

The Stock Interest.

THOROUGHBRED STOCK SALES.

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

JUNE 16.—L. A. Knapp, Short-horns, Maple Hill, Kas.

PEDIGREE AND AGE IN REFERENCE TO BREEDING.

The following paper, "Pedigree and Age in Reference to Breeding," from *Bell's Weekly Messenger*, London, was read before the Farmers' Club, the author being Mr. J. Kersley Fowler:

"Some years ago—it may be, in the remembrance of some of the members of the club now present—I read a paper on 'Breeding; Facts and Principles,' and in it I endeavored to show how greatly the male animal impressed the external characteristics, especially the moving or locomotive powers, whilst the internal organization followed the female; and I brought a number of instances, many of them very amusing, where this theory was, as I considered, proved. This was not an original idea of mine, it having been broached a short time before by Dr. Orton, at Newcastle; but my attention had been called to the theory by the late Mr. James Howard, at whose suggestion I wrote and read the paper. I may be excused from mentioning this, as the subject on which I am reading to-day, 'Pedigree and Age in Reference to Breeding,' is largely concerned with the subject of my former paper.

"There are some difficulties in handling this subject; the first and foremost is the time it takes to develop any new departure from old-established rules and systems, and it was this fact that induced me to try my first experiments on poultry—this could be done in a few months—as I have actually reared Cochins in the early part of February, and from the pullets of this hatch I have had eggs in June, which I put under hens and reared chickens, from the pullets of which I had eggs before Christmas, and which were set on and hatched before the February following. It will, therefore, be observed that there was ample opportunity for trying experiments in a shorter time than could be possibly done with any other class of live stock. In writing on the subject of my paper, my attention for many years was directed to the all-important feature in successful breeding, of a strict observance of pedigree, and Mr. Torr often quoted an axiom which had been attributed to the grandfather of Sir Mountstuart Grant-Duff, that 'a good beast is a good beast, however it may have come, but it is to pedigree alone that you can ensure succession.' This axiom I most strongly endorse, and in all the practical attempts at successful breeding that I have practiced, I invariably adhered to this great canon, which should be borne by all breeders.

"Beginning with poultry, I found that in the produce of a Dorking cock, who has five claws, when put to Brahma or Cochin hens, who have four claws, nearly all the chickens had five claws, whilst the pullets laid buff-colored eggs, showing the internal organization—egg laying—followed the female, whilst the comb of the cockerels and the five claws, being externals, followed the male. I also put a Brahma cock (four claws) to some Dorking hens, and the produce had only four claws, and the pullets laid white eggs. This is most interesting, as showing again the remarkable proof of the theory. Now we will take sheep. I have seen proved in a most singular manner that the same principle follows, and I again must quote my former paper, and relate how a noted Dorset breeder was desirous of breeding sheep with four horns, and obtained from South America a ram with four well developed curled horns, like the Dorset breed, and I saw a sample of this cross shown at the great Paris exhibition of excellent sheep, all with four horns, and I heard that he had now a large flock of this curiously developed breed, all from the use of this four-horned sheep. I have also seen stallions with deformed feet perpetuate their deformities for more than one generation. The peculiarly certain characteristics of the

jackass, when used on a pony mare, are invariably stamped on the mule; but when the reverse is pursued, the 'hinny,' which is the produce of a horse and donkey, is always reversed. I will now take cattle: The same rule here applies, and with the same marked effect. It is well known that the externals of a Bates bull are characterized by a grandeur of crest, a stately appearance and a peculiar grace of movement, and it is this specialty that causes a 'Duke' or 'Duchess' bull to be preferred to most others. The Booth animals are wanting in this grandeur of externals, but they make up for it in massiveness of frame, and carry a weight of carcass which makes them prominent in the showyard. Take, again, the Knightly or Fawsley tribe of Short-horns. The heads and faces have a peculiar sweetness and beauty which is carried out most constantly in the females. The Jersey bulls do not have such marked influences as the Short-horns, and I am not conversant enough with the Scotch or Welsh cattle, but the same rule I know applies with even greater force with the Herefords and Devons. With regard to pigs—the rule is as strict as in the foregoing instances. I now come to horses, and there is no novelty in stating the great influence here in the male animal, and the locomotive powers are more prominent than in any other animals. There is scarcely a man accustomed to the race-course that is not conversant with the marked peculiar action of most of the well known lines of blood of our best stud horses, and as Shire horses have now so completely come to the front, this stock has strong interest for all those connected with the cultivation of the land.

"Having, I hope, satisfactorily proved my position as first laid down in my former paper, I now proceed to show how necessary it is to look to the pedigree of all animals for the successful propagation of the stock necessary, not only for a farm, but for general purposes of ordinary business. When we talk or write upon pedigree, it is natural to consider what we mean by that term, and, as concisely as I can, I may say that it is the result of careful selection of the best of the species of all animal and also vegetable productions, and the continual propagation of those peculiarities which have made it so desirable for the breeder. Now let me ask you if, in these times of competition, you are not most desirous of perpetuating the best milkers from a distinguished line of cattle, whether Short-horns, Jerseys, Ayrshires, or any other distinct breed, and also the best producers of meat; and with sheep, for those breeds which grow the finest and most saleable wool, and with the greatest aptitude to fatten; so with pigs—the most productive and best mothers, as also those which carry most good lean meat well covered or mixed with fat; and with horses, the most speedy, the soundest in limb, wind, eyesight, the best tempered and best workers. Therefore, it behooves all breeders to keep their eyes open to all the most desirable points for the male animal, especially as to soundness, and to the female as to good temper, good milking and good feeding qualities. As to poultry, the extraordinary demand for eggs has caused a careful selection of the best layers, such as Minorcas, Leghorns and Indian Game, and the results have been perfectly marvelous. Having established the great value of pedigree, I must make some allusion to cross breeding, and here the value of a long line of distinguished parentage again comes into notice. I am sure that no one with any pretensions to a knowledge of successful breeding would ever care to breed from half-breeds on both sides. The thoroughbred should be on one side or the other, and it is perfectly wonderful how quickly a really fine flock of sheep or a good herd of cattle can be produced, and eventually maintained, by always breeding from a pure-bred ram and a purely-bred bull; many a great line of grand animals can be produced by this system, and after three or four uses of pure males, the flock or herd is enabled to take rank as pure-bred animals. It is wonderful what an extra-

ordinary effect is produced on the native breeds by the first cross of a thoroughbred male. I had the honor of winning the first prize at the great International Show, at Vienna, for my young Short-horn bull, Royal Geneva, of the Bates and Knightly tribe, and sold him to a Count Polanowski, in Galicia, who wrote me a year or two afterwards, and said he had nearly a hundred calves from his native cattle, and that the introduction of this English Short-horn blood would revolutionize the character of the cattle of the whole country, as the inhabitants of the district were buying up every bull calf he could rear. With pigs and sheep the same rule prevails, and the extraordinary improvement in horses all over the Continent and our colonies and South America is another proof of the value of English pedigrees in breeding. I now come to the age at which it is most desirable to breed stock for farm and general purposes.

"Early maturity is what is now considered the aim of cattle rearing, and I am not insensible to the great necessity which exists for the feeding of our teeming population. I question, however, if we are not killing the goose for the golden egg, and that we may hereafter jeopardize the stamina of our cattle in the future by early breeding, in the same way that too early marriages may eventually stunt or otherwise enfeeble our progeny. With regard to cattle, as a breeder of Short-horns I can testify to the necessity of putting the heifer to the bull at an early date, as there is such a tendency to lay on flesh with this breed that if deferred too long they will often become infertile. I once was on a visit to the late Mr. Mackintosh, who had a distinguished high-class herd of Short-horns, and saw a beautiful young Knightly cow, which had been shown several times, and was invariably successful, and was then between 3 and 4 years old; and he pointed her out to me as a splendid example of a ruined line from over-feeding for exhibition. I found it desirable to put my young heifers at 18 months old to the bull, that they might calve down a little over 2 years old, and then let them lie barren for five or six months before service. This got them into a breeding state, and the rest, after their first calf, was very useful for their future maturity. I had a young heifer of 10 months old lying out at pasture with a young bull of 7 months old, and little thought any result would follow; but she became in-calf, and brought a beautiful heifer calf at a little over 18 months old, which grew into a fine animal, and was sold at one of my sales (at 14 months old) for 175 guineas; but I let the mother lie by six months before her next service."

(To be continued next week.)

To Prevent the Growth of Horns.

If every feeder of cattle could have his favorite breed freed from horns without resort to the objectionable process of dehorning, he would doubtless consider that an advance had been made in the stock business. Prevention is better than cure in dehorning as well as in other matters. To avoid dehorning mature cattle the growth of the horn should be stopped in the very young calf. To accomplish that result, Dr. Salmon, Chief of the Bureau of Animal Industry, Department of Agriculture, states:

"The following mixture has been successfully used in preventing the growth of horns upon calves in experiments conducted by the bureau. The

What Can't Pull Out?

Why the

Non-pull-out

Bow on the Jas. Boss Filled Watch Cases, made by the Keystone Watch Case Company, Philadelphia. It protects the Watch from the pick-pocket, and prevents it from dropping. Can only be had with cases stamped with this trade mark.

Sold, without extra charge for this bow (ring), through Watch dealers only.

Ask your jeweler for pamphlet, or send to makers.

mixture is prepared by taking 50 parts of caustic soda, 25 parts of kerosene oil and 25 parts of water. An emulsion is made of the kerosene oil and soda by heating and vigorously stirring, and this is then dissolved in water. The mixture should then be placed in a bottle with a solid rubber cork. In applying, the following directions should be observed: First, the calf should not be over three weeks old, from five to twenty days being the proper age. A horn will sometimes be killed on calves that are even four to six weeks old, but it cannot be depended upon with certainty. Secondly, with a pair of scissors clip the hair around the embryo horn so as to expose a spot about the size of a nickel. While an assistant holds the calf securely, drop two or three drops of the mixture upon the horn and with the end of the rubber cork rub it in thoroughly over the bare spot. Apply the fluid first to one horn and then the other until each horn has been gone over three or four times. The rubbing should be continued until the caustic has softened and removed the hair and surface skin immediately around the horn. Third, care should be taken that the fluid does not spread over too large a surface and run down the sides of the face. To insure success, the mixture must be carefully and thoroughly applied. If used carelessly the embryo horn may not only not be killed, but the face of the calf may be disfigured by allowing the fluid to spread or run down over the skin."

The hog market is very unstable and appears to go up or down 15@25 cents without much ceremony.

The American Short-horn Breeders' Association, as well as the various State organizations, are doing well by the World's Fair exhibitors.

A Nebraska farmer tells an exchange that a remedy for scours, that has never failed for colts, and probably will do in calves, is raw eggs. The best way is to break the egg in a cup, hold the animal's head up, open the mouth and drop in, keeping the head up until swallowed. Don't be afraid of giving too many, anywhere from four to six at a time, then in a short time repeat the dose; have known as high as two dozen to be given in a day. The remedy everyone has and is cheap. It is an old Pennsylvania Dutch remedy; try it.

