with a service that is excelled by none. It makes a stopping place that is at once comfortable and easy of access to the city, the wholesale district and the stock yards. The hotel is conducted on the European plan and maintains an excellent restaurant in connection, and visitors there are always sure of the most courteous treatment. It is a good place to stop.

It is a credit to any man to take pride Col. R. L. Harriman, of Buncheon, Mo., the live-stock auctioneer of Missouri, has his book nearly full of dates and is out-selling his competitors in every test of skill. We know how to sympathize with him and congratulate him. He is the man who gets the money, and his sale at Milan, Mo., last fall for S. S. Spangler, made the record for draft horses that has not yet been equaled. We have been with Colonel Harriman in many sales and are glad to testify that he is one of the ablest, most gentlemanly, and most satisfactory auctioneers that we have seen in the ring.

In Norton County, Kansas, at Almena, on September 8 to 11, will be held the annual county Alfalfa Festival. Cash prizes will be given for the best displays of alfalfa and the committee now expects to have at least 100 loads in the parade each day. In addition to the display of alfalfa and the awarding of prizes thereon a number of noted alfalfa-raisers have been chosen to make short addresses on their methods of cultivation. Other attractions have been added in the way of horse-racing, base ball tournament, etc., but the alfalfa will be the main attraction and it is confidently expected that this will be the biggest event in the history of Almena.

In a recent letter Mr. J. C. Norton, of Moran, Kans., says: "A good ad in the Kansas Farmer is a good thing. It is like Aunt Jemima's plaster, the more you try to pull the more it sticks the faster." I have inquiries right along. They seem to want pigs from the produce of large breeds. The day of the fat chunk is numbered; also the fat for coal blacks. It is a notorious fact that the best Poland-China pigs have more or less spots on them; the more spots the better individual the pig is. The Kansas Farmer brings inquiries from Kansas, Missouri, Oklahoma and Indian Territories and Old and New Mexico." Mr. Norton announces that he will sell a few registered Shropshire ewes and rams for a limited time at half price.

The farmers of the Southern States are taking more active interest in the live-stock industry than perhaps ever before. This is shown in part by the recent organization at Starkville, Miss., of a live-stock association for the States of Louisiana, Mississippi, Alabama, Georgia, Tennessee, and Florida. The plan of organization is similar to that adopted by the Texas association which has been in operation so many years. It will be called the Southern Live Stock Association and will hold its next meeting on September 3 at Starkville, Miss., the site of the Agricultural College and at the same time when the State Farmers' Institute will be held. The Southern States need just such an organization and there is no doubt that it is the completion of the first part

of the prosperity of that section which naturally belongs to it.

"Ancient Rome," considered the greatest scenic spectacle ever seen in the West, will be presented at the Iowa State Fair at Des Moines four nights, Monday, Tuesday, Wednesday, and Thursday, August 24 to 27. This wonderful representation with fire-works depicting in a marvelous manner the burning of the city, preceded by reproductions of the life, festivities, sports and barbarities of the Eternal City in the days of Nero, is a production of dazzling magnificence. In a historical way it is rarely instructive. Nowhere could one see the life and customs of this most wonderful of the ancient peoples so vividly and accurately set forth. The drama has been planned with the most careful attention to its historical correctness and it tells one of the most interesting stories that is to be found in all past history.

J. A. Carpenter, of Carbondale, is making a success in his rejuvenation of the Hereford herd. He keeps Beau Gondolus 133277 at the head of the herd and has been adding from time to time such animals as he lacked for the line of breeding he has adopted. He has some very fine calves on the place at this time that are good enough to show. One of these which we have in mind is a young heifer by Beau Gondolus out of Wild Rose 119904. Another one is a bull calf by Beau Gondolus out of Matilda 102934 by Tom Reed. His cattle are now in the 320-acre pasture which is knee-high in the best of grass and no cattle need be in better condition as a breeding herd than are these. Mr. Carpenter has recently purchased a very fine Berkshire boar from W. H. S. Phillips and the time is not far distant when he will have gained a reputation as a Berkshire breeder that will be well merited.

J. F. Stodder, owner of the Silver Creek Herd of Shorthorn cattle and Duroc-Jersey swine, Burden, Kans., is fitting a shew herd of Shorthorns for the principal Kansas fairs and the American Royal at Kansas City this fall. Mr. Stodder is very much pleased with his herd-header, Lord Thistle, who is making a great record as a sire and is producing show cattle right along. He thinks that Lord Thistle and Aylesbury Duke are the most satisfactory herd bulls he ever owned. Aylesbury Duke weighed 2,200 pounds as a short 3-year-old and belongs to the Scotch Missie family bred by Marr. It will be remembered that he has been a prize-winner wherever shown and it is a matter of satisfactory to know that Lord Thistle is a good second to him and that they will each be accompanied by females of like merit in the Silver Creek Herd show string this fall. Mr. Stodder has a few 6- and 8-months-old bull calves that are good enough to go anywhere and some of them are show calves. These can be had at prices to suit the times. His advertising card on page 835 has been changed.

C. S. Nevius, owner of the Glenwood herds of Shorthorn cattle and Poland-China swine at Chiles, Kans., has a great string of show Shorthorns this year. His herd is one of the best in the State and contains in it some of the blood of Gay Lad, the great Harris bull which Mr. Nevius sold to Powell Bros., Lee's Summit, Mo. It also contains a strong infusion of the blood of Gloster who now heads the herd of C. D. Bellows, Maryville, Mo. At present the herd-header is Victor of Wildwood 129064, than whom there are few better bulls in the United States. After seeing most of the Shorthorn herds of Kansas and Missouri the writer thinks it a credit, both to the State and to Mr. Nevius, to say that there are not now in existence a half dozen herds in Kansas that are better than Glenwood. In a short time we shall plan to give some notes on the shew herd which goes out from this great breeding establishment this fall. Mr. Nevius is a young man who is extremely critical as to what constitutes a good Shorthorn, and he states that in all his past experience he has never been able to secure a bull that satisfied all the requirements, before he got Victor of Wildwood. Combining as he does the best Orange Blossom Cruickshank blood, and having proved himself a wonderful sire, it is not surprising that he has met even the requirements exacted by Mr. Nevius. This is certainly a great herd.

This week we introduce a Poland-China breeder who has been for about ten years both breeding and buying the best Poland-Chinas that could be brought together in one herd. He has won a reputation as a buyer at sales by reason of his willingness to pay any kind of a price provided the animal was right. The result of his careful work is shown in the herd which now embraces the best blood lines known to the herd-book. During a recent visit to Freedom Herd at Belleville, Kans., we found his animals in the best of health and condition and the owner says they are the best he has ever had. He has been breeding for the large, heavy-boned, broad-backed type which are so much in demand by the farmers and breeders everywhere. In attaining this result he has retained the finish which so pleases Poland-China breeders. In his herd at present may be found the blood of Kansas Chief 23250, Missouri's Black Chief 19399, L's Spot 19083, Best On Earth 24151, and Royal Tecumseh 21779. The writer had the pleasure of seeing Royal Tecumseh and was surprised that the owner would consent to part with him. He is a grand individual and would be a fine herd-header for some one who needs this quality of Poland-Chinas. Freedom Herd belongs to F. C. Swiercinsky, R. R. No. 1, Belleville, Kans., whose advertising card has been placed on page 831. Freedom herd is one of the good herds of the State and is well worth a visit to see.

Last week in speaking of the very excellent herd of Berkshire swine owned by W. H. S. Phillips, of Carbondale, Kans., we omitted to mention that the sow lately bought by Mr. Phillips of G. D. Willins, Inman, Kans., was sired by King Longfellow 50305 and out of Lulu 60353. She was bred by L. C. Lamson, of Nebraska, and was bred to Rome Park Chief 64775. The types made out last week that this sow was sired by Rome Park Chief instead of being bred to him. The Kansas Farmer is a strong believer in pedi-

gree, but only when the pedigree is backed by good individuality. This sow is an extra good one and we think would be placed second only to Mr. Phillips' Queen Headlight in his herd, while her pedigree is as good as may be found in the herd-book. Mr. Phillips justly takes pride in this herd of Berkshires and with reason. The breeding is of the best and we do not know where could be found a herd of Berkshires of similar size that could excel them in quality. Mr. Phillips lives quite close to the town of Carbondale on the main line of the Santa Fe and is easily reached by visitors. His proximity to the Santa Fe gives him opportunities to ship to all points readily. His herd is worth a visit. Read his card on page 834.

Mr. E. S. Cowee, who has long been known as a breeder of Hereford cattle and Duroc-Jersey swine, at Burlingame, Kans., has now moved his headquarters to his other farm on R. R. No. 1, Carbondale, Kans. Following out his former policy he will continue to breed Duroc-Jerseys largely. A recent brief inspection of the new farm and its equipment shows that he is able, both in quality of stock and facilities to meet his rapidly growing trade. The new farm is well equipped with buildings, yard, shade, and water, and the spring farrow of pigs is doing remarkably well. His new location places him convenient to the main line of the Santa Fe so that he can ship easily and readily to all points and he has a bunch of very fine young Durocs that he is offering at very reasonable prices. His herd is headed by Excelsior B 11827 by Western King 8755 out of Rosa Ruby 22722, bred by the late D. Trott, of Abilene. One of the best sows he has on the place is Madam E 34578 by Red Haven 9975 and out of Madam C 22554. Both Red Haven and Madam C were bred by the Newton Bros., Whiting, Kans. Madam C is the mother and grandmother of this herd and is one of the best breeding sows Mr. Cowee has ever owned. She is by Woodburn 3841 out of Madam XXXX 8862 and has proved a grand sow for her owner. Madam E's last litter contained nine pigs, of which she has raised eight that are extra fine in quality. We have seen these pigs and are ready to testify that they are not only a credit to their dam and her breeder, but to the breed as well. See Mr. Cowee's card on page 831 and write for further particulars.

Of late years great interest has been manifested in Red Polls both as pure-bred cattle and as a breed which will greatly increase the milk flow of grade cattle when crossed with them. With the recent development of the dairy industry in the West has come the greatly increased interest in the milk-producing cattle. Many men have chosen to go into the pure-bred dairy cattle-business because of the returns received from the milk. Others are induced to furnish milk from the stock already in hand, and this is advised by the creamerymen themselves. They always add, however, that such crosses should be made as will increase the milk flow. The Red Polls combine the merits of copious milk flow with excellent carcass and this explains their very rapid growing popularity. Mr. A. Z. Brown, Guilford, Wilson County, Kansas, is a breeder of long experience with Red Polls whose breeding card has now been placed on page 831. His herd numbers about seventy-five head and are as alike as peas in a pod, with fine colors, good bone, large udders, and well-developed milk veins. In fact, he has some members of his herd that it would pay to go a long distance to see, and farmers and breeders who are desirous of increasing the milk flow in their herds and at the same time improving the beef qualities of their cattle should correspond with Mr. Brown and get his prices. It is better, of course, to visit the herd and make your own selection, but Mr. Brown is a gentleman of standing and an order placed with him will be filled to the best of his ability. There is a great future in store for the Red Polls, both as beef- and milk-producers and now is the time to get next to this ready means of increasing the income of the farm by securing Red Polls of quality. See Mr. Brown's card and write him for details.

T. P. Babst & Sons, owners of the Valley Grove Herd of Shorthorns, Auburn, Kans., have a new advertising card in this issue. It will be found on page 834. We take special pleasure in calling attention to this card, for the reason that Mr. Babst is the owner of one of the largest Scotch herds of Shorthorns in the State of Kansas and for the more important reason that he is now offering, for the first time in years, a number of heifers for sale. These heifers are sired by Lord Mayor 11277 and Knight's Valentine 157068. This insures the quality of these heifers, but when it is announced that they are all bred to Golden Day by Imp. Mariner out of Imp. Mistletoe 15th, it will convince anyone that snaps are offered at this time. Golden Day is bred by Hanna & Co., Howard, Kans., and his great granddam was the dam of Merry Hampton. Mr. Babst has also a few young cows of the same breeding with calves at foot by Lord Mayor, Knight's Valentine and Golden Day. Like every advertiser in the Kansas Farmer, they had very good sales all this spring; in fact, the quality of the animals on this farm is such that they sell themselves when a discriminating buyer has an opportunity to see them. The Valley Grove Herd is one of the herds that has been so bred and so fed that they lay on even flesh of extra quality from grass. This is an extremely important point, because it places the animals in such condition that they are in shape to go to any part of the country and respond to any kind of feed, and retain their quality under all conditions. Mr. Babst has solved one of the problems of feeding for quality. There are no better Shorthorns than the Scotch, particularly when they have been properly bred and properly fed.

An After-Dinner Train.

Beginning with August 2, M. K. & T. train No. 3 will leave Kansas City Union Depot at 12:25 P. M., instead of 10:35 A. M. as heretofore. This makes an elegant After-Dinner Train for Texas, giving passengers from the North and West an opportunity to lay over in Kansas City for several hours, and then resume their journey to points reached by the "Katy" in Oklahoma, Indian Territory, and Texas.

Cremoline

KILLS SCREW WORMS

And Quickly Heals the Wounds.

"I have used **Cremoline** at my home, stables and ranch and after thorough tests, I feel perfectly safe in saying that I not only find it to be all that is claimed for it as a disinfectant, germicide and insecticide, but in my opinion it has no equal as a sure and speedy cure for Screw Worms." JAMES M. WALTERS, Mayor, Temple, Texas.

"**Cremoline** has proven to be what it is made for; I have used it successfully on a horse that was cut by a wire fence. It not only kills Screw Worms, but also greatly helps to heal the wounds. The sale has increased greatly, as it gives satisfaction in every instance." G. KLEVPAS, Westphalia, Texas.

For Sale by General Dealers, in 25c bottles and 1, 5, and 10 gallon cans; but if not kept in stock by your storekeeper, we will ship promptly on direct orders. Made only by: **The Cremoline Mfg. Co., 1729-31 Olive st., St. Louis.**

DIP

GOVERNMENT DIP ORDER ISSUED June 18, 1903, covers entire territory west of Mississippi river and demands that "Lime and Sulphur Dip Shall Be Used." No Other Dip is Approved. Rex Official Lime and Sulphur Dip is the BEST of Dips. Costs less than half what other Dips cost. Dip, wash, or spray for lice, scab, mange, scurvy, ticks, etc. For all stock. Write to-day for free copy of "VITAL POINTS ON DIPPING."

REX STOCK FOOD CO., Dept. 9, Omaha, Nebr.

Publisher's Paragraphs.

Farmers who are interested in securing earth that is thoroughly inoculated with alfalfa bacteria from one of the most successful fields in the State should notice the standing announcement of A. Munroe, of Whiting, Kans., on page 831.

We are in receipt of the new 64-page illustrated catalogue of the Gem City Business College, Quincy, Ill. It is the "Third-of-a-Century" edition, and is profusely illustrated with half-tone cuts of school-rooms, groups of students, individual portraits, etc., with full and specific information about this noted school. This catalogue is printed in four tints of ink on fine calendered paper, with a beautiful cover embossed in gold script letters. It is one of the most elegant school catalogues ever coming to our office. This catalogue is advertised in another part of this paper and may be had free by writing for it.

We want to call the attention of our readers to the advertisement of the Pella Drain-Tile Company of Pella, Iowa, that appears in this issue of the paper. It is a pleasure to meet good, reliable and responsible men in the business world to-day and we want to say right here to our readers that this firm is reliable and responsible in every respect. We can not recommend them too highly to your patronage. The Pella Drain-Tile Company manufactures all kinds of drain-tile and brick and they offer you the most liberal proposition on earth. If you are contemplating the purchase of anything in their line we would advise you to write them at once. It means money to you to do so. A dollar saved is a dollar earned and they will save you money.

Topping the Market.

Cattle fed on shredded corn-stover have repeatedly topped the live-stock market in price. The great nutritive properties of shredded corn-stover make it an ideal stock food, easily accessible to all farmers. The size and price of huskers and shredders, until recently, made it impossible for the small grower to secure a machine for the preparation of corn-fodder. The advent of the Deering Two-Roll Husker and Shredder, which meets the wants of the individual farmer, placed it within the means of the small grower to enjoy all the benefits of shredded corn-stover. The Deering Four-Roll Husker and Shredder is a strong, reliable machine, designed especially for the large grower or a club of farmers. The scientific construction of the Deering shredder head makes the shredded stover produced by Deering machines especially wholesome and nutritious. Deering shredded corn-stover is famous for its quality. It makes fat cattle.

The advertisement of the ever popular Eli Hay Presses, manufactured by the Collins Plow Co., Quincy, Ill., is running in our columns. Our readers can not help but be familiar with these famous presses. As made to-day they are the result of many years' experience in hay-press manufacture. A feature of the No. 1 continuous travel two-horse press, which perhaps has the widest use of any, is the immense pressure applied to the hay for the power used, the manufacturer stating it as 65 to 1 or concretely, a horse draft of 500 pounds exerts a pressure of upwards of over 30,000 pounds. This explains the solid compact bales for which this press is noted. This, with their uniform shapeliness, gives the Eli product

a preference in the market, receiving also the favor of shippers who are able to get the maximum amount in the car. The Ellis are strong and durable machines, have large feed-openings and do rapid work. The advertisement should be consulted by every prospective buyer.

The ability to write shorthand is coming to be more and more an absolute and necessary clerical qualification for young men and women in every station in life. The very nature of the work places them in close confidential business relations with merchants, financiers, capitalists, and business people generally. In a multitude of cases, shorthand has proved the stepping-stone to very lucrative positions. A good stenographer need never want employment in Kansas City, Mo., as its great mercantile houses, manufacturing, banks, railroad, packing, live-stock, grain and other gigantic enterprises employ one or more, and the demand for the really capable will always exceed the supply. The salaries of stenographers range from \$40 to \$60 per month, and when thoroughly experienced from \$80 per month upward. The student who desires to take up the study of shorthand should choose a standard system which, by the success of its writers, has proved to be capable of reaching the highest point in speed and accuracy. To show the simplicity of our systems of shorthand and the facility with which they are learned, we will send on request free, introductory lessons in one of the systems taught in our institution, Spalding's Commercial College, "Dept. 27," Kansas City, Mo.

How They Like McLaughlin's Horses.

McLaughlin Bros., Columbus, Ohio.

Gentlemen:—Since having purchased of you our French Coach Stallion Vernon 3306, last month, he died. We at once notified you of our loss. It gives us pleasure to write you this testimonial of your fair treatment. Although we did not claim that you were responsible for our loss yet you at once volunteered that you would stand part of it.

We have this day selected Viervillais 2879 and consider him one of the best coach stallions we ever saw. Although he may not be the equal of Vernon yet we consider him nearly as good and you have let us have him at a price so low that you have shared the loss of our horse equally with us.

You are the kind of people that any one can always feel safe to do business with because you try to help your customers along when they meet with misfortune.

Yours very truly,
Chas. E. Rohrer,
R. F. Smith,
F. W. Wing,
Geo. S. Miller.

SPECTACLES FREE!



SPECTACLE WEARERS!

Send us ten names of other spectacle wearers, for which we mail you FREE our Perfect Home Eye Tester, enabling you to select a perfect fitting set of Dr. Haux Famous Perfect Vision Spectacles at the lowest wholesale price (a full set for \$1 will wear yourself and family a lifetime) and we will include a handsome pair of Rolled Gold Spectacles FREE, if your application is received in the next 30 days. Address,

DR. HAUX SPECTACLE CO., St. Louis Mo.



America's Leading Horse Importers

At the Great Annual Show of France held at Evreux June 10 to 14, our stallions won first, second, third, and fourth prize in every Percheron stallion class; also won first as the best collection.

At the Show of the Societe Hippique Percheronne De France held at Nogent-le-Rotrou from the 18th to the 21st of June, our stallions won every first prize, over forty prizes in all. Two groups were made up of our exhibit, on which we won first and second.

This prize-winning importation consisting of a hundred and nine stallions arrived home July 28, and is by far the best lot of horses ever imported to America.

Call on us if your neighborhood needs a good stallion. A catalogue and calendar sent on application.

McLAUGHLIN BROS., Columbus, Ohio,
Emmettsburg, Iowa. Kansas City, Mo.

The Young Folks.

Conducted by Ruth Cowgill.

PAUL REVERE'S RIDE.*

[Printed by request.]

Listen, my children, and you shall hear
Of the midnight ride of Paul Revere,
On the eighteenth of April, in seventy-five;
Hardly a man is now alive
Who remembers that famous day and year.

He said to his friend, "If the British
March
By land or sea from the town to-night,
Hang a lantern aloft in the belfry arch
Of the North Church tower as a signal
light—
One, if by land, and two, if by sea;
And I on the opposite shore will be,
Ready to ride and spread the alarm
Through every Middlesex village and farm,
For the country folk to be up and to arm."

Then he said, "Good night!" and with muffled oar
Silently rowed to the Charlestown shore,
Just as the moon rose over the bay,
Where swinging wide at her moorings
lay
The Somerset, British man-of-war;
A phantom ship, with each mast and spar
Across the moon like a prison bar,
And a huge black hulk, that was magnified
By its own reflection in the tide.

Meanwhile his friend, through alley and street,
Wanders and watches with eager ears,
Till in the silence around him he hears
The muster of men at the barrack door,
The sound of arms, and the tramp of feet,
And the measured tread of the grenadiers
Marching down to their boats on the shore.

Then he climbed the tower of the Old North Church,
By the wooden stairs, with stealthy tread,
To the belfry tower overhead,
And started the pigeons from their perch
On the sombre rafters, that round him made
Masses and moving shapes of shade,—
By the trembling ladder, steep and tall,
To the highest window in the wall,
Where he paused to listen and look down
A moment on the roofs of the town,
And the moonlight flowing over all.

Beneath, in the churchyard, lay the dead,
In their night-encampment on the hill,
Wrapped in silence so deep and still,
That he could hear, like a sentinel's tread,
The watchful night-wind, as it went
Creeping along from tent to tent,
And seeming to whisper, "All is well!"
A moment only he feels the spell
Of the place and the hour, and the secret dread
Of the lonely belfry and the dead;
For suddenly all his thoughts are bent
On a shadowy something far away,
Where the river widens to meet the bay,—
A line of black that bends and floats
On the rising tide, like a bridge of boats.

Meanwhile, impatient to mount and ride,
Booted and spurred, with a heavy stride
On the opposite shore walked Paul Revere.

Now he patted his horse's side,
Now gazed at the landscape far and near,
Then, impetuous, stamped the earth,
And turned and tightened his saddle-girth;
But mostly he watched with eager search
The belfry-tower of the Old North Church,
As it rose above the graves on the hill,
Lonely and spectral and sombre and still,
And lo! as he looks, on the belfry's height
A glimmer, and then a gleam of light!
He springs to the saddle, the bridle he turns,
But lingers and gazes, till full on his sight
A second lamp in the belfry burns!

A hurry of hoofs in a village street,
A shape in the moonlight, a bulk in the dark,
And beneath, from the pebbles, in passing,
A spark
Struck out by a steed flying fearless and fleet:
That was all! And yet, through the gloom and the light,
The fate of a Nation was riding that night;
And the spark struck out by that steed,
In his flight,
Kindled the land into flame with its heat.

He has left the village and mounted the steep,
And beneath him, tranquil and broad and deep,
Is the Mystic, meeting the ocean tides;
And under the alders that skirt its edge,
Now soft on the sand, now loud on the ledge,
Is heard the tramp of his steed as he rides.

It was twelve by the village clock,
When he crossed the bridge into Medford town.
He heard the crowing of the cock,
And the barking of the farmer's dog,
And felt the damp of the river fog,
That rises after the sun goes down.

It was one by the village clock,
When he galloped into Lexington.
He saw the gilded weathercock
Swim in the moonlight as he passed,
And the meeting-house windows, blank and bare,
Gaze at him with a spectral glare,

*Mr. Longfellow imagined a party of friends met at a country inn, and telling tales before the fire. The first of these Tales of a Wayside Inn was by the land-lord, and is this story of Paul Revere. Revere was an American patriot, a silversmith and engraver by trade, whose tea-pots and cream jugs and tankards may be found in old Boston families. He was a spirited man, and in the secrets of the Boston patriots.

