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**DIVERSIFIED POULTRY YARDS.**—FOR SALE R. M. B. Turkeys, S. L. Wyandottes, B. P. Rocks, S. C. White Leghorns, Pekin ducks, and their eggs in season. I took first and second premiums at the State Poultry show, also at the Central show at Emporia, 1894. Toms, hens and pullets scoring 94 and 95. Lucille Randolph, Emporia, Kas.

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## The Stock Interest.

### THOROUGHbred STOCK SALES.

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

OCTOBER 2—C. C. Keyt, Short-horn cattle and Poland-Chinas, Verdon, Neb.  
OCTOBER 3—W. H. Wren, Poland-China swine, Marion, Kas.

### ECONOMICAL PRODUCTION OF MEAT.

One of the foremost authorities on practical feeding, Prof. Thomas Shaw, of the Minnesota School of Agriculture, states in the following some excellent points worthy of careful attention:

"Production may in very many instances be cheapened through better breeding, through early maturity, by means of continuous development, by keeping the animals in comfort, through the use of home-grown foods, sometimes through the exchange of foods, by using foods in proper combination, and through careful marketing.

"1. The stocks upon our Western farms are oftentimes deficient in breeding, painfully so. In this fact we find the explanation of so large an amount of rubbish finding its way into the canning factories of our great cities. It is dignified with the name of meat. The use of good pure sires, with some selection on the part of the dams that we have, would go very far to bring about the change in a single generation.

"2. More animals of the bovine species reach the Chicago markets over three years old than under that age, and more sheep are sold in the same markets over one year than under that age, unless in the season of the year when autumn lambs are being shipped in. In farm production this is all wrong. The cattle from the farm should reach the market rather under than over three years, and sheep from the farm when not more than one year old. These results could be easily achieved through proper breeding and good feeding and management. The cost of maintenance would be reduced, the quality of the animals would be improved, and better prices secured, where due attention is given to early maturity.

"3. Along with early maturity comes continuous development. Early maturity is hindered by any periods of stagnation that may occur. When these take place the food of maintenance is lost in the first place for the time being, and in the second place the ability or capacity of the animal to develop well is hindered, and the injury is greater the nearer to the birth period that this hindrance occurs. This rock of disturbance will be shunned by all careful producers.

"4. When animals suffer from undue heat or cold they do not thrive as they would under conditions of comfort. The humane man will study the comfort of his animal, and so will the inhumane man who is anxious to obtain the best profits that can be realized from keeping them. It is a question in the mind of the writer if more food is not wasted every three years in the Northwest in providing animals with warmth than would provide buildings that would keep them warm.

"5. Home-grown foods are usually more cheaply produced than they could be obtained by purchase. Were it otherwise the producers of these could not make a livelihood. They would have to abandon the ship were there no profits in production. There may be some instances where it will pay to purchase or exchange foods, as will be shown below, but these will prove the exception rather than the rule, where the farmer is also the feeder.

"6. Sometimes foods may be profitably exchanged. When one kind of food is dear and another kind is cheap it may be found profitable to sell the first and buy the second. There may be a real profit in the transaction after the labor connected with the exchange has been paid for. At other times it may be advisable to purchase only what will serve as a stimulant to digestion, while it is at the same time helpful in making flesh. Oil meal is a food of this character. As a food factor in making meat, bran at \$10 per ton is

much cheaper than oats at thirty cents per bushel.

"7. It is greatly important that foods be used in proper combination. From lack of knowledge in reference to this question many persons fail in feeding whose methods in other respects are good. Important as this question is, it cannot be dwelt upon further here.

"8. In careful marketing there is much scope for the exercise of careful thought and judicious planning. The aim should be to try and have the animals ready when there is no glut in the market. This can usually be accomplished by the exercise of a judicious forethought. And when the animals are ripe, that is when they cease to make paying gains because of their perfected condition as to the carrying of flesh, they should be moved off to market by the most direct road. In these and also in other ways production may be cheapened."

### Selecting the Brood Sow.

It is one of the fundamental laws of breeding that the male parent determines, for the most part, the outward form, structure and general appearance of the offspring, while the female chiefly determines the internal structure, and the constitutional strength or weakness. My own experience leads me to believe that this is about correct, and if it be a truth, it must be apparent to every one that the judicious se-

lection of the female is of prime importance, and that success is not assured without it.

lection of the female is of prime importance, and that success is not assured without it. It certainly needs no argument to prove that every hog-grower should have a definite object in view, and select his breeding stock with a view to attaining this object. If he is growing thoroughbred stock, to be sold at fancy prices for breeding purposes, he must breed for fancy points and appearance, that his stock when brought into the show ring may score "way up," and sell for a price that will repay him for the extra care and expense that is required to grow these fancy show animals.

With the farmer who raises hogs for the pork they will make, the case is quite different. The strictly fancy brood sow is of little value to him except for ornamental purposes. He should make his selection with an eye to the influence she will have on her offspring, as stated in the beginning of this article.

I believe it best to defer the selection until some growth has been attained, that a pretty correct judgment may be formed as to what her form and general make-up will be when she has matured.

To make the best possible selection, one should have a sharply defined ideal in our mind, and it should be about perfect, for the real brood sow is not apt to be better than, and seldom as good, as the ideal. Let me try to describe mine. She should be long and roomy, of rather loose and open build, the opposite of compact, yet broad on

the back, with well-sprung ribs. She should have limbs of medium length, strong foot and pastern, deep sides, full flank and broad, heavy hams. She should have a short, fine head, heavy jaw, large girth back of fore legs, and fourteen well-developed teats.

Coarseness is allowable in the sow, but there must be symmetry in form, a well-developed female appearance, and a good, kind, intelligent face. She must be a good feeder, have great powers of assimilation, and be of healthy stock. Above all else, she must be of a stock that is well-known to be prolific, as this characteristic is without a doubt hereditary. She should not be lazy and indolent, but nearly always on the move hunting for something to eat.

I will select such a sow as here described even if she is a trifle "off" in ear, or tail, or has an "awful swirl" on her back.

You may say that such sows are extremely hard to find, and so they are. I generally keep three brood sows, and raise five or six litters each year, and am always on the look-out for such pigs but cannot find enough for my own use. I have never seen more than a dozen in my life that suited me exactly, but have been fortunate enough to own three of these. I find by consulting my book of farm accounts that from two of these I have saved 182 hogs. The other is a young sow I own now, and she started off last fall with a first

### Sorting Hogs for Shipping.

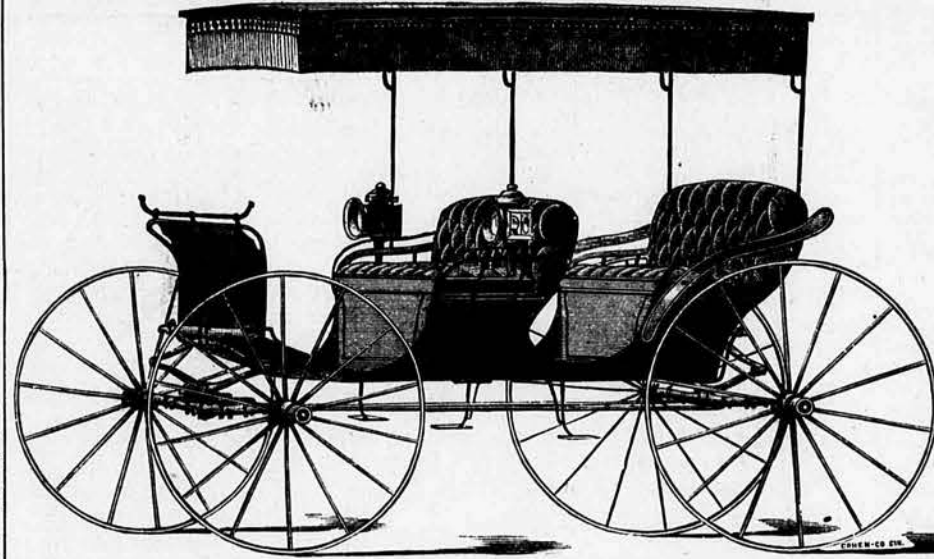
Speaking of the indiscriminate way in which some farmers and shippers send their hogs to market, J. R. Daley says in the *Live Stock Report*.

It is strange the country shipper cannot be educated up to the dollar-making idea of assorting his stock in the country, where room is cheap and plentiful, feed cheaper, labor cheaper, and all the advantages on his side.

"For more than thirty years the average country shipper would buy anything for a hog, size, sex or condition not taken into account, loading the entire zoological display into one car, where it arrives at the market in that very undesirable shape of 'mixed,' and woefully mixed at that. And here is where the sharp-eyed buyer, whether a speculator or regular, reaps the advantage over the careless country shipper. The salesman cannot afford to take the load and 'sort' or peddle out; he must sell where he can get a customer, and the customer places the value of the entire lot on the meanest looking beast in the load, and what that scalawag will sell for is what he considers the market, and if the offer is not taken, possibly if business is brisk he may raise the bid a trifle, but if the salesman is left until the end of the day with a lot of that stuff on his hands, he must carry over or 'give them away,' as the saying goes.

"The buyer or speculator in this class of stock calculates to make at least \$10

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litter of nine even, thrifty pigs.

Such animals are almost invaluable, but if compelled to keep them until they are five or six years old, I would not (for growing hogs for pork) take the risk and accept as a gift sows that came of unhealthy stock, or are the result of inbreeding, or that are short and compact, though perhaps excellent feeders, nor one that is lazy and sluggish and lays on fat over easy. Neither would I pay much for one that had been pampered from earliest pignood, and exhibited from Maine to California, even if taking "first in class and sweepstakes over all," at every big show on the road.

In conclusion, let me say that no brood sow should be kept by the common farmer except for the real merit there may be in her, and such a one is not produced on an exclusive corn diet. Such animals are the result of long-continued selection from animals that have been properly bred, fed and cared for many generations.—J. A. Dobie, in *Ohio Farmer*.

The cost of producing any sort of farm stock can be best reduced by reducing the time in which it is grown. To accomplish this you need good stock which has a marked tendency toward early maturity, and then you must do all that you can to intensify this tendency by good feeding. The two together can easily reduce the time of "making" either beef or pork at least one-half from the old standards.

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per car for the labor of sorting, feeding, etc., all of which can be done by the country shipper, who would be \$20 ahead, taking labor, feed, etc., at the country schedule of prices. Then again, it is a well-known fact that a car load—or say a half car load—of big, rough hogs, or mediums and light, will sell fully 10 cents higher than the current rates for small lots. Then why in the name of common sense is this stale and unprofitable system continued by the country shipper? Usually this class of shipper is he who changes his commission house or salesman at any turn of the moon, and at every change grows more discontented and morose."

The New Hampshire Experiment Station has been analyzing some of the cattle foods and condition powders extensively sold, and finds that farmers could readily prepare most of them at a cost not exceeding one-sixth the market price.

We have been told often enough that cleanliness is next to godliness, but how many of us keep in mind that it is a main factor toward healthfulness with all our farm stock? There is no animal that is not benefited by an occasional grooming—even a hog; but it is rare that any except the horses receive it, and they not half often enough. It would be easy to give the cows a brushing every morning, and they would be the better for it. Keep a good stiff broom handy, and brush them with it thoroughly when you clean the stables each morning.

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## Agricultural Matters.

### STORING HAY.

In storing hay the aim should be to preserve it with the least possible percentage of loss of valuable properties. Wherever practicable hay should be stored away under cover, but in very many instances this cannot be done. Where a part can be so stored, and the balance has to be stacked, the clover should be housed rather than the other kinds. It will take harm in the stack more quickly than timothy or wild hay. When, therefore, it has to be stacked, wild hay should be used in topping out the stacks, if possible.

It is important that stacks should be well built. Either straw or poles should form the foundation. They should, of course, always be kept highest in the center and carefully topped out. Enough hay is lost in the bottom and on top of the stack by careless stacking to pay for the extra time required in doing the work well.

Where at all practicable hay should be stored as soon as it is ready to draw. The practice of allowing it to become dry and crisp before raking it, and allowing it to lie for days in shapeless bunches into which it has been drawn by the rake, are to be condemned in strong terms. If rain were to fall upon it when in those bunches it would take much damage, which would be great in proportion as the hay was dry when the rain fell upon it. Even though no rain should fall upon it, its value for feeding is but little more than that of good straw.

It is not easy to describe on paper just how we may always know when hay is dry enough to be stored. Some experience is almost necessary to enable the individual to gauge this accurately. One used to handling hay can tell pretty certainly by its weight when pitching it. If a small quantity is taken up and held firmly by one hand, and is then twisted by the other, and if there is any appearance of water at the point where it is twisted it is too green for storing. If, on the other hand, it breaks off readily when thus twisted, it is too dry.

Of the two extremes the latter is the least harmful. When hay is stored too green it ferments too much. When it has over-fermented in the stack, or mow, it will appear dusty or mouldy, when removed, according to the degree of fermentation. In either case its value for food has been impaired. When mouldy it is positively dangerous to feed to live stock. A slight fermentation in the stack or mow is not harmful, but whenever the fermentation induces an accumulation of dusty particles, its value for feeding uses is considerably impaired, even though the dust should only be apparent while the hay is being forked.

Some kinds of hay are more prone to ferment than others. Usually, the coarser the stalks the greater is the danger from fermentation. Because of this clover ferments much more than timothy and the native grasses. In this fact we find the necessity for putting up the clover in coils and allowing it to ferment in these, rather than in the stack or mow. If it were allowed to lie as it fell from the mower until it became dry enough to keep in the stack, the leaves would be so dry and crisp that they would nearly all fall off in the handling.

Timothy, wild hay and millet may be loaded from the windrow, or from bunches when the weather is good. When loaded from the windrow a hay-loader may be used with much advantage, and more especially where the hay has to be drawn some distance. Where the stacks are near at hand the use of a sweep and stacker will be in order. The windrows should be made small where the hay-loader is used. It will take up the hay as fast as two men will take care of it on the wagon.

If hay is being stored on the damp side some salt may be sprinkled upon it with advantage. The salt has a tendency to hinder fermentation. But when the hay is stored in an unduly moist condition salt will not insure the proper preservation of the hay.

It should also be remembered that

hay long kept loses both in weight and feeding value. And there is also likely to be some waste from insects and wild animals. The aim should be, therefore, to feed or market the hay within twelve months of the time of cutting it.—Prof. Thos. Shaw, in *Farm, Stock and Home*.

### Combating Rust.

The Botanical department of the Kansas Agricultural college has just issued its second report on "Rusts in Grain." This constitutes bulletin No. 46 and may be had on application to I. D. Graham, Secretary, Manhattan, Kas., while the supply lasts. After a succinct account of the work, Prof. Hitchcock presents the following conclusions:

"1. In the vicinity of Manhattan the common wheat rust, *Puccinia rubroverga*, passes the winter in the tissues of the wheat plant in the mycelial condition. During the warm weather of spring a crop of spores is produced which, under favorable conditions, may rapidly spread the disease. The infection of the winter wheat in the fall is materially aided by volunteer wheat, which carries the rust through the few months following harvest. The red rust spores are capable of maintaining their power of germination through the winter, and thus infecting the crop the following spring.

"2. There is no evidence to show that the second kind of wheat rust (*Puccinia graminis*) survives the winter here, either in the mycelial condition or the uredo stage, though it may do so further south.

"3. A series of inoculation experiments shows that both wheat and oats are easily infected by rust from the same kind of grain, but not by the same kind of rust from other grains; e. g., wheat is infected by rust from wheat, but not by rust from oats, corn or blue grass. Hence there is little danger of infection from one kind of grain to another.

"4. The spraying experiments show that certain fungicides, as potassium bichromate and ferric chloride, are effective in preventing rust, but that, with our present knowledge concerning methods of spraying, it seems impossible to sufficiently cover the foliage. For this reason, although the rust can be largely decreased, we cannot attain prevention, as is done in such diseases as the grape mildew. Furthermore, it is extremely doubtful if spraying of wheat or oats would pay, even if effective.

"A more promising plan is the breeding of varieties of grain which shall be rust-resisting, the so-called 'rust-proof' varieties."

### The Soil Mulch.

The farmer or the orchardist who has kept the surface of the soil stirred during the present dry spell is the happiest husbandman on the list. As the fields are examined to-day, the one that has a perfectly smooth surface, made so by the repeated use of the harrow and roller, has an abundance of moisture within two inches of the surface, and all plants in such soil, whether belonging to the cultivated crops or the trees of the nursery, are making satisfactory growth. The next best conditioned soil is the half cultivated corn field, the next the oat or wheat field, the next the clover field, and lastly the timothy and blue grass field. And the several conditions are measured by the quantity of soil mulch at the surface. So far as the plants themselves are concerned, they are suffering in inverse proportion to the depth of the roots. Had we known at seed time what would be the character of the season, the seed-bed for small grain should have been cultivated "both ways" and leveled with harrow, then the seed put in with a press-drill, and the seed-bed rolled after the grain was about four inches high. Or the grain plowed in to a depth of four inches with a stirring plow, then harrowed properly and rolled when grain is at proper height. There is a treble object in rolling after the grain is up. It has the effect of cultivation. The drier condition, which usually follows seeding, promotes the breakage of the capillary tubes, and when the grain is growing there is no drifting of the soil which sometimes followed on rolled land. Taking everything into consideration, we must learn to prepare better seed-beds and to plant everything deeper. We all think that we are pretty well up in farming, but the best of us have several things to learn. The farmer who sowed his oats in the cornstalks and then scratched them in with a smoothing harrow, who planted his corn shallow, who sowed his grass seed on top of the ground, is getting his lesson. The soil mulch is the mediator between the crop and the dry weather.—D. A. Kent, in *Rural World*.

### Alfalfa for Eastern Kansas.

EDITOR KANSAS FARMER:—I have been very much interested in various reports published in FARMER on alfalfa raised under irrigation in southwest Kansas, and would like to know if it could be raised successfully in eastern Kansas, and the best time and mode of seeding, and the amount of seed per acre. Would it grow on prairie land with a clay subsoil? Would it not help the land to subsoil deep before seeding? Shall be pleased to hear through the columns of KANSAS FARMER from any one who understands the nature of raising on our kinds of soil.

W. M. G.

Prairie Center, Johnson Co., Kas.

Several correspondents have written their experience in growing alfalfa in the eastern third of Kansas. It does well on the Kaw river bottoms and is highly prized by those who have it. Experience on the uplands is varied. It is a deep-rooted plant and a heavy drinker, and all agree that it is short-lived where it cannot penetrate to permanent moisture. In the Arkansas valley it thrives on "hard-pan" land wherever a stand is obtained. On such land as our correspondent describes it may grow well for a year or two, if the seasons are favorable, but will be liable to die when unfavorable conditions occur. It is, however, so valuable a crop that it is worth while to try it almost anywhere, for if it succeeds it will produce more feed per acre than any other crop. Subsoiling, as our correspondent suggests, will certainly be beneficial, and some practical men have strong hopes that by this means it may be made to succeed in localities where it is now very likely to fail. It is believed, also, by some observers, that it is becoming adapted to the uplands and that it now succeeds where formerly it failed.