WOOL



References:
Metropolitan National Bank,
Chicago,
and this Paper.

SHIP YOUR WOOL

Direct to market and get all the value there is in it. We receive more Wool direct from the Growers than any house in this market, and make quicker returns. If you doubt it our books will prove it, and our shippers have testified to it. Average time on returns last season was eleven days from the time each shipment was received and we handled over three hundred thousand pounds. If you want your Wool sold at its true market value and get quick returns, don't dispose of it until you write us for prices and our terms for handling, and see the testimonials of our shippers. We are not an exclusive Wool house, but handle Hay, Grain and Produce of all kinds, and will quote prices if requested and give any information wanted.

SUMMERS, MORRISON & CO.
COMMISSION MERCHANTS,
174 South Water St., CHICAGO.

Agricultural Matters.

WATER CIRCULATION IN SOIL.

IN THREE PARTS—BY H. R. HILTON.
PART III.

A finely pulverized soil will invariably be a moist soil. A moist soil, that is, a soil containing as much water as can be raised by the capillary power, will, in our hot summer season, average 12° to 15° lower temperature than a comparatively dry soil; hence, by reducing its own temperature 12° to 15°, by reason of frequent stirring and fining, the soil is aiding in the self-preservation of its own moisture supply. An increase of temperature from 92° to 105° means a vast difference in the amount of heat radiated into the air, often the difference between an ordinary summer temperature and a hot wind. Dry, hard surfaces are admitted causes of much of our hot wind. A fine, loose or shaded soil—moistened—is its antidote.

To keep the surface soil constantly moist necessitates a thoroughly worked soil and the largest possible water storage capacity in the subsoil. In most Kansas subsoils, loosening the compact subsoil and letting the finer particles of the surface soil sift down among it, will greatly benefit. During heavy rains the very finest soil particles will be carried down as deep as plowed and fill up the interstices with the very best water retaining material. From experiment made it is quite evident that we have soils and clays capable of holding two to three inches of water to every foot of depth, and that if we have ten feet in depth of soil of such texture as has been experimented with we have an invaluable supply of water on hand, when fully saturated. The great problem in Kansas, however, is how to economize the supply for plant use and prevent its waste.

A plant will use its own weight of water daily in ordinary summer weather. An ordinary corn stalk, before tasseling, uses over three pounds of water daily. If the plant roots are not being constantly replenished with fresh supplies of moisture the deficiency will soon be made manifest in the curling leaves during the heat of the day. The amount of moisture a plant takes up, however, is largely determined by the temperature and relative humidity of the atmosphere. When the air is filled with moisture, almost to point of saturation, then the draft which the plant makes on the soil is very small. When the air is comparatively dry and warm at the same time, then the demand on the water supply in the soil is very large.

The lower the temperature of soil the greater the quantity of moisture taken from the air. Soil at high temperature takes comparatively little moisture from the atmosphere.

A soil made fine is the ideal seed bed in all lands and climes, but it has a special value in Kansas in its greater power of resistance in seasons of drouth and its effect in reducing velocity and temperature of wind by checking radiation. The great difficulty and problem is that in weather that is dry and suitable for making the soil fine and dusty it is usually windy, transporting the very best portions of the soil long distances through the air. Windy weather wastes the finer soil just as water flowing off the surface does. To prevent this waste we should subsoil to increase water storage, so the finer soil will settle down into the subsoil during rains, and in the same way while rolling to pulverize the soil a deep-toothed harrow should follow close to sift down the fine soil and leave the coarser on top. As the time of seeding approaches each cultivation should be shallow, and if subsoiling is done in summer, a spring crop next season should be the first to follow. There would be risk in seeding to fall wheat immediately after subsoiling, unless rains were unusually abundant to settle the soil sufficiently compact to insure capillary action.

The chemical constituents of the soil have much to do with the arrangement of the soil grains. The ammonia of stable manure tends to push the soil particles apart and give them a loose arrangement, thus increasing their

capacity for water, and is invariably helpful to soils disposed to pack.

On the other hand, salt, though it has no fertility in itself, promotes a closer arrangement of soils that are naturally too loose for good capillary action and do not hold enough water in suspension in soil for needs of our staple crops. Chemical analysis of soil should precede use of salt, and by experiment determine its effect on the soil texture and capacity for moisture before application. In the knowledge of this principle lies, I believe, the true method of determining the use of salt as a fertilizer in Kansas.

The summer sun robs the soil of much of its moisture, but the wind is a still greater robber, and especially when high tempered. But the wind robs the soil even in the winter season. Such winds as are generated within our State by heat radiated from hard or light colored surfaces are measurably within our control. A triple row of trees on the south and west lines of every eighty-acre tract will have a marked influence. Burnt prairies and close pasturing develop and encourage hot winds. A thick mat of grass is a good preventive. Subsoiling and good cultivation are the greatest beneficial agencies, but all three should go hand in hand. The are winds that have their origin beyond our State and which we cannot prevent or control, but their damaging effects will be less under the conditions just named. When low area storms are central over the Dakotas, and moving slowly eastward, there will invariably be a steady in-flow from the "high area" in the southwest towards the front of the low area storm. If this occurs "in a dry time" in Kansas, when the temperature is high, a warm wind can be predicted, because air descending from a higher altitude to a lower becomes heated dynamically, and descending from New Mexico into Kansas it is invariably dry. When to these conditions heat is added locally by radiation, we have winds that are freighted with danger to tender vegetation. Local winds generally cease at sundown. Winds blowing toward a storm centre blow continuously day and night till the storm centre passes so far eastward as to no longer exert any influence over them; but under the same conditions the velocity would be increased during the afternoon by increased temperature, and decreased before dawn by reduced temperature.

The people of Kansas have learned much about the soil and climate of their State in the past quarter of a century, and yet, after all, how little we actually know. A variation of \$25,000,000 to \$40,000,000 in the value of crops grown in two succeeding seasons is not uncommon, and years of shortage emphasize the importance of a better knowledge of soil and climate. Individual weather observations are unreliable, because irregular. Only the State can successfully collect the necessary data to form the basis of a weather service for the State such as will be demanded in a few years. We hope the interest in this question of so much vital importance to Kansas agriculture is not measured by the size of the appropriations so far made by the State for our weather service. The State Agricultural college should be equipped for chemical analysis of soils from all parts of State, and at same time determine by experiments with "soils in place" the chemical and physical texture of our various soils. Observations should be made and records kept of the temperature of the soil at various depths and under varying conditions; of the amount of heat radiation under different conditions of surface and temperature, and in every experimental plot there should be provision for determining the percentage of moisture in surface and subsoils, so that the various methods of treatment may be rightly interpreted. This means more laboratory equipment and more help; but it means also that the farmers of Kansas need a better knowledge of the chemical properties and physical texture of their soils to secure the best results in the seasons when nature seems unkind. If they will ask it of the State it will be given unto them.

Winter Wheat Coming Up in May.

Secretary Mohler has handed the following correspondence to the KANSAS FARMER. The subject is one of great importance, and Mr. Mohler's experience and opinion are both valuable:

WALLACE, Kas., May 14, 1893.

Secretary Mohler, Topeka, Kas.:

DEAR SIR:—I would like to have your opinion if Turkey red wheat sown last fall and coming up now will make a crop. I wish you would either answer by mail right away or in next week's KANSAS FARMER, and oblige,

E. UKELE.

TOPEKA, Kas., May 17, 1893.

E. Ukele, Esq., Wallace, Kas.:

DEAR SIR:—Yours received. You want to know whether Turkey red wheat sown last fall and coming up now will make a crop.

In answer I will say, I don't know. I do know, however, that old standard varieties of winter wheat, if sown in the spring or sown in the fall and not sprouting until spring, will not make a crop—will not head out at all. I know this by actual experiment. I know, however, one variety of wheat which may be sown in the spring, winter or fall with about equal assurance of success. This is known as the Odessa or Grass wheat. It was introduced as spring wheat and grown for years quite successfully as such, but afterwards it was sown during the winter, and at a later date in the fall at the usual time of sowing fall wheat, and it became a popular variety as fall wheat.

The Turkey red was introduced as a winter wheat and so far has been grown as such. If it is true, as claimed by some western Kansas farmers, that Turkey wheat has in other years made a crop—and a good one—even though it did not sprout until spring, then it may be sown in the spring and make a crop, and it is practically a spring wheat. If that be true then I answer, yes, your wheat coming up now may make a crop; that is, if conditions are favorable from this time on until crop is matured. I can speak with assurance in this matter, because in the spring of 1873 I sowed two bushels of spring wheat on my farm in Osborne county on the 12th day of May and had a yield of twenty-eight bushels of good wheat.

I understand that your wheat did not sprout until this spring and that it is now coming up. A portion, at least, of your wheat should be allowed to stand as an experiment. If it makes a crop the fact will be demonstrated that Turkey wheat is a spring wheat as well as a winter wheat. This is a matter of some interest and ought to be known.

Hoping that more favorable conditions may prevail in your section, and that you may be blessed with a good harvest, I remain, Yours truly,
M. MOHLER, Secretary.

To Remove Axle Grease or Dry Paint from Plows.

EDITOR KANSAS FARMER:—This is a task that every farmer hates before commencing to use plows or listers in the spring, as it gets very dry and hard to remove. I have tried quite a number of ways, all very tedious. This spring I took some old wire screen cloth that was of no use for screening, folded it four thicknesses, five inches square, applied two or three handfuls of sand and lots of water. I can clean a plow in three minutes. It is a success, and I feel like telling the readers of the "old reliable" KANSAS FARMER to try it. Long live the KANSAS FARMER; I don't see how we could get along without it. J. D. Z.

Crops in Clark County.

EDITOR KANSAS FARMER:—A decided change in crop conditions and prospects has taken place in this county since my report to you about May 1. The much needed rain began falling on the evening of the 9th. This rain was followed by another on the night of the 10th, thoroughly soaking the ground over most parts of the county, and also east and west in adjoining counties. Yesterday, last night and to-day, about an inch of rain fell, coming gently and was taken up by the soil. This last rain (which continues at this writing) appears to be general

Friendly Regard



is never entertained by the children for a medicine that tastes bad. This explains the popularity among

little ones of

Scott's Emulsion, a preparation of cod-liver oil almost as palatable as milk. Many mothers have grateful knowledge of its benefits to weak, sickly children.

Prepared by Scott & Bowne, N. Y. All druggists.

PERFECT Condition of Leather comes of Vacuum Leather Oil; 25c, and your money back if you want it.

Patent lambskin-with-wool-on swob and book—How to Take Care of Leather—both free at the store.

Vacuum Oil Company, Rochester, N. Y.

throughout this western country. In a drive of twenty miles yesterday I saw less than 10 per cent. of the wheat that appeared to be seriously damaged. With a continuation from this time on of the usual rainfall, Clark county will have as much wheat as last season. A large acreage of sod is being broken and planted to Kaffir corn, corn and fodder crops. Yours, etc.