As if they already stood aghast
At the bloody work they would look upon.

It was two by the village clock,
When he came to the bridge in Concord town.
He heard the bleating of the flock,
And the twitter of the birds among the trees,
And felt the breath of the morning breeze
Blowing over the meadows brown.
And one was safe and asleep in his bed
Who at the bridge would be first to fall,
Who that day would be lying dead,
Pierced by a British musket-ball.

You know the rest. In the books you have read,
How the British Regulars fired and fled,—
How the farmers gave them ball for ball,
From behind each fence and farm-yard wall,
Chasing the red-coats down the lane,
Then crossing the fields to emerge again
Under the trees at the turn of the road,
And only pausing to fire and load.

So through the night rode Paul Revere;
And so through the night went his cry of alarm
To every Middlesex village and farm,—
A cry of defiance and not of fear,
A voice in the darkness, a knock at the door,
And a word that shall echo forevermore!
For, borne on the night-wind of the Past,
Through all our history, to the last,
In the hour of darkness and peril and need,
The people will waken and listen to hear
The hurrying hoof-beats of that steed,
And the midnight message of Paul Revere.

—Henry W. Longfellow.

Our Pilgrimage.

Cambridge is a pretty town, all trees and homely houses. It is across the Charles River from Boston. It would be a quiet place, were it not for the heavy wagons that go rumbling past at all hours of the day or night. These wagons sound like a fire department and they awaken you at just such unseemly hours.

The heart of the town is the college. I have not yet had time to count all the buildings on this fair campus, for there are many—big, beautiful, substantial-looking structures, with ivy-covered walls.

A thing that seemed very strange at first is the fearlessness of the birds and squirrels. You can not walk any distance in any direction without seeing dear little bushy-tailed red squirrels running nimbly about upon the grass or up the trees, across the path or up to your very feet, entirely unafrighted. The pigeons and sparrows are equally gentle. You frequently see a college boy stooping in the middle of a path feeding the birds with crumbs, while they flutter about him, or approach half-timidly upon the grass. It is a very lovely bit of nature, that has come to seem as much a matter of course as the grass and trees and constantly passing students.

Here and there upon the campus are great bronze statues of men who have been intimately connected with the college. An ideal figure of John Harvard, the first founder, sits in a prominent place of honor, a fine, grave-faced man, with head meditatively bowed, as if in constant contemplation of the wonder of modern education, grown so great from his so small beginning.

The buildings are of all kinds and ages. There is a beautiful little chapel of green and gray stone of modern architecture, and there is the old Massachusetts Building, erected in 1720. The library is my especial joy. It is a huge, gray, stone building, filled with book and books and books. Almost anything you can desire you can find here—books upon every subject under the sun, books so rare that they can be found in only one or two other libraries in the world, books whose age alone would make them valuable, and the newest books yet written upon the most modern of subjects.

Another building of which we see a good deal and which is very interesting to us, is Randall Hall, the college restaurant. All we see is a great—immense—dining-room filled with long white-dressed tables. There is a kitchen at one side. I know, for sometimes as we come up for our meals, we can hear the clatter of the dishes a block away, and when we are hungry, we can smell the cooking ever farther. They have the queerest system in the world. You can not get a meal there until you buy one of their coupon books, little blue-bound books of thirty pages, each page containing ten little squares, like stamps, with a big figure 1 upon each one. You have to sign your name, seat and table numbers to your order. Then

you tear out enough little one-cent coupons to equal the amount of your order, and hold it all at arm's length, over your head. Then, after your arm gets to aching, a boy comes dashing up, seizes it and makes off with it. And then, if you wait long enough, you will finally get your meal. It is great fun, and we get no end of enjoyment out of it. The waiters are college boys, who take that way of helping out with their expenses, and they are always most courteous.

The bill of fare has a list of all the things you may order for that particular meal, with its price after it. For instance, bread is two slices for 1 cent; butter 2 cents (you are apt to forget to order butter for a time or two, being so used to consider it a component part of your bread); coffee, in a cup that is so heavy it makes you think of a water-bucket when you drink, for 4 cents. These and some others are the staples, which appear on every menu card. Then sometimes there will be a small beefsteak, for 12 cents; or a potato salad for 5 cents; or a pudding for 5, 6, 7, or 8 cents; etc. There is a very good variety for each meal, and you can have as much as you want to pay for. But there is where the exciting part comes in. The object of the game is to make your coupon book last as long as possible. Here is a splendid opportunity to save money on your diet which you will then have for other more important things. So you look down the card, and pick out the 2, 3, and 4 cent articles and make that your meal, for say 12 or 13 cents. Then by noon you are nearly starved and order a lot, regardless of expense, saying, sullenly, that you are not going to starve yourself, anyway. But you find ere long that you can not eat all you have ordered, and look with pain upon numerous little dishes set around your plate, which cost you 2, 5, or 8 coupons, and which you are absolutely unable to eat. But you eat all you can and leave in disgust and thereafter the thought of Randall Hall is unbearable to you for two or three meals, by which time you are ready to forgive and forget and try it all over again.

In my reading lately, I have run across some curious old accounts of New England affairs. One of them is an account of the founding of Harvard, which may be interesting in this connection. I give it just as it is written, spelling, punctuation, and all. It was written in 1636:

"1. After God had carried us safe to New-England, and we had builded our houses, provided necessaries for our livelihood, rear'd convenient places for God's worship, and settled the Civill Government: One of the next things we longed for, and looked after was to advance Learning and perpetuate it to Posterity; dreading to leave an illiterate Ministry to the Churches, when our present Ministers shall lie in the Dust. And as wee were thinking and consulting how to effect this great Work; it pleased God to stir up the heart of one Mr. Harvard (a godly Gentleman and a lover of Learning, there living amongst us) to give the one halfe of his Estate (it being in all about 1700. l.) towards the erecting of a Colledge, and all his Library; after him another gave 300. 5. l., others after them cast in more, and the publique hand of the State added the rest: the Colledge was, by common consent, appointed to be at Cambridge, a place very pleasant and accommodate and is called (according to the name of the first founder) Harvard Colledge.

"The Edifice is very faire and comely within and without, having in it a spacious Hall; (where they dally meet at Common Lectures) Exercises, and a large Library with some Bookes to it, the gifts of diverse of our friends; their Chambers and studies also, fitted for, and possessed by the students, and all other roomes of Office necessary and convenient, with all needful Offices thereto belonging. And by the side of the Colledge a faire Grammar Schoole, for the training up of young Schollars, and fitting of them for Academical Learning, that still as they are judged ripe, they may be received into the Colledge of this Schoole: Master Corlett is the Mr.

who hath very well approved himself for his abilities, dexterity and painfulness in teaching and education of the youth under him. * * *

"Over the Colledge are twelve Overseers chosen by the generall Court, six of them are of the Magistrates, the other six of the Ministers, who are to promote the best good of it, and (having a power of influence into all persons in it), are to see that every one be diligent and proficient in his proper place."

Another document is entitled "Rules and Precepts that are observed in the Colledge." They are such rules as need not be despised now and are very entertaining on account of the quaint simplicity that characterizes them. One is "Let every Student be plainly instructed; and earnestly pressed to consider well, the main end of his life and studies is to know God and Jesus Christ which is eternall life. Job. 7. 3. and therefore to lay Christ in the bottome, as the only foundation of all sound knowledge and Learning. And seeing the Lord only giveth wisdom, Let every one seriously set himselfe by prayer in secret to seek it of Him, Prov. 2. 3." Another is, "None shall under any pretence whatsoever, frequent the company and society of such men as lead an idle and dissolute life. Nor shall any without his Tutor's leave, or (in his absence) the call of Parents or Guardias, goe abroad to other Townes." Another, "If any Schollar shall be found to transgresse any of the Lawes of God, or the Schoole, after twice Admonition, he shall be lyable, if not adulterers, to correction, if adulterers, his name shall be given up to the Overseers of the Colledge, that he may bee admnished at the publick monethly Act."

Two disgusted old Dutchmen came over from Holland in 1679 to look the country over, and in their travels came upon Boston, and visited the "Colledge." They seem to have been not so very well impressed by what they saw. They say: "We reached Cambridge, about eight o'clock. It is not a large village, and the houses stand very much apart. The college building is the most conspicuous among them. We went to it, expecting to see something curious, as it is the only college, or would-be academy of the Protestants in all America, but we found ourselves mistaken. In approaching the house, we neither heard nor saw anything mentionable; but, going to the other side of the building, we heard noise enough in an upper room, to lead my comrade to suppose they were engaged in disputation. We entered, and went up stairs, when a person met us, and requested us to walk in, which we did. We found there eight or ten young fellows sitting around smoking tobacco, with the smoke of which the room was so full, that you could hardly see; and the whole house smelt so strong of it, that when I was going up stairs, I said, this is certainly a tavern. We excused ourselves, that we could speak English only a little, but understood Dutch or French, which they did not. However, we spoke as well as we could. We enquired how many professors there were, and they replied not one, that there was no money to support one. We asked how many students there were. They said at first, thirty, and then came down to twenty; I afterwards understood there are probably not ten. They could hardly speak a word of Latin, so that my comrade could not converse with them. They took us to the library, where there was nothing particular. We looked over it a little. They presented us with a glass of wine. This is all we ascertained there."

If these ancient cynics could only come here now and look about them! They would realize that they had been criticizing the acorn for being so small, for that small seed, planted so long ago, has become a mighty tree, whose branches reach far out over the world and succor men of all Nations. There is one thing, though, that would assure that this is the same old place, and that is, the tobacco smoke. There is a boy attached to almost every pipe or cigarette you see! RUTH.

What the Birds Say.

VARIOUS NOTES OF OUR WILD BIRDS.

To the uninitiated there is little but confusing medley in the voices of the woods, but even to such the notes will gradually separate themselves until one, two, three, and in time many more, may be distinguished from the blending whole.

Of the many varieties and species of birds, each has his own note, distinct and easily recognized from all the rest. And among these are notes which seem to be clearly expressed words, as "whip-poor-will," "cheer up," "chick-a-dee," "phe-be," and others that are familiar to every by-way rambler.

The goldfinch sings, "Come, talk to me, talk to me! I've cheated ye, I've cheated ye! Maybe, maybe! Paisley, Paisley!" The cardinal grosbeak whistles, "What cheer? What cheer? Three cheers! Three cheers! Cheo-cheo, cheo-cheo-qr-qr-rr!" If we listen sympathetically we can imagine the birds to be saying many things, so clearly do their notes lend themselves to certain words. Thus the robin's vocabulary has been added to almost indefinitely, and besides his well-known "cheerily, cheerily, cheer-up! Cheerily, be cheery!" various naturalists have credited him saying, "Mary, dearie! Think of it, dearie! Pick it up, Mary! Cheap! Tut-tut-tut! Mary Lippt, get your tippet! Go upstairs and get your hat! Quick! quick!"

The meadow lark calls tantalizingly, "Betsy, de-ah! Spring o-the-ye-ah! I see you. You can't see me!" The saucy house wren, "Sweet William! Sweet William! Cheer-up!"

Peabody bird, or white-throated sparrow, "Old Sam Pea-body, Pea-body, Pea-body! All day whit-ting, whit-ting, whit-ting! Sow wheat, Peverly, Peverly, Peverly! I work cleverly, cleverly, cleverly! Po-or me! Sweet Can-a-da, Can-a-da, Can-a-da!"

The song sparrow, "Pres-pres-pres-by-tee-rian! Maids, maids, maids, hang on to your tea-kettle! Sweet, sweet, sweet, bitter! Won't you come and live with me, sweet, sweet, sweet? Chewee, chewee, chewee, lira, lira, lira, lee!"

Among the sweetest of our singers are the thrushes: the hermit, with his clear, spiritual, "Oh! spherah, spherah, spherah. Oh! holy, holy, holy! Oh! clear away! Clear away! Oh! clear up! clear up!" the olive back, or Swainson's thrush, which sings, "I love, I love, I love you! I love, I love you, truly!" the gray cheek, or Alice's thrush, with his tender, "Wee-o-wee-o-tit-ti-wee-o!" the veery, or Wilson's thrush, which sings "When! Who! Ta-wheel-ah! Ta-wheel-ah! Twil-ah! Inee-o! Inee-o!" and the wood thrush, or wood robin, with his sweet "He-a-r me! Hear me! Noll-noll! A-l-o-lee! Come to me! Noll-a-e-o lee! GERALDINE!" The wood thrush always sings away from his nest and we rarely hear his voice except in the deeper woods.

The brown thrasher calls "Drop it! Drop it! Cover it up! Cover it up! Plant it! Plant it! Pull it up! Pull it up! Look up! Look up! Glory to God! Hallelujah! Amen! Videlicit!" The Baltimore oriole, "Hero, hero, hero! Cheery, cheery, cheery! Cheer up, cheer up, cheer up! Heave-ho! heave-ho! Once more! Now!" The orchard oriole, or starling, "Hebe! Hebe! Hurry-up Hebe! Hurry-up, hurry-up, Hebe! Hurry-up—bring—that—chow-chow, Hebe! Hebe!"

From the marshes the blackbird whistles "Agree! Agree! Jack, Jack, quick!" And the redwing blackbird, or red shouldered starling, "I-ka-lee! Conquer-ee! H'wa-ker-ee!" The rose-breasted grosbeak says, "See here! See here! Pretty one! Peter! Peter! All right!" The golden crowned kinglet, "See-see-see!" The Phoebe bird merely calls his name, "Phe-be! Phe-be!" and the wood pewee the same, but in a meditative, plaintive voice, "Pe-wee! Pe-wee! Pe-wee!" The cuckoo, or rain crow, ejaculates "Kuk-kuk-kuk—kuk-kow, kow, kow!" The cowbird, "Cluck-see! Cluck-see!" And the blue-jay, harshly, "Jay, jay! Dilly-dally! Pwll-hilly! Pwll-hilly! Chillack!"

From among the higher branches the green warbler sings, "Hear me, Sa-i-n-t Ther-e-se! Trees, trees, mur-mur-ing

trees! Cheese, cheese, a-little-more cheese! Sleep, sleep, pretty one, sleep! Wee, wee-wee-wee—Susy!" and near by his cousin, the yellow warbler, answers teasingly, "I beseech you! I beseech you! Pretty-creature—who are you?"

The bluebird says, "Pu-ri-ty, pu-ri-ty! Tru-ally, tru-ally! Bermuda! Bermuda!" The ovenbird, "Teacher! Teacher! Teacher! I see! I see! I see!" The Carolina wren, "Sweet-heart! sweet-heart! sweet! Jimmee! Jimmee! I'saureta! I'saureta! Phee-do, phee-do, phee-do, phee!"

We are most of us familiar with the bobolink's "Ha! Ha! Ha! I-must-have-my-fun, Miss Selverthimble, thimble, thimble, if I-break-every-heart-in-the-meadow, see, see, see! Classy! Be-true-to-me! Be true, be true! Kick-the-slipper! Tem-pe-rance! opodeldoc, opodeldoc—try-Dr.-Lincoln's-opodeldoc!"

The popular words of other birds are: Flicker, goldenwing, woodpecker, or pigeon woodpecker, "Wicka, wicka, wick! Yu-cah! Yu-cah!"

Yellow-breasted chat, "Cr-r-r-whrr—that's it—chee-quack-chick—yit, yit, yit! Now, hit it, tr-r-r-when—caw, caw, caw! Cut, cut! tea-bay! Who-mew! mew!"

The red-eye vireo, or preacher, "I know it! I made it! Would you think it? Mustn't touch it! Shouldn't like it! If-you-do-it-I'll-know it! You'll me it!" The brigadier vireo, "Brigadier, brigadier, brigade! How d'ye-do! How d'ye do! How d'ye!"

Chickadee, or black-cap titmouse, "chick-a-dee, dee, dee! day! Whee-wee! whee-wee!" The tufted, or crested titmouse, "Here-here-here! Hee-dle-dee-dle-dee! Pets! Pets! Pets! Pets! Daytee! 'Tis sweet, here, 'tis!"

Quail, or partridge, "Bob-white! Here's Bob-white! more-wet! Here's more-wet."

Catbird, "Prut, prut, prut! Coquill-cot Hey! Coquill-cot! Hey! Victory! Ze-a-y! Ze-a-y! Mi-au-w! Ma-a-a!" Maryland yellow throat, "I see, I see you! I see, I see you! Which it it? Which is it? What a pity! What a pity! I spy it! I spy it! Which way, sir? Follow me-e! Follow me-e! Follow!" King bird or bee martin, "Kyrie!" Red crossbill, "L'ink, link, l'ink!" Brown creeper, "Sue, luky, luky!" Purple finch, "Build it he-re, de-ar—better build it he-re!" Night hawk, "Skirk! Skirk!" Owl, "O o-o-that-I-never-had-been-b-o-o-r-r-r-n-n-n!"—F H. Sweet, in Small Farmer.

A Boy of His Size.

There is no better or truer instinct than that which makes it impossible for a boy to stand by in silence and see a small mate abused by an older one.

It invariably indicates a cowardly spirit on the part of the one who always "picks on" a boy smaller than himself, and the big fellow never gets or deserves any sympathy when he comes to grief through his failure to choose "one of his size" when he wants to fight.

Ten or twenty schoolboys were on their way to a school in an eastern city, one day recently, when a boy of 16 among them began to tease a little fellow of perhaps 12 years.

Suddenly the annoyed smaller boy threw an apple core at his tormentor, whereupon the big one assailed the little fellow brutally, saying:

"I'll let you know that you can't throw apple cores at me! You take that!"

The little fellow shrieked with pain, but he could contend but feebly against his far larger and stronger assailant, and none of his schoolmates offered to go to his relief.

Leaning against a lamp-post up the street was a typical gamin, ragged, unkempt, and far removed from the tidy, well-fed and well-dressed school-boys. Their lifeways were far apart. A bundle of newspapers was under his arm, and he seemed to be looking about for a customer. Suddenly he let the unsold papers drop to the snowy ground and came running lightly and swiftly down the street, his blue eyes aflame and his grimy fists clenched. The next instant the big, well-dressed assailant of the small boy found himself seized by the collar and

jerked violently to the ground by a boy of about his own size, who said, boldly:

"Take a kid o' yer size when ye want ter fight, yer big coward! Take a kid o' yer size! Touch that little kid ag'in if ye dare!"

The big fellow struggled to his feet, and said, blusteringly: "Who's going to keep me from touching him if I want to?"

"I am," said the gamin, standing as erect as a West Point cadet; and whipping off his ragged jacket he gave his head a toss, and said again:

"I am goin' to see that you don't touch him ag'in! If you want to fight, take a kid o' yer size, I tell ye! Try yer hand on me!"

"Humph!" said the big fellow, without, however, offering to touch the "kid of his size."

"Yer a coward, that's what you are!" said the gamin. "Ye don't dare touch a kid o' yer size!"

Nor did he. Mumbling and threatening, he walked off, with the jeers of his schoolmates ringing in his ears.

The street gamin went on his way also, unconscious, perhaps, of the fact that, in his bold defense of the weak against the strong, he had manifested a kind of heroism all too rare among the boys of the world.—J. L. Harbour, in Our Young People.

For the Little Ones

SUPPOSE.

Suppose and supposing that all o'er this world Each little girl cried when she had her hair curled—

Me! My! What a terrible cry! Why, all the soft kitties would scamper with fright, And set up a-meowing by day and by night, And dear little doggies stop wagging their tails To howl out the howlingest, wallingest wails; And wee little lambs in the fields far away, Would bleat and ba-a-a and refuse to go play, And their mothers would scold them for making a noise, And call them the naughtiest of little lamb boys—

But there! I forgot, I declare! I see I'm supposing the wrong kind of case, For my little girl, with a smile on her face, Says, "Please, I do so want to have my hair curled." And of course she is like all the girls in this world!

—Mary H. Flanner.

Marjorie's Dick.

Marjorie's Dick was a pretty red-bird. The way she found him was this. One day when walking in the orchard in the side that is near the road, she saw a bird fluttering along, trying to fly, but dropping to the ground whenever he attempted to lift his wings. She went to him, and picked him up, and saw that the poor little bird had been lamed in the wing. Some one had probably thrown a shot at him.

Marjorie has a tender heart, so she stooped and picked up the frightened little thing. At first he seemed afraid of her, but soon he would nestle down in her soft little hands as if he felt sure she would help him. Marjorie took him to the house and put him in a big cage that was up in the attic. She fed him and tended him day by day, until he was well and strong and would sing happily for hours at a time. And so he lived with her all that summer and winter, and everybody called him "Marjorie's Dick."

But the next spring, when all the

birds came back and sang so gaily in the treetops, free to come and go as they pleased, Marjorie felt sorry for Dick. "Dickey Bird," she would say, "Do you wish you were free, helping to make a nest in the tree-top?" And Dick would look at her wisely, with his little head on one side, but he said never a word.

At last, one day, Marjorie said, "I am going to make Dick free like his brothers and sisters in the treetops."

So that night she left his cage hanging out on the porch, with the door wide open. But what do you think? Dick stayed in the cage! He didn't try to go out at all. Marjorie left the door open all that day and the following night, but still faithful Dick did not go.

One morning Marjorie tipped the cage downward. Dick hopped down to the door, stood for a moment looking out, tripped gaily out, and flew to the highest treetop.

"Oh, Dickey, Dickey!" said Marjorie, and began to cry. For she had loved her pretty bird, and was sorry when he left her. But every day all that summer, Marjorie's Dick came to that treetop, and sang a merry song and Marjorie sat on the doorstep and listened.

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Do you know you have asked for the costliest thing
Ever made by the Hand above—
A woman's heart, and a woman's life,
And a woman's wonderful love?

Do you know you have asked for this priceless thing
As a child would ask for a toy?
Demanding what others have died to win,
With the reckless dash of a boy?

You have written my lesson of duty out.
Man-like you have questioned me;
Now stand at the bar of my woman's soul
Until I shall question thee.

You require your mutton shall always be hot,
Your socks and your shirt shall be whole,
I require your heart shall be true as God's stars,
As pure as heaven your soul.

You require a cook for your mutton and beef;
I require a far better thing:
A seamstress you're wanting for stockings and shirts—
I look for a man and a king.

A king for a beautiful realm called home,
And a man whom the Maker, God,
Shall look upon as He did the first,
And say: "It is very good."

I am fair and young; but the rose will fade
From my soft, young cheek one day;
Will you love me then, 'mid the falling leaves,
As you did 'mid the bloom of May?

Is your heart an ocean so strong and deep
I may launch my all on its tide?
A loving woman finds heaven or hell
On the day she is made a bride.

I require all things that are grand and true,
All things that a man should be;
If you give this all I would stake my life
To be all you demand of me.

If you can not do this, a laundress and cook
You can hire with little to pay;
But a woman's heart and a woman's life
Are not to be won that way.

—Elizabeth B. Browning.

A KANSAS FARMER IN THE OLD COUNTRY.

VII. Sarrento.—Capri.

The whole shore line of the bay of Naples, from the western portion of the city of Naples for more than thirty miles, to the southwestern point of the peninsula of Sarrento, seems to be covered with villages and cities, which give the appearance of one continued city, though several are included in that space.

From Pompeii our steamer party were driven over a smooth road for five miles to Castellamare di Stabia, a town of nearly 35,000 inhabitants; our route lay along the water front, and although the road was smooth and of easy grade, yet it was unpleasantly dusty.

Castellamare is a favorite summer resort of the Neapolitans. It has mineral water springs, shady walks and beautiful trees. Our American folks stopped long enough to have a good dinner, which was cooked and seasoned so nicely that it pleased the taste of all.

From Castellamare our ride continued for ten miles through a most delightful district, and along a cliff road which often was one hundred or two hundred feet up from the surface of the bay, and chiselled out of the rocky cliff, with a safe wall between the road and the water front.

