

TOPEKA : BUSINESS : INDEX

Of the Representative and Business Firms of the Capital City of Kansas.

The KANSAS FARMER endorses the following business firms as worthy of the patronage of parties visiting the city or wishing to transact business by mail:

- H. K. TEFFT, M. D., PHYSICIAN AND SURGEON. Office—212 West Eighth street, Topeka, Kas.
DR. ADELIN E. METCALF, PHYSICIAN AND SURGEON, 717 Topeka Ave., Topeka, Kas.
H. C. ROOT, Attorney at Law. Practices in the U. S. Supreme Court and U. S. Courts. Collections a specialty. 110 Sixth street West, Topeka, Kas.

HENRY W. ROBY, M. D., SURGEON. General Manager Kansas Surgical Hospital Association. OFFICE:—118 Sixth Avenue W., TOPEKA, KAS.

J. P. LEWIS, M. D., 519 KANSAS AVENUE, TOPEKA, - - - KANSAS. Special attention given to General Orthopedic and Gynecological Surgery. OFFICE HOURS—10 to 12 a. m., and 2 to 4 p. m.

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THE GEO. W. CRANE PUBLISHING Co., Topeka, Kas., publish and sell the Kansas Statutes, Kansas and Iowa Supreme Court Reports, Spalding's Treatise, Taylor's Pleading and Practice, Scott's Probate Guide, Kansas Road Laws, Township Laws, Lien Laws, &c., and a very large stock of Blanks, for Court and other purposes, including Stock Lien Blanks, Conveyancing Blanks, Loan Blanks, &c., &c. For fine printing, book printing, binding, and records for County, Township, City and School Districts, this is the oldest and most reliable house in the State.

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And everything in the Millinery line, call at the new store at 803 Kansas Avenue. I can please you. Your patronage respectfully solicited. An expert Trimmer from the East. ANNA ALLAWAY.

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Snyder's Art Gallery.

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Agricultural Books.

The following valuable books will be supplied to any of our readers by the publishers of the KANSAS FARMER. Any one or more of these standard books will be sent postage paid on receipt of the publisher's price, which is named against each book. The books are bound in handsome cloth, excepting those indicated thus—(paper):

- FARM AND GARDEN. Allen's New American Farm Book.....\$2.50 Barry's Fruit Garden..... 2.00 Broomcorn and Brooms..... .50 Flax Culture (paper)..... .80 Fitz's Sweet Potato Culture..... 2.00 Henderson's Gardening for Profit..... .80 Hop Culture (paper)..... .20 Onions: How to Raise Them Profitably (paper)..... .50 Silos and Ensilage..... 1.50 Stewart's Irrigation for the Farm, Garden and Orchard..... 1.50 Tobacco Culture; Full Practical Details..... .25

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HORSES. American Reformed Horse Book—Dodd..... 2.50 The Horse and His Diseases—Jennings..... 1.25 Dadd's Modern Horse Doctor..... 1.50 Jennings' Horse Training Made Easy..... 2.50 Horse-Breeding (Sanders)..... 3.00 Law's Veterinary Adviser..... .75 Mites on the Horse's Foot..... 2.50 Woodruff's Trotting Horse of America..... 1.50 Youatt & Spooner on the Horse..... 1.50

CATTLE, SHEEP AND SWINE. The Dairyman's Manual—Henry Stewart..... 2.00 Allen's American Cattle..... 2.50 Coburn's Swine Husbandry..... 1.75 Dadd's American Cattle Doctor..... 1.50 Harris on the Pig..... 1.50 Jennings' Cattle and Their Diseases..... 1.25 Jennings' Sheep, Swine and Poultry..... 1.25 Randall's Practical Shepherd..... 1.50 Stewart's Shepherd's Manual..... 3.00 The Breeds of Live Stock (Sanders)..... 3.00 Feeding Animals (Stewart)..... 2.99

MISCELLANEOUS. American Standard of Excellence in Poultry..... 1.00 Wright's Practical Poultry-Keeper..... 2.00 American Bird Fancier..... .50 Quinby's New Bee-Keeping..... .60 Dogs (by Richardson)..... 1.50 Atwood's Country Houses..... 1.50 Barnes, Plans and Out-buildings..... 1.50 Arnold's American Dairying..... 1.50 Fisher's Grain Tables (boards)..... .40 Fuller's Forest Tree Culturist..... 1.00 Willard's Practical Butter Book..... 1.00 Willard's Practical Dairy Husbandry..... 3.00 Practical Forestry..... 1.50 Household Conveniences..... 2.50 Dodd's American Reform Horse Book..... 1.25 Jennings on the Horse and His Diseases..... 1.25 Profits in Poultry..... 1.00 Frank Forrester's Manual for Young Sportsmen..... 2.00 Hammond's Dog Training..... 1.00 Farm Appliances..... 1.00 Farm Conveniences..... 1.50 Household Conveniences..... 1.50 Hussman's Grape-Growing..... 1.50 Quinn's Money in the Garden..... 1.25 Reed's Cottage Homes..... .50 Dogs of Great Britain and America..... 2.00 Allen's Domestic Animals..... 1.00 Warrington's Chemistry of the Farm..... 1.00 Williams' Window Gardening..... 1.50 Farm Talk (paper)..... .50 American Bird Fancier (paper)..... .50 Wheat Culture (paper)..... .30 Gregory's Onions—What Kind to Raise (paper)..... .30 Gregory's Cabbages—How to Grow Them (paper)..... .30 Our Farm of Four Acres (paper)..... .30 Cooked and Canning Foods for Animals (paper)..... 1.20 The Future by the Past, by J. C. H. Swann..... .20 Address KANSAS FARMER CO., TOPEKA, KANSAS.

BLAKE'S TABLES OF WEATHER PREDICTIONS FOR 1889.

According to Mathematical Calculations, based on Astronomical Laws, is ready for mailing. Price 75 cents per copy, or two copies for \$1.00.

These tables give the maximum, minimum and mean temperature, in degrees Fahrenheit, for each month in the year, for most of the Northern States and part of the Southern States, each State being calculated separately. The amount of rainfall has been calculated for each State, most of the Territories, and for Quebec, Ontario and Manitoba, for each month in the year, and the results stated in inches; and most of the large States have been subdivided into from two to six parts. General predictions are also given for England and Europe. The predicted fall will prove to be so nearly correct that they will clearly indicate which parts of the country will be the warmest and which the coldest, which the wettest and which the driest for each month. We have compiled all the records for the past fifty years, and show in inches what the average rainfall has been in each of said subdivisions. Also what the normal temperature has been. We have also calculated the weather for all civilized countries, to know what the crops will be in all parts of the world, from which we have inserted a table showing what the probable price will be in Chicago for wheat, corn, oats and cotton for each month in 1889.

The best evidence of the correctness of these predictions is our past record, which shows a verification of 88 per cent, for the past fourteen years; and the constantly increasing demand from all parts of the civilized world for our weather predictions. The floods, drouths and temperatures for 1889 will be at greater extremes than anything which has occurred since 1816. Address C. C. BLAKE, Topeka, Kansas. Send \$1.50 to the KANSAS FARMER and get the paper one year and Blake's Weather Predictions.

INSECTS OF FRUIT TREES. Can be destroyed by spraying the trees with London purple dissolved in water. For full directions and improved cuttings for Hand or Horse Power at BOTTOM CASH PRICES, address FIELD FORCE PUMP CO. Lockport, N.Y.

Agricultural Matters.

THE ONLY HOPE FOR WESTERN KANSAS.

EDITOR KANSAS FARMER:—It has now, I think, been clearly demonstrated that general agriculture—the raising of corn in particular—in western Kansas, under present climatic conditions, cannot be successfully carried on, at least to an extent that will justify the hope that it can be made to pay. Small corn, the "ninety-day" corn possibly some seasons, if planted early enough, might be grown, but the raising of a corn crop upon the scale on which it is done in eastern and central Kansas is manifestly out of the question. And for two reasons: First, the annual rainfall throughout the section designated as western Kansas is, on the average, wholly inadequate to supply the required moisture; second, the general recurrence of hot winds at the time when the corn is tasseling—a thing that will probably take place every year until the entire surface of sod in that region is broken up and deeply subsoiled and cultivated, and until the territory lying south of Kansas, and to the southwest and east, is also brought under cultivation. The uncertainty of the corn crop precludes the raising of cattle and hogs on a profitable scale, thus depriving farmers of the most profitable source of revenue in a purely agricultural State like Kansas. Hence, it appears that, cut off from corn, cattle and hogs, the farmers of western Kansas must turn their attention to some form of agriculture adapted, under existing conditions, to their lands. This raises the inquiry: Is there any crop that can be grown with reasonable certainty, every year, in that section? Yes. Sorghum cane can be raised anywhere in western Kansas, and can be made a sure and profitable crop, despite drouth, hot winds, and chinch bugs. It has been demonstrated, beyond all doubt by experiments in western Kansas that sorghum cane—and of the very best quality—cane rich in saccharine matter and well adapted to sugar-making, can be raised without either rain or irrigation, so long as the sub-surface contains sufficient moisture to start the seed, which is generally the case in the driest seasons. This, then, being true, it follows naturally that the crop which should for a number of years to come be raised in western Kansas, is sorghum cane. And raised chiefly for sugar-making.

To encourage farmers in that locality to devote their attention to this crop, the Kansas Legislature, it seems to me, could do nothing better to populate and build up that magnificent portion of our State, than to pass a law giving a bounty of, say \$50,000 per year for the next five years, for the erection of sugar mills at proper points, providing therein that \$10,000 shall be given to each of five companies that shall put up and operate a sugar mill the first year; \$10,000 each to five additional companies the second year; and \$5,000 each to ten additional companies the third year; and so on to the fifth year. This bonus should be supplemented by a bounty also provided by the Legislature, of not less than 2 cents per pound for all the sorghum sugar manufactured for the term of five or six years, or until such time when this industry shall be self-supporting. The benefits of timely legislative aid would be amply justified by results which, under existing circumstances, can hardly be looked for without some such encouragement.

It would result in utilizing within the next five years thousands of acres of arable land in western Kansas; in turn-

ing under a very large portion of the surface of buffalo sod; in affording a profitable occupation for the citizens of that section; in building to respectable proportions a large number of good towns and, the most important of all, it would enable western Kansas farmers, while raising this crop, and getting themselves in comfortable shape, to experiment with other crops, and to ascertain what cereals, if any, could be grown surely and profitably when once that entire region has been put under the plow. It seems to me, in view of the results to be accomplished by such a legislative provision as I have named, that it would be well worth the trial, and the more so, because it is now a demonstrated fact that, by the new diffusion process—the Parkinson and Swenson process—sorghum sugar of a very fine quality can be profitably made, if the business is properly managed. The investment of the amount of money I have specified would, under the circumstances, be the wisest the Legislature ever made.

To the query that might be raised in opposition to this plan—that it is unconstitutional for the State to provide aid for such a purpose—it may be replied that the Legislature has in the past, to meet certain exigencies, made appropriations not a whit more constitutional than this, and no one has challenged the wisdom of its action, or sought by legal means to prevent its execution. The State has provided bounties for timber culture, for silk culture, and for the culture of hedges and sorghum sugar, and public sentiment has sustained the Legislature in so doing. The same thing precisely might be expected should the Legislature provide for the development of the sorghum sugar industry in western Kansas. The emergency is upon us. Something should and must be done, and at the approaching session of the Legislature, to afford just this aid, and for this purpose, to western Kansas. Let the Representatives and Senators from western Kansas then put their heads together, and formulate and pass such a bill. It can and should be done, and when done, inside of the next ten years, the taxes levied and collected upon the enormously increased value of western Kansas farms and town properties will more than make good an hundred fold, the present required outlay.

I have reason to believe that under such an arrangement as I have suggested, Messrs. Parkinson and Swenson, the owners of the sorghum sugar patents, would heartily co-operate, to the extent of allowing sugar manufacturers to use their method upon the payment of a comparatively small royalty, or erect the necessary mills themselves were some local assistance assured. In the location of mills, it is important that they be on the line of a railroad, so as to get in the machinery and cheap coal for fuel; and it is also absolutely necessary to have an abundant supply of pure and good water. At Oakly, in Logan county, and at Tribune, Greeley county, I know that an abundance of good and pure water can be had; and both places are on lines of railroad, and in the extreme western part of the State. These, with three other places similarly situated, should be selected for mill sites for the first year.

There is another matter connected with this industry that I would like to discuss in this connection, but this communication would be too long were I to do so at any length. But it is, in short, that the silage that can be made from the sorghum leaves that are cut fine at the mill and winnowed from the stalks, together with the sorghum seed

(which can be made into meal very cheaply), and with the use of the cheap molasses will, at any fair-sized mill, feed and fatten two or three hundred head of cattle more rapidly and cheaper than with corn. G. W. GLICK.
Topeka, Kas.

About Listing Corn.

EDITOR KANSAS FARMER:—I second Observer's motion that the FARMER let the tariff matter drop or rather rest with the law-makers soon, and turn to practical matters for the farmer. Although there are hundreds of farmers in the State more competent than I to write upon the topics suggested by Observer, lest many will not do so, I will try to give a little of our experience with listed corn.

The first listing was done in this vicinity about ten years ago, and as a matter of course, being new and imperfectly understood, was not considered very successful for several years, but now, hardly a piece of corn planted in any other way can be found in this part of the State. The successive dry summers of '85, '86 and '87, convinced the most skeptical of the power of listed corn to withstand drouth, and farmers of many years experience in raising corn in Iowa and Illinois, who for several years shook their heads and would not accept a lister as a gift, were forced to adopt it as the only sure method, taking one year with another.

If there is rain enough at the right time to make good corn, there is not so much difference in the yield over that planted the old way; but with our hard winds, even then when planted corn is lying almost flat on the ground, the listed corn is standing up. It also seems more difficult to get a good stand in the spring with listed corn, than with planted corn, although with improved implements and methods this difficulty is lessened each year.

To those who list for the first time, the corn will be a disappointment to them for the first five or six weeks, perhaps, as it starts very slowly in the spring, owing, no doubt, to the fact that the soil in the ditch where the corn is planted has not been thoroughly warmed yet; but wait until you are ready to cultivate it about the third time, if you use the ordinary cultivator, then you can almost see it grow, and will have to hurry if you get it all cultivated over again if you have very much.

I write this from experience on upland. Listing may not work so successfully on bottom lands, such as that along the Kaw river, although I know of farmers on the Missouri bottom land who have at least been successful with it, and think they have increased their yield by this method.

If this finds favor, I shall write at another time our experience, as to modes of planting and cultivating.

JESSE HESSELTINE.

Berwick, Nemaha Co., Kas.

Experience With Listed Corn.

EDITOR KANSAS FARMER:—Listing is a quick way of putting in corn. With combined machine one man can put in about seven acres per day. It is drilled one stalk in a place. You don't have to plow the ground; this is all the advantage there is.

If your ground is rolling and in Kansas the heavy showers we have will wash out the corn on sloping ground, and cover it up. Where it is flat, water running down hill carrying the loose soil with it always finds a place to deposit mud and cover up your corn, and it is most always on the best land where you expect the better yield. It will not stand drouth any better than planted corn providing you don't plant too thick. E. P. ELKINGTON.
Willis, Kas.

American Pomological Society.

At the last meeting in Boston, the society unanimously accepted an invitation from the Florida Horticultural Society to hold its next meeting in that State. This will be the first time that a meeting has been held in the extreme South. The enthusiasm with which the proposition to go to Florida was received, and the extensive preparations being made by the pomologists of the South for the reception of their Northern friends, give promise of the most successful meeting ever held.

The session will open at 10 o'clock, on Wednesday, February 20, 1889, and continue three days. It was expected to hold the meeting at Sanford, beginning February 6, 1889, but it has been found necessary, owing to lack of time for suitable preparation, to postpone it until the 20th, and at the request of the Florida society, to hold the session at Ocala instead of Sanford. Ocala is located in the central part of the Peninsula, in the midst of the Orange Region, nine-tenths of all the oranges grown in the State being produced within a radius of eight miles. The climate is salubrious and healthful. No cases of yellow fever have occurred in that region, and the direct railroads leading to Ocala from the North pass through none of the districts where it has existed. No fear, however, need be entertained of visiting any portion of the State on this account. Since the occurrence of severe frosts the last quarantine, that of Jacksonville, has been raised, and the tide of winter travel has now set in.

Among the attractions offered by the people of Ocala, as inducements to hold the meeting there, are the Florida International and Sub-Tropical Exposition, which opens in January, the commodious buildings of which are tendered for the use of the society. The leading places of interest in the State are easily accessible from this point, and the local attractions include the famous groves of Lake Weir and Donnellton, and the wonderful Silver Springs, the finest of the kind in the world.

Arrangements will be made for unusually low rates on roads entering Florida, and for excursions within the State. Full particulars in regard to these will be announced later. Where no other arrangements exist, delegations should secure special rates to Ocala from their nearest member of the General Passenger Agents' Association.

It is hoped that all pomological, horticultural and agricultural societies in the United States and British Provinces will send delegates, in such numbers as they may deem expedient, and all persons interested in the cultivation of fruits are invited to be present and become members of the society. Persons so desirous can remit the fee, \$4 for biennial membership, or \$20 for life membership, to the Treasurer of the society, Mr. Benjamin G. Smith, Cambridge, Mass., who will give a receipt for the same, entitling the holder to all the courtesies in the way of reduced railroad and hotel rates, etc., which are accorded to members. It is desirable that the Secretary be notified as soon as practicable of the number of members expecting to attend, in order that proper arrangements may be made for their reception.

A special invitation is extended to ladies to attend the meeting, become members, and take part in the proceedings. An attractive program is in preparation, a full account of which will appear later. It includes papers and discussions by the best pomologists of the country upon new fruits and methods of cultivation, the problems of judging fruits, of transportation and marketing, diseases and their remedies, and the origination and introduction of new varieties.

The society offers no premiums for exhibits of fruits. Several special prizes, however, are offered by the Florida Horticultural Society for exhibits to be made at the meeting, the awards to be made by a committee appointed from the American society. The usual awards of Wilder medals will be made for objects of special merit.

Packages intended for exhibition should be addressed, freight or express charges prepaid, to J. O. Clark, Ocala, Fla.

PROSPER J. BERCKMANS, Pres't.
A. A. CROZIER, Sec'y, Augusta, Ga.
Ames, Iowa.

NOTE.—Until the Florida meeting, the address of the Secretary will be at the Department of Agriculture, Washington, D. C.

The Stock Interest.

THOROUGHBRED STOCK SALES.

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

FEBRUARY 8, 1889. — Berridge Bros., English Shire Stallions, Lincoln, Neb.

Swine-Feeding for Profit.

If there be any fact in the art of feeding that is thoroughly and forever settled it is that no animal designed for food consumption is being properly managed that is not gaining in weight. The amount of corn necessary to winter a 100 pound pig may be set down as not less than ten bushels, or about three pounds per day, and if only this amount be fed to such an animal there will be no increase in weight, as all of the food is required to maintain life. Many farmers see plainly the great loss that follows from this penurious system of feeding, but stand helpless before it and make no earnest effort toward betterment. Let it be said to such that it would be wiser to sell their pigs in the fall and buy again in the spring if they have not the confidence to feed their stock liberally in winter. Shotes will cost considerably more in spring no doubt, but to empty one's crib of corn and have not a pound of pork to show for it is the highest sort of folly practiced upon the farm. What would a farmer think of a miller that would let just enough water upon the wheel to enable it to turn the machinery of his mill but still so little that no grain could be ground? Yet that is just as reasonable as the common practice of wintering hogs in the West. Such hogs seem forever hungry, and reluctantly the farmer deals out the grain to them. He sees the crib which was his pride in the fall, when it was full of corn, gradually growing empty—empty as the squealing porkers always seem to be—and he goes into a sort of war for the winter with those "blasted hungry hogs," well knowing that they will whip him out entirely before grass comes. Spring finds the animals usually no heavier than at the beginning of winter, and with the corn all gone the drove must be carried over on grass only until the next corn crop is in condition to feed. When this period is at hand for the first time in their lives the hogs have their fill of grain; indeed, they are often overfed. The test of a good feeder is to supply abundantly every want of every animal under his charge. How many swine-feeders can stand such a test?