The usual directions for seeding say prepare the land so as to have the weeds well killed and the soil in the finest possible condition, and sow fifteen to twenty pounds per acre during May. Some sow with a broadcast seeder and harrow in, and others use a press drill. After weeds have made some growth, run over the field with the mower, having it set to cut high. Some have succeeded well on first breaking by cutting it fine with a disc harrow and putting in seed in the usual way. It is said that this method succeeds well at any time from May to September and has an advantage in the freedom from weeds. Others sow on old land in August. Others again have succeeded by sowing in the corn after it has been laid by. The greatest trouble is the weeds, which are liable to choke the alfalfa during its first season. After a stand is once obtained it crowds out all weeds and there is nothing to do but to harvest it about four times during the summer, except in irrigation regions, where it responds most liberally to the use of water.

### Salt for Chinch Bugs.

EDITOR KANSAS FARMER:—It has been rumored for some years that Mr. John Quick, of Neosho Falls, was raising good wheat every year by using salt as a fertilizer. We decided to try the experiment on this farm last fall. The weather was too dry here at that time to prepare wheat land properly, but we had one plot that had been plowed and cultivated several times during the summer. In September we drilled one and a half bushels of wheat per acre. A light rain brought the wheat up in a few days. One hundred pounds of salt was then sown broadcast per acre. Another plot which had been listed to corn on rye stubble, was worked down with a Bradley disc cultivator, cross-harrowed, planked and drilled to wheat. Part of this was salted, and the remainder not salted, one hundred pounds per acre in the fall.

On the 7th of May we paid Mr. Quick a visit, and from him learned that he salted his wheat three hundred pounds per acre every year, and never failed to harvest from twenty-two to thirty bushels of good wheat per acre. He lives on a level, upland prairie farm, the last place a Kansas farmer would think of trying to raise wheat. He informed us that he had the best results from salting in the fall; the wheat never



### A FRIEND

Speaks through the Boothbay (Me.) Register, of the beneficial results he has received from a regular use of Ayer's Pills. He says: "I was feeling sick and tired and my stomach seemed all out of order. I tried a number of remedies, but none seemed to give me relief until I was induced to try the old reliable Ayer's Pills. I have taken only one box, but I feel like a new man. I think they are the most pleasant and easy to take of anything I ever used, being so finely sugar-coated that even a child will take them. I urge upon all who are in need of a laxative to try Ayer's Pills. They will do good."

For all diseases of the Stomach, Liver, and Bowels, take

### AYER'S PILLS

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

Every Dose Effective

froze out, and although there were often chinch bugs in the wheat it did not seem to injure it.

On our way home we procured a load of salt, and the next day sowed it broadcast on both fields of wheat at the rate of one hundred pounds or more per acre. The chinch bugs were present in great numbers, and had destroyed the wheat crop on one and the rye crop on the other field, the year previous, despite the use of the "Snow chinch bug disease." In fact, this year we had concluded to not use the infection, expecting that the use of salt would destroy the disease germs. To our surprise, however, the bugs began dying all over the field and were covered with the white mould so characteristic of the disease. The bugs were not all destroyed, and during the dry weather in May laid many eggs, which hatched this month, but little or no injury was done the wheat. That on the plowed land made a fair crop; that on listed land was fully one-fourth cheat, owing, probably, to drouth last fall delaying germination, and thus causing winter-killing.

We are of the opinion that by using salt on crops in connection with the chinch bug disease, it will not only be rendered more effective, but where it has failed, or, as many farmers report, "stopped working," it will be made a potent agent in destroying this most troublesome pest. And while we think of it, when the weather is very dry and the disease appears to cease its destructive work, it may often be rendered active again by sprinkling the field of grain in numerous places with water at sundown or late in the evening. A little salt added to the water might be beneficial. J. W. G. McCORMICK.

Black Hill farm, June 18, 1894.

[The importance of every observation of disaster to the chinch bug is universally recognized. Our correspondent brings out some matters which are exceedingly suggestive. Some of the effects of salt upon land have been investigated with care. Thus it is known that its use renders some soils more retentive of moisture and increases the "surface tension," or the power of the soil to transfer water from the moister to the drier portions. If any studies have heretofore been made on the effect of salt on the development, activity or power of the white fungus chinch bug disease, they have not yet been given to the public. Mr. McCormick's observations point strongly to such effect. The fact that the white fungus developed rapidly in fields in which it had been used last year is a confirmation of a hope expressed by Chancellor Snow in his report for 1893, namely, that the soil may be so impregnated with the disease germs as to prove uninhabitable for chinch bugs. And if the simple application of salt shall be all that is needed to stimulate the disease to virulent action, the importance of the observation can scarcely be over-estimated.—EDITOR.]



## Irrigation.

### WINDMILLS AND RESERVOIRS FOR IRRIGATION.

Paper read by Mr. Ira C. Hubbell, of Kansas City, Mo., before Dodge City convention Western Kansas Irrigation Association, May 26, 1894.

Nothing worth the possessing is obtained without effort or expense. The man who secures popularity feels the public pulse, and gives expression to those ideas which best tickle the ears of his hearers, and on this horse he rides to fame whilst others unwittingly foot the bills. Here is a good place to remark, the thoroughly successful irrigator will be the man who installs such a pumping plant as will permit the proper and thorough irrigation of the crops whenever conditions necessitate.

To-day exaggerated ideas are set afloat with regard to pumping water for irrigation purposes by the utilization of the force of our winds. There can be no gainsaying the fact that wind power is cheap, whether furnished by the Almighty or through some fellow's lungs. Neither can any one deny that the pressure of the atmosphere at the sea level is but 14.7 pounds per square inch, and that therefore the force of a twenty-mile wind is but two pounds per square foot.

The statements which have been made with regard to the atmospheric pressure and the power exerted by the wind currents of a given velocity may be substantiated by recognized authority on this subject. The power which a windmill will develop, therefore, per force of conditions, is limited by the force exerted by the winds just as much as the power of a steam engine is limited by the pressure of the steam in pounds per square inch.

At this point, therefore, it is pertinent to say that windmills can be used successfully in the pumping of water for irrigation to but a limited extent and for the irrigation of small tracts only, and in all instances windmills must be used in connection with a reservoir erected sufficiently above the area to be irrigated to successfully distribute the water over that piece of ground.

An acre of ground contains 6,272,640 square inches. If you cover this one acre of ground with water one inch deep, you would then have a quantity of water equalling nearly 27,155 gallons, or one acre inch. If you place upon this one acre of ground twelve inches of water, you then have what is known as one acre foot, or 43,560 cubic feet, or 325,851 gallons of water. It will be well for each person here to make a note of and preserve these figures. It is conceded that in this section of the country it will require practically one acre foot of water per acre to make sure your crops, which will be needed until at least present conditions have been very materially modified. It is the history of the past in Colorado that irrigated lands to-day do not require the water of former years, and it has been said that in some sections they to-day find it necessary to drain lands on which formerly crops were impossible except from thorough and constant irrigation, and your speaker entertains the opinion that similar results will follow in this State.

In an address delivered before the Inter-State Irrigation Association, in Omaha, by your speaker, certain facts were stated which will bear repetition at this time, viz.: A gallon of fresh water weighs approximately eight and a third pounds, and to raise one gallon of water vertically one foot in one minute's time requires a mechanical force of eight and a third foot pounds plus the force necessary to overcome all friction, and that device does not exist which has no friction, else perpetual motion would be a possibility. The term "horse-power," as applied to all forms of mechanics, is not the power which one horse can exert, but is the equivalent of 33,000 pounds elevated one foot vertically in one minute's time, and this fact should be remembered, whether you desire to pump water, whether you wish to elevate any kind of grain or to elevate or move any substance under the sun. The term "horse-power" in this address always

refers to the mechanical horse-power. If, therefore, you desire to raise 100 gallons of water fifty feet vertically in one minute's time, remember that it will require the mechanical force of 100 multiplied by 50 and multiplied by the constant .0002527, which constant is the net mechanical horse-power required to raise one gallon of water one foot vertically in one minute's time. The net horse-power required in the problem just given is 1.2635, and to successfully do this work requires a mill or other power of two and one-half actual horse-power capacity. In determining the vertical distance in connection with the pumping of water, bear in mind that you must always measure this distance from the top of the water supply to the point of discharge.

It is conceded that to properly irrigate ten acres of land we must have in the time that water is needed an average of at least ten acre feet, or 3,258,510 gallons, and that this water will be required principally in two months of the year, and at least ten acre inches will be required in these two months, or an average of 1,357,715 gallons per month. Assuming that a windmill will pump fifteen hours per day, thirty days per month, we must then raise an average of 3,017 gallons per hour, or about fifty-three gallons per minute. Assuming that this water would have to be raised a total vertical distance of ten feet, it would then require a mechanical force of .134 net horse-power. Assuming the force of the wind to be eighteen miles per hour, a direct-stroke windmill ten feet in diameter would perform this work, the water being discharged into a reservoir of about 1,100,000 gallons, or 150,000 cubic feet capacity, and of dimensions, say, 150 feet by 200 feet and five feet depth. As the vertical distance the water has to be raised is increased above ten feet, in just the same ratio is the power required to handle fifty-three gallons of water per minute increased. It is also true that as the acreage to be covered is increased above ten acres, the elevation being unchanged, so is the power necessary to supply the additional water increased.

From such statistics on irrigation as your speaker has consulted, it is established that the land should have from two to six acre inches of water at each irrigation, and the same authorities seem to establish the fact that irrigation is accomplished practically in the three months of the year, and fully five-sixths of the water used is put upon the land in two of the three months, hence the importance of establishing your pumping plants of ample capacity and preparing for maximum demands, as the larger plant will more easily handle the minimum demands than a smaller plant will meet the unexpected emergencies.

If the one acre foot of water per acre needed for your crops could be distributed over the land throughout the season of 180 days in an average quantity, then windmills would be decidedly more serviceable in the matter of irrigation. It is the combination of the large demand in short time which renders the windmill of less value for the purpose. Your speaker intended this emphasis to be given in his Omaha address upon this subject.

A windmill, direct-stroke, ten feet in diameter, with proper reservoir, will supply sufficient water to irrigate ten acres of land, handling the water under a total vertical distance of not exceeding twenty feet, or it will furnish enough water to successfully irrigate five acres of ground handling the water a total vertical distance of forty feet, the reservoir in this case having, say, 75,000 cubic feet capacity, or say 150 by 100 feet by five feet average depth.

As the power of windmills is as the square of their diameters, a wheel twelve feet in diameter will accomplish about one and one-half as much work as a mill ten feet in diameter, and a wheel fourteen feet in diameter about twice as much as the ten-foot, and a sixteen-foot wheel about two and one-half as much as the ten-foot wheel.

In connection with these statements, remember, please, that the statements

are predicated upon an eighteen-mile wind, blowing at that rate an average of fifteen hours a day, thirty days per month, and also remember that the statements are conditioned upon the elevations and quantities of water previously given and with ample reservoirs.

In the use of windmills the reservoir for purposes of distribution of the water upon the land is required to meet a two-fold purpose where the source of water supply is from wells—one to allow the water to warm, the other to give the necessary volume of water in short time to properly and economically cover the ground, and where the source of supply is from impounded storm waters the distributing reservoir is still a necessity for reason just given.

The necessary water for irrigation purposes can easily be had to successfully care for thousands of acres of land in this State by the building of dirt dams across draws and retain the runoff waters of our storms. Your speaker was in Russell and Ellis counties the early part of this month when there occurred a three-inch rain, and it is safe to say that fully one-half of this water went down the draws into the rivers and out to sea. One draw near Russell, Kas., properly dammed, would retain sufficient water to irrigate 21,000 acres of land.

The building of these dams claims your earnest attention. They are of easy construction and not expensive. The two essential points are, first, enough dirt free from stones, roots, etc.; second, an ample spill-way, so that under no circumstances the water goes over the top of the dam. In the construction of these dams, as in the building of reservoirs, we can here speak of them only in a general way. With a maximum height of, say, ten feet, the bank should be, say six feet wide on top with a slope of six two to one on the water side and say one and a half to one on the outside, increasing the width on top and the slopes as the height of the banks are increased. Reservoirs can be made water-tight by the tramping of animals.

There was a stream in New Mexico where, except in flood times, the water was lost, until finally the herds going down into this stream for water have made it water-tight. This is reported by the United States government in one of the numerous volumes issued by the government on irrigation.

In conclusion, whilst it is true that wind power is cheap, so is it true that it is oftentimes unreliable, and in the main, and generally speaking, for total vertical discharges exceeding forty feet, your speaker earnestly recommends other combinations than wind powers, and offers this advice unselfishly, because he is just as much benefited by the sale of windmills as from the sale of other appliances. Wherever a combination consisting of a gasoline engine and centrifugal pump can be used, have nothing else. This style of engine is made by a number of reputable concerns, and in buying them insist upon the makers guarantee as to size of shafts, bearings and general construction, so that you get heavy, well-designed and well-built engines. These engines have no steam boilers and can easily be run ten hours per day without any more attention than you give your windmills. A centrifugal pump has no valves of any nature or description and absolutely nothing to get out of repair. They are not perpetual motion machines, and no reputable maker claims that they are, but any competent authority will recommend them to you as highly efficient and of a moderate first cost.

Irrigation is not only worthy of, but demands your attention. By it you can make this State the State of the Union.

Just think of Kansas buying potatoes, cabbages, fruits, etc., in Colorado, Utah or elsewhere! Kansas should have these for sale year in and year out, and if every man will do his part the success of the State is assured.

It will give your speaker pleasure to answer any and all inquiries of him in person, and cheerfully answer all letters to his address at Kansas City, Mo.

Finest location in the State—Wichita Commercial college—Y. M. C. A. building.

### The Future of the Arkansas Valley.

By H. V. Hinkley, Topeka, Consulting Engineer to the Kansas Irrigation Association and of the State Commission, read at the Dodge City Irrigation Convention, May 26, 1894.

Before embarking upon the future, let us see what the matter is with the present—what obstacles there are to overcome to insure to the valley any improved condition.

#### OBSTACLES.

1. The irrigation of the past in Kansas has been mostly by canals, drawing their water from the surface flow of the river. This supply has been diminishing year after year, both in reliability and quantity, and this diminution (which will continue till a wet river shall be a rare sight) accounts for many unsuccessful canal ventures and unsatisfactory water privileges.

2. The cheapness at which water has been brought upon the lands by some of these canals during high water stages has given foundation for rates of \$1 and \$1.50 per acre per annum, so that now I find many persons (who ought to know) saying that \$2 per year for an acre is too much, and \$3 a year is exorbitant, and in other sections of the country five times these rates are paid.

3. I have found capitalists and large land-owners in the valley who are skeptical as to the success of irrigation where water costs even \$1 a year, because they have been bitten by some ill-planned canal scheme somewhere.

4. A good share of the people have left the State and their place must be filled by others to do their work.

5. Our irrigation law of 1891 is a dead letter, so far as districting is concerned, as the bonding is limited to \$1 an acre and no water supply can be furnished at any such cost.

6. While individual efforts are gradually increasing the irrigated area the rapidity of the development may be materially increased by interesting capital in colonization. I could produce letters showing that this could be easily done were it not for certain unfortunate conditions in our State politics. (I shall not go into the details of this matter, as I have no desire to mix irrigation with politics.) I believe these obstacles are all surmountable and that there will be nothing in the way that will stop us from reaching

#### MY IDEAL.

which I will now explain. Some of you may have travelled through New England, where the roads are bordered with houses and where there is nothing to show where one village ends and the next one begins; or through southern California, where the train takes you for hours through a succession of gardens and orchards, where twenty years ago was a desert. Twenty years from now, if my judgment is good, you may have the pleasure of driving from station to station in this valley, passing garden after garden on a cottonwood-shaded street.

I am not given to visionary flights nor am I one of the enthusiasts who believe that all western Kansas can be irrigated. I do not believe that the "underflow" is supplied from some mysterious unknown source nor that it is inexhaustible. Such theories should receive no attention except to show their falsity. A man attempted to prove to me the other day that the underflow in his vicinity was (sure enough) inexhaustible. The railroad company had tested the supply by speeding their pumps up from 3,000 to 6,000 gallons an hour. The maximum speed of pumping would have irrigated fifty acres, and yet he was lowering the water during that short test on many hundred acres. The supply is not inexhaustible. It is limited, and we can never permanently irrigate all the land, even in this valley; but I want to call your attention to one particular in which you are specially fortunate. This valley has been provided by nature with an immense storage reservoir, miles wide, hundreds of miles long and hundreds of feet deep, filled by rains and freshets and protected from evaporation. As the surplus steam in a boiler, above a certain safe pressure limit, escapes by the safety-valve into the air, so when this reservoir becomes full it flows into the river bed and escapes into the air. You may talk all you please about dams for



artificial reservoirs (which will pay in some cases), still you can not devise so practical a storage as that which nature has given you, and I submit that in general it is better engineering and a better public policy to let the water go into that reservoir and pump it up when wanted than to impound it behind dams where it will evaporate. I mention this point partly because the extent of evaporation is not generally understood. While authorities quote a half inch a day as a reasonable maximum and six inches a day as having been known in one or two instances in the world's history, I could tell you of fourteen and one-half inches evaporation in western Kansas in twelve hours.

There is another point that I might mention that is not any too well understood. You people have coined the word "underflow," but the flow is slight. The flow of water in the sand in the river bed—in an iron pipe—through an aperture, or into the bottom of a well, is proportionate to the slope or pressure, and where the slope is seven feet per mile the flow is approximately a mile a year.

Two things are needed in the valley—people and pumps. People who will cultivate thoroughly and who are, in each neighborhood, congenial. The pumps may be operated by steam, gasoline or wind according to the conditions to be filled. You have canal companies with more water than people, others with people and no water. Capital that will control the lands and put onto them both the people and the pumps at the same time may sell its lands at a figure below the value of a single crop of potatoes or alfalfa and still double the amount invested. It must, however, be done understandingly and with a conservative policy as to water supply. I know of no class of investments in the United States that are safer than Arkansas valley colonization intelligently handled, and I see no reason why we may not, after removing the few obstacles and securing the needed legislation, make the valley one continuous village of groves, meadows, orchards, gardens and homes.