We passed below the monastery of Santa Maria a Pozzano, and through the village of Vico Equense, a place of 12,000 inhabitants, and then through the town of Marina di Equa, beyond yards and olive plantations on the Punta di Scutolo. Orange and olive trees, mulberry, pomegranate, fig, and aloe trees are beautifully intermingled along the way. The Roman emperors, Augustus, Agrippa, Antonius Pius and other gentlemen of renown some 2,000 years ago resided in this vicinity, and its beauties have attracted many thousands every year since.

Sorrento was the place we desired, and there we remained for the night. This is a small town of nearly 8,000 inhabitants, and is now buried in the luxuriant foliage of orange and lemon trees. During a short walk before dinner we came to a very palatial ap-

pearing house, and as we stopped to enjoy the view through the arched hallway, into the grove beyond, the custodian invited us to enter. We walked through the grove which contained about 1,000 orange trees, all loaded with fine, large fruit, ripe and ripening. The grove was surrounded by a high and thick wall, so that from the outside no one could get an idea of its great beauty. We concluded the premises belonged to some Italian nobleman, but we did not learn the gentleman's name, as our party consisted only of the writer and a gentleman from Baltimore, neither of whom could speak Italian or French, and our guide did not understand English.

Our hotel is located about one hundred and fifty feet above the bay, and steps chiselled in the rock lead down to the water. We were told that the house was formerly a villa of an Italian nobleman's family, but was converted into a hotel some three or more years ago. The view from the upper rooms, facing the sea, was magnificent.

The following morning at 10 o'clock the boat from the hotel conveyed our party to the steamer from Naples, which came to anchor a half mile from shore. There are no convenient wharves so built as to accommodate the traveler in Naples, so that in landing, or in going aboard a steamer, he can only do so by boat from the shore. A delightful sail of twelve miles brought us to the island of Capri, which was one of the very interesting points that all visitors to Naples wish to see.

The Emperors Augustus and Tiberius had summer palaces on this island, and for 2,000 years it has been recognized as a beautiful pleasure ground. Boats can land safely only at two points on the island, and its rocky sides prevent greater accommodation. Our steamer came to anchor a mile from the Blue Grotto, and boats came swarming along to take the folks to see the wonderful place. We were rowed to the cliff which seemed five hundred feet high, but at the water line is a small entrance; by lying down in the boat we were enabled to row into the grotto, where the room is 41 feet high and 175 feet wide at its greatest expansion.

The light of the sun on the water outside is refracted in the grotto, giving it a most handsome appearance, all in blue. The water is very clear and nearly fifty feet deep. There were bathers on hand, who make it a business to dive for the education of the visitor if he will kindly throw some coin into the water. After the grotto had been thoroughly visited the boats returned to the steamer, and we were taken two miles, to the village of Capri, then by a wagon up the cliff nearly 2,000 feet above the water, to the village of Anacapri. Along the road, above us and below us, whichever way we turned, were lemon groves and vineyards. The island, though small, grows great quantities of grapes, and the Capri wine is much appreciated by anti-prohibitionists who do not live in Kansas.

VIII. From Naples to Rome.

The distance from Naples to Rome, by railway, is about one hundred and twenty miles, and the express train requires five hours to travel in the quickest time. It is not so fast traveling as American express trains indulge in, but this is Italy, not America. The finest cars we have seen here will not compare favorably with the oldest ones on any of the roads in Kansas. The passenger enters the car at the side and can not pass from one car to another, as there are no doors in the ends of the cars. The jolting one has to endure in the best cars is more uncomfortable than the caboose of a Kansas freight train would afford.

Our route from Naples toward Rome lay through a valley between ranges of low mountains, where the valley at times would be several miles in width. The land bore evidence and being very fruitful, in that the fields were covered with heavy crops of ripe grain, or were delightfully green with the foliage of fruit-trees and vineyards. The farmers were industriously engaged in

harvesting the wheat, rye, and oats; not with machines as in Kansas, nor with scythe or cradle. The fields were usually small, and only a few were seen that appeared to have more than ten acres of grain, and many only two or three acres. A half-dozen men, women, and children would compose a group of harvesters; the men with sickles would cut the grain and lay it in bundles, the women would bind it in sheaves, while children or other women would follow gleaning the stems which were dropped by the sickle-wielders. Many of the men and women were barefoot among the stubble; but possibly they were so accustomed to it, that their feet were not aware of any unpleasantness. At 12 o'clock we saw several parties of laborers at lunch in the field, each one eating a piece of bread only.

Over the Roman Campania our train brought us to the first sight of Ancient Rome, and that was, the ruins of the aqueduct built by the Emperor Claudius over eighteen hundred years ago. Arriving at the station in Rome we procured carriages to take us to Pension Pagini, at Number 5, Gregoriana. The carriages will hold three persons comfortably, and the charge for each vehicle was 1 lire and 50 centimes, equal to 30 cents of American money.

We had thoroughly enjoyed five days of sight-seeing in Naples and vicinity and now hoped to have a week in Rome, historically the most famous city in the world. N.

A Dozen Country Eggs.

She was an energetic lady whose adage is "Save the pennies and the dollars will take care of themselves." Not long ago she decided that hard-boiled eggs would be a pleasant diversion from meat for a light supper, and promptly bought a dozen "best eggs" from the corner grocery. She gave the proper direction to the maid and went out on the stoop, happy in the consciousness that the supper was planned for one day at least. But her attention was soon attracted by a huckster's wagon in which was a huge box of eggs.

"How much?" she asked, and was astonished at the reply, "18 cents—and country eggs, at that."

Being quick to act where money matters were concerned, she bought a dozen eggs at 18 cents, and delivering them to the maid instructed that the others be put carefully back in the same paper bag in which they had come and taken over to the grocery: "And tell him, please, to give you back 20 cents," she added sweetly.

However, it was scarcely more than an hour later that the groceryman came around himself and rang the front door bell viciously.

"Well, ma'am," he said, "here are your eggs."

"But I sent them back," she said.

"But I can't take them eggs back," he said doggedly. "When that girl o' yours brung them eggs back I sez to myself, 'all right, I'll take them eggs back out o' consideration to Mrs. Blank,' an' I puts them on the shelf just as they was, and when a girl 'round the corner comes in and says she wants a dozen best eggs, to make a cake, I hands 'em to her. Well, ma'am, 10 minutes later she comes back and says she'd like to know what I mean by selling her them kind o' eggs—when she wants her eggs boiled, she'll boil 'em herself—and when she wants 'em raw she'll buy 'em somewhere else."

Mrs. Blank looked blank. "Boiled?" she murmured.

"Yes, ma'am, hard boiled. I opened them eggs and every one o' 'em was boiled hard as your head. An' that was a new customer I just got, ma'am."

Mrs. Blank produced her pocket-book. "Of course," she said, "I'll take the eggs," and handed him 20 cents.

"But them eggs is worth more than 20 cents now," answered the imperturbable grocer. "The eggs is boiled now, and I ought to charge real delicatessen prices. Then, too, I lost a customer 'cause o' them eggs. I think them eggs is worth 50 cents, but I'll give 'em to you for 30."

Mrs. Blank sighed as she produced

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the extra 10 cents. After all, it is not always the better part of wisdom to be too economical, she thought.—Cincinnati Enquirer.

"Woman's Vocation Four K's."

"A woman who can make jam puffs," the kaiser once said, "is worth more than a woman who can discuss a constitution." The German empress can do both, but the kaiser is prouder of her in domestic than political affairs. Some ladies were once talking to the kaiser on the position of women in Germany, and the emperor declared that he accepted his wife's opinion in such matters. "Shall I tell you what she sometimes says?" said he. "She tells me that woman's vocation is nothing but four k's." The ladies were Americans and did not understand, and the emperor explained that the four k's stood for kinder, kirche, kueche, and kleider—or, in English, children, church, cookery, and clothes.

On the Payment of Genius.

At a recent sale in London, Defoe's Life and Strange, Surprising Adventures of Robinson Crusoe, of York, Mariner, and The Farther Adventures of Robinson Crusoe, two volumes, of 1719, in the original calf bindings, realized \$1,535. If such a thing had happened in Defoe's own time, says Current Literature, it is probable that that gifted romancer would have ended his days in the madhouse. Such incidents are the irony of fate. Every other day one reads of a Poe manuscript having been sold at a large price. And then one remembers Poe's miserable life and ill-paid returns. Shakespeare, a prosperous dramatist considering his time, would gladly have sold not only the manuscript copy but dramatic rights to Hamlet for scarcely a larger sum than that given above. It is safe to say that the Avon Bard, good business man as he was, did not receive from all his plays what a modern "popular" novelist gains from a single book with its dramatic rights. It looks rather unjust, but Shakespeare still lives, while the novelist sees his reputation flickering before his eyes. It is doubtful whether, taking all things into consideration, Mr. Shakespeare would care to change places with Mr. ———: you may fill in your own blank.—Ex.

The Time of Awakening.

Our Katy publications are decidedly interesting and tend to show how a shrewd business man may make money. The possibilities are great along the line of the M. K. & T. Ry., and we shall be glad to mail you several attractive pamphlets bearing on business chances in Missouri, Kansas, Indian Territory, and Texas. Address "KATY," 603 Wainwright Bldg., St. Louis, Mo.

\$45 TOLMAN RANGES \$23.75

with reservoir and high closet. Great Foundry Sale. We ship range for examination without a cent in advance. If you like it pay \$23.75 and freight and take range for 30 Days FREE Trial.

If not satisfactory we agree to refund your money. Tolman Ranges are made of best wrought steel. Oven 17 1/2 x 21 in. Six 8 in. holes. Best bakers and roasters on earth. Burn anything. Asbestos lined flues. Guaranteed 5 years. Will save their cost in fuel in One Year. Write today for our new Catalogue. JUDSON A. TOLMAN COMPANY, Dept. KF, 66 Lake Street, Chicago.

Miscellany.

Purpose of the Correspondence Agricultural College.

The worthy objects of the Correspondence Agricultural College, Sioux City, Ia., are briefly set forth in a leaflet from which we excerpt the following:

The purpose of the Correspondence Agricultural College is to bring the Agricultural College to those who can not go to the Agricultural College. We provide instruction and help to the farmers who desire a more profitable knowledge of their life work. Our aim is to increase our student's earning capacity. Our instruction covers only what will earn you money. We take it for granted that you do not need or desire a course to make you more polished or more intellectual. The cold, hard fact of existence confronts all of us. How to be able to eat a little better food, how to sleep on a little softer bed, how to give the children a little better education, or a little better start in life, how to earn more with less backache, and to go down to old age with a little larger preparation for the rainy day, is the great problem that confronts each of us every morning and every evening. To the solution of this problem for the farmer we devote ourselves.

Mere muscle never did earn more than a day laborer's wages, and it never will. The minute a brain begins actively to direct the energies of a body, that body begins to earn more and it keeps on earning more and more as the brain lifts its energies to higher levels, until we find doctors and lawyers and business men and some farmers grown immensely wealthy because of brains. Because of brains, did we say? We meant because of trained brains, expert's brains. You have brains; probably as many as anybody. Are they trained to their highest earning capacity? If they are, you are rich, or are fast becoming so. If you aren't making money and making it fast you need training to supply the need. We have no theories to teach you except such as men have demonstrated again and again to be money-makers.

Are you content with your lot when a little money and a little energy will save you thousands of dollars and days of profitless toil?

We purpose to teach you how to judge stock until you can not be cheated in buying and selling; until you can select feeders that will finish off from \$5 to \$10 higher than the ordinary run of cattle.

We purpose to teach you how to feed until you save one-fifth of your feed, and yet get the same results. That one-fifth represents all the profit.

We purpose to teach you how to breed your stock until you breed in strong points and breed out defects. We train you to study your stock and breed accordingly.

We purpose to teach you how to treat all the common diseases on the farm as skillfully as anybody, and to qualify you to judge when to get a veterinarian without a moment's delay.

We purpose to teach you to keep cholera away from your hogs, lumpy jaw away from your cattle and glanders away from your horses.

We purpose to teach you how to keep every animal in the pink of condition so as to get best service, or highest results from feed.

We purpose to teach you what to sow, when to sow, how to sow, as these things have been worked out at great expense by others.

Don't say we can not teach you anything. Perhaps we can. You may learn something out of this little book that will make you a wiser man.

It is just good sound sense to write and see what we claim we can do for you, anyway.

The Real Farm Paper.

There are about all kinds of farm papers.

They may be classified as to the field they aim to cover, as to circulation, and in numerous other ways.

The most vital classification is that which takes account of those that are

really farm papers, first, last, and all the time, and of those that, while they may publish a good deal of agricultural matter, some of it good, and some of it not so good, are not primarily agricultural papers, but are published chiefly as a convenient way of earning a livelihood.

We have called this a vital distinction. We do not condemn the second variety of farm papers referred to. The publisher of such a paper may be an honorable man. He may publish his paper on a high plane, but fundamentally it may not be a farm paper.

Political or other bias prevents its being agricultural.

If we were on a farm it is not the kind of paper to which we should look for "light and leading," and it is not the kind of paper that reaches the best class of farmers.

The genuine agricultural paper is of a different type. It is edited by a man who has the agricultural basis, and has it bad.

His bias is all in the direction of plowing and sowing and cultivating and reaping and breeding and feeding and buying and selling. He is thinking about these things all the time, because his heart and soul are in them.

The great farm papers of to-day belong, of course, to the first-class described above, and no amount of brains nor money can ever create a great agricultural paper with a political, religious or social bias.

A certain preacher said that he aimed to give his Sunday evening sermons "a religious tendency." A paper with agricultural tendencies merely, is not genuinely a farm paper.

And somehow advertisers have discovered that there are these two classes of agricultural papers.

The "truly" farm paper somehow gets the most business, and the best business, as why should it not?

Like the politician, all of us now-a-days, whether advertisers or publishers, love the farmer, and we are fond of saying that the up-to-date farmer is a business man—if this is a higher term.

A paper which such a man will read year after year, and whose editorial opinions he will respect, must be edited by a man who is at least abreast of the present agricultural knowledge. This editor must speak with authority and not as the journalistic scribe who has neither practical nor academic knowledge of agricultural matters.

This is the kind of farm paper that will get business, and more particularly it is the kind of paper that will hold business.—Judicious Advertising.

A Correspondence Agricultural School.

A new means of education along agricultural lines has been inaugurated in the establishment of a correspondence agricultural college at Sioux City, Iowa. Doubtless all are familiar with the wonderful success that has been attained in other correspondence schools which have sought to teach electrical and mechanical engineering as higher branches of instruction above the ordinary mathematics and English training, and there would seem to be no reason why agricultural training can not be gotten in the same manner. There are very many experienced farmers whose age prevents their attending an agricultural college who yet feel the lack of scientific information such as would be of value to them in their business. There are also doubtless many young men who feel financially unable to take a course in an agricultural college who might be benefited by such a school as a correspondence agricultural college. Both the classes just named are dependent upon the agricultural press, the farmers' institute, the experiment station reports and text books on agricultural topics for the information they need in keeping posted in their daily vocation. Such men could doubtless profit by a correspondence school of this nature which will place them directly in contact with experienced breeders and farmers, and would secure for them at all times the benefit of expert information. While the KANSAS FARMER is a strong supporter of the agricultural college for the young men and young women of this country, we realize there are many,

National Encampment

G. A. R. San Francisco

\$45.00

THERE AND BACK.



DIVERSE ROUTES. ∴ SPECIAL TRAIN.

Visit California at a pleasant time of the year. Tickets may be issued to read returning via same route as that used going, or via any other direct route. For return via Portland, an additional charge will be made.

Special train for California, stopping at Santa Fe, Laguna, Grand Canyon of Arizona, (\$6.50 additional for side-ride, Williams to Grand Canyon and return,) and many other points of interest en route, will leave Kansas August 11, 1903.

Pullman palace and tourist sleepers, and free chair cars.

For free descriptive literature, reservations, information about rates, etc., apply to

T. L. KING, C. P. & T. A.,

The A., T. & S. F. Ry. Co.,
TOPEKA, KANS.

both young and old, who are prevented from receiving its benefits. To such as these we believe that a correspondence agricultural college will come as a boon, which will greatly increase their knowledge and usefulness as farmers at a comparatively small cost.

Mr. Carl C. McGee is the secretary of the Correspondence Agricultural College, and may be addressed at 413 Nebraska Street, Sioux City, Iowa. Information as to the course of study, text-books, methods, etc., may be had from him.

Scientific Expeditions of the Department of Systematic Entomology, in Charge of Dr. F. H. Snow.

Two entomological expeditions for the collection of specimens for the University of Kansas museum were planned for the season of 1903.

The first expedition made its headquarters at Englewood, Clark County, in southwestern Kansas, almost on the Oklahoma line and about 100 miles from the Colorado border. In addition to the director, the members of the party were Dr. C. F. Adams of the graduate school of the university, and Eugene Smyth and Roy Rauch of the

Topeka high-school, prospective students of the university. The close proximity of the camp to the sand hills along the Cimarron river, and the salt marshes and salt flats in the immediate vicinity, furnished a new field of operations. As a result of the favorable environment 15,000 specimens were brought to the museum, including nearly one hundred species of insects not previously taken in Kansas, thereby greatly increasing our knowledge of geographical distribution. Many of the new species have hitherto been recorded from Texas only.

The second expedition will be taken to southwestern Arizona, starting July 20. The director will be accompanied by Dr. C. F. Adams, Eugene Smyth and Geo. P. Makenzie. It is the intention to investigate the insect fauna of the region traversed by "Bill Williams Fork," one of the chief tributaries of the Colorado river, in a district not hitherto explored by an entomologist.

In this virgin field most interesting captures are anticipated. Many species previously reported from Mexico only, and many species entirely new to science, will undoubtedly be secured for the enrichment of the museum.

(Continued from page 813.)

call over-issues "water." The new name for the modern sort is "wind."

The word "confidence" has been much used in connection with financial matters. The confidence of that portion of the public which buys shares in capitalized industries has been worked to the limit and has resulted in transferring many millions from the buyer to the producer and seller of shares and bonds. Where did the purchaser get the money with which to buy? In general he did not produce it but played the game of "finance" with others less shrewd. But in the last analysis, this money to pay big prices for these stocks and bonds of little real value came from the hard-handed producers of wealth, those who toil on the farms, in the mines, and in the factories.

These trusts are managed by the ablest men that money can hire. Their organization as industrial producers is as perfect as human ingenuity has thus far been able to make it. Their products are turned out at less expenditure of labor than was ever known before. They should be able to render their service to society at less cost than any of their predecessors. If they were doing what they are capable of doing in this regard, their existence would be a blessing. But the financial schemers have made the purchasers of their stocks and bonds believe that by controlling the market they will be able to earn dividends on the immense capitalization issued. The attempt to do this puts prices of the product out of all proportion to the labor cost. The users of the trust product are thus robbed of all advantages of the modern, perfect organization and are made to pay a penalty for living in the most progressive age of the world.

But there comes a limit to what the purchasing public will pay. In the case of some products, as those of iron, the foreign producer finds himself able to pay the tariff and sell at the trust prices. The trust, therefore, dares not put the price higher than the foreign producer will make. Where foreign competition does not enter, the ability of the consuming public has its limitation. When prices reach the limit consumption ceases to expand or falls off, and the business of the trust ceases to grow or falls off. The trust sometimes finds it more profitable to do a large business on moderate margins than a small business on greater margins. Thus the ability or disposition of the consumer to pay limits the ability of the trust to make dividends on its capitalization of "wind." Other causes, as the possibility of American competition, may have some effect in restraining the rapacity of the trusts.

But, the fact remains that the trusts in their organized greed have sought with considerable success to prey upon the public in two ways; first, by selling its stocks and bonds in inordinate amounts; second, by placing prices of their products high.

The first is a confidence game which ought not to be permitted under the law. The remedy for the second is not so readily seen. Doubtless, prevention of the first would remove a large part of the incentive to the second. But under whatever name or form of organization conspirators attempt to rob the people they ought to be restrained by authority of law promptly and rigorously administered.

GENEROUS RAINS.

In addition to the well distributed precipitation shown on the official weather map of Kansas for the week ending August 1, Saturday night and Sunday morning furnished copious additions in several localities. The down-pour was peculiarly abundant over Shawnee County. At Topeka the Government gauge registered 4.59 inches. Of this nearly 3 inches fell between 7 and 8 o'clock Sunday morning. This was the heaviest rainfall ever recorded in so short a time in Kansas. Many of the streets became rivers, cellars were flooded, and some North Topeka people thought a second overflow of the river was upon them.

The official review of the crop situation is interesting this week. A big corn crop is now progressing favor-

ably. The effect upon values of growing and feeding stock and of breeding animals will soon reflect the assuring condition of the corn.

The later hay crops and pastures are growing remarkably well.

Kansas will be prepared to do her full share in feeding the world from the crops of 1903.

THE STATE FAIR PREMIUM LIST.

The Kansas Farmer Company is getting out this week 5,000 Premium Lists for the Kansas State Exposition Company, which has a magnificent classification for all breeds of live stock, as well as departments of poultry, horticulture, dairy and farm products, county displays, apiary, etc. It has the most representative offering of liberal prizes ever made in the State and should attract a creditable exhibit in every department. Every one who can make a display in any of these departments should secure a premium list and get ready for the big State Fair and Exposition to be held at Topeka, September 14-19, 1903. For premium lists address C. H. Samson, secretary, Topeka, Kans.

A FEW POINTS ON ADVERTISING.

Some interesting information has been published concerning the various items of cost of some of the cereal foods now so much used. Facts stated of a particular brand, together with deductions easily made from other reliable statements, show the elements of cost to be substantially as follows:

1. The food.....	\$0.024
2. The package.....	.014
3. The advertising.....	.054
4. Manufacturers' profit.....	.02
5. Transportation charges and	
6. Dealers' profits.....	.034

Consumers' price.....\$0.15

There is said to be considerable variation in items 3 and 4. The cost of advertising may run as low as 4 cents and it may be as high as 8 cents. In the latter case the manufacturer's profits are turned into losses. But when the advertising costs only 4 cents the manufacturer's profits are 3% cents.

The advertising problem is thus seen to be the most important one with which the manufacturer has to deal. Without advertising, there is no demand for his goods, no sale, and no profit. Judiciously advertised, a great demand is created and the manufacturer becomes one of the "captains of industry." The plan of doing business by advertising—of creating a demand by bringing before possible customers statements of the merits of things offered—has been greatly used in the recent past. It seems, however, to be but in its infancy. The fortunes that it has brought to the fortunate advertiser are few and small compared with those it holds for the future.

However meritorious an article may be, the purchasing public must be made aware of its merits before its vender can find customers. This is true of articles of food, of apparel, of medicine. It is true of machines, of vehicles, of general utilities, and of blooded stock.

A miller who is engaged in making the very best of Kansas hard winter-wheat flour recently explained to the writer the difficulty encountered by the Kansas and Missouri millers in making profitable sales of their surplus product. Even when the Kansas wheat crop is abundant and of the best quality the Minneapolis millers are almost crushing competitors. In that case they buy Kansas wheat, get low rates on its shipment to Minneapolis, make it into their widely advertised grades of flour, and get prices for it which the same foreign purchases refuse to pay for the equally meritorious but less advertised flour made here. Doubtless the question of future life or death with the Kansas and Missouri merchant millers is a question of advertising—comprehensive advertising.

The purchaser of an implement or a vehicle probably does not realize how much his choice is influenced by the advertisements he has read. The very fact of this unrealized influence makes it important that the advertisement be honestly worded. It is beguiling a care on the part of conscientious publishers for the character of goods ex-

ploited in their publications. Honest wares, offered at reasonable prices, and well advertised are making fortunes for manufacturers, while, perhaps, equally meritorious wares, at equally reasonable prices, but unadvertised are bringing small returns and no profits to their producers.

Breeders of thoroughbred stock are having experiences identical with those of manufacturers. Some inexperienced breeders are inclined to look upon the cost of advertising as an item that ought to be avoided. The more seasoned breeder knows that it is an item that is quite as essential as the feed and is not to be omitted any more than good blood. The attention of those who want good animals must be secured and there is no way to do this at so little cost as by judicious advertising.