W. J. WORKMAN.

Ashland, Kansas, May 14, 1893.

Mornings—Beecham's Pills with a drink of water.

The "patent lambskin-with-wool-on-swob," that comes free with Vacuum leather oil, does the business. It isn't a tenth of the nuisance it used to be to take care of harness and shoes.

Bureau of Information.

"The Burlington" has recently established in a convenient quarter of its elegant and commodious passenger station at Chicago, an office designed to afford travelers information on the thousand and one things they need to know, with regard to routes, rates, connections and accommodations. It has been placed in the hands of an experienced man, supplied with all railway guides, maps and time-tables, and is known as the "Bureau of Information."

It is a place to which all travelers may apply for information and receive a full and correct answer. This is the only office of the kind west of the sea-board cities; and it cannot but prove a convenience to the traveling public. All trains of the "Burlington" enter and depart from this station, and the intelligent and valuable service of the bureau may be enjoyed by all patrons of this line.

A special pamphlet will be issued by the "Burlington" in the near future, giving accurate information as to "How to get to the World's Fair Grounds;" How to secure rooms and board at the various hotels, boarding and lodging houses."

Trustworthy agents will be at the C. B. & Q. depot in Chicago to impart all information to visitors. Arrangements will probably be made by which some trains will be run direct to the World's Fair grounds without change or delay.

Nerve Tonic **Blood Builder**

DR. WILLIAMS' PINK PILLS FOR PALE PEOPLE

Send for descriptive pamphlet.

Dr. WILLIAMS' MEDICINE CO., Schenectady, N. Y. and Brockville, Ont.

50c. per box. 6 for \$2.50.

CANCER Can be cured by Drok Method. No knife, no pain. Book free. Address FINGREE & TREAKLE, 241 Wabash Ave., Chicago.

The Farmer's Forum.

This department is devoted to the discussion of economic questions and to the interests of the Alliance, Grange and kindred organizations.

Rise and Fall in Kansas.

The following, which was written by Rev. John D. Knox, of Topeka, to the *New York Weekly Witness*, will not be agreed to by everybody in all of its parts, but it is manifestly an honest statement of the views of a keen observer and party in interest:

For a number of years Kansas had a marvelous growth in population, in wealth, in schools, churches, towns, railroads and other elements of material comfort and enjoyment. Her praises were on many tongues. Her prohibition of the liquor traffic made her many friends.

What were the main elements of the wonderful rise in Kansas?

1. Railroads contributed to it to a great extent in opening up a vast territory to possible and easy settlement. When I reached Kansas, in the spring of 1865, there were but twenty-five miles of railway in the State; now there are about 10,000 miles. The building of these thousands of miles of road gave remunerative work and brought population and money to the State.

2. Barbed wire fences have added from \$1 to \$2 per acre, to many acres of prairie land, in value. Wooden fences rot fast and are rapidly consumed by prairie fires. Wire is cheap and durable.

3. Loan agents have brought many millions of dollars to Kansas and thus have enabled many poor men to develop wild lands into productive and valuable farms; towns have sprung up like mushrooms. Manufactories have been started in many places and have had good success.

4. The prohibition of the liquor traffic and the saloon, although followed by an exodus of drunkards, loafers, tramps, gamblers and prostitutes, like the casting out of the legion of devils, induced an immigration of a most desirable class of people in every way, and for several years Kansas was riding upon a sea of glory. But is she not now passing through fiery trials, and is not her glory somewhat departed? Has she not had years of decline?

What is the cause of this fall?

1. The payment of large interest, installments on State, county, township, city, school district debts, with individual indebtedness of various kinds, amounting in the aggregate to millions, and which mainly went out of the State, made a terrible drain upon the resources of the people. Bonds had been issued in aid of railroads, and stock had been taken in exchange, which was filched from them in one way or another. And thus the railroad was a luxury that had to be paid for twice—in the using, and in the payment of interest and the principal of millions of bonds granted in aid of said roads. This was a burden. Some farmers paid on money, even on farm loans, from 15 to 18 per cent., including interest, commission and expenses; and when it is remembered that for some years they did not realize more than from 15 to 18 cents per bushel on their corn, and had to raise and market 1,000 bushels of corn to pay the interest on a \$1,000 mortgage, the cause of ruin is readily discovered. This may be said to be an extreme case. But many paid to banks 10 per cent., and brokers and chattel mortgage men charged from 3 per cent. to 5 per month in the newer and more sparsely populated portion of the State. The most of these interest payments went out of Kansas.

2. When the Eastern money-lenders began to get frightened they called home the principal of their loans as fast as they fell due, and this was like bleeding a man to death. One can stand much bleeding, but it must not be all in one day. This money life-blood flowed eastward until the supply in the West became very limited. The sale of lands, farms and city property almost ceased, or they had to be sold at a ruinous sacrifice. We had more land than people, more debts than money. Foreclosures multiplied alarmingly.

3. Many of the settlers in the western and newer portions of the State were

inexperienced and poor. They came from a corn country and attempted to farm after the manner common in the State or community whence they came. The climate, land, and the altitude of the country were not adapted to corn, and multitudes were not willing or able to stand the crucible of a testing and instructive season; and when the the boom excitement came that prevailed along the Pacific coast, extending from Lower California to British Columbia, thousands left their new and mortgaged homes or lands and turned their faces towards the setting sun, and California, Oregon, Washington and other places thereby received an increase to their population. Many were worsted by the change; but their poverty prevented them from returning to Kansas.

4. The opening up of Oklahoma has taxed the population and the material wealth of Kansas not a little. More than three thousand souls left the city of Topeka alone for Oklahoma. This will do as a sample. Thousands of discouraged, discontented or roving farmers left for the same new country. The railroads running into the Indian country fostered this exodus. It was money to the roads, but a severe loss to Kansas. Not a few men have a hankering after Indian lands. They think that the land owned by the Indians is the very best, and they are determined to get some of it if possible. Some persons improved their circumstances by going to Oklahoma, and others suffered loss.

5. The "calamity howl" of the Alliance party and their doings in the Kansas Legislature has damaged Kansas to an alarming extent in the estimation of financial people east of us. The more enlightened citizens among us did not believe that the Populists would do all that the more radical declared they would do if in power; still, money is sensitive and sometimes superstitious, and fear took hold of investors. They dropped Kansas, lost faith in her, and many cursed her. Character is of slow growth, but may be destroyed in a day. So it was with Kansas. Her good and glorious name was damaged and darkened.

6. The great railways having lands in Kansas for sale by the million acres advertised these lands and the State in enticing words which brought men, money and enterprise into the State. Having sold their lands, they ceased to advertise the State as formerly and to organize cheap excursions into the State, and turned their attention to lands beyond us and to the orange groves of the Pacific coast.

7. Kansas has been defamed, traduced and slandered by the dram shop party, or in other words, the liquor interests. They have secured the aid of the Associated Press, and even moral and religious papers, in many instances, have aided in the desperate, defiant and ruinous work of slander. This has been carried on to such an extent—so overwhelming in its extent—that but little or no attempt has been made to contradict the lies about Kansas, and especially about the fruits and the enforcement of the prohibitory law. For this purpose of defamation money has been freely used, for when contradiction has been requested money has been demanded at advertisement rates. Good papers have been misled and have done Kansas a great wrong. Faults have been magnified into crimes. An ordinary breeze has been fanned into a death-dealing blizzard. One imported drunkard has been multiplied into a town filled with debauchery.

I have now touched upon some points on the rise and fall of Kansas; enough for this time. God made this central land for the inhabitation of men, free men, sober men, and Kansas is now on the up grade and will yet shine as the sun in his brightness.

Topeka, Kas., April 21, 1893.

Effect of Future Selling on Prices of Grain.

EDITOR KANSAS FARMER:—Mr. C. Wood Davis' letter in your paper of May 10 was a very great surprise to me, as I dare say it was to every one of your readers who has a memory. Mr. Davis, in this communication, impliedly proves the charge which I made against him several months ago,

of deliberately misrepresenting and be-fogging a situation which he cannot face with candor and honesty. I do not like to say a thing so severe about a man of Mr. Davis' position, or about any man, but what else can be said when he seeks to prove one thing on one occasion, and directly the opposite thing when doing so suits his purpose?

I will not charge him with deliberately misquoting me. That he did do so was evidently an offense of the memory. He is in error when he declares that "some time ago" I stated that No. 2 red wheat was selling at a much higher price than No. 2 Kansas in Liverpool. On the contrary, I stated that the two varieties of wheat were selling at the same price in Liverpool. Mr. Davis attempted to throw discredit upon my argument by endeavoring to make your readers believe that the two grades were *not* selling at the same price. He did not say in plain terms that they were not. But he sought to convey that impression by equivocation and by a bewildering redundancy of words which would not tie him down to any distinct statement. Now, after a lapse of several months, he declares that I said the identical thing which he pretended to prove in contradiction to what I actually did say.

Mr. Davis makes himself ridiculous in another way. He states that "he was able to show, and did show, that the actual quotations made in Liverpool, not the manipulated ones made by cable, did not warrant anything of the kind."

The absurdity of this lies in the fact that my comparison was based on actual sales quoted from the *Liverpool Corn Trade News*, and not on the cable quotations.

I now repeat the statement which I made then, and the truth of which Mr. Davis by implication now admits, namely, that No. 2 Kansas hard wheat was then selling in Liverpool at the same price as No. 2 red wheat, while the price of the hard wheat in Chicago was several cents (I forget how many) lower than the price of No. 2 red wheat there. The reason of the latter difference I said was due to the fact that the red wheat is a speculative grade and its price was held up by speculation, while the hard wheat was not a speculative grade and had to sell at whatever exporters and millers would pay for it.

In connection with that statement I made a prediction. I said that if the Kansas City Commercial Exchange succeeded in establishing a speculative market for Kansas hard wheat, the speculative trading in it would raise the price of it to a level with the price of No. 2 red wheat.

I now want to call Mr. Davis' attention to the fact that *just that thing has happened*. A speculative market for hard wheat has been established here. It is possible, as a result, to sell Kansas hard wheat for July delivery at almost the same price, freight considered, at which red wheat can be sold for July delivery in Chicago or in St. Louis.

If Mr. Davis would like an affidavit to prove what is here said, I can find you one for his satisfaction. The great mass of intelligent readers of the KANSAS FARMER, most of whom are readers of another influential paper which I could name, know these facts, if Mr. Davis does not. H. L. NICOLET.
Kansas City, May 13.

"Can I make sheep, hogs, beans, tobacco, flax, etc., pay?" are perennial questions. As well ask: "Can I make blacksmithing, watchmaking or picture-painting pay?" Men both make and lose money at all the avocations named. After all, it depends more on the man than the avocation.