**How About Chicago?**

Chicago is known the world over as a city of unusual push and energy; it has many vast and gigantic business enterprises. Its merchants have the reputation of being fully abreast of the times in all things pertaining to trade and commerce, broad and liberal in their views and pushers in everything which they undertake. It is this push and energy displayed by her merchants that has made Chicago what it is to-day—a wonderful city. It has been truly stated that in no city of this country can one find more push, energy and rush of business than in Chicago. Everybody seems to be in a hurry, whether on business or pleasure bent, and whatever her merchants desire and go for, they generally get.

This success cannot be better illustrated than by calling the attention of our readers to one of her noted wool and produce commission houses—that of Summers, Morrison & Co., 174 south Water street. The energy and push displayed by this firm in their line of business is truly wonderful and has astonished older houses in the same trade. The members of this firm know no such word as fall, and are satisfied with nothing short of reaching the top round in the ladder of success. South Water street, as every one knows who is acquainted with Chicago, is a very busy street and quite a show to look upon, but when the representative of this paper called at the store of Summers, Morrison & Co., he found it in a state of unusual activity. Besides immense quantities of produce, there was still a greater quantity of wool which was both going out and coming in.

Mr. Summers, who handles the wool department, was asked if it was not an unusually busy day with them, but he stated not. Said he, "We have been doing about the same amount of wool business since the season opened. Our receipts and sales are now averaging about the same amount, 20,000 pounds per day, and therefore we do not have much wool on hand at a time, but we keep it constantly moving, which, of course, keeps us busy." When asked where most of their receipts of wool come from, he replied, mostly from adjoining States, but he added, "you will probably be surprised when I tell you that we get shipments from the Atlantic to the Pacific. We read in olden times that all roads lead to Rome, and when we take into consideration the many different parts of the country from which we are receiving shipments of wool, I am forcibly reminded that all roads lead to Chicago. We have shipments in

transit at present from Massachusetts, West Virginia, Pennsylvania, Ohio, Indiana, Florida, Alabama, Wisconsin, Minnesota, the Dakotas, Colorado, Kansas, Oregon, Montana, New Mexico, and have just received one from California. There is no doubt but that we receive shipments from more different States than any house in this market." When asked to what he attributed their success in the wool business, he promptly replied, "Prompt sales and quick returns. Shippers don't send their wool to us to lay in our place of business, three, six and nine months; they all send it here to be sold, and we sell it and send their returns to them promptly, and they appreciate it and favor us with their business. Quick sales and prompt returns is our motto on everything we handle." Mr. Summers then kindly furnished our representative with a photograph which he had sketched from a farm scene where they were loading wool to be shipped to his house, which we have made a part of this article, and it but further illustrates the enterprise and energy of this firm in having such pictures taken. As the representative passed out he found another member of the firm, Mr. Morrison, just as busy in the produce department, waiting on customers in that line and disposing of shipments to the best interests of the shippers. In a few moments' conversation with him, it was found that the very large business which this firm does is divided into three departments—wool, produce of all kinds, hay and grain, with a competent head and manager for each.

Their business is systematized so that no department interferes with the other, but everything goes on with the regularity of clock-work. Shippers and producers can do business direct with this firm and have the confidence that they will be fairly and honorably dealt with and their interests be fully protected. They are indeed a representative, wide-awake commission house.

**Fruit in Barber County.**

EDITOR KANSAS FARMER:—The article of Frank Holsinger in the last



FARMER, reminds me that in the ten years I have lived here in Barber county there has never been a failure of the peach crop. In the seven years my trees have been bearing, there has not been one that I could not at some time during the season find peaches on. My trees are three inches in diameter. While it is a fact that droughts sometimes prevent the full development of the fruit, it still seems to me that this south-central part of the State, taken for a term of years, is second to none in the United States as a peach region. This is especially true of these mellow red lands of Barber county. The fineness of this soil in a well-cultivated orchard reminds one of walking on a bed of flour, and is the secret of its great drought-resisting power. It is quite pleasant to those farmers of our county who have taken good care of their orchards to see the trees loaded with apples and peaches, especially so since the peach crop is a failure over a large part of the United States. Many of my peach trees were so full as to require severe thinning of the fruit. Early peaches are needing rain now, and the prospect is good this morning for a shower.

The plum and grape crop is good. Pears a very few. E. T. DANIELS. Kiowa, Kas., June 21, 1894.

**Climatic "Changes."**

EDITOR KANSAS FARMER:—When the writer first saw southern Kansas, in the spring of 1870, it was an almost unbroken expanse of prairie. The winds were high, the sun hot and the rain, when it fell, rushed headlong toward the sea. We old settlers say: "It don't look like it used to," and "the rainfall in Kansas is increasing, as the land is being cultivated and as trees are planted on the prairies."

This summer (twenty-four years after his first appearance in Kansas) the writer spends in the younger Kansas—Oklahoma. Here similar conditions prevail. The winds are high,

prairie grass prevails and the streams are suddenly swollen after every rain. Twenty years hence these winds will be unnoticed and the soil will have reached such a state of cultivation that the rain will filter slowly through the ground, instead of running off the surface. There will be the superficial observer who will say, "rainfall is increasing," because crops will grow better and drought will be less frequent. Climatic changes are purely speculations as yet. Figures as to rainfall may be so juggled as to prove anything to suit the juggler. That rainfall in Kansas is increasing and that it is decreasing has been alternately and conclusively proven by the best authorities arguing from the same records. The truth is that no conclusion can be drawn from records covering so short a time.

He who waits for the climate to change will be a sorry farmer. We should make the most of present conditions. Use to the best possible advantage the resources provided by nature. Plant wind-breaks and cultivate with a view to prevent excessive evaporation. J. B. BROWN. Olive, Okla.

**Retaining Moisture in the Soil.**

EDITOR KANSAS FARMER:—I am much interested in the articles appearing in the FARMER on retaining moisture in the soil. But the arguments in most of them disagree with my experience and observation.

One year ago last winter I plowed wheat stubble from five to seven inches deep. It was as dry as a bone. In the spring I harrowed it and drilled in oats. It started at the first rain that went down two or three inches, June 3. I clod-smashed the field two or three days after the rain, so that I might mow the crop, expecting it to be short. It came up and died. I suppose the dry ground below

took the moisture away from the roots. The field was as smooth and well pulverized as an onion bed. A good shower on June 27 and a one-half inch rain on June 29 did not wet down three inches, except in the hollows and dead-furrows. The field is practically flat. The top inch or two was wet and sticky, but I could drive my toe into the dust below. I cultivated across it to see if it would take water and after the next shower the weeds came up at once. July 10 and 11 one and one-half inch of water fell. In plowing on the 12th, I had difficulty in keeping the furrow horse in the old dead-furrow, because he was in mud up to his fetlocks. The plow threw dust in his tracks clear through the field. A one-fourth inch rain started the weeds lively on the plowing, but they were sickly on the rest of the field, except the hollows, old dead-furrows and the cultivated place. I had good corn and potatoes on either side of the field. The rain of July 11 wet down more than a foot in the corn field. I think the oat field had been pulverized too much. A great many good farmers advise planting all grain on hard ground with only enough mellow dirt for covering. Certainly backsetting is the surest place for corn, and wheat drilled deep in clean stubble seems to yield with the best.

For years I have read articles by theorists on subsoiling, but I guess the farmers who find it a success in the West don't write about it. The general belief here seems to be against it. If it be more successful than plowing barely deep enough to keep the weeds from taking the crops, I would like to know it. Of course, what seems best here may not be best in other parts of the State. Our soil is light, so is our rain. If the ground be tolerably dry, oats plowed under six inches will come up all right. Plowing that is not harrowed the same day dries out too fast, but if it be harrowed too much and made fine it will not take in the rain as it should. CHAS. A. BABBIT. Webster, Rooks Co., Kas.

**UNHAPPY IN JUNE.**

Why Is It That So Many People Are Miserable?

**A PROFESSIONAL VIEW.**

A Gentleman Who Has Carefully Observed Tells the Secret Cause of It All.

"It seems surprising, but it is unfortunately true, that many men and women who ought to feel bright, strong, active and happy at this time of the year, are tired out, weak and miserable." It was the eminent Dr. Clarke, of New York, who made this startling remark.

"The number of people who complain of feeling languid, worn out and generally under the weather," he continued, "who are feverish, restless, with uncertain appetites, irregular sleep and similar troubles, seems to be increasing. Why they are in that condition neither they nor their friends know any more than many of the doctors do."

The physician paused a moment, reflected carefully, and then said: "There is generally but one cause and that can usually be traced to some forgotten incident, a neglected cold, a chill, possibly the grip, but it has left its effects on the system. It has acted like a bad spot in a choice fruit. The strange thing about it is that it almost always affects one, and only one, organ of the body, and from that the poison spreads over the entire system. This organ is the kidneys and this poison is uric acid. If the kidneys are strong and healthy and throw the uric acid from the blood there is no rheumatism, no neuralgia, no nausea and sick-headaches, no restless feelings, no irregularities or coated tongue. This is the secret cause of all these troubles in a nutshell."

"I have spoken frankly, you will say," he continued, "yes, but it is a serious matter and affects the life and happiness of thousands of people. Few people suspect the presence of kidney diseases, uric acid or possibly Bright's disease, because it is so deceitful a trouble. It steals like a thief into the system and robs the health before its presence is known. I have had a great experience upon this subject and I say to you frankly that I know of but one thing that will stop this trouble and keep the kidneys healthy, the body perfect, the health good. The remedy to which I refer is Warner's Safe Cure, which, of course, is how the standard remedy of the world for kidney trouble, Bright's disease and the various afflictions to which women are subjected. It is purely vegetable, it is powerful, and at the same time harmless, but I advocate its use promptly and without delay in every case where the first symptoms are detected. It was this remedy which restored and has kept in complete health so many prominent men and women of this country, and which is endorsed not only by physicians and scientists, but by ministers of the gospel, priests and those who have the spiritual as well as physical well-being of people at heart!"

"Then you think, Doctor," I asked, "that most of the physical troubles about which people are complaining during June can be traced to the cause that you have named?"

"I do, most assuredly, and I believe they can be avoided by following the suggestions I have made. I have seen so many cases where this has proven true that I have good ground for my belief, and if you, or any of your friends, young man, are out of sorts or have any of the symptoms of which I have spoken, I advise you to stop, reflect and act promptly and in time."

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## The Home Circle.

### To Correspondents.

The matter for the HOME CIRCLE is selected Wednesday of the week before the paper is printed. Manuscript received after that almost invariably goes over to the next week, unless it is very short and very good. Correspondents will govern themselves accordingly.

### They Are Dead.

There was a man who never told a lie—  
But he's dead;  
Never said it was wet when the weather was dry;  
Never said  
He'd caught fish when he hadn't caught one,  
Never said he'd done something that he hadn't done,  
Never scolded his wife, and never got mad,  
And wouldn't believe that the world was so bad,  
A respecter of men, a defender of women,  
Who believed the divine, and in that which was human.  
Meek as Moses—his never was understood,  
And the poor man died of being too good.  
And he's dead.

There was a woman who never had gossiped a bit—  
She's dead, too;  
Who hated all scandal, nor listened to it;  
She believed in mankind, took care of her cat,  
Always turned a deaf ear to this story or that;  
Never scolded her husband—she never had one;  
No sluggard was she, but rose with the sun;  
Never whispered in meeting, didn't care for a bonnet,  
Or all of the feathers that one could put on it;  
Never sat with the choir, nor sang the wrong note;  
Expressed no desire to lecture or vote;  
For the poor soul was deaf as a post—also dumb;  
You might have called forever, and she wouldn't have come.  
And she's dead.  
—Jeanette La Flamboy, in Outlook.

### A Parable.

Side by side, within my garden,  
Grew a flower and a weed;  
Off I watched the flower unfolding,  
To the other gave no heed.  
So the sun smiled and the rain fell  
On them both alike, and lo!  
Soon the weed's rank growth was spreading  
O'er the hidden flower below.

Trifles oft do make or mar us,  
If to fruits we give no heed,  
They rise up and dwarf us, spreading  
Rankly as the garden weed;  
Choking in their growth the nobler  
Instincts that our natures know,  
Till, like tender flowers uncared for,  
They in dust are trampled low.—Ex.

### "WOMAN'S WRONGS."

EDITOR HOME CIRCLE:—So much has been said upon the subject of "Woman's rights," that I should like to change the subject somewhat, as per above title.

This is, indeed, a very important subject to the average woman in this "fin de siècle" era, and one very near the heart of nearly all thinking women. Much gratitude to our bachelor editor for this opportunity of airing our grievances, whether fancied or real. This bachelor friend of woman, unlike many of his brethren, does not forget his mother was a woman, and, therefore, should have jointly enjoyed all the privileges, immunities or exemptions of his "paterfamilias," since it was she who, so uncomplainingly, was ever found with ready hand and willing heart to further the advancement of her husband's interests.

Ever do we find her the interested counterpart of man's most earnest endeavor, the true help-mate partner in all that pertains to his successes or reverses in the great struggle for an existence. In prosperity we find her his prototype, in an ambitious upbuilding of fame or fortune; and in the more complicated struggle toward the promised goal—a competency for old age—she is the constant companion, sympathizer, friend, through all his dreams of cherished weal.

But the great mass of our law-makers, in their broadcloth, or their tweed, perforce, ignore the fact that their mothers had ought to do in planting the standard of liberty in this great commonwealth of ours; they somehow forget that it is impossible that the stream can become purer than its source; that these mothers' sons are likely, through contact with a false and fallacious populace, and the thousand temptations that come to the public officials, to give more wholesome government, enact cleaner legislation and appoint purer officials, than would the mass of feminine fair, whose lives had been passed in the nursery of pure, sweet childhood, untarnished by taking bribes or peddling patronage where it would redound to their everlasting glory.

Thanks to a kind Providence, we were not given to man merely to rear his sons for him, but were endowed with intellect equal to the best of his race. (A fact which seems to smack of incongruous contradiction, does it not, since we have remained for nearly twenty centuries without a voice in any of our man-made laws, subservient as the most ultra of masculine disciplinarians could desire?)

It has been stoutly averred "we forge for ourselves shackles which we have not the power to break off." In some matters, perhaps, this saying may be all too true. In the matter of equality of sex, I think we are fully equipped, mentally, to cope with our brethren in the every-day affairs that pertain especially to home and home pre-

rogatives. Had woman the right to be heard in the exemplification of matters as far as the bread and butter question is concerned, do my fair-minded readers opine governmental gifts would be brought to such crippled condition as at present exists in the deplorable districts where the pulse of trade is strangled through greed of the "powers that be," to the utter destitution of thousands of helpless families? Will those suffering brothers, once again they stand at their respective polling places, vote the ballot to further seal their helplessness, or will they not discover the rift in the cloud that opens to give them a future of plenteous peace? Already those oft-quoted shackles are beginning to come unbound; already the rivets long used to rust and corrode are slipping out of groove or channel; those cumbersome man-made (not God-made) fetters are gradually taking their place along with the desuetude of stocks or martyr's stake.

The voice of our stronger sex (stronger only in view of his coarser physical creation) cries out against universal suffrage on the ground that the polling-place is unfit for the feminine fair to congregate for even a moment. Who made this place so like the ante-chamber of the sulphuric regions of which we fancy, even now, we catch an occasional sniff? Surely that charge cannot be laid at woman's feet. Then why, my brethren, delay, but set to work at once about the work of cleansing, purging, purifying the polling places, until you should be proud to take either wife or sweetheart where she, with you, may silently dictate what shall be done with the accumulated individual tax she pays for the privilege of living in this free land. Yours for woman's emancipation. MYSTIC.  
Oskaloosa, Kas.

### Perfect Liberty.

Graduating thesis by Clara F. Castle, Kansas State Agricultural college commencement, 1894.

With the declaration, "Let there be light," was implied the idea that this light should send its rays throughout the whole earth.

In every part of the creation is found the same universal benevolence. There were to be no restrictions, no limitations, but for man's good. Each of His creatures was to be free. Our first parents passed beyond the bounds of this God-given liberty, stamping upon man the love of greater gain, generating oppression, tyranny and bondage. Investigations in Egypt reveal walls, the lower layers of which show well-made brick. Upper layers reveal an entire absence of that necessary material, straw. History records, "Ye shall no more give the people straw to make brick. Go and work, for there shall be no straw given you, yet shall ye deliver the tale of bricks." The helplessness and hopelessness of a disheartened people was not forgotten. "I have heard the groanings of the children of Israel whom the Egyptians keep in bondage. Speak unto Pharaoh, King of Egypt, that he let the children go out of his land." That highest authoritative command, "Let my people go," has been heard down the ages. The nations are hearing it to-day. The question of liberty has been the greatest interest of all people. How is the seed to germinate and grow? What are its enemies, and how are they to be overcome? The movement of nations and history of liberty must be our aid. Greece and Rome, through the lack of enduring principles, fell short of the perfection of liberty.

In the seventeenth century a people is oppressed, and for what? Because in their worship they seek for greater freedom. That inherent love of liberty would bear no longer the closely-drawn lines. The landing of the Puritans on our shore meant overthrow of oppression and a higher advancement of civilization. Closely followed revolution, and at the cost of blood greater freedom was gained and the foundations laid for a home of liberty. Later, after the conflict, that wonderful instrument, the constitution of the United States, embodying the very spirit of liberty, the rights we love and the despot hates, was framed. In 1862 again sounded forth that command: "Let my people go," and through the instrumentality of his co-workers, four million souls were freed from chains, the lash and tyranny.

Our wise men tell us, "The noblest human work, nobler even than literature, science or art, is broad civil liberty, well secured and wisely handled." To a strong government belongs the harmony of power, check and protection. If the overbearing growth of power is not pruned before full-grown, class will rise against class, interests against interests, only for one to survive and absorb the other. Let the spirit of our States be national, our liberty broad. Let the increase of wealth be widespread.

Again are heard the murmurs of an oppressed people. Thousands are starving in this land of plenty. Multitudes are without hope of employment. Above the murmurs of discontent can be heard the satanic laugh of capital and tyranny; but the cry of oppression will not be quieted with false promises, ridicule or bribes. The rights of

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the laboring class must be heeded. That power that has emancipated the enslaved in the past will again release His people.

Is this continual contest between society and individuals to cease? Is there no solution to the problem? The time is promised when His kingdom will come. The bondage of inheritance, unwise education and evil will cease. The cloud of darkness will be lifted. Again the light will shine forth in all its glory. Truth will be revealed and we shall be a free people. "On the light of liberty you saw the light of peace, like another morn risen on mid-noon, and the sky on which you closed your eye was cloudless."

### The Value of Self-Control.

When can we say that our education is finished? We are, in one sense, never through learning. The truly educated eye ever sees new beauties, the mind grasps new truths, struggles with unlooked-for problems. The end of education then must be to awaken all our faculties of mind, to develop and mould the possibilities of character of the individual. Our natures are in reality three-fold, mental, physical and spiritual. The mind should not be trained regardless of the other parts of our natures, which are of equal importance and should receive equally the same amount of study and care in their development.