There are strong revolutionary tendencies in the methods of effecting exchanges of products in modern society. The introduction of the rural free delivery of mail, the telephone, and, later—and chiefly in the future—the interurban car system with its package delivery, bring the great markets to the doors of farmers. This gives the great stores and the big towns insurmountable advantages over the little ones. The reliable advertisement is taking the place of the trip to town and of personal inspection of the goods, the implement, the vehicle, or the animal. The advertisement costs less than the trip. The basis for this business is confidence. In it the strictly reliable advertiser is the one for whom large business and fortune are in waiting.

Live-stock Premiums at the State Fair.

H. A. Heath, general superintendent of the live-stock division of the Kansas State Fair, has announced the premiums for the different classes of live-stock exhibits which will be here this fall.

The entire live-stock exhibit is held under the auspices of the Kansas Improved Stock-breeders' Association, which makes all rules and classifications and appoints all superintendents and other officials in charge of exhibits.

The officers of this association are: President, Chas. E. Sutton, Russell; vice-president, Dr. O. O. Wolf, Ottawa; secretary-treasurer, H. A. Heath, Topeka; assistant secretary, I. D. Graham, Topeka. Directors: J. C. Robison, Towanda; A. L. Sponsler, Hutchinson; E. W. Melville, Eudora; H. W. Avery, Wakefield; C. M. Irwin, Wichita.

RULES.

Entries in this department close September 8, noon.

Exhibition stall, double, \$2.

No stall assigned until stall rent is paid.

All cattle must be recorded, or eligible for record in their respective herds, and full and satisfactory pedigrees must be produced if required.

All animals 36 months old and over shall have produced living progeny within the last eighteen months preceding the first day of the fair.

Exhibitors must have their stock in place September 14, and are expected to promptly obey the marshal in placing their animals on exhibition, or in appearing in parade, or such other instructions as may be directed by the superintendent of the department. Failure or refusal to follow instructions of the superintendent may work a forfeiture of any or all premiums awarded such party.

CLASS A—CATTLE.

Section V, Beef Breeds—T. P. Babst, Auburn, superintendent; J. B. Sims, director in charge.

LOT 1—HEREFORDS.

	1st 2d	Pr. Pr.
1. Bull 3 years or over.....	30	15
2. Bull 2 years and under 3.....	20	10
3. Bull 1 year and under 2.....	20	10
4. Bull 8 months and under 12.....	20	10
5. Bull under 8 months.....	20	10
6. Cow 3 years or over.....	30	15
7. Cow 2 years and under 3.....	20	10
8. Heifer 1 year and under 2.....	20	10
9. Heifer 8 months and under 12.....	20	10
10. Heifer calf 8 months.....	20	10
11. Four animals the get of one sire 30		15
12. Two animals produce of one cow 30		15
13. Exhibitor's Herd—Consisting of one bull 2 years or over, one cow 3 years or over, one 2-year-old, one yearling, and one heifer calf.....	60	30
14. Breeder's Young Herd—Consist-		

ing of one bull under 2 years, two yearling heifers, and two heifer calves. Heifers must be bred by exhibitor..... 60 30

SENIOR CHAMPION.

15. Best bull over 2 years..... Diploma

16. Best cow over 2 years..... Diploma

JUNIOR CHAMPION.

17. Best bull under 2 years..... Diploma

18. Best heifer under 2 years..... Diploma

GRAND CHAMPION.

19. Best bull any age..... Diploma

20. Best cow or heifer any age..... Diploma

Note.—One-half of the above premiums will be paid by the American Hereford Breeders' Association.

LOT 2—SHORTHORNS.

21. Bull 3 years or over..... 15 7

22. Bull 2 years and under 3..... 10 5

23. Bull 1 year and under 2..... 10 5

24. Bull 8 months and under 12..... 10 5

25. Bull under 8 months..... 10 5

26. Cow 3 years or over..... 15 7

27. Cow 2 years and under 3..... 10 5

28. Heifer 1 year and under 2..... 10 5

29. Heifer 8 months and under 12..... 10 5

30. Heifer under 8 months..... 10 5

31. Four animals get of one sire..... 15 7

32. Two animals produce of one cow 15 7

33. Exhibitor's Herd—Consisting of one bull 2 years or over, one cow 3 years or over, one yearling, and one heifer calf..... 30 15

SENIOR CHAMPION.

35. Best bull over 2 years..... Diploma

36. Best cow over 2 years..... Diploma

JUNIOR CHAMPION.

37. Best bull under 2 years..... Diploma

38. Best heifer under 2 years..... Diploma

GRAND CHAMPION.

39. Best bull under 2 years..... Diploma

40. Best cow or heifer any age..... Diploma

LOT 3—GALLOWAYS.

41. Bull 3 years or over..... 15 7

42. Bull 2 years and under 3..... 10 5

43. Bull 1 year and under 2..... 10 5

44. Bull 8 months and under 12..... 10 5

45. Bull under 8 months..... 10 5

46. Cow 3 years or over..... 15 7

47. Cow 2 years and under 3..... 10 5

48. Heifer 1 year and under 2..... 10 5

49. Heifer 8 months and under 12..... 10 5

50. Heifer under 8 months..... 10 5

51. Four animals get of one sire..... 15 7

52. Two animals produce of one cow 15 7

53. Exhibitor's Herd—Consisting of one bull 2 years or over, one cow 3 years or over, one yearling, and one heifer calf..... 30 15

SENIOR CHAMPION.

55. Best bull over 2 years..... Diploma

56. Best cow over 2 years..... Diploma

JUNIOR CHAMPION.

57. Best bull under 2 years..... Diploma

58. Best heifer under 2 years..... Diploma

GRAND CHAMPION.

59. Best bull any age..... Diploma

60. Best cow or heifer any age..... Diploma

LOT 4—BERDEEN-ANGUS.

61. Bull 3 years or over..... 15 7

62. Bull 2 years and under 3..... 10 5

63. Bull 1 year and under 2..... 10 5

64. Bull 8 months and under 12..... 10 5

65. Bull under 8 months..... 10 5

66. Cow 3 years or over..... 15 7

67. Cow 2 years and under 3..... 10 5

68. Heifer 1 year and under 2..... 10 5

69. Heifer 8 months and under 12..... 10 5

70. Heifer under 8 months..... 10 5

71. Four animals get of one sire..... 15 7

72. Two animals produce of one cow 15 7

73. Exhibitor's Herd—Consisting of one bull 2 years or over, one cow 3 years or over, one yearling, and one heifer calf..... 30 15

SENIOR CHAMPION.

75. Best bull over 2 years..... Diploma

76. Best cow over 2 years..... Diploma

JUNIOR CHAMPION.

77. Best bull under 2 years..... Diploma

78. Best cow under 2 years..... Diploma

GRAND CHAMPION.

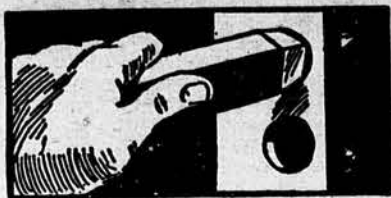
79. Best bull any age..... Diploma

80. Best cow any age..... Diploma

Methods of Combating the Hessian Fly.

The damage done by the Hessian fly to the wheat in some of the northern parts of Oklahoma during the past season was sufficiently serious to give rise to a general demand for information as to the best methods of combating that insect pest. The habits of this fly are such that after its eggs are once laid on wheat there is practically no way of destroying the insect without destroying the plants.

It has been found that some varieties of wheat are very little, if at all, damaged by the fly, even when grown alongside of other varieties that are entirely ruined. Before sowing wheat in the fly-infested region, the farmer should secure seed of such a resistant variety. The varieties with large, coarse, strong straw are the ones that are most likely to be resistant. But, as it has been found that a variety that is resistant to the attack of the fly in one locality may not be resistant to it in another, the best way to obtain such a variety is securing seed from wheat that is known to have actually made a good yield while exposed to the fly under circumstances that re-



"The square peg in the round hole" figuratively expresses the use of means unsuited to the desired end. A great many people who have been cured of dyspepsia and other diseases of the stomach and its allied organs of digestion and nutrition by the use of Dr. Pierce's Golden Medical Discovery say: "We tried many medicines with only temporary benefit. It was not until we began the use of 'Golden Medical Discovery' that we found a complete and lasting cure."

\$3,000 FORFEIT will be paid by **WORLD'S DISPENSARY MEDICAL ASSOCIATION**, Proprietors, Buffalo, N. Y., if they cannot show the original signature of the individual volunteering the testimonial below, and also of the writers of every testimonial among the thousands which they are constantly publishing, thus proving their genuineness.

"It is with pleasure that I tell you what Dr. Pierce's Golden Medical Discovery and 'Pellets' have done for me," writes Mrs. T. M. Palmer, of Peede, Kaufman Co., Texas. "Two years ago I was taken with stomach and bowel trouble. Everything I ate would put me in distress. I lived two weeks on milk and even that gave me pain. I felt as though I would starve to death. Three doctors attended me—one said I had dyspepsia, two said catarrh of the stomach and bowels. They attended me (one at a time) for one year. I stopped taking their medicine and tried some patent medicine; got no better, and I grew so weak and nervous my heart would flutter. I could not do any kind of work. Now I can do my house work very well; am gaining in flesh and strength, and can eat anything I want."

Accept no substitute for Dr. Pierce's Golden Medical Discovery.

Dr. Pierce's Common Sense Medical Adviser is sent free on receipt of stamps to pay expense of mailing only. Send 21 one-cent stamps for the paper covered book, or 31 stamps for the cloth bound volume. Address Dr. R. V. Pierce, Buffalo, N. Y.

sulted in damage to other varieties. If it is impossible to obtain such seed grown in the fly-infested neighborhood, the next best plan will be to get seed from the same source as that which is known to have done well in spite of the fly. Anyone having secured a good yield of wheat in fields so planted as to be fully exposed to the fly, should advertise such wheat for sale as seed.

While seeking to secure a variety of wheat which will resist the attack of the fly it is well to do what can be done to reduce the number of flies that will be on hand to lay eggs on the wheat. These insects usually spend the summer and part of the fall in the "flax-seed" stage in the stubble, or as "flax-seeds" or maggots in the bases of the stalks of the volunteer wheat. Therefore, in order to destroy them it is advisable that the stubble and volunteer wheat be thoroughly plowed under several weeks before the winter wheat is planted. This plowing should be done to a depth of six inches or more, and if a jointer be used the work should be more thorough. If volunteer wheat and stubble are not thoroughly buried by this plowing, so as to imprison the flies in the ground, the soil should be worked over so as to break up clods and pack it down.

Where any attempt is made to reduce the number of flies by plowing them under, all the unplowed wheat stubble in the neighborhood should be plowed about the same time.

The sowing of strips of wheat to trap the flies has been recommended as another means of destroying the insects. For this purpose strips of wheat are sown on one or more sides of the fields in August. Then immediately before the remainder of the field has been sown in the fall, these trap strips are to be plowed under.

One of the practices recommended further north is sowing late, so that wheat comes up after the flies which would lay their eggs on it have been killed by the first frosts. This method of late seeding sometimes fails in the north, especially when late mild weather brings more of the flies to the mature egg-laying stage after the early frosts. And it is likely to fail more often so far south as Oklahoma, where the weather may be mild enough for the egg-laying flies at almost any time during the winter.

The Hessian fly has its natural ene-

mies, as do most of the insect pests, and some of these are a species of four-winged flies which are parasitic on the larvae (maggots) of the Hessian fly. And these parasites serve to a great extent to keep the pest in check. But it is not advisable to depend entirely on these parasites to reduce the number of flies when they are very numerous.

Anyone who would like to know what the Hessian fly looks like would do well to rear a few of them from the "flax-seeds" which are to be found within the sheaths at the bases of the injured wheat stalks. If some of the infested stalks are partly dried and placed in a glass fruit jar which is covered, the adult flies may emerge from the "flax-seeds" in a week or two. To insure success stalks might be placed in different jars at intervals of about a week, so that if the insects are too young to stand drying at first, older ones may be tried later. The stalks are dried in order that they may not mold in the jars.

Bulletins illustrated with drawings of the flies in various stages of development may be obtained from the experiment station at Stillwater.—Oklahoma Experiment Station.

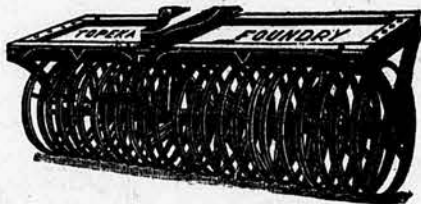
There's Money in It.

The Eleventh National Irrigation Congress, which meets in Ogden, Utah, September 15 to 18, 1903, will witness a struggle unknown outside the United States Senate and Congress. The United States Government has in the treasury over ten million dollars, which has been appropriated and set aside for the purpose of reclaiming the arid lands of the West. This great sum of money, as well as all future receipts from sales of the public lands of the sixteen arid States and Territories, can be used only for the storage of water by the erection of reservoirs and dams and the developing of water supplies by artesian wells and drain tunnels, and the conserving in other ways of water for the reclamation of lands in the arid West, which is defined by the irrigation law as including the following States: Arizona, California, Oregon, Washington, Nevada, Idaho, Montana, Wyoming, Colorado, Kansas, Nebraska, New Mexico, North Dakota, South Dakota, Oklahoma, and Utah.

The National Irrigation Congress, which was instrumental in causing the Government to set aside this great sum of money and which reconvenes at Ogden, Utah, next September, will recommend to the Secretary of the Interior the expenditure of these millions of dollars set aside as a reclamation land fund. Shall this State have her quota of this money? Each board of county commissioners, the mayor of each city not over 25,000 population, each chamber of commerce irrigation association, agricultural society, livestock association, society of engineers, and agricultural college is entitled to send two delegates. Mayors of cities

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Topeka Kansas.

over 25,000 population, are each expected to appoint four delegates, and the Governor of each State, twenty delegates. This State and every community should be fully represented in this National Irrigation Congress. Those interested in the upbuilding of the State should surely look into this matter, and see to it that proper representatives are sent to Ogden, Utah, to attend the Irrigation Congress. Those desiring further information may address Fred J. Kiesel, chairman of the Executive committee of the Eleventh National Irrigation Congress, Ogden, Utah, who will send the official call including credential blanks. Those who are authorized to appoint delegates should act promptly in this matter.

KANSAS FARMER'S NEW WALL ATLAS.

The KANSAS FARMER has arranged with the leading publisher of maps and atlases to prepare especially for us a New Wall Atlas, showing colored reference maps of Kansas, Oklahoma, Indian Territory, the United States, and the world, with the census of 1900. The size of the New Wall Atlas is 22 by 28 inches and it is decorated on the outer cover with a handsome design composed of the flags of all Nations.

Tables showing products of the United States and the world, with their values, the growth of our country for the last three decades and a complete map of the greater United States are given. This is an excellent educational work and should be in every home. The retail price of this New Wall Atlas is \$1.

Every one of our old subscribers who will send us \$1 for two new trial subscriptions for one year will receive as a present a copy of this splendid New Wall Atlas postpaid, free.

Any one not now a subscriber who will send us 50 cents at once will receive the KANSAS FARMER for five months and will be given a copy of our New Wall Atlas free and postpaid.

"I beg to state that my hogs were perfectly healthy and they have had no disease since the Show. Royal Baron never lost a feed, nor did any of them that I showed at Chicago indicate any signs of disease. We certainly recommend Zenoleum."—G. G. Council, Williamsville, Ill.

Shredded Fodder.

About one-half the feed value of the corn-crop is in the stalks, and wherever this fact is thoroughly understood the corn grower considers it just as important to shred the fodder as to husk the ears.

If the stalks are allowed to stand in the field until after the corn is husked, the fodder has little or no value as feed stuff, and this explains much of the misinformation that is still extant relative to shredded fodder. Neither timothy nor clover would make good feed if allowed to stand too long before cutting. If, however, the corn is cut at the right time, the fodder when shredded makes excellent feed, which analysis shows to be fully as nutritious as timothy hay. The McCormick husker and shredded enables the farmer to husk and shred his corn at one operation, thus saving time as well as all of the corn, and practically doubling the value of the crop.

An Excellent Remedy.

Rutledge, Mo., April 4, 1902.
I have used Watkins' Vegetable Anodyne Liniment for cholera morbus, also for bruises, cuts and pains, and find it an excellent remedy.
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The White House Cook Book, 590 pages, comprehensive treatise on carving. All kinds of cooking and baking. Everything from soup to nuts. Cooking for the sick. Health suggestions. Kitchen utensils. Family recipes. Toilet items. Dyeing and coloring. Measures and weights, etc. Prepared by the former chef of the Hotel Splendide, Paris. Regular price \$2. Our price with the Kansas Farmer for one year \$2. The two for the price of one, delivered to you.
Address, Kansas Farmer Company, Topeka, Kans.

Oil Cure for Cancer.

The Dr. D. M. Bye Co., of Indianapolis, Ind., report the discovery of a combination of soothing and balmy oils which readily cure all forms of cancer and tumor. They have cured many very bad cases without pain or disfigurement. Their new books with full report sent free to the afflicted. Dr. D. M. Bye Co., Drawer 505, Indianapolis, Ind.

SPALDING'S COMMERCIAL COLLEGE, New York Life Bldg., KANSAS CITY, MISSOURI. 36th Annual Fall Term begins September 1. Bookkeeping, Shorthand (Pitman and Gregg), Typewriting, Telegraphy, and English Branches at low rates. 20 rooms. 16 teachers and lecturers. Free Employment Bureau. 64-page Illustrated Catalogue 27 sent free on request.
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The Official Route TO San Francisco.

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\$45.00

Mrs. Bradford, the President of the Women's Relief Corps, G. A. R., has selected the

UNION PACIFIC R. R.

As the Official Route, special train which will line, leaving Kansas and Topeka at 12.40 August 11. Train both Standard and



and will use the special furnished by this City at 10.50 a. m., p. m., Tuesday, will be made up of Tourist sleeping cars.

For tickets and sleeping car reservations, call on

F. A. LEWIS, C. T. A., 525 Kansas Avenue. 'Phone 53.
J. C. FULTON, Depot Agent. 'Phone 34.



Do You Want to Know
how to fall in love with a cow? Do you care to know why a cow is worth more than a horse? If you do, you should have a copy of our valuable book.

"Business Dairying."
It won't cost you a cent. We send it free. Ask for it.
You have read many times about the **TUBULAR SEPARATORS.**
Wouldn't you like to know all about them? It won't cost you anything to do it. Just write for free catalogue No. 165.
THE SHARPLES CO., P. M. SHARPLES,
Chicago, Ill. West Chester, Pa.

In the Dairy.

Conducted by George C. Wheeler, Kansas Experiment Station, Manhattan, Kans., to whom all correspondence with this department should be addressed.

How to Build a Silo.

We hope some of our Kansas dairymen are thinking of building silos this summer, and there may be some who hesitate on account of not knowing exactly how to go about it. It will require prompt action in order to get a silo ready for fall filling at this date but is not too late if material can be secured at once.

We give "Buff Jersey's" description of how he builds a silo and we feel sure that his directions are carefully followed, a satisfactory silo will be secured at a very moderate cost. The following directions were first published in Orange Judd Farmer:

Fifteen years' use of silos and silage in several States and under various conditions of climate, has caused me to study both the construction of the silo and its filling. I find to-day that the greatest drawback to the adoption of the silo system is the supposed great cost of construction. I have used silos that cost \$4 per ton capacity to construct and have used those that cost 50 cents per ton capacity, and in one case content cost was as low as 30 cents. The cheap silo kept the silage just as well as those costing many times more money.

In building a silo, I consult local conditions. If in Texas, use Texas hard pine. If in western coast country, use redwood or cedar, but in the central section of the United States I find nothing better than the ordinary 2 by 4's (white pine) of commerce, costing from \$15 to \$22 per 1,000 feet. I have thoroughly tested this material in several States and in no case has it proved defective in any one of the above-named qualifications—strength, durability, and perfect exclusion of air, together with simplicity of construction. Briefly as possible I will describe my method of construction.

The stave silo has been condemned by many, owing to its tendency to dry out when empty and then fall down. Silo manufacturers make capital of this defect in advertising their tongued-and-grooved method of preparing their staves, but they do not say what we must do when the tongue rots out in a short time and leaves the staves free to fall down. I have adopted a method which does away with any danger of staves falling down, and simplifies the construction to a marked degree. The silo I will describe is the strongest building on the farm and will withstand inside pressure or wind-pressure as well as any style now in

use, something well worth careful consideration.

To build a round silo of 2 by 4 stuff, get the lumber and have it dry and free from loose knots; see that edges are straight, so that when the walls are up, the edges will touch evenly the entire height of silo. In a circle of 14 feet or more it is not necessary to bevel the lumber to fit the circle; it is better not to do so, because the lumber will dry out more quickly when the silage is removed, which tends to prolong the life of the silo by checking decay. In case beveling is done, don't bevel the entire stick's width, only take off bevel from center of timber. This will leave the other half slightly separated from its mate, giving the air a chance to dry the wood.

To the novice, an empty stave silo with its staves showing daylight shining through cracks from top to bottom is far from an air-tight building, but one has only to tighten up hoops and go ahead and fill. A stave silo is like a leaky barrel. It only wants hoops driven tight to make it as tight as ever. While the silo has not hot water, it has something just as effective—silage, which is 80 per cent water or sap, and heats up to 160 degrees. Every crack is shut tight.

To build a stave silo, first decide on the size of silo, then get the material most abundant in your locality. Any lumber that will not warp is suitable. Have it dry if possible. If your silo is to be above 20 feet in height, buy lumber of two lengths; for a 24-foot building get 14- and 10-foot stuff, for a 26-foot silo, use 12- and 14-foot lengths. Get your stuff on the ground during some dry, hot days, laying it closely, like a floor. Then take an old broom or a whitewash brush and a bucket of coal-tar (this is called gas-tar and can be bought for 3 or 4 cents a gallon at gas-works) and paint the lumber, not scrimping the amount of paint. Let lay a day or so and then turn up another face of the lumber and again give it the gas-tar paint. Continue until all sides and edges are painted. Gas-tar is the best preservative of silo walls yet found, and I may add that for rough work, such as farm-gates, corn-cribs and board roofs, it is not equaled by many of our paints. If tar is too thick to spread easily, thin with gasoline, remedying any trouble of this character.

While our lumber is drying we will put in silo foundation. We must decide where to build, and the best rule is to build just as near the animals' mouths as possible, to save work when feeding; at gable end of barn or shed is the best place. To lay foundation, drive a peg in center of ground selected for foundation; take a fence-board, bore a hole in end, slip over peg, then at half of distance of diameter of silo, slip a pin or bolt that will mark ground as beard is moved around. After this mark is made, set pin out as far as width of foundation-trench is to be, which is about 16 or 18 inches. Now dig trench 18 to 20 inches deep; then fill up within 6 inches of top with small rocks, brickbats or very coarse gravel. Over this pour thin cement. After this part of foundation is complete, start wall 6 inches from outside of trench leaving a 6-inch jog. That jog is to fool any rat that may wish to explore contents of silo. He will dig down to the concrete work and then stop, not knowing enough to follow the 6-inch step to outside of concrete. It is better to finish the narrower wall with flat rock or brick. Build up 8 or 10 inches above level ground. The dirt should then be thrown up against wall on outside, even with top of wall to turn water from building.

The inside circle or silo bottom should be of dirt only. Many people put down costly cement floors, only to find that a large amount of silage is spoiled each year. We do not know the cause, but we know that the last foot or 8 inches of silage on cement has a very offensive smell and is not relished by cattle, while silage on dirt can be fed to the last basketful. I am speaking from 16 years' experience when I make this statement. Have fed from many cement bottoms, always with the same result.