STEKETEE'S Hog Cholera Cure

Greatest Discovery Known for the Cure of PIN WORMS IN HORSES

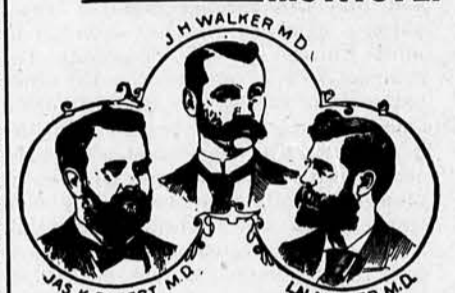
A Sure Remedy for Worms in Horses, Hogs, Dogs, Cats, and a Splendid Remedy for Sick Fowls.

ASK YOUR DRUGGIST FOR STEKETEE'S HOG CHOLERA CURE.

Price 50 cents; by mail 60 cents for 1 lb.; 3 lbs. \$1.50, express paid; 6 lbs. \$2 and pay your own express. U. S. Stamps taken in payment.

Address
GEO. G. STEKETEE,
GRAND RAPIDS, MICH.
Mention KANSAS FARMER.

ST. JOSEPH Medical and Surgical INSTITUTE.



DR. EGBERT, Specialist in Diseases of the Eye, Ear, Nose, Throat and Chest, Mental and Nervous Diseases. Medical Expert on Insanity.

DR. MILLER, Specialist in Diseases of Women, ... and ... Diseases of the Rectum.

DR. WALKER, Specialist in Surgery, Diseases of the Skin, Diseases of the Blood, Diseases Peculiar to Men.

All the Latest Scientific Treatments. Electricity, Massage, Etc.

Each doctor is a regular graduate, has fitted himself by years of study and practice for his specialties, to which he devotes his entire time.

Write for free printed pamphlet and Symptom Blank No. 1 for Men, No. 2 for Women, No. 3 for Skin Diseases, No. 4 for Rectal Diseases.

Call on or address Consultation FREE.
ST. JOSEPH Medical and Surgical INSTITUTE,
Northeast Cor. 8th and Edmond Sts.—Opp. postoffice.
Lock Box 900, - St. Joseph, Mo.

You Can't See the Fair in a Day.

Lee Stretton, of Natal, South Africa, is at the Great Northern, in Chicago. He is an athletic young Englishman, and is as swarthy as a Hindoo. He is there to see the fair, and says, from what he has discovered in the two days he has been in Jackson Park, that six years will come nearer to the time that it would take to thoroughly "see" the fair, rather than six months. He finds, however, that people here figure on a few days instead of a few months in which to do what he intends to take six months to accomplish.

"Why," said he, "to look at that fair and to study and see everything there is better for a young man than years of college training. It beats traveling around the world, and a liberal education is assured to the man, woman or child who will take the pains to look into all the exhibits and give each display a little time. I have traveled a long distance on purpose to see this fair, and I intend to see it all, if time, patience and money will allow me to do so. I have no other mission in America, and when October is over I expect to go back to Natal and devote several years of my life to thinking it all over and telling my less fortunate friends what it looked and sounded like."

Bugs and worms now meet in indignation meetings and pass lurid resolutions condemning the inventors and users of spraying devices.

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

Royal Baking Powder

ABSOLUTELY PURE

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.

Maize for the Nation's Emblem.

Upon a hundred thousand plains
Its banners rustled in the breeze,
O'er all the nation's wide domains,
From coast to coast betwixt the seas.

It storms the hills and fills the vales,
It marches like an army grand,
The continent its presence hails,
Its beauty brightens all the land.

Far back through history's shadowy page
It shines a power of boundless good,
The people's prop from age to age,
The one unfailing wealth of food.

God's gift to the New World's great need,
That helps to build the nation's strength,
Up through beginnings rude to lead
A higher race of men at length.

How straight, and tall, and stately stand
Its serried stalks upright and strong!
How nobly are its outlines planned!
What grace and charm to it belong!

What splendid curves in rustling leaves!
What richness in its close-set gold!
What largess in its clustered sheaves,
New every year, though ages old!

America, from thy broad breast
It springs, beneficent and bright,
Of all the gifts from heaven the best,
For the world's succor and delight.

Then do it honor, give it praise!
A noble emblem should be ours—
Upon thy fair shield set thy Maize,
More glorious than a myriad flowers,

And let the States their garlands bring,
Each its own lovely blossom-sign;
But leading all, let Maize be king,
Holding its place by right divine.
—Celia Thaxter, in *New England Magazine*.

NEW MOWN HAY.

What is there in the fragrance of new-mown hay that surpasses in this occult power almost all other perfumes? Is it that the very essence of imperishable vitality, the earth-mother's strength and enfolding love, is contained in the grass—the patient, long-suffering, sturdy, multitudinous, beautiful grass—which feeds the cattle, and carpets the hills, and creeps to the very edge of the road-side, and springs up in the ruts, and spreads its soft, thick coverlet over the graves of our dead? Nothing else so rests the tired eye, so springs back under the tired foot. When the vagrant impulse awakens in our breasts, the nomad instinct stirs, we are fain to go where the grasses wave and the old trees lean lovingly over them.

The wearied man of business, hard pressed with the routine of the counting-room, becomes a boy once more if he can but secure a holiday in the time of making hay. He goes into the field with buoyant step, and you hear his voice ringing in a joyous shout as he counts the rolling swaths.

How children love to tumble in the hay, and how defrauded they are of one of childhood's chief delights if they never know the glory of riding homeward to the barn on top of the great billowy load!

To some of us older people the new-mown hay brings back the days of the war—the four vivid, thrilling years when the land was full of marching men, of banners, drums and bugles—when every day had its fierce excitements, its exaltations, and its depressions. To think how mothers, and wives, and sweethearts, then watched the papers in the summer—for the hardest battles fought were not when wintry rigors bound the earth, but when the birds sang, the lilies bloomed, the apples ripened apace, and on the far northern uplands the farmers made hay.

To one household perched in a crag of the mountains, there arrived a great triumph in one of those summers. Their Harry had been made a brigadier—the boy had risen step by step from the ranks, so brave, so manful, was the stuff in him. Father came in from the hay-field with the letter that told of it in his hand.

The very young do not understand this trick of association. They have yet to grow up to the knowledge that souls remain young, though bodies change and take on new impressions with the years. They perceive an old man, an old woman, and sometimes smile at the sentiment which seems to them to linger untimely in these withered personalities. Not so. Youth is crude. Sentiment does not reach its full flower till people have had time to live. So we moralize over the rich sweetness of the new-mown hay.—*Harper's Bazaar*.

Far From the World.

Ben. E. Miller, a Port Townsend boy, who was on the United States steamship Bear during her eight months' cruise in the Northern seas, has many tales to relate of his adventures and the sights he has seen. Among other things he tells of the Bear's visit to King's island in Behring straits, thirty miles off Port Clarence, and to the shores of Alaska, where there are about 200 of the most curious islanders that ever were

seen. The island or rock they inhabit is about half a mile wide and a little more than that distance long, and the islanders are cave dwellers, and live on whale blubber and walrus meat.

On the southeast side, closely nesting against the cliff, is a village of cave-dwellers. One abode is built over and under the other, and to the right and left, giving them a strange, motley appearance, not unlike the recesses occupied by bald eagles. There are narrow caves excavated into the sides of each crumbling volcanic rock, and in the bottom of each is some of the short, native grass, forming a bed on which to sleep. At the mouth of the cave and just in the interior fires are lighted, and there they warm themselves in the winter. Skins of different kinds are also suspended outside to keep out the snow and cold. In the summer the hardy natives leave their holes and live in odd houses made of poles constructed near at hand on the edge of the cliff.

These strange people are usually as strong and vigorous as can be found anywhere. Moreover, they are entirely contented and as happy as people in any of the great cities of America. They have no government, no chief and no need of laws. Living in families and setting forth every day in their kiaks for the whale, seal and walrus, they return each night to their caves or pole tents, caring nothing for the outside world.

Odd to relate, however, the prestige of the native is determined by the clothes he wears. As they consist of skins and constitute the wealth of the islanders, it will be seen that they are not in this respect so much unlike civilized people. But the man with more clothes than anybody else has no more authority. He is respected for his sagacity, but that is all.

Little has been known of the islanders hitherto. For a great many years after the whalers had been going to Behring straits and the great Mackenzie, it was supposed the huge brown rock was uninhabited. It was like a beacon in the sea, and about it nothing was to be seen or heard except the roar of the waves and the weird cries of the wild fowl. Finally, some one discerned smoke ascending from the other side of the cliff.

A landing was made and there the islanders were found. They said they and their forefathers had been there always and that they knew no other world, though they had heard that there was one. This was only a dozen years ago. Since then the whalers have kept an eye out for them, for they liked the generous natives, who showed many good traits.—*Port Townsend Call*.

Dull.

A Penobscot county farmer, speaking of a former hired man in his employ, remarked quietly, "He's a pretty good sort of fellow, John is, but he's a little dull, a little dull." After a moment's further thought he continued: "It may be necessary to explain that a bit. I'll tell you how 'tis with him. I had a pretty nice field of onions growing, but they stood a little too thick together and needed thinning out."

"So I told John he might do it. He worked away at them for a day or two, and then I went out to see how he was getting on. I found he had pulled up all the biggest ones and thrown them away, leaving only the smallest plants in the rows. I asked him what in creation he had pulled out all the best ones for, and he said 'twas 'to give the little fellows a chance, 'cos the big ones had crowded them, and they couldn't grow.' A little dull John is; a little dull."—*Lewiston Journal*.

Perhaps John was much like the "backwoods" politician who was making a political speech in which he said: "Let's knock out all these big fellows who club together and build all them big railways, and telegraph lines, and telephone lines, and big city buildin's, and then we fellers will have a chance."

Concerning Mutton.

Mutton ranks but little lower than beef in its nutritious qualities, and while it is not as easily digested as beef, the difference is but slight. One of the greatest obstacles in the way of the general use of mutton is the idea which most housekeepers have that it has a somewhat rank flavor which must be taken out of it by par-boiling before it can be made palatable in any way. This is certainly true of a poor, coarse quality of mutton, but it is not true of prime mutton. There is not one in ten of the households that make use of mutton in their weekly bills of fare that do not serve it boiled, with the inevitable accompaniment of caper sauce. Now, this method of serving mutton is very good, but becomes monotonous when it is the only method of cooking this meat.

A roast leg of mutton is as delightful as a roast of beef, but there are several reasons why it does not appear on our tables in perfection. One of the most important of these is that our mutton is seldom hung for a sufficient length of time to render it tender and fine in flavor. Where there is cold storage accommodations, or, better still, where the weather is keen and cold, mutton is improved in quality by hanging full six weeks after it has been killed. It should



If your carpet looks dingy and you wish to restore its colors to their original freshness, use Ivory Soap and tepid water; apply with a scrubbing brush; use very little water so as not to saturate the carpet. After scrubbing lightly, rub the carpet with a cloth; wet frequently with clear water so as to take up the dirt and soap; wring out the cloth thoroughly before wetting it again.

A WORD OF WARNING.

There are many white soaps, each represented to be "just as good as the 'Ivory';" they ARE NOT, but like all counterfeits, lack the peculiar and remarkable qualities of the genuine. Ask for "Ivory" Soap and insist upon getting it.

