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Farming the Best Business.

If every young man that is raised on a farm could be made to understand the real value of his knowledge, there would be more and better farmers in the country, and there would be less disposition to change for vocations that offer little inducement to promotion or what is commonly called success in life; and if every man now engaged in farming appreciated fully the measure of his opportunities, there would be more contentment in rural homes, farm life would grow more and more attractive, and agriculture would be rated at its true worth—as the best business known among men.

The earth was given to man for a home. It costs him nothing only as it seems necessary among men to protect the right of possession. What one pays for a title deed to a portion of the earth's surface is rather a rent fee to save him from disturbance by other persons. But whatever the purchase price is, or whatever one may choose to call it, the amount is no greater than he regards the possession worth. And when he has it and it is paid for, he has an investment that returns him an income greater, better, more certain than that of any other class in life. This is a grand truth that many men do not accept, and yet a little thought and comparison would convince the most skeptical. We do not mean to point out particular individuals unlike in temperament and habit as well as in employment, for that is obviously unfair. John may gain a thousand or a million dollars in a single mining transaction on a capital that a cipher would represent, and James may spend the best years of his life boring and blasting in mountains and always be poor. So, Peter may become a successful, wealthy farmer, with fields and herds, and Paul may never get beyond a renter's estate. But, take business in its great departments—Commerce, Mining, Manufactures, Railroad, Banking, Merchandising, Farming, and note the successes and failures in them. Watch the weekly reports of failures in business. They are astounding when we stop to consider. The average number of failures by the week in the United States is about two hundred. Think of that. Two hundred failures every week for fifty-two weeks in the year, an aggregate of ten thousand four hundred in one year. Extend the period to ten years, and we have one hundred and four thousand. Make the time twenty-five years, and the showing is more than a quarter of a million. The failures which are reported are not those of small proportions; they do not include the persons who are trading on a few dollars capital; but it is the men who are recognized in the general world of trade as business men; they are such as appear on the commercial lists of men who make a business of studying and reporting the financial standing of individuals and firms that sometimes ask for credit in the money centers. The vast army of men engaged in trade in a small way, represented by, perhaps, more than one-half of the traders in every town and city, do not figure in these commercial reports at all. A man whose failure costs only a hundred dollars or so is not heard of outside of his immediate circle of friends. Such men never go to headquarters for supplies. They purchase from men near them. And the failures of this class are much more numerous than those where fields of operation are large.

Lying before us as we write is a copy of Bradstreet's, a trade journal, of date Jan-

uary 12, 1884. In an article on "Business failures of 1883," we find some interesting statements. The total number of "legitimate trading concerns recorded in the Bradstreet agency is 838,823, as compared with 548,180 in 1873, a gain of 290,646 in ten years." Total number of failures in 1883 10,299. The average amount of liabilities owing by every one of the failing traders was about \$17,000, a larger average than in any former year. Taking the country over there was one failure for every 82 traders. Taking the country by sections, the failures were: In New England, 1 in 61; in the Middle States, 1 in 104; in the Southern States, 1 in 69; in the Western States, 1 in 99; in the Pacific States, 1 in 30; in the Territories, 1 in 15. More than three-fourths of the failures were for sums less than ten thousand dollars. Thirty-three firms failed for more than thirty-seven millions.

The capital invested by commercial houses and manufacturing firms in 1880, according to census reports, was about seven thousand million dollars. Total liabilities of the failing traders reported in that year year was upwards of fifty-seven million, and in 1883 it was nearly one hundred and seventy-six million. In the list of failures we find one hundred and thirty-two different classes of business represented, as bakers, bankers, dry goods, groceries, liquors, woollens, etc.—one hundred and thirty-two different branches of trade, furnishing over ten thousand failures in a single year (1883) with liabilities amounting to little short of two hundred million dollars. In this large aggregate of ten thousand and upwards of failures, there is not one farmer—not one. Let young men study that proposition, and let old men talk its lesson to their children.

The value of farms in the United States in 1880 was \$10,197,000,000. That does not include any personal property—nothing but what would go to a purchaser if he would buy the farm. The capital invested in business, including real estate, water power, etc., in the United States in 1880, was \$9,881,000,000, not as much as the naked farms were worth, and yet more than five thousand business houses failed in that year, owing more than \$57,000,000, and among them not one farmer. These are surprising figures.

It is estimated that, of the total number of persons who engage in trade, at some time during their lives about 95 out of 100 fail; that is 95 per cent. Of farmers, the number is not equal to one in a hundred or 1 per cent. The number is so small that no record is kept of them. They do not make a ripple on the great sea of trade.

There is a reason for all this, and it is not difficult to find. Out of the earth comes everything that supplies the business world with materials for trade. Wheat, corn, meat, wool, cotton, and other things which farmers raise, keep millions of men and women employed. And that which goes into their hands, is, usually, the surplus only after the farmers are supplied. All this vast flood of business is done to make a living. The trader relies upon dollars and cents, while the farmer relies on wheat and meat, and both of them grow on his lands. Fire or fraud or credit sweep the business man's capital out of sight in a day, but the farmer's fields remain. His capital is not dollars, but good old Mother Earth.

Still more. Farming pays better than the average business which is successful. Men often complain about high rates of interest,

and the complaint is just. We scold because we think bankers and railroad men and capitalists generally are making money faster than we. The truth is, that agriculture pays larger profits than any other regular business. Take manufacturers. There is not an average of 10 per cent. profit realized in that field. Take railroading, and cover any period in its history and the net profits have not averaged 6 per cent. More than one-half the railroads in the United States have been in receivers' hands within the past ten or twelve years. Every road in Kansas except the A., T. & S. F. has been bankrupt. The Union Pacific is many millions behind. The aggregate debt of the United States railroads is greater than the public debt of the nation. Once in about ten years we have a general breaking up all over the country, but the farmer sticks. He does not break. His profits are from 10 to 25 per cent. on the capital invested—often much more. Government bonds, the very best money investment, now brings from 3 to 4½ per cent. What farmer would exchange his land for bonds at that rate? What farmer would give his home in exchange for 2 per cent. railroad stock, or 10 per cent. banking shares? An average Kansas farm, well improved, worth, say \$5,000, will return an average net profit of \$1,000 exclusive of the family keep. That is 20 per cent. profit and a clean living besides. No other regular and legitimate calling approaches that in profits. Twenty-five acres of wheat at 25 bushels to the acre, \$500; 25 acres of corn at 50 bushels per acre, \$400; 10 acres of oats at 50 bushels per acre, \$100,—making a total of \$1,000 from 60 acres, leaving an even 100 acres on the quarter section for other uses. One thousand dollars on three items, using only about one-third of the farm. Use the whole farm, making every part useful, and it is the best paying business on earth.

A Hundred Acres Enough.

A writer in the *National Stockman* says one hundred acres are enough, and he begins his reasons by asking—

"Enough for what? For the average farmer. Farm for what? A living. What is the object of life? Happiness. This is the purpose to which all direct their efforts, and the goal all expect to reach. Some think it lies in inaction; nothing to do, and will not make a single exertion unless compelled by nature's demands. But the most part think it lies in the gratification of their desires, every want supplied and each one in answer to the demands of his peculiar desires is seeking the gratification of that particular desire, anticipating thereby to attain to happiness. It is needless perhaps to add they have it more in pursuit than possession, and that all these anticipations are more or less delusive, and perhaps none more so to the farmer than the desire to possess large tracts of real estate. The prophet says, 'Woe to them that join house to house and lay field to field until there be no place that they may be placed alone in the midst of the earth.' It will be to our purpose then to inquire, What are the elements of true happiness? We reply, competence, enjoyment, health, duty. That competence lies in the 100 acres is not so hard to convince the average farmer as that all the elements of true happiness lie in a mere competence. It seems as though he would rather struggle, fret and sacrifice the best of life with a good chance of dying in poverty, depriving his

children of the most ennobling of all, education, a real home, a happy childhood and youth, the best training for a successful life, the best protection against vice, and for what? To leave a number of hundreds of acres to be sacrificed forsooth under the Sheriff's hammer. Duty to humanity demands that every acre a man holds shall be brought to the highest possible state of productiveness, but that is putting it too mildly. Every foot should reach its possibility, and there is a positive limit to the number of feet the average farmer can thus properly develop, and in every foot he holds beyond that amount he is defrauding the country of the blessing that development would bring, and depriving some one else of the opportunity to produce that development. The man of large estate will usually leave undeveloped resources convenient to him that would be more than equivalent to his real income from remote parts; besides the liability to loss from accident, from misapplied or negligent labor, is very largely increased when beyond the eye of the owner, to say nothing of the worry and care. True gratification and enjoyment in farming come from thoroughness of operations, from development of hidden resources, concentration of power and capacity. Thus the farmer looks with feelings of pride and satisfaction upon a permanent and thorough improvement—a swamp reclaimed, a barren rocky point brought to fertility to be 'a thing of beauty, a joy forever.' He looks upon a five acre field of wheat that will yield forty bushels to the acre with a satisfaction with which he never can view one of twice the size and half the yield. Leaving out the question of profit, and these are the feelings that are conducive to health and happiness. We see the happy farmer developing his competence near his dwelling where he can hear the joyous laugh and song of his family, and can respond to the first tap of the dinner bell to join the happy group for an hour's social enjoyment, and when the elements become unpropitious for his labor, he is soon safe and happy in his home. Social contact is always regarded as essential to social culture, and this is why our city cousins are apt to regard us as uncultivated socially. In the old countries the remedy was supposed to lie in grouping the farmers' families in villages, but this was found to combine serious evils. The true American idea is '100 acres enough,' combining social contact with sufficient isolation to give pure homes with perfect freedom for speech and action, overcoming the want of complete contact with the force of the press and facilities for travel bringing the world to our doors, combined with frequent social gatherings, giving to the average farmer pure and true social culture to which city cousins can scarce hope to attain. Homes make the people, and make the country. Thus, with 100 acres the true home makes the competence, enjoyment, health and happiness. It is the fruit of the true American idea."

A London Bridge died, was a Swiss self-condemned to dumbness for two some sin. He hrtOR

for fourteen years wood, Kansas, and died in the STORIAS, VIOLETS, LAV- ORKETS, and others from ckshank, Sittlyton, Aber- & Drops, and Urvy, de- herd of S. Campbell, otland. Also Young ADY ELIZABETH, etc. ed by Cruickshank, and cherd. On. Kas., is on the U. P. City. Farm joins sta- na. Inspection invited.

The Stock Interest.

PUBLIC SALES OF FINE CATTLE.

Dates claimed only for sales advertised in the KANSAS FARMER.

September 26—Clay Co., Mo., Short-horn Breeders' Association, Liberty, Mo.
October 3—C. B. Eichholtz, Wichita, Kas., Short-horns.
November 6—S. E. Ward & Son, Short-horns, Kansas City, Mo.
November 20—Jos. E. Miller, Holsteins, at St. Louis, Mo.

May 29, 1885—Powells & Bennett, Short-horns, Independence, Mo.

Sorting and Scouring Wool at Home.

The KANSAS FARMER, two years ago or more suggested the establishment of a local agency in Kansas for the purpose of preparing the wool of our State for market. We presented some reasons that we considered good, and were pleased to receive many approving responses. At one time we thought our plan was about on the eve of success and Kansas wool growers would be saved many thousand dollars and some Kansas town would have one more good business establishment permanently with them. But caution in business, lack of co-operation, and dread of future reduction in prices, worked together to defeat the project. We desire this article to be considered as a renewal of the agitation. We hope to succeed in the end. If we cannot induce our home capitalists to embark in the enterprise, it is possible to satisfy men outside the State that there is a good opening here for investment in this particular direction. We will be much pleased to have suggestions pro or con from our interested readers, by way of helping the discussion along. Every wool grower, whether his flock consists of ten or ten thousand head, is interested in this matter. Take the matter of transportation alone, and the saving would be very great. About two-thirds of the raw wool clip is dirt and grease that must come out before the wool is fit for the manufacturer. Say a farmer has two hundred sheep that shear an average of 7½ pounds of wool, and he ships it in lump, the way things now are. He sends his 1,500 pounds of wool and dirt away and pays transportation on 500 pounds of wool and on 1,000 of dirt. It would cost no more to scour the wool here than it does in Philadelphia or Boston. It must be done somewhere, for the fibre cannot be worked into fabric until it is cleaned. The dirt is all waste. The grower pays the railroad companies for hauling all that waste, and there are two pounds of it to one of clean wool.

Our object, just now is not to discuss the subject at length, but rather to show what other people in other places think on the same matter. We wish to present to our readers what a man who has investigated the subject has to say about it. In the meantime, we hope our Kansas readers will give the subject serious attention. Our idea is to establish, say at Topeka, a Kansas Wool Depot, where wool will be assorted and scoured ready for sale direct to the manufacturer, so that Kansas wool growers shall have here in their own

market for their wool as good as they can get, and much more direct and profitable than at any eastern city. Let us have here for our wool and pay for it directly into the growers' pockets, without the intervention of half a dozen middle men.

It is also kept in circulation by being pressed into a smooth leather, meant to be heated by the sun or in a stove, and is a very competent writer on the subject of the fleece at the little expected expressions of business men in the country, from New

England to Missouri. A few of these may be reproduced here, in order to show what is the general opinion on this subject.

One of the greatest American authorities on wool and sheep husbandry, a gentleman who introduced the Merino sheep into Japan and Australia, expresses himself thus: "I endorse your proposed system of washing, and fully agree with you as to its application in the preparation of wool at the source of supply among the wool growers of the country. Not only would they save immensely in cost of transportation, but they would also save themselves annoyance, because they would know just what they sent to market. The wool would leave them exactly as the manufacturers want it for the pickers in their mills."

A prominent manufacturer gives his views in these words: "Your idea is excellent. What we want is wool that will give us sixteen ounces of the pound. As to the quality of the fibre we could tell at a glance what was wanted in order to produce the right kind of fabrics. If wool could be found in the market in the same condition as other textiles, there would be no difficulty to know exactly the quantity to buy in order to produce the desired number of yards."

One of the foremost flockmasters in Kansas writes: "We are considering the subject, and have discussed it thoroughly, and since reading your article we have thought much about the item of skilled labor and machinery."

In making an estimate of the number of skilled laborers to do so vast amount of work in a limited time, it must be remembered that so-called skilled or expert help must include a class of men who have devoted years to actual service at the sorting board. But even this is not always skilled labor, for there are men who for years have been engaged in one and the same shop, who know only those particular wools used there. They are as ignorant of matters of utility, breed, condition, and cost of the other classes of wools, as if they were not wool sorters at all. The only really skilled sorters are those who have had years of experience in many different places, and who, with close attention to business, and naturally keen powers of observation, have come into contact with and done actual sorting of all of the leading breeds of wool in the world's market. They are men who know how to do a thing, and the reason why it is done thus. Probably few trades are so overfull of self-styled experts as this particular one. We meet constantly with individuals who have a great deal to say about wool, but who, the moment they handle the fleece, show that they were not brought up in the wool room. One of the keenest judges of wool we ever came in contact with, some years ago in New England, was a man of very few words. His judgement was invariably correct; seldom wavering. His employers considered him worth his weight in gold.

In woolen mills, where particular kinds of goods are manufactured, the owners confine themselves, as a rule, to special kinds of wool brought from the same sections of the country. So, for example, do some use exclusively the Colorado wools, while others use Ohio and Pennsylvania, depending of course on the goods into which the fibre is to be made. One of the advantages of this is, that it is an easy matter to make your own wool sorters, and in a comparatively short time. The territory wools, among which those of Kansas may be counted, are, as a rule, both easy to sort and cheap to manipulate. They must first, however, be well graded. This must be done by experts of

the highest ability, for if not properly done the sorting may be said to be only half done. Young men of good habits, strong constitutions, and particularly good eye-sight, of from eighteen to nineteen years, can in a short time, say in a few months, under able instructors, learn to do as good work as men of years of experience. In fact, we now have several young men under our instruction who know how to skirt and brake a closely graded Ohio fleece, though they have only been at the board a few months. They do the work as satisfactory as need be. But we would never for a moment call these "skilled," because if they were to go into another sorting place they would immediately be rejected.

The help required for sorting Kansas wools we are confident can, without much difficulty, be made from the crude local material; but in order to insure success it is indispensable to do good grading and systematize things so under a good practical management that the best results may be obtained.

The present year's Kansas clip, now coming, shows a smaller shrinkage-test than that for the last year's, and besides, the improvement in the breed or character of the wool is becoming very much appreciated by manufacturers, so that the wool has great future before it.

One of the characteristics of the Kansas wool is its remarkable freedom from deleterious discoloring. This shows that if it were presented in the market in a scoured condition it would demand attention from purchasers at first sight. In the state in which it is now presented, in a rubbishy condition, and often shown in the commission houses in dark obscure corners, it commands little more attention than so much refuse. As a consequence it seldom receives due consideration from the general run of buyers, while if it were put up as suggested, it would recommend itself, and at prices not to be despised.

Some manufacturers may make objection to scoured wool on the ground that they cannot tell exactly what it is. To these will say: If you are capable in buying, and exercise judgment in the selection of washed or unwashed wools, you will be more successful with an article entirely free from foreign impurities. We are confident that the most conservative wool buyer will, in a short time, prefer to get his 16 ounces to the pound, instead of getting, as now, half of that. But as honesty is the cardinal point in all transactions, so must this business, from the beginning, be carried on upon such principles that it will recommend and establish itself, by producing uniform and standard grades under strict adherence to trade marks.

Among the many ingenious contrivances for wool scouring by machinery, the object being of course to save labor, there are some of recent origin, much to be commended. The objection to all however, is the limited supply of pure water in the rinsing bowl. This should be so arranged that it will flow constantly through the last bowl, meanwhile spinning the wool around. In a system which we examined recently, the inventor has added, as we think, a great improvement in introducing a preparatory soaking tank, the object, of course, being to prepare the fibre preparatory to its actual scouring. This, in connection with a powerful scouring machine, and an equally ingenious dryer, all working on automatic principles, are so well adapted to all these lofty and open territory wools that it is certainly a great achievement in the scouring business.

The universal opinion of persons who have studied this matter in detail is that the scouring by the producer will

increase the profit to the wool growers by several per cent. But what is of equal importance, is the establishment of a home market, and overcoming many of the difficulties under which wool grower now labors.

What Causes Glanders.

Glanders is a fatal disease. Any thing which will help us understand its causes will prove to be permanently valuable. Personally the writer does not believe the theory of contagion which is that contagious diseases never originate from local causes. He agrees with J. W. Clark, in *Western Rural*, there is no good ground for doubt that any of the so-called contagious diseases—are not contagious in their early stages—may be sporadic or originate in almost any locality where the conditions may be severely obnoxious to health, as in cases where the water, food, breathing food, or air, any or all of these, may be impure from being overloaded with irritating and unassimilable matter, that is incapable of supplying any healthy constituent of sound blood. In such conditions nothing appears to prevent a disease in the animals they affect, originating as easily and necessarily in one country or locality as in another. The natural chemical elements being so distributed and combined as to form the blood diseaseing poisons, and the poisons entering the blood of an animal in any place he may happen to exist in, what is there to prevent the original outbreak of disease in one or a score of localities, under the influence of active blood poisoning in such predisposing conditions? But I have neither strength or time to pursue this leading idea here advanced; and can only add a few sentences on the origin of glanders, the incurable distemper that has affected so many horses in parts of the Northwest. In a town not far from my residence, four horses were ordered—by the State Veterinarian of Iowa—to be destroyed. He called on me the day he examined them, by advice of his assistant. I said then, as is here repeated, infectious material can exist anywhere, if the chemical elements producing it are there in the conditions that produce it whether in an organized form or merely chemical conditions, and here let it be added that much has yet to be ascertained about the nature and origin of ferments, the probability being strong, that there are both chemical and organic ferments, and that each class varies with the extent of poison contained in any kind of fermentive matter affected by it.

Glanders seems to originate in scores of localities either simultaneously or about the same time—the same being true of lung fever in cattle—strongly suggesting the opinion that in each case there are similar predisposing conditions and exciting causes, in many localities at about the same juncture of time, and produced by similar conditions or influences. In many horse stables of scores of localities, the fumes of decaying horse-manures strongly adulterate the lung food or wholesome breathing air of the horses kept therein. A leading constituent of these noxious fumes constantly arising from heaps of decaying manure, in actual contiguity or not far distant from the stables, is ammonia vapor—a very noxious and virulent poison, set free by fermentation in the manure. The lung-food or breathing air of the horses in such conditions is much adulterated with this virulent poison. Taken in by breathing, this poisonous ammonia vapor meets and mixes with the blood in the lungs, at every inspiration, and this process goes on in stables, where this poisonous gas from decaying horse dung contaminates the air till the blood of the horses kept



R. E. MITCHELL & Co.

therein becomes overcharged, and saturated, as it were, with this most noxious and poisonous ammonia vapor. The excess of the poison in the circulation becomes too great to be discharged by the natural excretory action of the lungs, the usual and natural process of throwing off foul matter from the blood and the poison permeates and contaminates the entire circulation. Thus surcharged with it, the system of the horse is clogged with poisoned blood; and its result is the discharge of the poisonous matter in the nostrils and otherwise indicating the infectious disease named—glanders. This disease is incurable because the circulation has become so saturated and chemically contaminated with the poison that the normal power of throwing off such foul matter has been permanently overpowered by the excess in quantity and virulent quality of such poisonous material accumulated in the general circulation. It is probable that glanders might be generally prevented by preventing fermentation of manure or other material taking place anywhere within a dozen rods of stables, thus keeping the lung food of the horses from being contaminated by any of the several poisonous gases—there are several besides ammonia vapor—liberated from decaying manure or other material by fermentative decay.

Different poisons, gases or otherwise, affect the system differently, and when not discharged as excretory matter normally, and through natural excretory channels, the various formations of poisoned matter escape from the blood by special processes, through ulcerations, and in other abnormal ways that indicate an excess of noxious poison in the circulation, from which such noxious discharges take place.

Other poisonous gases, such as sulphuretted hydrogen, hydrogen carbide and sulphide, and carbonic acid, of course contribute to poisoning the blood by their retention and accumulation therein. But ammonia vapor is chiefly referred to because it is at once a dangerous and subtle poison, and is commonly recognized as present wherever fermentation is proceeding in horse manure, contiguous to, or in the vicinity of stables; the reason of much more of the ammonia poison being produced from decomposing horse manure, in the vicinity of stables, being that oats particularly, and other horse feed, in degree, contain much more nitrogenous material than is found in corn and the general feed of other farm stock, and this accounts for the excess of ammonia vapor in many stables, and its certain influence in poisoning the breathing air and the blood of horses to a much greater extent than that of other animals, which inhale but little of this poison that is so generally recognized in horse stables, by its familiar pungent odor.

J. W. CLARKE.

Value of Hen Manure.