We need moral training to meet the temptations which come to us. We may have mental training, but if moral instruction and example has not accompanied it, of what avail is it? An educated person, morally corrupt, will use all their knowledge to accomplish their evil designs. As an example of this we have only to look at the conduct of Carlyle Harris, the wife-murderer of New York. He was educated and intelligent above the average, but used science to aid him in his deadly work.

What we especially need is strength of character. Solomon, the wise King of Israel, says: "He that ruleth his spirit is better than he that taketh a city." We can never be truly happy or useful until we have learned self-control. We feel justly proud when we have mastered one of the sciences or languages. All may not have this opportunity, but it is not only the privilege but the duty of each of us to gain a far greater victory when we are able to rule our spirits. How can we obtain this victory? By will power, what we all should have and indeed must have, if we are to succeed in ruling our spirits. Let us begin now to curb our tempers, and by and by, if we persevere, we will come out into a broader plane of living, where our peace of mind will be secure, because we are no longer controlled by petty annoyances and grievances.

We find a spirit within us that will not be overcome by difficulties. We will then be more hopeful. Will see the bright side always, because we have heretofore schooled ourselves to it, and it has now become second nature to us. If we could believe that every trial, disappointment and pain was only given to us to strengthen our characters, how much happier we would be. Who is it that is welcomed in the sick room? It is the bright, cheerful person, who, when patient and friends lose hope, keeps up courage, and even in the darkest hour is able outwardly to show no sign of agitation or fear. We may not think it, but there will come a time when we will need to have self-control. Troubles come to us all, and how much better if we have already learned patience, and the secret of the optimist, who teaches that everything is for the best. If we are really in earnest we will find "that the mind can rise superior to every difficulty." When the body is racked with pain, a determination on our part to be patient and not give up to disease will enable us, with proper treatment, to rally much sooner than one who loses hope at first, though they may obtain the best medical aid.

I know that the body influences the mind, but the more we give up to our feeling the weaker our wills become, until in the end we really have no wills, but are led by our feelings. Oh, do not allow your minds and your wills to become so weakened, but rise in the strength you now possess, and with every effort to rise new strength will be given you.—The American Farmer.

See Chicago Sewing Machine Co.'s advertisement in next week's issue.

A DOUBTFUL MATTER.—An Argyllshire elder was asked how the kirk got along. He said: "Aweel, we had 400 members. Then we had a division and there was only 200 of us left; then a disruption and only ten of us left. Then we had a heresy trial, and now there is only me and ma brither Duncan left, and I ha' great doots of Duncan's orthodoxy."

### Drs. Thornton & Minor,

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### Seashore Excursion Over Vandalia and Pennsylvania Short Lines.

Low rate round trip tickets to Asbury Park will be sold via Vandalia and Pennsylvania Short Lines July 7, 8 and 9, account National Educational Association meeting. Asbury Park adjoins Ocean Grove, Long Branch, Cape May, Atlantic City, Elberon, Sea Isle Park, Barnegat and other delightful watering places on the New Jersey coast, to all of which the Vandalia and Pennsylvania lines lead direct from St. Louis. Solid vestibule trains daily from St. Louis to Philadelphia, where connection is made with frequent trains for the seashore. Tickets may be obtained at principal ticket offices of leading railways in the West and Southwest. Return limit on excursion tickets will be ample for side trips. For any desired information, address J. M. Chesbrough, Assistant General Passenger Agent, St. Louis, Mo.

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Prof. W. H. Peeke, who makes a specialty of Epilepsy, has without doubt treated and cured more cases than any living Physician; his success is astonishing. We have heard of cases of 20 years' standing cured by him. He publishes a valuable work on this disease which he sends with a large bottle of his absolute cure, free to any sufferer who may send their P. O. and Express address. We advise anyone wishing a cure to address, Prof. W. H. PEEKE, F. D., 4 Cedar St., New York.

In writing to advertisers please state that you saw their advertisement in the KANSAS FARMER.



## The Young Folks.

### The Woodland Fern.

Afar in its shaded forest, anear on its open glade,  
Of varied kinds and rarest, the home of the fern  
is made.  
On slender stem, yet stately, of graceful growth  
and form,  
The woodland fern sedately greets both the sun  
and storm.

Bright in its emerald glories, or bleached with  
ashen dye,  
It has fascinating stories for thoughtful pass-  
ers-by,  
Of maidenhair-knit tresses, flowing freely and at  
ease,  
Holding verdure-tipped caresses, the soul of  
sense to please;

Of the forceful growth of summer, of autumn's  
hardy yield;  
Of the zest of each new comer, to crowd the  
thickening field;  
In beauty, wealth and rarity, each calling for a  
prize,  
For excellence and parity, from beauty-loving  
eyes.

Oh! the woodland fern, in lonely by-places,  
'neath the trees,  
Or where moist grasses only swing in the pass-  
ing breeze;  
Rare types of beauty olden, formed but to fade  
and turn  
From green to colors golden, and then to ashes  
burn.

A weird and solemn silence reigns in its chosen  
homes,  
Odors of unseemly incense from out its presence  
comes;  
In ferny lore unlet'ered, the soul essays to learn  
The story, somewhat fettered, of the modest  
woodland fern. —*Good Housekeeping.*

### HUMOR IN ENGLISH LITERATURE.

A portion of graduating thesis delivered by Isabella  
Russell Frisbie, at Agricultural college commencement,  
1894.

In literature we find that humor does not  
have the distinct place that other phases  
do, but each literary period does have a  
characteristic style of humor, with gener-  
ally one and perhaps more typical humo-  
rists.

The first period, the "age of Chaucer,"  
had as a central figure that talented man,  
whose work named the period. He was  
the one who gave to our language a perma-  
nent place in literature; and he also raised  
a standard of composition which has since  
been followed. His humor was of a quaint,  
sweet style, pure and simple, and to us has  
an added quaintness from being written in  
"old English." The following extract from  
the "Canterbury Tales" is a good example.  
One of the pilgrims, a wife of Bath, tells  
how she subdued her husband by a contin-  
uous tempest, and then said:

"And when I had gotten unto me,  
By malistree all the soveraltee,  
And that he sayd, min owen true wif;  
Do as thee list, the terme of all thy lif;  
Kepe thin honour, and kepe eke mein estat.  
After that day we never had debat."

Passing along to the Elizabethan era,  
we find humor and the drama walking hand  
in hand. The latter reached excellence  
with the work of Shakespeare, and as the  
greatest dramatist of the age, he was also  
the greatest humorist. He not only excel-  
led in wit and humor, but in all other  
branches of literature. As a whole, his  
humor is much less refined than that of  
Chaucer; but this is due to the immorality  
of society during his life.

Sir Richard Steele, one of a trio of satir-  
ists—the others being Joseph Addison and  
Jonathan Swift—who wrote early in the  
eighteenth century, is the best example of  
the humorist of the time of Queen Anne.  
His writings were nearly all published in  
the *Spectator*, *Guardian* and *Tattler*, daily  
or tri-weekly penny papers, which had for  
their especial object an attempt to better  
so-called polite society. Steele sets forth  
his purpose in the *Spectator* in these words:  
"I shall endeavor to enliven morality with  
wit, and to temper wit with morality, that  
my readers may, if possible, both ways find  
their account in the speculation of the day."  
The paper accomplished the purpose to a  
considerable extent by sending out witty,  
attractive essays on the practices of so-  
ciety, and assisted in bringing about a  
much-needed reform.

The nineteenth century brought with it  
such humorists as Irving, the author of the  
"Knickerbocker Sketches;" Holmes, who  
wrote the "Breakfast Table" series; and  
Lowell, the author of the "Bigelow Pa-  
pers." Their humor is of the true, pure,  
elevating sort, which is seldom produced,  
and in which behind all the fun, are to be  
found some good, practical thoughts, which  
are profitable for all.

To-day, the humorist is the funny man,  
or such he tries to be. His writings are  
simply wild exaggerations and are written  
to make you laugh, while the purpose is so  
evident that they often fail in it altogether.  
Such are the letters of "Bill Nye" and the  
writings of "Mark Twain." Their works  
are not such as will stand as monuments to  
their memory, but more probably will soon  
be forgotten.

The following from "Mark Twain" will  
serve as an illustration of modern Ameri-  
can humor; it is when he is mourning over  
the supposed grave of his ancestor Adam:  
"The tomb of Adam! how touching it was,  
here in a land of strangers, far away from

home and friends! True, he was a blood  
relation, though a distant one, still a rela-  
tion! The fountain of my filial affection  
was stirred to profoundest depths, and I  
gave way to tumultuous emotions. Noble  
old man—he did not live to see his child,  
and I, alas, did not live to see him."

### Fix Their Own Salaries.

One of the most remarkable features of  
the management of our postal system is  
that nearly all of the postmasters of the  
country fix their own salaries. They are  
not permitted to draw any amount that  
pleases them, but they make the returns to  
the department without supervision, on  
which returns their compensation is based.  
The postmasters who are paid in this way  
are the "fourth-class" postmasters—the  
men whose compensation is less than \$1,000  
per annum. When the compensation of a  
postmaster reaches \$1,000 a year his office  
is raised to the "Presidential" class. The  
fourth-class postmasters are appointed by  
the Postmaster General without the "ad-  
vice and consent" of any one. Postmasters  
of the first, second and third classes are ap-  
pointed by the President and confirmed by  
the Senate. At the beginning of this year  
there were 68,806 postoffices in the United  
States, and of these 65,382 were of the  
fourth class.

The postmaster appointed by the Presi-  
dent draws a fixed salary. At one time all  
of the postmasters drew fixed salaries. But  
the sudden growth of very small towns  
made readjustments of salaries at these  
towns so frequent that Congress determined  
on an elastic compensation, to be propor-  
tioned to the business transacted at the of-  
fice. According to this arrangement, if the  
business of an office was twice as heavy in  
the latter part of the year as it was in the  
first part, the postmaster's compensation  
would be increased proportionately. At  
first this sliding scale of compensation was  
based on the sales of postage stamps. But  
this offered many temptations to dishon-  
esty. Postmasters would sell large quan-  
tities of stamps at a discount so as to realize  
a commission on them. They would use the  
stamps in making purchases and then credit  
their offices with the sale of them. In par-  
ticular they would send the stamps to news-  
papers to pay for subscriptions, which they  
solicited; and there was a standing adver-  
tisement in most of the big newspapers  
some years ago offering stamps for sale in  
any quantity. No doubt some of the news-  
papers sold stamps at a discount.

The new system gives the postmaster in  
the country office a commission on the  
amount of stamps which he cancels. That  
is, he is paid according to the amount of  
business which goes through his office. But  
in supervising the returns from 65,000 of-  
fices the Postoffice Department must rely  
on the honesty of the postmaster. It can-  
not keep a force of inspectors at work over-  
seeing the cancellations at the small offices.  
The postmaster keeps an account of the  
value of the stamps he cancels each day  
and makes returns under oath to the Post-  
office Department. His compensation is  
calculated on the basis of the business re-  
ported. If the cancellations for a quarter  
(three months) amount to \$50 or less the  
department pays him a commission of 100  
per cent. On the next \$100 the commission  
is 60 per cent.; on the next \$200, 50 per cent,  
and on all above that, 40 per cent., until the  
percentage aggregates \$250. Theoretically  
the amount of business at a postoffice fixes  
the postmaster's compensation, practically  
he fixes it for himself.

In addition to the income from cancella-  
tions the fourth-class postmasters have a  
small income from the sale of waste paper  
and dead printed matter and from box  
rents. Under the law of 1883 the fourth-  
class postmaster furnishes boxes for the  
postoffice, which are turned over to his suc-  
cessor as the property of the government.  
The box rents belong to the postmaster.—  
*Harper's Weekly.*

### A Practical Test.

"I see by the newspapers," he observed,  
"that the city of Paris tried to borrow  
money, and was offered eighty-five times as  
much as was asked for."

"Yes, that's true."  
"I noticed, too, that the German loan  
was over-subscribed a good many times."  
"Yes."  
"It indicates that money is plentiful and  
cheap."

"It does."  
"Now, if I were to ask you to lend me a  
dollar, would you offer to make it \$50 or  
\$75?"

"Certainly not."  
"If I were to ask for a dime would you  
volunteer to furnish me with a \$2 bill?"

"No."  
"If I should endeavor to negotiate the  
loan of a cent I suppose that you would not  
even suggest that I take a nickel?"

"You are quite right."  
"It is as I thought," muttered the would-  
be borrower, as he walked away. "It is  
such a practical test as this that makes me  
skeptical of what I read in the newspapers."  
—*Pittsburg Chronicle-Telegraph.*

Highest of all in Leavening Power.—Latest U. S. Gov't Report.

# Royal Baking Powder

## ABSOLUTELY PURE

### A Fight With an Octopus.

Abe Onderdonk tells this story of subma-  
rine diving:

"There are, however, some terrible sea  
monsters, though the worst and most for-  
midable of all is the 'octopus,' or 'devil  
fish.' They are frightful, almost beyond  
description. When I was in New Zealand  
one of my men, Archie McGavan, while  
laying some wharf blocks, was suddenly  
surprised by an immense creature of that  
kind. Despite Archie's struggles (and he  
was a powerful man) the monster com-  
pletely overpowered him. He was locked  
in the tremendous claws of the devil fish  
and fastened helpless against a submerged  
spile. The man realized his peril and kept  
quiet until his assailant—whose arms mea-  
sured fully nine feet—loosened his hold.  
Then Archie signalled to be drawn up, and  
came to the surface with the hideous crea-  
ture clinging to his back."—*Bell's Messen-  
ger.*

### She Moved to a Healthy State.

"When they resurveyed the line between  
North Carolina and Virginia," said a re-  
cently returned commercial traveler, "the  
engineers found an error in the old stand-  
ards, and in one place moved the line a short  
distance south."

"Laws, Massa, chile, what you adoing,"  
said an old colored woman, as she observed  
the man moving one of the monuments,  
which for years had stood near her cabin.  
"Don't you know you mustn't sturb that  
'ere stone that shows as how long I lives  
in Norf Carolina?"

"But you don't live in North Carolina  
any longer, aunty," replied one of the men.  
"The new survey shows that you live in  
Virginia now."

"Live in Virginny! I live in Ole Vir-  
ginny. O, no, honey. You can't fool me  
that way. I never ain't moved in my life.  
So, how could I live in Virginny when I've  
born in Norf Carolina?"

"But you do, aunty," replied the man,  
smilingly, and he briefly explained the case.  
Then the aged woman shook her head  
and repeated again and again, "in Vir-  
ginny, Ole Virginny! Ain't that wond'ful,  
an' me never changin' a step!"

"Anyhow," she remarked at length, "I've  
glad I lives in Virginny. They always said  
'round here as how Virginny was more  
healthy like than Norf Carolina."—*New  
York Herald.*

### The Rarest Display of Fireworks Yet Achieved.

A Bessemer converter, with its twelve  
tons of molten iron under full blast, is the  
grandest display of pyrotechnics that man  
has yet achieved. The thunder of the blast  
deafens you; the ever brightening flame,  
flashing up finally as high as fifty feet,  
blinds you; sparks fall everywhere; smoke  
and steam confuse you; your mind and  
senses are in a whirl. Yet, however con-  
fused, a sense of the majesty and glory  
of the display is never absent from your  
thoughts. The blast finished, the converter  
tips downward, while a huge crane places  
before it a ladle of the capacity of fifteen  
tons. The converter is tipped a little more  
and the white, fiery liquid runs into the

ladle. The ferromanganese is then thrown  
in, to recarbonize the steel, and this is at-  
tended with a violent reaction. Flames  
leap up, and not infrequently the metal  
boils over the edge of the ladle.

From the ladle the metal is poured into  
ingot moulds of sizes differing according to  
need, and placed on cars. When the moulds  
are filled the cars are drawn by a puffing,  
screeching little engine, called a dinkey,  
into the rolling mills, where the ingots are  
to be used. There an ingenious device  
called a "stripper" takes off the mould,  
and leaves the ingot, now a red mass of  
steel, ready for the "soaking pit," in which  
it is to be heated to a soft, white heat  
throughout, before being rolled. Then a  
huge crane, of twenty-five tons capacity,  
wheels deftly around, picks up the ingot  
with a heavy pair of tongs, and swings it  
off smartly to the mouth of the pit. The  
cover is rolled back from the pit by men  
with bars, and the ingot is lowered into  
place. When, in the "heater's" opinion, it  
is hot enough, the men roll the cover back  
again, and the crane carries the piece to  
the rolls.—*McClure's Magazine for July.*

### LION NERVE TONIC RESTORATIVE

THE ONLY KNOWN

SPECIFIC for EPILEPSY



The great reputation of this medi-  
cine is based chiefly upon the good  
results obtained by its use in the  
treatment of epilepsy, diseases of  
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Telegraphy, English. Positions secured graduates. WE PAY  
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Display advertising 15 cents per line, agate, (fourteen lines to the inch).

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Electros must have metal base.

Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.

To insure prompt publication of an advertisement, send the cash with the order, however monthly or quarterly payments may be arranged by parties who are well known to the publishers or when acceptable references are given.

All advertising intended for the current week should reach this office not later than Monday.

Every advertiser will receive a copy of the paper free during the publication of the advertisement.

Address all orders  
**KANSAS FARMER CO., Topeka, Kas.**

If our subscribers who are about to renew their subscriptions, will notice our advertisement of "Picturesque America" in this issue, they no doubt will desire to take advantage of our offer. Send for our supplement containing our various clubbing propositions.

Readers should remember that the special offer to send the *KANSAS FARMER* to new trial subscribers for 50 cents from now to January 1, 1895, is still open, and that the person who sends in the subscription is authorized to keep 25 cents of the money. See the neighbors and get us a big list of trial subscribers.

We have to-day received a copy of Chancellor Snow's third annual report in regard to the success of his chinch bug infection. About 100 of these reports have been sent to the County Commissioners of this county for distribution. Should any one interested in the spread of the chinch bug disease fail to receive a copy of the report from the Commissioners, he should send 6 cents in stamps for postage to F. H. Snow, Lawrence, Kas., who will, on receipt of the application, forward a copy of the report.

In answer to many inquiries from those who have received one number of "Picturesque America," would say, that any subscriber who has sent us \$1 for subscription will receive three other numbers of the work from us upon receipt of one more dollar for a year's subscription for any one whose name you choose to send. By a little work in any locality several subscriptions can be obtained, and for each one, accompanied by a whole dollar, the sender will be entitled to receive from us three numbers of "Picturesque America." In sending to us always report what number or numbers you already have, and the numbers you claim.