Realizing the vast loss from wintering our hogs, many are trying to avoid it by having the litters come at such dates that the pigs can be grown and strengthened without being carried through the winter. This necessitates that the pigs be farrowed in March or April, but these months are usually quite fatal to young pigs except in the hands of the most careful and experienced breeders. Many who have tried having their sows farrow during these months have grown discouraged and have returned to the practice of having the pigs dropped late in the spring or summer, at which time little attention is required. It seems to us there is a place on many farms for summer and fall pigs that is not half appreciated. When stock is fed whole corn the droppings are rich in grain not properly masticated and digested, but which nevertheless need not be wasted because not utilized by the animal voiding it. If whole corn be fed to dairy cows, young cattle, or fattening steers, pigs and shotes can be put after such stock to gather a great deal of matter which would otherwise be lost. Here is a

means of making the pig useful and solving a perplexing problem on the farm. Any farmer who gives the method a fair trial we believe will give up the practice of grinding corn for cattle and turn what was formerly toll for the miller over to the pigs. Experiments at the Wisconsin Experiment Station show that when fattening steers were fed whole corn and bran they gained as fast as on an equal weight of corn meal and bran. Pigs following steers fed on meal made no gain from what they got from the droppings, while large gains were noted for those pigs following the steers getting whole corn.

It is certainly easy to rear large litters of pigs farrowed in summer or fall by putting such pigs after the cattle fed whole corn. While we have therefore in this an easy, economical way of supplying a large portion of their wants, yet as the droppings provide corn only, shorts and ground oats or barley should be fed in addition to make good bone and muscle. The cost of the rapid gain such pigs will make will not be great, and when spring comes the farmer can crowd then rapidly forward to catch the good market which usually prevails in June or August. Will not pigs thus handled prove more profitable in many cases than April pigs sold at six or eight months, or May pigs wintered over on corn after the practice of so many farmers?—*Breeder's Gazette.*

The Death of Cattle in Stalk Fields.

Prof. Fallyer, in a late number of the college paper, *Industrialist*, discusses this subject as follows:

"The much-mooted question of the cause of death among cattle running in stalk fields has become of increased interest to some of the farmers near the college. One farmer has lost seven head out of some fifty, and another four head out of about half as many. In each of these cases the cause of death is far from apparent. There have been about as many different theories advanced to explain the loss, in past years, as there have been losses. Almost all kinds of facts have been adduced as bearing upon, or even being the only, cause of death. It is not the purpose of this article to discuss this matter fully, but to present some facts of these recent cases that make improbable some of the assumptions as to preventive measures. First, it may be said that an active poison from corn smut or other source has not been found. A free supply of water has not insured immunity from the attacks. It has been frequently held that the woody and indigestible character of the feed obtained in the stalk field is the source of the trouble, and that when little or no other food is given the animals fill themselves with the indigestible material which becomes a dried-up mass in the digestive apparatus, resulting in irritation, inflammation, and death.

"In the cases before us both herds had free access to water; both were in good flesh; both had been on good feed before they were turned into the field; both were left in the stalks but a half day or less at a time. The one herd, when not in the stalks, was running in a pasture about an unfenced hay stack; the other herd was fed millet, hay, and grain both before and during the time they were grazed in the stalks. An examination of animals that had died from each of these bunches of cattle showed grains of corn, corn husks and blades, and hay in the first stomach. The contents of this and the third stomach, or so-called manifold, were in the usual moist condition. Death occurs at no great interval after the food has been eaten. In one case, a heifer that had been kept out of the field

was permitted to graze there three hours, and died the next day. Now here is an active, acute agent, and not a slow fever due to impaction. Nor does it seem probable that the result is due to digestive trouble resulting from innutritious food, for plenty of good food had been eaten.

"I offer this suggestion: May it not all be due to gorging with food which may have been excellent in itself, but which, because of the inordinate quantity, causes indigestion, fermentation, and so-called colic? If this be true, the food given as a preventive would be the reverse. I would suggest grazing in the field for a period not longer than one hour each morning and evening. This might result in avoiding the over-feeding suggested as the cause."

Stock Notes.

To be in the best possible condition physically it is necessary that a horse's skin be kept absolutely clean, but as this is impossible at any time the nearest approach to it is to be recommended.

Experiments in the West show that one of the best crosses of horses is the Percheron stallion and thoroughbred mare, the produce combining the large size of the sire with the activity and endurance of the dam.

Never confine an animal in its stall by fastening a rope around its neck. Always use halters, both for horses and cattle, as a slight mistake in adjusting the rope, or in making the knot, may cause injury or loss.

As the cold weather approaches, the absolute cruelty of putting frosted metal into the mouths of horses is so frequently brought to mind that any suggestions as to a better course are at this season timely as well as merciful.

Scratches are to be found in many stables one winter after another, and their origin can be traced to nothing else than carelessness. Muddy roads, muddy barn yards and in some cases muddy stables are found in every neighborhood, and unless a vigilant watch is kept some annoying disease will follow. If there is one time in the year more than another when it will pay better to keep the horses clean it is for the next month or two, for if any diseases are contracted now it will be hard to get rid of them before the winter is over.

I have undertaken to start balky horses, being handled by others, after other methods of starting them had failed. I request the driver generally to move out of the way, that his voice or presence may not be recognized by the horse. I then first inform the animal, by patting him and talking to him, that there is a new man at the helm, thereby partly diverting his attention. As soon as he begins to give me his attention I take up his foot and tap it a few times, and never failed except in one instance to start the horse. And that exceptional case was one where the horse was overloaded and knew it.

No one who has had to do with horses when the mercury is considerably below the freezing point but has witnessed their sometimes almost frantic efforts to escape the pain that comes of putting on the bridle. Misunderstanding it many times, the coarse and brutal hostler adds blows to the other brutality, and forces the animal to take between its jaws a piece of iron that freezes its tongue and sections of its mouth the moment it touches them, causing not only present pain, but often ulceration, and almost always sores. The remedy is a leathern bit, instead of an iron one. If a bit of this sort is not easily procured, a common iron one can be covered, which will be at least a partial remedy.

The very worst method of attempting to start a balky horse, according to my experience and observation, is that of pulling the head of the animal by the bit, and it is a method almost universally adopted by the inexperienced users of the horse. The stubbornness of the horse is only increased by that method. I offer this suggestion in the interest of your cause. Whenever a horse driven by myself has balked I have got out of my carriage and gone to his fore foot, lifted it from the ground and struck the shoe a few blows with a stone or with a wrench (which I always carry in my carriage). I have never

failed to start a horse in that very simple way, and I have on several occasions had balky horses which exhausted the patience of all former owners.

There is no question but what too little attention is paid to the matter of keeping farm horses clean. Neither is there any question about owners paying dearly for their negligence each year. The direct results of this carelessness are not always seen or known. In some cases they are, though, and most farmers are careful enough about their horses to try to avoid any trouble in this direction. For example, if mud and dirt are left on the feet and legs of a horse, scratches, grease-heal, and other diseases will follow; if the shoulders are not kept clean the collar is apt to produce sores. All prudent horsemen know this and guard against such trouble by seeing that enough attention is paid to grooming the horses to avoid them, but there are many imprudent horsemen who do not do this much.

Care of House Plants.

Grow pot plants how or where we may, there are some things that tinge our pleasure with a shade of vexation, to say the least; and among these, insects have asserted their right to a front place in a very pronounced manner. You may try to ignore their presence, but all the same, they are there, and, what is worse, will stay unless you crush them out, which would be the better way if it were not so tiresome. A few hints from time to time, therefore, will not be out of place. For those who grow plants in pots, the time most to be dreaded for insects is from January to April, inclusive; for it is during this time that some of these pests take the most delight to multiply, and in a fearful manner, unless some means be taken to check them. It will be years before we master the insect business, notwithstanding all the so-called insecticides in the market.

The most common, but not the most destructive insect is the aphid, of which there are many species, only two of which, however, the green fly and the black fly, are very troublesome to the grower of pot plants. Of these, the black fly is most to be dreaded, and unfortunately, is the hardest to kill.

In the green-house the aphid is easily managed by repeated fumigations with tobacco smoke. In the sitting-room or parlor, however, this is not admissible, and recourse should be had to Buhach or Persian insect powder, which is one and the same thing. This, faithfully used, will abate the nuisance.

There is no sufficient reason, however, why plants in rooms should suffer from insects; yet as a matter of fact and observation, we know they suffer more than plants grown in green-houses. This is chiefly owing to the fact that the parties, as a general thing, do not know that their plants are infected by insects, especially when that insect happens to be the red spider, which, however, is not a spider at all. They have not been taught how to recognize insects on plants, or the effects of their presence. We shall by and by try to teach them something on this subject.

Innumerable times we have been asked, "Won't you tell me what is the matter with my plants?" In the majority of cases it has been insects, and most frequently the red spider. Now if the plants usually kept in rooms were carefully looked over two or three times a week, and the insects killed by hand, the labor would be comparatively light, and the pests would soon disappear. The fly should be crushed between the thumb and finger; the red spider and the mealy bug washed off with a sponge dipped in soap suds; and the scale removed with a tooth brush or nail brush. —*Peter B. Mead, in Orchard and Garden.*

For \$1.50 we will send Blake's Weather Tables for 1889 and the KANSAS FARMER one year.

In the Dairy.

PROFITS OF DAIRYING.

Essay read before a Farmers' Institute at Chester, S. C., August 23 and 24, 1888, by H. M. Dibble, of Aiken.

There exists in many minds an impression that dairy farming can never flourish in the Southern States. Because we lack the luxuriant fields of clover and blue grass which are always associated with the thought of choice butter, we are apt to overlook the peculiar advantages which we enjoy for profitable cattle-feeding in our freedom from extreme cold in winter, the possibility of having pastures of vetch, rye, crab and Bermuda grass, or cow peas, any month in the year; and, since the feeding of corn ensilage has become so common, the great luxuriance with which Indian corn will flourish in our warm climate, and the small cost of cutting and preserving it with our cheap labor.

I believe that at the present price of good butter in South Carolina, a herd of selected Jerseys can be made to pay a net profit of \$80 per cow over all expenses for feed and care, and I propose in this essay to give the figures on which this estimate is based.

The mode of feeding which I follow is essentially the soiling system. This is generally recommended by Northern writers as the cheapest and most desirable method, but the scarcity of labor on Northern farms prevents its general adoption. With us this objection does not exist, and there are arguments to be derived from our climate which make it particularly desirable to keep cows most of the time in box-stalls, and to bring their food to them, rather than force them to seek it under the scorching rays of the August sun, and exposed to the maddening attacks of their insect enemies. The great mortality which has followed the importation of Northern or foreign cattle is largely due, in my opinion, to their being overheated by the sun when forced to search for their food during the warm hours of the day. If this be so, the adoption of the soiling system by Southern farmers would have saved many thousand dollars in former years.

Before the preservation of corn in silos was understood, it was at times difficult in soiling to arrange a succession of crops which would follow each other without a break. But now this difficulty no longer exists, and Indian corn can be made the basis for stock-feeding throughout the year.

This is done on my own farm, where ensilage is fed to all stock from November to July, and the green corn, or its cousin, milo maize, for the remaining four months.

It is of course understood that cattle are fond of a change, and relish variety in their food as well as mankind. This can be easily given in the meal ration fed with the ensilage, or by an occasional run on a rye or crab grass pasture, while the corn is the main course to which these appetizing deserts are added.

Ten tons of good ensilage, or its equivalent in corn and grass, will feed a Jersey cow of the average size for a year. It is hard to give the exact cost of this ensilage. An acre of corn—that makes fifteen tons of it—can be plowed, planted and cultivated for \$3, making the raising of the corn cost but 20 cents a ton; and for 30 cents a ton I can haul it to the barn, run it through the cutter and pack it in the silo, making the apparent cost of a ton of ensilage but 50 cents. But it has taken about fifty cart loads of rich stable manure to the acre to make this heavy yield, and if this be charged to the crop at the value of its

fertilizing ingredients, it adds at least a dollar a ton to the cost of the ensilage, and perhaps if this ensilage is charged to the cows at \$1.50 per ton it will be about its true value. In addition to this a liberal ration of ground meal is necessary in order to produce the best results, and every feeder will vary the rations given in accordance with the price of the various feeds in his market. Other considerations, however, ought largely to govern. For example, cotton seed meal will increase the richness of milk more in proportion to its cost than any food we have, and many chemists tell us that its manurial value after being thus used is more than its cost in our markets. But fed to excess it injures the quality of the butter, and it is impossible to make a first-class article when cows are fed largely or entirely upon it, and I need not tell you that the whole cotton seed is not a fit food for the milch cow, and should never be given.

On the other hand, we have in the cow pea a food that has no superior in the whole range of cow feeds. Not only does it largely increase the flow of milk, but it gives it a superior flavor and imparts an agreeable taste to the butter made from it. When cow peas are fed whole they are imperfectly digested, and there is a large percentage of loss. They should be run through a mill and then fed, mixed with ensilage or other coarse food.

The following ration I have found to be very satisfactory. Mix one ton of pea meal, 1,000 pounds of wheat bran, and 700 pounds of cotton seed meal together, and give each cow an average of ten pounds a day of the mixture, varying the amount according to the size and condition of the cow, giving more to fresh cows and heavy milkers than to those which have been long in milk.

This question of feeding is a vital one in dairy farming. A careless feeder who fails to study the capacity of each cow will have constantly cows that are "off their feed;" and an ignorant man, who has not studied the properties of the various foods, can easily ruin his herd by improper feeding.

Near the city of Augusta there is a herd of Jerseys which have been collected at great cost from various parts of the United States and Canada, and which contains representatives of many of the leading butter families; yet two or three years of poor management, with the feeding of rich, carbonaceous food like corn meal, which tends to fatten rather than to increase the flow of milk, has completely changed the character of these cows, and they are now more like Short-horns than Jerseys. This herd contains about the same number of cows as my own, and yet last winter, when my cows were making from ninety to one hundred pounds of butter a week, they were producing but forty pounds; and while the good Jersey cow rarely goes dry, many of these have not been milked for several months. It is but just to add, however, that a large share of the blame in this case was due to poor milking, and that this is almost as important as the feeding.

When cows are fed on the soiling plan I have found that the labor of caring for them, together with the dairy work, is equal to the labor of two men for every thirty cows. If these men are paid \$20 a month, this will make the care of each cow amount to \$16 a year, which is certainly a high estimate, and presumes that all the work is done in the most thorough manner. When, as is generally the case, the dairy work is done by the owner's family, this item can easily be reduced one-half.

I will admit that this is an expensive way of keeping cattle,—indeed the cost

per cow when kept and fed as above is nearly three times as much as in many Northern dairies, and only good cows will pay a profit when fed in this manner. But in the Jersey we have the ideal good butter cow, and as we are figuring on the basis of a butter dairy, our estimate will be made from our knowledge of this breed.

How much butter will a herd of good Jerseys produce in a year, when fed richly and well cared for?

On this point I quote from an article by Major H. E. Alvold, well known as a close and accurate observer, and now at the head of the Maryland Experimental Farm: "A Jersey herd with an average product of 300 pounds of butter a year for every female over two years old, may be called a good herd. Three hundred and fifty pounds for the average is a worthy ambition, and may be reasonably expected as the result of proper effort; while 400 pounds is a very high annual average."

I have at hand the records of a number of herds, which lead me to think the above estimate a reliable one. Mr. T. J. Hands, of New York, reported in 1874 an annual average of 406 pounds for every cow in his herd; but, as Mr. Alvold affirms, this is an unusual yield. My own herd has not been established for an entire year, and as I have been experimenting with their feed and learning how to handle them during the time that they have been in my possession, it would hardly do to take the figures or that time as a final test of the capacity of the cows. Judging, however, from their yield since the first of December and their condition at the present time, the average for each cow in my dairy for this year will be in the neighborhood of 300 pounds. Regular customers pay me 35 cents a pound for this butter, and the supply is far short of the demand.

The manure made from cows fed in this manner is very valuable. I have taken the tables compiled nearly thirty years ago by J. B. Lawes, England's great farmer and scientist, for showing the value of manure made from various foods, and which have been recognized as the standard for all calculations on this point by every agricultural writer of recent years. Reducing the value of the nitrogen, phosphoric acid and potash in the tables from 18, 10 and 7 cents to 10, 7 and 5 cents respectively, which I believe is their estimated value in this State, I find that the ten tons of ensilage and 3,700 pounds of mill feed which one Jersey cow consumed, will enrich our farm fully as much as would the purchase of \$30 worth of commercial fertilizers. This result so astonished me that I turned to the record of my corn crop cut this year to see if the soil, that greater chemist than Lawes, would confirm this estimate.

On many acres of unmanured land this season the crop of corn ran as low as two tons to the acre. On land which four years ago was equally poor, but which has been brought up by an annual dressing of manures estimated at fifty cart loads, or the manure made by one cow in a year, to the acre, the yield of corn was very nearly twenty tons to the acre, while the cost of cultivating this thick and fast-growing corn was considerably less than for that on the poorer land. In but little more than three months these fifty cart loads of manure have made over \$20 worth of ensilage, and left the ground much richer than it was to start with, as the heavy grass now covering it bears witness. Experience seems in this case to have verified the truth of Lawes' tables. I find, however, that Stewart, Linsley, Quincy and various foreign writers estimate the value of this manure at \$20 per cow, and as I do not wish to

place the figures too high, I will accept the latter sum and add it to the \$105 received from the butter.

Then we still have to dispose of a lively fawn-colored calf from our Jersey cow. How much can we expect to receive for it? Mr. G. W. Farlee, of New Jersey, last year had one that he asked \$1,500 for, but then the mother of that calf made over 700 pounds of butter in a year, while ours only made 300. Not wishing to stop too long over this item, we will suppose the calf disposed of for \$25, and proceed to the last item on our list, the skim-milk and buttermilk. If the dairy were near town these could be sold at a good figure; but as it is remote from a market they are fed to the calves and hogs, and are worth about \$5 per cow.

Now how does the account balance?

Jersey cow.		Dr.	
To 10 tons of ensilage, at \$1 50	.....	\$15.00	
" 1 ton of pea meal	.....	23.00	
" 1/4 ton wheat bran	.....	11.00	
" 700 pounds cotton seed meal	.....	7.70	
" labor account	.....	16.00	
" salt and sundries	.....	2.30	
Total	.....	\$75.00	
		Cr.	
By 300 lbs. of butter, at 35 cts	.....	\$105.00	
" manure	.....	20.00	
" calf	.....	25.00	
" butter milk and skim-milk	.....	5.00	
Total	.....	\$155.00	
Cr. by balance	.....	80.00	

This grade of cows can not be bought for much if any less than \$200 at the present time; but a study of these figures show that even at that price they pay a very good interest on the investment.