The editor of the Germantown (Pa.) Telegraph lately saw on the premises of a first-class farmer, a well-constructed hen-house, though not at all complying with the conditions which hen-fanciers would impose. It was well designed only for laying and roosting in, and at first seemed strange to find, at mid-day, with a cool atmosphere, turkeys and chickens occupying it. They had free egress and ingress and were not fed or watered in it; yet the chickens always went there to lay. The secret was revealed, however, when the proprietor informed us that he had it cleaned out every week. All the droppings of the fowls were scraped from the floor, which was an inclined plane, into a trough or receiver, from which they were shoveled and heaped up, and the

place whitewashed frequently. This required but little over half an hour, and the manure for last season was estimated at \$120, and quite sufficient in quantity as an application to his entire crop of corn.

Farmers don't pay as much attention to their hen-houses and the manurial product as the real importance demands. Here was a most valuable amount of fertilizing material, obtained with little labor upon the premises, ready for use when needed, which would have cost a heavy sum to provide; besides, from the excellent arrangement of the house, which was by no means expensive, an increase of eggs was obtained which more than covered all the additional expense in labor.

Charcoal in Horticulture.

Not only florists but the growers of small fruits in Europe are making use of charcoal for promoting the growth of the plants they cultivate. It is not claimed that the charcoal is in any sense a fertilizer. It is an inert substance, and one not liable to pass into a state of decay, even under the most favorable circumstances. It endures longer when exposed to the action of the elements than any of the metals, except those that are ranked as precious. When it forms a union with the oxygen of the air it forms nothing but carbonic acid, which, though highly useful to plants, is obtained from the air without the trouble of producing it. It contains considerable potash and some lime, which the roots of plants will appreciate. Its principal use, however, consists in storing up moisture, fertilizing elements contained in water, and various gases, as ammonia, and giving them out as the wants of plants require. A barrel of freshly-burned charcoal will absorb nearly its own bulk of soapsuds or liquid manure without presenting the appearance of being wet. The roots of the plants will pass between the pieces of charcoal and will often penetrate them, and in so doing will be in a position to appropriate the substances in the pores. Charcoal is very desirable for placing in pots or boxes in which house plants are raised. It will retain many of the bad odors which are likely to arise from most fertilizers. It is also very desirable for garden beds in which roses, annual flowers, and edible vegetables are raised. It is an excellent substance to bury in the ground where grape vines are planted. For placing in pots, boxes, and garden beds it should be tolerably fine. For grape vines and large shrubs it may be in the form in which it is taken from the kiln, or is usually found in the market. For these purposes it should be buried quite deeply. Persons who sell or use charcoal often have considerable that is too fine for keeping up a fire, and will dispose of it for a nominal price. This will be very suitable for use in the house, or the flower or vegetable garden. Persons who have large graperies will find it to their advantage to burn their own charcoal.

It is said that hens fed on clean, sound grain and having good clean grass runs, produce finer-flavored eggs than those having access to stable and manure heaps and eat all kinds of filthy food, and we do not see why the statement should not be true.

For fodder the yield of sweet corn and sorghum is about the same. The former, however, is better relished by stock, while the latter endures drouth better.

A New York horticulturist has found the blossoms of mulched strawberries more seriously injured by frost than those unmulched.

BREEDERS' DIRECTORY.

Cards of three lines or less, will be inserted in the Breeder's Directory for \$10.00 per year, or \$5.00 for six months; each additional line, \$2.00 per year. A copy of the paper will be sent the advertiser during the continuance of the card.

CATTLE.

J. M. MARCY & SON, Wakarusa, Shawnee Co., Kas., breed Thoroughbred Short-horns of fashionable families. A few yearling bulls and young cows left for spring trade. Correspondence solicited.

BROAD LAWN HERD of Short-horns. Robt. Patton, Hamlin, Kas., Prop'r. Herd numbers about 120 head. Bulls and Cows for sale.

ALTAHAM HERD. W. H. H. Cundiff, Pleasant Hill, Cass Co., Mo., has fashionable-bred Short-horn Bulls for sale. Among them are two Bessie of Sharons and one aged show bull. None but the very best allowed to go out from this herd; all others are castrated.

U. P. BENNETT & SON, Lee's Summit, Mo., breed-ers of THOROUGHBRED SHORT-HORN CATTLE, Cotswold sheep, Berkshire swine, Bronze turkeys and Plymouth Rock chickens. Inspection invited.

POWELL BROS., Lee's Summit (Jackson Co.) Mo., breeders of Short-horn Cattle and pure-bred Poland-China Swine and Plymouth Rock Fowls. Stock for sale. Mention this paper.

W. A. POWELL, Lee's Summit, Mo., breeder of the Poverty Hill Herd of Thoroughbred Short-horn Cattle. Inspection and correspondence solicited.

WALNUT PARK FARM, Frank Playter, Prop'r., Walnut, Crawford Co., Kas. The largest herd of Short-horn cattle in Southern Kansas. Stock for sale. Correspondence invited.

A. HAMILTON, Butler, Mo., Thoroughbred Galloway cattle, and calves out of Short-horn cows by Galloway bulls, for sale.

W. M. D. WARREN & CO., Maple Hill, Kas., importers and breeders of Red Polled Cattle. Stock for sale. Correspondence solicited. E. R. station St. Marys, Kas.

HOLSTEIN CATTLE AND SHROPSHIRE SHEEP bred and imported by Jos. E. Miller, Ellwood Stock Farms, Belleville, Ill.

J. W. LILLARD, Nevada, Mo., Breeder of THOROUGHBRED SHORT-HORNS. A Young Mary bull at head of herd. Young Stock for sale. Satisfaction guaranteed.

W. M. P. HIGINBOTHAM, Manhattan, Riley Co., Kas., Proprietor of the Blue Valley Herd of Recorded Short-horn Cattle of the best families, and choice colors. Also High Grade Cattle. Offers some choice bargains in Bulls, Cows and Heifers. The growing of grade bulls for the Southern and Western trade a specialty. Correspondence and a call at the Blue Valley Bank is respectfully solicited.

PLEASANT VIEW FARM, Wm. Brown, Lawrence, Kas., Breeder of JERSEY CATTLE of the best strains.

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E. S. SHOKEY, Lawrence, Kansas, breeder of Hereford Cattle. Three cows and 11 bulls for sale. Also Grade bulls and heifers for sale.

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CATTLE AND SWINE.

HILLSIDE STOCK FARM, W. W. Waltmire, Carbonate, Kas., breeds Thoroughbred Short-horn Cattle. Recorded Chester-White Swine a specialty.

WOODSIDE STOCK FARM, F. M. Neal, Pleasant Run, Pottawatomie Co., Kas., breeder of Thoroughbred Short-horn cattle, Cotswold sheep, Poland-China and Berkshire hogs. Young stock for sale.

J. E. GUILD, CAPITAL VIEW STOCK FARM, Silver Lake, Kansas, Breeder of THOROUGHBRED SHORT-HORN CATTLE and POLAND-CHINA SWINE. Correspondence solicited.

D. R. A. M. EIDSON, Reading, Lyon Co., Kas., makes a specialty of the breeding and sale of Thoroughbred and high-grade Short-horn Cattle, Hambletonian Horses of the most fashionable strain, pure-bred Jersey Red Hogs and Jersey Cattle.

H. B. SCOTT, Sedalia, Mo., breeder of SHORT-HORN CATTLE, POLAND CHINA HOGS, COTSWOLD and SHROPSHIRE SHEEP. Send for catalogue.

W. H. & T. C. EVANS, Sedalia, Mo., Breeders of Short-horn Cattle, Berkshire Hogs, Bronze Turkeys, Plymouth Rock Chickens and Pekin Ducks.

SHEEP.

E. COPLAND & SON, DOUGLASS, KANSAS, Breeders of Improved American Merino Sheep. The flock is remarkable for size, constitution and length of staple. Buck a specialty.

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D. W. McQUITTY, Hughesville, Pettis Co., Mo., breeder of SPANISH MERINO SHEEP, Berkshire Swine, and eight varieties of Poultry. Eggs, \$1.50 per setting.

G. B. BOWWELL, Breckenridge, Mo., has 1,100 Merino rams for sale. 250 of them are registered. His seven best stock rams shear from 27 lbs. to 33 lbs. weigh from 145 lbs to 180 lbs.

A. F. WILLMARTH & CO., Ellsworth, Kas., breed-ers of Registered Spanish Merino Sheep. "Woolly Head" 695 at head of flock. Choice rams for sale. Satisfaction guaranteed.

SAMUEL JEWETT, Independence, Mo., breeder of American or Improved Merino Sheep. Vt. Register. The very best. Choice stock for sale. Over 300 extra rams. Catalogues free.

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C. F. HARDICK & SON, Louisville, Kansas, breed-ers of REGISTERED AMERICAN MERINO SHEEP, Having good constitution and an even fleece of fine, dense wool. Fine wool a specialty. Come and see our flocks or write us.

MERINO SHEEP, Berkshire hogs and fifteen varieties of high-class poultry of the best strains. Bucks a specialty. Harry McCullough, Fayette, Mo.

SWINE.

CATAPPA GROVE STOCK FARM, J. W. Arnold, Louisville, Kansas, breeds Recorded

POLAND-CHINA SWINE AND MERINO SHEEP. The swine are of the Give or Take, Perfection, and other fashionable strains. Stock for sale in pairs not related. Invite correspondence or inspection of stock.

A. J. CARPENTER, Milford, Kansas, breeder of Thoroughbred Poland-China Swine. Stock for sale. Inspection and correspondence invited.

W. M. PLUMMER, Osage City, Kansas, breeder of Recorded Poland-China Swine. Young stock for sale at reasonable rates.

I. L. WHIPPLE, Ottawa, Kas., breeder of Recorded Poland-China and Red Berkshire swine. Stock for sale at all seasons. Correspondence solicited.

L. W. ASHBY, Calhoun, Mo., Pure English Berkshire, shires. Imported Royal Toronto 4377 at head of herd. Inspection solicited.

R. B. BALDRIDGE, Parsons, Kas., breeder of THOROUGHBRED RECORDED POLAND CHINA SWINE. Stock for sale. Inspection of herd or correspondence inv.

ROBERT COOK, Iola, Allen county, Kansas, importer and breeder of Poland-China Hogs. Pigs warranted first-class. Write.

POULTRY.

EGGS FOR SALE—Of Light Brahma and Black Spanish Chickens, by Mrs. M. Waltmire, Carbonate, Kas.

ONE DOLLAR per 13 for Plymouth Rock eggs; Pekin Duck eggs the same. Three settings for \$2.50. Mark S. Salisbury, P. O. box 931, Kansas City, Mo.

N. R. NYE, breeder of the leading varieties of Choice Poultry, Leavenworth, Kansas. Send for circular.

NEOSHO VALLEY POULTRY YARDS—Established 1870. Pure-bred Light Brahmas, Partridge Cochins, Plymouth Rocks, Egg in season. Stock in fall. Send for circular. Wm. Hammond, box 190, Emporia, Kas.

WAVELAND POULTRY YARDS, Waveland, Shawnee county, Kansas. W. J. McCallum, breeder of Light Brahma, Plymouth Rocks, and Pekin Ducks. Stock for sale now. Eggs for hatching in season; also Buff Cochins eggs.

MISCELLANEOUS

STOCK FARM FOR SALE.—640 acres, together with stock and farm implements. Address J. H. Reints, Odin, Barton Co., Kas.

J. G. D. CAMPBELL, Junction City, Kansas, Live Stock Auctioneer. Sales made in any part of the United States. Satisfactory reference given.

S. A. SAWYER, Manhattan, Kas., Live Stock Auctioneer. Sales made in all the States and Canada. Good reference. Have full sets of Herd Books. Compiles catalogues.

TOPEKA TRANSPORTATION OFFICE,

No. 130 Kansas Ave., Topeka. All orders promptly filled. Also storage for all kinds of goods at reasonable charges. Orders taken for hacks. Moving families a specialty. A. G. DRAKE, Manager.

Branch Valley Nursery Co., Peabody, Ks.

The Russian Mulberry and Apricot specialties. Nurserymen and Dealer, write for wholesale prices. E. STONER & SON.

YORK NURSERY COMPANY (Established 1870). Nurseries and Green Houses at FORT SCOTT, KANSAS. Largest Stock of Nursery and Green House Plants in the West. BEAUTIFULLY ILLUSTRATED CATALOGUE now ready. Mailed to applicants free.

Stock Ranch for Sale.

A well-watered stock ranch of 1,280 acres, three miles west of Stockton, county seat of Book's county. A creamery and a school house one-half mile from the ranch. 640 acres under fence and 300 acres in cultivation. The ranch has four good springs and abundance of running water in the creek. There is a good stone residence, stone stable, frame corn cribs a stone cattle stable 14x12 feet, ice and milk house 1x30 feet and corral 150x40 feet, a good well and 600 growing catalpa trees. Price \$7 per acre; one-third cash, balance on time at 8 per cent. Address ROCKY CO. BANK, Stockton, Kansas.

THE LINWOOD HERD

SHORT-HORN CATTLE



IMP. BARN VICTOR

W. A. HARRIS, Linwood, Kansas, The herd is composed of VICTORIAS, VIOLETS, LAVENDERS, BRAVITH BUDS, SECRETS, and others from the celebrated herd of A. Cruickshank, Slittytown, Aberdeenshire, Scotland. GOLDEN DROPS, and URYS, descended from the renowned herd of B. Campbell, Kinellar, Aberdeenshire, Scotland. Also Young MARYS, YOUNG FAYLIGES, LADY ELIZABETHS, etc. IMP. BARN VICTOR 42824, bred by Cruickshank, and IMP. DOUBLE GLOSTER head the herd. Linwood, Leavenworth Co., Kas., is on the U. P. R. R., 27 miles west of Kansas City. Farm joins station. Catalogues on application. Inspection invited.

Correspondence.

TEXAS FEVER AND CROPS.

Letter from an Old Settler of Bourbon County Who has Been There.

Kansas Farmer:

The farmers of southeastern Kansas are rejoicing over their fine crops of wheat, oats, flax and corn—in fact everything. It seemed as if we were blessed with good rains at the right time all through this season. Grass crops of all kinds are good. Clover and timothy are proving to be a success as far as we have tested them. Quite a number have sown and more are going to sow. Wheat threshing has begun, and turns out from 15 to 30 bushels per acre; oats, 35 to 50. Fruit crops will be rather light, although there will be considerable apples. There are quite a number of fine orchards in this county.

Stock of all kinds is doing well. We have no disease among them. Our cattle and hogs are healthy and doing well. Farmers are improving the blood, until we have some as fine stock as they have anywhere, and the same with horses; in fact, I think we are up with our neighboring counties, if not ahead in some things. As to improvements, it is surprising to see the new improvements going on all over the county. Farmers have begun to put up fine dwelling houses, barns, etc.

I hear a good deal said about disease among cattle in the western part of this State. I will give you my knowledge in the matter and my views, also. At the time our early freighting was done, then the Texas or Southern cattle were driven through this country over the old military road. Nearly all of the native cattle along that road died during July, August and September, every season, by what was called by some dry murrain, by others bloody murrain; some said Texas fever; and those men that had worked cattle freighting on or near that road, lost nearly all of their work cattle when they returned home, except those that had Texas steers for teams. A few years afterwards, some began to buy Texas cows and young heifers. Then the trouble began again. Our native stock began to die. In course of time the farmers along that military road began to think it was Texas cattle that caused them to lose so much of their stock. Then they began to interfere with drovers to prevent them from driving over that road, and the drovers began to go east through Missouri and the west part of this county. Then the cattle plague was renewed again among our cattle. The second season we stopped the first herd that came into my neighborhood, and where our native cattle grazed on the prairie where we stopped this herd and turned them back, just so far as they came along that route, the cattle died that season. One of my neighbors, a new-comer, that lived five miles out from the settlement, sympathized with the drovers so much that he had them go up on his range and said they might stay all summer. That was in May, and they stayed about one month with this farmer, who had 40 head of fine native cattle. The effect was, he lost 39 head out of the 40, and said hereafter he would listen to older settlers in things he knew nothing about. Now I think if our Western cattle men would not allow Texas or Southern cattle to be driven through or shipped and unloaded to come in contact with our cattle on their range during the summer season, they would be as we are in this county, free from any disease. But the first season they come in contact with our native cattle, or our cattle feed on the range where those Southern cattle have been, just so sure they will take what is called Texas fever. Symptoms:—Lop their ears; eat nothing; some will pass blood with urine, seemingly as if they would all go to blood. All seem to have considerable fever and are very weak until they die.

I know of one fine Texas steer that got out of the drove and run with my neighbor's cattle one season, and from the effects there was about thirty head of fine fat cows and steers died. I know of cattle taking the fever from eating the bedding that was thrown out from the cattle cars wherein Texas cattle had been shipped.

Our cattle will not take the disease one

those Southern cattle run. We old settlers would no more let our cattle run with or on the range with those Texas cattle the first season after their coming here than we would give our cattle strychnine.

Excuse my long letter. It is the first, and I am not in the habit of writing to papers. But I feel considerably interested in the stock men of Kansas. C. T. RUCKER.
Hiattville, Bourbon Co., Kas.

Silk Culture.

Kansas Farmer:

In the KANSAS FARMER which makes its rounds of weekly visits, we see a great deal about stock, the dairy, poultry, the busy bee, etc., but no one tells us about the busy silkworm that has just given us a harvest of "golden" and "silver" cocoons. Why not, is a question; for it is of great importance to us an industry and material for clothing. Whatever fabric silk forms a part of it is more beautiful and enduring. Silk raisers so far as heard from feel encouraged and are hopeful. Very many specimens of beautiful cocoons have been sent me by those who purchased seed and instruction book. With but few exceptions all desire to enlarge the work next year. One lady says she has 400,000 eggs and intends to save at least half; the remainder she will dispose of to her neighbors who are greatly interested in the work. She says her worms were perfectly healthy and measured over four inches at maturity. Her specimens of cocoons are very beautiful, and her method of saving them was very simple and ingenious. She fed entirely on Osage orange; the worms liked it better than mulberry. She had the New York Guide Book, but thought it would take a young saw-mill to saw lumber enough to make the "fixens." It was cumbered with too much and expensive preparations; said she liked the Bombyx Mori as an instruction book; it had more common sense and less finery and consequently less expense.

Since the publication of the Bombyx Mori a great and rapid change has taken place in regard to silk worm food. What was entirely discarded has come into general use, and produces a fine grade of silk. There never were greater facilities offered in any new industry; food already grown in the greatest abundance.

The ingenuity of our women will soon devise ways and means and means to shorten and lighten the work; method of preparation will suggest itself to each according to the space and means each has to devote to the work. The rules in the Manual are not arbitrary; but sufficient space, perfect ventilation and clean bins are. A very important point is to keep the temperature as nearly as possible the same day and night. This is too much neglected, and is the cause of serious loss in many instances.

A lady has just written me that a two days rain was succeeded by a cold night; the spinning worms were chilled and unable to finish their cocoons, and the chrysalis, not yet perfectly formed, died in the cocoon. Had they warmed the worms, she says, they would have had splendid success. The want of a ready market for the cocoons is no longer an insuperable objection. Robert F. Mulrey, 1345 Hancock St., Philadelphia, will purchase and manufacture American silk as long as the supply lasts. He prefers them to imported ones. Silk culture has its friends and its enemies; but the latter are fast disappearing.

MARY M. DAVIDSON, Silk Culturist.
Junction City, Kas., Aug. 6.

Kansas Fairs.

A revised list of State, district and county agricultural societies in Kansas that will hold fairs in 1884, with names of Secretaries and places and dates of holding fairs:

Shawnee county—Kansas State Fair Association, Topeka, G. Y. Johnson, Secretary, Sept. 8, 9, 10, 11, 12 and 13.

Douglas—Western National Fair Association, Lawrence, R. W. Cunningham, Sec'y, Sept. 1, 2, 3, 4, 5 and 6.

Anderson—Anderson County Fair Association, Garnett, M. L. White, Sec'y, Aug. 25, 27, 28 and 29.

Bourbon—Bourbon County Fair Association, For Scott, Ira D. Bronson, Sec'y, Oct. 7, 8, 9 and 10.

Brown—Brown County Exposition Association, Hiawatha, C. H. Laurence, Sec'y, Sept. 16, 17 and 18.

Butler—Butler County Exposition Association, El Dorado, W. H. Litton, Sec'y, Sept. 16, 17, 18 and 19.

Chase—Chase County Agricultural Society, Cotton-

Association, Columbus, John Henderson, Sec'y, Sept. 2, 3, 4 and 5.

Clay—Clay County Agricultural Society, Clay Center, D. A. Valentine, Sec'y, Sept. 23, 24, 25 and 26.

Cloud—Republican Valley Fair Association, Concordia, Thos. Wronn, Sec'y, Sept. 16, 17, 18 and 19.

Coffey—Coffey County Fair Association, Burlington, J. E. Woodford, Sec'y, Sept. 16, 17, 18 and 19.

Cowley—Cowley County Fair and Driving Park Association, Winfield, Ed. P. Greer, Sec'y, Sept. 23, 24, 25, 26 and 27.

Crawford—Crawford County Agricultural Society, Girard, A. P. Riddle, Sec'y, Sept. 23, 24, 25 and 26.

Davis—Kansas Central Agricultural Society, Junction City, F. W. Powers, Sec'y, Oct. 1, 2 and 3.

Dickinson—Dickinson County Agricultural and Industrial Association, Abilene, H. H. Floyd, Sec'y, Sept. 23, 24, 25 and 26.

Doniphan—Doniphan County Agricultural, Horticultural and Mechanical Association, Troy, Thos. W. Heatley, Sec'y, Sept. 23, 24, 25 and 26.

Elk—Elk County Agricultural Society, Howard Thos. Bruce, Sec'y, Sept. 18, 19 and 20.

Ellis—Western Kansas Agricultural Fair Association, Hays City, D. C. Nellis, Sec'y, Sept. 24, 25 and 26.

Franklin—Franklin County Agricultural Society, Ottawa, A. H. Sellers, Sec'y, Sept. 23, 24, 25, 26 and 27.

Greenwood—Greenwood County Agricultural Association, Eureka, A. W. Hart, Sec'y, —.

Harper—Harper County Agricultural and Mechanical Association, Anthony, John D. Brown, Sec'y, Sept. 3, 4 and 5.

Harvey—Harvey County Agricultural Society, Newton, Allen B. Lemmon, Sec'y, —.

Jefferson—Jefferson County Agricultural and Mechanical Association, Oskaloosa, A. J. Buck, Sec'y, Oct. 1, 2 and 3.

Jefferson—Valley Falls Kansas District Fair Association, Valley Falls, M. M. Maxwell, Sec'y, Aug. 26, 27, 28 and 29.

Jewell—Jewell County Agricultural and Industrial Society, Mankato, Geo. S. Bishop, Sec'y, Oct. 1, 2 and 3.

Jewell—Jewell District Fair Association, Jewell, Jno. S. Foster, Sec'y, Sept. 17, 18 and 19.

Johnson—Johnson County Co-operative Fair Association, Edgerton, C. M. T. Hulet, Sec'y, —.