Every trade paper speaks in woefully despondent terms of the condition and prospects of its specialty. Commercial and financial reviews are no better, and where they venture at all upon speculations as to the near or remote future it seems as if pessimism has seized upon the writers. The brightest prospects to-day presented are those of the farmer, and especially of the farmer who tills his own land. The disposition to crowd into cities and towns continues and the ever-increasing competition for positions with salaries or wages, shows no signs of abatement, but, on the contrary, of greater fierceness. The young man who knows how to farm, and who has or can make an opportunity to farm, is not unlikely throwing away the best opportunity of his life when he seeks the town or city. The remedy which every farmer has for the times which are apparently ahead is within the reach of no other class or occupation.

## CONDITIONS OF OUR TIMES.

Financial and economic writers who have until recently predicted a recovery from the depression, and that it would date from the settlement of the tariff policy of the present Congress, are now less buoyant in their expectations than when the enactment of the tariff bill was yet a great way off. While predicting that the taking effect of the tariff measure is now but a few days off, Wall street admits that its operators take very little interest in the event. This means, of course, that no considerable effect is apprehended or likely.

In the mad determination of politicians to saddle upon "the other party" the responsibility for the depressed condition of the country, a studied effort has been made to conceal the fact that the unfortunate condition prevails almost universally over the civilized world; that something like it has been chronic for many generations in many of the older countries, and that in these older countries partial relief has been had by the emigration of the surplus populations towards the setting sun. So also and to a greater extent in the older States of this country, when opportunities for employment at satisfactory compensation have become scarce, those who desired to better their condition have gone west; the pressure for places has been relieved; new resources have been developed; new communities have been established with their new demands to be satisfied and crowding has been impossible. Men now living have thus seen half a continent peopled.

True, much of the country is yet allowed to remain far below its ultimate productivity. This, however, does not prevent a feeling of limitation of opportunities and of uneasiness for fear of being overcrowded. It accentuates the tendency to gather into cities.

It was remarked, several years ago, by close observers, that from the dawn of history the migrations of mankind have been chiefly to westward. The overflowing population of the far east thus peopled Europe; the overflow from Europe came to America; the overflow from the Eastern States came to the Western. A more detailed examination of migrations has shown a tendency to travel on parallels of latitude, or at least to seek in the new country natural conditions as nearly as possible like those in the old, and the center of the stream of migration of the conquering peoples has been about the fortieth parallel of north latitude.

A prominent naturalist not long ago remarked, in speaking on inherited tendencies, that the simplest form of organized existence, the primitive form in all living things, is the cell, and that, when examined under the microscope, there is no discernible difference between the cell which forms the beginning of a whale and that which may develop into a man. "But," he continued, "behind the initial cell in the latter case is the whole history of the race."

So much cannot be said of the motive which impels man to move westward, and yet behind this impulse is the whole written and traditional history of the race. The slight variation from obedience to this long-inherited tendency recently developed in a desultory landing of Chinese on our western coast, has seemed so against nature that it has been made the subject of severely restrictive legislation.

The tendency to move westward rather than northward or southward has left South America out of the great current and is likely to leave the great fertile plateau of central Africa to its present indolent and sparse population long after it would have been overrun by Caucasians if in the latitude of the United States.

This tide of emigration, which has moved with accelerated force from the earliest times until now, has gone around the globe and has come against the east and is brought to a sudden stop. The world no longer has this safety-valve. The tide has turned upon itself and the "industrial" army from the Pacific and from the western mountain States is one of the apparent disturbances resulting.

That America has natural resources

sufficient for the luxurious support of several times her present population, does not change the fact that these resources have been appropriated and those unused are held in idleness by the greed of their possessors. That the extortion of the monopolist on the one hand and the competition of those dependent upon their labor alone on the other hand, will be alike augmented far beyond the largest conception of the present time seems inevitable. That "unrest" on the one hand and the demand for measures of "repression" on the other follow naturally upon these conditions, is already illustrated by the events of the recent past in this country and by chronic situations growing worse in the older countries of the world.

The closing years of the nineteenth century not unlikely mark an era in the history of mankind, an era of changes affecting the habits of society from the foundation of its present form, and possibly presaging organic changes of far-reaching kind. Certain it is, the best thought, the most devoted patriotism and the highest philanthropy will be needed to safely conduct society through the perils which now beset it. These perils are not imaginary. During the last few weeks the militia of many States has been called into the field. Only last week a State officer in Colorado, the Adjutant General, was captured, forcibly taken away and suffered the indignity of a coat of tar and feathers, because of what, to impartial observers, appeared to be his firm and courageous discharge of his plain duty in connection with some of the disturbances of the times. While this editorial is being written comes the news that an anarchist's dagger had been plunged into the breast of the President of the Republic of France, whereof he died at an early hour this (Monday) morning.

In all of the commotions of the present time which threaten violence or result in violence and bloodshed, the primary cause has been contention over the possession of some of God's gifts to man. Whether society is now at the beginning of a struggle in which the present civilization shall be violently destroyed or whether organized society shall be made the instrument for future advancement of the race and greater and more universal enjoyment, is a question of serious moment in the minds of thinkers.

## PRESIDENT CARNOT, OF FRANCE, ASSASSINATED.

Early last Monday morning the wires brought the startling news that the President of the French Republic had been stabbed in his carriage by an assassin, and that soon after he died. The deed was done by a young anarchist, who was immediately arrested, and but for police protection, would have been torn to pieces by the excited populace. The young man refuses to talk about the cause of his rash deed until he shall come before a tribunal. Surmises are indulged freely that it was an act of revenge for the recent execution of anarchists, and was planned and directed by an organization. This supposition seems scarcely tenable. It is known, however, that European countries contain large numbers of persons who belong to organizations in which the wrong and the unfortunate aspects of society are the principal themes. These organizations hold that man ought to so govern himself that law would be unnecessary. They also place in a strong light the protection of law under which extortions and many injustices are possible and are practiced. Following these lines of thought the narrower-minded of their followers come to look upon laws and officers of laws as oppressive and the chief cause of the ills which are all too prevalent. The intensity of this conviction in the minds of enthusiasts and monomaniacs nerves them to do the most desperate deeds, and causes them to accept death on the block—as the extreme penalty is administered in France—as a great honor and a fitting termination of a life of devotion to the cause—as they think—of humanity.

The error is in the assumption that the law, with all its imperfections, is

not, on the whole, beneficent. The perversion of the law-making power to wrong uses leads to injustices and oppressions, but as long as the selfish impulses and the passions of men dispose them to do injustice and wrong, so long must there be law to hold these impulses and passions in check, so long must there be officers of the law to attend to its administration as well as to its enactment.

It is well to teach people to be better; it is well to teach them to so demean themselves as to need no restraint from the law, but it is a grave error, it is a crime to teach or to assume that law and officers can be dispensed with or that they are the enemies of society. The duty of the citizen is to join in the effort to give the public will such expression in law as shall not promote oppression, but shall in the admirable language of our constitution "promote the general welfare." It is inconceivable that there shall ever be such a state of human society as that law and its administration shall be unnecessary. The best that can be hoped is that with the advancement of the race the necessity for the prominence of law will be decreased and that law will be so perfected as to be no more the instrument of oppression, but purely a protection and a beneficent regulator of society.

But under present and possible conditions of society, law is a necessity. Its rigorous enforcement and wise revision call for and will continue to call for, the services and careful consideration of the wisest and best in every land. The assassin who raises his hand against the administrator of the law is rightly regarded as a public enemy.

The assassination of President Carnot is without justification. Reformers even on this side of the water have pointed to France as an exemplification of the benefits of some of the reforms advocated. That country has been less affected than any other in the civilized world by the great depression. The crowding of population in that country has ceased to alarm since the increase of numbers has ceased, and it has been demonstrated that the productive powers of the people are equal to their demands. But the craze which nerves the assassin's hand seldom discriminates.

## Weekly Weather-Orp Bulletin.

Issued by the United States Department of Agriculture, in co-operation with the Kansas State Board of Agriculture, for the week ending June 25, 1894, T. B. Jennings, observer:

The temperature has ranged slightly above normal during this week, with an average amount of sunshine, while the rainfall has been far in excess of the weekly average, except in the central counties of the extreme west and in Cowley, Chautauqua, Elk, Montgomery, and the southern portions of Woodson and Greenwood.

There were two well-defined centers of rainfall this week, amounting to over four inches each, one in Osborne and Smith culminating in 5.90 inches in Osborne, the other in Reno, Harvey, Sedgwick and northern portion of Butler, culminating in 5.40 inches at Mt. Hope, in the northwest part of Sedgwick.

This has been the best growing week of the season so far, but the rains have very generally stopped the harvesters. Corn has grown very fast and has a fine color, much of it being too large for the double cultivator, while in the south it is tasseling and has begun to silk. Meadows have greatly improved and pastures are in fine condition.

Flax has generally passed the bloom. Apple orchards and gardens are in fine condition. Oats and barley have greatly improved, and the oat harvest has begun in the south.

Potatoes are in very good condition except in the northwest part of Coffey where the wet weather is having an injurious effect on bottom fields. Haying will commence next week in Woodson. Threshing has begun in the south.

The Kansas Weekly Capital publishes more Kansas news than any other weekly paper. A free sample copy will be sent on application to THE TOPEKA CAPITAL CO., Topeka, Kas.



### AN OBJECTIONABLE FOOD PRESERVATIVE.

There will probably never be an end of humbugs, not to say harmful devices for which to obtain people's money or property. One of the later of these is a food preservative. The idea of chemical food preservatives is not new and the fact that they do preserve the substances to which they are applied, and in many cases preserve or only slightly modify the fine appearance, and even a fine, though generally a modified flavor, enables the vendors of the preservatives or of the recipes for them to attract readily the attention of persons of honest intentions.

The experiment stations are doing good work in exposing frauds and have not been slow to point out the fact that many of these remarkable preservatives render the fruit, or such articles of food as they are applied to, unwholesome. A case has just been reported by Prof. H. A. Huston, Chemist of Purdue University Experiment Station, of LaFayette, Ind. He says:

"In the month of December, 1893, I received from Mr. H. F. Smith, of LaPorte, Ind., a package of material for use in preserving fruits and other perishable food material. The compound was for use in the 'Great French Preserving Process,' the business headquarters of which were in Chicago. It was also stated that various fruits on exhibition at the World's Columbian Exposition were preserved by this process. There were also enclosed various advertising sheets relating to the selling of the compound itself and of the rights to territory in which the compound should be sold.

"The examination of the compound showed that it was composed of sulphur, charcoal, nitrate of soda, cane sugar and common salt. The salt may have been an impurity in the nitrate of soda used. The composition of the sample was:

Cane sugar.....	14.20 per cent.
Salt.....	1.42 "
Nitrate of soda.....	1.36 "
Sulphur.....	57.63 "
Charcoal, moisture and insoluble matter.....	25.64 "

"The essentials of the directions for the use of this material were that the compound should be burned in a closed space and the fumes arising from the burning should be absorbed by water placed in suitable vessels, and that the fruit in some cases should also be exposed to the fumes. Finally the fruit was to be placed in the water which had absorbed the fumes of the burning compound and the vessel closed.

"The burning of the compound would result in the production of sulphur dioxide, also known as sulphurous acid, as one product, and it is this substance which exerts the preservative action in the process. The other ingredients are merely to aid in the burning of the sulphur.

"This sulphur dioxide is an intensely poisonous gas and its use is prohibited as a food preservative in European countries. When the gas is absorbed by water sulphurous acid, a powerful therapeutic agent, is formed. There is no doubt that its preservative action will be effective, for it is one of the best antiseptic and bleaching agents. But there are grave objections to the indiscriminate use of powerful therapeutic agents in food.

"The parties having the material and rights for sale state that the material or process is covered by a patent. On inquiry at the United States patent office we learned that the patent with the number said to belong to this process was issued for some sort of machinery, and had no relation to this subject.

"The advertising matter calls attention to the very large profit arising from the sale of this compound and to the larger profits in disposing of rights to sell it in certain territory. No doubt the profit ought to be large, for it sells at \$1 per pound, while the cost of material in one pound would not exceed 6 cents, even if material of the very best grade was used in its manufacture.

"We would advise people not to buy the material on account of its high price and objectionable character as a food preservative, and to have nothing to do with the purchase or sale of ter-

ritorial rights, unless they want to be imposed upon or impose upon others.

"The State Dairy and Food Commissioner of Minnesota has recently condemned this material in his report, and Mr. Smith states that the *Poultry and Bee-Keeper* wrote up the matter in 1887, at which time the process was offered as a means for preserving meat.

"Attention is again called to the matter because it seems probable that the material will be offered to farmers as a means for preserving fruit for food purposes."

### THE STATE AGRICULTURAL COLLEGE, 1894.

The thirty-first annual catalogue of the Kansas State Agricultural college, fully illustrated, gives a clear and complete statement of the methods and equipment of this noted institution, the best attended of its kind in the country.

Its faculty of forty professors and assistants, descriptions of its buildings, grounds, laboratories and shops, the names of nearly 600 students, and of hundreds of graduates scattered over this and many other States, many of them in places of trust and responsibility as experts and instructors, fill the catalogue with interest.

Its four years' course of study is most practical and thorough, and provides accurate training in those studies which are most needed in every-day life, being strongest in the sciences especially related to agriculture and the mechanic arts. Young women have parallel courses in household economy and domestic arts. Even a single term of study there provides the best of mental discipline and increased practical knowledge.

The farms, gardens, shops, sewing-room, kitchen laboratory, printing office and music rooms are described as places for genuine industrial training in the arts of every-day life. Those who desire to follow mechanical pursuits, as well as those who seek skill in farming and gardening, are well provided for.

All students have the freest possible access to a carefully selected scientific and general library of some 15,000 volumes, and apparatus worth \$100,000, of the various scientific departments, is provided for their use; while the work of the Agricultural Experiment Station is at all times open to their inspection, thus affording them the greatest facilities for verifying the facts and adding to the knowledge gained elsewhere by means which must help to make of them independent thinkers.

Students are admitted to this college, on examination, direct from the district schools of the State. Diplomas received on the completion of an approved county course of study, certificates of passing the grammar grades in selected city schools, and Kansas teachers' certificates are accepted in lieu of the entrance examination.

Endowed by the nation and controlled by the State, this college opens its doors to all classes without charge for tuition or incidentals and under conditions which make the necessary expenses for the student very light.

The fall term begins on September 12 next with examinations for admission. Copies of the catalogue and other information may be obtained by addressing the President or the Secretary, Manhattan, Kas.

The Cincinnati *Price Current* estimates the exportation of wheat for the crop year which will end with the present month, at 165,000,000 bushels, and the domestic food, seed and other consumption, at 370,000,000 bushels or more. It then observes that "if the crop of 1893 be reckoned at 460,000,000, then it must follow that the excess of distribution has been 75,000,000 bushels, and that the quantity in the country on July 1 will be 75,000,000 bushels smaller than at corresponding date last year."

Many a man who has been sent to an early and even suicidal grave by the tortures of dyspepsia would be alive and well to-day had he tested the virtues of Ayer's Sarsaparilla. This is no temporary appetizer, but a radical, scientific remedy. It makes life worth living.

"Blessed are the sorrowful who carry a cheery face."

### HAY EXPORTS.

Last year was the first in which American hay and forage crops were exported in large quantities to Europe. The drought there made imported hay an expensive necessity and a great deal was shipped abroad. From Zurich, Switzerland, the state department received a report which says:

"The drought prevailing last year in western Europe is apt to repeat itself. People here in Switzerland already predict a dry season, and should this prove true, there is a chance for American farmers to place considerable hay in Switzerland.

"A large quantity of American hay found its way into Switzerland last season, the municipalities of each town or village being the purchasers. They bought large quantities and distributed it among the people at cost, thus preventing unscrupulous dealers from taking undue advantage of the crisis by raising the price of hay beyond the reach of the poorer classes.

"If rain does not come soon, after a winter almost bare of snow, forage and grain crops will be almost a failure, and our farmers will perhaps have a good market for their hay. I would say, however, that poor hay is not wanted in this country; nothing but the very best quality and of strictly honest baling is in demand. Hay should be put in 100 or 200 pound bales, firmly pressed and wire-bound. Hay, when properly protected, can safely be shipped by sailing vessels, thereby effecting lower ocean rates than by steamship. Hay is admitted free of duty into Switzerland."

The crowded condition of the countries of the old world makes it necessary for their people to consume each year within very narrow margins the supplies produced. For many years the new world has supplied their deficiencies of grain and later still has furnished meat. Now we begin to supply hay. This is a matter of great interest to the Western farmer who has witnessed the wonderful productiveness of certain portions of the land when sown to alfalfa and has led to inquiry as to a market for the immense amounts likely soon to be produced. Two factors have not generally been fully considered in this connection. The first is the fact that the area adapted to the production of the phenomenal crops of alfalfa is limited in extent and is much of it in the midst of grazing regions which are likely to make heavy demands for forage. The second and newest factor is the foreign demand which, while it may not be steady, will require in the aggregate large quantities of the best forage.

### Rain and Crops in Barber County.

EDITOR KANSAS FARMER:—On June 23, we had a glorious rain. Nearly two and one-half inches of water fell. It came too late to help wheat much. I doubt if there will be one-fourth of a crop of wheat in Barber county this year. The failure is due to the very cold weather in the winter. The oats were also nipped by frost after they came up, when too young to stand much cold. Some pieces sown early in February got so strongly rooted that they were not killed, and will make a fair crop, with only one rain since sowing before the last rain. Corn, cane and millet are a splendid stand, and you ought to see them grow now. Miller & Benedict ranch has corn six inches higher than I can reach, which is seven feet nine inches. This last rain, with one or two showers later, will make the corn and cane.

If Congress would let the bounty on sugar remain as fixed by the McKinley bill, it would be worth \$20,000,000 to the State of Kansas in the next ten or twelve years. Southwestern Kansas has the best soil in the world for sorghum-raising, and northeastern Kansas is well adapted to sugar beets. In five years under the McKinley bounty, this country will produce all its own sugar, which will keep \$125,000,000 in this country, the most of which will otherwise go into the pockets of foreign sugar beet-raisers and manufacturers. The production of sugar has almost doubled in this country in two years. We produced over 23,000,000 pounds of beet sugar last year from only six fac-

ories, and hundreds of new factory companies were being organized before they began the fight against the bounty. Why send men to Congress to tear down instead of building up new industries in this country? In spite of the abominable sugar trust, sugar is cheaper in this country than ever before.