Parties living near a good market will find that selling milk is much more profitable than making butter. In many towns Jersey milk will sell readily at 10 cents a quart, and the cow that will make 300 pounds of butter a year should give an average of two gallons of milk a day for 240 days in the year, and this sold at 10 cents a quart makes the income from a single cow \$272 a year. But this price is too high to be lasting, and no one should embark in the dairy business with the expectation of long realizing such excessive profits.

It would be interesting, did time permit, to consider how well other crops and pursuits can be combined with the system of soiling I have described. After our ensilage is all secured, the land is left free to make a crop of crab grass or turnips or rye for winter pasture, before it is wanted again for corn. On this crab grass sheep can be pastured during the fall months; on the rye and turnips they can be folded during the winter and early spring, and as "the sheep foot is golden," as the old Spanish proverb truly says, the land loses nothing in fertility and is left in much better condition for the plow.

South Carolina is blessed with a mild and equable climate, which will develop a great variety of crops. Our annual rainfall is sufficient to insure their growth without expensive systems of irrigation. Increased fertility of soil alone is wanting to make this one of the most favored portions of the globe, and this fertility is sure to come when stock-raising is recognized as an essential part of all good farming. In this will be found the crowning and most enduring profit of dairying and stock-feeding.

The prevalence of Malaria in large sections of country where, until recently, it has never been known, is not easy of explanation. If you are a sufferer, it will be more interesting to you to know how to get well. A few doses of Shallenberger's Antidote will do the work, and do it *immediately*. The medicine is prompt in destroying the poison, and always safe; even for young children. Sold by Druggists.

Of 4,692,348 persons returned by the census of Germany in 1882 as engaged in agricultural work, 1,230,080, or nearly a mill on and a quarter, were females. The land of Bismarck still adheres to the old fashion of harnessing women to the cart and the plow.

Correspondence.

A Remedy for High Interest on Money.

EDITOR KANSAS FARMER:—As I have noticed there has been a good deal said in your paper of late in regard to interest, I thought that I would give you my opinion. Interest here in Kansas is one of the hardest things that we farmers have to contend with; it is worse than the drouth and chinch bug both put together. When a man once gets into the coils of the money-loaner it seems that there is no escape for him but bankruptcy and ruin. The money-loaner has as much mercy as the once famous Shylock of Shakespeare's time. All of those who have had anything to say about interest in your paper, have dwelt on the miseries of the farmer that was in debt without giving us a remedy. I propose to give a remedy, and if anybody can give a better one, let him speak. I think that a little counseling together of the farmers will help us a good deal. Interest is the great drawback to all kinds of business in this country; it robs the farmer of his profits; it compels the farmer that has not got his farm paid for to submit to double taxation, for he has to pay tax on his farm the same as though it was paid for, and more than that, he has to pay a greater rate of interest than he would if his notes were not taxed; so you see that the man who is in debt has to pay his own tax and also the tax for the man that he owes. I ask if this is fair.

Now I will give you my remedy. I would have the law read just like this: All money loaned at 6 per cent. or less shall be free from all State and municipal taxes; all monies loaned for more than 6 per cent. shall be subject to taxation. Such a law as that would induce the man that had a little money to spare to let it out at such a rate that the farmer could pay it and live, and if his crops were cut short by drouth he could afford to borrow a little money to carry his business along without being compelled to pay the money-loaner all of his profits and more too. I think that the rule of taxing money or notes that are given for back payments on land is all wrong. Those back payments do not draw more than 6 per cent.; if they draw more than 6 per cent., then tax them, for it is evident that the man that holds the notes is trying to get more than a fair recompense for his money. F. W. B. Marion, Kas.

About Large Crops.

EDITOR KANSAS FARMER:—Since my short article appeared in the KANSAS FARMER some weeks ago describing a new corn, some of my brother farmers have written me, saying that it is almost incredible that a yield of 125 bushels of corn could be raised on an acre. I admit that it is not often done. Yet eight years ago I knew an honest farmer in Anderson county, this State, living on Pottawatomie creek, ten miles west of Garnett, who raised 160 bushels of corn on an acre—one bushel persquare rod. It is a fact that great yields of corn or anything else are dependent on favorable conditions. And the variety and quality of seed, the soil, time of planting and method, cultivation and the season, are the conditions. One hundred and twenty-five bushels of corn or anything else cannot be raised per acre if a poor quality and variety is planted haphazard, on poor soil, late in the season, and then let the crab grass and weeds take it. My soil is a black sandy loam, with clay subsoil; a heavy coat of stable manure was plowed in deep early in the spring, and then a good top dressing of well-rotted stable manure was added; five grains of corn were planted in each hill the first of May, hills three and a half feet apart each way. When corn was up five or six inches it was thinned to three stalks in each hill. My object in planting heavy was to be sure of having three stalks in each hill, but I believe every grain grew. It was plowed and hoed two or three times a week during May and June, or as often as I could find the time. The season was fair, and the corn was ripe the last of August.

The hills at three and a half feet apart each way and three stalks in each hill, gave me at the rate of 3,555 hills or 10,665 stalks per acre. With one ear per stalk this was over 106 bushels per acre; but with two ears on a majority of the stalks, it can easily be seen that 125 bushels per acre is not so in-

credible as one would at first suppose. Perhaps in a large field the yield would not be as great, because of the difference in soil, spots of it lacking those essential chemical properties that are absolutely necessary for the rapid growth and development of plant life. There ought not to be any secret as to the methods of obtaining a large yield of any crop. But strange as it may seem, people will not believe fact and the truth when seen and told, though they may formally assent to it. The great trouble with many Kansas farmers is, they scratch over too many acres. I verily believe that if they would take one-half or two-thirds of their land and prepare and cultivate it as it should be, they would raise more and do it easier.

W. R. SMITH.
Box 34, Coyville, Wilson Co., Kas.

Queer, Isn't It?

EDITOR KANSAS FARMER:—Well, I have read Slim's Johnson county address, delivered at Olathe, Kansas, and of course he, like the Grangers here, is for organization. And what the Johnson county Grangers have said against railroads and railroad bonds would make volumes in book form. And on three occasions in this county some of the leading Grangers urged the people to vote \$20,000 railroad bonds on two townships. I have thought sometimes that it was good to organize, and then again I have thought that the people were pretty near organized out of existence. Why have a mile of railroad represent \$54,000, and pay taxes on \$4,000 to \$8,000? Why have a \$6,000 farm and pay tax on \$1,500? Why should a cutthroat mortgage be held in the county in which the cutthroat lives and not pay tax, and the man that lives on the land pay interest on \$4,000 and pay taxes beside? Why should a lot of County Clerks meet in Topeka, recommend that county assessors be appointed, and in turn they appoint township assessors? Did they presume on the people's intelligence or ignorance?

I have sometimes thought that the people were not all fools, but some of us were good subjects for dupes.

Well, I might ask why Leland Stanford voted to confirm Lamar Associate Justice, and why should Senator Plumb vote to confirm that old copperhead Fuller Chief Justice; last, but not least, why should such corporations as the Kaw Valley Life Insurance Company be allowed to rob the people of Kansas, and go unpunished?

Long live the KANSAS FARMER.
SANFORD.

Peanuts.

EDITOR KANSAS FARMER:—If my experience in peanut culture will be of benefit to any one, here it is.

Last spring I planted one acre. After planting the weather set in wet and cold, and only about one-half grew. I cultivated and hoed them frequently, so as to have the ground clean, mellow and level when the vines commenced running. On the 4th of August, when they had just begun to bear, a hail storm cut off the vines. But they soon grew out again, and I gathered thirty bushels from the half stand on one acre.

My way of gathering the crop is by plowing around lands, the first round plowing as close to the row as I can get without cutting the vines, and the next round turning up the row and so on until all are turned over. Then immediately follow the rows, taking them by the roots and shake off the dirt and drop them down in rows to dry. After they are partly dry throw them on piles large enough for one forkful.

After a few days if it does not rain, which it is not likely to do here at that time of the season, they will be dry enough to haul together on a pile on a clean place prepared for the purpose, after which the nuts can be easily knocked off the vines in a very short time with a club. The chaff and light nuts can easily be separated from the sound ones by the wind. They should then be stored away in sacks or bins until they go through a sweat.

I have not sold any yet. Will not attempt to sell any but bright sound ones, and expect to realize not less than \$1 a bushel for them. The others I will use for seed and feed. I find they are excellent feed for all kinds of stock, chickens and turkey being especially fond of them. While mine were drying on the vines, it required watching to keep my calves from eating them.

While other crops are withering and

scorching in the hot sun and winds, peanuts are growing right along fresh and green. Neither are they easily destroyed by hail. For these reasons I am satisfied they will become one of the important crops of Southwestern Kansas, either for the market or for feed.

We raise good crops of grain here, but it is not safe to rely on grain alone; we should try other crops adapted to the climate in connection with corn, wheat and oats, even though they may not be so pleasant or profitable to grow.

J. L. HAMILTON.
Bucklin, Ford Co., Kas.

Gossip About Stock.

Kansas breeders should get ready for a prosperous year in 1889 by sending in their breeder's card in time for the New Year.

Breeders who want the KANSAS FARMER, Breeder's Gazette and Blake's Weather Tables for 1889 can secure them all by ordering at once for \$3.25. The total single price amounts to \$4.75. Save \$1.50 by ordering now, as this is a limited offer.

We are in receipt of the 1889 catalogue of imported Clydesdale, Percheron and Coach horses of E. Bennett & Son, Topeka. This extensive establishment is not only a credit to the state, but the West generally. They have done an immense business and their trade extends from New York to Washington Territory. Send for their illustrated catalogue.

The attention of our readers is again called to the advertisement of Mr. John Lewis to be found in the Directory of this paper. He makes a specialty of Poland-China hogs of the very best strain and at prices to suit, while his wife prides herself in having pure bred poultry, bronze turkeys, Imperial Pekin ducks, peafowls, white guineas and Toulouse geese, and will send illustrated catalogue to intending purchasers who mention this paper.

Humane hog-raisers will be much interested in the illustrated device on the first page this week of a hog sanitarium, the patented property of E. M. Crummer, Belleville, Kansas, one of our old subscribers. He has proved it to be very successful, having recently shipped the last of seven carloads fed out since June 1, of 420 head averaging about 320 pounds, there was not a cripple or dead hog, and only one dock made in the whole number. Mr. Crummer has had 400 applications from farmers in Republic county who have seen it in use in his feed yard.

Rix & Goodenough, Topeka, have sold the excellent young stallion Highland Boast 1292 to the Wealthy Rock Rapids (Iowa) Horse Company, and says: "We had decided to reserve this horse for use in our own stud, but purchasers were determined to have the very best they could find regardless of price, hence we very reluctantly consented to let him go. He was first in class at last Kansas State Fair, and will be likely to win wherever shown next season. The following horses have also been sold from Highland Stock Farm during the past three weeks: Lord Russell 1276, 2 years, sire perfection (3926), dam by Young Colin (Vol. X), to parties in Aurora, Dakota. Sir Charles IV (6392) 1273, 2 years, sire Perfection (3926), dam Lancashire Lass by Whats Wanted (2833), to Creston, Iowa, parties. Sir Archie (6389), 1272, 2 years, sire Blyth Archie (4238), dam by Model Tom (2627), to Horse Company at Prescott, Iowa. Lincoln's Model (5170), 1263, 4 years, sire Lincoln, (1850), dam by Master of Arts (1500), to Patrick Curtis and others of Creston, Iowa. Enterprise of Mawdsley (5319) 1270, 2 years, sire Prospect (4631) dam by Confidence (520). Brown Oliver [5598] 1265, 2 years, sire Oliver [3243], dam Lofty [Vol. IX]. Sorrell King, 3 years, sire Garrett [2787], dam by King Alfred [2442], and the Cleveland Bay Cavallero [701], 3 years, sire Sportsman [299], dam by Lively [172].

Many an otherwise handsome face is disfigured with pimples and blotches, caused by a humor in the blood, which may be thoroughly eradicated by the use of Ayer's Sarsaparilla. It is the safest blood medicine in the market, being entirely free from arsenic or any deleterious drug.

Instead of buying a late pig to eat the skim milk this winter give it (the milk, not the pig) to the hens.

WELLS, RICHARDSON & Co's

IMPROVED Butter Color.

EXCELS IN STRENGTH
PURITY
BRIGHTNESS

Always gives a bright natural color, never turns rancid. Will not color the Buttermilk. Used by thousands of the best Creameries and Dairies. Do not allow your dealer to convince you that some other kind is just as good. Tell him the BEST is what you want, and you must have Wells, Richardson & Co's Improved Butter Color. Three sizes, 25c. 50c. \$1.00. For sale everywhere. WELLS, RICHARDSON & CO. Burlington, Vt.

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Make pets of all your animals and handle them always the same.

Contiguous swine pens harbor disease. Constant change should be aimed at. If a pen is used at farrowing time, it should be vacated for a time before using for that purpose again.

The Orange County Farmer says: "Do not dose your animals. Even when they are sick move in that direction with great caution. A thousand are killed by dosing with poisonous drugs where one is bettered."

There is no live stock on the farm that needs warmer winter quarters than the hens, but on the majority of the farms they are wintered in some building that is not considered fit for anything else, or on trees.

"The Future by the Past," and the Kansas Farmer one Year for \$1.50.

We have made arrangements for a limited time with J. C. H. Swann, author of the "Future by the Past," price \$1.00. It has had a wide sale on account of being a perpetual calendar of predictions. The supply on hand is small and we propose to give our readers a chance to secure the book at half price in connection with the FARMER.

From an exchange we learn that the Wisconsin Agricultural Experiment Station has been testing the cow pea crop and that the results are favorable. The peas attained a height of two feet and yielded good crops on land too poor to make corn. Its ability to resist drouth was superior to red clover. Twenty-one tons of green forage per acre were raised at the Station, and analysis showed the pea vine slightly ahead of red clover as a nutrient.

Special Opportunity at the State Agricultural College.

The college will organize at the beginning of the winter term—January 7—classes in common branches of various grades of advancement suited to the wants of students at district schools who want the advantages of the college training. The requirements for admission will be the same as at the beginning of the year in September. Students over 18 years of age may be received upon special conditions, where for lack of opportunity they are deficient in one or more of the branches named. The examination will be held on Monday, January 7, but admission will be possible at any time upon showing sufficient advancement to enter classes already in progress.

The education offered at the college is of the best for all ordinary purposes of life. Farmer's sons and daughters have special consideration of their wants in the sciences directly related to agriculture; household economy and mechanic arts are also provided for. An able corps of teachers and excellent equipments make the teaching in every way superior. Tuition is free. For further information address

PRES. GEO. T. FAIRCHILD,
Manhattan, Kas.

WEATHER PREDICTIONS.

By Prof. C. C. Blake, Topeka.

[Correspondence on account of this Weather Department should be directed to C. C. Blake, Topeka, Kas. See advertisement of Blake's Weather Tables on another page.]

SECOND EDITION.

The first edition of our "Weather Tables" is exhausted, which caused a little delay in filling orders this week. The recent demand from all parts of North America has been so much greater than we expected that the supply ran out before we were prepared with another edition. But the second edition of 5,000 copies will be out in a few days, so that we will be able to fill all orders by Friday, December 23.

QUESTIONS AND ANSWERS.

RUSH CENTER, KAS., Dec. 16, 1888.

I received your Weather Tables for 1889, and am much interested in the contents, though I have not had time to thoroughly understand all parts of it yet. There is one point which troubles me; it is this: You state that the amount of rainfall in different months next year will vary largely in the middle third of the north half, west third of north half, west third of south half and middle third of south half of Kansas. Rush Center is in latitude 38 deg. and 30 min., and longitude 99 deg. and 20 min.; which of the four subdivisions do we belong to, and what may we expect in rainfall next season? We are geographically in the middle third of the south half, but by a "small majority." But are we really, or do isothermal lines have some bearing on the matter?

JAMES A. RUSSELL.

The above question and the answer thereto apply with equal force to many places in the United States, especially to localities situated on or near the boundary line between two States or two subdivisions of the same State. We have a number of similar questions from different parts of the United States. First, we wish to remark that the questions imply an expectation of a greater degree of exactness in our predictions than subsequent verifications will warrant. Take the middle third of the south half of Kansas as an instance. The figures which we give in our book show how many inches and hundreds of an inch of rainfall will occur during each month of next year in that section. But it will not be equally distributed during any one month. In one month the most rain will be in the eastern part, in another month the bulk of the rain will be near the center, while in other months the most rain will be near the northern, western and southern parts of said subdivision. At times heavy local showers will occur in one county with none in adjoining counties. Our calculation and prediction is, that taking the total amount of rain that falls in any one month in said subdivision, both during general storms and local showers, it will be enough to make a layer of water over the whole section equal to the number of inches stated in our Tables. We did not pretend to say that said number of inches of rain will fall at each and every point in the middle third of the south half, and that as soon as the west line is reached a layer of a different thickness will commence and run uniformly over the west third of the south half of Kansas. We know that while some of the general storms may cover a whole subdivision, or a whole State or more, yet most of the storms and all of the showers will go more or less in streaks and spots; that it will frequently occur that one-half of a county will have a good shower while the other half will have none. It may happen that Rush county will have more rain in any one month than the average of any of the four subdivisions which corner in that county, or it might have considerably less. The probabilities are that at Rush Center the rainfall each month will be about an average of that predicted for the four sections which corner there. The proper thing to do for all points on or near boundary lines, is to strike an average between the two or more subdivisions or States which join or corner there. We admit that this will not give results which will prove to be exactly correct. But it should be remembered that the nature of the problem does not admit of absolute mathematical accuracy; if it did, our predictions would all be infallible. A still greater degree of accuracy could be attained if we made calculations for each county separately. We have tried that and have made calculations for one county only which made a verification of 95 per cent.; but it took such a vast amount of labor that it was impracticable. As we wrote a friend a few days ago, we are a splendid marksman while shooting at the broadside of a barn at short

range; but aiming at the center of the "bull's-eye" at a range of 900 yards, is like Bogardus aiming at a nickel thrown into the air. So, too, making weather calculations for one county only is awful fine work, as we have to include all the local showers which can possibly strike that county and not other counties adjoining, and have to exclude all showers which reach adjoining counties but which miss the one in question. This is sharp-shooting indeed; but when it comes to calculating the average for a continent it is like shooting at a barn—"We are at home then, and the latch-string is out."

If we made predictions for each county it would require all our time to calculate for half of Kansas, leaving no time for the other half or for other States. For this reason we have for the past twelve years tried to induce educated astronomers to investigate our system of calculating, so that with a multitude of experts, calculations could be made for each county in this and all other countries. But while we found plenty of ignorant charlatans who were willing to branch out as full-fledged "weather prophets," we did not meet with success in interesting competent mathematicians in our system till Professor Jenkins, of the Royal Astronomical Society of England, adopted our line of work, in which he has already met with encouraging success.

But for practical farming purposes our readers cannot go far wrong if they take the figures in our book and therefrom make averages for all doubtful points. This can be done closely, as our book contains tables of specific predictions for eighty subdivisions in this country. Isothermal lines and topography have much to do with it, but have all been considered in the predictions as recorded.

WINFIELD, KAS., Dec. 3, 1888.