COPYRIGHT 1892, BY THE PROCTER & GAMBLE CO.

never be used in less time than two weeks. This statement sounds startling to many people who are unacquainted with the methods of the best butchers in our large cities, who understand their business most thoroughly. Meat that is kept in this way, at a cold temperature always, without the slightest danger of becoming tainted, acquires a delicacy and tenderness that cannot be obtained in any other way.

Mutton, like beef, should be served rare. The saddle, the leg and the ribs, which are generally cut into chops, make excellent roasting pieces. A rib roast of mutton is generally known in our markets as a rack, and brings the highest price of any cut, because of the large amount of waste that is entailed upon the butcher when making this cut from the shoulder or fore quarter. The breast and other meat remaining usually sells for half the price a pound that the fore quarter does entire. The hind leg makes a very good roasting piece, though it is not quite so tender as the rib roast. A saddle of mutton is simply the two loins lying on each side of the backbone. This cut is not common in our markets, as the hind quarters are generally divided by butchers and the two loins sold separately.

Some Virginia Breads.

Laplans.—Beat separately one dozen of eggs. Mix into the yolks one quart of flour, one quart of cream, one teaspoonful of salt; the whites beaten to a stiff froth. Put into small moulds, well floured, before being greased, and bake in a very hot oven.

Batter Bread.—Dissolve one-half teaspoonful of soda in one quart of clabber or fresh buttermilk. Stir into this four well-beaten

eggs, one tablespoonful of melted butter, one teaspoonful of salt and one and one-half pints of white, unbolted corn meal. Pour into a baking dish and bake quickly.

Beaten Biscuit.—One quart of flour, one-half teacupful of butter, one-half teacupful of lard, one teaspoonful of salt. Mix with sweet milk into a stiff dough; beat with a heavy weight until the dough blisters thoroughly. It usually takes half an hour. Cut with a biscuit cutter, stick each biscuit several times with a fork, and bake in a hot oven until they are a soft, deep brown.

Batter Cakes.—Two eggs beaten together, three cupfuls of sweet milk, salt to taste; enough white corn meal to make the batter the consistency of fresh cream. Have the hoe hot, grease slightly, drop the batter on the hoe and let it fry until brown, then turn. Serve hot with fresh butter. This makes a nice dish for an invalid and can be prepared in twenty minutes.—*Good House-keeping*.

This is a Good Sausage Story.

In former times it was the custom in many German towns to manufacture sausages of enormous length, and carry them on festive occasions in solemn procession through the streets. On New Year's Day, in 1558, a giant sausage, 198 ells in length, was carried in triumph by forty-eight persons. But in the year 1588 it took ninety-one persons to carry a sausage 597 ells long and weighing 484 pounds. The chronicler of the period says: "The butchers' men were all neatly attired in white blouses. The first man wound one end of the sausage several times around his neck with a portion of it hanging down in front, the rest followed at equal distances carrying the trophy on their shoulders, and the last one had the other end wound round his neck like the man at the head of the procession."

All Other Baking Powders

Leave traces of Ammonia, Alum,
Alkali or Acid in the Food.

Dr. Price's Cream Baking Powder

Is the only Baking Powder that is free from any taint of adulteration or defect.

Dr. Price's is indispensable when perfect work and wholesome food are desired.

Its higher raising power and marvelous purity make it more economical than any other.

WILL CHEMISTRY SUPERSEDE AGRICULTURE?

Chemists have found out many things. Not the least of these—though not a recent discovery—is that the materials most useful to man for food and raiment are composed of a very few elements, all of which are found in inexhaustible supply in the air, water and soil. The proportions in which these elements are combined to produce the most useful substances are also well ascertained. The separation of the substances into these constituent elements is readily accomplished. Finally, changes of the proportions and arrangement of the elements, thus transforming useful substances into others more or less useful, is effected on a commercial scale by practical chemists.

Perhaps the oldest practical chemists are the bakers who, by the use of yeast, so change the substances of which flour is composed as to make light and wholesome, instead of heavy and indigestible bread. On a large scale have distillers broken up the arrangement of the elements in grain for the production of alcohol instead of bread. One of the most marked instances of the transformation of one substance into another is in the slight change of composition effected in starch, with the resulting production of glucose, or grape sugar. Starch is composed of carbon, oxygen and hydrogen in definite proportions. Now, the last two of these, oxygen and hydrogen, combined in certain proportions, constitute water, and in starch they are found in exactly the same relative proportions to each other as in water; so that it may, without serious error, be said that starch is composed of carbon and water in certain unvarying proportions. But it has been found possible to combine a little more water with the carbon of starch and thereby to produce glucose, or the kind of sugar which gives the sweet taste to grapes and most other fruits.

Now, starch constitutes the principal part of our grains. So also, as we have indicated, is glucose a product of nature. Both starch and grape sugar are produced in their greatest perfection under careful cultivation, so that they are very properly classed as products of agriculture.

An interesting fact in this connection is that the sugar of commerce, frequently called cane sugar, and by chemists called sucrose, is the exact intermediate between starch and grape sugar. And, while chemists have succeeded very well in transforming starch and water into grape sugar, they have not succeeded at all in stopping the process at the half-way house and producing cane sugar.

Thus, while we are willing to take off our hats in recognition of the achievements of the chemists, we find them subject to surprising limitations, and we involuntarily ask whether they have made more than a mere beginning.

Having thus early found the wise men of the bottles and test tubes powerless to even put the brakes on their own processes, we are prepared to receive a negative reply to our request that they combine carbon and water in such proportions as to produce, directly from the native elements, either starch, sugar or glucose.

The farmer is a better chemist than the savant in his laboratory, for he so directs nature that these substances are produced in his laboratory, the farm, under the influences of the light and heat of the sun, and by the combination of carbon, as it exists in the air, with water, as it is found in the soil, his grains, fruits and grasses are built up in their perfection. Not only the simpler forms of products, containing the three elements heretofore mentioned, are produced in the laboratory of the farm, but more complex compounds, containing a fourth element, nitrogen, are thus produced.

This nitrogen is, indeed, one of the most abundant of all substances, and in its uncombined state the most easily obtained, since it constitutes about four-fifths of the still air around us, and of every zephyr, breeze, wind and cyclone. But while so abundant in nature, it is one of the most expensive, under our

present knowledge, to induce to enter into such combination as to form a constituent of material for either food or clothing.

Encouraged by the little which the chemist is able to determine, and the less he is able to accomplish in relation to the simpler forms of matter, persons have grown enthusiastic, and entering the domain of prophesy, which is admitted to be entirely outside of the realms of both history and science, some have suggested that the chemist will one day effect the direct combination of the elements known to constitute our food stuffs and manufacture from the abundance of inert matter so rapidly and so cheaply as to leave the farmer without an occupation, the things needful to his physical comfort. It has been suggested, in this connection, that a quarter of a century ago, after the philosopher Faraday had explained to the world the foundation facts and the principles on which the later electrical development is based, it was asserted by persons, whose authority in the scientific world was almost undisputed, that electricity could never be produced cheaply enough to be used for the purpose of general illumination. This statement was based on the supposition that electricity could never be produced by a method less expensive than by the consumption of zinc. The world has lived to see electrical illumination in general use in cities and towns, and the discussion of its use in the country well inaugurated. And further, electricity has largely displaced the horse as a means of conveying persons from place to place in cities, and its use for the purposes of the farm is under consideration.

In view of the frequency with which the positive assertions of conservatism are disproved by subsequent invention and discovery, it is not safe to assert, without mature consideration, that anything, even the production of food without farming, is impossible. We hope to enter into a further consideration of this interesting subject at another time.

YOUNG WOMEN AT THE FAIR.

The Young Women's Christian Association, of Chicago, now sixteen years old, has always been an aggressive body in aiding young girls depending upon their own resources for support. It has continuously, since 1876, kept a home for young girls, strangers in the city, opening from time to time new ones. Now it has four homes, located at the following numbers: No. 288 Michigan avenue; 5830 Rosalie Court, near Jackson Park; 367 Jackson boulevard (West Side), and 3258 Wentworth avenue. These homes are given as landmarks of safety to young, respectable girls, who need protection or information in coming alone to Chicago. These homes, with their limited capacity, if full, can direct to suitable lodging houses. The great feature of the work of the Young Women's Christian Association is the Travelers' Aid Department, about four years old. Paid agents wearing a blue badge marked "Young Women's Christian Association," meet the trains, to aid women traveling alone in making changes, or direct them how is the cheapest and safest way they may reach their destination. No charge is made for this service, as the agents are paid by the association. Girls are warned not to speak to strangers, but go to the waiting room, and remain until the badge is seen. The agents may be delayed a trifle, but will gratuitously direct as well as aid in finding the friends or shelter sought by women or girls traveling alone. Young girls proposing to visit Chicago should, three days prior to leaving home, address the head agent, Miss Anson, 5830 Rosalie Court, Jackson Park. State the exact date and time of starting, as well as the railroad they will come over.

The sole desire of the Young Women's Christian Association, of Chicago, is to aid young, self-supporting girls and women, and to protect them from imposition.

Will the correspondent who signs "Aunt Polly" kindly send real name to this office?

SEVERAL QUESTIONS.

EDITOR KANSAS FARMER.—(1) I saw in the KANSAS FARMER that Chancellor Snow, of Lawrence, Kas., will send diseased chinch bugs in exchange for well ones. How should the bugs be confined, and how sent—by mail or express? (2) Also that the 1891-92 report of State Board of Agriculture is out. Is it sent free to all who wish it? (3) I would also like to receive the bulletins of the Kansas Agricultural college or Experiment Station if they are sent out. I just came from Iowa last fall, and while there I always got them as soon as issued. I wrote some time ago and addressed the letter to Agricultural college, Manhattan, Kas., but have never heard from the letter in any way. Did I direct the letter right? Please answer the above either by letter or through KANSAS FARMER. I expect the information would be gladly received by your readers.

THOS. J. BEALS.

North Branch, Kas.

(1) See directions for sending insects by mail, in note at head of Entomological column.

(2) The edition of the last report of the State Board of Agriculture was less than 4,000, and is, we believe, nearly, if not quite, exhausted. If any of these books are left they can be obtained by addressing the Secretary, at Topeka. The provision for getting the information contained in these valuable reports to the farmers is entirely inadequate. It is hoped that a better method will be perfected.

(3) Your request for bulletins of the Experiment Station was correctly addressed and should have brought you a response. Our advice now is that you write a postal card to I. D. Graham, Secretary Experiment Station, Manhattan, Kas., and say to him that the KANSAS FARMER directs you to repeat your request for bulletins every day until your name is placed on the list.

A STANDARD DICTIONARY OF THE ENGLISH LANGUAGE.

Users of dictionaries have been about equally pleased at finding information sought, perplexed at the inconsistencies discovered, and disappointed at surprising omissions. Necessarily, perhaps, English is lacking in uniformity of usage on account of the effort to attain, in its composite composition, at least traces of the characteristics of the source of each contribution to the language. Happily, a new dictionary is now in preparation in which the language is treated as a realization, as an instrument actually in use, the significance of whose words and phrases as used is of first importance, and derivation and history, while not omitted, relegated to subordinate places. The work of preparation is conducted on what is termed a scientific—which in this case is closely akin to a common sense—basis.