A sill is not necessary, but I always use one. To make the sill, take 10-

inch width lumber, 1 inch thick and cut in segments of circle of wall; cut enough of these to make sill three or four inches thick; bed first in layer of mortar, then give a coat of gas-tar, then lay on another course, breaking joints; nail down to lower layer. Continue laying, tarring, and nailing until desired thickness is reached. We are now ready for the tarred staves or 2 by 4's. But you may wonder how to make a start, what to use for fastening hoops and silo with, and what to fasten staving to. To do all of this requires four timbers of hardwood, 4 by 6 inches in size and as high as silo is to be. Before we put up these timbers, or we may say frame of our silo, we bore enough holes in these sticks to receive the hoops. These holes are in pairs, and are 2½ inches from what will be the inside edge of the silo. Holes are to be 3 inches apart, long way of timber. Now we will lay off our circle, finding one-quarter of distance, where we stand one of these sticks, the inside edge flush with inside wall of silo and becoming part of wall and secure it by toe-nailing to sill. Then measuring another quarter distance set up another timber, continuing until we have the four up. We at same time brace these pieces with fence boards or 2 by 4's, always keeping out of inside of silo.

After we have braced wall, we set 2 by 4 pieces on outside of silo opposite the 4 by 6 timbers, about 3 feet from them, or as wide as you wish to build scaffolding. Nail lumber from these 2 by 4's to 4 by 6 pieces at intervals of about 8 feet on which scaffold lumber is laid. A silo 25 feet high will require three of these stagings. Now we are ready to build or set up the staves. Three men or boys do first rate. For this work the necessary tools are three hammers and plenty of 60-penny wire spikes; 40-penny will do in case 2 by 4's are scant 4 inches, as they often are. Now set up one of the 2 by 4's edges against a 4 by 6 piece and nail about every 4

DE LAVAL CREAM SEPARATORS

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feet; the men on different stagings will attend to nailing up to top of silo. Toe-nail the 2-by-4 stave to sill with 10-penny wire nails. Continue setting up and nailing. If the upper half of staves do not want to follow circle, strike on inside wall with heavy hammer, maul, or back of an ax, and the right curve will come.

After setting all staves to last three or four feet (and this space should be at place where doors are to be), make arrangements for doors. The doors are only the walls of the silo cut out on bevel, and the pieces thus cut out are nailed together with some barrel staves, the staves giving the short pieces the necessary curve to circle. The bevel must be on inside of silo, so that when doors are set the silage will press them into place. No frames for doors are necessary and no fastenings or hinges. In cutting out the doors they should be numbered so they will be put in the same place each time. A door 20 inches by 2 feet is large enough. To cut out these places it is best to cut side bevel pieces while the 2 by 4's are on the ground. To do this, bore a hole in center of 2 by 4 on right bevel and cut with a tenon saw far enough to allow larger saw to enter cut; when piece is cut out, tack in place with small nails. Now finish up silo walls, and then the man in silo will have to cut out the lower door in order to get out. If on outside can cut his way in. Doors must be about three feet apart to be handy in taking out silage.

The hoops for this silo should be of five-eighths, round iron; each section

ANOTHER PROP KNOCKED FROM UNDER HIM

Our "would-be competitor" the DeLaval Separator, in his efforts to counteract the fact that the U. S. Separator is the better skimmer, has tried various schemes to prop up his trembling frame and waning popularity.

He used to try the "Churnability" bluff, but this prop was knocked out long ago; then he howled about flushing the bowl with hot water, but the U. S. corrugated cups quieted him on that; and lately it has been the "cold skimming" dodge, whenever he has run up against the U. S., but alas this also has been knocked from under him, so that now about all the prop he has to lean on is that of "bluff."

That readers may fully realize how little ground there is for advocating cold skimming, we give below a portion of an article that appeared in the June 18th issue of *The Kansas Farmer*, headed "Abuse of a Hand Separator," by Prof. Edw. H. Webster, formerly of the Kansas Agricultural College and now one of the Government Dairy Inspectors:

"Other abuses were in time met with in the tendency of agents to follow methods that would be condemned anywhere else. One of the principles of separation understood by all creamerymen, is that the warmer the milk the more complete the separation. Yet agents will run cold milk through just to beat the other fellow. This is wrong for various reasons:

"In the first place the milk should be skimmed when warm in order to get the best separation of the cream.

"It should be skimmed when warm in order to give the calves and pigs the warm skimmilk, and

"It should be skimmed fresh from the cow in order that the cream may be quickly cooled to prevent the development of bacteria.

"Everything is against cold skimming and in favor of warm skimming, and the tendency of these contests is to give farmers erroneous ideas in regard to the hand separator."

What further evidence is necessary to convince you that the DeLaval has to depend on other things than its merits to sell its goods?

Remember, the U. S. Holds World's Record

For further particulars as to its merits, write for catalogues.

Vermont Farm Machine Co., Bellows Falls, Vt.

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DAIRY DOLLARS
We claim that the **EMPIRE** Easy Running Cream Separator will make you more money than any other separator can or will, because the Empire turns more easily, is more easily cleaned and kept clean and has fewer parts to get out of order. Send for our book, "A Dairyman's Dollars," investigate all claims and decide for yourself. Empire Cream Separator Co. Bloomfield, N. J. Western Office, Fisher Bldg., Chicago.



of hoop should be long enough to pass through two of the 4 by 6 timbers, and threads should be cut 6 or 8 inches on each end of hoops so as to take up any shrinkage of silo. Large cast-iron washers are necessary to bear against the 4 by 6. Light washers will sink into the wood when the silo is full and pressure bears on hoops. Hoops should be placed as follows: First, one near bottom of silo about six inches from sill; the next two feet higher, and each succeeding hoop six inches higher than last put on. This is for 18-, 20-, and 25-foot in diameter silos; smaller ones may use fewer hoops and even one-half inch hoops will answer. Our silo is now ready for roof. The roof of the silo can be built of boards put on hip-roof style, or a cone-shaped roof can be put on and shingled. Metal roofing is used by many, while many have no roof. I have used silos without a roof and saw no bad results.

The Keeping Quality of Butter.

Dairymen and creamerymen throughout the State will be interested in a bulletin entitled, "The Keeping Quality of Butter," just issued by the Iowa Experiment Station at Ames. It is the work of Prof. G. L. McKay and Mr. C. Larson. Some of the subjects discussed are as follows: "Sources of Deterioration in Butter," "Cause of Rancidity," "Defects in Butter," "Effect of Working Upon Water Content of Butter," "Purity of Well-water," "Methods of Purifying Wash-water," etc. It contains numerous tables reporting results from actual experiments conducted and several cuts.

From the results of the investigations it appears that much of the deterioration in butter is due to the presence of bacteria in wash-water. Practical methods of removing these organisms are described and discussed.

The bulletin is No. 71 of the station and can be had without cost by addressing a request to Prof. C. F. Curtiss, Director of the Experiment Station, Ames, Iowa.

Butter and Cheese Exhibit at the State Fair.

The Kansas State Dairy Association, acting in conjunction with the Kansas State Exposition Company, has placed all dairy exhibits in the hands of Mr. A. E. Jones, of Topeka, superintendent Dairy Department. Last year no showing was made in this line, but the managers are confident of a generous display this year of both creamery and farm butter, and also a full showing of Kansas cheese. Liberal cash prizes are offered in the regular dairy classi-

fication, as well as a number of special cash premiums, which should induce butter- and cheese-makers to contribute nothing but the best, such as will reflect great credit on the State.

The dairy exhibit will have commodious quarters in the new merchants' and manufacturers' building with such refrigeration as will preserve all dairy goods in a perfect and natural state. The awards will be made under the National Association rules with the following scale of points:

Butter—flavor 45, grain 30, color 15, salting 10, total 100.

Cheese—flavor 30, quality 30, texture 20, color 10, salting 10, total 100.

An appeal is made to all dairymen in Kansas to make as large and fine display this year as possible, and thus gain some idea of what will need to be done next year when our dairy products will come into competition with all the great dairy States at the World's Fair in St. Louis.

The full premium list will be sent out soon. For information, write to C. H. Samson, Secretary Kansas State Exposition Company, or A. E. Jones, Superintendent Dairy Department, Topeka.

Some Dairy Needs.

Kansas, the very "hub" of the United States, the land of corn and alfalfa, and broad natural pasture lands, ought to be the first State in the Union in the dairy world. There is no spot on earth so blessed with natural advantages, and I may say, too, no place is so poorly equipped with those artificial environments which it is the duty of the dairy people to provide.

The State is just beginning to awaken to its duty, and the appropriations for the experimental work at our Agricultural College constitute the first sign of life in dairying as a State industry. This start is good. But we need more. We need legal standards for dairy products; standard methods for handling them; a system of creamery and dairy inspection for sanitation, not only in the factory but in the home of the country dairyman as well. By such a system Kansas butter can be made the standard for the market, and worth from one to two cents per pound more than any other on the market.

As we have things at present, there is no incentive for a man to make a first-class product. In the matter of cream production, there are many shipping companies willing and even advising to ship a poorer article and save time in caring for it and hauling to market. This is sold on the reputation which it has cost our dairy

farmers thousands of dollars to build up. Neither can any persuasion prevent a dairyman from selling a poor article rather than a good one when both bring the same price.

These things should, in my opinion, be controlled by legal limitation. Our statute should require a standard product, and our State would surely be repaid well for the expense of enforcing it.

I should like to hear from anyone interested in dairying on these subjects, and especially systematic dairy and creamery inspection, either through the KANSAS FARMER or privately. At our next Legislature some steps should be taken in this direction.

A. F. TURNER.

An Old Observer's Observations.

EDITOR KANSAS FARMER:—This is my twenty-third visit to Kansas during the last twenty years. I came to Kansas this time over the West Shore and Nickle Plate and Santa Fe roads. I was on a sleeper from New York City to Buffalo, hence saw but little of the crops and general prosperity. The severe drouth in New York State and in New England was broken the last of June, and copious rains since have improved the prospects of corn, oats, and wheat very much. The wheat in Erie County was just beginning to ripen, and oats were just showing their heads.

From Buffalo to Cleveland quite a large portion of the land is covered with grape-vines; and from present appearances, I should think with profit to farmers. If the grapes produced are in part used for food in their ripened condition, and the rest put into grape-juice as you recommend in your paper of the 9th inst., they could not be put to a better use. Physiologists and chemists all agree that all of the starch and cane-sugar gotten by the people has to be converted into grape- or fruit-sugar before it can be assimilated by the tissues of the body. If the people eat the grapes and drink grape-juice they get nutrition of the very best kind without the trouble of converting the starch and cane-sugar into fruit-sugar.

From Cleveland and Fort Wayne and on toward Chicago there is a very rich agricultural country. Wheat, rye, oats, corn, and potatoes are the principal crops and they all were looking fine. The most of the wheat was in the stack and the oats were being harvested with binders. Both of these crops were fine, and the corn, clover, and timothy meadows were in prime condition. The corn was about waist high, a good stand and free from weeds, and was beginning to show tassels. They usually get from 25 to 30 bushels of wheat to the acre and from 50 to 75 bushels of oats and corn to the acre. There was plenty of moisture in the soil. As I took a sleeper from Chicago to Kansas City I saw nothing of the crop conditions in Illinois and Iowa until I reached the Missouri State line. The crops I saw in northwestern Missouri were not nearly so promising or so forward as in Ohio and in Indiana; yet wheat and corn looked well and will make a fair crop. The wheat and oats were being harvested.

My train arrived in Kansas City too late for the morning train for Wichita, so I was compelled to stay over for the evening train. It gave me a good chance to see and appreciate the ruin wrought by the flood. Your word-pictures of it in the KANSAS FARMER of the 9th were none too vivid. Many of the freight-cars now going through the country show distinctly the height to which the water reached. There is a car in Medicine Lodge that indicates that the water was within two feet of the top of the car. To think of its being eight feet deep in the big depot in Kansas City will give some idea of the terrible disaster visited upon the business men of that city.

The sleeper prevented me from seeing the disasters of the flood from Kansas City to Topeka or of the crops from there on to Newton. From all appearances the crop outlook was better in the western part of Sumner, through Harper and the western part of Barber Counties than in Sedgwick



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MORE MILK MORE MONEY!

Cows will give 15 to 20 per cent more milk if protected from the torture of flies with

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 50 cows sprayed in a few minutes. A true antiseptic; keeps stables, chicken houses, pig pens in a perfectly sanitary condition.

Ask for Child's SO-BOS-SO or send \$3 for 1-gal. can and Sprayer complete, E. K. pd. any point east of the Mississippi.

CHAS. H. CHILDS & CO., Sole Manufacturers,
18 Lafayette Street, Utica, N. Y.

County or the eastern part of Sumner. I should say that Harper County would make a record year for wheat but not for corn. Wheat is also a fine crop in the western part of Sumner and the eastern part of Barber Counties, and corn and oats are fine crops. They are thrashing wheat in Barber, and the yield is not as heavy as in many other years, the average being only about fifteen bushels to the acre, while it looks good for twenty bushels.

The farmers about Medicine Lodge are going extensively into alfalfa. To show how much it is adding to the value of these farms the following is an example: A hundred and sixty acres near my ranch changed owners five years ago at \$10 an acre. The purchaser has since put eighty acres of it in alfalfa, and he told me yesterday he had recently two offers of \$6,000 for the farm. He intends to put nearly the whole farm into alfalfa as soon as it can be done.

On my ranch I have 36 acres of alfalfa, 256 of wheat, 45 of oats, 34 of rye, 206 of corn, and 132 of Kafr-corn and sorghum. The crops taken together have never averaged so good as at the present time. Pasture land will not rent for one-third as much per acre as that cultivated for crops, and much of it is destined to be plowed up and put in cultivation unless cattle-breeders can afford to pay more rent for such lands.

About three weeks ago a Wichita correspondent for the New York Sun stated that an effort was being made to have the general Government plow up all of the tillable Government lands in western Kansas. It has been grazed by cattlemen until the wild grass has been nearly killed off. If that was done and twenty-five acres on every quarter-section was planted in forest-trees, and two or three rows of forest-trees planted around each half or quarter section, in five years the whole area would be changed. Add to this the building of ponds on every forty acres where it could be done, and it would not be long before good paying crops could be raised on almost every acre of land in the State. The plowing, the forest-trees, and the ponds would soon store up moisture, so that with proper soil-cultivation, crop failures would seldom occur.

We have always noticed that when there is a heavy fall of snow at the close of winter in the mountains of Colorado we get rainfall sufficient in western Kansas to raise good crops. The more forest-trees, ponds, lakes, and streams, the less evaporation of moisture from the soil and the better crops.

DR. E. P. MILLER.

Bourbon County, July 13, 1903.

Low Summer Tourist Rates Via Chicago Great Western Railway.

\$15.00 Kansas City to St. Paul and Minneapolis and return; \$19.00 to Duluth, Superior and Ashland; \$13.00 to Madison Lake, Waterville, Faribault, and other Minnesota resorts. Tickets on sale daily to September 30. Good to return October 31. For further information apply to Geo. W. Lincoln, T. P. A., 7 West 9th St., Kansas City, Mo.

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Horticulture.

Cider-Vinegar.

Vinegar made from pure cider or grape-wine is the best and most wholesome form of this popular condiment.

The fabrication of pure cider-vinegar is a very simple process, and one which any one who can grow or buy a few bushels of apples may successfully carry on.

In the production of pure cider-vinegar four factors are concerned. These are pure cider; the presence of the acetic acid ferment, "Bacillus aceti," free ingress of air, and the temperature of the air of room not less than 70°, nor more than 85° F.

As vinegar is ordinarily made on the farm, it is simply allowed to ferment spontaneously in unbunged barrels in a cellar whose temperature during the fall months, when cider is usually made, is pretty constant at about 60° F. The acetic acid ferment does not grow actively at any temperature below 70° F., hence the relatively long period it requires to produce good vinegar, in farm cellars. Although the acetic ferment requires a comparatively high temperature, there are many other ferments which can grow at lower temperatures. These generally get into the farmer's vinegar-barrels and make trouble. The following-described process will enable any one to make a fine vinegar with the least possible waste of time and material:

Take sound barrels or any suitably sized vessels of wood, earthenware or glass—never iron, copper, or tin. Clean thoroughly, and scald. Fill not more than half full with the cider stock, which should have fermented at least one month. To this add one-fourth its volume of old vinegar. This is a very necessary part of the process, since the vinegar restrains the growth of the chance ferments which abound in the air, and at the same time it favors the true acetic acid ferment. Next add to the liquid a little "mother of vinegar." If this latter is not at hand, a fairly pure culture may be made by exposing in a shallow, uncovered crock or wooden pail a mixture of one-half old vinegar and one-half hard cider. The room where this is exposed should have a temperature of about 80° F. In three or four days the surface should become covered with a gelatinous pellicle, or cap. This is the "mother of vinegar." A little of this carefully removed with a wooden spoon or a stick should be laid gently upon the surface of the cider prepared as above described. Do not stir it in. The vinegar ferment grows only at the surface. In three days the cap should have spread entirely over the fermenting cider. Do not break this cap thereafter so long as the fermentation continues. If the temperature is right the fermentation should be completed in from four to six weeks. The vinegar should then be drawn off, strained through a thick white flannel, and corked or bunged tightly, and kept in a cool place until wanted for consumption. If the vinegar remains turbid after ten days, stir into a barrel one pint of a solution of one-half pound of isinglass in one quart of water. As soon as settled, rack off, and store in tight vessels. Usually no fining of vinegar is needed. No pure cider-vinegar will keep long in vessels exposed to the air at a temperature above 60° F. "Vinegar eels" are sometimes troublesome in vinegar-barrels. To remove these, heat the vinegar scalding hot, but do not boil. When cool, strain through clean flannel, and the "eels" will be removed.

In making cider-vinegar, the strength of the product or per cent by weight of the acetic acid in it will be a little less than the per cent by weight of the alcohol in the cider. A little of the alcohol remains unfermented, and serves to give the desired flavor or bouquet to the vinegar.

There is another, and even more rapid, method of making cider-vinegar. In this method, the fermented cider, or "hard cider," is run through a box of beechwood shavings wetted with old vinegar. By this method good vinegar may be made in twenty-four hours. But the process as first described

makes better vinegar, and is preferable for farm use.—Bulletin No. 182 of the North Carolina Experiment Station.

Economy and Value of the Low Head-ed Fruit-tree.

Some forty years ago I helped to gather the apples from trees that were so tall that it took two men to put up a ladder long enough to reach the top of the trees.

After the ladder was placed in position one man would go up with a handle basket that had a rope attached to it, fill it and let it down for the other man to empty into a barrel. This slow and expensive process led me to the conclusion that the top of an apple-tree should be grown nearer to the ground, and, having some young stocks in my garden of suitable size to graft, the next spring I commenced my experiment of low head for apple-trees.

I grafted fifty trees, the scions all formed a union and made a good growth, and the following spring I cut them back to about 6 inches from the ground, leaving 4 to 6 buds, and from those buds the branches for the future top, or head, were produced.

With a great deal of interest I watched them as from year to year they advanced towards fruiting. When they were three years old, I offered some of them for sale, as I had not room for all of them, but no one would buy. "Too low!" they said. They wanted trees that they could plow under. In vain I stated the advantages of having them low down, but it was of no use. The people wanted apple-trees up out of the way, so I planted out most of them myself.

The trees made fine growth, and are in bearing condition now, and seem good for forty years more. Those trees, I think, were the first ever grown especially for low heads in this country. Orchardists are now, and have been for several years, drifting towards that method of training. Still there are many who object to it, and it is for those doubting Thomases that I am prompted to pen this article.

It might be difficult to state just which is the most important. The great saving of expense and the great ease and comfort in gathering the fruit is certainly an important one. Another is the greater convenience in spraying, pruning, and thinning fruit.

Again, if an apple drops to the ground it is not ruined by the fall. Another great gain, and perhaps the greatest advantage of all when the life of the tree is considered, is the protection given to the roots from the hot sun in summer. Trees thus protected make a better growth, and seem more healthy and, as I believe, will endure much longer.

There is one other advantage to be derived from this low training and shading. It is the effect on the growth of the branches. They being always shaded and so near the ground, it causes the under side of the branch to make a thicker growth every year, thereby causing a more upright growth. If one should cut off one of those branches and examine the cut he will find that the heart is very much nearer to the upper side or above the center, and rings showing the annual growth will be much further apart at the under side than at the upper side, whereas, if a branch is cut from a tree with a high head and long trunk (a lower branch) it will be found that the heart will be at the center, and that the branch is growing in a more horizontal direction.

Such branches, when laden with fruit, are much more likely to bend down to the ground than those which start near the ground and grow more uprightly. One can therefore cultivate more conveniently among the low-headed trees than he can among the higher and more spreading heads.—N. B. White, in American Gardening.

Big Crops Asparagus from Seed.

In the spring of 1901 I had a bed prepared in the following manner, and then seed was sown May 20. Trenches 3 feet deep by 1½ feet wide were made, 5 feet apart. At the bottom of each I put in well-rotted manure, mostly from the cow stable, to the depth of

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Both are hardy, yield well, have a stiff straw, and do not lodge or break down like bearded wheat.

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together at a considerable expenditure of labor in order that every person interested may be able to participate in an intelligent way in the fruit exhibits at St. Louis.

The Chief of the Department of Horticulture will be glad to mail a copy of this pamphlet to any one who asks for it. Requests should be addressed to Frederic W. Taylor, Chief, Department of Horticulture, World's Fair, St. Louis.

Low Rates West.

The Chicago Great Western Railway will on August 1st to 14th, inclusive, sell tickets to Seattle, Wash at greatly reduced rates. For full information apply to Geo. W. Lincoln, T. P. A., 7 West 9th St., Kansas City, Mo.

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Horticulture at the World's Fair.

The Department of Horticulture at the St. Louis World's Fair has just issued a circular of forty pages which gives very complete information with regard to every possible question which may arise with relation to that department.

A part of the pamphlet is devoted to a statement as to the importance of placing a large amount of fruit in cold storage this fall in order that the space to be assigned any State may be covered at the opening of the Exposition and kept covered during its entire period. Accompanying this are very full instructions for collecting, packing, wrapping, and handling the fruit, in order that the best results may be obtained. Those who have given the subject no thought will be surprised when they study it to learn the great advance which has been made along this line within the past ten years. As a matter of fact the refrigeration of fruit in a commercial way may be said to have grown up within that very brief period.

The information contained in the pamphlet is all new and is brought

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 post office, should be signed with his full name, and should be addressed to Dr. Geo. C. Frichard, V. S., 110 East Tenth Street, Topeka, Kans. Telephone No. 319, either phone.

Tuberculosis.—I have a grade Jersey cow which I have been using as a family cow for a year or two, which I begin to think may be infected with tuberculosis. She is of a rather large, slim build but not thin. She has lumps on her forelegs from the size of a pea to as large as the end of my thumb. The lumps are rather hard and seem to be slowly increasing in size. She also at times breathes in a labored manner, some as a person with asthma. Her udder seems all right except that since she came fresh she has given very little milk out of one quarter of the bag. She eats well and feels well, and is in as good condition as most Jersey cows.

I do not want to take any chances in using the milk if there is any danger of infection.

Missouri. WILLARD P. HOLMES.

Answer.—The most satisfactory way to determine whether your cow has tuberculosis or not, is to have her tested with the "tuberculin test." Employ a competent veterinarian to make the test, and you will feel well repaid for trouble and expense.

Strangles.—A 4-year-old gelding had distemper and large abscess formed on his breast. It was lanced six weeks ago, all matter pressed out, and washed with antiseptic solution, but sore continues to run and is swelling some again. What should be done?

Wyandotte County. H. E. E.

Answer.—Make a thorough incision into the abscess, long and deep enough for perfect drainage, and you will have no trouble in getting rid of the abscess you mention on your horse.

Thumps in Pigs.—I have several Poland-China pigs, 3 months old, afflicted with thumps. The pigs have had alfalfa and the range of the farm all their lives, and plenty of running water. Their feed since being weaned has been shorts and water with a little shelled corn. They are not what would be called fat. I have given them digitals and coal-oil in sweet milk. They thump from three to six weeks and die; some have fever in the last stage.