Your Tables have been noted with much interest. But your eight solid pages of figures will require several months of close and careful study to thoroughly digest them. Your chapter on "Hot Winds" alone is worth the price of the book. For further information on this important subject I enclose 35 cents for those copies of *The Future* containing your chapters on "Cosmogony and Astronomical Laws and Tables." My curiosity to have at least a partial understanding of the basis of your operations is aroused. It is to be hoped that in the course of time you will become so perfect in astronomical science as to be able to foretell the exact day on which weather phenomena will occur, thus eliminating even the appearance of "glittering generalities." Also that you will be able to prescribe a daily regime of weather with as much certainty and accuracy as astronomers now time the movements of the planets and the occurrence of eclipses. Believing that a text book on astronomical mathematics would fill a long-felt want, it is to be hoped that you will soon perfect your system so as to issue such a publication. In closing permit me to request you to explain or explode the empirical notion so many old farmers seem to have relative to planting potatoes, and the seeding of various grains as well as the performance of animal trimming in accordance with special phases of the moon. Is there any particular advantage to be gained by allowing the moon to govern our operations in these respects?

M. H. MARKUM.

Even if our system of calculating the weather were as perfect as practical astronomy now is, it would not be perfect, for there is quite a large per cent. of error in the very best astronomical calculations as to "timing the movements of the planets," though it is not generally known outside of the observatories that such errors constantly occur.

As to the influence of the moon upon our earth, there is a vast amount of truth and error mixed up together. The subject is a vast one, too vast for consideration in a short newspaper article. It really embraces the whole of the science of Astronomy. We do not place any faith in astrology as taught by the ancients during the dark ages, and that taught by modern astrologers is not one whit better. Astronomy is true, for it is susceptible of mathematical demonstration; but astronomy includes a vast amount which astronomers have not generally learned. About all the influence astronomers ascribe to the moon is her influence upon our tides, and they do not know how that phenomenon is caused. We explained it in full in the fourth chapter on "Cosmogony" in *The Future* for October, 1886, and also what the influence is which causes the earth to rotate on its axis. Most of the old farmers are right in their idea that the moon has a good or bad influence upon recently planted crops. The same parties are also wrong in supposing that this influence at new moon is always the same, or that the effect of the moon's influence is al-

ways the same at the same quarter. If there were no planets, then the influence of the moon would always produce the same effects when in the same relative positions. But the influence of the planets is frequently such as to make the moon appear to have an influence directly contrary to what it usually has. The new moon always has a tendency to increase the temperature in the atmosphere and in the soil at all points within 1,000 to 1,500 miles north and south of the latitude where the new moon is vertical (directly overhead at new). If the new moon is in perigee (point nearest the earth), this increase in temperature is much greater than when it is in apogee (point farthest from the earth). Hence, if there is new moon at perigee when the moon is in the highest possible northern latitude, which is 28½ deg. north of the equator, it will cause great heat in the United States. If at the same time the planets are in position to act in conjunction with the moon the heat will be at its maximum. But if at such time the planets are exerting an influence contrary to that of the new moon, the heat-producing influence of the moon will be neutralized and it will not appear to have its usual effect. This is the reason why those farmers who "plant their potatoes in the moon" are sometimes right and sometimes wrong. But while the new moon increases the temperature near where it is vertical, it causes an ascending column of warm air which spreads out to the north and south at a small elevation, creating a partial vacuum and low barometer at the point under and near the new moon; and banking the air in the upper atmosphere at points from 1,000 to 3,000 miles north and south of the point where new moon is vertical, causes a high barometer at said north and south points. It is well known that the surface winds blow from a high to a low barometer; hence the flow of surface air from the high barometer to fill the vacuum near new moon will permit the cold upper air over the high barometer to settle down to the surface of the earth, producing what we call a "polar wave," though it frequently comes from no farther north than latitude 45 to 50. In summer time it will produce a cool spell, and frequently frost in high latitudes, as was the case in August and September of this year. But in winter it sometimes produces severe blizzards. The observing will notice that a warm and showery spell at time of new moon during the warm season is usually followed about a week later by a cool spell.

At new moon strong electric currents are passing from the bowels of the earth to the moon, and these being retarded and obstructed by nonconductors, such as our atmosphere, are largely converted into heat. At such times we have frequently noticed that the ice on ponds and rivers rots from the bottom much faster than from the top. Probably many of our readers have noticed times when it was cloudy and muggy, and when the ice very suddenly and mysteriously disappeared. The cause of the sudden disappearance was that the electric currents passing from the interior of the earth through the water and ice, were obstructed enough to develop such heat as quickly rotted the bottom of the ice, so that it filled with water and sank to the bottom of the river or pond.

Where maple sugar is made it will be noticed ordinarily the sap flows much more freely at and soon after new moon. At such times we have freezing nights and thawing days, especially in the early spring, which is the best time for collecting sap. It also follows that at such times, potatoes and grain will sprout better because the soil is being warmed by these electric currents. But at too great a distance from the vertical new moon the reverse might be the effect. New moon can never be more than five degrees south of the equator after the 20th of March till after the 20th of September; and it is never that far south but once in nineteen years during spring. The moon is always within five degrees of the ecliptic (plane of the earth's orbit around the sun); hence new moon always runs high in summer and low in winter, while full moon always runs high in winter and low in summer. New moon is five degrees north of the sun in summer once in nineteen years, and five degrees south of the sun once in nineteen years; during the remainder of said nineteen years it is between those two points. It therefore follows that part of the time the new moon lies "flat on its

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Efficacy

of this preparation."—Mrs. P. H. Davidson, Alexandria, La.

"I was afflicted some three years with scalp disease. My hair was falling out and what remained turned gray. I was induced to try Ayer's Hair Vigor, and in a few weeks the disease in my scalp disappeared and my hair resumed its original color."—(Rev.) S. S. Sims, Pastor U. B. Church, St. Bernice, Ind.

"A few years ago I suffered the entire loss of my hair from the effects of tetter. I hoped that after a time nature would repair the loss, but I waited in vain. Many remedies were suggested, none, however, with such proof of merit as Ayer's Hair Vigor, and I began to use it. The result was all I could have desired. A growth of hair soon came out all over my head, and grew to be as soft and heavy as I ever had, and of a natural color, and firmly set."—J. H. Pratt, Spofford, Texas.

Ayer's Hair Vigor,

PREPARED BY

Dr. J. C. Ayer & Co., Lowell, Mass.
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back," while at other times it "stands on one of its horns." Many people think that these positions of the moon indicate wet or dry weather in summer. A sufficient reply to this idea is to say, that if such positions of new moon indicate what the precipitation will be, then we can calculate with mathematical infallibility as to what the rainfall will be during each month for the next ten thousand years, for any astronomer can calculate what position the moon will occupy for each day for many thousands of years to come. The moon generally causes more or less of stormy weather at or soon after new, especially during the northern summer; but at times the influence of the planets is so much greater that the moon appears to have no influence at all. Such is always the case where a drought lasts for more than thirty days. But it does not do much good to understand all the complicated influences of the moon, unless the still more complicated influences of all the planets are also understood, to as to be able to tell (predict) when the moon's influences will cause definite effects, and when those effects will be superceded by the planetary forces.

The moon and planets have certain definite, thermal, electric, magnetic, viable and anti-viable effects upon animal organisms, including the physical, mental and moral forces in the human organism. While we have investigated these forces pretty extensively, yet we have not so far mastered them that we dare venture to put the results of our researches into print; we hope to be brave enough to do so at some future day. But whatever influence the moon and planets may have upon animal life, it is certain to be in strict accordance with laws which admit of scientific, if not mathematical, demonstration. With such wild guesswork and imagining as is usually employed in astrological blundering, we have no patience. In fact we neither believe nor disbelieve anything till a demonstration shows it to be true or false, though we freely accept every new idea or suggestion on probation, pending an investigation. You may say that we do not show this charity in our unqualified rejection of the teachings of Astrology; but in this we shall disagree. We have proved by our verified predictions for the last fourteen years that we have gone farther in the study of planetary influences than any astrologer who has ever lived. We can and do demonstrate all that we affirm. If you notice all of our writings you will observe that we simply demonstrate or prove who *did* steal the boots, wasting no time in trying to prove who *did not* steal them. Since we have learned what planetary forces *are*, why should we waste time in showing what they *are not*?

For \$1.50 we will send one of Blake's Weather Tables for 1889 and the KANSAS FARMER for one year.

The Young Folks.

What's the Use?

If you meant to catch a robin,
And instead you get a crow,
Is there any use in whining,
In lamenting and repining,
Now I really want to know?

If you thought you had an orange,
And it proved a lemon sour,
Would it change the acid flavor
To a sweet and pleasant savor
If you soulded for an hour?

If a friend should prove unfaithful
That you thought was real and true,
Can you win him back by fretting
At your comrades, quite forgetting
They have not played false to you?

Will it ever lighten trouble,
Ever help you in disgrace,
Will it make you strong and able,
If you, like the man in fable,
Spoil your nose to spite your face?

Sighing fills no purse with dollars;
Weeping neither makes nor mends;
If to-day we court Dame Sorrow,
She will clasp us fast to-morrow,
While we search in vain for friends.

So we'll keep our faces cheery;
We will crush our sorrows dumb;
And with strong hearts for life's burdens,
We will win sweet Heaven's guerdons,
Taking each howe'er they come.

—Good Housekeeping.

Fidelity, that neither bribe nor threat
Can move or warp, and gratitude for small
And trivial favors, lasting as the life
And glist'ning even in the dying eye.

—Cowper.

The pleasing poison
The visage quite transforms of him that
drinks,
And the inglorious likeness of a beast
Fixes instead unsmiling reason's mintage
Character'd in the face.

—Milton.

A Great Hat Factory in Charge of a Topeka Boy.

Impelled by a desire to see an old friend, when in Philadelphia a few days since, I stepped into the Stetson hat factory, in charge of "Harry" Ruloff, a former Topekan and son-in-law of the gentleman whose name this factory bears, whom I desired to meet.

Mr. Ruloff, who has had charge of this factory for the past fourteen years and seen it grow under his management from a small concern, employing but thirty-two people, to its present mammoth proportions, occupying entire a very large five or six story brick building and working 1,500 employes, has many warm personal friends amongst the residents of Topeka of fifteen or sixteen years ago, when he was connected with the operating of the then small but now great Santa Fe railroad. After an uncommonly pleasant visit with the object of my call, answering his many inquiries regarding our city's growth, remembered acquaintances and friends and a lunch with him in the elegant dining hall in an upper part of this factory building, for the exclusive use and accommodation of the employes, I was taken in charge by an intelligent and gentlemanly traveling salesman, he being the most available person that could be spared from imperative duties, and shown through this, to me, and I doubt not would be to others who had not seen the like, interesting institution.

Commencing in the ware room, where thousands upon thousands of the skins, of a small animal, much like the muskrat of this country are stored, mostly in the original packages as imported, and from which the fur is procured to make felt hats (no silk hats are made in this factory), we went from room to room, up stairs and elevators and down stairs and elevators in regular order as the material for and the hat takes, until we found the fur grown upon these little animals transformed into beautiful and elegant finished hats.

The skins spoken of are first unpacked, assorted as to quality, thoroughly washed and tacked upon wooden racks or frames and dried; when thoroughly dry, they are removed from the frames, shaken, whipped and beaten to straighten the fur, the long hairs plucked with sharp knives, by hand, leaving nothing on the skin but soft fine fur. After this process the skins are, one by one, passed through a machine which cuts the fur all from the skin, the fur coming out on a movable apron without disturbing the shape. At the same time the skin is cut into small strips, such as one would make in cutting the narrowest pieces possible from paper with sharp shears. This skin part comes out of the machine in a pile on the

floor and does not enter into the manufactured hats unless it be when it returns from the glue or gelatine works, to which it is sold, to act as a stiffening. The fur is taken from this movable apron on pieces of heavy pasteboard, and separated by girls, experts in the business, into three qualities—the outer edges, that part grown under the animal, being the finest and most valuable; another strip from each side forms another quality, leaving that on the back for still another.

This fur is then put through numerous mixing and picking mills until all impurities and foreign substances are removed, leaving nothing but the purest of fur.

This fur is then accurately weighed and placed into something resembling a case, of a little more than ordinary pigeon-holes turned on its back, each apartment or pigeon-hole containing the exact amount necessary to make the desired sized single hat.

It may be properly said that from here the material for, and each hat passes through the various processes necessary to its completion, singly and alone. The next process is the running of this fur, the amount necessary for one hat at a time, through another picking or cutting machine, sending it with great force in very fine particles resembling dried thistle blossoms into a small chamber or apartment, provided with a single hollow metal cone finely perforated, about thirty inches high and twelve or fifteen inches in diameter at the base; wet with some substance, and made to revolve on a pedestal, and upon this cone the fine fur is collected, forming a felt, which is the beginning of the manufacture of a hat. These cones are changed as often as the fur for a single hat passes through the machine. This felt is removed from the cone while still wet, carefully inspected to see if perfect, folded and taken to the fulling room, provided with a large number of vats containing hot water surrounded with smooth, broad shelves sloping towards the vat into which this first start of the hat is dipped and kneaded or rubbed on these smooth shelves by the hands of hundreds of men, this pulling process being carried on continually, diminishing the size and increasing the thickness of the felt until brought down to the required dimensions. One might suppose that this room would be filled with steam and unhealthy, but it is not, that being carried off in pipes by a system of ventilation, which is excellent, throughout the entire building, until there is much less steam in this room than in the average laundry in private houses on wash days. After being pulled by hand, these pieces of felt are put into machines and brought down to the exact required size, to the sixteenth of an inch, then these reduced cones are shaved by hand, to remove all protruding hairs. The cone-shaped felt is then placed on a former composed of blunt prongs, in diameter about the size of an ordinary hat, kept wet, over which another pronged apparatus, also kept wet, is forced up and down until the cone shape loses its identity and the shaping of the hat is commenced. After more particular forming over wooden blocks properly shaped, the hat is dyed, re-formed, rubbed, scraped and sandpapered by hand, and by means of machinery the edges trimmed, but it might be said next to nothing is cut off, as the hat is started for a certain size and width of brim and worked and pulled down to meet the requirement, bound, shaped, lined, etc., and lastly, before being packed in boxes for shipment, manufactured in this factory as most of the machinery used also is, the hat is placed in a wooden form and put under a bag of hot sand for a universal pressing and final finish.

Leaving the factory proper we entered the chapel, a pleasant, well-lighted and ventilated room provided with nice folding chair settees for the accommodation and seating of, I would say, 500 or 600 people. Adjoining this is the prayer meeting room, beautifully furnished and carpeted, where services are held every day at noon, participated in, as I was told, almost every day by Mr. Stetson, the founder of this factory, as well as by many of his employes, both male and female. In the next story below is a large library room, fully and completely furnished, well lighted and ventilated, where may be found all the daily and other leading journals of the country and many well-filled cases of books. Off of this is the hospital, presided over by the most eminent

physicians and surgeons of the city, who have offered their services in sufficient numbers so that they rotate. The chapel, prayer room, library and hospital, all in this factory building, are at all times open and free to the employes and their friends in the neighborhood, for regular service, use and treatment, and for such entertainments as they choose to have.

The people connected with this manufacturing institution, in each and all of its varied departments, carry on their faces an expression of fair treatment, contentment and happiness that does not in the least corroborate that statement lately made by an exalted official of this country and heralded broadcast over the civilized globe, which statement, had it emanated from a source where such was looked for, would be said to savor strongly of communism, wherein all manufacturers of this country, as a class, are charged of being guilty of "selfish greed and grasping avarice."—Orrin T. Welch, in *Capital-Commonwealth*.

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A report of the proceedings of the Farmers' Institute at Sterling is on file, and will be published next week.

The *KANSAS FARMER* wishes all its readers a happy New Year, with peace, plenty and prosperity to the end.

We have a good deal of correspondence on file which has not yet been examined. Christmas, you know.

The best agents of a journal like this are its readers. They know what its merits are and can speak of them with knowledge and conscience.

We are daily in receipt of subscriptions, many new friends sending in clubs. This is encouraging and we appreciate it. The cases are too numerous to individualize, but we are thankful all the same. The *KANSAS FARMER* is growing. Its managers want to make it equal to the best. The editor is commissioned to make it the best, and he is trying hard to do it.

Let us all make a few good resolutions and keep them: Plow deep, manure heavily, plant good seed, sow in season, reap when the grain is ripe, waste nothing, work faithfully, work cheerfully, get out of debt and stay out, study methods and select the best, experiment within your means, rest occasionally, eat good food and plenty of it, take plenty of sleep, rise early, go to bed in season, and thank the good Father every day.

OUR "d-52" SUBSCRIBERS.

No doubt many of our subscribers have noticed "d-52" on the printed label of their paper. It means that the time of your subscription expires with the year 1888. **RENEW NOW FOR 1889.** You can send in a club of only six subscribers for one year and get your paper free. We want every subscriber to renew and send in as many more subscribers as possible. We want to make a better paper every year, and we will do it if every reader will help us just a little. Let us get ready now for a prosperous year in 1889.

THE FARMERS' RIGHT ARM.

Among the thousands of persons who read the *KANSAS FARMER*, only a small number, comparatively, have ever thought about its value to agricultural interests in directions other than the routine work of the farm. To discuss farm methods, plowing, harrowing, planting, sowing, reaping, marketing, etc., is important, very much so, but there is a good deal more than this about the business of farming. Men complain of useless wasteful, destructive legislation; farmers complain of injurious combinations against them; they feel the effects of brains and money in trade channels; they recognize the need of some great force among themselves to help them resist unjust encroachments upon their rights—a teacher to show the way, a leader to go ahead, a captain to command the march of farmers against all forms of attack. They need a voice in the Legislature, they need a spokesman in Congress, they need a friend in court. Such a teacher, such a leader, such a captain, voice spokesman and friend, the *KANSAS FARMER* has been and now is to and for the farmers and hard workers generally in Kansas. Can you mention one needed reform which this paper does not advocate? Is there any one thing which farmers need that it is not working for successfully. It quietly defeated a proposed constitutional amendment which would have needlessly increased taxation; it opened the way for a reduction of interest, and for a redemption law, it is now advocating the establishment of a department of agriculture and will soon open fire on the general subject of State taxation. In truth, a paper like this is the farmers' right arm; it can strike where he cannot, it can speak where he wants to be heard, it can represent him every place where his interests are at stake.

These statements are made modestly, not boastfully; and they are made not for pastime but to impress a great truth upon the readers' mind to the end that our friends may encourage us and strengthen our hands by assisting to increase our circulation and thus enlarge the paper's influence. The point we make is this: The paper is the farmer's voice, it speaks for him, it represents him, it makes his complaints known, it tells of his needs and points out remedies and advocates them; by increasing the number of its patrons he increases his own strength and influence among his fellows; in short, a good farm journal is the farmer's best and most powerful friend.

With this introduction, and thanking friends who, in all parts of the State, are taking great interest in the *KANSAS FARMER*, we urge upon every one of our readers the importance of great exertion in this behalf, and we appeal to them to work with us in the line of our ambition, which is to establish a powerful journal in the interest of men who till the soil and who eat bread in the sweat of their faces. If every old subscriber sends in the name of one other, that doubles our circulation,

widens the field of our influence, and adds 50 per cent. to the paper's force. Such work pays as it goes; by helping us you help yourselves. The Legislature will soon be in session; a new Congress convenes in March; the *KANSAS FARMER* wants to know that it has an army of toilers behind it; then it will have courage to go ahead.

COMMISSIONER OF AGRICULTURE FOR KANSAS.