The people in Barber county are now paying much attention to the subject of irrigation by pumping. A meeting is to be called soon for the purpose of organizing an association to promote irrigation and to acquire information as to the best system of irrigation in this locality. Perhaps some of your readers will be able to give us light on that subject. The Medicine river runs in a southeast direction across Barber county, and along the bottoms on this river there seems to be an abundant supply of water at from six to twelve feet below the bed of the river. At Medicine Lodge Elm creek unites with the Medicine river, and along its banks are splendid bottom lands where, at a depth of ten feet, there seems to be an abundant supply of water. The second bottoms are from ten to twenty feet above the first, hence water is found at a depth of from twenty to thirty feet.

Now, if any of your readers have had experience in irrigation on lands similarly situated, will they please give us their experience? The first bottoms are sandy loam, the sand predominating. The second bottoms are of a reddish clay loam, with sand more or less mixed. The uplands are excellent for all kinds of crops, with a sufficient supply of water, but we have to go from forty to sixty feet to find it.

Alfalfa is attracting considerable attention. The last two seasons have been so dry that it was difficult to get a good stand, the young plants not getting root enough to stand the dry weather of July and August. This season gave it a better show. Yesterday I pulled up a stalk with a top of twelve to fifteen inches and root about fourteen inches long. It was seeded the 10th of May. It had no rain after it was sowed except one shower (a good one) which came the next day after sowing, until the one of Friday last. It is a fair stand and it grows mightily now.

The government sugar factory in this place, built for experimental purposes, is now going to ruin under the mistaken policy of the present administration. It was doing invaluable work for all the people by experiments in the cultivation of the different varieties of sorghum. They have raised the percentage of sugar in the cane from 8 to 12 and 12 to 23 per cent., and in a few years would have added 10 to 15 per cent. to the amount of sugar above that found in the present varieties. The factory here was not only increasing the amount of sugar obtained from the soil as found in the improved varieties and kinds of cane raised, but in the amount obtained by improved methods of extracting the sugar from the cane. These experiments would have been worth millions of dollars to the people of this country had they been continued a few years longer.

DR. E. P. MILLER.  
Medicine Lodge, Kas.

### Our Illustration.

Our front page illustration in this issue gives the modern and practical farmer, especially if he be a corn-grower, a very good idea of the improvements attained in the Dain Safety Corn-Cutter. It is called the "Safety" because its construction absolutely makes it safe for both the horse and the operators. The shafts act as a guard and straightens up leaning stalks, keeps the horse, in turning the machine, off the knives. Being mounted on four wheels, in addition to the guides or runners, can be turned around easily and on the smallest possible area of ground. The horse walks between the rows and the knives extend on each of the two sides of the machine, cutting two rows. The two operators, seated back to back, gather in the stalks and partly support the same until twelve, fourteen or sixteen hills are cut and resting on the platform, then the horse is stopped and the cut stalks are taken and placed in the shock. This operation is continued, and experience proves that by the use of the Dain Safety twenty acres is soon in the shock and the time and labor saved in working on the twenty acres pays for the machine. Owing to the hard times the Dain Company announce that they will make very low prices to the farmers and in districts where they have no agents they invite direct correspondence and will trade direct with the user. The prospect for a short hay crop should stimulate every farmer to save all the corn fodder possible, and the KANSAS FARMER takes pleasure in recommending the Dain Safety Corn-Cutter.



## Horticulture.

### DISCOVERY OF THE CONCORD GRAPE—FINDING EXCELLENCE.

EDITOR KANSAS FARMER:—I enclose herein, a fragment of a noted grape vine. It is a part of the original Concord vine, the parent of the millions of vines of the Concord variety which are now growing in all parts of this country.

The Concord vine was a seedling planted eighty years ago at Concord Mass., by Mr. Bull. It proved to have superior qualities; it succeeded everywhere, and in all soils; it is hardy and productive and is probably more widely known than any other variety. Consider how much that man accomplished who first propagated the Concord grape by cuttings in 1854.

The old Concord vine takes us back to a discouraging period in the culture of the grape in this country. At the first settlement of the country the abundance of native grapes growing wild attracted the attention of the colonists. The first vineyard was planted in Virginia, in 1620. It did not succeed, and after trying to learn how to make it succeed for ten years, French vine-growers were brought over to take it in hand, but they also failed. In 1683 William Penn planted a vineyard near Philadelphia, but he also failed. In 1790 a colony of Swiss vine-growers planted a vineyard in Kentucky, and afterwards they planted another in Indiana, but though they worked at the problem for forty years they failed to make a success of grape-growing. The native grapes were inferior, and the European varieties could not be made to succeed anywhere east of the Rocky mountains. On the Pacific coast, that wonderful country where every species of plant seems to excel and surpass itself, there both the European varieties and the native varieties succeeded, but east of the mountains grape-growing was a failure from 1620 to 1850. In all this time this was a good country for grapes. It was only waiting for the origination of varieties suited to the country.

The Catawba grape was found in Maryland about 1850. The Isabella was found in South Carolina, the Casady was found growing in a dooryard, the Diana was a seedling of the Catawba, the Goethe was an accidental cross, the Concord was a seedling, the Martha was a seedling from the Concord, the Delaware originated in an unknown way, the Herbmont was found in the woods by a farmer, the Ives was an accidental seedling, Norton's Virginia was found on an island. Before these and other new varieties had originated, viticulture or grape-growing had been a failure in spite of strenuous and persistent efforts to make it a success. Within ten years after the general introduction of these varieties it was estimated that 20,000,000 gallons of wine were produced annually, besides other products of the vine. The grape industry had only been waiting for the the new varieties.

It will be noticed that these new varieties originated accidentally. They were not imported from foreign countries. They were not produced by scientific hybridization, or by gradual improvement by selection of seed, but they were seedlings, accidentally crossed, or variations which were greatly superior to the parent plants. They were simply found. It is said the same is true of other fruits. The finest varieties have been found growing wild in the woods or in a hedge, or were seedlings. In the improvement of plants we owe more to accidental variations, more to accidental crossing, than to our own efforts. We can hope to make more progress by preserving superior plants of unknown origin than in any other way. Selection of seed is simply selecting variations, greater or less.

The sorghum industry presents a striking parallel to the grape industry. Cane is easily produced. It is suited to the country; it has enough sugar in the juice, but the varieties are imported from foreign countries, just as foreign varieties of the grape were imported. The sorghum sugar indus-

try waits for the origination of new varieties in this country which will crystallize sugar as readily as the varieties of tropical cane, and then sorghum sugar manufacture will bound forward as did the grape industry, as soon as it found the needed varieties.

The grape industry in this country waited 200 years for some one to find superior varieties in the woods, on the island or among seedlings, and in all that time there were only needed intelligent eyes to see and skillful hands to propagate the new varieties. We move faster now. It is said that more than 200 new varieties of the grape, all of them superior to the old varieties, have been developed since 1850. It is said that our cultivated plants have been improved more in the past forty years than in the previous forty centuries, and we may reasonably hope for as great improvement in the next forty years. M. Henri Vilmorin, of Paris, who received the cross of the Legion of Honor from his government in recognition of his eminent services to horticulture, in an address before the horticultural convention at the last World's Fair, said that, while we cannot now expect to find new species of plants of great economic value, we may expect to greatly improve the plants we have by developing superior varieties. In many a field of wheat there has been one plant that would have started a superior variety of wheat, as the old Concord vine started a superior variety of the grape. In many a cane field there is a single cane which would prove as valuable to the sorghum sugar industry as the old Concord vine was to the grape industry. It requires only intelligent eyes to recognize the superior qualities, and care to propagate them. In the little grains of corn which have been recently found in the ruins of the cliff dwellers of the West, we may see how much corn has been improved, and could we see the change which has taken place in all cultivated plants, we would have good grounds for hope in the future improvement of plants. D.

#### Fruit as a Diet and Medicine.

By a member, and read before a late meeting of the Missouri Valley Horticultural Society.

It is the custom, with many writers on the food value of fruits, to dismiss the subject with the remark: "They are of little value." It is true that some varieties contain very little nutriment, but I think that a careful observation of the effects of fruit diet upon both man and the lower animals will prove to the contrary. In proof of this assertion is the well-known fattening of birds and domestic fowls on fruit diet; the rapid improvement in flesh of the pig in the plum patch—how he delights in its shade, and audibly expresses his satisfaction with the nectar of its delicious fruit, and how he even shakes the trees, if the gentle breezes do not bring down enough to supply his wants. Hunger calls forth appetite. Appetite is nature's demand for food. Fruit satisfies that demand.

There are foods and foods. The elements of nutrition are much richer in some than others, the cereals and legumes containing less water and much more aliment. But fruits rank well, in their nutritious elements, with many other articles that are high in popular esteem. For instance, the currant has 10 per cent. nutrition; the egg (raw), 13; the apple, 16; the beet, 14; the peach, 20; boiled codfish, 21; the grape (sweet), 27; raw beef, 26; the plum, 29; broiled mutton, 30.

You must remember that a large percentage in the weight of these articles represents water. Seventy-four per cent. of raw beef consists of water and mineral salts or ash. The cereals and legumes—beans, peas, etc.—range in nutrient value from 75 to 95 per cent. You perceive that sweet grapes contain 1 per cent. more food than raw beef, whilst plums contain only 1 per cent. less than broiled mutton, which has lost considerable water by cooking.

Those fruits containing the greatest amount of sugar—grape sugar, or glucose, as it is called—possess the greatest food value. They also contain vegetable albumen, acids and inorganic salts that aid in the nutrition of the body and the maintenance of health.

Fruit, to be wholesome, must be fully mature, ripe and perfectly sound, and

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eaten with due moderation. It is best and safest eaten with the regular meals. The damage to health from fruit-eating is generally due to unripe or decaying fruit. If it is not eaten fresh from the garden or orchard it should be kept at as low a temperature as convenient to prevent fermentation. Fermentation means decay, destruction. If the germs of ferment are not in the fruit when gathered they soon will be acquired from the atmosphere. Modern genius has made grand strides in the preservation of fruits in their fresh state, but there is something still to be desired. We want some cheap means of keeping the strawberry fresh and sweet and sound from the time it is plucked till it goes on to the table of the consumer, after a ride of 500 miles on the cars. Shall we ever see it? I believe we shall. The genius of invention is abroad in the land, and daily fills us with astonishment.

All animated nature cries for fruit as a diet, from man—"a little lower than the angel"—to the festive curculio and the detested codling moth. Its constituents are a happy combination of sweets and acids most gratifying to the taste—a taste that has not to be cultivated, either, as with many other foods, but is inborn, as witness the supreme delight and surprise of the infant on first tasting the juice of the grape or strawberry. I conclude, therefore, that fruit as a diet has a food value of great excellence and is worthy of the energy, industry and skill employed in its propagation and production.

#### MEDICAL USES.

Fruit in the present day is little used in medicine, as a drug. The acids in their natural juices or in combination with inorganic bases, are employed in medicine as refrigerants and laxatives. The juices of the orange, lemon and lime are used as cooling drinks in fevers and have been from time immemorial employed as a remedy in that scourge of soldiers and sailors, the scurvy. The juices of other acid fruits seem to be equally valuable, and since the introduction of canned fruits and vegetables scurvy is rarely heard of in camp or at sea.

The acids, with their combinations, increase the vital forces by stimulation of the natural secretions and excretions, and carrying off the body waste material create a demand for new material, new food. Hence, under their use our bodies are more frequently renewed, the functions of life are more active, which means good health. The province of fruit, therefore, is not wholly medicinal, nor wholly nutrient, but both combined. Variety and change is best for man and beast. Bounteous nature provides seasonable variety. In this is manifest the wisdom and goodness of Providence.

The ancients held in high esteem the medicinal virtues of fruits, especially the grape. Moses, who was a good judge of human nature, a great law-giver, a great doctor, in fact, a great all-round man, recognized the grape when he permitted his people "to eat of grapes their fill, at thine own pleasure." Medical authors from the times of Nero, the Roman, Dioscorides, Galen, Cullen and the Arabians of the tenth century, allude to the healing virtues of the grape.

#### THE GRAPE-CURE.

No essay on the subject would be

complete without some account of the grape-cure, or, more properly, the fruit-cure, as the treatment is not confined to the grape, for it embraces figs, cherries, plums, currants and berries within its scope, and they have long been in repute with some eminent European physicians. Van Swieten is said to have recommended in special cases the eating of twenty pounds of strawberries daily. He reports a case of consumption cured by strawberries, and cites cases in which maniacs regained reason by the exclusive use of a diet of cherries. Hoffman, Richter and Berger report analogous cases. The great botanist, Linnaeus, was a sufferer from gout, and thought he relieved its attacks and lessened their frequency by a fruit regime. The author of this paper was once relieved of dysentery in twelve hours by the free use of the juice of dried peaches well stewed. One very dear to him, during the late war, contracted catarrh of the stomach that resisted the best efforts of an able physician for three weeks, was restored in a short time by the liberal use of well-ripened cherries.

So far as I know the idea of adopting stations for the grape-cure, originated with German physicians, and is, perhaps, the most useful of the applications of dietetics to medicine. These grape-cure stations are found in Germany, Switzerland, the south of France, Italy and in Austria. They are selected with reference to the vineyards, favorable climatic conditions, and frequently to the existence of mineral waters and dairies, for the milk-cure is an essential feature with some of them. One of the most popular of these stations is Meran, in Austrian Tyrol, an all the year round health resort. It is in a valley 1,100 feet above the sea, of mild and equable climate, short winters and agreeable summers. It abounds with vineyards and dairy cows and mineral waters. They combine the milk or whey cure in spring, the herb-cure in summer and the grape-cure in autumn—September till November—and tone up during the winter with mineral water and fat living. The customary dose is four pounds grapes eaten from the vine before breakfast, and a pound or two after each principal meal. The meals are simple, and I presume not extravagantly abundant.

Extravagant claims have been made in behalf of the grape-cure. It has been employed in the treatment, with more or less success, of habitual constipation, hemorrhoids, passive congestions of the digestive organs, some forms of chronic diarrhoea and dysentery, heart disease and for rheumatism, in the form of baths in the fermenting mash. I don't know whether they make wine out of that same mash or not. History is silent on that point. The truth is, that at these stations so many accessories are employed, such as hygiene, milk and herb cures, mineral waters and climatic influences, that it is difficult to say what part the fruit regime plays in the cure of disease.

#### Leasing Oklahoma School Lands.

All persons wanting to lease school land in Oklahoma will be rewarded by sending for a free sample copy of the HOME, FIELD AND FORUM, Guthrie, Okla., the leading agricultural paper of Oklahoma Territory.

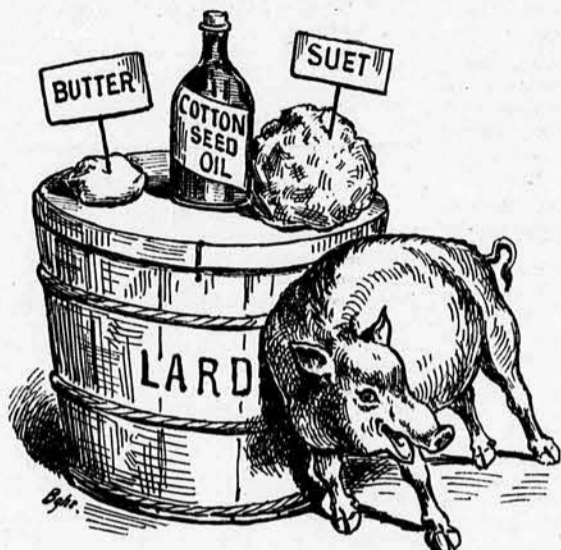


### In the Dairy.

Conducted by A. E. JONES, of Okland Dairy Farm. Address all communications Topeka, Kas.

#### THE STORY OF OLEOMARGARINE.

You've all read the story, as good folks should, The story of Little Red Riding Hood.



The little girl and the grandmother old  
And the horrid wolf with his scheme so bold.  
How he hid himself in the old dame's bed  
With her big nightcap tied over his head,  
And her glasses perched on his savage nose  
That little Red Riding Hood might suppose  
It was grandma still—and the old wolf thought  
He could eat her up; but the fraud was caught.  
Yes, that is the story you all have heard;  
I hope you remember it, every word  
For though that old coward has passed  
away,

He has a bad cousin alive to-day.  
A mean and contemptible, painted fraud,  
A terror to farmers is now abroad.  
I'll tell you this story—it won't take  
long.

The theme of all ages for praise and song  
Has been the old cow—for her milk and  
cream

Has started full many a poet's dream;  
For sentiment, fancy and fact somehow  
Run back to the farmer and the good  
old cow;

And her golden butter a memory brings  
Of breezy old pastures, and pure cold  
springs

And the old-time life on the sunny farm—  
But here comes the wolf with his chill-  
ing harm.

The steer and the hog—they are jealous  
folks.

They pass for good-natured and slow old  
pokes

All right in their place; but, my stars!  
say how

Can they take the place of the good old  
cow?

They are just not "in it," as one might  
say,

But the thought got into their heads one day—  
"It isn't the cow, but the dairymaid  
That gives the old critter so much good trade.  
Let's start with the statement that fat is fat,  
There isn't a shadow of doubt of that.

They captured her dress. How the poor thing  
wept.

How the cow wept, too, while, with grin and leer  
These miserable traitors—the hog and steer,  
With their clumsy fingers and butcher's skill  
Made over the dress, so the hog could fill  
His bogus position—they found it hard

And many a ton of his stuff he sold  
At the price of butter—the fraud and thief,  
For he had been shrewd in his first belief,  
That customers surely would give their trade  
To him, as a counterfeit dairymaid.  
So with stolen dress and with buttered face  
He went on his way; while in deep disgrace



To fit on the dress—but a tub of lard  
And a junk of tallow soon filled him out.  
While over his face and his ugly snout,  
They poured a bottle of cotton-seed oil;

The sorrowful cow and the dairymaid  
Were forced to admit, that their labor paid  
A mighty small margin; when bogus fat  
Will sell for good butter, trade falls as flat  
As an unraised pancake—and, anyhow,  
It looked like the end of the good old cow.



The wolf in the story was killed at last  
And the hog's fat credit one day went  
past.

The scandalized dairymaid had a bean,  
And he was just tickled to death to show  
A bit of devotion, to prove his love.  
He swore he would handle without a  
glove,

The lying old hog in his sweetheart's  
dress,  
And show up the whole of his bogus  
mess.

So with a big cudgel the folks called  
vote,

He cornered the hog in the fence and  
smote

The liar a blow on his ugly snout,  
So hard that the secret all came right out.  
For closest analysis ne'er reveals  
In butter the shade of a thing that squeals.

So they stripped the robber and scraped  
him clean,

And under the butter and oil was seen  
The very same hog, and people said:  
"We'll mark him now," so they painted  
him red.

And so, to the end of all time, he goes,  
A warning alike to his friends and his  
foes,

Bright red from his snout to his lazy  
toes.