Elk County. H. A. CONDRA.

Answer.—This disease is due to some derangement of the digestive organs. The phrenic nerve is a branch of the pneumogastric and is distributed over the surface of the diaphragm, and as the diaphragm is one of the great respiratory muscles of the body, and intimately connected with the nervous system, it follows that any rearrangement of the nervous system would affect the diaphragm sympathetically, causing spasm of the muscle, or thumps.

Treatment indicated is to correct faulty digestion by regulating the diet. Make a complete change of feed.

Bleeding Wart.—I have a jack 1 year old that has a wart inside of hind leg as large as a pigeon's egg, and is raw.

THOMAS BROWN.

Washington County.

Answer.—To remove wart from jack's leg, take up fold of the skin surrounding wart and clip out wart, skin and all at one stroke. Any simple dressing will heal the wound readily.

Inflammation of the Udder.—I have a cow that has been fresh about three

and a half or four months. A week ago there was a small scab came over the end of one of her teats, and on taking it off, which was done easily, the teat was real hard to milk. It was this way four or five days and then her milk stopped and udder became swollen, and now her leg is swollen some on the inside. L. B. HARPER.

Osage County.

Answer.—Your cow has mammitis inflammation of one-quarter of the udder. Treatment: Give a mild cathartic, one pound or pound and a half of epsom salts dissolved in two quarts of warm water. Foment the udder with warm water. Milk often with a teat syphon. Plenty of hand rubbing, continued fomentation until the hard condition has all disappeared from the udder. The swelling in the leg will disappear as the inflammation of the udder subsides.

Muscular Rheumatism.—I have a 2-year-old red sow. She failed out in the back about three weeks ago. She had ten pigs six weeks old and we took them from her at the time she was taken sick; she had a poor appetite at first; has a fair appetite now, but her back is no better. I gave her turpentine internally and externally—and gave arsenic, but it seems to do no good.

WILLIAM H. BUNZEL.

Montgomery County.

Answer.—Your sow has muscular rheumatism. Treatment: Continue with turpentine externally well rubbed in. Give internally nux vomica. Commence with very small doses twice a day and gradually increase the dose until there is a change. Keep the bowels open and keep the animal in a dry place.

Injured Testicle.—I have a 12-year-old French draft stallion that got kicked on testicle about a month since. Testicle swelled much at time and has not gone entirely down yet and seems very sore. Used nothing but mild ointment on it. What should be done and what would effect on breeding be if testicle were removed?

RALPH SNYDER.

Jefferson County.

Answer.—You should have used plenty of hot water at the time of the injury. Liniments have no value or merit in reducing inflammation caused by sprain or bruise. Think you would get benefit yet with hot applications. Would advise employing a qualified veterinarian, as it will probably be necessary to aspirate before complete restoration.

Scours in Calves.—Last year we lost cattle in this neighborhood with dysentery. I first noticed it among my calves. They began by passing blood and constant straining, which condition soon turned to scours. I gave oil of turpentine to one and gave oak bark. This disease affected old cattle as well as young. I did not lose but one and it died of blackleg after it was sick with dysentery. I have tried everything I could hear of and found little benefit. My neighbors' cattle are having the same disease.

Some one asks in the KANSAS FARMER for remedy for cankered mouth in pigs. Take pulverized blue vitriol, mix with lard and apply. This remedy has never failed. If the tongue is cankered apply it to the tongue and the canker will come off. I lost a great many pigs of this disease before I happened on this remedy. When pigs have this disease they should be kept from the herd. I also have a remedy for sprained stifle in horses. Gum kino, one-half ounce, wood alcohol, 8 ounces, mix and apply over stifle joint. I have cured horses that had been lame more than a year.

Allen County. J. N. THOMPSON.

Your communication failed to state the character of food the calves were



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will do more and better work than any other machine of like character and corresponding size on the market; that it is simpler in construction; easier in every way to operate; easier and safer to feed and to require less power for successful operation. The proof of these claims is sent for the asking. We make also a complete line of sweep and tread horse powers, shellers, ensilage and fodder cutters, feed grinders, wood saws, windmills, etc. Remember that Appleton quality is the standard of excellence.

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being fed. But on general principles, scours is a result of some form of indigestion accompanied by a sour stomach. Treatment indicated would be a complete change of food, and in the first stages a good dose of raw linseed oil, to be followed by the following: Soda hyposulphite, 4 ounces, dissolved in 8 ounces water. To this add one ounce tincture ginger, one ounce laudanum, and two ounces spirits nitrous ether, and water sufficient for a pint. Give tablespoonful every two to four hours as occasion demands.

"Hardscrabble."

While in St. Louis Dedication week Gen. Fred D. Grant visited the house in which he was born, on the corner of Fourth and Cerre streets, and "Hardscrabble," the log house in which he passed much of his early life, and which was erected on its original location by his father, U. S. Grant, fifty years ago. "Hardscrabble" was recently removed to its present location, in Forest Park, and on the World's Fair Grounds, by Mr. C. F. Blanke, the present owner of the structure.

Western State Fairs for 1903.

Missouri State Fair, Sedalia, Aug. 17-22.
Iowa State Fair, Des Moines, Aug. 21-29.
Minnesota State Fair, Hamline, Aug. 31-Sept. 5.
Nebraska State Fair, Lincoln, Sept. 4-11.
Kansas State Fair, Topeka, Sept. 14-19.
Illinois State Fair, Sept. 26-Oct. 3.
Texas State Fair, San Antonio, Sept. 26-Oct. 11.
St. Louis Fair, Oct. 5-11.

Kansas Fairs for 1903.

Following is a list of fairs to be held in Kansas in 1903, 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, LaHarpe, September 22-25.
Barton County Fair Association: Jas. W. Clarke, Secretary, Great Bend; August 25-28.
Brown County—Hiawatha Fair Association: Elliott Irvin, Secretary, Hiawatha; September 8-11.
Butler County Fair Association: H. M. Balch, Secretary, Eldorado; October 5-9.
Chautauqua County—Hewins Park and Fair Association: F. N. Whitney, Secretary, Cedar Vale.
Coffey County Agricultural Fair Association: J. E. Woodford, Secretary, Burlington; September 8-11.
Cowley County—Eastern Cowley Fair Association: Ed. E. Reed, Secretary, Burden; September 8-11.
Cowley County Agricultural and Stock Show Association: W. J. Wilson, Secretary, Winfield; September 8-11.
Finney County Agricultural Society: A. H. Warner, Secretary, Garden City; August 5-7.
Franklin County Agricultural Society: Carey M. Porter, Secretary, Ottawa; September 15-18.
Harvey County Agricultural Society: J. C. Nicholson, Secretary, Newton; September 22-25.
Jackson County Agricultural and Fair Association: S. B. McGrew, Secretary, Holton; September 1-4.
Jefferson County Agricultural and Mechanical Association: Geo. A. Patterson, Secretary, Oskaloosa; September 1-4.
Jewell County Agricultural Association: H. R. Honey, Secretary, Mankato; September 14-17.
Marshall County—Frankfort Fair Association: J. D. Gregg, Secretary, Frankfort; September 8-11.
Marshall County Fair Association: E. L. Miller, Secretary, Marysville; September 15-18.
Miami County Agricultural and Mechanical Fair Association: W. H. Bradbury, Secretary, Paola; September 8-11.
Mitchell County Agricultural Association: H. A. Phelps, Secretary, Beloit; September 30-October 3.
Morris County Exposition Co.: M. F. Ambrine, Secretary, Council Grove; September 22-25.
Nemaha County Fair Association: W. R. Graham, Secretary, Seneca; September 1-4.
Neosho County Fair Association: H.

Lodge, Secretary, Erie; September 29 to October 2.
Neosho County—Chanute Agricultural Fair, Park and Driving Association: A. B. Timpane, Secretary, Chanute; September 1-4.
Ness County Agricultural Association: I. B. Pember, Secretary, Ness City; September 2-4.
Norton County Agricultural Association: C. J. Shimeall, Secretary, Norton; September 1-4.
Osage County Fair Association: E. T. Price, Secretary, Burlingame; September 1-4.
Reno County—Central Kansas Fair Association: Ed. M. Moore, Secretary, Hutchinson; September 14-19.
Rice Agricultural Fair and Live Stock Association: W. T. Brown, Secretary, Sterling; September 1-4.
Riley County Agricultural Society: E. C. Newby, Secretary, Riley; September 1-4.
Rooks County Fair Association: Omer Adams, Secretary, Stockton; September 8-11.
Saline County Agricultural, Horticultural and Mechanical Association: H. B. Wallace, Secretary, Salina; September 8-11.
Sedgwick County—Southern Kansas Fair: H. L. Resing, Secretary, Wichita.
Smith County Fair Association: E. S. Rice, Secretary, Smith Center; August 18-21.
Stafford County Fair Association: Geo. E. Moore, Secretary, St. John; August 19-21.
Sumner County—Mylvant Agricultural Association: Newton Shoup, Secretary, Mulvane.
Wilson County—Fredonia Agricultural Association: J. T. Cooper, Secretary, Fredonia; August 25-28.

Farm Engines and How to Run Them.

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engineer as to how to set up and operate his engine and boiler, followed by questions and answers to what should be done in every conceivable difficulty that may arise, covering such subjects as scale in the boiler, economical firing, sparks, pressure, low water and danger of explosions, lining and gearing the engine, setting the valves, oiling, working injector and pump, lacing and putting on belts, etc. There are two chapters on farm engine economy, giving the theory of the steam engine, especially in its practical applications to securing economy of operation. Chapter XII describes "Different Types of Engines," including stationary, compound, Corliss and high speed engines, and all the leading makes of traction engines with an illustration of each. Also chapter on gasoline engines and how to run them, and another on how to run a thrashing-machine. The book closes with a variety of useful recipes and practical suggestions and tables, and 175 questions and answers often given in examinations for engineer's license. Beautifully illustrated with plans, etc. 12mo cloth. Price, \$1.

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W. H. RICHARDS, V. S., Emporia, Kansas.

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ZENNER DISINFECTANT CO., 61 BATES STREET, DETROIT, MICHIGAN.

Definitions of Home.

A prize was offered recently by the London Tid-Bits for the best answer to the question, "What is Home?" Here are a few of the answers which were received:

"Where you are treated best, and you grumble most."

"A world of life shut out, a world of love shut in."

"Home is the blossom, of which heaven is the fruit."

"The golden setting, in which the brightest jewel is 'mother.'"

"The father's kingdom, the children's paradise, the mother's world."

"The place where the great are sometimes small and the small often great."

"The center of our affections, around which our heart's best wishes twine."

"The jewel casket, containing the most precious of all jewels—domestic happiness."

"The only spot on earth where the faults and failings of fallen humanity are hidden under the mantle of charity."

"A little hollow scooped out of the windy hill of the world, where we can be shielded from its cares and annoyances."

"Home is the central telegraph office of human love, into which run innumerable wires of affection, many of which, though extending thousands of miles, are never disconnected from the one great terminus."—Selected.

Queer Things About Frogs.

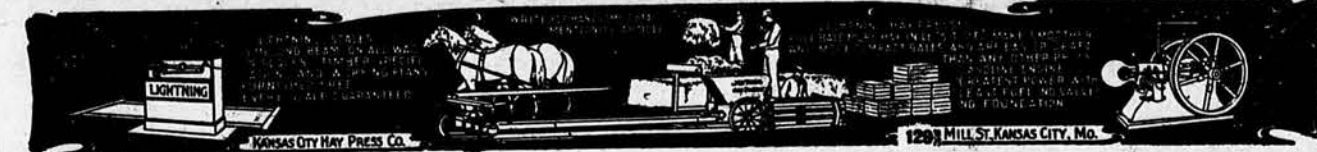
"The frog's skin is so important as a breathing apparatus that the creature would die at once of suffocation if the pores were closed by a coat of sticky varnish, by dust or in any other way," says Ernest Harold Baynes, in the May Woman's Home Companion. While we are speaking of his breathing, you will notice that his sides do not heave as ours do at each breath we take. A frog has no ribs, and can not inhale and exhale as we do, but is obliged to swallow his air in gulps, and if you will watch this little fellow's throat you will see it continually moving in and out as one gulp follows another. In order to swallow, his mouth must be closed; just try to swallow with your mouth wide open, and you will see what I mean. The frog, then, always breathes through his nose, and if you held his mouth open he would suffocate as surely as though you gave his skin a coat of varnish. Mr. Frog has an enormous mouth for his size, and if you were to put a finger inside it you would find that he has a row of teeth in the upper jaw, and that his soft, white tongue, unlike our own, is attached in front and is free behind. When he wishes to catch any insect he throws out the free end of the tongue, then draws it in so rapidly that it is difficult to see whether he has been successful or not. As the tongue is coated with a gummy fluid, the insect sticks to it and is carried back into the mouth, which closes upon it like the door of a tomb. Frogs, however, are not limited to one mode of feeding; they often leap open-mouthed upon larger prey, which includes, besides insects, small fish, mice, small ducklings, polliwogs and tiny frogs.

Beauty-Making Foods.

"The best of all beauty-making foods are fresh fruits and fresh vegetables," said Prof. H. W. Wiley, the famous Government chemist, who is incidentally a skilled physician. "They contain relatively little nourishment—a woman could hardly live on them exclusively for any length of time—but for reasons which as yet are imperfectly understood, they possess extraordinary value as health givers. If you want bright eyes and a clear complexion, eat plenty of them."

The fact is that most fresh vegetables and fruits are nearly all water. Spinach is 92½ per cent water, cabbage is 77 per cent water, beets are eighty-eight per cent water, carrots are 91 per cent water, cauliflower is 91 per cent water, cucumbers are 96 per cent water, egg plant is 93 per cent water, onions are 78½ per cent water, tomatoes are 96 per cent water, green corn cut from the cob is 81½ per cent water, and celery is 94½ per cent water. Fruits are pretty nearly all water, though the banana is relatively rich in starch.

Fruits and vegetables, then, are of no great use in supporting the human body. Their value is mainly medicinal, and as beauty-makers they are the chief among foods. It is almost impossible to eat too much of them in a fresh state, though, of course, the diet must include a reasonable proportion of those substances, such as meat, which furnish blood and muscle tissue.—Selected.



WEEKLY WEATHER-CROP BULLETIN.

Weekly weather-crop bulletin for the Kansas Weather Service for the week ending August 4, 1903, prepared by T. B. Jennings, Station Director.

The first part of the week was quite warm, followed by much cooler the latter part, the average temperature for the week being slightly below normal. The rainfall was quite light in the southwestern counties, nearly normal in the extreme eastern and southeastern, and above normal over the rest of the State, being very heavy in the central and central northern counties.

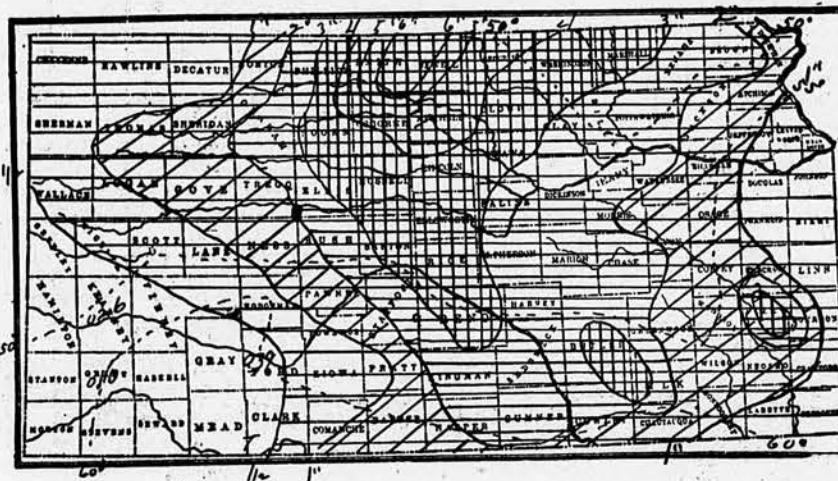
RESULTS.

EASTERN DIVISION.

Corn has been greatly benefited by the rains; early corn is earring well and late corn is growing rapidly. Wheat thrashing continues, but the yield is below expectations though the quality is generally good. Oat thrashing develops a light yield. The yield of flax is fair in Bourbon though disappointing in Cherokee, while in Coffey, though the yield is light, the quality is good. Prairie hay is progressing in the southern and central counties and an unusually good crop is being put up. Tame is about all in the stack or mow. The third crop of alfalfa is doing well in the south, and the second crop is out in the north, a good crop. Apples are a good crop in the south, a half crop in Bourbon, none to speak of in Greenwood, very light in Woodson and Wyandotte, and light and faulty in Crawford. Pastures are good. Plowing for fall wheat continues in Montgomery.

Anderson.—Rains very beneficial to corn; a little of the earliest planting was badly injured before the rains came; the ground is in fine condition and plowing will begin at once.

Rainfall for Week Ending August 1, 1903.



Maximum temperature shown by broken lines.

SCALE IN INCHES.

Less than 1/2. 1/2 to 1. 1 to 2. 2 to 3. Over 3. T, trace.

Bourbon.—Corn has been well cultivated and is clean and the rains are now producing a rapid growth; much hay has been saved in good condition; a crop of flax has been saved in good condition; wheat short of expectations; oats yielding fairly well; potatoes fair; apples a half crop; peaches fair; blackberries good.

Brown.—Corn much benefited by recent rains; thrashing in progress; yield of wheat not as good as expected, but the quality is generally good; most of the oats is yielding poorly and is light in weight.

Chase.—Rain came in time to give good prospects for corn planting before the flood; alfalfa and prairie hay good.

Chautauqua.—Most of the corn promises a fair crop since the rains; a large crop of prairie hay is being put up in good condition; ground now in good condition for plowing; Kafir and cane crop promise well; third crop of alfalfa in fine condition.

Cherokee.—Corn is growing well now; early corn is tasseling low, but late corn which comprises nearly half the acreage promises well; wheat, oats, and flax crops all light; apples a pretty good crop; grapes mostly good.

Coffey.—The recent rains have put corn in good condition; wheat and flax are making light yields, but the quality of both is good.

Crawford.—Early corn in tasseling and silk, late, about knee high; all growing well; wheat thrashing well along, yield poor; oats poor; good crop of tame hay well put up; ground in fine condition for plowing; peaches ripening but rotting on the trees; apples a light crop and faulty; pastures fine and stock doing well; celery fine.

Doniphan.—Wheat a light crop; oats yield poor and chaffy; corn backward but benefited by rains; grass good; potatoes good.

Douglas.—Hay crop nearly harvested; thrashing from the shock about finished with a fair yield; early corn greatly benefited by rain.

Elk.—Fine rains and all crop doing well.

Franklin.—The rains have put the crops in good condition.

Greenwood.—A fair crop of prairie hay being put up; upland corn has a good crop but bottom corn is considerably fine; but the rains will greatly benefit it; grass cattle are going to market; no apples, peaches, pears, or plums to speak of.

Jackson.—Some early corn had begun to fire before the rain, but all has been greatly benefited; oats and wheat yielding poorly; timothy hay mostly in the stack in good condition.

Johnson.—Fine week for thrashing; corn is being cleaned of weeds and growing rapidly.

Linn.—The rains will be helpful to the corn; though it was not injured by drought, yet only a light crop is expected.

Marshall.—Rains very beneficial to corn and grass; all crops now in good condition; second crop of alfalfa and blue-grass cut and both are good crops.

Montgomery.—Corn conditions favorable; plowing for wheat in progress.

Morris.—Corn making good growth, most of late planting laid by, and roasting ears plentiful; some early corn blown down; thrashing stopped by wet weather; ground in fine condition for plowing.

Pottawatomie.—The recent rains are very

helpful to the corn which was beginning to suffer.

Riley.—Corn in fine condition; third crop of alfalfa is short and the fields somewhat spotted; late frost seems to have killed the canker worms, which were doing damage to orchards in this vicinity last year.

Shawnee.—Wheat thrashing progressing; a good yield of fine grain; early corn silking and late corn growing rapidly; oats stacking well under way; haying has begun; the crop is unusually heavy; pastures good and cattle doing well; apples growing finely.

Wilson.—Corn looking better; oats yielding very poorly; wheat way below average.

Woodson.—Corn in tasseling and silk with prospects for a good crop; haying continues; thrashing about finished; apple crop is very light.

Wyandotte.—Early corn in roasting ear, late corn growing rapidly; second crop of clover being cut; shock thrashing mostly done; the rains will benefit the corn, and put the ground in fine condition for plowing.

MIDDLE DIVISION.

Corn has been very much improved by the rains this week; early corn is earring, and late corn is making a good growth; drought hurt corn in southern counties. Wheat stacking is finished, and thrashing from shock nearly finished; the yield has generally been good, berry good. The oat yield is fair. Alfalfa was greatly benefited by the rains, and is being cut in Lincoln and Osborne. Hay grass and pastures have been revived by rain and cooler weather, and in Barton haying delayed by the rain. Apples are ripe and abundant in the south. The ground is now in good condition, and fall plowing is progressing in southern counties.

Barton.—Thrashing was stopped and haying delayed by much needed rain which freshened the corn, forage crops and pastures; ground in fine condition for fall plowing.

Butler.—A good rain has terminated the long, dry spell and will help the forage crops and pastures.

Pratt.—Pastures and feed crops have been revived by light showers, but of very little benefit to corn; thrashing retarded by showers; thrashing from shock about one-third done; some large yields of wheat are reported.

Reno.—The rain will put the ground in fine condition for plowing and may benefit the corn some; thrashing from the shock nearly done, but considerable stacked grain remains to thrash.

Rush.—Harvest finished and grain saved in good condition; feed crops greatly benefited by rain.

Russell.—The rain retarded thrashing but was very beneficial to corn and all other growing crops.

Saline.—The recent rains have been very beneficial to corn; ground in fine condition now.

Sedgwick.—The corn has been badly injured by the dry weather; opinions differ as to whether or not the recent rains were of much benefit to it. Apples look well.

Smith.—The rains were very helpful to the corn; some damage by grasshoppers is reported; some wheat was never shocked and much was poorly shocked and will be damaged by rain; thrashing in progress; yield and quality of all small grains good; forage crops doing well.

Stafford.—Ground in fine condition for fall plowing.

Sumner.—Thrashing nearly done; corn and pastures helped by rain; corn generally is very late, the earliest being in roasting ear; plowing is in progress; ripe apples are plentiful.

Washington.—Fine rain for corn; early corn is in tasseling and silk; oats are a fair yield and wheat medium; garden truck backward; potatoes are small but of good quality; there are some grapes but no peaches.

WESTERN DIVISION.

Corn has been damaged in Ford but further north it was in better condition; all corn has been materially helped by the rains this week and in the southern and central counties the early is earring and in the north it is tasseling and silking. Wheat thrashing develops a good yield of a good berry. Spring wheat has not filled well. Oats is about over and a good crop has been secured. Forage crops have been greatly improved by the change in weather this week. Cutting of second crop of alfalfa was stopped by rains and in Wallace much of it is being saved for seed. Range-grass has cured in the south but is fine in the north. Cattle are doing well.

Clark.—Kafir-corn looks well, but corn is about all burned up.

Decatur.—Thrashing in progress; wheat, oats, and barley all good crops; corn needed rain badly, but was greatly benefited by the rains; it is now in tasseling and in good condition.

Ford.—The rain was beneficial to corn and feed crops, though corn is seriously damaged and much of it killed in tasseling; thrashing shows wheat yields about as anticipated and of good quality.

Grant.—Crops beginning to burn up; grass dry.

Lane.—Thrashing begun; early wheat good, but late wheat did not fill well on account of drought; the barley and oats crops both good; light rains beneficial to corn and forage crops; ears are setting on the early corn and late corn is tasseling.

Morton.—Early planted cane, milo maize, and corn growing finely; milo maize leaves are scorched a little; cattle fattening rapidly.

Worton.—Corn helped by rain; corn tasseling and silking and where clean is in fine condition; thrashing in progress and wheat yielding well.

Sheridan.—Harvest nearly finished; corn is silking and in fine condition; grasses of all kinds are good.