Is not Kansas old enough, and are not her agricultural interests great enough to require the services of a commissioner of agriculture whose duties it shall be to look after the agricultural interests of the State generally, and to see that educating agencies are set at work to assist the farmers in every available way? The State Board of Agriculture has done much good for the State, but its work has been in the direction of advertising the State and bringing immigrants in rather than helping farmers already here by diffusing needful information among them. Reports which have been sent out by the Secretary were splendid advertisements of a magnificent agricultural region; they were in demand at every emigration agency in this country and in Europe. No other State sent out books like these; they described every county and every township and every town in the State. Costly maps showed where school houses, postoffices and mills were located. A vast amount of descriptive and statistical information was contained in every edition of the reports. And this character of matter made up the body of the books. Kansas agriculture occupied but a few pages comparatively, and that in the form of essays by men mostly resident in the eastern counties. The reports were intended for advertising the resources of Kansas, and they served the purpose admirably.

But we need more than that now, something different, and in one respect something better. Farmers of Kansas are now scattered all over the State; every one of the 106 counties, except only six, are provided with railroads, and if there is one Congressional township in the State without a settler the writer hereof does not know where it is. Our population is about 1,600,000, which is an average of twenty persons to the square mile. The State is large enough to maintain a population ten times greater than we now have, but there is no need to hurry immigration now like we did when we were beginning life as a State. Our farmers need attention now more than the farmers of other States, and what they need can be best afforded by the State acting through the Legislature. Farmers' Institutes, which are meetings of farmers, assisted by one or more persons of special training, where matters of special interest to farmers in that particular locality are discussed by competent persons and the proceedings published in the local papers. There ought to be at least one of these in every county every year, and a dozen would be just twelve times better. For Kansas that would require 106 Institutes in a year, and only four months can be profitably devoted to that kind of work. Sunday is excepted, of course, and Monday is not a good day; hence only five days in a week may be used in one week; and as two days is little enough time to devote to one Institute, it would be necessary to hold six every week in order to have one in each county and get through between the middle of November and the middle of March. The State Board of Agriculture was not established for work of this character, and as at present

constituted it is not well adapted to it.

In view of these facts it is time to consider whether some legislative action is not necessary and whether the best thing to do is not to create the office of commissioner of agriculture and place the farming interests of Kansas in his charge. If the State Board is to remain in anything like its present condition its powers and jurisdiction ought to be greatly enlarged in some respects and curtailed in others. Kansas agricultural reports in future ought to be devoted chiefly to Kansas agriculture as developed and practiced by Kansas farmers; the Commissioner of Agriculture could profitably devote all his time to the practical education of our own agricultural population, and his reports would be an abstract of what had been done among the farmers every year.

SIX PER CENT. ENOUGH.

One of the great political parties of the State, in its platform last summer, declared in favor of reducing the legal rate of interest on money from 7 per cent. to 6 per cent. and the contract rate from 12 per cent. to 10. The State Grange at its recent meeting adopted a resolution of like import. There is a general disposition among the people of all parties to reduce the rate of interest. And it comes from a general recognition of the need of a change in the law. But is the proposed reduction enough? And is there any need of a double rate, one the legal rate when no particular rate is agreed upon by the parties, the other a legal rate if contracted for and not above a certain per cent? Why have two rates if it is not intended to place the borrower largely at the mercy of the lender? If we are to have two rates why not fix them to correspond with actual transactions and with what the people need? Would not six per cent. be high enough without any contract attachment? If all contracts for the use of money should bear interest at the annual rate of 6 per cent., would not that be as much as ordinary business profits afford? And if that were not enough, would not the effect be to encourage investments of capital in various enterprises that would tend to develop the country and in that way help farmers more than by lending them money at rates of interest which they cannot pay? And if we must have two rates, is not 10 per cent. too high? The best companies are now lending on good security at 6 per cent. with a commission which on long time loans, does not exceed 1 per cent. annually for the time, so that the total rate, including interest and commission, is only 7 per cent. The borrower must expect to furnish abstracts and all necessary evidences of title, and for recording papers on his side of the case; these expenses are necessary on his part and they ought not to be charged to interest account. If two rates are to be maintained, are not 5 and 8 high enough? And if that rule were adopted, if 5 per cent is too low, would not the tendency be toward 8—the maximum rather than toward 5, the legal minimum?

There does not appear any need of two rates if the regular rate is high enough. Loans have not been made in Kansas at a rate as low as 5 per cent., and there is not much money being put out here now above the legal rate—7 per cent., with commission added. Rates are ranging from 6 to 7 per cent. If large amounts are lent at 6 per cent., why is that not enough on all loans? What good reason, then, can be assigned why the double rate should not be abolished and a single rate of 6 per cent. adopted, allowing commissions and other proper charges of lenders not to exceed 1 per cent. on long time loans and 2 per cent. on short time loans, drawing the line between long and short time at two years?

THE MORTGAGORS' EXODUS.

One Frank Wilkeson, owner of about a thousand acres of land in Saline county, Kansas, on which he borrowed money at least twice since he began to write false and defamatory matter about the most prosperous State of its age in the Union, appeared recently in the New York Times with still another letter which is no nearer the truth than any of its predecessors of like tenor. We had occasion, twice before, to refer to the writings of this man in relation to affairs in Kansas, because he writes not only untruthfully but wildly, starting on unsound premises and building equally unsound superstructures; his letters, like shoddy cloth, has just enough good material in them to deceive those persons who do not know better. Mr. Wilkeson's letter to the Times pretends to deal with the condition of farmers in Central and Western Kansas, more especially those west of the 100th meridian of longitude. He says all that vast region is being rapidly depopulated because the people are too poor to stay longer. The whole country, he says is plastered over with mortgages which the people are unable to pay. In one part of his letter he says the trouble comes from hot winds killing the corn, and people are leaving on that account; in another part he says the money lenders have robbed the people beyond recuperation, and that is the reason of their exodus. In one place he puts the number of farmers, within a small area, who have already gone because of their inability to pay what they owe, at 5,000, and he says the exodus is only just begun, and a little further on he says the farmers are going to stay on their mortgaged lands and fight it out to the bitter end with the money lenders. A man who writes so loosely is like a witness in court who testifies carelessly about material facts, his testimony is not reliable; it would not require much urging to set such a witness to lying outright.

That the reader may judge of Mr. Wilkeson's style, we copy the first paragraph of his letter:

On all Kansas highways which lead from the arid zone (the land west of the one hundredth meridian) are white-capped wagons—here two, there three, yonder a short column, that roll slowly away from the region which was scorched by the Mexican sirocco's fiery breath last summer. The discouraged people who ride in these wagons know that the American desert still exists. They gather around the campfires which nightly burn on all the roads that lead eastward and curse the day on which they were induced to enter the arid zone. Six, eight, ten years ago these people traveled westward. Then there was joy and song and festivity around the campfires. Now they sit in silent despondency. They have worked hard. They have lived hard. They have lost their property and they have lost a large portion of their lives. It is well known that last summer a drought of long duration sharply reduced the grain in central and western Kansas, as previous droughts did in 1887 and 1888. During these years hot, withering winds have blown from the southwest just at the critical period of the corn plant's growth. The thirsty wind sucked the water out of the creeks and ravines. Wells had to be deepened. The prairie grass was sufficiently dry to burn in late July. The corn plants which promised to yield a hundredfold wilted, dried, and then died with a portion of a worm-eaten crop hanging on the dead stalks.

There is no objection to anyone's writing the exact truth, and that, as to this matter is bad enough; for it is true that in Kansas, and in at least a dozen other States, the last two years were not profitable ones for farmers generally, and early settlers always suffer most from crop failures because they have no stores laid by; but when a writer refers to the western one-fourth of Kansas as the "arid zone" from which people are flying as if from flowing lava, and attempts to make the world believe that nothing which farmers need can be grown there, it can be said in truth that many thousand people are now there intending to remain, and every one of them is a living refutation of Wilkeson's exodus story. There are some people leaving Kansas this year as there were every other year since the State first appeared on the map; and the number who will have left in 1888 will be no larger than the records of several other years will show. This exodus business is old; every year it

comes to us as if it were new; regularly as the autumn comes Kansas is depopulated. But the State has gone ahead without a parallel in the history of settlement. Not yet thirty years old, we have nearly three quarters of a million people, 8,000 school houses, 8,000 miles of railroad, and farm property actually worth a thousand million dollars.

After writing of the climate of Kansas in the most discouraging language, and charging up the exodus to the climate account, Mr. Wilkeson says:

The migratory movement is not confined to the dupes of the "change-of-climate" theory. But scores, yes, hundreds, of farmers who tilled upland which is in the famous "Golden Belt" of Kansas have abandoned their upland farms, not because of drought, but because they realize that they cannot pay their mortgages.

Having charged the climate with all the farmers' misfortunes, he says many are leaving, not because of drought, not because the climate is not good enough, but because they are in debt and cannot pay out. When both these facts are shown, then Mr. Wilkeson says:

Nine-tenths of the mortgageors are on their farms. They are sullen. They are angry. They have resolved to hold the land if it is possible. They feel that they have been gouged in some mysterious way, (none of them believe that their trouble sprang from the tariff.) These angry men are preparing to make trouble for the holders of Kansas farm mortgages. They realize their desperate financial condition and they have cast about for means of relief. They have decided to attack the farm mortgages; in fact, so decided last summer.

If nine-tenths of the mortgageors are on their farms, and if they are going to stay there, who compose the vast army of outgoing farmers of which Mr. W. speaks? What part of his letter is to be taken as true? But he cites one case of particular hardship—that of Mr. Allen, who lived near Trescott, Ottawa county. We quote:

Mr. Allen owned 240 acres of land that was worth \$20 per acre, or \$4,800. The farm was well improved. On it were valuable buildings. Mr. Allen's eldest son desired to open a store in an adjoining county. The father and son talked the matter over and decided that the business venture was almost sure to result profitably. The farm books showed that the farm could easily carry a mortgage of \$1,500, the sum required to start young Allen in business. So a mortgage that had a face value of \$1,500 was laid on the land. The boy opened the store and did a credit business largely, as is necessary in Western agricultural communities. A Mexican sirocco swept northward and crops were blasted. Young Allen's customers could not pay and his business went to pot. The sirocco blasted the crops on his father's farm. In 1887 Mr. Allen again lost his crops because of drought and hot winds, and he found that the mortgage he had so lightly and cheerfully assumed to help a loved son was actually a financial devilfish. He lay awake at night to devise means to feed the devilfish. He worked hard. His children worked by his side. It was no use. He was forced to raise money with which to pay interest on the farm mortgage by laying chattel mortgages on his stock. These mortgages called for the payment of 3 per cent. per month interest. Here went a horse to satisfy one chattel mortgage, there went a cow to satisfy another, and yonder a small herd of swine disappeared to satisfy a third. The end was near.

That, doubtless, is a very hard case in Mr. Wilkeson's estimation, or he would not cite it among 5,000; it probably represents a large number of other equally hard cases. Let us suppose that Mr. Allen had been wise enough to stay on a good farm and let merchandizing alone; he would now have one farm more than he has, and one judgment against him less. Why should he or his friends abuse men of whom he asked money and then sold goods on credit? Had he kept out of the store, or going into it, had he sold for cash, he would have saved himself. Whenever a man mortgages a farm for money and then voluntarily squanders the money, he need not blame anybody but himself for the inevitable outcome.

We understand well enough that a great many farms in Kansas and in all the western, southern and south-western States are encumbered, some of them heavily, and no man sympathizes more deeply with the unfortunate persons who lose their farms under foreclosures, than he who writes these lines; but we protest against this wholesale system of defaming the State. The style of this man's writing in the letters referred shows plainly that he is not writing for himself but for others who would keep money out of Kansas so that it might be used in manipulating stocks in eastern markets. This day the president of one of the oldest and most reliable companies in Kansas told the writer hereof that within the range of his knowledge foreclosures of farm mortgages are not more numerous at this time than usual; and he said that during an extended journey over a large portion of the State recently, he saw much of the people and what they are

doing, more especially in the western counties, and he saw no unusual emigration.

Mr. Wilkeson does not reside in Kansas; he lives in New York city, and writes for the magazines and papers; he is interested in what he says less than in its pecuniary value in print. Now we will hear from a few persons who live on their farms in the region specially maligned by the kid-gloved farmer. The 100th meridian, beginning at the north line of the State, runs south through the following named counties: Norton, Graham, Trego, Ness, Hodgeman, Ford and Clark. The counties west of that meridian are Decatur, Sheridan, Gove, Lane, Garfield, Gray, Meade, Seward, Haskell, Finney, Scott, Logan, Thomas, Rawlins, Cheyenne, Sherman, Wallace, Greeley, Wichita, Kearney, Grant, Stevens, Morton, Stanton, Hamilton. The KANSAS FARMER publishes reports from every county in the State, seven times a year. The reports are made up by persons specially appointed—persons living and working in the counties named, most of them farmers. Here are a few extracts from our last September reports covering counties within what Mr. Wilkeson calls the "arid zone."

Cheyenne.—Two-thirds of this county had a good crop of wheat, oats, rye, corn, potatoes, sorghum, melons, and all kinds of vegetables. We have had frequent rains in all portions of the county except the southeast, along what is called the dry, or middle Beaver creek. Cattle and horses in fine condition.

Clark.—Corn crop is short; last of July and first of August too dry. There will be enough corn for home consumption, but very little surplus. Rye was good.

Decatur.—Too dry for corn. Spring wheat was fair, fifteen to twenty bushels per acre. Oats medium.

Finney.—Corn will make a fair crop; the best under irrigation, it will be heavy, outside light. Same true of oats. Having abundant August rains.

Ford.—Corn in south half of this county better than ever known; north half about half crop, but better than in 1887. Oats and wheat above average crop. Rye a full crop. Millet and sorghum best ever raised in the county.

Garfield.—Corn is short and varies very much in different parts. Much of it will not make more than fodder. Grass has been good and stock is in good condition.

Gove.—Corn crop is as varied as possible; some fields are good, some not good; some no corn at all. Oats were good. Rye good.

Graham.—Corn in some parts of county good, in other parts near total failure. Oats spotted, some good, some bad. Wheat poor except in the northwest part of the county. Sorghum on new breaking good.

Grant.—There will be but little corn in the county owing to dry hot weather of June and July. Rice corn did fine; neither heat nor dry weather seemed to hurt it. Kaffir corn will not come up to what was promised for it. There will be plenty of corn fodder to winter the stock as a large acreage of corn was planted.

Greeley.—Corn far ahead of last year in quantity and quality. Wheat and oats fair for a new country, say half to two-thirds of a crop for best. Some fields were injured with hail. Farmers are sowing fall wheat and rye and will sow as much as possible. Tame grass good. Stock prime and will be in good shape for winter, with abundance of feed for a hard winter if necessary. There are spots in fields where crops were injured with drought but not to an alarming extent. Greeley county has a good acreage of fine quality of broom corn with good weather to care it in. Judging from this and last year's crop, "This is the home of the broom corn," and it will be a staple crop in western Kansas.

Here are a few of the November reports:

Haskell.—Corn fair in north half of the county; south half no good. What wheat was sowed is good. Oats fair. A large acreage of wheat will be put in this year, as it is undoubtedly the crop for the southwest. Grass rather short. Stock in splendid condition.

Rawlins.—Early corn in bad condition, excepting a small strip in the northwest. Corn that was planted late is good, and if we do not have have an early frost, will yield heavy, as we had rain in the last few days that came in good time. Oats are turning out from fifteen to forty bushels per acre; wheat from ten to thirty bushels per acre.

Sheridan.—Corn will not average over one fourth of a crop throughout the county. Wheat exceeds twenty bushels per acre. I will say in regard to the corn crop, that wherever it was not too thick on the ground the yield will be satisfactory. Let the farmers of western Kansas make a note of this.

Wallace.—The corn crop has been a success in every respect with prospect of a yield from twenty to forty bushels per acre. Sorghum has made a heavy crop. Rye and wheat good.

Wichita.—Plenty of rain during August. In north half of county will have at least one-half crop; south has suffered more from drought. Cane, broom corn, rice corn and pastures now growing finely; corn crop particularly heavy. All stock in excellent condition.

Decatur.—In some parts of the county corn is good, in others almost is failure. More than an average amount of fall wheat sown. Stock doing well. Hay crop short; fodder plenty and in good condition.

Greeley.—Corn all sound, from ten to forty bushels per acre.

Lane.—Corn in the south part of the county an entire failure, but the north part of the county had a fair crop, averaging about twenty-five bushels. Sorghum a fair principal crop.

Morton.—Tag corn crop was a failure except in the southern part of the county, where it yielded thirty to thirty-five bushels to the acre. There were some fields, however, that made a fair yield in the west part of the county. There is plenty of millet, however, and it is good.

Scott.—Corn crop generally light, some pieces averaging from ten to fifteen per acre.

Stevens.—A few good fields of corn raised, averaging from twenty to thirty bushels per acre. The farmers generally have cut up their corn, and have an abundance of fodder. The potatoe crop in some instances is yielding remarkably well; small acreage planted. Stock are in good condition throughout the county.

That is a very good showing for the

"arid zone." The truth is, western Kansas is as good a farming region as eastern Kansas; what is needed most is the raising of crops adapted to the soil and climate, such as sorghum, rice corn, milo maize, broomcorn, millet, sweet potatoes, peanuts, etc. We have no objection to the truth being told, but we do not want unscrupulous newspaper correspondents to frighten responsible capitalists into withdrawing their patronage from any part of the State. Kansas people have used a good deal of money; they will need a good deal more, and the KANSAS FARMER wants to do what it can to aid in making money plenty and cheap. We have faith in Kansas, in every part of it. The State is growing and will continue to grow. Those persons who are specially interested in knowing about how many people have left the State, can learn something interesting by writing to the County Clerks of different counties, asking for the number of votes cast at recent elections. That will show the extent of the mortgageors' exodus.

P. S.—Here is a letter fresh from Graham county—just received:

EDITOR KANSAS FARMER.—The West is not as bad as some think. In this county a good many farmers have grown a thousand bushels of corn and some more than that amount of small grain. Oats and corn in the north-half of the county did very well, some fields of oats yielding as high as sixty bushels per acre, and there is an abundance of hay and fodder. Corn is worth 25 cents, oats 30 cents, wild hay \$5, potatoes 60 cents. In our neighborhood we have a nice new school house, a store and postoffice. A new road was built through the county this summer and our county seat, Hill City, on the line of the new road, is growing fast. I have a boy, 17 years of age, who farmed over 100 acres this summer, had corn, oats, rye and potatoes, and out fifty tons of hay. I have 1,200 acres of land, and I am no land shark. I came honestly by it, but I do think that amount is too much for one farmer to utilize. W. T. DUDLEY.

Roscoe, Graham Co., Kas.

LEGISLATIVE RELIEF FOR DEBTORS.

Two successive years of crop failures in all the western and south-western States set debtors generally two years nearer pay-day without preparation for payment. In many places failures were so nearly total that it was found impossible to pay even interest due without borrowing more money. It was not that bad in all cases, but it was bad enough. It was a good deal better this year, though little relief has been afforded yet, and it will require several good years to get even if creditors will wait for their money. Will they wait? And if not, what then? Can the legislature afford relief? if so, what will it be—what ought it to be?

Indebtedness is a fact proved by written and recorded evidence; there is no disputing that, and there is no way of avoiding payment as far as at least as mortgaged property is concerned. The legislature cannot impair the obligation of contracts, that is a constitutional provision, and a very wise one. But cannot the legislature afford some relief without affecting the contract of indebtedness? Might not the time of payment be extended by legislative act? That would be in effect a redemption law, allowing the debtor a certain period after judgment in which to redeem mortgaged property or property which is subjected to a judgment lien. This would not be unjust to creditors in view of existing conditions. Property will not decrease in value, so that the security would not be lessened or jeopardized by an extension of time, and it would afford opportunities for relief on one side while saving rights on the other.