Lincoln—Solomon Valley Farmers' Club, Ingalls, N. B. Alley, Sec'y, Sept. 11 and 12.

Linn—LaCygne District Fair Association, La Cygne, O. D. Harmon, Sec'y, Sept. 30 and Oct. 1, 2 and 3.

Marion—Marion County Agricultural Society, Peabody, L. A. Buck, Sec'y, Sept. 2, 3 and 4.

Marion—Marion Fair Association, Marion, Geo. C. Lockwood, Jr., Sec'y, Sept. 23, 24, 25 and 26.

Marshall—Marshall County Fair Association, Marysville, L. W. Libbey, Sec'y, Sept. 23, 24, 25 and 26.

McPherson—McPherson County Fair Association, McPherson, Jas. B. Darrah, Sec'y, Sept. 30 and Oct. 1, 2 and 3.

Morris—Morris County Exposition Company, Council Grove, F. A. Moriarty, Sec'y, Sept. 30 and Oct. 1, 2 and 3.

Morris—Morris County Agricultural Society, Parkerville, C. N. Hull, Sec'y, —.

Nemaha—Nemaha Fair Association, Seneca, Abijah Wells, Sec'y, Sept. 2, 3, 4 and 5.

Osage—Osage County Fair Association, Burlingame, C. H. Taylor, Sec'y, Sept. 16, 17, 18 and 19.

Ottawa—Ottawa County Agricultural Society and Mechanics' Institute, Minneapolis, A. C. Jackson, Sec'y, Sept. 30 and Oct. 1, 2 and 3.

Phillips—Phillips County Agricultural and Mechanical Association, Phillipsburg, J. W. Lowe, Sec'y, Oct. 8, 9 and 10.

Rice—Rice County Agricultural, Horticultural and Mechanical Fair Association, Lyons, C. W. Rawlings, Sec'y, Sept. 24, 25 and 26.

Riley—The Blue and Kansas Valley Agricultural Society, Manhattan, S. A. Sawyer, Sec'y, Sept. 23, 24, 25 and 26.

Rooks—Lanark Agricultural Society, Stockton, Albert Lambert, Sec'y, Oct. 9, 10 and 11.

Saline—Saline County Agricultural, Horticultural and Mechanical Association, Salina, Chas. S. Martin, Sec'y, Sept. 23, 24, 25 and 26.

Sedgwick—Arkansas Valley Agricultural Society, Wichita, D. A. Mitchell, Sec'y, Sept. 30 and Oct. 1, 2 and 3.

Sheridan—Sheridan County Agricultural and Mechanical Association, Kenneth, Geo. W. Crane, Sec'y, —.

Sumner—Sumner County Agricultural and Mechanical Association, Wellington, I. N. King, Sec'y, Sept. 17, 18, 19 and 20.

Washington—Washington County Exposition Association, Washington, C. W. Aldrich, Sec'y, Sept. 2, 3, 4 and 5.

Washington—Washington County Live Stock, Agricultural and Mechanical Association, Greenleaf, F. L. Joslyn, Sec'y, Sept. 10, 11 and 12.

Woodson—Neosho Valley District Fair Association, Neosho Falls, R. P. Hamm, Sec'y, Sept. 22, 23, 24, 25, 26 and 27.

Wyandotte—Wyandotte County Industrial Society, Wyandotte, M. B. Newman, Sec'y, —.

World's Fair at New Orleans

Will be open to the public on December 1st, next, and continue until June 1st, 1885. The MEMPHIS SHORT ROUTE SOUTH will enable people in the West and Northwest to visit the great Exposition at a trifling cost, as this new route (the only direct line between the West and South) makes the trip to New Orleans a comparatively short one.

During the Great Fair, round trip tickets to New Orleans, good to return until June 1st, will be on sale via the MEMPHIS ROUTE, at very low rates from Kansas City and all points in the West, and especial arrangements will be made to accommodate the people in the best possible manner. Entire

close connections are made with all lines South and East.

The MEMPHIS SHORT ROUTE SOUTH is the only direct line from the West to Chattanooga, Atlanta, Nashville, New Orleans, Jacksonville, and all Southern cities. Round Trip Tourist Tickets are sold via this route to all the pleasure resorts of the South.

Send for a map and time card of this SHORT ROUTE, and note particularly its quick time and superior accommodations.

J. E. LOCKWOOD,
General Passenger Agent,
Kansas City.

The Length and Quality of Wool.

"The three causes which affect the length and quality of wool are the breed of the sheep, the climate and the soil. These might be reduced to two, for the breed of the sheep ultimately depends on the climate and the soil; but it is more useful to consider different breeds as quite distinct. The present breeds have been obtained in some instances by careful selections of those sheep which had a tendency to produce such wools as the grower desired and as the climate favored; until now some sheep will only grow short wool if left in their native district. In other instances, probably the most numerous, nature has decided for herself what length and quality of wool the sheep must produce in each country; no matter what efforts the farmer may make to the contrary, he can only permanently rear short-wooled sheep where nature favors short wool, and long-wooled sheep where she favors length.

"The property for which wool is perhaps most valued is truefulness of breeding. In a true-bred sheep each staple of wool, that is, each lock into which a group of fibers naturally forms itself, will be of equal growth throughout. The fiber will be the same thickness as nearly as possible the whole length, or will be finer at the point than at the root. There will be no shaggy rough wool in it. But if the sheep be cross-bred, or ill-bred and exposed to storms, the fibers will be rough at the points and rougher there than at the roots; the reason of this being that as the wool gets longer, or as it is more exposed to bad weather and hard treatment, nature makes it stronger to resist what it has to encounter, while the part which is next the skin remains fine to give greater warmth. Such wool, even when combed and spun into yarn, never lies smoothly and evenly as true-bred wool, and consequently not of as much value. There is another sort of wool which farmers do not seem to understand, and writers on the subject often ignore, but which is found more or less on all cross-bred sheep, and on sheep which are too much exposed and fed in hilly districts. This is known as 'kemp,' or dead hairs. These kemps vary in length and coarseness according to the breed of sheep. In white Highland they are about two inches long and very thick; in cross-bred Australian they are very short. In the former they cover the under side of the fleece; in the latter they are so few as not to be of any importance. They are, however, all alike in this, that they are a brilliant shining white (except on sheep with gray wool, when they may be black), and they will not dye the same color as the rest of the wool. They consequently depreciate the value of the wool very greatly, making it only suitable for low goods. They seem to be fibers of wool, which, owing to the coarseness of the breeding of the sheep, or owing to its exposure to rough weather, have been killed, so far as power to grow long is concerned; but they grow in thickness and hardness till they become solid, glazed and horny, and thus are unable to receive the substance of the dye. They never alter in the process of carding, combing or spinning, nor do they unite with the rest of the wool to form the thread, but lie on the surface, only held down by other fibers of wool which may be wrapped round over them. It should be the object of every breeder of sheep to diminish, if possible, these very kempy varieties of wool."

Hay Fever.

I have been afflicted for twenty years, during the months of August and September, with Hay Fever, and have tried various remedies without relief. I was induced to try Ely's Cream Balm; have used it with favorable results, and can confidently recommend it to all.—ROBERT W. TOWNLEY, (ex-Mayor) Elizabeth, N. J.

Business Matters.

That there has been a good deal of unsoundness in business circles during the past six months was evident to all close observers. The cause is not difficult to find—abuse of credit. It would be absolutely impossible to conduct great enterprises, and especially an extended commerce, either inland or foreign, without the use of credit. Commercial law had its origin in the necessities of trade. Notes, drafts and bills of exchange, banks and clearing houses are evidences of what commerce must have as auxiliaries. These things, however, are all proper, and the whole people are benefitted by their existence. They have no necessary relation to that kind of business which deals in fluctuations and uncertainties. Legitimate business and trading on guesses are two very different things; and it is from the latter that most of our panics grow.

There were more business failures the last year than ever before in this country in the same length of time, except possibly 1873-4, and they were for larger amounts. Recent breaks have shown enormous hazards, yet there has been no panic in the ordinary sense of the term. People generally have gone about their regular business as if there was no trouble anywhere. The reason of this is that the country at large has been improving and adding to its permanent wealth in regular channels of legitimate trade. The startling failures were those of persons engaged wholly in schemes of reckless speculation, a kind of business that adds nothing to the people's store, and in no way affects legitimate commerce except as it may have imposed upon the credulity of solid and regular establishments. Ward's villainy exposed a margin of indebtedness amounting to nearly if not quite sixteen million dollars; but aside from robbing General Grant of about all the old man had, and relieving his sons of a few thousand dollars, and sinking some mining profits of Mr. Mackay, no real property was lost. Such performances, except as to the amount of capital invested in the beginning, never deal in anything but credit. Hence we say the most notable breaks have come from abuse of credit.

But, while these failures do not destroy much property, they are an indirect attack on legitimate business, because, more or less, they destroy that mutual confidence among men which is essential to flourishing trade. They affect banks and other moneyed institutions, making capital cautious. Collections are pressed, thus forcing loss and inconvenience upon debtors; and money that ought to be out among the people is hoarded through fear of a panic.

In the last Financial Circular of Henry Clews & Co., New York, the situation is well stated. Though that was published three weeks ago, and although several heavy failures have been reported since, we think the facts remain about as they are there stated. We quote: "All the facts of recent experience go to show that while abuses of credit and speculation have grown up during the last ten years of general prosperity, and while the recent panic was to a large extent a natural breaking-up at those weak points, yet at the same time the extent of unsoundness to be rectified by panic was much more limited than that usually developed at these decennial crises—a fact which is perhaps attributable to the extraordinary degree of the prosperity with which the nation has been favored during the last decade. There has been no previous period in our history in which the national wealth has made such large and solid accumulations;

and the most significant fact has been that the achievements of our enterprise have been accomplished mainly from home resources, and that we have simultaneously paid off very large amounts of obligations held in foreign countries. We have felt firmly convinced that a panic following years of such solid and compact progress must find less to feed upon than in ordinary times, and that it must strike such a buttress of free and independent capital as would put a sharp limit upon its effects. It would have been fortunate had those who have charge of large amounts of floating capital cherished this kind of confidence, for they then might have avoided much needless disturbance of loans that has made the effects of the panic more serious than they otherwise would have been. Even now that the panic has spent its force and its comparative feebleness has been exposed, we find the banks adopting a policy of caution which appears to go beyond all legitimate occasion and which is calculated to do more harm than good."

What is good for us Kansas people is, that we have not been pinched by whatever squeeze there was. Our banks are all reported to be in good condition, and improvement is everywhere apparent. And best of all, our farmers are in better condition than ever. A Presidential election always depresses business more or less; and the pending issues are of such a nature as to encourage the usual disquietude and make it more apparent. But even with five or six Presidential tickets in the field, Kansas shows her wheat stacks, her corn fields and herds, and is ready for the heaviest squall.

Business is not brisk, but there is no panic and there will not be any. There is plenty of money, but it is held pretty close. There is plenty, however, of everything the people need, and as soon as we get rid of some surplus manufactures, the entire sky will be bright again.

The World's Exposition.

The World's Exposition that is to be opened at New Orleans, is so far perfected in all its departments that it is now in order to state that it will be the largest world's fair ever held. The buildings are larger than those erected for the Philadelphia centennial. The exhibits outnumber those of any previous exposition. Each of the States, except possibly one or two, will be represented by an exhibit. Congress has made a loan of \$1,000,000 in favor of this centennial exposition. The United States government will make a special exhibit, the largest it has ever attempted, costing hundreds of thousands of dollars, and to that end a mammoth building is being erected in the group of exposition buildings. The Mexican government has appropriated \$200,000, and will erect a special building for its unique display. The Central American republics have been aroused from their long slumber and will be fully represented for the first time among the great nations of the earth. At the exposition one may learn more about the natural resources of those regions than by an ordinary visit to Mexico or Central America. To lovers of music a visit to the Exposition will be highly gratifying as there is a music hall capable of seating 11,000 persons and a stage large enough to hold 600 musicians. Grand concerts will be given during the season. Beside this the fact ought to be known that New Orleans is the only city in the Union that has had an established opera during half a century. Nor is this all. Strangers think themselves well paid by making a visit of pleasure to the quaint old city at any time. During the carnival season tens of thousands of visitors flock to the Crescent city to see the gorgeous pageants prepared annually at an expense to the citizens of from \$100,000 to \$200,000. This lavish expenditure of money is for the gratification of strangers and home folks, and the displays are absolutely free. The citizens of the southern metropolis who do such large things, in such a large way, have pledged their word to make their World's Fair the crowning event of the century and they will do it.

The Wool Market.

From Walter Brown & Co.'s wool circular of date August 1 we quote:

Since our last report the wool market has shown considerable activity; after having tried to "bear" prices to an unreasonable point for several weeks, manufacturers seem finally to have reached the conclusion that values are as low as they can be forced for some time, and that it would perhaps be well to lay in a supply while the assortment is good.

As a consequence, large transactions have been made in such wools as were shipped East to meet the market, especially noticeable in Texas, Territory and western unwashed wools, and although no material rise can be quoted, prices are certainly stronger and weak holders are difficult to find.

It can hardly be expected that values will advance to any extent, in view of the large stocks offering on the market and the continued dullness of woolen goods; and also, while money is more abundant and obtainable, the rates are still high, with an under current of uncertainty as regards the financial future. Nevertheless it seems reasonable to consider that the bottom has been reached and that we can look for a steady, healthy trade during the next few weeks on the present basis of quotations.

The improved tone is especially noticeable in Michigan X grade fleeces. These wools were sold ten days ago to a considerable extent at 29c, and it was predicted by some manufacturers that they would go still lower. Offers of 28c were freely made but not accepted. A few large transactions at 29c soon restored the balance of trade, and to-day holders are firm at 30c and 31c. Other wools of course have sympathized with the movement in Michigan fleeces, although no advance can be said to be established.

KANSAS AND NEBRASKA.—Light.—Fine 17a19c, Fine Medium 20a22c, Medium 18a20c. Ordinary.—Fine 15a16c, Fine-Medium 16a18c, Medium 15a17c, Low and Carpet 12a13c.

MICHIGAN, WISCONSIN, &c.—X and above 29a31c, No. 1 31a32c, No. 2 and Common 25a 28c.

This, That and the Other.

Never put pickles in a jar that has had lard in it.

Roasted coffee is one of the most powerful disinfectants.

Save your cold tea; it is excellent for cleaning grained wood.

A little sweet oil and beeswax rubbed on mahogany polishes it up beautifully.

They are as sick who surfelt with too much as they who starve with nothing.

Since the foundation of the crematory at Gotha 163 bodies have been burned in its furnace.

Sandpaper will whiten ivory knife handles that may have become yellow with use or age.

The unpleasant odor left in the breath after eating onions is entirely removed by a cup of strong coffee.

The new luminous paint blackens lead paint by its vapors, and is itself blackened by the vapors from lead paint.

Cream cures sunburn on some complexions, lemon juice is the best on others, and cold water suits still others best.

Japanese girls spend all their extra money in sashes and fancy pins for the hair, and judge dress entirely by these two details.

If you wish to pour boiling hot liquid into a glass jar or tumbler, it can be safely done by putting a spoon in the dish before you pour.

A corduroy road has recently been discovered in Lincolnshire, under six feet of clay and a layer of peat, which is crossed by a Roman road.

Salt laid upon the stage takes the place of snow in some theaters in which the managers do not trust to white paper to impose upon the audience.

The number of flowers produced by the palms is astonishing, not less than 12,000 having been counted in a spathe of the date, and 207,000 in one of a species of *Alfonisia*.

It is said that the girls in telephone offices quarrel and gossip among themselves less than girls employed in any other business. Talking is their work, and they come to dislike it.

A large stone in one of the Twin Lakes in Salisbury, Ct., has moved more than a quar-

ter of a mile during the last ten years. The channel which it has made for itself along the bottom of the lake clearly indicates the direction which it has taken.

An interesting result of the late earthquake in England has been noticed on the wells of Colchester, the water-level in which commenced to rise soon after the shock, and in a few days reached a point eight feet above the highest ever before known. It now stands at about seven feet above the former high-water mark.

Recent chemical investigation has shown that potato plants do not absorb and assimilate the arsenic of Paris green and other preparations used for destroying the Colorado potato beetle. Fears that the tubers might be rendered poisonous are thus proven to be groundless. The productiveness of the soil, however, is impaired by the use of arsenic in considerable quantity.

An Australian has devised a scheme for bringing down rain to order. The concern is in the form of a balloon, with a charge of dynamite underneath it. The balloon is to be sent into the clouds, and the dynamite is to be fired by a wire connecting it with the earth. It is the intention of the inventor, it is stated, to make a trial of the apparatus on the dry districts of New South Wales.

An automaton exhibited in London in 1883 represented a man mounted on a small frame. On putting into an orifice in the frame any one of the numerous metallic cards which lay about with questions inscribed on them, the figure, after making you a bow, struck with his rod a little door, which opened, and there was the answer printed on another card. The reply given was always strictly appropriate to the question, and was not of a mere general character, like the answers on conversation cards.

Radishes may be had in good fresh condition all summer and fall by sowing a little seed every two weeks. They grow all through the warmer part of the year if they have opportunity.

String beans, it is said, may be preserved in brine. When they are wanted for use, remove from the brine the quantity wanted, soak in clear water to remove the salt, and they will then be just as fresh and good as if picked a few hours before cooking.

Tomato vines ought to be grown in rows and protected by poles or slats laid on forks or pieces of lumber driven in the ground. The frame work ought to be two or three feet high, and the plants trained up to lie on the top. This keeps the fruit clean, and also greatly increases the yield.

As distinguishing between fruit and vegetable, it may be said that fruit always follows fertilization in the bloom or blossom. Anything which grows from the blossom and begins its growth after fertilization, is called fruit, while the vegetable, as the potatoe or cabbage grows without reference to bloom or fertilization.

"One of the most successful seed-sowers we have known," says the *German-town Telegraph*, "allows his garden ground to get rather dry before putting in the seed. He then stretches a line where the seeds are to go, sows the seed on the surface and then walks sidewise along the line, pressing the seed with the flat of his foot. He says that he has never had a seed miss, and so sows them thinly just where every plant is to grow."

Nothing is more conclusive evidence of the real merits of an article, than the fact of its being counterfeited. No one ever heard of a counterfeit being made of a spurious or worthless article. Leis' Dandelion Tonic has a great reputation as a valuable remedy for all diseases of the kidneys, liver and blood.

It is said that the milking qualities of a cow depend more upon those of her sire's mother than upon those of her own mother.

Those crops of grain and grass that are driven to market on foot, generally bring the best prices.

The Home Circle.

The Fern and the Moss.

There was a Fern on the mountain, and Moss on the moor;
And the Ferns were the rich, and the Mosses the poor.
And the glad breeze blew gaily; from Heaven it came,
And the fragrance it shed over each was the same;
And the warm sun shown brightly and gilded the Fern,
And smiled on the lowly-born Moss in its turn;
And the cool dews of night on the mountain Fern fell,
And they glistened upon the green Mosses as well.
And the Fern loved the mountain, the Moss loved the moor,
For the Ferns were the rich and the Mosses the poor.
But the keen blast blew bleakly, the sun waxed high,
And the Ferns they were broken, and withered and dry;
And the Moss on the moorland grew faded and pale,
And the Fern and the Moss shrank alike from the gale.
So the Fern on the mountain, the Moss on the moor,
Were withered and black where they flourished before.
Then the Fern and the Moss they grew wiser in grief,
And each turned to the other for rest and relief;
And they planned that wherever the Fern-roots should grow,
There surely the Moss should be sparkling below.
And the keen blasts blew bleakly, the sun waxed fierce;
But no wind and no sun to their cool roots could pierce;
For the Fern threw her shadow the green Moss upon,
Where the dew ever sparkled undried by the sun;
Where the graceful Fern trembled before the keen blast,
The Moss guarded her roots till the storm-wind had passed;
So no longer the wind parched the roots of the one,
And the other was safe from the rays of the sun.
And thus and forever, where'er the Ferns grow,
There surely the Mosses lie sparkling below;
And thus they both flourish, where naught grew before,
And they both deck the woodland, and mountain and moor.

—Eliza Cook.

Knack in Re-making Clothes.

Reading of "knacks" in your paper set me to looking inwardly to see if I had a knack for anything useful, concluded if so it must be in the line of making "old clothes" look almost as well as new. But that knack is varied much by experience and determination. How true the old proverb, "Where there's a will, there's a way," and where one is just determined to do a certain thing, why they'll usually find a way to do it. One failure only stirs up to a better trial, and we often acquire a knack of doing what once we failed to accomplish.

From seeing garments badly put together one often wishes more people had a knack of dressmaking. Would it not be much better if mothers required their daughters to learn the dress-making trade? Fashions change constantly, yet the principle remains the same, and the little knack well learned, will enable the future mothers to fashion their own and little ones garments with better skill. I pity the makers of botched up garments. They see it is not right; they do not know how to better it, and wonder why they cannot make their work look like Mrs. A's. A have a friend (a splendid woman) that when married could not fashion the simplest garment she wore. She had no natural knack for such work and had never been properly taught. She was a good cook and housekeeper. In contrast with knack comes hobby, of which, more some other time.

Laisy Dean, I am a reader of the House-

hold and echo your assertion that it is a splendid woman's journal, one that has a fund of knowledge indeed in all departments of housekeeping. The recipes are true and tried; letters from ladies all over the United States, spicy, breezy, and full of useful knowledge. CLARIBEL.

Sterling, Kansas.

The Trade in Modern Antiquities.