Thomas.—Harvest about over; forage crops were benefited by rain; corn in fine condition; fall plowing will begin next week; some damage by hail; forage crops are quite weedy.

Trego.—Wheat and oats about all cut; rain stopped the cutting and stacking of alfalfa, millet, etc.

Wallace.—Barley cut and being stacked; much of the second crop of alfalfa is being left for seed; range-grass fine and cattle doing well; rains were beneficial to corn and forage crops; some damage by hail is reported.

The Missouri State Fair.

Beef Breeds.

The State Fair has surpassed all other like institutions in offering \$2,000 in prizes on Shorthorn cattle; large sums are offered on all other beef breeds. These liberal premiums will not only bring all the great herds of Missouri, but the leading herds from all other States. The State Fair will furnish an opportunity to see the great prize-winners of the world. Many animals valued at from ten to twenty thousand dollars will be on exhibition. Kansas, Iowa, Illinois, Indiana and Ohio have already indicated that they will be on hand with their best animals. Champion herds, that have won from Texas to Maine, will be at the fair. Missourians with herds that won at Chicago and Omaha exhibitions and at every State fair in the Union will be in the heat of the big show. Herds from other States will be fairly treated. Missourians don't know how to treat them otherwise, but if they win over Missouri herds they will have some recollection of having been at a red hot cattle show.

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DEPT 153, East St. Louis, Ill.

THE MARKETS.

Kansas City Live-Stock and Grain Markets.

Kansas City, Mo., August 3, 1903.
Plentiful supplies of rangers and a moderate run of native corn-fed cattle were the features of the market here to-day. Total receipts were 8,000 head, and less than 25 per cent of this number consisted of corn-finished beefs. About 3,000 head arrived in the quarantine division. Offerings of Oklahoma and Panhandle cows were liberal. The general market on beefs was steady to 10c higher with a free movement. F. S. Spurck, of Nelson, Neb., and Argonbright Bros., of Adrian, Mo., topped the market with 1,000 to 1,570 pound beefs that brought \$5.30. Local traders are generally optimistic with regard to the future of corn-fed beefs, although they look for no decided improvement, if any at all, in grassers.

Hog receipts here were light at 2,000 head and the runs elsewhere were moderate. In view of this fact, salesmen held out for better prices and generally succeeded in securing them. The advance amounted to 5c@10c. Bulk of packing hogs brought \$5.10@5.20 while top pigs commanded \$5.35. Sheep were in moderate supply and the market held steady. Colorado wethers selling up to \$3.40 and native lambs bringing \$4.75 as top. Shippers are urged to be a little chary in purchasing lambs and to discriminate against bucky stock, for this is being done at all markets at present. Horse arrivals were 500 head, double the receipts of the preceding Monday or of the same day last year. A good many Eastern buyers were in attendance upon the auction and they took hold with a vim, making an active firm market. Drivers sold largely at \$80 @145 and best drafts at \$145@167 1/2.

Cattle receipts here last week aggregated 42,000 head, the heaviest run since the flood. For the first three days the market sagged owing to heavy supplies. After Thursday, however, corn cattle began to look up and the loss was regained, best steers bringing \$4.75@5.30 at the close, which was the high point of the week. Grassers were in very heavy supply, just the reverse of the situation in corn-fed stock and killers continued to gouge prices on grassers all week. Some classes of steers declined 25c@35c under the hammering. Stock calves put on 50c@75c and weals also advanced. Stock heifers sold dull and lower. Feeding steers opened firm but the demand proved too light for the supply and the close of the week saw values go down 15c@25c. Fat heifers are now quoted at \$4.40@4.75; best cows at \$3.25 @3.85; stock cows and heifers \$2.00; stock steers \$3.20@4, and feeders \$3.40@4.25.

Those bringing in good cattle here last week were: F. E. Bottenfield, Nelson, Neb., \$5.25; F. S. Spurck, Nelson, Neb., \$5.30; Wallace & Sinclair, Kincaid, Kans., \$5.05; Pat Flynn, Klineo, Kans., \$5; steers and heifers: Thomas Sump, Riley county, Kans., \$5.20; George Wideman, Greeley, Kans., \$5.05; J. W. Teeter, Eldorado, Kans., "Spur" Westerns at \$4.85; J. D. Slusher, Lexington, Mo., \$5.17 1/2; H. H. Staley, Richmond, Kans., \$5.20; B. M. Goode, Winchester, Kans., steers, \$5.05; and steers and heifers at \$5.15.

Hog receipts for the week showed the substantial total of 37,300 head, a gain of 13,000 over last year. The supply at the five chief markets was 70,000 head above that of the same period last year, and in view of this fact the bears had the market in their own hands. The general decline for the six days was 10c@15c. Traders are hoping that receipts will let up a little from now on so that the decline can be checked. It is felt here, however, that hogs are now at about the low point of the season.

Sheep receipts for the week amounted to 25,300 head, the heaviest supply since last May. The most disastrous break in lamb values of the season was had, prices dropping off 75c@1 within four days. Last Monday prime lambs brought \$5.75@5.80 and at the close of the week the same class of stock was dull at \$4.65@4.80. Liberal offerings of Idaho, Utah, and New Mexico sheep and lambs were what swelled the receipts and caused the break in lamb values which was just as pronounced elsewhere as here. Muttons generally sold steady throughout the week, 10c@15c covering the decline.

Wheat receipts here last week aggregated 1,070 cars, compared with 1,033 cars the preceding seven days. Bullish influences were at work in both the cash and speculative departments, however, and prices advanced 1c@1 1/2c. Corn receipts were light at 167 cars but in spite of this a dull demand caused prices to fall off about 1c. Oats followed the lead of corn. No. 2 wheat is worth 70c@74c; No. 4, 64c@70c; No. 2 corn 46 1/2c@47c; No. 4, 43c@44c; No. 2 oats 28c@35c; No. 4, 26c@30c. White oats are greatly outselling mixed oats at present. The poultry market showed steady prices prevailing. Spring chickens weakened a little the first of the week but this was later regained. Hens and aged stock sold steady throughout the week. Butter was unchanged for the best grades while common kinds sold easier. Eggs held firm. Eggs are worth 11 1/2c@12c; hens 9c; broilers 11c; turkeys 9c; ducks 8c; geese 9c; butter 11 1/2c@17c.

H. A. POWELL.

South St. Joseph Live Stock Markets.

South St. Joseph, Mo., August 3, 1903.
The good finish of the cattle market of the previous week encouraged freer marketing last week, which, coupled with the bad condition of the trade east, enabled buyers to pound prices to the tune of 10c@25c, mostly 10c@15c. Medium grassers were in good quota and choice dry-lot beefs from Missouri topped the market at \$5.30, with quite a number of Kansas grades going at \$5.25. Cows and heifers were in moderate proportion and good demand, although prices broke 10c@15c. The dry, hot weather and discouraging condition of the corn and pastures checked what little demand there was from the country for stockers and feeders, resulting in a good accumulation of cattle and a break of prices to the amount of 10c@25c. The good rains late in the week, however, along with the lower range of prices, caused a fairly good outlet to the country.

Arrivals in the quarantine division were moderate, caused no doubt by owners holding back for a better turn in prices. Steers were in the majority and prices broke 10c@15c. Cow-stuff and bulls met with a ready demand and values lost

around 10c. Calves were in light supply and strong request, which resulted in a reaction of 2c from the low point, which was two weeks ago.

Supplies of hogs continued liberal last week and prices were on the toboggan on most days. The quality was good and weights of good strong average, which indicates that there are plenty of hogs in the country. The feeling here is bullish for prices during the next sixty days, but of course, prices depend upon the receipts. Under nominal marketing there would be a strong advance, but with continued liberal supplies values will go even lower. The tops to-day were made at \$5.35 with the bulk of sales at \$5@5.25.

Offerings in the sheep department were not liberal last week, but showed an increase with the last few weeks. Idaho and Utah sheep made up a good quota of the offerings. There was little change to note for sheep of decent quality, but common and medium kinds went to feeder buyers at steady figures. The good class of lambs sold at a decline of 25c, and medium and bucky grades broke 35c@40c. To-day Idaho lambs brought \$5.60; Idaho wethers, \$3.70; Idaho ewes, \$3.30; and Idaho feeding wethers, \$3.20.

FRIDLEY.

New York Butter Market.

The New York butter market for the past week has been as follows:
Monday, July 27, 19c; Tuesday, July 28, 19c; Wednesday, July 29, 19c; Thursday, July 30, 19c; Friday, July 31, 19c; Saturday, August 1, 19c; average for week of July 27 to August 1 was 19c.

Kansas Live-Stock Committees for the World's Fair.

At the last annual meeting of the Kansas Improved Stock-Breeders' Association members were named as chairmen of committees to represent each of the pure-breeds and to have charge of the securing of a creditable exhibit of the several breeds for the Louisiana Purchase Exposition in 1904. These committees have been filled and are as follows:

Herefords—C. A. Stannard, chairman, Emporia; Robert H. Hazlett, El Dorado; Marion Jones, Comiskey.
Shorthorns—S. C. Hanna, chairman, Howard; J. F. Stodder, Burden; T. P. Babst, Auburn.
Aberdeen-Angus—Chas. E. Sutton, chairman, Russell; Parker Parish, Hudson; Thos. Anderson, Iola.
Galloways—Geo. M. Kellam, chairman, Richland; E. W. Thrall, Eureka; S. M. Croft, Bluff City.
Red Polls—Wilkie Blair, chairman, Girard; Chas. Morrison, Phillipsburg; Mahlon Groenmiller, Centropolis.

Polled Durhams—Case Broderick, chairman, Holton; John D. Snyder, Winfield; J. J. Achenbaugh, Washington.
Dairy breeds—M. S. Babcock, chairman, Nortonville; E. W. Melville, Eudora; Wilkie Blair, Girard.
Berkshires—G. W. Berry, chairman, Emporia; W. H. Rhodes, Tampa; E. W. Melville, Eudora.
Poland-Chinas—H. W. Cheney, chairman, North Topeka; C. F. Dietrich, Richmond; T. A. Hubbard, Rome.
Duroc-Jerseys—H. A. J. Coppins, chairman, El Dorado; J. B. Davis, Fairview; W. R. Dulaney, Wichita.
Chester-Whites—D. L. Button, chairman, North Topeka.
Tamworths—C. W. Frelove, chairman, Clyde.
Draft Horses—H. W. Avery, chairman, Wakefield.

Standard-bred and Harness Class—O. P. Updegraff, chairman, Topeka; Dr. J. T. Axtell, Newton; J. W. Creech, Herington.
Sheep—E. D. King, chairman, Burlington; E. W. Melville, Eudora; E. S. Kirkpatrick, Wellsville.
Angora Goats—N. A. Gwin, chairman, Lawrence; Drake Spencer, Kickapoo; R. C. Johnson, Lawrence.

H. A. Heath,
Secretary of the Committee.
Topeka, Kans.

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Special Want Column

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CATTLE.

FORTY HEAD of Shorthorn cattle, eight are pedigree, red and well bred, and will be sold at my public sale, three miles North of Hope, Kansas, August 25, 1903; account of my removal to Pennsylvania. D. B. Hostetter, Hope, Kans.

FOR SALE—Two double standard Polled Durham bulls, one my herd bull three years old, one yearling. A. L. West, Garnett, Kans.

FOR SALE—Five head of pure bred Hereford bulls of serviceable age. Address, A. Johnson, Clearwater, Kans., breeder of high-class Herefords.

FOR SALE—Guernsey bulls from best registered stock. J. W. Perkins, 425 Altman Building, Kansas City, Mo.

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OH, SAY! Want a Poland-China sow? Stock selected from five counties and two states, 10 October gilts, 6 yearling sows, 4 herd sows all bred, 20 spring sows. Write me. Price low, quality guaranteed. F. H. Barrington, Spring Creek, Chautauqua Co., Kans.

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FOR SALE—Pure bred Duroc-Jersey pigs, April farrow. Some very choice pigs of either sex. F. A. Hill, Durham, Kans.

FOR SALE—Duroc-Jersey boar, ready for service. He is from the famous Blocher-Barton stock. February pigs now ready for sale. J. P. Lucas, 113 West 23rd St., Topeka, Kans.

SEEDS AND PLANTS.

WANTED—To buy 20 bushels of alfalfa seed. Riverside Stock Farm, Topeka, Kans.

FOR SALE—English blue-grass for fall sowing. Write to D. O. Buell, Robinson, Kans.

BLUE GRASS—If you mean to sow this fall, write to J. G. Hinsh, Eureka, Kans.

FOR SALE—Golden Yellow popcorn, very productive, excellent for popping, very tender. Packet 6 cents; 7 pounds 50 cents. J. F. Overlander, Highland, Kans.

200,000 FRUIT TREES! Wholesale prices; new catalogue. Baldwin, Nurseryman, Seneca, Kans.

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CHEAP AND GOOD FARMS—Small and large, for dairying, stock-raising, general farming, in Marathon, Clark, Wood, Dunn, Chippewa, Barron, Polk and St. Croix Counties, Wisconsin. Rich soil; never-falling water; cheap fuel. No floods. No droughts. No failure of crops. Drop a postal to us; we will attend to the rest. Hiles & Myers, A60, Matthews Bldg., Milwaukee, Wis.

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EVERY foot gilt edge, 400 acres, quality can't be beat in state, nice and smooth, 380 under cultivation. 7 room house, good barn, 2 miles to good town. Price \$35 per acre. Garrison & Studebaker, Florence, Kans.

5,000 ACRES VIRGIN TIMBER LAND in Lamar county, Texas, in the Red river valley near the "Brisco System." Soil very rich and never overflows. Fine saw mill and be proposition. Black, White, Red and Post Oak, Ash, Hickory, Walnut and Bou D'Arc. Will sell in small tracts to suit purchaser. Address, Chas. Lee Requa, Eureka Springs, Ark.

RANCH FOR SALE—1300 acres, 1120 acres of creek bottom, with model improvements, 140 acres alfalfa, 600 acres pasture, balance number one farm land. For further information address G. L. Gregg, Real Estate Dealer and Auctioneer, Clyde, Kans.

SOME BARGAINS in farm lands in Anderson County, Kansas, in farms ranging from 80 acres up. S. B. Hamilton, Welda, Kans.

FOR SALE—Farms and ranches in central and western Kansas. We have some great bargains in western ranches. Write us. R. F. Meek, Hutchinson, Kans.

MISCELLANEOUS.

WANTED—Buyers for pure bred Scotch Collie pups. Cheap. Write soon. W. T. Walters & Son, Emporia, Kans.

FOR SALE—1,000 trained ferrets at \$3 per pair. Farnsworth Bros., Elk Falls, Kans.

ALFALFA BACTERIA—I can supply earth thoroughly inoculated with alfalfa bacteria from one of the most successful fields in Kansas. 40 cents per 100 pounds f. o. b. Whiting. Large quantities at a less rate. Address, H. Monroe, Whiting, Kans.

TO EXCHANGE—Square piano for horse or young stock. Miss F. L. Knox, (Potwin), Topeka, Kans.

WANTED—Oil agents, reliable, energetic men to sell on commission our high grade line of lubricating oils, greases, also roof, barn and house paints, etc., locally or travelling. Specially to the thrashing trade. Address, The Lion Oil & Grease Co., Cleveland, Ohio.

WANTED—Position as agriculturalist or farm foreman. 25 years experience. Address W. A. Kimble, 1019 Seaward Ave., Topeka, Kans.

TWO more litters of those high-bred Scotch Collie pups, only one week old, but you will have to book your order quick if you want one. Walnut Grove Farm, H. D. Nutting, Propr., Emporia, Kans.

WANTED WOOL—Send us samples of your whole clip, we will pay market price. Topeka Woolen Mills, Topeka, Kans.

CREAM Separators Repaired at Gerdorn's Machine Shop 820 Kansas Ave., Topeka, Kans.

WANTED—Money to get patent on a quick-selling toy. Will give 25 per cent of what it sells for. Henry Boite, Webster, S. Dakota.

FOR SALE—Ten registered and ten high-grade Jersey cows, from 2 to 5 years old; most of them will be fresh next month. Will be sold worth the money to anybody wanting some good cows. M. S. Babcock, Nortonville, Kans.

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FOR SALE OR EXCHANGE for sheep or cattle, one imported registered Percheron stallion, black. One black Missouri-bred Jack 8-year-old—will make a large Jack. Can be seen one-half mile south of city limits. J. C. Hentzler, 921 Kansas Ave., Topeka, Kans.

WANTED—To buy or trade, a Clydesdale stallion for a span of good mules. H. W. McAfee, Topeka, Kans.

PROSPECT FARM—CLYDESDALE STALLIONS, SHORTHORN CATTLE and POLAND-CHINA MOGS. Write for prices of finest animals in Kansas. H. W. McAfee, Topeka, Kans.

The Stray List

Week Ending July 23.

Reno County—Wm. Newlin, Clerk.
PONY—Taken up by J. B. Dane, in Lincoln tp. June 23, 1903, one sorrel pony, 5 years old, three white feet, blaze in face, branded 76, valued at \$25.

Wyandotte County
HORSE—Taken up by C. A. Hunt, in Kansas City, at 739 Barnett St., June 6, 1903, one dark brown horse, age 10 or 12 years, size 12 hands, star in forehead, left hind foot white, O brand on hip, valued at \$25.

Wallace County—O. N. Tharun, Clerk.
HORSE—Taken up by Almon Johnson, in Sharon Springs, in Sharon Springs tp., Oct. 30, 1902, one iron gray horse, weight about 900, indescribable brand; valued at \$25.

Week Ending July 30.

Riley County—C. M. Breese, Clerk
MARE—Taken up by Chas. Isaacson, in Randolph, in Jackson tp. May 13, 1903, one brown mare, 2 years old, white star in forehead; black tail and mane, valued at \$30.

FINE DAIRY

..AND..

STOCK FARM

FOR SALE.

240 acres located on Badger Creek, Lyon County, Kansas, divided as follows:

150 acres in cultivation (100 acres bottom land), 10 acres orchard, 20 acres good timber, 60 acres pasture and meadow land. Good improvements. Eight-room house in nice grove, new creamery building (cost \$750), two good barns, cattle sheds, chicken house, hog house, coal house, two ice houses, two silos (100 tons each), never-falling water, pond and three wells, elevated tank and windmill, underground water pipes with hydrants, two stock tanks with floating valves and tank heater, 40 acres in alfalfa. Three miles from railroad station, 8 miles from Emporia (county seat), 10,000 population. Long-distance telephone connecting with Emporia exchange and all parts of the State goes with the farm. Fifty cows kept on this farm at present. Would like to lease creamery building of purchaser and will contract to take all milk produced on farm by the year. Price \$50 per acre. Easy terms. Address owner,

G. W. PARKMAN, Emporia, Kansas.

Thomas County, Kansas

offers exceptional advantages for the home-seeker. I have some choice farms in Thomas County, at prices, which considering the prosperous conditions, are the best bargains to-day on the market.

Write me for Land Buyers' Guide, giving list of many choice farms.

80 acres, level land, 9 miles from town, Thomas County, ordinary improvements; 30 acres cultivated. Price \$700.

160 acres, Thomas County, mostly smooth, 7 miles from Rexford, 10 acres cultivated, balance grass. Price \$1,400.

320 acres, 60 acres cultivated. Price \$3,000.

240 acres, house and barn, good well and windmill; 3 miles from town, all cultivated. Price \$3,000.

480 acres, mile and half from town; 4-room house, stable, sheds. 200 acres cultivated. Price \$5,500.

HILAND P. LOOKWOOD,

102 Bryant Bldg., Kansas City, Mo.

FREEDOM HERD

PURE-BRED POLAND-CHINAS

Choice spring and fall pigs, both sexes, by Belleville Chief 29123; Kansas Chief 23250; Lamplighter 26890; Par's Spot 23629; Best on Earth's Chief 27037 and Royal Tecumseh 2d 25314. Royal Tecumseh 2d for sale. A snap.

F. C. SWIERCINSKY,

R. F. D. 1, BELLEVILLE, KANS.

BERKSHIRES.

The best imported blood that money can buy, crossed on the finest native blood. For bargains write,

T. J. PUGH, Fullerton, Nebr.

RED POLLED CATTLE

For Sale in large or small lots. Twenty years a breeder of these surely dual-purpose cattle.

A. Z. BROWN, Guilford, Wilson Co., Kans.

Two Missouri Farm Bargains,

40 acres well improved. Fruit and water. Near Odessa, 30 miles of Kansas city, only \$35 per acre. 80 acres, fair house, two large barns, plenty water, fruit. Close Independence, 10 miles east of Kansas City. Worth \$125, can sell it for \$90. Geo. W. Webb, Independence, Mo.

DUROC-JERSEY—Large boned and long bodied kind. Choice spring pigs for sale—both sexes. Prices reasonable. E. S. Cowee, R. F. D. 1, Carbondale, Kans.

Grange Department.

"For the good of our order, our country, and mankind."

Conducted by E. W. Westgate, Manhattan, to whom all correspondence for this department should be addressed. Papers from Kansas Granges are especially solicited.

NATIONAL GRANGE.

Master..... Aaron Jones, South Bend, Ind.
Lecturer..... N. J. Bachelder, Concord, N. H.
Secretary..... John Trimble, 514 F St., Washington, D. C.

KANSAS STATE GRANGE.

Master..... E. W. Westgate, Manhattan
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Lecturer..... Ole Hübner, Olathe
Steward..... R. C. Post, Spring Hill
Assistant Steward..... W. H. Coultis, Richland
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Flora..... Mrs. L. J. Lovett, Larned
L. A. S..... Mrs. Lola Radcliffe, Overbrook

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Henry Rhoades..... Gardner
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What Has the Grange Done?

ABSTRACT OF ADDRESS DELIVERED BEFORE
DANVILLE JUNCTION GRANGE, MAINE,
BY W. W. STETSON.

Many people have asked the question, What has the Grange done for its members and the communities in which it is found in return for the work and money that have been devoted to its organization and maintenance?

The question is not only a natural, but it is a fair one, and should be answered with such facts as the history of the order make possible.

1. The Grange has a right to claim credit for improving the home in its physical surroundings and appointments and making it a more useful center of social, intellectual, and moral development. It has helped those at the head of the household to understand children better; it has aided the children in evolving better ideas of their work and responsibilities. It has increased our love and respect for the home and those who live therein.

2. It has given intelligent and cordial support to efforts which have been made to improve the public schools. It has insisted upon the employment of competent teachers, the providing of suitable school grounds and buildings and the supplying of such material as will aid the school in doing its work more satisfactorily. It has supported vigorously and effectively those who have sought to expose errors, stimulate interest, introduce better methods of instruction and provide courses of study.

3. The churches have found in Patrons their most constant and helpful supporters. They have revived, to an extent, the old-time spirit of devotion.

4. It has established a large number of libraries and many volumes have been purchased for the farm homes of Maine through the influence of the Grange. Statistics show that this list runs so far into the thousands that the figures seem incredible.

5. It has furnished opportunities for training in conventional observances which have aided its members in avoiding the vulgarity of the ultra-fashionable and the crudeness of the untutored. Their dress, manners, knowledge of business and parliamentary forms and civic customs indicate that they are fitted to associate with cultured people with credit to themselves and comfort and benefit to others. It has never been true that the Maine farmer has been a clown or worn the apparel of a barbarian. All such implications are libels or caricatures. But he has become more familiar with the approved forms in good society and he is no longer painfully conscious of his conduct on public occasions. The value of all this is shown in an increased self-respect and a disposition to carry fewer chips on his shoulder and he has less of the feeling that it is necessary for him to assert himself in season and out of season. It has helped to give him the strength of a man and the accomplishments of a gentleman.

6. It has improved to a greater extent than even the farmers themselves realize, the quality and character of the farming industry of the State. It has given Patrons that form of scientific

knowledge which, tempered and saved by common sense and experience, has helped them to increase their earnings and enlarge their lives. It has placed dairying, orcharding, cattle-raising and general farm work upon a plane never occupied in this State before. It has also reduced the drudgery of the farm.