Creditors do not want the property which is mortgaged to them. In 90 per cent. of the cases creditors would much prefer extending the time of payment if the security remains good, rather than to foreclose and take the property in order to save themselves.

This is a matter of great importance to people of at least one-half the States of the Union. It is not only to Kansas that it is applicable. But legislative relief must come from State Legislatures. We submit that the subject ought to be taken up early by our Legislature, to the end that some sort of relief may be afforded. A great many persons can save themselves and their property if they are not crowded beyond their present ability to pay. Let us have some relief.

Horticulture.

MISSOURI HORTICULTURAL SOCIETY.

The thirty-first meeting of the Missouri State Horticultural Society was held at Nevada, the 5th, 6th and 7th days of this month. The attendance was large and over a thousand plates of fruit were on exhibition. Numerous displays of vegetables, also, were made.

Among the many excellent things said may be mentioned the following:

J. Ames, of Carthage, read an excellent paper on "Adaptation in Orchard-growing." He considered first the relation of an orchard to the home. God planted a fruit garden for man when He first breathed the breath of life into his body. The speaker next took up the question of adaptation to the market. But little fruit is grown north as far as Iowa. Shall we plant only to supply our own latitude or plant to supply our neighbors five or six hundred miles north of us? Our market for apples has heretofore been in the South. Can we not sell in the North also? He thought more summer and fall apples should be planted to supply the North and northwest, that demand something besides the Ben Davis.

A. Nelson, Lebanon, then read a paper on "Orcharding on the Ozarks." He had cleared two farms in York State, and was free to say he had made no mistake in coming to southwest Missouri. For general fruit-growing the Ozarks and southwest Missouri in his opinion, stood at the head as a fruit-growing section. An elevated soil and east slopes, he thought best adapted to successful fruit culture. The only way to handle apples is to hand-pick them and hand-pack them in barrels right under the trees which bear them. If this is done our fruit will reach the market in prime order and command the highest price, for our fruit is as fine as grows in the land.

Jacob Faith, Montevallo, by invitation read a paper on "Will Apple Culture Pay?" He began a very interesting and exhaustive paper by asking the question and answering it affirmatively, going on to show by facts and figures, that, considering the cost and labor expended, no investment made better returns.

Dr. Ensign, Nevada, followed by invitation, with a paper on "Tree planting and the future care of trees." This essay was eminently practical and contained many useful and valuable suggestions.

J. B. Durand, Butler, read a statistical paper on orchard-growing, which gave many valuable facts.

The discussion of the papers read was opened by W. R. Laughlin, Elm Grove. The subjects of orchard-planting, varieties, cultivation, pruning, thinning, marketing, successes, failures, mistakes, etc., all received attention from the various speakers, and much valuable information was given.

Mr. Holman, Springfield, said that the Ben Davis, Willow Twig and Jonathan are bound to be the best varieties to plant in this section. This has been demonstrated by fifteen years experience.

Mr. Lipscomb spoke of the soils best adapted to the different varieties. The Jonathan apple will not do well on sandstone prairie. Among the best lands is the red timber land. His experience had been that the timber land is best for most varieties.

Mr. Murray, Holt—Twenty years ago everybody was planting early harvest apples, but just now there is a great scarcity of fall and summer apples in the market. Good early and good fall apples are paying well, but the supply is

never equal to the demand in the northwest markets.

Secretary Goodman—In southern Illinois, special varieties are grown for special markets. The point is, we must study our markets and know what to grow.

Mr. Durand—I received word from Chicago, that they could and did sell the Jonathan at \$4 a barrel when other apples were in no demand.

Jacob Faith, Vernon—I shall plant Jonathan for early market.

Mr. Henry, Butler—Undoubtedly, the most important thing for Missouri fruit-growers is the market. I am told that in Minnesota the Jonathan was worth a dollar a barrel more than any ordinary apple during the month of October. They told me at Minneapolis that the supply of Jonathans was always behind the demand.

Mr. Holman thought the Grimes Golden ought to be raised alongside the Jonathan.

Mr. Speers, Butler—The demand for Jonathans is just as good in the far South as in the North. But the Willow Twig has paid better in my section than any other.

Mr. Nelson, Lebanon, thought apples for marketing should be hand-picked and packed in the barrels under the trees.

Capt. Henry, Butler, considered honesty the most important thing in preparing fruit for market. He thought an effort ought to be made to have the State make laws requiring every man who shipped apples to place his name and postoffice address upon every barrel.

Mr. Murray favored clean, new uniform standard packages every time. Undersized barrels worked against the grower. The man who ships well-packed apples is the man who will make the money.

Practical suggestions in small fruit-growing was the topic of a very interesting and instructive, practical paper by Z. T. Russell, Carthage.

Profits of small fruits and how to get them was handled by J. H. Logan, of Nevada.

The paper on "Seedlings," by B. W. Speece, Carthage, was read by Mr. Hall.

Secretary Goodman then read a lengthy but interesting report of the horticultural committee having charge of the Missouri fruit exhibit at the St. Louis exposition. Among other interesting facts given in the report was the statement that although only thirty-eight counties were represented the exhibit was the finest and most complete ever made.

An essay on horticulture, by Master Willie Foreman, followed.

Mrs. Dugan, "May Myrtle," of Sedalia, then read a capital essay on "Horticulture."

J. G. Kinder, of Nevada, followed with an excellent paper on practical grape-growing.

Mr. Gano, of Howell county, in reporting on stone fruits, read a paper on peaches. He went on to show that elevated newly-cleared land is best adapted to peach-growing. Twenty feet is about the right distance for planting. He advocated planting varieties from the earliest to the latest, but thought only a few of the earliest sorts should be planted.

C. T. Kellinkrodt, of St. Charles, sent specimens of a new variety of winter pears to be tested by the society. They were grown upon trees twenty years old which have never been troubled with blight.

Mr. Holman, of Springfield, exhibited a large seedling pear which originated in Taney county on the White river. A good cooker and a long keeper. The specimen weighed one pound and three ounces.

Specimens of seedling apples originat-

ing on the red lands of the Ozarks were also exhibited.

Mr. Goodman thought some of these chance seedlings would eventually prove to be the best apples in the world. He would advise, therefore, that a strict watch be kept of all seedlings found, especially in south Missouri.

The meeting was interesting from beginning to end. The proceedings were enlivened by musical and literary treats rendered by persons resident in Nevada. We are indebted to Secretary Goodman for copies of the Nevada Daily Mail, containing notes of the proceedings.

Forest Trees.

Mr. J. S. Andrews, in a communication to the Wichita Eagle, recently said:

"Forest trees are all worthy the consideration of all engaged in agricultural pursuits as well as all others. If on every section and half section line, forest trees were planted all over the State the climate in the course of time would be almost entirely changed. Those heavy, driving, chilly winds of the winter would be entirely broken, and the hot winds of summer overcome; and thereby the value of lands and the wealth of the State increased at least one-third. In portions of the country where lands are too wet to be productive tilling overcomes the difficulty. Where the lands are unproductive for want of rain irrigation is resorted to. Why not, when the winds sweep over a vast extent of country like this in the winter, chilling to death stock and endangering and causing so much suffering among men; and in the summer scorching vegetation and rapidly drying up and sweeping away the moisture in the earth, produced by rains. Why not, I would ask, obstruct and temper these winds; that drive the snow from the unprotected fields, drifting it into the hollows, ravines and canons, and in the summer time robbing the fields of the much-needed moisture just at the time most needed for maturing and perfecting the crop.

"But how can this be remedied? We would answer, by forest trees and hedges planted nigh each other, so as to break the onward rushing current. If forest trees of some height were standing in line around every quarter section where timber is lacking they would absorb a vast amount of heat in the hot part of the season and lessen the need of so frequent rains. But it might be objected that when these trees become large that they would take up too much ground. A physician who had retired was accosted by a patient who said to him: "You have quit practice, have you, doctor?" "Yes." "Well," said the man, "I suppose you concluded you had killed men enough." "Killed men enough?" said the doctor. "I guess I have saved a great many more than I have ever killed." So with the forest trees—they might kill some growing crop, but they would save the life and give vitality to ten times as much as they would destroy or kill. The same might be said of the hedge—the protection it gives is worth five times as much as the ground it occupies.

"Admitting that all that has been presented is true, individual effort can do but little. To make it general, legislative action is necessary. It must be encouraged and fostered by legislation and such inducements held out as to influence every owner of land to go to work at setting out trees upon every section and half section line, so that one man's row of trees will connect with that of another till the whole vast prairie of the State shall have far-reaching lines of trees running north, south, east and west. Is this too great a work to undertake? The aggregate expense would look large, but it would be very

small to each individual owner of 160 acres or more. The aggregate profits and advantages to the State would be millions; to individuals in proportion.

"Why is it that Illinois and Iowa have not the same heavy, bleak winds they had in the first settlement of the country? The hedges, forest trees, fruit trees and improvements will answer why.

"Besides, if forest trees were made general would they not tend to increase the rainfall, increasing the yield of grain and helping the condition of the soil for grass?

"I have given utterance to these thoughts upon this subject with the hope that it might awaken in the public mind thoughts of that which appears to me full of meaning and big with importance, and if carried out far-reaching in good results."

Death of Judge Simmons.

Hon. L. A. Simmons, of Wellington, Sumner county, long an active and useful member of the State Horticultural Society, died suddenly at Hutchinson, Thursday, December 6, of heart disease. He was in attendance upon a meeting of the society, and had gone to the railway station on his way home. While standing at the ticket window purchasing his ticket, he sank down lifeless.

Judge Simmons was long an honored citizen of Kansas. He was born in Warren county, Illinois, about fifty-six years ago. No man in Kansas, probably, took a deeper interest in the horticultural development of this State than he. He was buried at Wellington, the 10th inst., under direction of his comrades of the G. A. R.

The Black Walnut.

Daniel B. Emerson, Beloit, Wisconsin, has given his experience in black walnut culture. He prefers shallow planting, seven feet apart each way, if planted in a field, or sixteen feet apart if planted around fences, as wire fences can be attached to the trunks without injury. Under favorable circumstances, the trees begin to bear in about seven years. One bushel contains from 400 to 600 nuts, or fifteen pounds of kernels, which will yield seven and one-half pounds of oil. He has trees fifteen years old which are thirty feet high and a foot through at the base. They yield ten bushels of nuts each annually, worth \$4. The leaves and husks, when boiled, furnish a liquid which will kill worms and insects on lawns, without injuring the grass.—Lumberman.

A Philadelphian went to a physician with what he feared was a hopeless case of heart disease, but was relieved on finding out that the creaking sound which he had heard at every deep breath was caused by a little pulley on his patent suspenders.



MANLY PURITY AND BEAUTY

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Rheumatism, Kidney Pains and Weakness speedily cured by CUTICURA ANTI-PAIN PLASTER, the only pain-killing plaster.

The Poultry Yard.

ABOUT THE BREEDS.

The November *Poultry-Keeper* has an extended article discussing the breeds of poultry, with their points of excellence. It is too long for one issue of the *FARMER*, but we will reprint it in parts from week to week until it has all been given to our readers. The *Poultry-Keeper* is good authority.

PLYMOUTH ROCKS.

The weight of a Plymouth Rock cock should be nine and a half pounds, and the cockerel eight pounds. The color of the body should be grayish white, with blue bars across each feather, which should be even on all parts of the plumage. The body should be broad on the back, with deep, prominent breast, and the general appearance compact, abundant hackle on the neck, moderately full fluff, bright red wattles with bright red medium-sized ear-lobes. The beak and legs should be yellow, and the eyes bay. The tail should not be flowing like the Dominick, but composed of short feathers nicely curved over. The shanks should be clear of feathers, while the thighs should be well covered with fluff. The weight of the hen is eight pounds and the pullet six and a half pounds. Both the cock and hen should have medium-sized, single combs, which should be straight with regular serrations. The hen resembles the cock in color, or rather, should do so in the show room, but for breeding purposes the cock should be lighter than the hen. The legs of the hen should be yellow, but we will say here that there are few pullets that do not have a dark stripe down the front of the leg, and instead of the legs of either sex being yellow the large number of them are a yellowish flesh color. A pair of Plymouth Rocks with yellow legs is a rarity, and not often seen. Feathered legs are not tolerated on Plymouth Rocks, and as the ear-lobes must be red they should not have any white on them. A falling or crooked comb is an abomination, and so is a side sprig. The plumage should be even, free from splashes of black and white, and the hens should be laced on the wings. Brass on the hackle and saddle of the cock is not allowed, but it usually crops out the second year, and the same may be said of white feathers in the tail. When the chicks are first hatched they are black with white on the under parts, the head being ornamented with a white spot. As market fowls the Plymouth Rocks are unequaled, and if not kept too fat are splendid layers. In order to give the views of the best and most experienced breeders on the subject we condense from an article in the *Fancier's Gazette*: What the color of a Plymouth Rock chick should be, when first hatched, is a question upon which all breeders do not agree. Many desire to see the chick appear with a white spot on the head and a white stripe running down the neck and breast and extending underneath the whole body, and to have the color of the back a mixture of white and black. Nearly every breeder seems to desire that the color of legs and back in the young chick should be a clear, bright yellow; but it is seldom that female chicks of this variety do not show more or less black on beak and legs. The writer never wishes to see the newly-hatched chick show a bright yellow leg or beak, for such chicks usually show a pale yellow or flesh-colored leg when matured, and lack "positiveness" in color of plumage. To fill the requirements of the writer's eye, the

plumage of the young chick should be decidedly black, showing only a small white spot on the head and a light stripe underneath the neck and breast. The color of the beak should be a faded black, showing dark yellow underneath, and the legs should be a brownish yellow or faded black, with dark yellow plainly distinguishable underneath. Positive black is objectionable. Experience has taught that chicks which show much white in color of back and body, when first hatched, in nine cases out of ten will develop into light-colored, white-tailed and winged cockerels that are worthless, except for the table. It is seldom that we let a very light-colored chick, when such a one appears, live to be twenty-four hours old. Female chicks seldom show any white in color of back; so seldom, in fact, that if a chick shows such color it is a male chick to almost a certainty. Occasionally, a chick shows a little white on the tip of wings, which is almost sure proof that it is a female. The feathers on the chicks usually appear on the fourth or fifth day, showing first on the wings, and to the experienced eye the color of these feathers is an indication of what color the adult plumage will be. If the chick is a male, the bars of white and black will appear when the feathers are out a half or three-fourths of an inch, while in female chicks the color of the wing feathers, for the first inch or two, will be a decided black, and the light bars begin to show faintly at first, but showing more plainly as each successive bar appears. From this time on, the change in plumage is rapid, first on wings, then on back, breast, neck and tail, until the chicken plumage is complete. At once commences another change, and gradually the plumage of the chick gives way to the adult plumage, which is of so much importance to the breeder, for upon the color of this plumage the value of the chick, in a great measure, depends. It is to be desired that the tails of neither cockerels nor pullets should develop early. The adult tail feathers of a cockerel should not appear until he is at least four months old. Ordinarily, if a cockerel's adult tail shows early it will mature so long as to spoil the specimen, and in most cases will show white in sickles. The same is also true as regards the pullets. If the adult tail appears early, the chances are that the specimen will be of little value when matured. The tail will be too long, and in nearly every case will be carried nearly upright, and will more resemble the tail of a Hamburg than of a Plymouth Rock. It can be set down as a rule that an early tail in a Plymouth Rock pullet means a long-legged, light-bodied and narrow-breasted bird of little value, no matter how perfect in color its plumage. It will lack in size, will be sadly deficient in symmetry, and will be an eye-sore to one who has a correct idea of what a perfect Plymouth Rock should be. For most purposes no doubt the Plymouth Rock answers well, but to breed them for the show room is a very different thing from breeding them for the farm. The prize-winners at fairs cannot be depended upon for breeding other prize-winners, for, if the requirements of the standard are complied with, such is an impossibility. Every one who has seen Plymouth Rocks, knows that the cocks are much lighter in color than the hens, but for the show room they must match or be disqualified. In order to match them, breeders must breed their pullets light and cockerels dark, thus reversing the rule, but in order to get the pullets light it is often the case that the hens do not possess the broad bars on the plumage so ardently admired by many, for the lighter the plumage the narrower the bars. The cockerels must be bred as dark as possible, which brings out, on the majority of them, that peculiar dusky, dirty appearance of the back, so different from the lighter ones used for breeding. If the Standard requires that the birds must match in the show room, it is evident that the cocks who receive the highest scores are necessarily always dark, or they would be disqualified. It is known to breeders that dark cockerels are not reliable for breeding offspring true to color. The pullets will sometimes come black, and there will be no uniformity. This necessitates the establishment of two separate yards, if premium fowls are



"NEVER SEE THE BEAT ON'T."

"I tell you what, Elder, I never see the beat on't," said Deacon Stubbs, as he leaned over the fence to chat with the parson. "Never see nothin' like it afore. Like that med'cin, I mean, that my son Samuel sent down to mother from the city this spring. The old lady's been feelin' kind o' down't the heel all winter. Said she guessed she was goin' to give out. Couldn't eat nothin' cause it didn't taste good and didn't seem to relish. Couldn't sleep nuther an' she got awful downhearted. Kep' a hackin' a good 'en, an' said she felt just as if suthin had took all the tuck out of her some way. Samuel, he's smart and sharp ef he is my son, and sez he, 'Mother you need suthin to cleanse out your blood an' enrich it. It's weak. An' your liver's out o' kilter, too, I reckon. I'll fix that fer ye. I'll send down a bottle of stuff that'll hev you around again in no time. You'll be as spry an' chipper as ever in less'n a week after you've begun takin' it.' An' I swan, Elder, it did just as he said it would. The old lady's feelin' peart's you please a'ready. What's the name on't? Let me see—O, I've got it, it's the Golden Medical Discovery and its put up by a doctor by the name o' Pierce in Buf'lo. I dunno nothin' about him, but he makes a jofred good med'cine, and don't you forgit it."

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As a regulator of the Liver, Stomach and Bowels, "Golden Medical Discovery" cures all bilious attacks, indigestion and dyspepsia, Chronic Diarrhea and kindred ailments. As an alterative or blood-purifier, it manifests its wonderful curative properties in the cure of the worst Skin and Scalp Diseases, Salt-rheum, Tetter, Eczema and Scrofulous Sores and Swellings, as well as lung-scurfula, commonly known as Pulmonary Consumption, if taken in time and given a fair trial. It is guaranteed to benefit or cure in all diseases for which it is recommended, or money paid for it will be promptly refunded.