One of the chief delights of Continental travel, as every person of experience will admit, is the unlimited opportunities it affords for buying antiquities. The statuary, the coins, and the pictures that may be purchased in Italy are a source of never failing profit to Italian dealers. Andalusia, again, is a huge curiosity shop. Being once upon a time in Seville, we came across a retired British grocer or tailor, or something of that kind, who had just purchased a Madonna and Child—unhappily, unsigned—which he had picked up for a few pounds in a dingy back street. He was going to send it to the Exhibition of Old Masters, and, if he ever did so, he probably found that it was worth only a pound or thirty shillings at the outside. It is the same, indeed, throughout Spain. The altar cloths, the broken fans, the inlaid tables and cabinets, as resplendent as anything in the convent of the Cartufle at Granada, the wonderful chairs, and the more extraordinary scraps of ancient lace, upon which all who have ever traveled in Spain have spent much money—these abound from Malaga to Irun, and naturally one is inclined to speculate a little on the odd circumstance that the supply is more abundant than ever, although the demand is fairly brisk. Tangiers is, we should say, a hot-bed of modern antiquities, and even Mr. Chamberlain bought some of them when he was over there a year or so ago. He ought to have known something about this class of goods, being a Birmingham man, but the child-like faith of the President of the Board of Trade in all things ancient is notorious. America, oddly enough, has taken to this business of manufacturing the antique Dutch cabinets that, with bronze panels, dingy and marked with the cracks of fictitious centuries, are turned out every day from Chicago furniture stores, and for some purposes they are quite as useful as if they had indeed belonged to some departed burgher in the dead cities of the Zuyder-Zee. New York experts in this sort of forgery make a specialty of Queen Anne chairs and tables, and the imitation is so perfect as to deceive all but those who have studied such things minutely in Europe. The explorer of furniture stores may come upon magnificent specimens of English Gothic chamber pieces or ancient-looking Chippendale and Sheraton chairs, which might have belonged to Queen Elizabeth but for the fact that they did not. It must be puzzling at first to discover in New York shops stamped leather chairs of the time of Louis Treize, plentifully ornamented with brass nails, whose heads are fully an inch in diameter, and the citizens of that enterprising city are invited to become the happy possessors of as many of these treasures as they like on ridiculously low terms. If, however, the explorer is inquisitive, and the furniture venders are in a tolerably candid mood, the visitor may be conducted into some back yard where these gems of high art are produced. A Queen Anne's chair just made can, for instance, be supplied with worn holes by the simple process of tilting it bottom side up and firing a charge of pigeon shot into the bottom and front of the seat. Old armor, too, is a good line in this business, the drawings required for the purpose being made from the collection in the Grand opera house, in Paris. It is said that Birmingham knows something about this branch of the trade, and that helmets, shields, casques, breast plates, and complete suits of mail are regularly manufactured for the gratification of credulous oil speculators and retired pill manufacturers. If a man starts a lot of ancestors he likes to have dummies of them in his hall rigged in their mediæval ironmongery. If Birmingham did not gratify him, Germany would. It is astonishing how many tons of antiquities are annually sold along the Rhine, and it is even asserted that in Castle Colburg, where Martin Luther threw his ink-stand at the devil—and unhappily, missed him—the original splash was cut up and sold long ago; but that, as the timber is massive, the place is carefully reinked every night for the purposes of sale next day. We cannot say how

much truth or falsehood there may be in this particular story. There might have been some excitement in seeing the original transaction if both the distinguished parties to it were present. There can be none in gazing on a patch of ink. The trade in modern antiquities, however, is a curious reality, as real as the sale of old clothes or tombstones. It is a fact calculated to weaken one's faith in life.

Drying and Canning Corn.

Among the many good things to be prepared for the farmer's table is corn dried or canned when in the green or soft state. We have published something on the subject every year, but still it is well to repeat. Here are some good suggestions from the *Prairie Farmer*:

There is no difficulty whatever in keeping dried green corn all through the year in any dwelling affording a dry, cool room. The sweet varieties are preferable, but any field corn does very well. A very little sugar added when cooking makes it as palatable as the sweet kinds, and it is equally nourishing. We always prefer a little sugar and a very trifle of salt in cooking even the canned sweet corn.

A simple method is to take the corn when in full milk—not before or it will be skinny, nor when at all firm or it will be less digestible; boil the ears until the kernels are scalded through, but not too long or the "goodness" will be partly taken out by the water, and it will be harder also. Shave off the cooked kernels and spread them on plates or on white paper tacked on boards to keep the wind from blowing it off. Old sheets and table cloths are very convenient for drying on, as they can be quickly gathered with the corn in them, at night or before a sudden rain. Easily accessible roofs inclined to the sun are good drying places. The drying may be started on plates, and when the milk ceases to be sticky the corn can be spread upon clean unprinted paper. In this way one can have a much larger amount drying than the ordinary supply of dishes would allow. It does very well to simply shave off the kernels and dry them without cooking. Move the dishes and boards under cover when it storms and at night. When thoroughly dried through, it will keep any length of time in bags hung up out of the reach of mice, in any fairly dry room—better where the air will be kept some hat free from dampness by the heat of a chimney or stovepipe. If well dried it can be stored in pails or boxes.

While experienced, expert housekeepers can succeed well in canning green corn, we doubt the advisability of it, as a rule, in most families. The cans are expensive; it is far more troublesome than drying; if not well done there is some liability to corrosion of the tin, and to absolute loss; and the large establishments, which make a business of it, supply the article at wholesale almost as cheaply as one can get the empty cans at retail. This is our observation; still we shall be glad to have the experience of our readers. The following is reported to be the method of the "Oneida Community," whose canned sweet corn we have eaten; other establishments use a similar method in many cases:

The kernels are cut off into tin cans and they are filled to the top of the corn with cold water. Then solder on the cover and boil $2\frac{1}{2}$ hours, after which pierce a very small hole in the cover for the gas to escape; while still hot, before air enters, stop with a bit of solder; cook in hot water again for 2 or three hours, and put away for use.

How to Bring Up a Baby by Hand.

Where mothers are unable to nurse their children the problem of artificial feeding becomes of high importance, especially during the summer. In a recent article by Dr. Clement Cleveland, in the *Medical Record*, the suggestions made under this head are so clear and definite as to be of great practical value. The Doctor lays it down as an axiom that next to woman's milk, cow's milk is really the best food for the infant. The milk of many cows is to be preferred to that of any particular cow, from the fact that it is likely to continue more uniform. Undiluted cow's milk is too rich in fat and casein to be readily digested by the infant, for during the earlier months a baby's power of digesting fat is very deficient. The casein of woman's milk curdles into delicate flakes,

that of cow's milk into much larger ones. Fortunately these difficulties can be overcome to some extent.

A milk should be selected that is not rich in cream. The morning's milk contains less than the evening's. On boiling, much of the cream comes to the surface in the form of scum, and is to be removed by straining. Water added to the milk helps the digestion of both fat and casein. It can be helped also by gelatine, barley or oat meal water, or by the addition of lime water, bicarbonate of soda or potash. The standard proportion of one part milk to two of water suits the majority of children. The doctor has found it advantageous, however, to begin with one part to three, and work rapidly up to one part to two, if the digestion continues good. He uses for the first two weeks eight parts of milk to twenty-four of water; second two weeks, eight to twenty; second month, eight to sixteen; third month, eight to fourteen; fourth month, eight to twelve; fifth month, eight to ten; sixth month, eight to eight; seventh month, eight to six; eighth month, eight to four; ninth month, eight to two; tenth month, pure milk.

Some children do better with a little water with the milk, even after the twelfth month. Both the milk and the water should be boiled. The dilution should be slightly sweetened with pure brown sugar or milk sugar, and a little salt should be added. It is well to prepare in the morning the whole amount to be used during the twenty-four hours. Cow's milk is slightly acid or neutral. To render it perfectly digestible it is sometimes necessary to make it slightly alkaline. This helps the digestion of the casein by causing its distribution into finer flakes. When undigested flakes appear in the passages, one-half to one grain of bicarbonate of soda is added to the amount of diluted milk given at each feeding. Should it not answer, barley water, made by boiling four hours a teaspoonful of pearl barley and a saltspoonful of salt with an ounce of water, may be added. This is to be used in the same proportions as the formula above. For the first month the child should be fed every two hours, never oftener, because it takes fully two hours for milk to digest.

After pointing out the fact that infants are more likely to cry on account of distress due to indigestion than from hunger, the Doctor says that children at three months should acquire the habit of sleeping throughout the night. The last bottle should be given at 10 p. m., and the first at 6 or 7 o'clock in the morning. At first it may cry for hours, but in three or four nights an excellent habit of life will be formed. It is one of the most important points in bottle feeding that the child take the milk slowly into the stomach. Rubber nipples without openings, but in which a hole may be made with a red-hot cambric needle, are the best. The milk is drawn out slowly, and keeps pace with the formation of gastric juice. Canned condensed milk is, in the Doctor's opinion, too rich in sugar to be advisable as food for infants. Condensed milk fresh every day is not open to this objection.

Dr. Cleveland says a good deal about wet nurses, and sums up the matter as follows: "I have seen so much trouble caused by wet nurses, directly and indirectly, that I invariably advise the bottle where the infant is healthy, and the mother cannot or will not nurse her child. I believe it safer to run the slight risk of the bottle's not suiting than to introduce such an element as a wet nurse into a family. The physical defects of the bottle we understand pretty well, and can, to a great extent, guard against them. Its moral qualifications, compared with those of a wet nurse, are simply sublime."

For twenty years I was a sufferer from Catarrh of the head and throat in a very aggravated form and during the summer months with Hay Fever. I procured a bottle of Ely's Cream Balm and after a few applications received decided benefit—was cured by its use. Have had no return of the complaint. — CHARLOTTE PARKER, Waverly, N. Y. Fifty cents.

A Minnesota gardener traps cut-worms by digging holes about six inches deep, with perpendicular sides, in his garden.

Continue to improve your stock, make it better every year, and ten to one your soil will follow suit.

Ask your Druggist for a free Trial Bottle of Dr. King's New Discovery for Consumption.

The Young Folks.

Spinning and Humming.

A spider was swinging herself in glee
From a moss covered swaying bough;
A breeze came rollicking up from the sea,
And fanned her beautiful brow.
She hung, it is true, with her pretty head
Down,
But her brain was as cool as you please;
The fashion quite suited the cut of her gown,
And she could look up into the trees.

She saw where a humming bird lighted
Down;

His throat a bright ruby gleamed;
On his head was a gold and emerald crown,
And he sat on a bough and dreamed.
The spider ran up on a noiseless thread,
And looked in the little king's face;
"If I may but sit at your feet," she said,
"I'll spin you some beautiful lace."

The humming bird looked in her shining
Eyes,

And then at her nimble feet,
And said to himself, "I have found a prize;
She is useful as well as neat.

Let me sit at my side if it please you
Well,"

Said he, "the summer time through;
And since you spin on a noiseless wheel,
I'll do the humming for you."

The Last Gasp.

Washington *National Tribune*: Gen. Sheridan tells a very interesting story about the last campaign against Lee, and the incidents of the surrender. It will be remembered that he headed off Lee at Appomattox Court-House, and captured eleven trains of supplies which were waiting for him there. When Lee found out that he had no stores or ammunition for his army, and that his retreat was cut off, he sent a flag of truce, which Custer received and conducted to Sheridan. The two armies laid on their arms waiting for Grant, who was on his way to the front.

In the meantime Sheridan and some of his staff started to ride over toward Appomattox Court-House, when they were fired upon by a regiment of Rebels half concealed among some underbrush. The General and his party waved their hats toward the place where the shots came from, and made all sorts of demonstrations to silence the unexpected and mysterious attack, but to no purpose. Finally, the Confederate officer who brought the flag and Maj. Allen, of Sheridan's staff, rode over to see what the matter was.

They found a South Carolina regiment, whose Colonel, in a grandiloquent tone, informed them that the war wasn't over, and that he and his regiment did not recognize the authority of Gen. Lee to make terms for peace. "Be Gawd, sir," exclaimed this gallant Johnny, "South Carolinians never surrender!"

The two officers rode back to Gen. Sheridan, who, with his party, had retired under cover, and reported to him the situation. The General called Custer and told him there was one regiment over in the brush which hadn't got enough of it, and it would be well for him to go over there and "snuff it out." Custer ordered his bugler to sound "forward," and at the head of a regiment dashed across the interval which lay between the two armies, which were drawn up in long lines and stood at rest. It was a beautiful Sunday morning—a perfect spring day—and the sight of that regiment, with Custer's long, tawny hair as their banner, dashing at full gallop across the fields, evoked a cheer from both armies.

Meantime Sheridan had reached the court-house, where he met Gen. Gordon, recently Senator from Georgia, and Gen. Wilcox, who had been his classmate at West Point, but whom he had not seen for many years. Wilcox has since been a doorkeeper in the United States Senate.

While this party were sitting on the steps of the court-house, chatting familiarly over the situation, heavy musketry was heard in the distance. Gordon looked up in anxiety and alarm and asked one of his aides to ride over in that direction and find out what it meant. "Never you mind, General," said Sheridan. "It's all right. I know what it means. Custer is over there having some fun with a South Carolinian who never surrenders." Gordon insisted upon sending the

officer to stop the fight, but before he got there the doughty Colonel had presented Custer with a very much battered sword. It was the last gasp of the Army of Northern Virginia.

Brazilian Diamond Mines.

The diamond beds of Bahia and Minas Geraes, in Brazil, are very similar in character as regards the minerals composing them and their plateau form, or situation on water courses. A new bed has been recently opened on the Rio Pardo, in Bahia, which presents some differences to those hitherto known in Brazil. The country around is low and marshy, and covered with forests. The working of these forests has led to the discovery of the diamonds, which are found in a white clay along with beds of decomposed leaves. The deposit appears of modern formation. The minerals of the clay accompanying the diamond are, according to M. Gorceaux, quartz, silice, monazite, zircon, disthene, staurolite, grenat almandine, corindon, and some oxides of iron. There are oxides of titanium, or tourmalines, as is frequently the case in diamond beds. The clay appears to be from its character and situation the debris of the granite mountains bordering on the Bahia coasts.

Canals.

The Imperial Canal of China is over 1,000 miles long. In the year 1861 was completed the greatest undertaking of the kind in Europe, the canal of Languedoc, or the Canal du Midi, to connect the Atlantic with the Mediterranean; its length is 148 miles, it has more than 100 locks, and about 50 aqueducts; and in its highest part is no less than 600 feet above the sea; it is navigable for vessels of upwards of 100 tons. The largest ship canal in Europe is the great North Holland canal, completed in 1825. It is 124 feet wide at the water surface, 31 feet wide at the bottom, and has a depth of 20 feet; it extends from Amsterdam to the Helder, 51 miles. The Caledonian canal, in Scotland, has a total length of 60 miles, including 3 lakes. The Suez canal is 80 miles long, of which 66 miles are actual canal. The Erie Canal is 350½ miles long; the Ohio Canal, Cleveland to Portsmouth, 332; the Miami and Erie, Cincinnati to Toledo, 291; the Wabash and Erie, Evansville to the Ohio line, 374. The Suez Canal is 26 feet 4 inches deep, 73 feet 5 inches wide at bottom, 329 feet wide at water surface. Length a little short of 100 miles. The Panama Canal is to be 45½ miles in length.

A Steaming Mountain.

The Secretary of the Treasury has received from Capt. M. A. Healy, of the United States revenue cutter Corwin, under date of Ounaslaska, May 23, two interesting reports by officers of the Corwin describing a visit to the recently upheaved volcano in Behring Sea, at the northern end of Bogosloff Island, in latitude 53 deg. 55 min. 18 sec. north, longitude 168 deg. 21 min. west. This volcano, which is in a state of constant and intense activity, was upheaved from the sea in the summer of 1882, but was not seen by any civilized eye until Sept. 27, 1883, when it was discovered by Capt. Anderson, of the schooner Matthew Turner. A few days later it was also seen by Capt. Hague, of the steamer Dora, but no landing upon it was made previous to that by the officers of the Corwin last spring. Dr. Yemans describes it as a dull, gray, irregularly-cone-shaped hill, about 500 feet in height, from the sides and summit of which great volumes of vapor were rising. At a height of about two-thirds the distance from the base to the apex of the cone there issued a very irregular series of large steam jets, which extended in a horizontal direction completely across the northwestern face of the hill. Around these steam jets were seen upon nearer approach deposits of sulphur of various hues, which at a distance had looked like patches of vegetation.

A landing was effected without difficulty upon a narrow sand spit connecting the new volcano with the old Island of Bogosloff, and Dr. Yemans and Lieut. Cantwell undertook the ascent of the smoking cone. It was covered by a thin layer of ash, formed into a thin crust by the action of rain, which was not strong enough to sustain a man's weight, and at every step the climbers' feet crushed through it, and they sank knee-deep into a soft, almost impalpable dust, which arose in

clouds and nearly suffocated them. As the summit was neared the heat of the ashes became almost unbearable. A thermometer buried in them half way up the ascent marked 196 deg., and in a crevice of the ramparts of the crater "the mercury rapidly expanded and filled the tube, when the bulb burst, and shortly afterward the solder used in attaching the suspension ring to the instrument was fused." The temperature was estimated at 500 deg. Fah. On all sides of the cone were perforations, through which the steam escaped with more or less energy, and in some cases at regular intervals, like the exhaust of a steam-engine. The interior of the crater could not be seen on account of the clouds of smoke and vapor which filled it. "A curious fact to be noted," Lieut. Cantwell says, "in regard to this volcano, is the entire absence, apparently, of lava and cinders. Nowhere could I find the slightest evidence of either of these characteristics of other volcanoes hitherto examined in the Aleutian Islands. Volcano dust, or ash, however, is thrown out in considerable quantities, and carried by the wind to places as distant as Ounaslaska."

After carefully measuring the volcano and photographing it from various points of view the exploring party returned without accident to the ship.

Physiology in Brief.

The average weight of an adult is 140 pounds 6 ounces.

The brain of a man exceeds twice that of any other animal.

A man annually contributes to vegetation 124 pounds of carbon.

One thousand ounces of blood passes through the kidneys in one hour.

A man breathes about 20 times a minute, or 1,200 times in an hour.

The average weight of a skeleton is about 14 pounds; number of bones 240.

The average weight of the brain of a man is 3½ pounds; of a woman 2 pounds 11 ounces.

A man breathes about 18 pints of air in a minute, or upwards of 7 hogsheads in a day.

Twelve thousand pounds, or 24 hogsheads and 4 gallons, or 10,728½ pints, pass through the heart in 24 hours.

The average height of an Englishman is 5 feet 9 inches; of a Frenchman, 5 feet 4 inches; of a Belgian, 5 feet 6½ inches.

The average of the pulse in infancy is 120 per minute; in manhood, 80; at 60 years, 60. The pulse of females is more frequent than that of males.

One hundred and seventy-five million holes or cells are in the lungs, which would cover a surface 30 times greater than the human body.

The heart sends nearly 10 pounds of blood through the veins and arteries each beat, and makes four beats while we breathe once.

A Glass of Water.

There are some very pleasing tricks that may be performed with a glass of water. Not only do they amuse, but lessons in natural science may be learned at the same time. One which we illustrate requires only a sheet of paper in addition to the goblet of water.

Fill the goblet brimming full of water, and cover it with the sheet of paper; then turn the glass quickly over; the pressure of the atmosphere upon the paper will sustain the water, which will not run out.

This experiment should be first practiced over a bowl or pan until accuracy is acquired.

Another experiment consists of filling a dry tumbler even full of water, and dropping coins into the center of the goblet, the coins edge downward. The water will rise up a little as each additional coin is dropped, until you may say you have a tumbler heaping full of water. The top edge of the goblet should be made dry before dropping the coins.

The third experiment will illustrate the philosophy of the diving-bell. Take a goblet, and when inverted, sink it into a vessel of water. You will find that the air in the glass will not all escape, and will occupy the upper half of the goblet and hold the water back. By putting a fly or two in the glass before sinking it, the insects will represent the divers as they go down in the bells.

The fourth experiment consists of drawing water from a saucer up into a goblet. To do this put some water into a tea saucer, then light a little wad of dry paper, and after

placing it on the water surface, in the center of the dish, turn an empty goblet over it. The heat will force out a greater portion of the air and form a vacuum, and the outer air, in an effort to fill the vacuum, forces the water from the saucer up into the goblet.

Chimes, and How They are Rung.

Bells may be rung in two ways: first, by striking them with rope and wheel; and secondly, by striking them either upon the outside or inside with hammers, the bell itself being stationary. In England the former method of rope and wheel was almost universally adopted, requiring a man for each bell. From this method we get that interesting and peculiarly English kind of chime music known as the "changes," which gave England the name of the Ringing Island. In Belgium, however, the stationary method was used. Chimes played in this manner were rung by one person and called carillons, because the Italian *quadrighio*, or quadrille, "a dreary kind of dance music," was the first ever played upon them. To play upon carillons the performers used an instrument known as the "clavecin," a kind of rough key-board arranged in semi-tones. Each key was connected by wire or rope with a hammer, which struck the bell when a sharp blow was given the key with a gloved fist. This machine was necessarily extremely crude at first; and, since chimes have never been played half so well as in the days of this invention, it is all the greater wonder that the art ever progressed at all. Recently some great masterpieces in chime music have been found, which were composed and played at Louvain in the latter half of the last century by the most skillful and wonderful chimer who ever lived, Matthias van den Gheyn. No one in Europe or America can now be found who is able to play this music, which rivals in the depth and subtlety of its composition some of the finest works of Bach, Mozart or Beethoven. Hence the inference is that the art of playing carillons has sadly declined, with small prospect of ever recovering the lost ground. —Atlantic.

Sheep's Horn for Horseshoes.

A new horseshoe has lately been experimented with at Lyons, France. The shoe is made entirely of sheep's horn, and is found particularly adapted to horses employed in towns and known not to have a steady foot on the pavement. The results of the experiments have proved very satisfactory, as horses thus shod have been driven at a rapid pace on the pavement without slipping. Besides this advantage, the new shoe is very durable, and though a little more expensive than the ordinary one, seems destined sooner or later to replace the iron shoe, particularly for horses employed in large cities, where, besides the pavement, the streets are intersected by tramway rails, which from their slipperiness constitute a source of permanent danger.

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TO SUBSCRIBERS:

The letter "d" represents Vol. XXII (1884) on our subscription books. When the number following this letter (d), on the label of your paper, corresponds with the number of the FARMER (which you will find to the left of date line on first page), your subscription expires with that issue of the paper. For instance: If "d 52" appears on the label, your time expires with No. 52 of this volume (1884). Then your paper will be discontinued. You should renew at once.

Although late, grape vines may yet be layered.

Send us forty cents for the FARMER till New Years day.

A good many cotton factories are running on short time.

Try this paper till Christmas. Forty cents will pay for it till that time.

Several heavy failures among manufacturers were reported last week.

Several new and strong gas wells were discovered recently near Pittsburg, Pa.

The government has taken precautions against the introduction of yellow fever from Mexico.

As soon as corn is well eared and the kernels hard enough to save without shrinking, begin to cut up the stalks.

A convention is to be held at Lawrence, September 2d, to nominate a State Prohibition ticket and Presidential electors.

There is a very strong undercurrent in England toward a larger liberty. A powerful effort is now directed against the House of Lords.

The condition of growing corn on the first day of August was better, the country over than it was at the same period in any year since 1880.

Cholera is spreading in France. There is something peculiar about it in this respect—it appears in places where there is no evidence of contagion.

Lima beans may be dwarfed so as to not need stakes by pinching off the ends of shoots as they grow beyond the height desired.

An invention is reported for making rural transportation easier and cheaper. It is a cheap wooden railroad made to run wagons over.

In a private letter from D. B. Roser, Elm Valley, Ness county, he states that crops in that county are good and that stock is in excellent condition.

R. G. Chesney, engineer at the A. T. & S. F. elevator in Atchison, has invented a grain shovel with which one man can unload a car of five hundred bushels of grain in eight to ten minutes.

How Much Seed Wheat?