7. It inaugurated a movement which in the end, will give us a usable knowledge of road-building. This work will not stop until we know the material available for this purpose and have the skill necessary to use it so as to furnish roads that will increase the value of every farm and add materially to the comfort of rural life.

8. Work for the Grange has taught the farmer that lobbyists are not foes to be feared or enemies to be slain, but that they, like themselves, are "good, average citizens," some of whom will evade taxes and appropriate umbrellas and consider the first an exhibition of shrewdness and the second as no crime. He has learned both in fierce contest and friendly competition that it is not wise to abuse or shun these men. He knows from experience that they can be beaten in a fair contest and that in more instances than one, they have been ready to give proposed changes a fair hearing and sincere support.

9. Contact with his brothers has taught the Patron to be more just and kindly in his estimates of his associates. Fairness and self-respect compel him to treat with consideration the opinions and convictions of others, and he has discovered that people do not have to agree, for both parties to a controversy to be sincere and, in some cases, for both to be right. He has learned that members of a certain political party are not necessarily destitute of decency and that their opponents are not, for this reason, the embodiment of all sanctity.

He has come to see that religious controversies are not worth the while, and he is not only willing for each to have a fair chance to tell his story, defend his doctrine, preach his Gospel, and live his life, but he has come to take pleasure in helping others to find their path and walk in it, in their own way. In a word, he has learned to curb his offensiveness and officiousness and have a proper regard for the individuality of his brothers. The world will be a more comfortable place to live in when more people learn this important lesson.

10. The Grange has built more than 250 halls in as many different communities. Many of these buildings are ornaments to the towns in which they are located and are peculiarly fitted for the purposes for which they are or may be used.

11. The Patron has learned how to walk under his own hat, do his own reading, studying, thinking, voting, without feeding called upon to announce his action or defend his conduct from the house-top. He has learned to appreciate the strength of simplicity, straightforwardness, and silence.

12. He has learned that a man who gives a dollar's worth of material or service and does not receive a dollar in return, is as dishonest as the man who receives a dollar's worth of service or a dollar's worth of material or a dollar's worth of advantage, and does not give a dollar in return. His moral sense is in harmony with the best moral standards.

13. Patrons have learned the lessons taught them by the politicians, and they carried through the last Legislature eight of the nine bills championed by members of the Grange, looking toward the equalization of taxes. In this experience, they showed self-control, sound judgment, a knowledge of men, skill in the use of means, and that rarest of all qualities, the ability to accept defeat without discouragement and victory without boasting. They showed themselves to be men and the peers of trained men. They made clear that they possess clean, alert, strong, and self-respecting manhood.

14. The Grange furnishes rare opportunities for development to those who have the capacity to grow.

Griswold Square Mesh Field Fence.



The best of all Lawn and Field Fences. Is hog proof. Manufactured in 18, 24, 33, 39, 50 and 56 inch heights; in 20 and 40 rod rolls. The narrow widths can be supplemented to any height desired by Barbed or Plain wire, or two strand twisted Cable wire. Manufacturers of Diamond Mesh Fence, Plain, Galvanized, Barbed or Telephone Wire. Wire Nails and Hay Bale Ties. Write for illustrated catalogues and price lists. Dillon-Griswold Wire Co., Sterling, Ill.

The above are some of the things which the members of the Grange may claim as accomplished results in the past quarter of a century. The list is so long that we are able to appreciate the influences and efforts which have produced these changes. One more familiar with the work done would extend the enumeration much further. The above facts have come under the observation of a casual observer.

THE FUTURE.

The work of the Grange is not completed. Among the things to be done, the following appeal for immediate attention:

1. The order must continue its efforts until it secures such legislation as will compel every dollar's worth of property, whether real, personal, or in the form of franchises, to pay its full proportion of taxes.

2. The statutes must be so amended that one-half the amount expended for the support of public schools will be paid from the State treasury, and that certain roads, and all bridges exceeding a certain length will be controlled and maintained by the State.

3. The counties must control and maintain certain roads and all bridges between certain lengths and must contribute a certain proportion of the funds necessary for the erection and maintenance of school buildings.

4. The town must be made responsible for furnishing one-half the funds needed for the support of the public schools, providing a certain proportion of the amount used in the erection and maintenance of school buildings and have the control and be responsible for the maintenance of certain roads and all bridges under a certain length.

5. The Grange must prepare and publish four manuals for the use of its membership. They should include: A. A manual on literature, history, science, and art, on the general plan of the Chautauqua Reading Circle. Lists of books should be given, outlines, quizzes, reviews, and examinations provided, and such suggestions included as will be helpful to the reader in acquiring a knowledge of standard literature, familiar science, general history and works of art.

B. A course of study should be outlined which will give lists of the best books on dairying, orcharding, stock-raising, etc. This course, like the one above-mentioned, should be supplemented by such aids as will help the reader in mastering the books read.

C. A manual on the ritual of the order should be prepared which will contain such directions and instructions on conferring degrees and the general conduct of the meetings as is proper to be given to the public. It should bring together the plans and devices which the most enterprising granges have developed in the matter of varying and elaborating the ceremonies so as to make them more attractive and more impressive. The Grange in Maine, without question, leads the granges of the country in these particulars. It is certainly a brotherly service to give all the opportunity to

use what the most capable have worked out.

D. The last in this list should be a manual giving ground sketches, floor plans, elevations, and specifications for farm-buildings. The home in all its details and appointments should be clearly described. The location of sheds, ice-houses, dairy-buildings, stables, barns, and all structures needed on the farm should be so located and illustrated that those who are erecting new buildings or repairing old ones may do this work in such a way as to secure beauty, utility, and economy. Fifty plans will meet most of the conditions in a majority of our communities. They can be modified or adapted to suit local needs.

This review shows a most encouraging record. The work outlined for the future calls for broad intelligence and unusual sagacity. The Grange does not need to go outside its membership for these qualities. Those who know the order best, believe that it will not only rise to the occasion, but above it, and will perform the service the age asks at its hands.

Flint's Powders Best on Earth for Distemper.

Red Bud, Ill., April 30, 1903.
Dr. B. J. Kendall Co., Enosburg Falls, Vt.
Dear Sirs: Enclosed find \$1.00 in money-order for two packages of your Prof. Flint's Horse and Cattle Renovating Powders, which please send as soon as possible. I find your powders the best thing on earth for the distemper.
Very truly yours, Adam Reinmuth.

Business Opportunities for All.

Locations in Iowa, Illinois, Minnesota, and Missouri on the Chicago Great Western Railway; the very best agricultural section of the United States where farmers are prosperous and business men successful. We have a demand for competent men with the necessary capital for all branches of business. Some special opportunities for creamery men and millers. Good locations for general merchandise, hardware, harness, hotels, banks, and stock-buyers. Correspondence solicited. Write for maps and sample leaflets. W. J. Reed, Industrial Agent, 604 Endicott Building, St. Paul, Minn.

DISEASES OF MEN ONLY.

The greatest and most successful Institute for Diseases of Men. Consultation free at office or by letter. BOOK printed in English, German and Swedish. Explaining Health and Happiness sent sealed in plain envelope for four cents in stamps. All letters answered in plain envelope. Varicocele cured in five days. Call or address

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ST. JOSEPH, MISSOURI.

TO WOMEN WHO DREAD MOTHERHOOD

Information How They May Give Birth to Happy, Healthy Children Absolutely Without Pain-Sent Free.

No woman need any longer dread the pains of childbirth; or remain childless. Dr. J. H. Dye has devoted his life to relieving the sorrows of women. He has proved that all pains at childbirth may be entirely banished, and he will gladly tell you how it may be absolutely free of charge. Send your name and address to Dr. J. H. Dye, Box 137, Buffalo, N. Y., and he will send you postpaid his wonderful book which tells you how to give birth to happy, healthy children, absolutely without pain; also how to cure sterility. Do not delay but write to-day.

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For the Tourist who desires to unite pleasure with comfort at moderate cost.

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For the Business Man to build up his shattered nerves.

Three sailings each week between Chicago, Frankfort, Charlevoix, Petoskey, Harbor Springs and Mackinac Island, connecting for Detroit, Buffalo, etc. Booklet free.

JOS. BEROLZHEIM, G. P. A.,
Chicago.

The Poultry Yard.

Prepare for Winter Eggs.

A visitor to our farm a few days ago inquired if poultry-keeping pays. Our reply was, Poultry-keeping pays if the party who goes into it understands the business. He must have some knowledge of the subject of course to make it a success. There are a few fowls kept on the farm that are profitable, while a number of farm flocks pay but a small per cent of profit. There seem to be a few farmers in some sections that do not have the least knowledge of poultry-keeping. Why? A pretty well educated fellow said to me not long since, "Do chickens drink water?" "Any amount of it," said I. "Well did you ever, I never dreamed of chickens drinking water," was his astonishing reply. Now this man is a splendid stock-raiser, a prosperous farmer. Any one would suppose that all farmers understand the needs of fowls, but with all the literature at this day many good farmers are on the surface when it comes to poultry-keeping.

If one expects to make a profit on his fowls he must understand how to feed, when to feed and what to feed for best results. There seems to be a great mystery existing with the novice as to how to get eggs in winter, etc. The average farmer makes no effort toward getting winter eggs until he goes to his nearby store and learns that eggs are ruling supreme once more. Then it is everlastingly too late. Right now is the time to make an effort for winter eggs, first by procuring and retaining pullets, nothing but pullets. Get rid of the old hens for what they will realize. It is a mistake to sell the fine plump pullets to some one who may offer what you may think is just a few cents above the market for them. We have been there, we have been caught up by those long-headed fellows that know a good thing when they see it, and it's a very true saying, "a burnt child dreads fire," and we don't propose to hold the sack any more and let the other fellow rake in the eggs when prices are at the top notch. Sell the old hens and make room for the young, early pullets and give them every

chance possible. Give them freedom of range, keep them free from lice, prepare snug warm quarters, keep them in the pink of health and feed food strong in protein such as green bone, blood meal and wheat, with a little corn and we will stake our life that they will be producing eggs by the middle of November in paying quantities and will keep at it all winter long. It has been repeatedly said that poultry on the farm if properly managed pays and pays well, unless grossly mismanaged. A few fowls on the farm will supply the household with eggs and enough surplus eggs to sell to provide the necessary groceries, and this alone is unquestionably most profitable.

The secret of getting winter eggs is in retaining bright, healthy pullets and getting them to laying before cold weather sets in. Feed them throughout the winter a varied ration. Keep them separate from the males. Steer clear of overcrowding. There are more eggs produced from a limited number of hens than from a large number that are overcrowded. If the early pullets are vigorously pushed from now until late autumn, fed at regular intervals, the young hens ought to return a very good profit in the keeping of them, besides furnishing the farmer a luxury with fresh eggs from his own fowls. The man residing in the city can appreciate a luxury of this kind more fully than the farmer.—J. C. Clipp, in National Stockman and Farmer.

When to Sell.

The early hatched chickens are now up to the frying size, and some are past it. The question of market and profit is now up, and the time for action in this respect is here, and we should not forget the assertion of one who has made market poultry pay, and pay well, that the best time to market a young chicken is as soon as it is old enough to eat.

He made it pay because he put a nimble penny in his poultry business, and kept it a turning by rotating his chicken crop; that is, after the first

AND PERCHERON HORSES were old enough to eat, he sold them and kept on setting and selling off the older ones as soon as possible, all through the season, reserving some pullets only, for layers. He kept his stock of roosters too thin to count.

In doing this, he dodged the sickly time of the year, which is in the fall, by having all his young chicks, excepting the late ones, safely in market, and the money for them in his pocket, or in bank.

A chicken can be raised up to the frier or broiler size, at a very small cost, say 7 or 9 cents, or even less, in some situations, and it will bring then 20 to 30 cents, which is certainly more profitable than to carry it along through the season, and market it the following spring for 35 or 45 cents, for it will eat twice as much food in point of value during the last half of its life, as it will in the first half.

If we are alive to our best interests, then, we will market our surplus stock now, and not hold it over till it eats its head off.—H. B. Geer, in Tennessee Farmer.

POULTRY BREEDERS' DIRECTORY.

BLACK LANGSHAN EGGS for sale, 5 cents a piece. Minnie M. Steel, Gridley, Kans.

BARRED ROCKS ONLY—Heavy boned, vigorous stock, unlimited range. Eggs carefully and securely packed. 100, \$4. 15, \$1. Adam A. Wier, Clay Center, Neb.

SUNNY NOOK POULTRY YARDS—S. C. B. Leghorn eggs, from vigorous, good layers, \$1 per 15. John Black, Barnard, Kans.

FOR SALE CHEAP—Pedigreed Scotch Collie pups. W. H. Richards, V. S., Emporia, Kans.

EGGS FROM GEM POULTRY FARM are sure to hatch high-scoring Buff Plymouth Rocks. No other kind kept on the farm. 15 for \$2; 30 for \$3.50. Satisfaction guaranteed. M. B. turkey eggs, 11 for \$2. C. W. Peckham, Haven, Kans.

COLLIE PUPS AND B. P. ROCK EGGS—I have combined some of the best Collie blood in America; pups sired by Scotland Bay and such dams as Handsome Nellie and Francis W. and others just as good. B. P. Rock eggs from exhibition stock; none better; 15 years' experience with this breed. Eggs \$1.50 per 15. Write your wants. W. B. Williams, Stella, Neb.

SCOTCH TERRIERS—Finest bred in this country. Heather Prince, the champion of Scotland, and sire of Nougay Foxglove, out of the champion imported Roman Ringlet, best service at our kennels. G. W. Bailey, Seattle, Kans.

Rose Comb Brown Leghorns Exclusively. Farm raised. Eggs per setting of 15, \$1. Incubator users write for special prices in 100 lots. P. H. MAHON, R. D. No. 3, Clyde, Cloud Co., Kans.



DUFF'S POULTRY

During the summer months we will sell all our fine breeders, consisting of over 400

one-year-old birds, from our breeding pens of this season. Birds costing us from \$5 to \$25 will all go at from \$1.50 to \$5 each. We will also sell spring chicks all summer. Our stock can not be excelled by any in standard requirements and hardiness. Barred Plymouth Rocks, White Plymouth Rocks, Buff Cochins, Partridge Cochins, Black Langshans, Light Brahmas, Silver Wyandottes, White Wyandottes, Silver Spangled Hamburgs and S. C. Brown Leghorns. Single birds, pairs, trios and breeding pens. Circulars free. Write your wants. A. H. DUFF, Larned, Kans.

"SUNFLOWER CURE."

For Chigger and Mosquito Bites.

Relieves the Itching and Burning by killing the poison of these or other insects. Will not burn or stain the flesh.

DIRECTIONS:

Shake and apply to affected parts with cork or cloth.

At Druggists, or by mail on receipt of 25 cents.

THE SUNFLOWER CO., Atchison, Kansas.

PIPE. Good second-hand Wrought Iron sizes from one-half to twelve inches diameter. It is complete with threads and couplings. 1 inch, per foot, \$1.40 etc. 1 1/2 inch, per foot, \$1.40 etc. We handle all kinds of well casing. Write us your wants in the pipe line. We have all kinds of supplies of this character. Write for Free Catalogue No. 61. CHICAGO HOUSE WRECKING CO., West 56th and Iron Street, Chicago.

HORSES.

Percheron Horses

HENRY AVERY & SON, WAKEFIELD, KANSAS.

Registered Stallions For Sale

15 HEAD AT SPECIAL PRICES CONSISTING OF Five Percherons, 2 to 5 years old—all black but one, and that a black-grey; two black yearling Percherons; four Shires, 8 to 7 years old; three trotting-bred horses, 8- and 4-year-olds; one registered saddle stallion. All but two at prices from \$200 to \$1,000 each. Come at once for bargains. SNYDER BROS., WINFIELD, KANSAS.

ROBISON'S PERCHERONS AND SHORTHORNS

Percheron Herd headed by Casino (45462) 27834. Prize-winner National Show of France 1901. Winner of first prize at Missouri and Kansas State Fairs 1902. Shorthorn herd headed by Airdrie Viscount, a son of the great Lavender Viscount, champion of America in 1900 and 1901. Stock for sale. Address J. W. & J. C. ROBISON, TOWANDA, KANS.

THE AMERICAN

Percheron Horse Breeders & Importers Association

Capital Stock, \$10,000.00. Shares, \$10.00 Each

Incorporated under the laws of Illinois.

No proxies can be used in this Association and no person or firm allowed more than ten votes. Our legal rights are fully and finally established by the courts. ONLY PERCHERON ASSOCIATION IN AMERICA RECOGNIZED BY THE UNITED STATES GOVERNMENT. It is the object of this Association to have its stock as widely scattered as possible, that the Percheron interests of the whole country, may be represented in its membership. We are now ready to sell stock and receive applications for registry. For application blanks, stock and full information, address,

GEO. W. STUBBLEFIELD, Secretary, Bloomington, Ills.,

Cheyenne Valley Stock Farm.



F. H. Schrepel, Ellinwood, Kans. Breeder of PERCHERON HORSES and POLAND-CHINA HOGS

For Sale—Fifteen young stallions and a few mares. Inspection and correspondence invited.

Prospect Farm



H. W. McAfee, Topeka, Kans. Breeder of CLYDESDALE HORSES, SHORTHORN CATTLE

FOR SALE—Two Clydesdale Stallions, one 5 years old, weight 1,750 pounds; the other 2 years old, weight 1,400 pounds; registered and sound. Inspection and correspondence invited.

50-REGISTERED HEREFORDS-50

WILL BE SOLD BY THE

CENTRAL MISSOURI HEREFORD BREEDERS' ASSOCIATION

At the Fair Grounds in Moberly, Mo., Thursday, September 3, 1903.

WELL BRED CATTLE AT MODERATE PRICES.

Send for Catalogue.

S. L. BROCK, Secretary, MACON MISSOURI.

Colts. Sparks, Rogers, and Graham, Auctioneers.

Prizes will be offered for the best yearling bull and heifer in the sale. Next sale, October 15, at Salisbury, Mo.

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BEST PREVENTIVE OF BLACKLEG.

Blacklegoids afford the latest and best method of vaccination against blackleg—simplest, safest, surest. They are always ready for use; no filtering, measuring or mixing is necessary. Accuracy of dosage is always assured, because each Blacklegoid (or pill) is exactly sufficient for one inoculation. Administration with our Blacklegoid Injector is easy. The operation need not consume on a minute. Blacklegoids are sold by druggists; ask for them. Our newly printed eight-page folder on the "Cause and Nature of Blackleg" is of interest to stockmen. Write for it; it is free.

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D. M. TROTT ABILENE, KAS., famous Duroc-Jerseys, Poland-Chinas. Registered Stock, DUROC-JERSEYS, contains breeders of the leading strains. N. B. SAWYER, CHERRYVALE, KANSAS.

MAPLE AVENUE HERD J. U. HOWE, Wichita, Kansas. Duroc-Jerseys. Farm 2 miles west of city on Maple Ave.

FAIRVIEW HERD DUROC-JERSEYS Combination Sale July 9. At Sabetha, Oct. 23, sale of males at the farm. February 5, 1904, bred sow sale at farm. J. B. DAVIS, FAIRVIEW, KANS.

DUROC-JERSEYS. Duroc-Jerseys for sale. Choice 1903 pigs, both sexes. Prices \$20 and \$25, 125 head in herd to select from. NEWTON BROS., Whiting, Kans., and Goffs, Kans.

DUCK CREEK HERD OF Duroc - Jersey Swine. 200 head to choose from. Write us your wants. Mitchell Bros., Buxton, Wilson Co., Kans.

ROCKDALE HERD OF Duroc - Jersey Swine. Has for sale 100 head of spring pigs of fashionable breeding, and good individuals. Correspondence and inspection invited. Free rural delivery and telephone from Frankfort. J. F. Chandler, Frankfort, Kans.

Maplewood Herd of... DUROC - JERSEYS HEADED BY OUR FINE HERD BOAR. MISSOURI CHAMPION 18349. Have on hand some extra fine pigs of this spring's farrow, for which we are booking orders. Write for what you want. J. M. IMHAUSER & CO., R. F. D. No. 4, Sedalia, Mo.

Rose Hill Herd DUROC - JERSEY HOGS. I have some choice February and March pigs for sale out of large, old sows of the most prolific strain and best breeding, sired by four good, well-developed boars. I can supply old customers with new blood, or pigs not related. I have the kind that will please you. S. Y. THORNTON, Blackwater, Mo.

Standard Herd of Registered Duroc-Jersey Swine, Red Polled Cattle, and Angora Goats.

Swine herd headed by Big Joe 7888 and Ohio Chief. Cattle herd headed by Kansas 9808. All stock reserved for October sale. PETER BLOCHER, Richland, Shawnee Co., Kas.

POLAND-CHINA SWINE.

East Side Herd Poland-Chinas Combines the best strains of blood in the breed. 24 spring litters. Royal Blue 27642 by Big Chief Tecumseh 2d, first boar in service. Write for list of sires and dams in herd. W. H. BARR, ELLIOTT, IOWA.

Shady Lane Stock Farm HARRY E. LUNT, Proprietor, Burden, Cowley Co., Kans. A few choice bred Poland-China Boars for sale; also fine B. P. Rock poultry.

Kansas Herd of Poland-Chinas Has some extra fine fillets bred; also some fall boars. Will sell Sen. I know, he by Perfect I know. Address—F. P. MAGUIRE, - - HUTCHINSON, KANS.

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SHADY BROOK STOCK FARM POLAND-CHINAS. I keep constantly on hand all sizes and ages of high-class Poland-China pigs. Quality high, prices low. Write for description and price to H. W. CHENEY, - - North Topeka, Kans.

PECAN HERD OF Poland-Chinas Will you want a few Bred Sows or Gilts for fall farrow, bred to Model Tecumseh or American Royal? Also fall Boars, sired by Model Tecumseh 64188. J. N. WOODS & SON, R. F. D. No. 3, - - Ottawa, Kans.

THOROUGHbred... Poland-China Hogs. I am cleaned up on boars and bred gilts. I have some nice open June gilts and can spare a few yearling bred sows. Orders booked for spring pigs by Keep On 81015, Imperial Chief 8d 28978, Black Perfection 27183, and Corwin Improver 25768. On Missouri Pacific R. R., one mile west of Kickapoo, Kans. JOHN BOLLIN, R. F. D. No. 5, Leavenworth, Kans.

Oak Grove Herd.. OF PURE-BRED Poland-Chinas For Sale—A few choice Boars and 50 Gilts, some bred for early spring farrow. Write, or come and see. Gus Aaron, Leavenworth, Kas.

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Dietrich & Spaulding, Richmond, Kas. For Sale—Imperial Chief 3d, litter brother to our great show sows. Some choice fall boars and gilts. Place your order for gilts—bred for fall farrow.

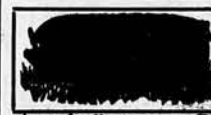
WAMEGO HERD ...OF... Poland-Chinas

With Black Tecumseh 25116 at head, he by Big Tecumseh 2429, a grand individual and sire of large, strong, growthy fellows, nearly perfect in color, coat, and markings. Large M. B. turkeys and B. F. chickens for sale. Correspond with me at Wamego, Pottawatomie County, Kansas. C. J. HUGGINS.

Providence Farm Poland - Chinas. Correct by Corrector, Perfection Chief 2d, by Chief Perfection 2d, Jewell's Silver Chief, and Kron Pring Wilhelm, herd boars. Up-to-date breeding, feeding qualities, and large, even litters in this herd. Young stock for sale.

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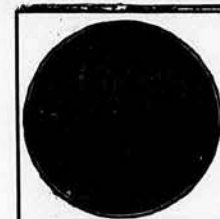
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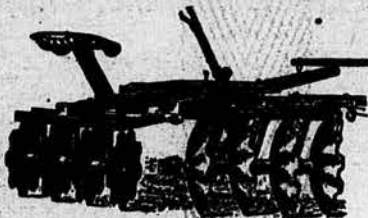
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