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is offered by the manufacturers of DR. SAGE'S CATARRH REMEDY, for a case of Catarrh in the Head which they cannot cure. By its mild, soothing, and healing properties, Dr. Sage's Remedy cures the worst cases, no matter of how long standing. 50c., by druggists.

desired, but the difficulty in the way is that a majority of those who purchase eggs labor under the delusion that premium fowls are breeding fowls, and should they procure eggs with the expectation of securing first-class chicks they may be disappointed and heap showers of imprecations upon the head of him who supplied them with their stock. It is imperative, then, that we succeed in educating those who make poultry an object to a knowledge of these facts, or else radically change the system that permits the premiums to be given to one class of fowls while the best for breeding are disqualified and left out of the shows. For our part we do not wish to place any obstacle in the way of those who breed for the show room exclusively, but we do desire to lift the odium that is often attached to those who sell eggs from premium fowls and disappoint their customers, for they must sell from premium birds or pretend to do so. The Standard, therefore, compels the breeder to deceive. It requires that fowls must match in the show room, in order to be exhibited,

and confines premiums to the fowls that match only, but it offers no inducement to the breeder who really matches his fowls with the object of breeding according to other requirements. The Standard requires that the cocks be free from brass in any part of the plumage, but the utter impossibility of this is made evident from the fact that the yellowish cast over the hackle, though really brassy, has been dignified with the appellation of "light," while at every show whole rows of coops may be seen in which the cocks are as brassy as can be, though the cockerels are more or less free from it. If this disqualification was strictly fulfilled, there would be but few Plymouth Rock cocks capable of securing a premium, the dark and light specimens being alike afflicted. The difficulty in the matter is that breeders are forced to breed from disqualified birds; and premium fowls, instead of being such as may be the best and more particularly adapted for breeding purposes are really, when the exhibition is over, the most undesirable of all.

(Continued next week)

M.M.L. MEXICAN MUS-TANG LINIMENT Should be kept in stable, Kitchen, Factory, Store & Shop!

M.M.L. MEXICAN MUS-TANG LINIMENT Should be kept in stable, Kitchen, Factory, Store & Shop!

M.M.L. MEXICAN MUS-TANG LINIMENT is for Man & Beast. Kills Pain. Rub it in very vigorously!

M.M.L. MEXICAN MUS-TANG LINIMENT is for Man & Beast. Kills Pain. Rub it in very vigorously!

Drainage marks the line between swamp and grain field; between swale and grassy meadows; between musquitto plantations and pleasant orchards and groves; between unprofitable and profitable agriculture.

There is now a postoffice for every 1,000 men, women and children in the United States. If the expenses of carrying the mails were paid direct from the pockets of the people, pro rata, each citizen would pay an average of 85 cents a year for having his mail carried.

A correspondent of the Weekly Tribune says that the kicking of horses in the stable indicates a nervous, restless disposition and recommends the use of a large, roomy stall, which will often change the current of the animal's thought, and cause him to drop the obnoxious practice.

Coughing and sneezing can be stopped by pressing on the nerves of the lips in the neighborhood of the nose. Pressing in the neighborhood of the ear, or pressing very hard on the top of the mouth, inside, is also a means of stopping coughing. The will has immense power, also.

Wood oil is now made on a somewhat extensive scale in Sweden, where the refuse of timber cutting and forest cleanings is turned into account for the oil it contains. It is used for illuminating purposes, and gives, when put in a lamp especially made for it, a very satisfactory light.

Catarrh Cured.

A clergyman, after years of suffering from that loathsome disease, Catarrh, and vainly trying every known remedy, at last found a recipe which completely cured and saved him from death. Any sufferer from this dreadful disease sending a self-addressed stamped envelope to Prof. J. A. Lawrence, 88 Warren St., New York city, will receive the recipe free of charge.

Any young man not now on a farm, who desires to become a farmer, should hire out to the best farmer he can find and stay two or three years. He will then get trained for his work and be paid for his training. He can still further help himself by a course of judicious reading and study during the winter evenings. Such a course for a young man of common sense and energy will fit him to manage a farm wisely and well.

Planting Potatoes by Machinery.

To many people it may seem almost incredible, as well as impracticable, nevertheless it is a well-established fact that in every potato-growing district such machinery is in successful operation. The Aspinwall Potato Planter, manufactured by the Aspinwall Manufacturing Company, Three Rivers, Mich., is spoken of very highly, and we would advise our readers who are interested in potato culture to send for one of their illustrated catalogues.

Many Minnesota growers of timothy and clover seeds have learned that it is best to thresh out the crop as soon as possible after cutting. That is, they take no needless chances of damage from heating and molding. They have learned, also, that it pays to clean all the seed thoroughly. In a community of seed growers the man who does not clean his seed will soon understand from the discrimination of buyers that he is losing much more money by attempting to sell weed seed than he gains by extra weight.

Prof. Beal says: "The large weeds, like yarrow and bitter dock, parsnip and carrot, may be left until the growing stalk has acquired some strength. Then on some day when the soil is soft, and before the seeds have dropped, go over the field with a spade or stout spud, thrusting it down perpendicularly within a couple of inches of the plant. Take the stalk with one hand near the root, and with the other pry it loose. In this way no roots are left below the surface to sprout and send up a new crop. Never cut off the tops of such weeds, leaving the roots in the ground.

An Irish sea captain writes to the Liverpool Mercury that during a voyage around Cape Horn he measured the height of the waves in a gale. To do this he went up in the main rigging, to get, if possible, the top of the wave coming up astern in a line of sight from the mast to the horizon at the back. The reason he selected the mainmast

was this, that as a rule it is nearly amidships, and when the ship is running the sea ahead and from aft lifts the two ends, forming a hollow amidships (the actual foot of the wave) below the mean draught, equal to the slight elevation, the observer is above the true height. It was a difficult operation, but he obtained some good observations, marking the height of the waves on the mast. On measuring the distance from these to the mean draught he found them to be as follows: 64, 61, 58 and 65 feet respectively, varying in length from 750 feet to 800 feet.

Topeka Weather Report.

For week ending Saturday, December 22, 1888: Temperature.—Highest at 2 p. m., 56 deg. on Saturday the 22d; lowest at same hour 28 deg. on Tuesday, the 18th. Highest recorded during the week 56 deg. the 22d; lowest, 14 deg. on the 19th and 20th.

Rainfall.—Nineteen-hundredths of an inch of rain fell Sunday, the 16th.

The farmer, as a producer of the necessary articles of consumption, should take the same interest in his business, and be as anxious for its success, as he who is engaged in manufacturing or commerce, and should study the ways and means carefully and intelligently, being ready to adopt any or all methods that promise success.

I will mail a valuable present to any minister, teacher or friend of education on receipt of address. THOS. J. BRYANT, St. Joseph, Mo.

Farm Loans.

Loans on farms in eastern Kansas, at moderate rate of interest, and no commission. Where title is perfect and security satisfactory no person has ever had to wait a day for money. Special low rates on large loans. Purchase money mortgages bought. T. E. BOWMAN & Co., Jones Building, 116 West Sixth street, Topeka, Kas.

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To the Editor:—Please inform your readers that I have a positive remedy for Consumption. By its timely use thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy FREE to any of your readers who have consumption if they will send me their Express and P. O. Address. Respectfully, T. A. SLOCUM, M. C., 181 Pearl St., N. Y.

How to Get a Useful Little Book for Nothing.

For a limited time we make the following offer: To every one of our readers who will send us the name of one NEW yearly subscriber and one dollar, we will send one copy of "PEPPER'S TARIFF MANUAL."

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The KANSAS FARMER will be sent one year free to any reader of this who will send ten trial three month's subscriptions at 25 cents each. Any one can easily do this in an hour any time. We might have many thousand new subscribers in a short time if every friend would make this effort. You get your paper for a year for a little effort, and do us and your friends a good thing.

SPECIAL CLUB OFFER.

In order to accommodate a large number of our subscribers who want a representative State newspaper which will give all the State and telegraphic news, and full reports of the Legislature, we have concluded to offer the Weekly Capital Commonwealth and the KANSAS FARMER one year for only \$1.50. This offer holds good only till February 1, 1889.

SPECIMEN COPIES.

We will be grateful to our friends and readers of the KANSAS FARMER if every one will send us a list of farmers' names and addresses, such as do not take the paper, as we wish to send them specimen copies with the hope of meriting their subscriptions. We want 50,000 subscribers, and if every reader will put forth a little effort at once in sending us names for free specimens, we will secure them. Send along your lists, friends.

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DR. HUMPHREYS' BOOK Cloth & Gold Binding 144 Pages, with Steel Engraving, MAILED FREE. Address, P. O. Box 1810, N. Y.

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SPECIFICS.

Sold by Druggists, or sent postpaid on receipt of price.—HUMPHREYS' MEDICINE CO., 109 Fulton St., N. Y.

The BUYERS' GUIDE is issued March and Sept., each year. It is an encyclopedia of useful information for all who purchase the luxuries or the necessities of life. We can clothe you and furnish you with all the necessary and unnecessary appliances to ride, walk, dance, sleep, eat, fish, hunt, work, go to church, or stay at home, and in various sizes, styles and quantities. Just figure out what is required to do all these things COMFORTABLY, and you can make a fair estimate of the value of the BUYERS' GUIDE, which will be sent upon receipt of 10 cents to pay postage. MONTGOMERY WARD & CO., 111-114 Michigan Avenue, Chicago, Ill.

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A Portfolio of beautiful baby pictures from life, printed on fine plate paper by patent photo process, sent free to Mother of any Baby born within a year. Every Mother wants these pictures; send at once. Give Baby's name and age. WELLS, RICHARDSON & CO., BURLINGTON, VT.

FLORIDA EXCURSIONS -- LOWER THAN EVER.

If you have any idea of ever visiting Florida, you should not neglect an opportunity which will soon be offered by the management of the Memphis Route (Kansas City, Fort Scott & Memphis R. R.). When a round trip rate of \$29.15, Kansas City to Jacksonville, Fla., with proportionate rates to nearly all other points in the State, is announced, we are sure it will be appreciated. Tickets will be sold December 18, January 15 and 29, and February 12 and 26, good going fifteen days from date of sale and valid for return passage at any time within sixty (60) days; these rates will apply not only from Kansas City, but from Fort Scott, Lamar, Springfield, Clinton and intermediate points; rates from principal stations on Joplin and Cheryvale Divisions proportionately low. Excursion trains will have Palace Reclining Chair Car (seats free) and Pullman Buffet Sleeping Cars. For map, time-card and full information, address J. E. LOCKWOOD, Gen. Pass. Agt., Kansas City, Mo.

Vandalia and Pennsylvania Route--St. Louis to New York. Three daily trains as follows: No. 20. No. 6. No. 8. Lv. St. Louis, 8:10 a. m. 8:00 p. m. 7:25 a. m. Ar. New York, 4:00 p. m. 8:00 a. m. 9:35 p. m. No. 20 and No. 6 have through Pullman Vestibule Buffet cars, St. Louis to New York without change. And only one change for coach passengers, either first or second class. Through Sleepers to Washington and Baltimore without change. For full information address, Chas. Conklin, North Western Passenger Agent, Kansas City, Mo.; or E. A. Ford, General Passenger Agent, St. Louis, Mo.

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Carrying the United States Overland Mail for California, Australia, China and Japan. ONE DAY SAVED CROSSING THE CONTINENT BY TAKING

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BETWEEN Council Bluffs, Omaha, Kansas City and Portland, Sacramento, San Francisco and Los Angeles.

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Adds to its service everything that will in any manner contribute to the comfort of its patrons. Among other conveniences, its equipment includes Modern Day Coaches, Elegant Pullman Palace Cars, and New Free Family Sleepers.

Baggage checked through from all Eastern points to destination. Eating houses along the line are under the direct supervision of the Company, and the meals furnished by the Pacific Hotel Company are unsurpassed. Instead of going abroad, why not visit some of the numerous health and pleasure resorts of the West, so widely noted for their curative springs and wonderful scenery. Among those reached by the UNION PACIFIC are: Idaho Springs, Colorado, Guyer Hot Springs, Idaho, Georgetown, " Soda Springs, " Central City, " Shoshone Falls, " Boulder, " Yellowstone Nat'l Park, Garfield Beach, Utah, Wyoming, Utah Hot Springs, Utah, The Dalles of the Columbia, Oregon.

For folders, descriptive pamphlets, rates of fare, etc., call upon or address F. A. LEWIS, Agent, 525 Kansas Ave., Topeka, Kansas. JOHN B. FRAWLEY, Traveling Passenger Agent, Ninth and Broadway, Kansas City, Mo. F. B. WHITNEY, General Agt., Kansas City, Mo. THOS. L. KIMBALL, E. L. LOMAX, Acting General Manager. Ass't G. P. & T. Agent. J. S. TEBBETTS, Gen'l Passenger and Ticket Agent, OMAHA, NEBRASKA.

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DIRECT LINE TO KANSAS CITY, ATCHISON, ST. JOSEPH, OMAHA and the NORTH. SEDALIA, HANNIBAL, ST. LOUIS and all points EAST. DALLAS, FT. WORTH, AUSTIN, SAN ANTONIO, HOUSTON, GALVESTON, and all principal CITIES in TEXAS and the SOUTH-WEST. PUEBLO, DENVER and the WEST.

Solid Daily Trains with Pullman Buffet Sleeping Cars between Kansas City, Pueblo and Denver via the

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CALIFORNIA For free information concerning AGRICULTURAL LAND in Southern California, address with stamp JOHN B. ISLER, San Diego, Cal.

For Sale or Exchange for Good Real Estate, a Herd of Fine Short-horn Cattle And one IMPORTED PERCHERON STALLION—an excellent breeder. Also, one ENGLISH COACH STALLION—very fine. Address D. H. SCOTT, Topeka, Kansas.

THE MARKETS.

By Telegraph, December 24, 1888.

LIVE STOCK MARKETS.

St. Louis.

CATTLE—Receipts, shipments Market steady. Choice heavy native steers \$4 30a4 60, fair to good native steers \$3 50a4 00, medium to choice butchers steers \$3 00a4 00, fair to good stockers and feeders \$2 10a3 25, grass rangers \$1 50a2 85.

HOGS—Receipts, shipments, Market firmer. Choice heavy and butcher's selections \$5 05a5 10, medium to prime packing \$4 90 a5 05, ordinary to best light grades \$4 00a4 90.

SHEEP—Receipts, shipments Market firm and steady. Common to good \$2 00a 4 25.

Chicago.

CATTLE—Receipts 6,000. Market strong. Best not quoted; good, \$3 75a4 25; medium, \$3 25a3 70; common, \$2 75a3 20; stockers, \$2 00a 2 50; feeders, \$2 75a3 15; bulls, \$1 50a2 90; cows, \$1 15a2 90; Texas steers, \$2 10a2 75; Texas cows, \$1 40a2 10.

HOGS—Receipts 12,000. Market stronger. Mixed, \$5 10a5 30; heavy, \$5 10a5 40; light, \$5 05 a5 30; skips, \$4 50a5 00.

SHEEP—Receipts 5,000. Market steady. Natives, \$2 75a4 75; Texas, \$2 25a3 00; lambs, per cwt., \$3 50a5 75.

Kansas City.

Receipts for 1888 to date are 1,042,534 cattle, 1,631,619 hogs and 348,870 sheep, showing a gain of 382,624 cattle, 405,595 hogs loss and a gain of 140,142 sheep, compared with 1887.

CATTLE—Some 1,039-1b butcher steers sold at \$3 25, which the seller said was 25c higher, \$3 00 being the worth of such cattle Saturday. The country will not get excited on the irregularities of holiday week, with a handful of cattle to sell.

HOGS—Heavy hogs brought a small premium. The tops were at \$5 12 1/2 for 240 to 270 lb. lots. Tops Saturday, \$5 10. Bulk of sales was at \$5 05a5 10, against 5 00a5 05 Saturday. Pigs were in demand from Chicago buyers.

SHEEP—There were no sheep in excepting the 1,600 Utah sheep. Trade was quiet on all the holiday order, but buyers bid on all the Utah sheep. Prices steady with Saturday; 90c a \$2 00.

Table with columns for draft, good, saddlers, mares, drivers, streeters, mules and prices per head.

PRODUCE MARKETS.

New York.

WHEAT—No. 2 red, \$1 02 1/2 a 1 03. CORN—No. 2, 46c.

Kansas City.

WHEAT—Receipts at regular elevators since last report bushels; withdrawals, 1,800 bushels, leaving stock in store as reported to the Board of Trade to-day, 261,645 bushels. There was a steady market to-day on 'change. No. 2 red winter, cash, no bids, 96c asked. No. 2 soft winter, cash, no bids nor offerings.

CORN—Receipts at regular elevators since last report, 1,265 bushels; withdrawals, 7,068 bushels, leaving stock in store as reported to the Board of Trade to-day, 96,223 bushels. Market about steady on 'change to-day. On the call the only sale was No. 2 May at 29 1/2c against 29 1/2c bid yesterday when 29 1/2c was asked. No. 2 cash, no bids, 28 1/2c asked.

OATS—No. 2 cash, no bids nor offerings. RYE—No. 2 cash, no bids nor offerings. HAY—Receipts 25 cars. Market weak. Fancy prairie, \$6 00; good medium, \$4 00a4 50.

SEEDS—We quote: Flaxseed, \$1 35 per bu. on a basis of pure. Castor beans, \$1 50 per bu. for prime.

OIL-CAKE—Per 100 lbs. sacked, f. o. b., \$1 25; \$12 00 per 1,000 lbs.; \$23 00 per ton; car lots, \$21 00 per ten.

FLOUR—Weak and very dull. Quotations are for unestablished brands in car lots, per 1/2 bbl. in sacks, as follows: XX, \$1 00; XXX, \$1 10; family, \$1 30; choice, \$1 65; fancy, \$1 90; extra fancy, \$2 10a2 20; patent, \$2 40a2 50.

BUTTER—Receipts large and market weak and very dull. We quote: Creamery, fancy, 29c; good, 24c; dairy, fancy, 22c; fancy roll, 15 a16c; good to choice store-packed, 13a16c; poor, 10c.

CHEESE—We quote: Full cream, twins, 12a 12 1/2c; full cream, Young America, 12a12 1/2c.

EGGS—Very slow at 17 1/2c per dozen for strictly fresh.

POTATOES—Irish—Market well supplied; home-grown, 30a35c per bus.; Colorado and Utah, 60a85c per bus.; Iowa and Nebraska,

choice, 30a35c per bus. Sweet potatoes, white and red, 50c; yellow, 65a75c per bus.

BROOMCORN—Green, self working, 4c; green hurl, 4 1/2c; green inside and covers, 2 1/2a 3c; red tipped and common, self working, 2c; crooked, 1c.

PROVISIONS—Following quotations are for round lots. Job lots usually 1/2c higher. Sugar-cured meats (canned or plain): Hams 10 1/2c, breakfast bacon 10c, dried beef 8c. Dry salt meats: clear rib sides \$7 05, long clear sides \$6 80, shoulders \$6 30, short clear sides \$7 00. Smoked meats: clear rib sides \$8 05, long clear sides \$7 80, shoulders \$7 00, short clear sides \$7 00. Barrel meats: mess pork \$13 75. Choice tierce lard, \$7 50.

Boston Wool Market.

The market was quoted steady and higher. Quotations ranged as follows: Pulled wool quoted 22a28c for choice and at 30a40c for fair to good supers; No. 1 combing, 33a34c; No. 2 combing, 35a36c; fine delaine quoted at 28a31c; No. 1 washed wools quoted at 34a38; unwashed wools, scoured, at 50c; medium, scoured, unwashed, 45a47c; new spring Texas at 17a25c for medium to fine grades; Wyoming and Utah, 23a27c; Western unwashed and unmerchanted fleeces, 26a27c; unwashed combing, 23a25c; scoured Texas wools, 45a51; medium and fine Texas fall, 18a25c; scoured pulled wools, 45a 50c; medium and fine Territory wools, 55a60c; Territory scoured, 52a55c for fine and medium; Western pulled wools, 25a35c.

JEWEL The earliest and best market grape known. Vigorous and productive. Sold at 20 cents per pound, wholesale. Price, \$1.50 each; \$15.00 per dozen. STAYMAN STRAWBERRY Large and firm; pre-duced at the rate of 30,000 quarts per acre. Send for testimonials. STAYMAN & BLACK, LEAVENWORTH, KAS.