So listen now, dairymen, stop your play,  
The traitor is here at your door to-day;  
The steer and the hog with their "oleo,"  
An ulcer that surely will spread and grow  
All over your trade if you don't watch out.  
Up, men! and hammer his butter-lined snout  
With vote! There's a cudgel that no'er will fail.  
Just corner the fraud and you'll see him quail.

And then, though it made the old cow's blood  
boil,  
They smeared him all over with butter pure.  
"And now," says the hog, "that'll get 'em, sure!"



And nobody knows it without its name,  
For in hog, cow, steer, it is all the same.  
You let me dress up like a dairymaid  
Says the hog to steer: "And our fortune's made,  
For tallow and lard, they are cheap to buy,  
While No. 1 butter is awful high."  
So alas! one night while the poor girl slept

And, as for a name so the lard won't show,  
Say, what is the matter with 'oleo'?"

Then gayly he walked through the market place,  
That traitorous hog, with his buttered face  
And his stolen clothes—like the wolf of old,

Then strip off his dress and his thin disguise,  
And souse him by law to the very eyes  
In color as red as a ball of flame,  
And make him snail under his own foul name,  
And carry his color where'er he goes.  
Up, dairymen! Strike at your sneaking foes!  
—Rural New Yorker.



### The Poultry Yard.

#### Care for Little Chickens.

H. B. Geer writes: "In caring for little chickens, we prefer simple, home-made brooders to hens, and we are raising all our chicks this year artificially. We have gone to no great expense, but have rigged up several artificial mothers that are more convenient than the hens.

"In making our cheap brooders, we take a cracker box and nail three or four strips of wood crossways the box, up about six inches from the bottom. To the lower edge of the cross strips and hanging down to the bottom, lacking one inch, we tack strips of flannel goods about half an inch apart. Over the top of the cross strips we tack a piece of flannel; then we take a two-gallon jug and fill it with hot water, cork it tightly and set it in the box on the cross pieces, refilling it once a day. Then we pack soft pieces of cloth or sacking about the jug, and put the top of the box on, which is made detachable.

"This is the 'mother' proper, and beneath the hot jug, among the flannel strips is where the little chicks huddle.

"Then in the front end of the cracker box we make a hole 2x4 inches directly in front of the box brooder, and fitting end to end and extending two feet, we place a run for the chicks, and in this run we place the feed and water. This sort of an artificial mother we find highly satisfactory and successful. One such brooder is large enough for twenty-five chickens, and costs about one dollar, and can be made in an hour or two.

"We let the chicks stay with the hen until fully twenty-four hours old, and then put them in a brooder. Frequently we reset the hen on fresh eggs, especially if it be early in the season and sitters scarce.

"We feed the little chickens on hard-boiled eggs and oat-meal from the start, and give them plenty of water. The main thing is to feed often, but feed only a little at a time. The chickens need sand and small gravel from the start, and it is well to crumble their feed on a sanded surface. The sand helps digestion.

"The top of the box brooder can easily be made to shed water so that it may be set out of doors without endangering the chickens in wet weather.

"When the chickens get too large for the brooder, we scatter larger coops about through the orchard for them to roost in, and we make it a point to try and have them roost under shelter all summer instead of taking to the trees, as they are disposed to do."

#### Poultry Notes.

Charcoal is a good purifier and should be near where the fowls can get it.

Wheat is rich in material for growth, and, in nearly all cases, stimulates egg-production and is easy of digestion.

After ten days with the cockerel the eggs become fertile—some say for ten days more if the cockerel is removed.

If an account was kept many farmers would be surprised at the amount of income that is derived from the poultry.

The Canadian experiment farm has found that the Plymouth Rocks lead all other breeds in making weight from a given amount of food.

Prevention is cheaper than cure in the case of poultry diseases, and good food, clean and warm rooms are cheaper than patent egg powder.

The Plymouth Rocks and Wyandottes head the list for general purpose on the farm. They are both good layers and good for table use.

A good hen is the best incubator you can have, unless you will take time to learn how to run the other kind, and have patience to do it after learning.

Chicks in a brooder should be of about the same age, otherwise the younger ones will be crowded out, tramped under foot and will not thrive.

Try some improved blood in your poultry yard and find for yourself whether it pays. It will not cost much to experiment with one pen of pure-bred stock.



# The Family Doctor.

Conducted by HENRY W. ROBY, M.D., consulting and operating surgeon, Topeka, Kas., to whom all correspondence relating to this department should be addressed. Correspondents wishing answers and prescriptions by mail will please enclose one dollar when they write.

## Answers to Correspondents.

(NUMBER 28.)

V. H., Macksville, Kas.—A higher altitude above sea level is of the greatest consequence to you for the asthma. Residence at Denver, Colorado Springs or Pueblo would most likely cure that part of your trouble. The tonsil should probably be removed and would cost, perhaps, \$10.

F. R. M., Sylvan Grove, Kas.—The cases you ask about are not suitable for public prescribing. Both cases seem to be curable, but will require close personal study before any one can make proper prescription. If patients can see me personally I can probably make the cures desired.

DR. H. W. ROBY:—Will you please give a remedy through the KANSAS FARMER to stop perspiration.  
A. N. M.  
Topeka, June 17.

Certainly. Just keep cool—don't work, don't exercise, don't drink any hot drinks, don't wear any warm clothing, and if need be take off your flesh and sit in your bones. But I cannot advise you to follow the prescription, for I think God knew what he was about when he constructed 2,381,248 little sweat glands in each human skin and gave them something to do. He surely did not intend them to be idle or go on a strike or play tramp. Each of them is a little workman with a duty to perform for your especial good. When your body gets too warm each of these tiny workmen comes hurrying along with his tiny bucket of clear, salt-tainted water and pours it out on a little spot on the surface of your body. That tiny drop of water takes up as much of surplus heat as it can carry and then evaporating, or yielding up its existence for your good, passes that heat over to the atmosphere that you may feel a little cooler. And when the whole number of these little servants of your body have done their duty you again feel cool and fresh. If they were lazy or went on a strike you would get as "hot as a basted turkey," and in a little while your toes would be pointing to the sun while the clods of the valley would rattle over your coffin and men would say: "Poor fellow, he died because he could not sweat." In India, the morning salutation is not, as with us, "Good morning, how do you do to-day?" but, "Good morning, how do you sweat to-day?" and if you do not sweat well you are hurried away to the doctor for a sudorific, and thus a funeral is saved. Were you to varnish your skin all over so that the sweat glands could not empty their little cups of water on the surface of your body, you would soon bloat up like one with dropsy, and if you did not actually burst you would, nevertheless, die very promptly. Now, go and stop the sweating process if you wish to. You have my permission to get up a sensation for your friends to sweat over.

DR. ROBY:—Three months ago I took what I was told was the inflammatory rheumatism. My limbs and hands swell and are very painful. My ankles are the worst; will pain me so at times that I can hardly bear my weight on them. I have no appetite. Do not sleep well of nights. I will write you what I have been taking, but it don't seem to do any good: Whisky, 1 pint; cohosh root, 2 ounces. I am 21 years of age.  
L.  
Assaria, Kas.

And you ought to thank the good Lord that you still live. When any one fills up with such poison stuff as whisky and cohosh, in such unconscionable quantities as goes with a fair inference from your letter, he or she ought to be profoundly thankful for the spark of life left in the poor, aching body. Drugs are all poison and in any but very small quantities are very damaging to the human constitution. Did you never read the famous aphorism of Dr. Oliver Wendell Holmes, who wrote, after many years of study and observation, that if all the drugs in the world were thrown into the sea it would be much better for mankind and much worse for the fishes? Did you never read what old Dr. Mason Good, of London, said: "Drugs have destroyed more lives than war, pestilence and famine combined?" The great Dr. Magendie said: "If I dared to say just what I think, I should add that it is chiefly in the service where the medication is the most active and heroic that the mortality is the greatest." The great Dr. Ramage, of London, said a few years ago: "I affirm without hesitation that in the greater number of cases the patient would have been much safer without medicine."

But you do not seem to think that these old doctors who spent their lives between patients and drugs know anything about the dangers of drugs, and that you can pour down whisky and cohosh with impunity, just as though your stomach were cast-iron or porcelain, instead of flesh and blood. Had you taken a single drop of cohosh tea it might have relieved you, as it

has done many others. But the poisonous quantity you seem to have taken has often brought on rheumatism where it did not before exist. One drop doses of aconite every two hours will often relieve such rheumatism. Try it. But don't go mad over it and make a drug shop of your stomach.

FAMILY DOCTOR:—I am a busy farmer, always with apparent good health, but I am every year about this time of the year laid up with rheumatism. Sometimes bowels get constipated, but generally they are all right. Occasionally for two or three days I am troubled with vomiting, when my stomach is about empty, and that is water first and then a very bitter mucilage, with perhaps some little remains of former meal. This comes on when I feel perfectly well, and when it passes I feel just as well as ever. I have no relish for good, nice bread, such as other people like, and this time of the year have a ravenous appetite for such things as butter-milk, clabber milk, pickles and the like. Now, is there any connection between my appetite and my rheumatism? Is there any climate you know of favorable for rheumatic people? What should my diet be? Please answer through FARMER.  
H. T. GRAVES.  
Lincoln, Kas.

There is an intimate relation between the fickle appetite and the rheumatic trouble. So far as known, rheumatism always comes in, if at all, with some state of depraved nutrition and fickle appetite. There are some medicinal springs in the country that right up the poor nutrition and thus abate the rheumatism. Manitou, Colorado Springs, the hot springs of Arkansas and New Mexico are all good in their way.

## Chicago Wool Market.

The June circular of Silberman Bros., of Chicago, gives the following candid review of the wool situation in that market, and also gives a clear statement of this firm's method of doing business:

"We are unable to report any more favorable features regarding the wool market than appeared in our previous circular. Wools of good staple are taking the lead and sell at their late full value, while short, or clothing wools, on the contrary, are hard to sell even at the low prices which prevail. We know from our sales, compared with correspondence at hand, that we are realizing considerably more for our consignors' wool than they are able to obtain for it at home, as we learn that buyers in the country offer for the best medium unwashed clips in the bright wool sections, such as are produced in Illinois, Wisconsin, Michigan, Indiana, Missouri and Iowa, only 11 to 13 cents. Why should you sell your wool at home at such low prices, when by shipping to us you will realize several cents more per pound? In fact, we advance you almost that much on receipt of the wool, in case you need the funds, charging you interest at the rate of 6 per cent. per annum only for amount advanced.

"Already quite a quantity of Territory wools, such as Utah, Idaho, Oregon and Wyoming, are coming forward, and those lots which are well-bred and of good staple find ready sale at full quotations, but, on the contrary, we find the market on heavy, earthy, short and unsightly wools very dull; they are hard to dispose of at anything like a satisfactory price.

"In Montana and other Northern sections shearing has just begun, and so far we have received a few small clips from Montana. We are glad to be able to state that from appearances the condition, quality and growth is much better than for several years past.

"Our receipts of wool so far have been very heavy from all sections and far in excess of any previous season. Every old customer makes many new ones for us. Our facilities are unsurpassed; we sell direct to the leading manufacturers and thus are able to realize the highest market value, which cannot be otherwise than satisfactory.

"We do not advise our shippers, especially those who consign wools in large lots, to urge us to immediately dispose of their entire holdings; we think it advisable to sell only those grades which can be sold to advantage at a relatively high price, and keep a portion of their clip in order to take advantage of any favorable course the market may take.

"Do not let the question of money enter into your calculations regarding this policy. Money is plentiful here, and after wool is received we are willing to advance our shippers 90 per cent. of its present market value, as we feel confident wool cannot experience any further material decline.

"The question of the amount of advance commission houses are willing to make on bills of lading before they have seen the wool should not influence the consignor in deciding where to ship. We cannot, nor can others, tell within 2 or 3 cents per pound of what wool is worth until there has been an opportunity to see and examine it, and, consequently, we wish to figure on the safe side when advancing on bills of lading; but, after wool is received in our store, we are willing this year, as already stated, to make a further advance, amounting in all to 90 per cent. of present market

value. If you ship us your wool we furnish sacks without charge.

"Our commission for selling is only 1 cent per pound, which covers all expense after the wool is received at our warehouses. We are at all times ready and willing to furnish you with any information desired."

Following are current prices on Kansas and Nebraska unwashed wools:

Fine (heavy).....	8¢10	Low medium.....	13¢15
Fine (choice).....	10¢12	Coarse.....	11¢13
Fine medium.....	11¢13	Cotted, etc.....	8¢10
Medium.....	12¢14	Black.....	10¢12

## Publishers' Paragraphs.

Farmers are having good success making their own cheese at home by following the instructions given by C. E. Kittinger, Powell, S. Dak. For \$1 he sends ten rennets, with instructions for making and curing cheese at home without costly apparatus.

A workman in the great Carnegie steel mills at Homestead has written such an account of the life and work there as only one who had had actual experience of them could write, and it will appear in the July number of McClure's Magazine, supplementing the article on the same subject by Mr. Hamlin Garland, which appeared in McClure's for June.

## He is Going to Get Married.

DEAR EDITOR:—I want to tell you about my good luck. I saw an advertisement of the Mary Jane Dish Washer, which I investigated and went to selling, as it sells for only \$3, and a child can wash and dry dishes better than can be done by hand, in one-fourth the usual time. Everybody buys and I am making \$5 to \$10 a day. This encouraged me to ask a question of some one (whose name is not Mary Jane), and as I got a favorable reply and am making money enough to get me a home, I am very glad I saw the advertisement. Will say every woman I sell to feels grateful for being relieved of the drudgery of dish-washing, and that any man or woman that is willing to work can write J. K. Purinton & Co., Des Moines, Iowa, and get an agency and do just as well as I am doing, for every family wants a Mary Jane.  
FRANK SMITH.

## A New Harvesting Machine.

For about eighteen months Mr. Henry Burmeister, of Claffin, Kas., has been experimenting on a harvesting machine which should be adapted to the wants of the small farmer, enabling him to take care of his grain cheaply and expeditiously and with little help and not too many horses. He has succeeded in producing a machine which he attaches to the side of the wagon. With this the grain is headed and thrown into the wagon. Two men and three horses do the work until the wagon is full, when the machine may be uncoupled without stopping the wagon. Another similar crew of two men and three horses may pick up the machine and fill their wagon while the first is being unloaded. Every care has been observed to make a light-running and durable machine and also one the cost of which shall bring it within the means of the small farmer. It has been tried on green grain and has worked well. A test trial will be given near Claffin, Kas., July 2, 1894. This will be worth a good deal of effort to witness and is a trial to attend which a general invitation is extended.

It is claimed by the inventor that this machine will enable the small farmer to compete successfully with the wheat baron who cuts, threshes and sacks his grain at one operation. The advent of this machine upon the market next season will be watched with interest by thousands of farmers, and if it proves to be what is claimed for it, the manufacturer who secures control of it will have a bonanza.

## Y. P. S. O. E. Souvenir.

An edition of the souvenir maps of the Y. P. S. O. E. convention, to be held July 11 to 15, at Cleveland, O., has been issued to the Nickel Plate road, the shortest through passenger line between Buffalo and Chicago. Any person who expects to attend this convention and desiring one of these maps can have the same forwarded to his address, free, with the compliments of this low-rate line.

Requisition should be made to J. Y. Calahan, General Agent Nickel Plate road, 199 Clark street, Chicago.

When his enemies tell lies about him he just thanks God that they are lies and goes about his work.—New York Witness.

To prevent the hardening of the subcutaneous tissues of the scalp and the obliteration of the hair follicles, which cause baldness, use Hall's Hair Renewer.

## Railroad Fares Reduced.

The Nickel Plate road has made material reductions in the fares to many points on that line, including Fort Wayne, Cleveland, Painesville, Ashtabula, Erie and many other Eastern points. Ticket office, 199 Clark street; depot, Twelfth street viaduct and Clark street, Chicago.

# Old Leather New Again.

New leather always new if you use Vacuum Leather Oil.

It won't mend cracks, but will keep leather from cracking.

If there are cracks in it the oil won't mend them.

25c. worth is a fair trial—and your money back if you want it—a swob with each can.

For pamphlet, free, "HOW TO TAKE CARE OF LEATHER," send to VACUUM OIL CO., Rochester, N. Y.

## Horse Markets Reviewed.

KANSAS CITY.

W. S. Tough & Son, managers of the Kansas City stock yards horse and mule department, report the market as showing an increased number of buyers, but no change in prices. Values on nice, tasty Southern mares and geldings, 15 to 15½ hands high, smooth and fat, are steady, but rough, thin and leggy horses are hard to sell at any price. Prices will take a tumble as soon as the excessive hot weather sets in, so that dealers who have stock ready for market can do no better than to ship on the present basis.

Mule market fairly active. Considerable trading in all classes. Prices steady at quotations.

## The Fourth of July Number of the New York Ledger.

The Fourth of July special holiday number of the New York Ledger is a publication of unrivaled beauty and interest. The cover has a beautiful girl waving an American flag from a window as a decoration. The contents of this number of the Ledger make a strong appeal to Patriotic Americans. "Our National Birthday" and "Bunker Hill" are the subjects of special editorial articles. "Johnny's Fourth of July" is an amusing poetical effusion, dedicated to the spirit of young America intent on celebrating the holiday. This number of the Ledger contains the first chapters of Mrs. E. D. E. N. Southworth's famous novel, "The Widows of Widowville," which will be read with delight by old and young readers. The Ledger is now an illustrated paper of the first class, and with its various departments of science, correspondence, woman's world, miscellany and children's stories forms the best and cheapest illustrated family paper published in America.

The one in any service who isn't afraid of hard work is the elect. He says to himself, and rightly, "Each day fetches me nearer an easier place.—New York Witness.

BOOKKEEPING. 10 cts. ONLY. Easy home study. Wonderful book 100 positively self-instructive. 10c. mailed. Advertisements pay us, otherwise actually worth \$5. MACNAIR PUB CO., Detroit, Mich.

## The Mary Jane Dish Washer



Is guaranteed to wash dishes better than by hand and in one-fourth the time. There is no soap, no muss, no broken dishes, no soiling of clothing, no wetting the hands, but clean, nice polished dishes in a fourth of the usual time.

Thousands sold. Suits all. ONLY \$3.00.

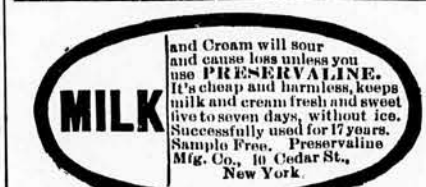
Circulars free. Agents wanted. J. K. PURINTON & CO., Des Moines, Iowa.