The quantity of seed wheat required is not great if all conditions are favorable. If the ground is cloddy and badly plowed, no amount of seed will be sufficient for a good crop. What seed most needs is loose, mellow, rich earth to germinate in. Clods are nearly always dry, and there are open spaces about them where seed can never sprout. Soil ought to be so fine and loose that the seed will have an absolutely dark place to lie when covered. And if possible, the earth ought to be packed on the seed. It has been demonstrated that one-half a bushel of seed wheat is enough for one acre of ground. We believe that less than that will do as well if the work is properly done. The trouble is, that a great deal of the seed we do sow does not root at all. If every berry of two bushels of wheat should sprout and grow on an acre of ground there would be a dense growth of straw—too much for good wheat. If every berry of one-third of one bushel germinates and grows well, that quantity in good soil and well grown would produce forty bushels on an acre. The point is, to get every berry to grow and live till harvest. Thin seeding produces tillering or stooling five to eight fold in good soil.

It would be well if every farmer, before seeding his land, would test the seed, to see how much of it will grow. This is easily done, by taking a handful picked up a pinch at a time in different parts of the bin; then plant them in a box of earth, warm and moist. Count the seeds planted, and compare with that the number of seeds that sprout. If the soil is in first-class condition, we believe that one bushel of good seed is enough for an acre if drilled and then the ground rolled. If something like Smith's Roller Attachment is used, the quantity may be lessened, down to twenty-five pounds. This is on the theory that every berry grows and lives. Any one can count the number of kernels of wheat in a pint, or gill, and from that estimate the number in a bushel or half or third bushel. Let the average tillering be, say five stalks to the berry, and the number of berries to the head 25, and we have one hundred and twenty-five fold at harvest. Divide that by the number of berries in a bushel, and we have the amount of the crop at that rate of increase; or we have 125 times the quantity of seed sown, whatever that was.

Plowing for Wheat.

Some farmers have not yet plowed their wheat ground. For such we have a suggestion or two. If it is very weedy and if the weeds have gone to seed, it would be better to mow them, let them dry and then burn them clean. This will destroy most of the seeds and leave considerable ashes on the ground. If the weeds are green and growing vigorously, plow them under deep, covering well. Use the rope or chain of which the FARMER has often spoken. It will make the work easier, probably, to run a harrow over the ground in the same direction the plow is to move. The harrow combs out the weeds so that they are not so likely to choke the plow, and it breaks down many of the larger ones.

If there are no weeds, and the ground is in good condition, soft, loose and thoroughly pulverized, it may not need to be plowed at all. If the surface is clean enough for a cultivator to work well, that implement in such ground will do all the stirring that is needed.

If the ground had wheat last year, and there are stubbles enough to burn well, and especially if there are any indications of chinch bugs, it is better to burn off the stubble clean. There is no

loss in burning dry stubbles anyway, because the ashes is left, and that is all the good the soil will get from the stubble.

In case of plowing for wheat now or at any time before seeding, the ground ought to be harrowed well immediately and rolled. It is better to do this twice a day; that is, harrow and roll just before noon what was plowed that morning, and repeat in the evening. Nothing is lost by pulverizing and smoothing the fresh plowed ground when it is to be seeded soon. This is true in case of any kind of grain, and especially is it important if the seed to be sown is wheat.

A Welcome Rain.

A rain of most welcome coming fell in this region Monday night. It came when the people were praying for it. The earlier part of the season had been so moist that the hot weather of late July and dry early August gave us a thirst for rain that nothing but rain could satisfy. And it came gently and quietly, almost without notice; and it fell slowly, steadily to give plenty of time for the dry earth to absorb every drop of it, and the people had time to thank God. No wind, no electrical disturbance—simply the falling rain for hours, and all nature rejoicing over the refreshment.

We do not know certainly how large is the area covered by the fall, but we have reports from points west along the lines of railway, and from these we gather that a large portion of central Kansas was visited. This makes certain the maturity of all early corn in the region covered by the rain. The later fields will need one more, and that one, when it comes, will put wheat ground in order.

Large Yields of Wheat.

When Kansas people used to tell big stories of what was raised and what could be raised in this new country, people stared at us and said we were lying. It is true we did draw on our imaginations a good deal for the biggest stories; but our faith was strong enough to satisfy us that our statements would some day be verified. The writer of this well remembers what he thought of a man who once told him of a 55½ bushel-to-the-acre crop of wheat in Fall river valley. That was a dozen years ago. Since that time our faith has grown to be as big as Kansas, and that is putting it pretty strong.

This year 1884 is in the lead among our best crop years. Heavy yields are reported from every part of the State where cereals are grown. But the largest returns that have been brought to our notice come from that same Fall river valley near Neodesha in Wilson county. We quote from the Neodesha Register of two weeks ago:

And still they come! Better and larger reports of the immense wheat crops raised in this vicinity. It used to be thought that when farmers raised from 35 to 40 bushels of wheat per acre the highest point had been reached, but soon rumors, and the verified reports, were afloat of 40, 45 and 48 bushels to the acre, and this year still larger yields are reported until it seems that there is no limit to the amount that can be produced by the skillful and experienced farmer. While the yields of certain fields are wonderful, the general average is still more so. To think of all the fields in a large area of country making an average of between 35 and 40 bushels per acre is truly astonishing. Rob't Cole, living on Dr. Long's place, had forty-five acres of measured ground that produced 2,365 bushels, being an average of 52½ bushels per acre. On the same farm I. r. Long had forty acres that produced 44 bushels and a fraction per acre; the whole field of eighty-five acres produced 4,165 bushels, machine measure, and 40 bushels by measure weights out 45 to 47 bushels. Frank Kimball and J. H. White had 70 acres on Kimball's farm that made an average of 40 bushels per acre. This included some Little May wheat which only produced 28 bushels to the acre, thereby lowering the general average. J. J. Haag had 120 acres that made an average of 40 bushels per acre. Indeed, less than 40 bushels is the exception not the rule.

Timothy Seeding.

Prof. J. W. Robson, one of the botanists to the State Board of Agriculture, takes much interest in the growing of timothy. Here are his last published thoughts on the subject: "As soon as oats and millet are harvested, plow the ground shallow (just deep enough to cover the stubble), leaving it to become packed. During the last week of August prepare the soil for seeding, by giving it a thorough harrowing. Sow the seed at the rate of one bushel to four acres, and complete the operation by going over once more with harrow. To be successful in raising timothy in Kansas, the following rules must be observed, and success is certain. 1. Before purchasing the seed, take a pinch from what your seedsman has in stock, and sow it on the north side of the house giving it occasional waterings to keep the soil moist. If it germinates freely, secure your seed. If a Kansas farmer sows 10 or 20 acres to timothy before testing, he is not wise. Do not sow wheat, rye, or oats with timothy. Give the entire ground to the grass crop, and at the end of June, 1885, you will cut a heavy crop of hay. 2. Be sure your ground is packed solid before sowing. 3. Sow clover seed on the same ground very early the following year, at the rate of two pounds to the acre.

"By following the above rules the culture of timothy can be made a splendid success. For the last six years I have raised good crops of hay. The present season, finer and heavier than any of the previous years.

"The idea is too prevalent among the farmers of this State that tame grasses will not grow in Kansas, just as the same idea prevailed in the early settlement of Illinois and Iowa. This is a ruinous fallacy, and the sooner Kansas farmers get rid of the deceptive idea the better for themselves, and the State at large."

That Grass and Wheat.

A correspondent, some weeks ago, sent to this office samples of grass and wheat, which we referred to Prof. Popenoe, of the Agricultural college, for examination. Here is his report:

EDITOR KANSAS FARMER: The grass sent for name by "Russell County Farmer" is known to botanists as *Koeleria cristata* and is not of sufficient importance to have received a common name. It is found throughout the eastern section of our country, is also now largely distributed through the "blue-stem" pastures and meadows of Kansas. I should like to hear from your correspondent in regard to this grass in his locality.

The sample head of grain sent is a wheat; the variety I cannot name. Nor can I offer any explanation of the lack of grains in the head, which is probably due to local or accidental causes. Very respectfully,
E. A. POPENOE.

Condition of Crops.

From Secretary Sim's last report we learn that the losses on wheat reported in July were about made up by gains in other parts of the State. The total winter wheat crop of the State is put at 46,811,383 bushels, an average of 21½ bushels to the acre. Spring wheat is put at 1,436,979, making a total yield of wheat for the State, 48,248,362 bushels. Rye is successful wherever grown, and particularly in western Kansas. Corn is in better condition than at this time last year. Oats is not as good.

Kansas Patents.

The following devices were patented August 5, 1884 by citizens of this State, and were reported for the KANSAS FARMER by J. C. Higdon, solicitor of patents and attorney for patentees. Under writers exchange building Kansas City, Mo:

Churn—John H. Hisey, Emporia.
Harrow and cultivator—E. W. Allen, Seneca.
Wind Wheel—R. N. Rockwell, Peabody.

The Coffeyville *Journal* says that Montgomery county farmers regard Fultz as the best wheat. It yields more and stands winter better than any other.

The Dodge Economy Drier company advertise their machinery in the KANSAS FARMER. All of our readers interested in drying fruit ought to read what the company proposes.

The Kansas City Fat Stock show association has changed the time of its next meeting at Kansas City on account of the Presidential election. The date is changed to begin Saturday October 25 and end November 1.

The wheat fields of the great basin of the Columbia river, a region that is to become one of the most notable in this country for its productiveness, will form the subject of a paper by Mr. Ernest Ingersoll in the September *Harper's*.

The tariff question is to be thoroughly discussed in the *North American Review*. Free Trade arguments will appear in the September number, and protection views in the October. The ablest writers on both sides have been engaged.

The French people are discussing the propriety of revising their constitution. The subject brings up some exciting reminiscences, and the delegates have several times become so disorderly that the Assembly found it necessary to adjourn until the members cooled off.

It is not yet too late for turnip seed to be sown. Turnips need a loose soil and rich. The best time to sow is just before a rain, but one cannot always know in time when a rain is certain to come. When the ground is ready, sow the seed mixed with earth or ashes, so as to get the seed thin enough, then harrow or brush lightly and roll, unless the ground is very moist. Rolling is needed only if the soil is dry on the surface.

Quoting from the last report of the Kansas State Board of Agriculture: "The enumeration of inhabitants on March 1st, of this year, as returned by township assessors through County Clerks, is 1,135,614, an increase in one year of 10 per cent., or 106,885. The largest proportion of this increase has been added to the rural population, but little of it going to the towns and cities."

Captain Payne and the silly people whom he persuaded to go into Indian Territory and take up land there, were ejected last week by the military. This is the third time that kind of work had to be done, and in this case the work was speedy and rough. The settlers were given twelve hours to leave, but they relied on the good nature of the soldiers who, in former instances, had been lenient and merciful. The innocent ones were quietly escorted to the State line; the old offenders were taken to Fort Smith and turned over to the civil authorities, and the cabins were burned.

One week from to-day, August 20, (not 19, as we published) the Democratic State convention meets in this city to nominate a State ticket. A call has been published for a meeting on the same day and at the same place of delegates representing such Republicans as desire a re-submission of the prohibitory amendment to a vote of the people. It is probable that the Democrats will offer two or three places on their ticket to the dissatisfied Republicans. If they do not, there may be still another entire ticket put out. That would give us two Republican, one Democratic, and one Prohibition State ticket—enough, surely.

Book Notices.

PRACTICAL FORESTRY.—A treatise on the propagation, planting, and cultivation, with a description, and the botanical and popular names of all the indigenous trees of the United States, both evergreen and deciduous, with notes on a large number of the most valuable exotic species. By Andrew S. Fuller, author of the "Strawberry Culturist," "Grape Culturist," "Small Fruit Culturist," etc. Illustrated. Cloth, 12mo. Price, post-paid, \$1.50. Orange Judd Company, 751 Broadway, New York.

"**HOW TO TELL THE AGE OF A HORSE,**" a pocket manual, giving full information of the methods employed by professional horse-men and veterinarians to determine the age of horses, with numerous illustrations, showing the shape of the teeth at different ages, and a chapter on horse character, or how to determine the disposition of a horse, with portraits of several famous trotters and thoroughbreds. By Prof. J. M. Heard, member of the Royal College of Veterinary Surgeons, London, and Professor of Clinical Surgery in the New York College of Veterinary Surgeons. Price, 30 cents. M. T. Richardson, Publisher, No. 7 Warren street, New York.

FRANK LESLIE'S SUNDAY MAGAZINE.—The September number is, as usual, filled with good things. The contents are highly interesting, edifying and entertaining, and the illustrations are numerous and handsomely executed. "Religious Associations of Edinburgh," "Sketches of Germantown, Pa.," "The Kingdom of Roumania," etc., are most interesting articles and profusely illustrated. "Wall Street Defalcations" is by the editor, T. DeWitt Talmage, D. D., who has also a sermon in the Home Pulpit, "Esther the Mediatix." The serials, "How it all Came Round" and "Clare Linton's Friend," are continued, and there are sketches, essays, etc., by favorite authors. The poems are by Dean Plumtre (beautifully illustrated) and others, and besides the Editorial Comments, Religious Notes and News, Personal Notes, Obituaries, etc., there is a large miscellany affording delightful reading. Price 25 cents a number, or \$2.50 a year, postpaid. MRS. FRANK LESLIE, Publisher, 53, 55 and 57 Park Place, New York.

SINGING ON THE WAY.—A collection of hymns and tunes for Sunday schools, social worship and congregations. By Mrs. Belle M. Jewett, assisted by Dr. J. P. Holbrook. Price 35 cents. Published by Oliver Ditson & Co., Boston. By common consent there is a demand for an advance in Sunday school music, showing that the people who have been enticed to sing by the jingle of the rather milk-and-watery productions of a decade or two ago, have put away childish things, and now relish what is really music and really poetry. *Singing on the Way* contains 175 songs or tunes. About 75 of these would be perfectly in place on the pages of a high class choir book, and perhaps 60 have the measure of "Gospel Songs." The young children who are the only ones who like "children's songs," are well remembered in 25 pieces, and thus the various wants of all ages are fully met. As a practical thing, it is not very convenient to have a Sunday school book and also a vestry, or social meeting singing book lying about the same settees. *Singing on the Way* answers all purposes, and thus one book may take the place of two.

Cowley County.

"Farmer" writes us from Cowley county that stock is in excellent condition in that county. The fruit crop, he says, is immense, and peaches will be a "glut in the market." Fine specimens of budded varieties have been preserved and will appear in the State's exhibit at the New Orleans Exposition next winter. The representative of the State Horticultural Society who was here making collections says that the State will have to depend upon the "grand quartette" Butler, Cowley, Sumner and Sedgwick counties, for fine peaches this year. Prospectors are coming in fast, and lands "miles away from town" are changing hands at \$50 per acre.

Inquiries Answered.

TO DESTROY HEDGE.—Cut it clean off as close as possible to the ground in August,

beginning at one end of the line, throwing the brush back directly on the stumps. Beat it down with heavy sticks so as to make it lie close on the ground with the stumps under the middle. Let lie until well dried and then burn. As the burning proceeds throw in to the center all the loose parts that drop off, and finish up the brands on the stumps.

Gossip About Stock.

Texas fever has broken out in Lancaster county, Pa., and in some parts of Iowa and Montana Territory.

There is to be a conference to-day at the Governor's office concerning cattle and horse diseases in Kansas.

Governor Crosby, of Montana, issued a proclamation for quarantine against Texas cattle from northern ranges coming into the Territory by rail.

Thos. B. Wales, Jr., writes us that his company, at Iowa City, have recently sold Holsteins to persons residing in half the States of the Union.

Capital View Sheep Farm, located near Topeka, make an announcement this week on the 16th page that will be examined with pleasure by the customers of Bartholomew & Co.

Mr. J. I. Case has arranged to trot Jay-eye-see against the 2:09½ record of Maud S, and Phallas against his own record of 2:13½ at Belmont park, Philadelphia, on Friday August 15th.

Wm. Bair, the driver of Maud S., made \$10,000 by giving her a record of 2:09½, as by his contract with W. H. Vanderbilt he was to receive \$5,000 for beating Jay-eye-see's best time, and \$5,000 for lowering the mare's own record.

Governor Sheldon, of New Mexico, has issued a proclamation putting into effect the act for the prevention of the introduction of diseased cattle. From August 11 cattle must be inspected before allowed to enter the Territory, no matter where they come from. The law is very stringent and will be fully enforced.

Gov. Hale, of Wyoming, issued a proclamation establishing quarantine on the southern and eastern boundaries of the Territory to prevent cattle shipped from Texas, wholly or in part, from entering, or cattle from any point affected with contagious or infectious diseases. The proclamation is to remain in force till October 1st.

Messrs. A. H. Lackey & Son, of Peabody, Kas., sell thirty head of well-bred Short-horns and 120 head of high-grade Short-horn dairy cows on Tuesday, Sept. 9. This will be a favorable opportunity for farmers and dairymen to stock up with good milkers. Peabody is on the A., T. & S. F. railroad, sixty miles west of Euporia.

Those enterprising and reliable breeders of the Spanish Merino sheep, R. T. McCullery & Bro., Lee's Summit, Mo., announce that they will be at Newton, Kansas, from August 15 to 19, with a very fine car-load of their celebrated thoroughbred rams. It will pay any sheep breeder to give these gentlemen a call while they are in Newton.

That conscientious and careful breeder, H. B. Scott, Sedalia, Mo., in renewing his card in our Breeders' Directory for another year says: "I want you to make your annual visit to Glen Eyre as soon as you can to see what I am offering to sell your patrons. It is your place to protect your buyers as well as your sellers; but be that as it may, stock of all kinds never looked better at Glen Eyre than they do now. I have had unusual good luck with my pigs. Variety K, bought at the last St. Louis fair, of Klever Bro.'s, of Ohio, for which I paid \$200, has six beautiful pigs; and Rosebud D, bought of the Dorseys at \$125, has seven fine pigs. These sows have been winners at such fairs as St. Louis, Illinois, Indiana and Ohio State fairs.

Volume 5 of the American Poland-China Record is now ready for delivery, and contains 700 pages. This is one-third more than any of the previous volumes. Price \$4. Price of volumes 1, 2, 3 and 4, \$3 each. There are now over 1,000 pedigrees on file for 6th volume. Those wishing to insert pedigrees in 6th volume will please forward promptly. The registry fee is \$1 for each pedigree recorded. The number to be given to the animals cannot be furnished before the book is printed. It is best for owners of stock, sending in pedigrees, to keep copies of the same, as the Secretary can in no case give copies. Pedigrees sent for record are not returned, but kept on file for reference when recorded. When stock changes hands, please notify John Gilmore, Secretary, Vinton, Iowa, at once. Blanks for that purpose will be furnished.

THE MARKETS.

By Telegraph, August 11, 1884.

STOCK MARKETS.

New York.

CATTLE Beeves: Receipts inclining to 40 car loads, for exportation 4 2/3, making 9,920 for the week. Early clearance poor to fair native steers sold at 5 65a 50 per cwt. (live weight), good to prime do, sold at 6 70a 20, tops 4 70, Texas steers 5 02a 50.

SHEEP Receipts 11,000, making 38,500 for the week. Market firm; 4 00a 25 for sheep, 6 00a 25 for lambs.

HOGS Receipts 10,400, making 27,150 for the week. Market nominally firmer at 5 60a 20; none for sale alive.

Chicago.

The Drovers' Journal reports:

HOGS Receipts 13,000, shipments 5,000. Market brisk, good hogs give 10c higher. Rough packing 5 40a 65, packing and shipping 5 65a 00, light 5 70a 10, skips 3 50a 50.

CATTLE Receipts 4,200, shipments 1,100. Market active and stronger. Exports 6 50a 90, good to choice shipping 6 00a 50, common to medium 4 65a 90, grass fed Texans 3 75a 00, rough cattle 15a 20c higher.

SHEEP Receipts 1,800, shipments none. Market weak. Interior to fair 2 50a 25, medium to good 3 25a 00, choice to extra 4 00a 60, Texas sheep 2 50a 00.

The Journal's Liverpool cable reports: Market weak for American cattle, best grades making on y 14½c per pound dressed weight. Sheep market sluggish, 15a 16c for choice American.

Kansas City.

CATTLE Receipts since Saturday 4,850 head. The offerings to day were almost entirely range cattle—grass Texas. The market was steady for all classes of good quality, while medium and common were rather weak and slow. Sales ranged 3 25a 20.

HOGS Receipts since Saturday 4,503. There was a firm feeling and the market active to-day at an advance of 10c over Saturday's prices. Extreme range of sales 5 55a 75, bulk at 5 60a 70.

PRODUCE MARKETS.

New York.

WHEAT Receipts 293,000 bus, exports 102,000. No 2 Chicago 86½-87½, ungraded red 80a 93, No. 3 red steamer 74½. No. 2 red 90½-93c.

CORN Receipts 63,000 bus, exports 14,000. Ungraded 58a 63½c, No. 3 6c, No. 2 63c.

St. Louis.

WHEAT Active. Market opened advanced, then declined and closed a fraction under Saturday. No. 2 red 8 ½a 82c, cash 81a 81½c.

CORN Cash 47c.

OATS Cash 25a 26c.

RYE Dull at 54c asked.

BARLEY No market.

Chicago.

WHEAT Sales ranged at 78a 79½c; September 80½a 81½c.

CORN Cash 50a 51½c, August and September 50½a 51½c.

OATS Cash 25c.

Kansas City.

WHEAT There was not much strength to the market to day on 'change. Cash No. 2 red sold at 62½c—Saturday's bid, August nominal, Sept. sold at 63½-64½c against 64c Saturday.

CORN The market was again weak and quiet to day on 'change, cash No. 2 mixed having sold at 40½c.

OATS No. 2 cash 25c bid no offerings, August 23c bid, 26½c asked.

RYE No 2 cash, no bids nor offerings. August 40½c bid, 43½c asked.

CASTOR BEANS Quoted at 1 50a 60 per bus.

FLAX SEED We quote at 1 18a 20 per bus, upon the basis of pure.

BROOM CORN Common 2a 2½c per lb; Missouri evergreen 4a 5c; hurl 6a 7c.

POTATOES We quote home grown 40a 50c per bus.

SWEET POTATOES Home grown 1 25a 50 for red per bus; yellow 1 75a 2 00 per bus.

TURNIPS Home grown 40a 50c per bus.

APPLES Consignments of Missouri and Kansas choice 2 25a 2 10 per bbl, common to good 1 50a 2 10 do. Home grown from wagons 50a 90c per bus.

SORGHUM We quote consignments in car loads: dark 18a 20c, bright 22c.

BUTTER Supply to-day light. Storepacked and dairy are scarce and firm. Creamery is in fair supply and city retailers find a ready market for it among consumers; hence prices firm and demand good.

We quote packed:
Creamery, fancy fresh made..... 19a 20
Creamery, choice "..... 17a 18
Creamery, old and held stock..... 15a 16
Choice dairy..... 14a 15
Fair to good dairy..... 10a 12

EGGS Market bare and dealers getting their own prices. We quote at 13a 1c, and occasional sales higher. Good receipts to-morrow will settle the market.

CHEESE We quote eastern out of store: Full cream: Young America 10½c per lb; do twin flats 10c; do Cheddar, 9c. Part skim: Young America 7a 8c per lb; flats 6½a 7c; cheddar 6½a 7c. Skims: Young America 5a 6c; flats 4½a 5c; Cheddar 4½a 5c.