Hart Pioneer Nurseries

FORT SCOTT, KAS.

Established 1865. 460 Acres. Full line of Nursery Stock. Forest Seedlings for Timber Claims and Apple Trees for Commercial Orchards a specialty. Large Premium for planting forest trees in spring of 1889. Treatise on cost and profit of apple orchard, free on application. Good salesmen wanted.

Black Walnuts and Butternuts

FOREST TREE SEEDLINGS.

Black Walnuts and Butternuts, hulled, for planting, at 40 cents per bushel, free on board cars here. All kinds of Forest Tree Seedlings. Send for Price List. Address BAILY & HANFORD, Makanda, Jackson Co., Ill.

KANSAS HOME NURSERY

OFFERS

BEST HOME-GROWN TREES. Choice Fruit and Ornamental Trees of real merit for the Western Tree-Planters. Also best Fruit and Flower Plates. Water-proof. Samples by mail, 10 cents each; \$5 per 100, by express. A. H. GRIESA, Drawer 28, Lawrence, Kas

Lee's Summit Nurseries

APPLE TREES TWO AND THREE YEARS old, of most excellent quality, offered at low rates by the 1,000 or by the carload. Also Peach, Plum, Grapes, etc., etc. J. A. BLAIR & SON, Proprietors, Lee's Summit, Jackson Co., Mo.

Mount Hope Nurseries

ESTABLISHED 1869.

Offer special inducements to the Trade and large Planters. A full stock of everything. A heavy stock of Standard and Dwarf Pear Trees and Cherry Trees. Quality unsurpassed, and all home-grown. Nurserymen and Dealers supplied at lowest rates. Best of shipping facilities. Let all who want nursery stock correspond with us. State your wants. A. C. GRIESA & BRO., Drawer 13, Lawrence, Kansas.

SEEDS 51st YEAR

FRESH AND RELIABLE. BUY NO OTHERS Seed Store at your door. Send for our illustrated catalogue of everything for the Farm and Garden. J. M. McCULLOUGH'S SONS, CINCINNATI, OHIO.

CORN IS KING

Send for my New Catalogue of

Fire Dried Seed Corn

Wheat, Oats, Potatoes and Garden Seeds. How to grow them, and other valuable information FREE.

JAMES W. BOUK, Box B, GREENWOOD, NEB. Mention this paper.

379 VARIETIES OF FRUIT TREES, VINES, PLANTS, ETC. Apple, Pear, Peach, Cherry, Plum, Quince, Strawberry, Raspberry, Blackberry, Currants, Grapes, Gooseberries, &c. Send for Catalogue J. S. COLLINS, Moorestown, N. J.

TRUE TRIED GARDEN & FLOWER SEEDS AT LIVINGSTON SEED STORE DES MOINES IOWA. SEND FOR NICE NEW CATALOG.

LA CYGNE NURSERY. MILLIONS

Fruit Trees, Shade Trees, Small Fruits. Vines, Ornamental Trees, Etc.

TEN MILLION FOREST TREE SEEDLINGS. ONE MILLION HEDGE PLANTS.

ONE HUNDRED THOUSAND TWO-YEAR APPLE TREES—Grown from whole root grafts.

FIVE THOUSAND IRISH JUNIPERS—Two-foot, SPLENDID WALNUTS, and other forest tree seeds and nuts, prime and fresh

Full instructions sent with every order, and perfect satisfaction guaranteed. Send for full list and prices. Address

D. W. COZAD

Box 25, LACYGNE, LINN CO., KANSAS

PURE GRASS, FIELD, GARDEN & TREE SEEDS, FERTILIZERS, ETC. SEND FOR CATALOGUE. MAILED FREE. 1426-1428 St. Louis Ave., Kansas City, Mo. SEEDS

1889. GREGORY'S SEED CATALOGUE 1889. Come, Fellow Farmers! It is the good things and the new things you want. Here is a Catalogue full of them! Do you want tested seed, raised from stock selected with extra care, grown from the best strains, got from the originators? I aim to have mine just such. Do you want new varieties that are really good, and not merely novelties? I aim to have mine such. Do you want seed that the dealer himself has faith enough in to warrant? I warrant mine, as see Catalogue. Do you want an exceptionally large collection to select from? Mine is such. Do you want them directly from the grower? I grow a large portion of mine—few seedsmen grow any! My Vegetable and Flower Seed Catalogue for 1889 FREE to every body. JAMES J. H. GREGORY, Marblehead, Mass.

FOR THE MARKET GARDEN LEONARD'S SEEDS. BRIDGEPORT DRUMHEAD. Are acknowledged to be THE BEST. No failure when they are used. You cannot afford to be without our Illustrated CATALOGUE FREE containing all the NOVELTIES in Vegetables, Flowers, and Field Grains, Oats, Wheat, Potatoes, etc. Address S. F. LEONARD 149 W. Randolph St., CHICAGO, ILL.

HAGEY & WILHELM, WOOL COMMISSION MERCHANTS ST. LOUIS, MO.

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MISSOURI KANSAS FARMER. GOOD GROUND AND BROUGHT FORTH FRUITS—SOME AN HUNDRED FOLD, SOME SIXTY FOLD. Per Year, 25c. KANSAS CITY, MO., U. S. A.—ISSUED MONTHLY. Six Months, 15c.

The MISSOURI AND KANSAS FARMER is the cheapest paper in the whole wide world. It has 8 large, clean-printed pages, with 6 columns of matter 20 inches long on each page. Every number contains the Land Laws, showing how to enter GOVERNMENT LANDS. Every number contains descriptions of the Counties, Towns and Townships, telling all about the Soil, Water, Minerals, Climate, etc., the Prairie and Timber lands, and their adaptation for Farming, Fruit Growing and Stock Raising. Every number gives letters from farmers and homesteaders now on the grounds. Every number is full of Facts for the Man who wants to Pre-empt or Homestead Government Land. Mailed to any address in the United States, Canada or Mexico for the trifling sum of 25 cents per year. Remittances may be made with 2-cent American postage stamps or silver. Write names PLAIN. Address, MO. & KAN. FARMER, Lock Box B, Kansas City, Mo. Four months on trial for 10c, so don't ask for samples. Cut this advertisement out. We will send the above named paper one year free to any one sending us \$1.00 for the KANSAS FARMER for 1889. Offer good until February 1, 1889. Address KANSAS FARMER CO., Topeka, Kas.

The Busy Bee.

Bee Notes.

Wind-breaks in the shape of high board fences or evergreens will be found a great protection to the apiary during winter. Every established apiary should be provided with something of the kind. Evergreens are more desirable, as they are ornamental as well as useful. It requires some time to grow them to the required size to be useful, but when once they attain maturity they are much less expense to keep in repair, and are life-long a useful and ornamental investment. They are much better in summer than a board surrounding, as a high board fence will absorb an excessive heat that the pines will not, which item is greatly in favor of the evergreens, and is somewhat against the boards, although the boards are a more perfect break against the wind. The pines may be trimmed to any height and shape desired, and aside from their usefulness they are a "joy forever." To be properly equipped with evergreens about farm houses, stock ranches, etc., is a matter of great importance that is much neglected, saying nothing of the bee interest. These wind-breaks about our houses and stock yards are the source of much comfort, and will add dollars to the value of our surroundings. Both man and beast will be benefited from the effect of breathing the atmosphere which constantly passes through the pine branches.

We seldom hear in these days anything concerning the destruction of bees by worms. The time was when this was the only drawback to bee-keeping; but it is now that the new races of bees have laid this trouble to one side. Hence it is only outside of the beehive that any damage is done by moth worms. They will infest empty combs and will utterly destroy them when left away from the protection of the bees. During warm weather is the time those empty combs are to be watched. This is why we advise leaving the surplus combs on the hives throughout the summer season. The bees will protect them. If taken off after the honey season it will be exceptional if they do not become infested. In putting them away for the winter it would be well to closely scrutinize them, and if any have worms leave out and sulphur them. There is but little danger during cold weather, but as soon as warm weather puts in in spring time the eggs will hatch and operations will soon commence. Combs containing pollen are the ones to be feared; also brood combs. New combs that are but the pure wax, that have been used for surplus honey, are not apt to be disturbed by the worms. The old black combs are the ones they prefer to operate on.—National Stockman.

A Horse Who Can Talk.

Everybody has heard of a "horse laugh," but who has ever seen an equine gifted with the power of speech? Such an animal would be pronounced a miracle; but so would the telegraph and the telephone have been a hundred years ago. Why, even very recently a cure for consumption would have been looked upon as miraculous, but now people are beginning to realize that the disease is not incurable. Dr. Pierce's Golden Medical Discovery will cure it if taken in time. This world-renowned remedy will not make new lungs, but it will restore diseased ones to a healthy state when all other means have failed. Thousands can gratefully testify to this. All druggists.

Dr. Charcot, the great French Physician, says that children under sixteen cannot have their brains overworked. No forcing, he says,

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KANSAS CITY.

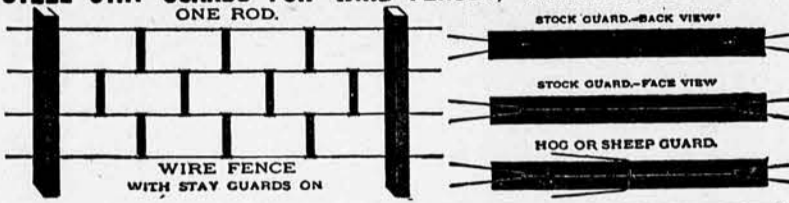
ST. LOUIS.

THE JAMES H. CAMPBELL CO. Live Stock Commission Merchants, FOR THE SALE OF CATTLE, HOGS AND SHEEP.

Rooms 23 and 24, Exchange Building, KANSAS CITY STOCK YARDS.

Unequaled facilities for handling consignments of Stock in either of the above cities. Correspondence invited. Market reports furnished free. Refer to Publishers KANSAS FARMER.

STEEL STAY GUARDS FOR WIRE FENCES, MANUFACTURED BY THE WIRE FENCE IMPROVEMENT COMPANY, 325 Dearborn St., Chicago.



CAN be attached easily to Smooth or Barbed Wire Fences, by any one. Recommended STRONGLY by Farmers, Breeders, and Agricultural Journalists. Will not SHIFT on Fence Wires. Made of Fine, Springy Steel, Japanned Jet Black, are 13 1/2 inches long, and 1 1/2 wide; flexible, light, very strong, and cheap. With smooth No. 9 wire, will make a CHEAP fence, easy to see, impossible to break, and lasting a lifetime. "Stock" Guards are for fences with wires 6 to 13 inches apart. "Hog" or Sheep Guards for use on wires 6 to 6 1/2 inches apart. Stock Guards, \$15; Hog Guards, \$17 per 1,000. Discount to dealers. If not for sale in your town, write us.

serts, will get out of them more cerebral work than the brain will accomplish without fatigue. It is not until after the age of sixteen or eighteen that surmenage becomes possible.

Lightning struck a pine tree on the farm of W. F. Spann, of Webster county, Ga., and killed twenty hogs that had taken shelter under it.

ST. JACOBS OIL

For Rheumatism. BRAND NEW, STRONG PROOFS. 22 Years. Newton, Ill., May 23, 1888. From 1865 to 1885—about 22 years—I suffered with rheumatism of the hip. I was cured by the use of St. Jacobs Oil. T. C. DODD.

15 Years. Maple Hill, Mich., May 5, 1888. Mr. JOHN J. SMITH, Enslay, Michigan, was afflicted with rheumatism 15 years; his case was pronounced incurable by two physicians, but was cured by St. Jacobs Oil and has remained so two years. S. McREARY, Druggist.

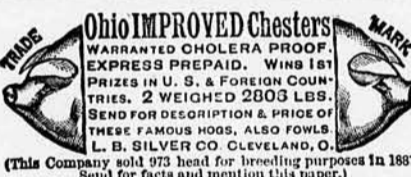
Since 1885. No. Branch, Mich., May 21, 1888. Fall of 1885 was taken with Inflammatory Rheumatism and suffered two weeks; was cured by one bottle of St. Jacobs Oil. Mrs. J. H. VANDECAR. AT DRUGGISTS AND DEALERS. THE CHARLES A. VOGELER CO., Baltimore, Md.

A Proclamation!

Dr. I. Guy Lewis, Fulton, Ark., says:—"A year ago I had bilious fever; Tutt's Pills were so highly recommended that I used them. Never did medicine have a happier effect. After a practice of a quarter of a century, I proclaim them the best."

ANTI-BILIOUS medicine ever used. I always prescribe them.

Tutt's Pills Cure All Bilious Diseases.

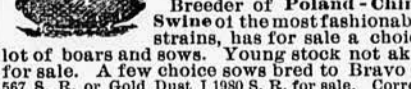


F. M. LAIL, MARSHALL, MO., Breeder of the very best



POLAND-CHINA HOGS. Pigs from ten first-class boars for the season's trade.

W. T. DOYLE, MARYVILLE, MO., Breeder of Poland-China Swine of the most fashionable strains, has for sale a choice lot of boars and sows. Young stock not akin for sale. A few choice sows bred to Bravo C. 567 S. R. or Gold Dust 11980 S. R. for sale. Correspondence solicited. Personal inspection invited. Special rates by express.



Walnut Grove Herd of Poland-Chinas. Pigs from three first-class boars for sale. Am taking orders for fall pigs, to be delivered at from eight to ten weeks old, at \$8 per head, or in pairs \$15. Sows in pig or with litters, for sale. A few choice males on hand. My stock is of the best strains in America. Inspection desired. Stock recorded in Ohio Poland-China Record. Pigs from twelve exceeding fine sows. Took six first and two second premiums at Topeka and Ottawa, only places shown, including grand sweepstakes at Ottawa. V. B. HOWEY, Box 103, Topeka, Kas.

OTTAWA HERD

OF POLAND-CHINA and DUROC-JERSEY Hogs. Twenty head of first-class boars from four to nine months old. Also seventy-five head of sows of same age, sired by Bruce 4695, C. R., Leek's Gilt Edge 2887, C. R., Whipple's Stemwinder 4701, Daisy's Corwin 4697. Dams—Mazy 2d 6214, Zella 3d 8250, Maggie's Perfection 8210, Yone's Perfection 9424, Fay's Gold Drop 11676, Jay's Dimple 12172, Eureka Mayo 12176, and many other equally as well bred, and fine as can be produced by any one. Part of sows bred to gilt-edge boars of the most popular strains. Will sell at prices to suit the times. Never had any cholera in the herd. Write for prices. I. L. WHIPPLE, Box 270, Ottawa, Kas.

Gold Dust Herd of Poland-Chinas.



J. M. McKEE, WELLINGTON, KANSAS. Tom Corwin 3d 5293 A. P. C. R. at head of herd. Strains representing Model, Givo or Take, Gold Dust, King Bess and Black Beauty. Have some choice male pigs for sale. Also eggs of P. Rock, Brown Leghorn and Light Brahmas, \$1.25 per 13; Toulouse Geese, 15c.; Pekin Duck 10c. each. Write; no catalogue.

JACKVILLE HERD OF POLAND-CHINAS

J. S. RISK, Prop'r, WESTON, MO.



I have 100 Pigs for sale, sired by such noted boars as Gov. Cleveland 4529, Royalty 6469, John 690, King Kiever 2d 1809, and other equally noted sires. I can supply very choice pigs. Write for prices or call and see stock.

MAINS' HERD OF POLAND-CHINAS.



Jas. Mains, Oskaloosa, (Jefferson Co.), Kas., is located two and a half miles southeast of Oskaloosa, on Maple Hill Stock Farm. All hogs eligible to Ohio Poland-China Record. A fine lot of spring pigs now ready, for sale at prices that will suit the times. Also some fall sows now ready to breed or will be bred if desired. Personal inspection solicited.

ROME PARK HERDS

T. A. HUBBARD, Wellington, Sumner Co., Kansas, Breeder of

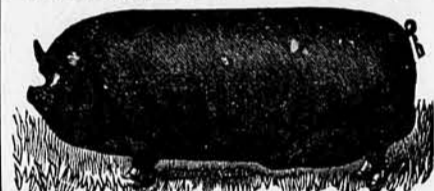
POLAND-CHINA and LARGE ENGLISH BERKSHIRE HOGS.

My herds are composed of the richest blood in the United States, with style and individual merit, representing such families as Corwins, U. S., Black Bess, I. X. L., Sallies, Dukes, Duchess, Belladonnas, Hoods, Champions, etc. Show pigs a specialty. Am using twelve show boars on a bunch of sows that are pleasing to the eye of a breeder. Sows bred to my sweepstakes boars for sale. Come and see or write for prices.

SELECT HERD OF LARGE BERKSHIRES!

Owned by G. W. BERRY, Berryton, Shawnee Co., Kas. My sows represent the Royal Duchess, Sallie, Hillside Belle, Charmer, Stumpy, Fashion, Queen Betsy, and other families of fine, large fleshy qualities. Herd headed by British Champion III 13481, Dauntless 17417, and the noted young show boar Peerless. Berryton—Is located nine miles southeast of Topeka, on the K., N. & D. R. E. Farm adjoins station. Come and see me and all my hogs at home, or address as above.

ENGLISH BERKSHIRES.



THE WELLINGTON HERD consists of twenty matured brood sows of the best families of home-bred and imported stock, headed by the celebrated HOPEFUL JOE 4889, and has no superior in size and quality nor in strain of Berkshire blood. Also Plymouth Rock Chickens. Your patronage solicited. Write. M. B. KEAGY, Lock Box 784, Wellington, Kas.

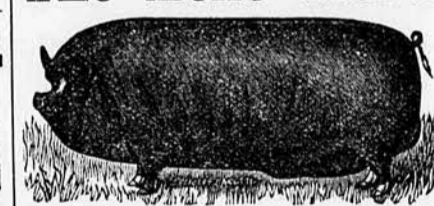


ROYAL GRANITE 10105.

BERKSHIRE PIGS

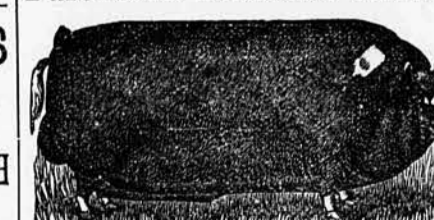
Of Best English and American-bred Families. Write for now Catalogue of breeding stock. SPRINGER BROS., Springfield, Ill.

The Echo Herd.



For Registered Prize-winning BERKSHIRE SWINE AND SOUTHDOWN SHEEP or money refunded. Come and see or address J. M. & F. A. SCOTT, Huntsville, Randolph Co., Mo. Mention Kansas Farmer.]

PLEASANT VALLEY HERD OF Pure-bred Berkshire Swine.



I have thirty breeding sows, all matured animals and of the very best strains of blood. I am using three splendid imported boars, headed by the splendid prize-winner Plantagenet 2919, winner of five first prizes and gold medal at the leading shows in Canada in 1881. I am now prepared to fill orders for pigs of either sex not akin, or for matured animals. Prices reasonable. Satisfaction guaranteed. Send for catalogue and price list, free. S. McCULLOUGH, Ottawa, Kansas.

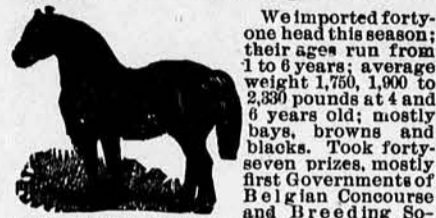
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