## W. L. DOUGLAS \$3 SHOE IS THE BEST. NO SQUEAKING.

\$5. CORDOVAN, FRENCH & ENAMELLED CALF.  
\$4.50 FINE CALF & KANGAROO.  
\$3.50 POLICE, 3 SOLES.  
\$2.50 2. WORKINGMENS EXTRA FINE.  
\$2.175 BOYS SCHOOL SHOES.  
LADIES.  
\$3.25 2. BEST DONGOLA.  
SEND FOR CATALOGUE W. L. DOUGLAS, BROCKTON, MASS.

You can save money by wearing the W. L. Douglas \$3.00 Shoe.

Because, we are the largest manufacturers of this grade of shoes in the world, and guarantee their value by stamping the name and price on the bottom, which protect you against high prices and the middleman's profits. Our shoes equal custom work in style, easy fitting and wearing qualities. We have them sold everywhere at lower prices for the value given than any other make. Take no substitute. If your dealer cannot supply you, we can.



and Cream will sour and cause loss unless you use PRESERVATIVE. It's cheap and harmless, keeps milk and cream fresh and sweet five to seven days, without ice. Successfully used for 17 years. Sample Free. Preservative Mfg. Co., 10 Cedar St., New York.



The Veterinarian.

We cordially invite our readers to consult us whenever they desire any information in regard to sick or lame animals, and thus assist us in making this department one of the interesting features of the KANSAS FARMER.

SICK PIGS—THICK WIND IN COLT.—(1) I have some pigs about 6 weeks old that first begin to droop, then lie around and shiver as if cold.

Answer.—(1) Your pigs may have caught cold from exposure to rain. You do not give symptoms enough to base a diagnosis upon.

Gossip About Stock.

Kansas ranks seventh for the number of recorded Berkshires in comparison with the other States.

Hon. T. A. Hubbard, Rome, Sumner county, reports having five young Berkshire males, weighing 300 to 400 pounds, that are extremely fancy, suitable for use in good pure-bred herds.

The office of Secretary and Treasurer of the American Guernsey Cattle Club has been removed from Farmington to Peterboro, N. H.

Dietrich & Gentry, of Ottawa, Kas., write that they have recently purchased of R. A. Kerr, South Warsaw, O., a very fine boar pig which they think the readers of the FARMER will be interested in, as they consider him the finest pig of his age to-day in Kansas.

Mr. C. C. Keyt, Verdon, Richardson county, Nebraska, proprietor of the Hillsdale herd of Short-horn cattle and Poland-China hogs, writes that he has returned from a visit through Missouri and brought home with him a pure-bred Cruickshank bull, Aberdeen King 101458, weight 2,200 pounds.

Kansas Fairs.

Following is list of fairs to be held in Kansas during the present year, their dates, locations, and Secretaries, as reported to the State Board of Agriculture and furnished by Secretary F. D. Coburn: The Kansas State Fair, C. M. Irwin, Secretary, Wichita, October 2-6.

Excursion to Asbury Park, N. J.

The Baltimore & Ohio Railroad company will sell excursion tickets to Asbury Park, N. J., and return from all points on its lines, July 7, 8 and 9, good returning until July 16, with privilege of extension until September 1, provided the return portion of the ticket is deposited with the joint agent at Asbury Park on or before July 13.

Lion Nerve Tonic.

Elsewhere in this paper appears the advertisement of the Lion Nerve Tonic Co., of Kansas City, Mo., announcing the merits of the Lion Nerve Tonic Restorer. It is far from the policy of this paper to blindly indorse whatsoever article may chance to be presented in its columns, but in this case there is so much of what is of vast importance to the general public that we depart from our usual custom.

Lion Tonic is an advance in medical science that has developed most wonderful results and conditions, since it has proved that the dread disease epilepsy, so long pronounced incurable, yields readily to scientific treatment. This is no idle statement; intelligent physicians everywhere now concede that the nervous terror of the ages is a curable disease, while hundreds of testimonials from people of prominence testify to the wondrous cures Lion Nerve Tonic has effected.

Where Will You Spend the Summer? The Baltimore & Ohio Southwestern railway has an attractive list of summer resorts reached via its lines. Before you decide where to go, ask some agent of the B. & O. S. W. Railway for a copy, or write O. P. McCarty, General Passenger Agent, St. Louis, Mo.



DOES WOOL GROWING PAY?

That depends upon how you sell your Wool. If you ship it direct to market and to the right house, "It does pay." It is no experiment. Our shippers testify to it unambiguously.

SUMMERS, MORRISON & CO., Commission Merchants, 174 So. Water Street, Chicago.

MARKET REPORTS.

LIVE STOCK MARKETS.

Kansas City.

June 25, 1894.

CATTLE—Receipts, 2,724 cattle: 141 calves. The top was 5c higher than a week ago. Dressed beef steers \$2 75@4 60; cows, \$1 35@3 00; heifers, \$2 25; calves, \$4 33@6 25; stockers and feeders, \$2 75@3 25; Texas and Indian steers, \$1 90@3 35; Texas and Indian cows, \$1 20@2 00; Texas and Indian calves, \$2 50@3 55.

Chicago.

June 25, 1894.

CATTLE—Receipts, 8,000. Market active. Beef steers, \$3 35@4 75; stockers and feeders, \$2 35@3 50; bulls, \$2 00@3 25; cows, \$1 00@2 85.

GRAIN AND PRODUCE MARKETS.

Kansas City.

June 25, 1894.

WHEAT—Receipts for forty-eight hours, 24,000 bushels; last year, 37,800 bushels. A more bullish feeling pervaded the market than for some time. The heavy rains and fear of damage to the new crop and higher markets abroad encouraging buyers and causing them to bid up values all around.

CORN—Receipts for forty-eight hours, 39,600 bushels; last year, 24,600 bushels. Firmer and in very good demand, both mixed and white, local dealers and order men both buying. By sample on track: No. 2 mixed, 2 cars at 35 1/2c; No. 3 mixed, 2 cars at 35 1/2c; No. 2 white, 10 cars at 39 1/2c; No. 3 white, 5 cars at 39 1/2c; No. 2 special billing at 40c; 1 car Memphis at 48 1/2c; No. 3 white, 39c@39 1/2c; No. 4 white, 4 cars at 38c.

OATS—Receipts for forty-eight hours, 10,000 bushels; last year, 14,000 bushels. Market slow. Arrivals better and new oats are expected every day. By sample on track: No. 2 mixed, 1 car at 42 1/2c; No. 3 mixed, 4 cars at 42c; No. 4 mixed, 4 cars at 41c; No. 2 white, 1 car at 46c; No. 3 white, 4 cars at 44c; No. 4 white, 4 cars at 42c.

RYE—No market for want of offerings; prices nominal. By sample on track, on the basis of the Mississippi river: No. 2, 50c@51c; No. 3, 48c@49c.

MILLET—Firm and in fair demand. Per 100 pounds, German, 90c@91c; common, 75c@80c.

BRAN—Selling fairly at old prices. Bulk, 55c and sacked 60c per cwt.

FLAXSEED—Further advanced. \$1 32 per bushel upon the basis of pure.

HAY—Receipts for forty-eight hours, 310 tons. Steady and in fair demand. Fancy prairie, \$8 50@7 00; choice, \$6 00@6 25; low grades, \$3 50@5 00; timothy, choice, \$9 00@9 50; No. 1, \$8 50; No. 2, \$7 00@7 50; choice clover, mixed, \$8 00@8 50.

BUTTER—Market drabby but all good goods bringing steady prices. Creamery—Highest grade separator, 16c@17c per pound; finest gathered cream, 14c; fine fresh, good flavor, 13c; fair to good, 12c. Dairies—Fancy farm, 12c@13c; fair to good lines, 10c@11c. Country store-packed—Fancy 10c; fresh and sweet packing, 9c.

EGGS—Quiet. Fresh, 7c.

CHEESE—Slow sale and weak. Missouri and Kansas, full cream, 8c.

POTATOES—Market quiet and stocks at hand good. Colorado red, per bushel, 80c@90c; Colorado white, 80c@90c; Northern, choice, 80c@90c; Northern, fair, 70c@80c; Idaho, 80c@90c. New Southern, 75c@85c; new, home-grown, 40c@50c.

BERRIES—Blackberries in fair receipt and good demand at prices ranging from \$2 00@3 00, as to quality. Strawberries sell around \$3 00 for good ones. Raspberries in good offering and bring \$2 00@2 50. Cherries in rather light offering and steady at \$1.

MELONS—Watermelons in heavy supply and selling at \$2 00@2 50 per 100 for both Georgia and Texas. Cantaloupes in good receipt and selling at 80c@1 00 per dozen, and \$1 00@1 25 per crate.

PEACHES—Not many on sale and demand fair at 50c@60c for pecks 65c@75c for thirds.

VEGETABLES—Jobbing prices: Beans, navy, California, per bushel, \$2 10@2 15; country, \$2 00@2 10; cabbage, per 100 pounds, \$4 00; celery, California, 75c@1 00 per bunch.

EARLY VEGETABLES—Asparagus, 10c@12c per dozen; cabbage, home-grown, per pound, 1c 1/2; cucumbers, per dozen, 10c@20c; beans, per bushel, 30c@40c; beets, per dozen bunches, 10c@15c; egg plant, per dozen, 30c@40c; kale, per bushel, 15c; new corn, per dozen, 10c@20c; peas, per bushel box, 60c@75c; radishes, per dozen bunches, 10c@15c; tomatoes, Mississippi, 4 basket crate, \$1 @1 50; one-third bushel box, 65c@70c. New onions, \$1 00 per bushel. Squash, 20c@30c per dozen.

BROOMCORN—Hurdled, green, 3c@3 1/2c per pound; green, self-working, 2 1/2c@3c; red-tipped, do., 2 1/2c@3c; common, do., 1 1/2c@2c; crooked, half price. Dwarf, 2c@3c.

GROUND LINED CAKE—We quote car lots sacked at \$25 per ton; 2,000 pounds at \$26; 1,000 at \$14; less quantities \$1 50 per 100 pounds.

Wool—Market steady and in fair demand. Missouri and similar—Fine, 56c@11c; fine medium, 10c@12c; medium, 12c@14c; combing, 18c@15c; coarse, 11c@13c. Kansas, Nebraska and Indian Territory—Fine, 7c@10c; fine medium, 5c@11c; medium, 10c@13c; combing, 12c@14c; coarse, 8c@10c. Colorado—Fine, 7c@10c; fine medium, 8c@11c; medium, 10c@12c; coarse and carpet, 9c@10c; extremely heavy and sandy, 5c@7c.

The following table shows the range of prices for active "futures" in the Chicago speculative market for the speculative grades of the commodities. This speculative market is an index of all prices and market tendencies:

Table with columns: Commodity, High-est, Low-est, Closed June 18, Closed June 25. Rows include WHEAT, CORN, OATS, PORK, LARD, S. RIBS.

WHEAT—Cash—No. 2 red, 59 1/2c; No. 3 red, 53 1/2c. CORN—Cash—No. 2, 40 1/2c; No. 3, 40 1/2c. OATS—Cash—No. 2, 44 1/2c; No. 2 white, 46 1/2c.

St. Louis. June 25, 1894. WHEAT—Receipts, 19,000 bushels; shipments, 1,000 bushels. The market was unsettled early, but strong later. No. 2 red cash, 57 1/2c; June, 57 1/2c; July, 57 1/2c; August, 56 1/2c; September, 57 1/2c.

CORN—Receipts, 115,000 bushels; shipments, 55,000 bushels. No. 2 mixed, cash, 39 1/2c; June, 38 1/2c; July, 38 1/2c; September, 38c. OATS—Weak. No. 2 cash, 42 1/2c; July, 35 1/2c; August, 30c.

GEO. W. CAMPBELL. A. B. HUNT. J. W. ADAMS.

CAMPBELL, HUNT & ADAMS Live Stock Salesmen---Stock Yards---Kansas City, Mo. ROOMS 31 and 32--Basement of East Wing.

WOOL+WOOL+WOOL+WOOL+WOOL+WOOL+WOOL COMMISSION Wool FOR 28 YEARS we have successfully conducted a WOOL BUSINESS and have maintained confidence and successful relations with wool growers and the trade. Our reliability is vouched for by Chicago banks and mercantile houses. Established 1866. SILBERMAN BROS. 212-214 Michigan Street Chicago, Illinois.



**IF A FARMER** Your name and address should go in the Farmers' Directory. Seedsmen, publishers and merchants will send sample goods in abundance to you. It is the only DIRECTORY of its kind. Ten cents in silver will put your name in it. Try it, and see the results. Address  
G. E. WALSH, P. O. Box 1189, New York City.



**LEWIS' 98% LYE**  
FOWDERED AND PERFUMED  
(PATENTED)  
The strongest and purest Lye made. Unlike other Lye, it being a fine powder and packed in a can with removable lid, the contents are always ready for use. Will make the best pertumed Hard Soap in 20 minutes without boiling. It is the best for cleansing waste pipes, disinfecting sinks, closets, washing bottles, paints, trees, etc.  
**PENNA. SALT MFG CO.**  
Gen. Agts., Phila., Pa.

**A GOOD BROTH IS HALF A DINNER**



EVERY ONE can afford to use Clam Bouillon for Lunch, Dinner and Tea at 20 cents a quart. Enough for a whole family. Prepared in five minutes from a bottle of  
**BURNHAM'S CLAM BOUILLON**  
Quality improved, price reduced, larger bottles. All Grocers sell it.  
E. S. BURNHAM CO.,  
120 Gansevoort St., N. Y.  
Sample bottle, 10 cents; makes a pint.

**TEXAS CHAIR CAR LINE.**  
THE  
**MISSOURI, KANSAS & TEXAS RAILWAY.**

Using the Celebrated  
**Wagner Buffet Sleeping Cars and Free Reclining Chair Cars**  
On all Trains.  
THE BEST ROUTE FOR ALL POINTS IN KANSAS, INDIAN TERRITORY, TEXAS MEXICO and the PACIFIC COAST.  
AND FOR  
St. Louis, Chicago, Hannibal, Kansas City and Sedalia.  
For information apply to any Agent of the Company or  
**JAMES BARKER,**  
Gen'l Pass. & Ticket Agent, St. Louis, Mo.

**MISSOURI PACIFIC RAILWAY**  
THE GREAT  
**Southwest SYSTEM.**  
Connecting the Commercial Centers and rich farms of  
**MISSOURI,**  
The Broad Corn and Wheat Fields and Thriving Towns of  
**KANSAS,**  
The Fertile River Valleys and Trade Centers of  
**NEBRASKA,**  
The Grand, Picturesque and Enchanting Scenery, and the Famous Mining Districts of  
**COLORADO,**  
The Agricultural, Fruit, Mineral and Timber Lands, and Famous Hot Springs of  
**ARKANSAS,**  
The Beautiful Rolling Prairies and Woodlands of the  
**INDIAN TERRITORY,**  
The Sugar Plantations of  
**LOUISIANA,**  
The Cotton and Grain Fields, the Cattle Ranges and Winter Resorts of  
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THE STRAY LIST.

FOR WEEK ENDING JUNE 13, 1894.

Scott county—Jos. Griffith, clerk. HORSE—Taken up by H. E. Babcock, in Lake tp., May 17, 1894, one medium-size black horse, branded L with over letter on left hind leg; valued at \$16.

Wabunsee county—J. R. Henderson, clerk. MARE—Taken up by Sol Stanley, in Newberry tp., P. O. Vera, one bay mare, about 6 years old, saddle marks, white spot in forehead and on nose, some white hairs back of left fore foot, lame in left leg or shoulder.

Gray county—W. J. Francisco, clerk. THREE MARES—Taken up by William J. Downing, in Montezuma tp., May 18, 1894, three mares—brown, bay and gray, 6, 7 and 9 years old, no brands; valued at \$63.

Comanche county—D. E. Dunne, clerk. MARE—Taken up by S. B. Gregory, in Nescatunga tp., P. O. Nescatunga, May 14, 1894, one bay mare, five feet five inches high, three white feet and star in forehead; valued at \$30.

Rush county—W. J. Hayes, clerk. HORSE—Taken up by F. N. Mills, in Nekoma tp., May 15, 1894, one dark bay or brown horse, left hind foot white, white spot in forehead, about 8 years old, has poll-evil bad; valued at \$5.

Cherokee county—P. M. Humphrey, clerk. HORSE—By same, one dark brown horse, about 12 years old, bone spavin on left hind leg, right hind foot white, star in forehead; valued at \$15.

Cherokee county—P. M. Humphrey, clerk. HORSE—By same, one brown horse, left hind foot white, small white spot in forehead, about 5 years old; valued at \$30.

Cherokee county—P. M. Humphrey, clerk. HORSE—Taken up by C. E. Haigler, in Shawnee tp., P. O. Crestline, one black mare pony, white spot on fore leg, shod all round.

Linn county—Jno. J. Hawkins, clerk. MULE—Taken up by D. K. Paddock, Blue Mound tp., P. O. Blue Mound, June 4, 1894, one dark brown mule, 3 years old, left ear drops down, cut on left ear with barb wire.

Wichita county—W. S. Place, clerk. HORSE—Taken up by Watson M. Beeman, in Edwards tp., P. O. Leoti, May 22, 1894, one bay horse pony, four feet nine inches high, wire cut on right arm, both hind feet white above pastern joint; valued at \$10.

FOR WEEK ENDING JUNE 20, 1894.

Cowley county—J. H. Fishback, clerk.

MARE—Taken up by A. A. Knox, in Bolton tp., June 8, 1894, one black mare, fifteen hands high, 4 years old, three white feet, mark on left ankle.

MARE—Taken up by Lewis A. Bass, in Bolton tp., April 19, 1894, one bay mare, sixteen hands high, 12 years old, four white feet, front feet white above pasterns, white stripe down forehead, white spot on nose, two collar marks on right shoulder, shod all round; valued at \$25.

Cherokee county—P. M. Humphrey, clerk. HORSE—Taken up by H. F. Rains, in Pleasant View tp., one roan horse, fourteen and a half hands high, shod all around, left front foot and right hind foot white, foretop cut off, 4 years old; valued at \$25.

Pottawatomie county—Frank Davis, clerk. TWO HORSES—Taken up by John Ekart, in Pottawatomie tp., P. O. Myers Valley, May 31, 1894, two bay horses, 3 and 4 years old, no marks or brands; valued at \$55.

Kingman county—W. J. Madole, clerk. HORSE—Taken up by H. B. Pulliam, in Richland tp., June 1, 1894, one bay horse pony, weight about 500 pounds, collar mark on shoulder; valued at \$10.

FOR WEEK ENDING JUNE 27, 1894.

Marshall county—E. E. Woodman, clerk.

MARE—Taken up by V. D. Crawford, in Noble tp., P. O. Vermillion, one dark sorrel mare, supposed to be 2 years old, no marks or brands; valued at \$12.

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