Horticulture.

Sanitary Value of Plants and Trees.

Every year the order goes forth and is heralded through our State, "Plant trees," "Plant trees," and how enthusiastically the command has been received, and how effectively put in force, let the fair young groves and blooming orchards which now adorn our once treeless plains make answer.

And so cheerfully has mother nature responded to the touch of the wand of labor that our earliest planters now sit in the shade of their own vines and trees and their children sport beneath the wide spreading branches thereof. To the former the lone barren prairie is a memory, to the latter a myth. Twenty miles a year, it is said, we are gaining upon and wiping out the Great American Desert.

From our own experience and from that of other countries we are led to infer that there is no desert so void and naked that it might not be reclaimed in the course of half a century. The Khedive of Egypt has wrested land from the sand wastes as the Hollanders win it from the sea, and by a cheaper process than the building of extensive dikes, simple by planting date palms and olive trees. In France the government has reclaimed the Landes, a sandy steppe on the southwestern coast, by planting willows and bay trees, and even Algeria has been improved by the persistent tree culture of the French colonists.

Happy is the generation which is able to profit by the mistakes of those gone before.

Humboldt once said, while contemplating the evils wrought by the wholesale destruction of forests, "Truly men in all climates seem to bring upon future generations two calamities at once—a want of fuel and a scarcity of water." Champollion is reported as saying in reference to the great desert of North Africa.

"And so the astonishing truth dawns upon us that this desert may once have been a region of groves and fountains and the abode of happy millions. Is there any crime against nature which draws down a more terrible curse than that of stripping mother earth of her sylvan covering. The hand of man has produced this desert and, I verily believe, every other desert upon the surface of this earth. Earth was an Eden once and our misery is the punishment of our sins against the world of plants. The burning sun of the desert is the angel with flaming sword who stands between us and paradise."

Plants are the children of the earth since they receive their nourishment directly from her bosom, while the more highly organized animals live upon plants or upon animals which have first been nourished by plants.

We are not concerned at present, however with the relative values of the various food plants, nor even with the medicinal remedies plants provide us with, but wish rather to give attention for a few moments to their influence within doors and without, in conducting to health and preventing disease.

That vegetation purifies the air—chiefly by three functions i. e. by absorbing carbonic acid, by inhaling oxygen and by producing ozone, has been placed beyond doubt by vegetable physiologists, and chemists. And though it has also been maintained that the absorption of carbonic acid and the production of oxygen and ozone by house plants is so small in quantity as to produce no appreciable change in the composition of the atmosphere of the dwelling, yet so potent are these effective agents that the most infinitesimal portions may often be the means of

turning the scale in favor of a healthy condition. According to Schonbein, air containing but 1-3,240,000 of ozone is capable of disinfecting its own volume of air filled with the effluvia evolved in one minute from four ounces of highly putrid flesh.

And though the sun acting upon flowers and plants as well as leaves of trees is constantly distilling this poison destroying element very little finds its way into our dwellings, the most of it being consumed in oxidizing outside impurities.

But conceding that the chemical effects of a rose, a geranium or a begonia are so infinitesimal as to be incalculable, they possess, nevertheless, a hygienic influence of great value in the impression they produce on our minds and senses. Medical men tell us much of the influence of a certain relative proportion of pleasurable and painful impressions upon health. The painful sensations which needs must come to all in daily life must be counterbalanced by some kind of pleasure or other.

Are the daily tasks monotonous and wearisome? Do they cramp the soul and weary the body? Let the eye rest for a moment upon the brightly blooming house plant, and a thrill of pleasure is experienced calm and pure because free from all taint of passion, and felt all the more intensely because nameless and indefinite, and this simple pleasure may in many cases give the preponderance to the pleasurable and furnish the stimulus necessary to enjoyment, and consequently health. Flowers in a room like condiments in the food have a direct sanitary value.

The same may be said of private gardens and public parks, and justifies the expense incurred in the artistic perfection of them, as the more tastefully laid out and the more carefully attended the better the effect.

Modern hygienic investigation has demonstrated the fact that a condition of health is largely dependent upon the variations of moisture in the soil, that a country denuded of its trees is subject to these variations, and that one-fifth of the area might advantageously be given up to the cultivation of forests.

Plantations in India are found to be preventives of that great scourge, cholera. Roads which lead through forests, though travelled daily by hundreds who might carry contagion, are found to be nearly free, while the barren, treeless plains are covered with the dead and dying.

European soldiers in India when quartering in barracks surrounded by trees have been observed to have comparative immunity.

In Bavaria during the cholera epidemic of '54, places situated in the forests were spared notwithstanding the otherwise bad condition of the inhabitants.

The same thing has also been observed in Saxony, and even if deductions must be made cautiously we are convinced that these facts tell indisputably in favor of trees and woods.

Vegetation also purifies the soil from the refuse matter of human habitations the roots of the trees taking up much deleterious matter. But it will not do to tax them in this way too heavily.

Forests are also a protection from vicissitudes of temperature. They intercept the winds moderating equally the chill breezes of the north and the blighting heat of the south. They capture the rays of the sun and store them up for fuel in winter while yielding us coolness and shade in summer.

As a condition of health our internal organs must be maintained at a uniform temperature of 98 deg. whether the surrounding atmosphere is that of tropical heat or arctic cold. Deviations of but

one degree are signs of serious illness. We are provided of course with a self-regulating apparatus which performs this colossal task, under ordinary circumstances, by means of an increase or diminution of the peripheric circulation and the pores of the skin. But under pressure of extremes we are obliged to resort to artificial means. Against cold we have excellent methods in clothing, dwelling, and fires. Against heat we have as yet less effective means in baths cooling drinks, fans and shade. The most grateful form of the latter being furnished us by the trees which line our sidewalks, surround our dwellings, or woo us to rest beneath their branches in the wood.

Besides the more obvious effect of preventing the sun's rays from striking us directly, a great deal of heat is neutralized by evaporation from the leaves, another portion by the decomposition of carbonic acid. Prof. Ebermayer, who has made a study of forestry, tells us that the temperature of trees in a forest is always lower than that of the surrounding atmosphere, a portion of the heat of our bodies is therefore lost by radiation to these cooler objects.

Besides this shade in the open air always produces a draught which acts as a kind of fan. The air being slightly cooler in the shade layers are found, differing in gravity, which causes motion. In the wood the air from outside is drawn in, cooled and returned to us again. The evaporation of moisture stored up by the leaf covered soil, as well as that which has been carried deeper by the roots, also moderates the temperature of the surrounding atmosphere. Ebermayer estimates the presence of a forest to be equivalent to a change of several degrees of latitude.

Therefore plant trees, they measure their ages not by months and seasons but by centuries.

They have important relations to agriculture, to commerce, to the industrial arts, and are essential to the health and welfare of mankind.—Mrs. Mary J. Humphrey.

The Tallest Chimney in the World.

Speaking about large chimneys, the tallest chimney in the world is said to be that of the Port Dundas works, Glasgow, Scotland. Its height from the foundation is 468 feet; above the ground, 454 feet; the foundation being 14 feet deep. The outside diameter on a level with the ground is 34 feet; at the top of it 12 feet 8 inches; thickness at the ground, 7 bricks, at the top 2½ bricks. The internal diameter at the base is 20 feet, which gradually contracts to 10 feet 4 inches at the top. There are no other human structures in the world higher than this chimney except the steeple of the Strasborg Cathedral, which is 465 feet about the ground, and that of St. Stephen's church, in Vienna, which is 465 feet high. The most wonderful part of the story of this lofty chimney is, that having been twisted out of the vertical line to the extent of seven feet nine inches by a violent wind before the mortar was hardened, human skill reduced it to a perfect perpendicular again. The mortar was sawed out on the windward side so as to allow the chimney to settle sufficiently to restore the perpendicular again. Nearly 2,000,000 of bricks were used in the construction of the chimney, and it cost \$40,000. It is 150 feet higher than the cross on the top of the steeple of the new Trinity church in New York, and 90 feet higher than the cross on the top of St. Paul's in London. The breadth of this chimney at its base is 40 feet, or equal to the space occupied by a large sized house, and it gradually contracts to 11 feet at the top.

As a rule we prefer a physician's prescription in preference to using patent medicines of whose composition we are ignorant. But we make an exception in favor of Leis' Dandelion Tonic. Its use in our family has been eminently satisfactory, and we heartily recommend it.—J. S. BOUGHTON, Editor of *Kansas Monthly*.

A well-drained farm is said to improve the health of domestic animals that live upon it.

CATARRH Hay Fever



It is a type of catarrh having peculiar symptoms. It is attended by an inflamed condition of the lining membrane of the nostrils, tear ducts and throat, affecting the lungs. An acrid mucus is secreted, the discharge is accompanied with a painful burning sensation. There are severe spasms of sneezing, frequent attacks of blinding headache, a watery and inflamed state of the eyes.

ELY'S CREAM BALM is a remedy founded on a correct diagnosis of this disease and can be depended upon. It has gained an enviable reputation wherever known, displacing all other preparations.

Not a Liquid or Snuff.

Apply by the finger into the nostrils. It will be absorbed, effectually cleansing the nasal passages of catarrhal virus, causing healthy secretions. It allays inflammation, protects the membranous linings of the head from additional colds, completely heals the sores and restores the senses of taste and smell. 50 cts. at druggists; 60 cts. by mail. Sample bottle by mail 10 cts.

ELY BROS., Druggists, Owego, N. Y.

AYER'S Sarsaparilla

Is a highly concentrated extract of Sarsaparilla and other blood-purifying roots, combined with Iodide of Potassium and Iron, and is the safest, most reliable, and most economical blood-purifier that can be used. It invariably expels all blood poisons from the system, enriches and renews the blood, and restores its vitalizing power. It is the best known remedy for Scrofula and all Scrofulous Complaints, Erysipelas, Eczema, Ringworm, Blotches, Sores, Boils, Tumors, and Eruptions of the Skin, as also for all disorders caused by a thin and impoverished, or corrupted, condition of the blood, such as Rheumatism, Neuralgia, Rheumatic Gout, General Debility, and Scrofulous Catarrh.

Inflammatory Rheumatism Cured.

"AYER'S SARSAPARILLA has cured me of the Inflammatory Rheumatism, with which I have suffered for many years.

W. H. MOORE."

Durham, Ia., March 2, 1882.

PREPARED BY

Dr. J. C. Ayer & Co., Lowell, Mass.

Sold by all Druggists; \$1, six bottles for \$5.

\$11,950

IN CASH
GIVEN AWAY

Premiums No. 11,950

\$500

\$450

\$400

\$350

\$300

\$275

\$250

\$225

\$200

\$175

\$150

\$125

\$100

\$90

\$80

\$70

\$60

\$50

\$40

\$30

\$20

\$10

Smokers of Blackwell's Genuine Bull Durham Smoking Tobacco will receive Premiums as follows on terms and conditions here specified:

1st PREMIUM, \$5,000

2d " " \$2,000

3d " " \$1,000

22 other Premiums as here shown.

The 25 premiums will be awarded December 22, 1884.

1st Premium goes to the person from whom we receive the largest number of our empty tobacco tins prior to Dec. 15.

2d will be given for the next largest number and thus, in the order of the number of empty tins received from each, to the twenty-five successful contestants.

Each tin must bear our original Bull Durham label, U. S. Revenue stamp, and Caution Notice.

Tins must be done up securely in a package, with name and address of sender, and number of tins contained, plainly marked on the outside, and must be sent, charges prepaid, to Blackwell's Durham Tobacco Co., Durham, N. C. Every genuine package has picture of Bull.

See our next announcement.



Cures all Open Sores on Animals from any cause.

STEWART'S HEALING POWDER

At Harness or Drug Stores. 50 Cents a Box.

D. M. MAGIE COMPANY, OXFORD, BUTLER CO., OHIO, Originator and Headquarters for Magie or Poland-China Swine. 751 head sold for breeders in 1883. Have shipped stock to Seven Foreign Countries. Send for Circulars.

The Veterinarian.

[The paragraphs in this department are gathered from our exchanges.—ED. FARMER.]

CAPPED HOCK.—A fine three-year-old colt has a soft bunch on the point of his hock. Have applied iodine, but a friend advises corrosive sublimate, turpentine and camphor. Would that be proper treatment? Can I work her while treating? Another friend says I will have to open it with a knife. [Take no advice that will ruin the colt, such as corrosive sublimate; it will leave a blemish for life. Use Caustic Balsam 4 oz., linseed oil 4 oz., mix and rub on every day, and work the colt as usual. The Balsam will sweat it out and leave no blemish.]

GARGET.—I have been troubled in my cows with garget; what can I do for it? Where can I find marshmallow? [Garget is produced by being over-fed while near the calving, and causing an unnatural force of milk into the udder when the separation of the umbilical cord takes place at time of parturition. You can find common mallow growing in almost every barn-yard, or you can get it at drug store. Boil it well, foment the bag when it is warm, then rub on iodine ointment 2 oz., olive oil 1 oz., mixed. Draw the teats often; feed moderately when a cow is coming in, and one week after.]

CONTUSION OF THE WITHERS.—My two-year-old mare is threatened with a fistula of the withers. Will you please give the nature and causes of the disease, also the treatment before and after it breaks? [Saddle horses are, beyond all doubt, more liable to injuries of the above character than any other class, simply because they are more exposed. This is, no doubt, to be attributed to the undue pressure which is sometimes produced by a heavy rider, and often aggravated by a bad-fitting saddle. The first thing that is usually noticed in these cases is a tumor of variable dimensions, hot, swollen, and tender. At this stage of the disease, if proper precautions are taken, by removing, for a time, all sources of irritation, the swelling and tenderness will soon disappear, leaving the animal none the worse for the injury. A very good application for these recent injuries is, camphor water 1 pint, sugar of lead 1/2 oz., laudanum 1 oz.; mix, and apply frequently with a sponge. If, however, some means are not taken to prevent repeated contusions of the parts, ulceration and suppuration are liable to follow, which very frequently terminate in the formation of one or more sinuses, burrowing deep in the soft parts, and sometimes involving the bony structure, and constituting what is known as fistula of the withers, in a most aggravated form. This disease is considered complicated and difficult to cure when the bones are involved, and simple and comparatively easy to cure when nothing but the soft parts are involved. The proper treatment in the primary stage is rest and frequent application of warm or cooling lotions to the affected parts. If, after a week's treatment, the tumor remains undiminished in size, and shows no signs of suppuration taking place, it is considered advisable to apply a blister, the action of which will hasten the formation of pus. When it is ascertained that an abscess has become developed, which may be known by its soft, fluctuating feel, the sooner it is freely opened the better; and the proper way to accomplish this is by passing a seton in at the top and out at the bottom of the tumor. This method of treatment will give a free exit to all discharges, and, at the same time, give the operator a chance to thoroughly inject the sac. A solution of the sulphate of zinc is very good, or a solution of carbolic acid may be used. The treatment of fistula of the withers is, however, altogether a different affair. In the treatment of all of these cases, the source of irritation must be effectually removed before a

radical cure can be effected. When it is ascertained that the cartilaginous extremities of the dorsal vertebrae are diseased, which is frequently the case, it will be necessary to cut down and remove all of the diseased parts, but in cases where the bones have not become involved, it is only necessary to get a proper depending orifice and to thoroughly inject the sinuses daily with one of the following remedies—or perhaps a better plan is to use them alternately: No. 1—Carbolic acid, 1 dr.; tincture of muriate iron, 1 oz.; water, 1 pint; mix. No. 2—A saturated solution of sulphate zinc. No. 3—Chloride zinc, 1 dr.; water, 1 pint; mix.]

HEREFORD CATTLE.

THOROUGH-BRED BULLS and HIGH-GRADE BULLS and HEIFERS for sale. Inquiries promptly answered.

WALTER MORGAN & SON,
Irving, Marshall Co., Kansas.

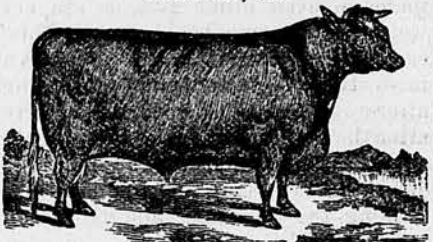
Mt. Pleasant Stock Farm, Colony, Anderson Co., Kansas.

J. S. HAWES
Importer and Breeder of
HEREFORD Cattle.

I have one of the largest herds of these famous cattle in the country, numbering about 200 head. Many are from the noted English breeders, T. J. Carwardine, J. B. Green, B. Rogers, W. B. Powell, Warren Evans and P. Turner. The bulls in service are "FORTUNE," sweepstakes bull with five of his get at Kansas State Fair, 1882 and 1883; imp. "Lord Wilton" bull "SIR EVELYN" own brother to "Sir Bartle Frere;" imp. "DAUPHIN 19th," half brother to T. L. Miller Co.'s "Dauphin 18th;" and "THE GROVE 4th," by "The Grove 3d."

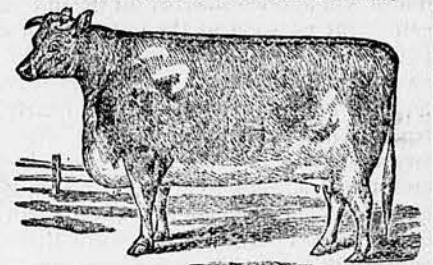
To parties wishing to start a Herd I will give very low figures. Write or come.

Wm. Gentry & Sons, Sedalia, Pettis Co., Mo.
Joel B. Gentry & Co., Hughesville, Pettis Co., Mo.



BREEDERS of and Dealers in Short-horn, Hereford, Polled Aberdeen and Galloway Cattle, Jacks and Jennets. Have on hand one thousand Bulls, three hundred she cattle in calf by Hereford and Polled Bulls. Are prepared to make contracts for future delivery for any number.

SUNNY SIDE STOCK FARM.



J. P. FENLON, P. O. Box 148, Leavenworth, Kansas.
—Breeder of—

SHORT-HORN CATTLE

of the most noted beef strains, and all superior individuals.

FOR SALE—Forty Thoroughbred Pure Short-horn Bulls—Rose of Sharon, Young Mary and Princess, from 9 months to 2 years old; also, 60 High grade Bulls, all Red and in fine condition, from three-quarters grade cows and pedigree bulls.

Correspondence or inspection of herd cordially invited.



PRINCESS.—Aired Hocks, 26 1/2 lb.; fourth fleece, 26 1/2.

R. T. MCCULLLEY & BRO.,
LEE'S SUMMIT, JACKSON CO., MISSOURI.

Breeders of Pure Spanish Merino Sheep—Vermont Register. 40 Rams unequalled for length and quality of staple, constitution, and weight of fleeces; 240 selected by R. T. from the leading flocks of Vermont especially for retail trade. The line of blood, coupled with the high character they possess, insures a reproduction of their excellent qualities. At prices to correspond with wool.

Also, Light Brahma and Plymouth Rock Chickens and Bronze Turkeys. All orders promptly filled and satisfaction guaranteed. Catalogue free.

H. V. PUGSLEY,
PLATTSBURG, MO.



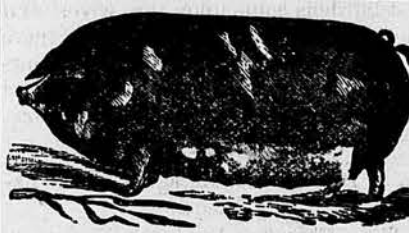
BREEDER of Vermont Registered Merino Sheep. The largest flock in the State 350 rams and a number of ewes for sale. High-class poultry. Catalogues free

Elk Valley Herd of Recorded Poland-Chinas.



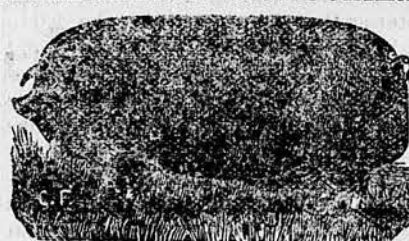
BRED BY J. WRIGHT ELK CITY, KAS.
My stock was selected from the best herds in Illinois, Indiana and Ohio. Young stock for sale; also high-class Poultry. Send for catalogue and prices.
JOHN WRIGHT, Elk City, Kas.

MEADOW BROOK HERD



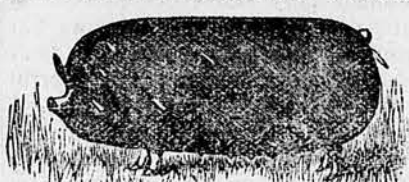
OF POLAND-CHINA SWINE.
Breeding Stock recorded in American and Ohio Records Tom Duffield 1675 A. J. C. R., at head of herd. Always space with latest improvements of the favorite breed. Personal inspection solicited. Correspondence promptly answered.
JELLEY & FILLEY, Proprietors, KINGMAN, KANSAS.

Acme Herd of Poland Chinas



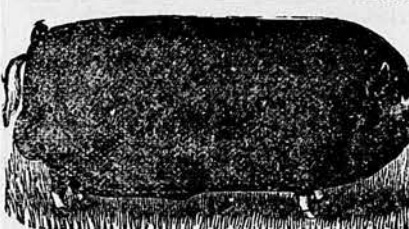
Fully up to the highest standard in all respects Pedigrees, for either American or Ohio Records, furnished with each sale. All inquiries promptly answered.
Address **STEWART & BOYLE, Wichita, Kansas.**

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. McCULLUGH, Ottawa, Kansas.

WELLINGTON HERD ENGLISH BERKSHIRES.



The Wellington Herd of well-bred and Imported Berkshires is headed by **HOPEFUL JOE 4889.** The herd consists of 16 matured brood sows of the best families. This herd has no superior for size and quality, and the very best strains of Berkshire blood. Stock all recorded in A. B. R. Correspondence and inspection invited. Address **M. B. KEAGY, Wellington, Kas.**

PIG EXTRICATOR, to aid animals in giving birth. Send for free circular to **WM. DULIN, Avoca, Pottawatomie Co., Iowa.**

Poland-China and Berkshire HOGS.



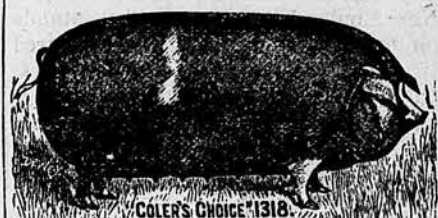
We have for sale a fine lot of Poland-China and Berkshire Pigs, from 2 to 6 months old. Ours is the largest herd of pure-bred Swine in the State, and the very best strains of blood of each breed. If you want any of our stock write us and describe what you want. We have been in the business many years, and have sold many hogs in this and in other States, and with universal satisfaction to our patrons. Our hogs are fine in form and style, of large stock, quick growth, good bone, hard and of wonderful vitality. Our Poland-Chinas are recorded in the American Poland-China Record.

RANDOLPH & RANDOLPH,
EMPORIA, LYON CO., KANSAS.