This dictionary is to be called "A Standard Dictionary of the English Language," a prospectus of which, with sample pages, is before us. It is really difficult to lay aside these pages, so greatly do they interest. It is satisfactory to know that the work, which has been for years in preparation, is now being pushed rapidly towards completion.

The definers are in the letter "T," and over one-third of the work is in type. Of the 200 specialists, all, except one, have reached the end of the alphabet. The enormous task of perfecting a work of this kind may be judged from an examination of the prospectus. Nearly \$300,000 have already been paid to the editors and specialists engaged in the preparation of copy; and before the work is completed, over a half million of dollars will have been expended.

There are many distinguished features of this dictionary. On nearly every page of the prospectus one finds description or illustration of one or more of these features: as, the systematic compounding of words; the exact locating of quotations; the comprehensive provision for definition by specialists; the arrangement of the various definitions of a word in the "order of usage," instead of in the "historical order" so generally followed heretofore in dictionary-making; the aggressive (yet essentially conservative) steps in the simplification of spelling; the

adoption of the scientific alphabet in the pronunciation of words; the system followed in the grouping of certain terms; the discrimination between common and proper nouns in the vocabulary, and the placing of the entire appendix under one alphabet.

The extraordinary richness of the vocabulary is to be noted. After the exclusion of thousands of obsolete words that are found in other dictionaries, though do not appear in what may be called the living books of to-day, and the exclusion of all scientific and technical terms that can be safely spared from a work of this kind, a comparison with other dictionaries will show how complete is the vocabulary of the Standard. The following is reported as an actual count of the words and phrases recorded under the letter "A":—

Stormonth.....	4,692
Worcester.....	6,928
Webster (International).....	8,358
The Century.....	15,521
The Standard.....	19,758

The work is in preparation for publication by Funk & Wagnalls Company, New York.

Hon. Joshua Wheeler, of Nortonville, Kas., one of the best posted farmers in the State, is quoted as saying that in his opinion the Kansas wheat crop will not be over half of last year's yield, and that prices will materially advance. Mr. Wheeler makes a suggestion of value in this connection. He says the wheat ground will be put in corn and that there is reason to believe that this is to be one of the great corn years in Kansas.

A small flock of Persian sheep will be placed on exhibition in the live stock pavillion of the World's Fair some time in September. The peculiarity of the Persian sheep is that during the spring and summer season it accumulates a large amount of fat in its tail, that appendage reaching a weight of twenty-five to fifty pounds. During the winter or dry season it hibernates much like a bear and consumes the fat thus stored up.

Weekly Weather-Crop Bulletin.

Issued by the United States Department of Agriculture, in co-operation with the Kansas State Board of Agriculture, for the week ending May 22, 1893; T. B. Jennings, observer:

Good rains are generally reported from the southern third of the State, while in the northern half of the State no rain occurred until the closing hours of the week, when some heavy rains fell in the Kaw valley, in which local hail storms occurred. The heaviest rains for the week fell in the southern townships of Sedgwick and in Grant and Haskell.

The average temperature for the week has been about normal except in the extreme west and northwest, where an excess of temperature is reported. An excess of sunshine has prevailed except in Labette, Reno, Clark and Meade, where it was normal.

Draw a line through Atchison to Pottawatomie, thence to the northeast part of McPherson, thence southward to the northwest part of Sedgwick, thence across Kingman to the southwest part of Harper, and east of this line it has been the best growing weather of the season.

Draw a line through Marshall, thence to Pawnee, thence west through Hamilton; west and north of said line the week has been unfavorable; between these areas the results have not been decisive either way except in Clark, Ford, Meade, Seward, Haskell, Grant, Stevens and Morton, where it has been quite beneficial.

In the southern half of the eastern third of the State wheat is in good condition and doing well; it is heading out in Linn and Miami. It has greatly improved in Harper, Sedgwick, Harvey and Marion, and in the extreme southwestern counties.

Corn is doing well over a much larger area than wheat, but in the west and northwest is suffering for moisture.

Potatoes are growing finely in the eastern half of the State.

Grass in general has received more benefit than any other crop.

Fruits are generally reported light. Hot winds on the 18th in Kearney, Wichita, Logan, Thomas and Ford threatened vegetation.

Entomology.

Conducted by Prof. E. A. Popenoe, State Agricultural college, Manhattan, Kas., to whom queries about insects and specimens for determination may be sent, with request for reply in this paper. Answers will be published as soon as possible, and unless of immediate importance no other reply will be made. Always send several specimens, where possible, with statement of habits observed and, with the plant-feeders, parts of the plant attacked, where its name is not certainly known. Specimens may be packed, if small, in a quill; if larger, in a tight tin or other box, strong enough to prevent crushing in transit, and never loose in a letter. The package, addressed and marked with the name of the sender, without other writing, is available at the rate of 1 cent per ounce, prepaid.

Ourolios Among Peach Trees.—The Leaf-Footed Bug.

I enclose herewith, in a quill, three insects of one kind, of which I find a good many under my chip trap beneath peach trees, and one of another kind, which I judge is the plum curculio, and of which I am capturing many by the jarring process. Also three or four warlike fellows, with red posteriors, hatched from nests like those I sent you which got crushed. E. T. D. Kiowa, Kas.

Answer.—The beetles found under the chip traps are the snowy curculio (*Conotrachelus nivosus*), a species that occurs throughout the summer upon a widespread and abundant weed, the margined spurge, or "Snow-on-the-mountain" (*Euphorbia marginata*). Doubtless this plant grows near or among the peach trees, and the presence of the beetle may thus be explained. I have not observed it attacking any fruit.

The second beetle, an oblong, somewhat flattened, dark brown, short-beaked, snout beetle, one-fourth inch long, with three lines along the thorax and various small spots along the sides of a yellowish brown, is known to entomologists as *Sitona lineellus*, not having been sufficiently well known to have received an English name. I have observed this species also on the apple, feeding on the leaves, though not in sufficient abundance to merit attention. Probably it may feed upon the leaves of the peach as well, and this may be its errand among your trees.

Neither of these is the true plum curculio, which is much like the snowy curculio, though of a darker color and with a pair of prominent dark polished tubercles in the middle of the wing covers on the back.

The third species of insect, "the warlike fellows," are the newly hatched young of a bug related to the common ill-scented squash bug. The species is called by Hubbard "the leaf-footed bug" (*Leptotylosus phyllopus*), and is normally found feeding upon various weeds, the thistle, the milkweed, and occasionally the yucca. Its "warlike" character goes no farther than in appearance. The adult is a brown bug about an inch long, with long slender legs and antennae, the hind legs in the shank being greatly expanded into a flat, leaf-like form, marked with a cream white irregular blotch; a belt of the cream white color crosses the middle of the back also.

In Florida the adults have been noticed injuring the young buds and tender shoots of the orange and puncturing the ripe fruit, causing it to drop. Our correspondent should report any injury which he is able to trace certainly to this insect in his locality, as a fact of interest and likely to be new.

The White Tree-Cricket.

Find enclosed specimens of black-berry and raspberry canes killed by some insect depositing eggs in same. Please tell me what you can about them and if there is any way of combating them. C. E. Hamlin, Kas.

Answer.—The injury complained of is the work of the white tree-cricket, an insect too common in Kansas fruit gardens. The raspberry canes are pierced with punctures close together in a slightly irregular row, extending sometimes four or five inches along the cane. Upon splitting the wood in the line of the row of punctures they will be found to extend into the pith, and at the bottom of each, in the pith, will be found a long shining egg soon to be hatched into the young cricket. The crickets belong to an order of insects, the *Orthoptera*, in which the metamorphosis is incomplete; that is, the young resemble the adults except in their

smaller size and in the absence of wings, and are active from the time they are hatched until full grown. The mouth parts of the crickets are of the mandibulate type, provided with two sets of jaws, working from side to side, and the insects, in all stages above the egg, feed upon solid food. It must be stated in favor of the young crickets that they have been observed to feed upon plant lice, and their habits indicate that these pests form, in great part, their usual food. They are, therefore, to be regarded as our allies, so far as the habits of the immature crickets are concerned. It is different, however, in the adult stage. Then the crickets are, at least to some degree, plant feeders, and have been observed to be mischievous in the vineyard by girdling the stems of the full grown grape clusters and causing them to shrivel, or by cutting the stem completely through and allowing the cluster to fall upon the ground. The female cricket, like others of the family of crickets, carries at the end of the abdomen a long, slender, piercing instrument, the ovipositor, with which she punctures the stems of various soft-wooded plants, or the twigs of orchard trees, laying eggs therein.

In brittle-wooded plants the injury does not stop with the puncture, which might otherwise be of little moment, but the twig is so weakened that it is easily broken off by the wind, or in pruning and training. In the grape and raspberry, two plants specially open to attack, the punctured canes usually split and die beyond, so that the damage due to the insects where abundant is sometimes too great to be overlooked.

As to their repression, which is in such cases desirable, no method of destroying the insects themselves, whether in younger or adult stage, is practicable, owing to the variety of food on which they may subsist, and to their wide distribution. They do not congregate, as do some injurious insects, but are found separately, scattered throughout orchard, vineyard, field and garden. The only method of avail is the reduction of their future numbers by the destruction of the twigs with the contained eggs, and with those observant gardeners who regularly prune their vines, this plan will be found profitable at a relatively small outlay of time.

Horticulture.

Spraying Orchards in a Wet Season.

New York Experiment Station Bulletin No. 48, contains an account of spraying for apple scab and apple worm during the season of 1892 upon trees mostly of the King and Baldwin varieties. The season was such as is supposed to favor the growth of both the fungus and the worm and make the application of fungicides a difficult matter. A meteorological table shows that during June, when the first two sprayings were given the trees, there were fifteen rainy days, with an excess rainfall for the month of 1.31 inches.

Bordeaux mixture and Paris green or London purple were used in combination, and Paris green was used alone. The formula for the Bordeaux mixture was: Sulphate of copper (crystals), six pounds; lime (unslaked), four pounds; water, forty gallons.

The arsenites were used at the rate of two and one-half ounces to forty gallons of liquid. The cost of applying four and one-half gallons (the average amount required) of either of the combinations was about 7 cents per tree for each spraying. Spraying with Paris green alone cost about half as much. Four sprayings were given, and the author thinks this number sufficient for even very wet seasons.

Trees should be well pruned, so that all parts may be reached by the spray. Well-pruned trees allow free access of light and air, preventing the fungi from securing as strong a foothold. Pruned trees may be sprayed more economically than others. The first application was made June 13, about a week after the petals had fallen.

The author now thinks this application should have been made earlier,

and that an application before the buds open would be valuable. The other applications were made on June 22 and July 1 and 22, the same formula being used in every case.