ROME PARK STOCK FARM, located seven miles south of Wellington, Sumner Co., Kansas; Rome depot adjoining farm. I have 35 breeding sows—Poland-China and Large English Berkshire swine. Also 230 high grade Short-horn cattle. Stock recorded in Ohio and American Records. The animals of this herd were and are prize-winners and descendants of prize-winners, selected with care from the notable herds in the different States without regard to price. The best lot of sows to be seen. Am using six top-class Cornishell 24, Kansas Queen, Kansas Pride, Cora's Victor, Ohio King, Hubbard's Choice, sweepstakes. Orders booked for Spring Pigs. Address **T. A. HUBBARD, Wellington, Kansas.**

Riverside Stock Farm.



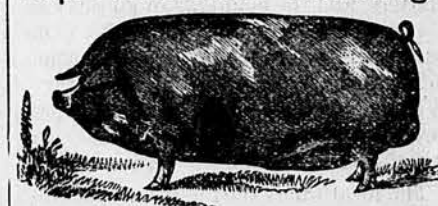
Herds of pure-bred and high grade Short-horn Cattle, Poland-China Swine, Shepherd Dogs and Plymouth Rock Fowls. The best herd of Poland-Chinas west of the Mississippi river, headed by Black-foot 2361, Young U. S. 4491, Laudable vol 6 (own brother to Look-No-Farther 405) and Seek-No-Farther (a son of Look-No-Farther). All stock sold eligible to the Ohio Record. Send for new catalogue. **MILLER BROS.,** Box 298, Junction City, Kas.

Thoroughbred Poland-Chinas



AS PRODUCED AND BRED BY A. C. Moore & Sons, Canton, Illinois.
We are raising over 800 pigs for this season's trade. Progeny of hogs that have taken more and larger sweepstakes and pork-packer's premiums than can be shown by any other man on any other breed. Stock all healthy and doing well. Have made a specialty of this breed of hogs for 37 years. Those desiring the thoroughbred Poland-China should send to new quarters, our breeders will be registered in the American Poland-China Record. Photograph of 34 breeders, free. *Swine Journal* 25 cents. Three-cent stamps take n.

Improved Poland-China Hogs



We have been breeding Poland-China Hogs for twenty years. The long experience obtained has enabled us to select none but the choicest specimens for breeding purposes. We now have

Hogs of Quick Growth,

Easily fattened and early matured, showing a great improvement in form and style, especially in the head and ears. Our breeders consist of the finest lot of Sows and three of the best Boars in the State being descendants from the best families in the United States. Those wishing choice pigs should send orders in early as there is a very large demand for stock. Mail orders filled with dispatch. Pedigrees furnished with all hogs sold.

S. V. WALTON & SON,
P. O., Wellington, Kansas; Box 207.
Residence, 7 miles west of Wellington, near Mayfield.

In the Dairy.

How to Start a Factory.

It is essential for the best success of the enterprise that it should lie within the dairy belt which, in this country, extends from the 40th to the 45th parallels of latitude. On the mountainous ranges in the Alleghanies and Rockies, it extends farther south. Any region abounding in good grass and in brooks fed by living springs, or by the melting snow and ice of mountain peaks, will be suitable for co-operative dairy work. A cheese or butter factory, as a rule, starts with one individual, who feels the need of a better method of making up his own dairy products. The inauguration of the creamery system is credited to a single person—Jesse Williams, a prosperous farmer living near Rome, N. Y., no farther back than 1850. In that year his son was married, and the milk of his farm was brought to his father's house, to save labor and to gain his father's skill in making a first-rate article of cheese. Other neighbors were attracted to the place by the same motives and thus commenced the associated dairy business. Almost any good dairyman, of well established reputation for first-rate dairy products, can start a cheese or butter factory. There are different methods of running a dairy factory. It is sometimes started as an individual enterprise, one man furnishing all the capital and buying all the milk, and marketing the products. This would be safe enough, if he owned all the cows and the farms that were necessary to give full employment to the factory. But in the average of farming communities, and especially in New England, where every tub stands on its own bottom, and has been secured in that direction for two centuries, there is likely to be difficulty in arranging the price of milk and other details on a satisfactory basis. It would be in the power of the many patrons of the institution to withdraw patronage, and make the enterprise unprofitable to the owner. It is the safer and fairer way to form a joint stock company, and to have the majority of the stock owned by the dairymen who expect to sell their milk to the factory company. Then if there be fair management at the factory, there will be no room for jealousy or factious opposition to the methods of the directors or managers. The policy of the institution will be shaped by the major vote of the stockholders, and the losses and profits will be fairly divided among them.

The factory system of cheese and buttermaking requires skilled labor, and it is essential that the actuary who manages the business at the factory should be one who has had ample experience—an education in it. Fortunately the system is so widely extended all through the dairy region, that such men are not difficult to be found. They have spent years in the factory, have turned out good products, and have reputations to lose. A green hand may have education, tact and skill in other matters, and the elements of success in his character, but inevitably the company will have to pay for his education in running a cheese or butter factory. With a man who understands the business, there will be little waste, and substantial success from the beginning.

The location of the factory, especially if butter is to be made, is a matter of prime importance. A copious spring of living water is a prime necessity, and a brook, with volume enough to make a pond for ice near by, is hardly less important. Much depends upon the temperature of the milk in making the best dairy products, and with plenty of ice

the temperature is under perfect control in the hottest weather. A location, central to the district that is to furnish the milk, is also to be taken into the account. Whether each farmer brings his own milk to the factory, and carries hence the whey or skimmed milk, or this work is done by the company, economy in carting should be considered. It makes a difference whether a team has to travel twenty miles or thirty to bring in the daily supply of milk. The leader in such an enterprise, before he matures his plans and ventures to solicit stock, should take ample time to visit a dairy region, where the factory system is in successful operation, and endeavor to master all the details of the business, so far as to know the cost of the necessary buildings, and of the apparatus for making the best dairy products. Changes are constantly going on in the associated dairy business, and it will cost but little more on the start to have the latest improvements, than to purchase apparatus and to adopt plans that the business has outgrown.

The advent of the dairy factory, in many of our dairy districts in the older States, is a "consummation devoutly to be wished." Any one familiar with the improved methods of associated dairying, is pained on visiting a region where the methods of the age of homespun are still in use. There is immense waste of labor, of health and life, and the heaviest burdens come upon the wives and mothers. In the factory system there there is emancipation from these burdens, and more sunshine and gladness in rural homes.—*W. C. in Country Gentleman.*

Dairy Day on the Chicago Produce Exchange.

The Chicago Produce Exchange, which represents the legitimate produce commission business of the city, and which holds a daily session, has arranged to, after September 1, devote one day in the week to dairy products, which will be known as "Dairy Day." The business will be of the same character as that transacted on the Elgin and Des Moines Boards of Trade, and will consist of offerings and sales of dairy products exclusively. It is a little remarkable that such a movement has not sooner been inaugurated, since the magnitude of the sales of dairy products in this city are enormous. It is claimed that shipments of butter and cheese from this city average one million pounds daily, while of the estimated 13 million milch cows in the United States, fully one-fourth are embraced in an area within six hundred miles of Chicago. While the cow population in the older dairy states of the east remains nearly stationary or shows but slight increase, that of the new dairy states of the west shows a wonderful increase. In 1850 Iowa had but 45,000 cows; to-day the number is nearly or quite 1½ millions, being exceeded in number by but one other state—New York. Wednesday of each week has been fixed upon by the Produce Exchange as Dairy Day. Transactions will be only of a wholesale character, in lots of from fifty tubs of butter to carloads. The movement must prove beneficial to the dairy interest, since it will bring buyers in competition in the open market.

If your horses have sore shoulders, scratches, cuts or open sores of any kind, use Stewart's Healing Powder.

In some parts of Europe the sunflower is cultivated for an oil that is extracted from the seeds.

Since boyhood I have been troubled with Catarrh and Hay Fever, and have been unable to obtain permanent relief until I used Ely's Cream Balm. It has cured me.—E. L. CLICKENER, New Brunswick, N. J. Price fifty cents.

The Busy Bee.

After-Swarming of Bees.

A New York bee keeper, W. Z. Hutchinson, gives results of his experience with after-swarming in the *Country Gentleman*. The first swarm that leaves a hive is called a first or prime swarm, and he says it does not usually issue until several queen cells are well under way, and perhaps one or more of them sealed over. As soon as the first queen hatches, if a flow of honey continues, she leads off a second, or "after-swarm," and as the young queens continue to hatch, they also continue to lead off after-swarms, the number that issue depending on the yield of honey, the amount of brood left in the hive by the prime swarm, and the weather. Of course, each successive swarm is smaller than the preceding one, the last one often not containing a pint of bees, and if hived in the usual manner would amount to nothing, but by hiving it upon empty combs, and perhaps giving it a frame or two of hatching brood, and feeding it a few pounds of sugar syrup, if it does not secure a sufficient amount of honey for winter stores, it can usually be brought into good condition for passing the winter; and having a young and vigorous queen, it is almost certain to prove an excellent colony the succeeding season. One peculiarity about after-swarms is that they are likely to issue at almost any time of the day, or in almost any kind of weather, instead of choosing the middle of a fine day, as does a prime swarm; they also go farther from the hive to cluster, or perhaps go off without clustering.

When honey is more desirable than increase, even prime swarms are not welcomed by some bee keepers, while each after-swarm is looked upon as a misfortune. One method of preventing after-swarming is to open the old hive after the first swarm has issued and cut out all the queen cells except one. The objections to this are the trouble of performing the operation, and, if the cell that is left fails to produce a perfect queen, the colony is left hopelessly queenless. Giving the old colony a laying queen, as soon as the first swarm has left, will usually prevent after-swarming, at least for the time being, as the queen will at once destroy all the queen cells; but as soon as the hive becomes populous, she will often lead out a swarm. Giving the old swarm a newly hatched queen, or a queen cell nearly ready to hatch, will also prevent after-swarming, and is preferable, unless increase is desirable, to giving it a laying queen. A newly hatched queen, or a queen cell ready to hatch, is of little value, while a laying queen is worth at least one dollar, and the colony, not having a laying queen until the young queen is fertilized and laying, does not become populous quite as soon, and, consequently, is less inclined to swarm. A colony with a young laying queen, is not as apt to swarm as one with an old queen.

The writer has, the present season, practised to a considerable extent, this method of preventing after-swarming; that is, giving the parent colony a mature queen cell soon after it has cast a swarm, and in no instance has a colony thus treated swarmed again. He has a small slate hanging upon a nail driven into the back of each hive, and when a swarm issues, the date is marked upon the slate. He has learned by experience that more of the young queens hatch sooner than the sixth day after a swarm has issued, usually about the seventh or eighth day; and when a colony from which no after-swarms are wanted cast a swarm, it is an easy matter, by ex-

aming the dates upon the slates, to find a colony that has swarmed six or seven days previous, from which to obtain a queen cell nearly ready to hatch, to give the colony that has just swarmed. Another method of preventing after-swarming is to place the new swarm upon the old stand, removing the parent colony to a new location. The flying bees all return to the old location, and join the new swarm, which so reduces the strength of the old colony that it often casts no second swarm. The writer, however, carries this method one step farther, and makes of it a complete success. In fact, it is his favorite method of preventing after-swarming, and, at the risk of repeating what he has, perhaps, already said in these columns, he will describe it here. The new swarm is hived in a new hive and placed upon the old stand, but, instead of carrying the old hive to a distant new location, it is placed beside the new swarm, the rear of the hive in contact with the new hive, but the front turned to one side at an angle of 45 deg. So far as the flying bees are concerned, the old hive occupies a new location fully as much as though it had been carried away rods distant, for they all enter the new hive on the old stand. Each day the old hive is slightly turned toward the new hive until, at the sixth day, it stands close beside and parallel with it. The bees of each hive recognize and enter their respective homes, but let either hive be removed, and all the flying bees will enter the hive left upon the old location. The seventh day, the old hive is picked up and carried to a distant stand, when, of course, all the flying bees join the new swarm upon the old stand, leaving the old colony so reduced in numbers just at the time when the young queens are hatching, that all thoughts of swarming are abandoned, the first queen that hatches biting into and destroying the remaining cells, together with their occupants. If several queens hatch at about the same time, there are royal combats, which result in the "survival of the fittest."

When this method is adopted, the honey boxes, should be removed from the old hive to the new one at the time hiving the swarm. The great mass of workers will then be where the honey boxes are, which is as it should be. In fact, in the writer's opinion it is better always to put on boxes at the time of hiving a swarm, and then contract the brood next, to such an extent as to crowd some of the bees into the boxes. (When this is done, unless a queen-excluding honey-brood is used, the queen will often make mischief by invading the surplus department.) A delay of even twenty-four hours in giving boxes to a newly hived swarm is often fatal to securing the best results, as where bees commence work when hived, there they will continue to work until they are compelled for lack of room to work somewhere else; if given boxes at the time of hiving, and crowded into them, they will commence work in both them and the brood nests, and all will go well. The only reason why the writer did not practice the last described method exclusively the present season is, that he had twenty-five cumbersome chaff hives that were extremely difficult of removal; hence, when a swarm issued from a chaff hive the colony was given a mature queen cell taken from one of the other hives that had just been removed to a new stand.

Some bee-keepers manage after swarms by hiving each one upon sheets of foundation, and placing the hive containing it by the side of the parent colony. If another one issues from the same colony, it is hived in the same manner as the first, and placed upon the opposite side of the old swarm. As soon as one of the young queens is found laying, all the bees are shaken down in front of the old hive, and the drawn out combs of foundation put away for future use.

The point to be considered, in many localities, is this; the main honey harvest is of short duration, not usually more than six weeks, and to secure the best results there must be an abundance of workers, during this period, in the hive where the honey boxes are. If the body of workers is divided up by swarming and after-swarming, into mere squads, the harvest is ended ere any of them have recruited their ranks sufficiently to gather and store it in proper shape for market.

The Poultry Yard.

Diseases of the Throat and Air Passages.

Gapes, is the expressive name derived from the chief symptom of a disease which chiefly attacks the younger chickens. It is a disease that has long been known, as the fowls affected with it give such unmistakable signs of its presence. It is due to the presence in the wind pipe, of a parasitic worm, called simply the "gape worm," or in scientific language, "syngamus trachealis," or by some naturalists, "sclerostoma syngamus." It is not found in the hen alone, but occurs also in the turkey, duck, and all domestic birds, besides various wild species, as the partridge, pheasant, lapwing, black stork, magpie, hooded crow, green woodpecker, starling, and swift. (This list is quoted from English authorities, and these birds are not in all cases the same as those known by this name in America.) Dr. Andrew Wisenthal, of Baltimore, in 1797, appears to have first published an account of the malady. The fully-developed worms are found, as already stated, in the windpipe. They are of a pale reddish color. The female is about five-eighths of an inch long, and one thirty-fifth of an inch thick. The male only one-eighth of an inch long and one-fiftieth thick. But the two sexes are always found united, the male being attached to the female far enough down, so that the heads are about on a level, making a figure not unlike a two-tined hay fork, with a rather short handle. The head of the female is much larger than that of the male, and has six lips. Dr. Spencer Cobbold describes it as follows: "In both sexes the surface of the body is quite smooth, but the female displays a series of spirally arranged lines, which, at first sight, convey the idea of a natural twisting of the body; this, however, is more apparent than real. The body of the female toward the tail exhibits a decided tendency to fold upon itself. The lower part of the body preserves a tolerably uniform thickness almost to the extremity, where it is suddenly constricted to form a narrow, mucronate, pointed tail, scarcely visible to the naked eye. Employing a pocket lens, it is easy to observe through the transparent integument the spacious digestive canal, surrounded on all sides by sinuous foldings of the ovarium, tuba, and uterus—the vagina terminating laterally at a point corresponding with the line of the upper fourth of the body. Here the male is usually found, rigidly affixed by means of a strong membranous sucker which proceeds from the lower end of the body. This disease was very troublesome in the East, but we have never seen a case in Minnesota.

Symptoms—The disease occurs most frequently in July and August, in unthrifty fowls or those kept in unclean places, fed with unwholesome food and impure water. The whole windpipe is sometimes completely filled with the little worms, and in order to breathe the fowl throws up its head and gapes, the fowls lose their general health, droop and die. Very young chickens are those usually attacked. In older fowls the windpipe is larger and the current of breath stronger, and the worms might more easily be expelled, or would not cause so much disturbance if present.

Treatment is very necessary or the fowl will die. The easiest treatment, and it is surer, is to put some carbolic acid of the clear, transparent quality, into a spoon or metal saucer and hold it over a lamp. Dense white fumes will arise. Hold the chicken's head in these

gate them together, but watch them closely lest they be killed. Burned sulphur fumes will also do very well for this purpose. The vapor of spirits of turpentine and of creosote are also recommended. Another method is to take a feather, which has been stripped of all its webbed portion, save about one inch of its tip, dip it into spirits of turpentine or kerosene and carefully insert it in the windpipe and turn it around several times, some will come out with the feathers. The opening of the windpipe is easily found at the base of the tongue. In some cases the windpipe has been found so full of insects, and suffocation so imminent, that it has been found necessary to open the windpipe by cutting into it from the outside in order to remove the parasites. This is not so difficult an operation as it seems, the main trouble being to hold the windpipe steady during the operation. Sew up the hole, taking care to stitch only the external skin. Internal treatment is sometimes recommended, such as cracked corn soaked in alum water, or kerosene. After recovery the fowls should be carefully nursed for awhile; those which have died should be burned to prevent the infection of the others. When the disease appears in a flock, fluid carbolate, or camphor, or lime should be added to the drinking water to prevent infection, and the sick should be put by themselves. As the subject is very important, we add still other methods of treatment recommended. Camphor has been given in pills the size of a pea with success; alum and sulphur in the form of fine powder, blown down the throat will destroy the worms. Lime will also effect the purpose, and may be applied by putting the chickens into a box covered with fine muslin, and sifting powdered lime through this, but not so fast as to smother the chickens. A few years ago while living in New York State, the gapes swept off my young chicks by the score. All the above remedies were tried to no purpose. Finally I saw in the New York Weekly Witness mustard seed highly recommended. Although having no faith in it, I concluded to give it a trial. One dose usually effected a complete cure; never had occasion to use it more than twice. From that time to this it has been my only remedy. A tablespoonful of the black seed (whole) to a pint of meal is about the right proportion.—Rural World.

Consumption Cured.

An old physician, retired from practice, having had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints, after having tested his wonderful curative powers in thousands of cases, he felt it his duty to make it known to his suffering fellow-men. Actuated by this motive and a desire to relieve human suffering, I will send free of charge, to all who desire it this recipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing with stamp, naming this paper, W. A. NOYSE, 149 Power's Block, Rochester, N. Y.

Western farmers and breeders now lead the world in stock breeding, both in quantity and quality.

Fun, Facts and Fiction.



A PAPER FOR THE PEOPLE.

Devoted to Society, Lodge, Amusement and Dramatic News, good Literature, etc. Will be published especially for the State of Kansas. Terms, \$2 a year; \$1 for six months. Specimen copy free.

Address M. O. FROST & SON, Pubs., Topeka, Kansas, Clubbed with the KANSAS FARMER for \$2.75.

"THE BEST IS CHEAPEST." ENGINES, THRESHERS SAW-MILLS,

THE STRAY LIST

HOW TO POST A STRAY.

BY AN ACT of the Legislature, approved Feb 27, 1886, section 1, when the appraised value of a stray or strays exceeds ten dollars, the County Clerk is required, within ten days after receiving a certified description and appraisement, to forward by mail, notice containing a complete description of said strays, the day on which they were taken up, their appraised value, and the name and residence of the taker up, to the KANSAS FARMER, together with the sum of fifty cents for each animal contained in said notice." And such notice shall be published in the FARMER in three successive issues of the paper. It is made the duty of the proprietors of the KANSAS FARMER to send the paper free of cost, to every county clerk in the state to be kept on file in his office for the last section of all persons interested in strays. A penalty of from \$5.00 to \$50.00 is affixed to any failure of a Justice of the Peace, a County Clerk, or the proprietors of the FARMER for a violation of this law.

How to post a Stray, the fees fines and penalties for not posting.

Broken animals can be taken up at any time in the year. Unbroken animals can only be taken up between the 1st day of November and the 1st day of April, except when found in the lawful enclosure of the taker-up.

No persons, except citizens and householders, can take up a stray. If an animal liable to be taken, shall come upon the premises of any person, and he fails for ten days, after being notified in writing of the fact, any other citizen and householder may take up the same. Any person taking up an estray, must immediately advertise the same by posting three written notices in as many places in the township, giving a correct description of such stray.

If such stray is not proven up at the expiration of ten days, the taker-up shall go before any Justice of the Peace of the township, and file an affidavit stating that such stray was taken up on his premises, that he did not drive nor cause it to be driven there, that he has advertised it for ten days, that the marks and brands have not been altered, also he shall give a full description of the same and its cash value. He shall also give a bond to the state of double the value of such stray.

The Justice of the Peace, shall within twenty days from the time such stray was taken up (ten days after posting) make out and return to the County Clerk, a certified copy of the description and value of such stray. If such stray shall be valued at more than ten dollars, it shall be advertised in the KANSAS FARMER in three successive numbers.

The owner of any stray, may within twelve months from the time of taking up, prove the same by evidence before any Justice of the Peace of the county, having first notified the taker up of the time when, and the Justice before whom proof will be offered. The stray shall be delivered to the owner, on the order of the Justice, and upon the payment of all charges and costs. If the owner of a stray fails to prove ownership within twelve months after the time of taking, a complete title shall vest in the taker up.

At the end of a year after a stray is taken up, the Justice of the Peace shall issue a summons to three householders to appear and appraise such stray, summons to be served by the taker up; said appraisers, or two of them shall in all respects describe and truly value said stray, and make a sworn return of the same to the Justice. They shall also determine the cost of keeping, and the benefits the taker up may have had, and report the same on their appraisement.

In all cases where the title vests in the taker-up, he shall pay into the County Treasury, deducting all costs of taking up, posting and taking care of the stray, one-half of the remainder of the value of such stray. Any person who shall sell or dispose of a stray, or take the same out of the state before the title shall have vested in him shall be guilty of a misdemeanor and shall forfeit double the value of such stray and be subject to a fine of twenty dollars.

Strays for week ending July 30, '84

Sedgwick county.—E. P. Ford, clerk.
MULE—Taken up by Silas Rutledge, in Union tp. one bay mare mule, 15 hands high, 10 years old, had on a leather head-stall, has white spot on right jaw, has harness marks; valued at \$100.

Crawford county.—Geo. E. Coles, clerk.
PONY—Taken up by Henry Burchett, of Washington tp, July 9, 1884, one sorrel mare pony, 14 hands high, brand on left hip shape of bridle bit and half of same brand on left jaw, also letter N on left shoulder, star in forehead, supposed to be 4 years old; valued at \$25.
PONY—By same, one roan pony, 14 hands high, 7 years old, branded X. D. on left hip, left hind foot white; valued at \$25.
PONY—By same, one brown mare pony, 14 hands high, 4 years old, branded H. B. on right hip, small white spot on right shoulder, star in forehead, white ring around right hind pastern joint; valued at \$25.

Brown county.—G. I. Prewitt, clerk.
HEIFER—Taken up by A. C. Palmer, of Walnut tp, June 10, 1884, one red and white speckled yearling heifer, crop off of right ear.
STEER—By same, one red and white yearling steer, no marks or brands.

Reno county.—W. R. Marshall, clerk.
PONY—Taken up by W. A. Watkins, in Soda tp, July 16, 1884, one dun mare pony with black stripe on back bore, W and square on left shoulder and indistinguishable brand on left hip, had on web halter when taken up; valued at \$30.

Butler county.—James Fisher, clerk.
PONY—Taken up by ———, in Plum Grove tp, 1881, one gray mare pony, supposed to be 12 years old, branded F. E. on left 14 hands high, lump on under jaw, indistinct brands on right side.

Ellsworth county.—N. H. McCoy, clerk.
HORSE—Taken up by Charles Ketchum, in Empire tp, July 15, 1884, one brown horse, 11 years old past, 15 1/2 hands high, branded W on left shoulder, right hind foot white, star in forehead, white collar marks on both shoulders and mark from back pad of harness; valued at \$60.

Wabaunsee County.—H. G. Licht, Clerk.
BULL—Taken up by August Paleuske, in Mill Creek tp, July 22, 1884, one black bull, 1 year old, yellow around nose, no marks or brands; valued at \$10.

Davis county.—P. V. Trovinger, clerk.
STEER—Taken up by Lewis Nicklasson, in Jackson tp, June 20, 1884, one roan steer, 2 years old, branded M C on right shoulder; valued at \$25.

Strays for week ending August 6, '84.
Sedgwick county.—E. P. Ford, Clerk.
MULE—Taken up by I. J. Kice, in Payne tp, one sorrel horse mule, 4 years old, star in forehead, indistinguishable brand on left shoulder; valued at \$40.
MULE—By same, one sorrel mare mule, 5 years old, indistinguishable brand on left shoulder; valued at \$40.

Johnson County.—Henry V. Chase, Clerk.
MARE—Taken up by Ed Gooding, near Stanley, one black mare, right hind foot white, shod all around, supposed to be 4 years old, 15 hands high; valued at \$50.

to, one pale red steer, 7 months old, no brands, white line on back; valued at \$12.

Linn county.—J. H. Madden, clerk.
MARE—Taken up by Edwin Kewison, in Sheridan tp, July 8, 1884, one black mare, 12 years old, scar on left fore leg, no other marks or brands visible; valued at \$50.

Shawnee county.—Chas. F. Spencer, clerk.
HORSE—Taken up by W. H. Baker, in Soldier tp, July 8, 1884, one horse, with saddle and bridle, branded C on left jaw and on left shoulder, 4 white feet, 7 years old; valued at \$25.

Strays for week ending August 13, '84.

Cowley county.—J. S. Hunt, clerk.
MARE—Taken up by Drury Warren, in Silver Dale tp, July 28, 1884, one bay mare 2 years old; valued at \$60.

COLT—By same, one bay horse colt, 1 year old, 1 hind foot white to pastern joint; valued at \$40.
PONY—Taken up by D. W. Pierce, in N. nescah tp, June 23, 1884, one sorrel pony mare, 10 years old, 12 bands high white strip in face, hind feet white, a little white on right fore foot, shod all around; valued at \$30.

Riley County.—F. A. Schermerhorn, clerk.
STEER—Taken up by Edward Nelson, of Grant P.O., July 18, 1884, one red 4 year-old steer, line back, branded P. G. on left hip, crop and nick in left ear; valued at \$40.

Bourbon county.—E. J. Chapin, clerk.
PONY—Taken up by C. T. Humphreys, in Drywood tp, July 3, 1884, one sorrel horse pony about 13 1/2 bands high, 15 years old, white spot in forehead and on nose, right hind foot white, saddle and harness marks; valued at \$20.

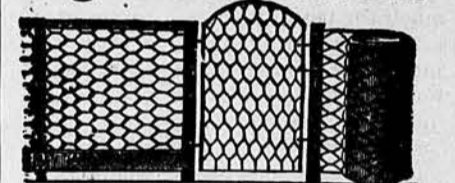
KANSAS FARMERS Mutual Fire Insurance Company,
—OF—
ABILENE, : KANSAS.

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German Asthma Cure never fails to give immediate relief in the worst cases, insures comfortable sleep; effects cures where all others fail. A trial convinces the most skeptical. Price 50c. and \$1.00, of Druggists or by mail, Sample FREE for stamp, Dr. R. SCHIFFMAN, St. Paul, Minn.

BLOOMINGTON NURSERY CO. Established 1852, by F. K. PHOENIX, Incorporated 1885. We offer for the Fall Trade a very large and fine stock of Fruit & Ornamental Trees, every description of Fruit & Ornamental Trees, Catalogue for Fall of 1884 now ready and mailed on application. 600 ACRES, 13 Greenhouses.

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Watering Plants.

We agree with a writer in Floral Cabinet that plants should always be watered in the evening after the sun has ceased to shine on them, when it will be of great service to sprinkle water over their leaves likewise. When watering is once commenced, it should never be abandoned till rain falls in the requisite quantities, for a plant which has been left wholly to nature will sustain drought far better than one which has been artificially watered. Water, too, should always be administered very copiously, as the amount of evaporation daily going on at this period is astonishing. It should, if possible, be rain water, or that which has been exposed to the sun's influence, and not from a spring, as such water has a great tendency to harden the ground.

To avoid the latter circumstance, moreover, water should be applied to each individual plant through the spout of a pot, and not poured over a whole bed with a rose. Where water is applied to the surface of a bed through a sprinkler or rose, the soil will soon become baked to a crust nearly as hard as concrete. This will be avoided by watering through the spout alone; but where it does occur, it is necessary that the earth should be loosened and stirred frequently with a small fork to render it pervious to water. The importance we place on this subject may seem overdrawn; not so, however, for our experience and observation has taught us that more plants are injured or spoiled by injudicious watering than from all other causes combined.

Slight surface waterings are worse than useless, as in a dry time, plants by their roots are constantly searching for water. Therefore, when the surface is wet say to the depth of half an inch, the roots will immediately change their direction, turning upward where there is an apparent supply; this is no sooner reached than the heat from the sun bakes the surface of the soil in which are the true roots of the plant to such an extent that the roots are destroyed—at least, the spongioles or mouths of the roots, and vegetable growth must cease until new feeding roots are formed.

Excepting in small gardens, it is much the better plan not to resort to artificial watering, but to keep the surface of the ground as loose as possible for two reasons. First, it will prevent, in a great measure, evaporation; in the second place, the dry surface will cause the roots to go downward where there is a supply, which, if not copious, will be sufficient to keep the plant in a healthy state, if not in an active growing one. It will be in a condition when the rain does come to carry on the work for which it was created, the development of flowers and fruit.

An Inexpensive Incubator.

The American Agriculturist gives us a very good plan for a simple and cheap incubator: "The incubator is made of three boxes six inches deep. The first, or bottom box, has no top, and the floor is perforated with ten or twelve half inch holes in which are inserted ten tubes to admit air. This is called the ventilator. The second box, the egg drawer, has no top or bottom, but a piece running lengthwise on the bottom, on which the eggs are placed, the third box has a zinc bottom, the top and sides being of wood. This is called the heater. At the rear of this box is a tin elbow, not bending into it, but extending downwards outside. The three boxes being placed one on the other, first the ventilator, second the egg drawer, and last the heater, we now have an incubator with three divisions, the top one being heated with a lamp

inserted in the elbow. The draught from the lamp is caused by two or three tubes extending from within half an inch of the zinc upwards through the top of the incubator, and at the opposite end of the lamp. The whole is covered with a large box, eight inches larger in every direction. Top, bottom and sides filled with sawdust. The heat, smoke and impurities enter the heater, warm the zinc, and pass out at top of the tubes. The eggs in the drawer underneath are kept at a temperature of 102 degrees."

Young Men! -- Read This.

The VOLTAIC BELT Co., of Marshall, Mich., offer to send their celebrated ELECTRO-VOLTAIC BELT and other ELECTRIC APPLIANCES on trial for thirty days, to men (young or old) afflicted with nervous debility, loss of vitality and manhood, and all kindred troubles. Also for rheumatism, neuralgia, paralysis, and many other diseases. Complete restoration to health, vigor and manhood guaranteed. No risk is incurred as thirty days trial is allowed. Write them at once for illustrated pamphlet free.

The Angora goat is very profitable when well in hand. When a flock is graded up to shear three pounds of wool or hair on the average, no animal, perhaps, excels it in profits.

Every poultry house should face the south, in order to get the full benefit of the light and heat of the sun. It pays as a part of the programme.



"I owe my Restoration to Health and Beauty to the CUTICURA REMEDIES." Testimonial of a Boston lady.

DISFIGURING Humors Humiliating Eruptions, Itching Tortures, Scrofula, Salt Rheum and Incurable Humors cured by CUTICURA REMEDIES. CUTICURA RESOLVENT, the new blood purifier, cleanses the blood and perspiration of impurities and poisonous elements, and thus removes the cause. CUTICURA the great skin cure, instantly allays itching and inflammation, clears the skin and scalp, heals Ulcers and Sores, and restores the Hair. CUTICURA SOAP an exquisite Skin Beautifier and Toilet Requisite, prepared from CUTICURA, is indispensable in treating Skin Diseases, Baby Humors, Skin Blemishes, Chapped and Oily Skin. CUTICURA REMEDIES are absolutely pure, and the only infallible Blood Purifiers and Skin Beautifiers. Sold everywhere. Price, Cuticura, 50 cents; Soap, 25 cents; Resolvent, \$1. POTTER DRUG AND CHEMICAL CO., BOSTON, MASS.

ARE YOU CONSTIPATED?

If you are bilious, dyspeptic or constipated, a few bottles of Hops and Malt Bitters will cure you as they have many others. An occasional use of Hops and Malt Bitters gives tone to the blood, strengthens the nerves and promotes perfect digestion. Do not be persuaded to try something else, said to be just as good, but get the genuine. For sale by all dealers.

HOPS & MALT BITTERS CO., DETROIT, MICH.

\$2,000 BIBLE CONTEST.

The list on the left is a partial record of the presents to be given to the subscribers of the FARM, FIELD AND FIRESIDE Sept. 1st. The publisher will pay the following extra 179 Cash Premiums to its new subscribers: FIVE HUNDRED DOLLARS for the first correct answer, \$400 for the second correct answer, and \$200 for the third correct answer, and \$100 for the fourth, and \$50 each to the next ten, and \$10 each to the next fifteen, and \$1 each to the next 150 correct answers to this question: Where is the first place in the Bible that Partridge is mentioned? These premiums are only offered to new subscribers to the FARM, FIELD AND FIRESIDE a large twenty-eight page Family and Agricultural paper, bound, stitched and cut, the subscription price of which is \$1 per year, 50 cents for six months. We already have 150,000 subscribers, who pronounce it to be the best family paper in the world. Each competitor for one of the above prizes must send either 50 cents or \$1.00 with their answer. Those whose answers are received first get these cash premiums. All those who send a 50 cent receipt will receive the paper six months and a numbered receipt good for one present September 1st. Those who send a \$1.00 receipt will get a present valued at from 25 cents to \$1.00. Send your answer quick, you will get a prize now or one sure September 1st. Money will be sent immediately to the successful ones. Send remittance by Registered Letter, P. O. Orders, Postal Notes or Express. Postage stamps taken. Address FARM, FIELD AND FIRESIDE, 89 Randolph St., Chicago, Ill.

LANDRETHS' CENTENNIAL SEED CATALOGUE "GARDENERS' COMPANION." PRICE 10 CENTS. The most complete and brilliantly embellished Seed Catalogue ever published, costing fifteen cents. The article on Market Gardening under Glass is worth twenty times the price. This being OUR ONE HUNDRETH YEAR, we publish this Ornate Guide for Garden and Farm. To all senders us TEN CENTS in stamps, we mail a copy, and on orders for Seed will give credit for that amount. Address LANDRETH & SONS, Seed Growers, Lock Box, Phila., Pa.

USE LEIS' DANDELION TONIC THE GREAT BLOOD & LIVER PURIFIER A SURE CURE FOR Sick Headache, Dyspepsia, Langour, Nervous Exhaustion arising from overwork or excess of any kind, -AND FOR- Female Weaknesses. -IT PREVENTS- Malarial Poisoning and Fever and Ague And is a Specific for Obstinate CONSTIPATION PRICE \$1.00 PER BOTTLE; SIX FOR \$5.00 SOLD BY DRUGGISTS EVERYWHERE.

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\$5. A Bonus. \$5.

Don't let your Fruit Rot but get the "DODGE ECONOMY DRYER"

for a song. Capacity 50 to 100 Bu. Apples a Day. Write immediately for circulars. Dodge Economy Drier Co. Normal, Illinois.



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Has the Largest Track Wheels. DOUBLE GEARED. No Hubs. Chilled Bearings and LEVEL TREAD

Union Thresher Separator and Cleaner, Premium Farm Grist Mill, Feed Cutters, etc. Write for Descriptive Catalogue FREE. W. L. BOYER & BROS., Philadelphia, Pa.

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Any BETTER Hay Press can HAVE IT
Bales 10 tons a day. Loads full weight in cars. Address, GEO. ERTEL & CO., Quincy, Ill.

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Is perfectly Self-Regulating, Light, but Strong and Well Balanced. See that your stock is provided with pure water and plenty of it. PUMPS and TANKS of every description. Agents Wanted. Send for Catalogue.

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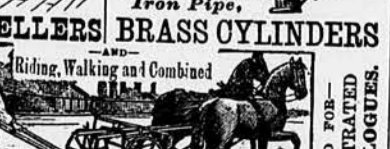
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With Adjustable Force Feed, Spring Hoe, Hoe Pressure and Fertilizer Attachments. Superior Broad-Cast Seeders, Cider Mills, Hay Forks, Carriers and Equipments. Descriptive Catalogues free. THE SUPERIOR DRILL CO. Springfield, O.

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HAND ONE, TWO, FOUR OR EIGHT HORSE POWERS. BELT or GEARED FEED GRINDERS. Pumping or Power WIND MILLS, ALL SIZES AND STYLES OF Iron Pumps, Iron Pipe, SHELLERS BRASS CYLINDERS

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MARSELLES MFG. CO., MARSELLES, La Salle Co., Illinois.

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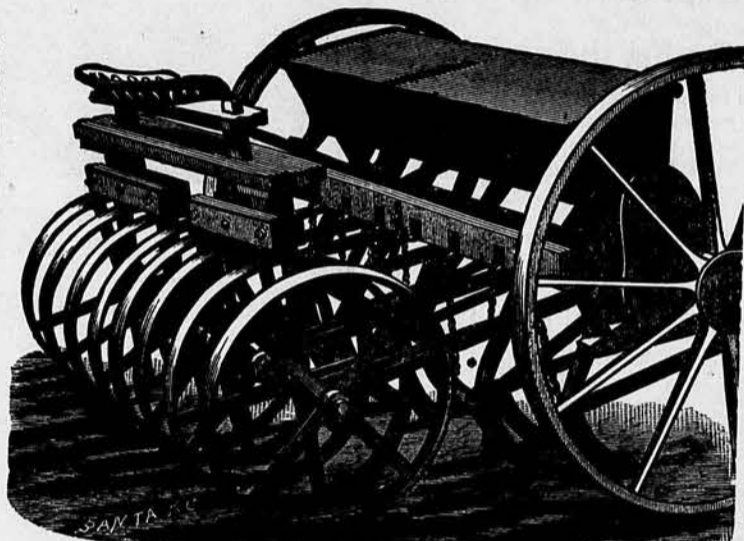
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TOPEKA, KANSAS, Manufacturers of Smith's Roller-Attachment for Grain Drills, The Meadow King Hay-Stacker and Hay-Rake, and The Topeka Swivel Tower Wind Mill.

Smith's Roller-Attachment!

The Roller-Attachment

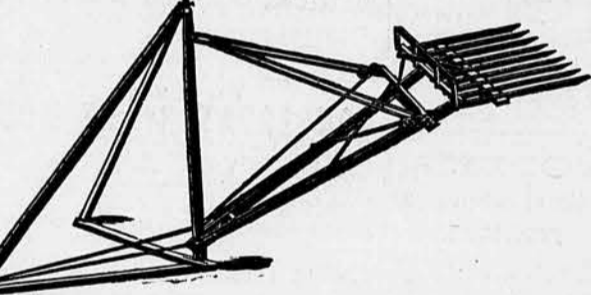


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Made a Certainty by the use of Smith's Roller-Attachment for Seed Drills. The soil is firmly pressed on the seed, causing the soil to adhere to the seed, which greatly assists germination. The compactness of the soil retains the moisture, preventing injury by drouth. Requiring less than one-half the seed usually sown, from the fact that none is wasted, either by a failure to sprout in the fall or by winter-killing, by pressing the soil firmly on the seed in track of the drill-hoe as it is being sown by the drill, leaving a wheel-track for the grain to grow in, which locates the wheat plant 2 to 4 inches below the general surface of the field, causing the plant to be most destructive weather that wheat has to pass through. The Roller-Attachment, which is the perfect in every respect, and we guarantee all that we represent for it. THE ATTACHMENT CAN BE COUPLED TO ANY GRAIN DRILL.

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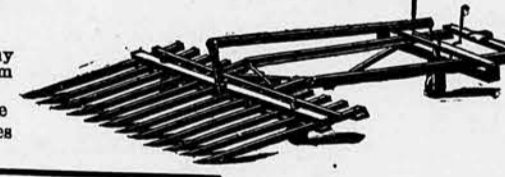


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The MEADOW KING STACKER saves time and labor. It dumps the hay evenly over the stack, just where you want it. It is easily operated. Two stacks built at a time if desired. It sells for less money and will do more and better work than any other Stacker in the market.

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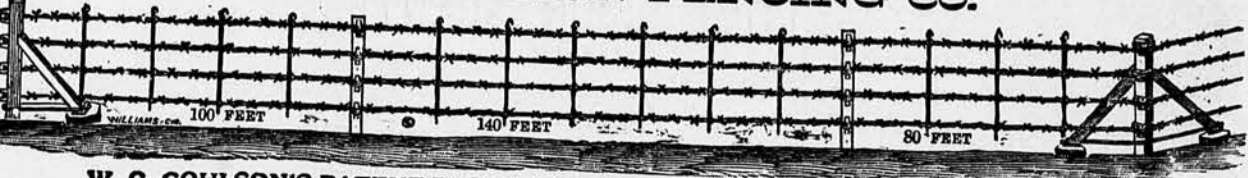
Will do more and better work than any other Rake sold. Takes the Hay from the Swath. It is the cheapest and best Rake made. One man can rake from 20 to 30 acres per day.



We also manufacture THE TOPEKA SWIVEL TOWER WIND MILL, conceded to be the Best and Cheapest Wind Mill made. Will be ready for market as soon as the rush on the Roller-Attachment and the Meadow King Stacker and Hay-Rake is over, about September 1st. For full particulars and information concerning our Machinery, address

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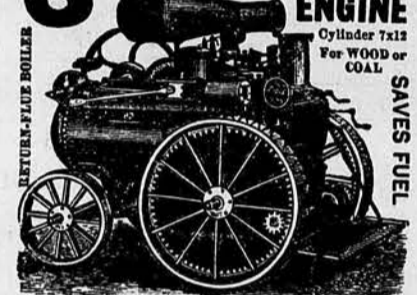
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FOR SALE—The Holstein Bull Calf "Elmah Boy 2970." Price \$150. A bargain. Geo. W. Harrop, Manhattan, Kas.

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FOR SALE, From 200 to 300 Young Grade Cows with Calves.

The Calves are by pedigreed bulls, and about 10 per cent. of them are Herefords. These Cows are being bred to pedigreed Short horn bulls. For terms apply to G. A. FOWLER, Maple Hill, Wabunsee Co., Kas.

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The only Co-operative Life Association offering Absolute Protection in Old Age. Agents wanted. Send for Journal and Leaflet, giving full information, to J. E. MOON, Sec'y.

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A HIGHLY-CONCENTRATED CHEMICAL FLUID! Non-poisonous and non-corrosive Sheep Dip and Wash for all Domestic Animals. A safe and sure Remedy against all kinds of Parasites in Plants or Animals. A powerful disinfectant. Send for papers giving full instruction, to DONALD MCKAY, Special Agt., Rose Bank, Dickinson Co., Kas.

BUCK-THORN BARB FENCE Solid Steel.

A Flat Strip, Twisted. PLAIN TO BE SEEN. EFFECTIVE, SAFE AND STRONG. HANDSOME, LASTING AND CHEAP.

THE BEST IN THE WORLD. Write for Sample and Circular. THE BUCK-THORN FENCE CO., TRENTON, N. J.

BINDER TRADE MARK E TWINE.

After a test of Four years has the unqualified endorsement of Machine-makers and Farmers THROUGHOUT THE GRAIN-GROWING REGION.

It will bind more grain to the pound, with fewer breaks than any other twine made; is strong, even, free from bunches and knots, and by saving the time of the farmer is WORTH DOUBLE THE PRICE OF OTHER TWINES. Ask your Agent for "DIAMOND BINDER TWINE," and take no other.

M. W. DUNHAM Wayne, Du Page Co., Illinois, HAS IMPORTED FROM FRANCE Percheron Horses valued at \$3,000,000, which includes

75 PER CENT OF ALL HORSES whose purity of blood is established by their pedigrees recorded in the STUD BOOKS OF FRANCE, EVER IMPORTED TO AMERICA.

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PATENTS! Thomas P. Simpson, Washington, D. C. No pay asked for patent until obtained. Write for inventor's guide.

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IMPROVED POLAND-CHINA HOGS,

Will offer their Entire Herd at public Sale On September 3d, 1884, At their place of residence,

Seven Miles West of Wellington, Kansas, And One-half Mile of Depot at Mayfield, On the KANSAS SOUTHERN R. R.,

Consisting of 40 Fine Brood Sows and 4 Leading Boars, of the best families in the United States, all duly bred and correctly pedigreed. A part of the sows in pig for fall. Sows all young. Also 130 Pigs, from two weeks to four months old. Some fine Show Hogs in the lot. Sale to commence at 10 o'clock a. m.

S. V. WALTON & SON, Wellington, Kansas.

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To the Sheep Breeders of Kansas: We will be at Newton, Harvey Co., Kansas, August 15 to 19, with a Car load of SPANISH MERINO RAMS that are first-class in every respect and without doubt the best lot of Rams ever offered to the sheep breeders of Kansas. We will sell at prices to correspond with the prices of wool. If you wish to buy the best Ram for the least money, don't fail to call and see us. R. T. McCULLY & BRO.

Thoroughbred Merino Rams FOR SALE.

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