The apples were harvested in October and carefully examined for scab and worms. Those gathered from two to four trees of each lot were counted and graded into four lots, as follows: (1) Free from scab and worms; (2) attacked slightly but marketable as first-class; (3) second-class or evaporating apples, and (4) cider apples.

The following are the author's conclusions:

(1) The injury done by the apple-scab fungus was decidedly reduced where the Bordeaux mixture was used.

(2) When Paris green was added to the Bordeaux mixture the fungicidal action of the combination was more marked than when London purple was used instead of Paris green.

(3) Paris green has a certain fungicidal value, but in this is not equal to Bordeaux mixture.

(4) The value of Paris green as an insecticide does not appear to be materially affected whether applied alone or in combination with Bordeaux mixture.

(5) The insecticidal value of Paris green when used with the Bordeaux mixture was greater than London purple when similarly applied.

(6) More applications are required during a wet season than during a dry one; during wet weather they should be repeated every week or ten days.

(7) The results obtained from the application of a combination of the Bordeaux mixture and Paris green or London Purple show that the use of such a combination is valuable and practicable for the treatment of the apple-scab fungus and the apple worm, even in a very wet season.

The character and condition of nursery stock exerts a far greater influence upon the success of an orchard than is usually supposed. The Professor of Horticulture in the Experiment Station at Stillwater, Ok., reports that with several hundred apple trees, bought from a number of widely separated nurseries last year, this point was quite noticeable. From one order of stock 29 per cent. was lost entirely and had to be replaced this spring. From another the loss was only 10 per cent., being about one-third what it was from the other. The trees from which the 29 per cent. was lost came a long way and were subjected to a heavy freezing in the transfer from the railroad to Stillwater; and it should be said that adverse circumstances with the whole planting explain the large total loss. Trees from Texas lost 10 per cent., as noticed; trees from southeastern Missouri lost 14 per cent.; trees from Kansas City lost 22 per cent.; and trees from Georgia lost the 29 per cent. mentioned above.

The Oklahoma Experiment Station has lately received many complaints of insect pests, with request for relief. The cut-worm family and the squash bugs seem to be the worst offenders, and really are difficult to manage. The Director recommends for the various squash bugs the use in spray, of soap suds, to which has been added enough Paris green to give a decided tinge of color to the solution. Older plants should also be hilled up to the first leaf. If the stems show signs of decay it is from the presence of the larvæ or maggots producing the squash bugs, and the vines should be pulled up and burned, without delay. The moths that are so common around the lamps, these warm evenings, are in most instances the perfect insects of some of the cut-worm families, and should be destroyed. Into a pan pour an inch of water and a tablespoonful of kerosene. Into this set a lighted lantern or lamp, and place where the moths can be attracted by the flame, and dashing down fall into the oil and die. If this plan were pursued by our farmers persistently in the early spring, for a few years, the cut-worm plague would be a thing of the past.

Spring medicine and Hood's Sarsaparilla are synonymous terms, so popular is this great medicine at this season.

"German Syrup"

Here is an incident from the South—Mississippi, written in April, 1890, just after the Grippe had visited that country. "I am a farmer, one of those who have to rise early and work late. At the beginning of last Winter I was on a trip to the City of Vicksburg, Miss., where I got well drenched in a shower of rain. I went home and was soon after seized with a dry, hacking cough. This grew worse every day, until I had to seek relief. I consulted Dr. Dixon who has since died, and he told me to get a bottle of Boschee's German Syrup. Meantime my cough grew worse and worse and then the Grippe came along and I caught that also very severely. My condition then compelled me to do something. I got two bottles of German Syrup. I began using them, and before taking much of the second bottle, I was entirely clear of the Cough that had hung to me so long, the Grippe, and all its bad effects. I felt tip-top and have felt that way ever since." PETER J. BRIALS, Jr., Cayuga, Hines Co., Miss.

BLUE VITRIOL FOR SPRAYING FRUIT TREES, VINES AND PLANTS.

Nurserymen and farmers, write or call for prices in quantities. J. K. JONES, Wholesale and Retail Druggist, Topeka, Kas.

Strawberries -- Wanted: To let berry-growers know that our new Robinson strawberry is the ideal for market purposes. Is large, strong, stands firm as Captain Jack. 700, 717 plants of other well-known varieties for sale. Send for price list. B. F. SMITH, Box 6, Lawrence, Kas.

Established 1894. 39th Year. **Evergreens** Fruit and Forest Trees. 50,000,000 for spring trade. A sample order of 200 evergreens, three varieties, for \$1, or 600, seven varieties, for \$5. 2 yrs. old, sent to any part of the United States or Canada, express prepaid. 32 page catalogue and how to grow evergreens, FREE! R. H. Ricker Co., Elgin Nurseries, ELGIN, ILLS.

SPRAYING PUMPS. Automatic Mixers. Brass Working Parts, heavy Hose and VERMOREL NOZZLES. Our GARFIELD KNAPSACK and LITTLE GEM lead all others. You can save money by dealing with us. Book of instructions free. FIELD, FORCE PUMP CO., 155 Bristol Ave., LOOKPORT, N. Y.

FRUIT EVAPORATOR THE ZIMMERMAN The Standard Machine Different sizes and prices. Illustrated Catalogue free. THE BLYMYER IRON WORKS CO., Cincinnati, O.

MAKE MONEY While You Sleep. **STAHL'S EXCELSIOR FRUIT DRIER** Evaporates Fruit DAY and NIGHT. Catalogue free upon application. Address WILLIAM STAHL EVAPORATOR COMPY, QUINCY, ILL. Mention KANSAS FARMER when answering.

COMPLETE MANHOOD AND HOW TO ATTAIN IT. At last a medical work that tells the causes, describes the effects, points the remedy. This is scientifically the most valuable, artistically the most beautiful, medical book that has appeared for years; 96 pages, every page bearing a half-tone illustration in tint. Some of the subjects treated are Nervous Debility, Impotency, Sterility, Development, Varicocele, The Husband, Those Intending Marriage, etc. Every man who would know the Grand Truths, the Plain Facts, the Old Secrets and New Discoveries of Medical Science as applied to Married Life, who would atone for past follies and avoid future pitfalls, should write for this WONDERFUL LITTLE BOOK. It will be sent free, under seal, while the edition lasts. If convenient enclose ten cents to pay postage alone. Address the publishers, **ERIE MEDICAL CO., BUFFALO, N. Y.**

In the Dairy.

A Dairy Test of Soy Bean Ensilage.

A paper read by Prof. F. C. Burtis, State Agricultural college, before the State Dairy Association.

Undoubtedly many of my hearers have read the various reports on the Soy bean, given from time to time in the last two years, so I will suppose you are somewhat familiar with its growth and characteristics. Perhaps many have availed themselves of the opportunity of obtaining free sample packages of the seed from the station and have tested this valuable plant for themselves. Although it was introduced into the United States many years ago, the discussion and question of its value and adaptability have been awakened by its introduction into Kansas by Prof. Georgeson, where it is proving a great success as a fodder plant. Here is a plant said to be the richest known vegetable substance. Rein says: "In point of nutriment, the Soy bean is of all vegetables nearest to meat." Recent analysis gives the following result:

Water.....	11.53	per cent.
Dry matter.....	88.47	" "
Crude protein.....	34.49	" "
Crude fat.....	16.45	" "
Nitrogen, free extract.....	29.90	" "
Crude fibre.....	4.40	" "
Ash.....	6.55	" "

The grain yields all the way from fifteen to thirty bushels to the acre. It is true, the yield is not as much as corn; but as the grain is far richer in protein, etc., it will fill places in feeding that corn cannot. But besides the bean being very rich, the plant compares very favorably with clover and alfalfa. The crop, cut as hay, will yield from one and a half to two tons per acre. The total crop in this form can be ground through a suitable feed grinder—we use the duplex that grinds ear corn—and will analyze as good as bran and will make a good concentrated feed. The question is asked, cannot the dairyman raise this crop and use it in the place of bran, cotton seed meal and linseed meal, for which he yearly pays out so much money? When the Kansas dairyman adopts the valuable practice of soiling his cows, he has one of the best plants for that purpose right here. Surely a plant that has such a feeding value claimed for it and has come triumphantly through the drouths of 1890 and 1892 in Kansas with a good yield of grain and fodder, can claim a little attention of the Kansas farmer.

Before last summer, the crop at the station was not extensive enough to test its feeding value. Last season six and one-half acres were devoted to the crop of four varieties. A portion of each variety was put up as silage, a portion cut for hay, and the remainder was left to mature for seed. This gives material enough to carry on some feeding experiments in a small way. As yet the silage is the only portion that has been fed. It has been fed out to some dairy cattle with quite favorable results, and so, with the knowledge that this would be an incomplete paper and an incomplete experiment, I agreed to give it, although the experiment is not far enough advanced to draw many conclusions.

The crop made a surprising growth during the hot, dry weather of the past summer. While corn on all sides was withering up, this was unaffected.

The seed was planted May 23, and the ensilage crop for the four varieties was cut August 24, making a crop in three months. At the date of cutting, the varieties were in different stages of maturity, and this point should be kept in mind, as later you will see that it showed its effect upon the milk.

The Yellow Soy was the most mature. It had so nearly reached maturity that the leaves had begun to fall. The Edamame was the next in order, and was only a few days behind the Yellow Soy. In both of these the bean was fully formed. Third in order of maturity was the Kiyusuke Daidzu. Here the seed was about half grown. The fourth variety, Yamagata Cha-Daidzu, is a late variety. It has a long period of blossoming; and at time of cutting was not fully out of blossom, although some of the seed was about half grown. This variety is often

caught by frost before the seed is mature. The following are the yields of ensilage per acre:

Yellow Soy.....	5.38	tons.
Edamame.....	4.12	" "
Kiyusuke.....	4.43	" "
Yamagata Cha-Daidzu.....	5.31	" "

The ensilage kept in excellent condition until the silo was opened. In feeding out some corn ensilage that was put on top, the bean ensilage was reached before it was expected, so it lay a few days, which affected the top somewhat. The four varieties were placed in the silo in one layer, which was divided into four parts by loose board partitions, and, as one variety had to be fed out at a time, this somewhat exposed the remaining ones. Although very little of the outside actually spoiled, the cows did not eat it nearly as well as the part that had not been exposed.

When the ensilage is fresh and good, all stock eat it as eagerly as they do the corn ensilage.

(To be continued next week.)

The Poultry Yard.

Profits in Poultry.

EDITOR KANSAS FARMER:—My last article in the KANSAS FARMER on "Profits in Poultry" seems to have called the attention of a large number of Kansas and Missouri poultrymen, from the letters I received. I concluded to look around and see how profitable the farmers in this, Grant township, Neosho county, Kansas, were making poultry, or if they were making any improvement. In order to get a correct idea of the facts I will make a comparison of what we farmers were doing in this township. Twelve years ago last January, when I landed in this county from Indiana, I was breeding Plymouth Rocks, and they were the first that was in this part of Kansas. Poultry-raising at that time was limited and badly mixed up on breeds, but to-day you may find many standard ones. Eggs at that time were taken to market in buckets. A little boy, I have seen him often, going to market with eggs in a little tin bucket, but to-day he is a young man, and eggs are taken to market in crates. I see them pass my door every week, dozens of them.

Before I give you any figures, if you will look on the map you will see that Stark is surrounded with towns in distance from two four miles; by this you see the territory of its trade. First I went to two of the leading storekeepers in Stark to learn of them how many eggs they had shipped out in the months of March and April. The firm of Weddle & Cooper shipped in March 3,300 dozen; in April, 3,030 dozen. The firm of Harper Bros. shipped in March 2,760 dozen, and in April 2,580 dozen. There are other firms in Stark that I did not go to, as these two are the leading ones, and I am very thankful to these gentlemen for these figures. The figures here given do not include the eggs that were sold in the city or that went back into the country for setting. The average price paid has been about 11 cents per dozen. Then I went among the farmers, and they averaged from thirty-five to forty dozen a week; while some fall below, others reach nearly 100 dozen a week. Of course these figures would have been larger, but this being the time of the year when every farmer's wife is setting every hen she can, and a large number of them have on hand now 300 little chicks. By these figures we can clearly see that this part of Kansas is awake to the profits in poultry. A number of our farmers have things very conveniently fixed for poultry-raising, and a number will build larger henneries after harvest. The writer is one of them. No State in the union has better advantages for raising chickens, and I do not know a farmer in Kansas that is so unlucky as to have a wife that does not take a great interest (in fact, all of it,) in poultry-raising, and I do not guess at things when I say if the farmers will only fix up things for a business in poultry for their wives, in five years from to-day you will not hear so much about mortgages. But it has been a wonder to me, sometimes, the way some

farmers' wives had things fixed for them, that they ever attempted to raise a chicken. These cases are getting more rare every year, and the faster the better, for Kansas alone can produce over and above what she does now, to cover up that big sum of 16,000,000 dozen eggs that Uncle Sam has to import every year to feed his children.

I hear of some complaint of lice this spring, but if every farmer will only subscribe for the KANSAS FARMER and read its columns they will soon learn how to get rid of them.

Stark, Kas. J. R. COTTON.

The sunflower is the best egg-producing food known for poultry, keeping them in thriving condition, and largely increasing the production of eggs. Every poultry-raiser who tries it will find that this is the best food known for glossing the plumage of fowls, and is almost indispensable for those who want to fit their birds for exhibition to the best advantage. The Russian sunflower is easily raised, requiring very little care, and can be grown in fence corners and other places difficult to cultivate. Its production of seed is immense, yielding often at the rate of 100 bushels to the acre. It should be planted in hills four feet apart, any time from the 10th of May to the 1st of July. Three quarts of seed will plant an acre.—*Iowa Homestead.*

Plenty of gravel is an essential part of poultry diet.

Hens must have grit and gravel and sand and dirt and fresh water daily.

Things to be Avoided.

Do not place your coops in the open field, yard or orchard, where rains will soak and the rays of the sun beat down upon them.

Do not give them more soft or moistened feed at one time than they will eat; nor allow them, if possible, access to impure water. And remember that wet and filth are the greatest enemies to fowls, whether old or young.

When the young chickens are about to leave their mother, or what amounts to the same thing, she is about to leave them, decide for them their future roosting place and train them to go there in the evening.

If you want any for table use take those of inferior quality, and keep your best to stock your yard. Take them quietly from the roost the evening before, and do not capture them after a long chase over the farm with boys and dogs after them. Their roosting place should be dry all the year round, cool and airy in the summer, and closed up and warm in the winter. I do not believe in glass houses for chickens any more than for human beings to live in. If fowls are allowed to roost in the stables the warmth of the cattle will be beneficial and the yield of eggs increased during the winter months. This will be a question of expediency with the owner, as the presence of poultry in the stables is in some respects objectionable.

When they are kept over night in a separate chicken house, the floor under the roosts should be covered with dry earth or coal ashes, and be cleaned out and renewed once a week, or not less than once in two weeks, according to the number it accommodates. If you keep the roost poles and inside of your hen house dusty your fowls will not be troubled with lice, and the droppings mixed with the earth or ashes form an excellent manure, a source of profit generally neglected.

There ought also be kept a dusting box, containing several bushels of dry earth, to accommodate the fowls with a dust bath

during the winter season. A few cart loads of dust gathered off the road in the summer time and housed away, is the best that can be used for both purposes.

Do not keep your poultry confined in small pens; give them the run of the farm-yard and orchard whenever the crops allow.

Do not allow the young to run through the wet grass or be caught in a shower.

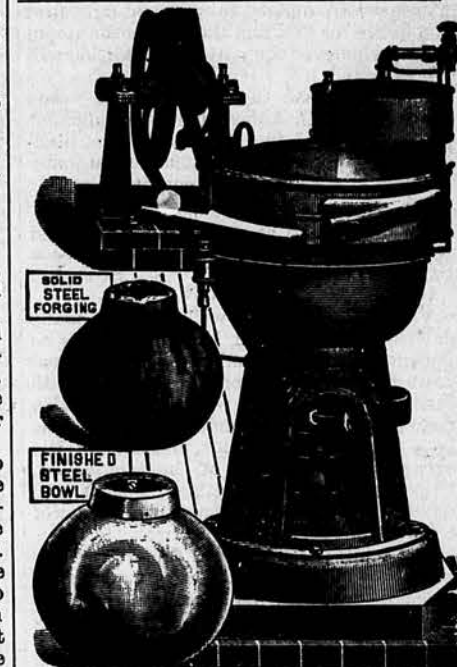
As to diseases of fowls, time will not allow me to say much on this subject. If you have observed the rules already given, the chances are your poultry will not be much troubled by disease. If, however, sickness shows itself, notwithstanding, separate the sick ones immediately from the rest; and, unless a valuable fowl, the cheapest remedy will be to take off its head and bury both the fowl and the malady deep enough under the ground to prevent the others from catching it. I will say this, that most of the diseases to which fowls are subject can be successfully treated if taken in time; such is my experience, and this includes both cholera and roup.—S. P. Eby, in *American Poultry Yard.*

Caustic Balsam.

GARRISON, Colo., May 5, 1892.

The Lawrence-Williams Co., Cleveland, O.:

While breaking a horse last fall I sweened him, and having cured a number of cases of sweency with your Caustic Balsam, I tried it. I used one bottle according to directions. It cured the lameness immediately, but the shoulder does not fill up. Perhaps you can tell me a way to cure him. (Continue the treatment. L-W. Co.) FRANK E. SNOW.



If you know of any one contemplating buying Creamery or Cheese Factory Machinery, refer them to Davis & Rankin Bldg. and Mfg. Co., Chicago, Ill., largest manufacturers of these goods in the world. Low prices and fair dealing is their motto. Alexandra Improved Cream Separator a specialty. See cut above. Capacity 2,500 to 4,000 lbs. per hour. Two horse power will run it. They also manufacture Fairlamb Cheese Color, Fairlamb Cheese Dressing, Fairlamb Rennet Extract, Fairlamb Butter Color and the Babcock Milk Tester and everything in the line of machinery and supplies for butter and cheese factories. If you wish to buy from the manufacturers direct, write for quotations and discounts. All goods guaranteed first-class or can be returned at our expense.

Davis & Rankin Bldg. and Mfg. Co.
240 to 252 West Lake Street,
CHICAGO, ILLINOIS.

BUTTER AND CHEESE MAKERS, please notice that you will, as a rule, find me from 11 a. m. to 1 p. m. on the S. E. balcony of the Agricultural Building, Jackson Park, and from 8 to 10 a. m. at my new office, where you may call or write for *Butter and Cheesemakers' Manual*, advertising Chr. Hansen's Butter Color, Cheese Color, Rennet Extract and Rennet Tablets (for farm cheesemaking). J. H. MONRAD, 5 W. Washington St., Chicago.

ST. JACOBS OIL

CURES
RHEUMATISM,
LUMBAGO, SCIATICA, SPRAINS,
BRUISES, BURNS, SWELLINGS,
NEURALGIA.



A copy of the "Official Portfolio of the World's Columbian Exposition, descriptive of Buildings and Grounds, beautifully illustrated, in water color effects, will be sent to any address upon receipt of 10c. in postage stamps by THE CHARLES A. VOGELER CO., Baltimore, Md.

PILES, FISTULA,

And all other Diseases of the Rectum cured by Drs. Thornton & Minor, Kansas City, Mo., without knife, ligature or caustics—no money to be paid until patient is cured. We also make a specialty of Diseases of Women and Diseases of the Skin. Beware of all doctors who want any part of their fee in advance, even a note. In the end you will find their expensive luxuries. Send for circular giving names of hundreds who have been cured by us, and how to avoid sharpers and quacks. Office, No. 100 West Ninth Street. Rooms 30-31-32 Burker Building.

ALL STEEL LIGHTNING FULL CIRCLE

K.C. HAY PRESS CO. KANSAS CITY, MO.

SAVE MONEY

KENWOOD

#65 High Arm "Kenwood" \$25.50
 #55 High Arm "Kenwood" \$22.50
 #50 High Arm "Arlington" \$20.50
 #45 High Arm "Arlington" \$18.50

The "Kenwood" is the latest improved and BEST sewing machine made. Light running. Noiseless. Self-setting needle. Self-threading shuttle. Automatic bobbin winder. Warranted ten years. All attachments free. We ship anywhere to anyone in any quantity at wholesale prices and pay freight or give ten days' free trial in your own home. No money required in advance. We also sell Standard Singer machines at \$16.50, \$14.00 and \$9.50. Send at once for free catalogue. CASH BUYERS' UNION, 158-160 W. Van Buren St., B710, CHICAGO, ILL.

FOR FATTER SHEEP AND MORE WOOL

DIP YOUR SHEEP IN COOPER DIP

BENEFITS THE FLOCK ERADICATES INSECTS AND DISEASE

1,000 gallon case, \$16; 100 gallon packet, \$2.
 SWIFT & HOLLIDAY, TOPEKA, and all Dealers.

IF YOU WANT ANYTHING IN THE LINE OF

PRINTING, BINDING, STATIONERY, BLANKS,

Township, School District or City Supplies, KANSAS LAW BOOKS, ETC.,

WRITE TO

CRANE & Co.

812 Kansas Ave., Topeka, Kas.

Send for Catalogue if interested.

THE "WESTERN SETTLER" IS A NEW PAPER.

TELLS ALL ABOUT THE WEST. Will be sent free to you and your friends.

Address JOHN SEBASTIAN, Gen. Ticket and Passenger Agent, Chicago, Rock Island and Pacific Railroad, Chicago, Ill.

DEAFNESS AND HEAD NOISES CURED

by Peck's Invisible Ear Cushions. Whispers heard. Successful when all remedies fail. Sold FREE!

W. F. HANCOCK, 535 N. W. Write for book of proofs.

KENDALL'S SPAVIN CURE

The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

KENDALL'S SPAVIN CURE.

SMITH'S FORD, N. C., Nov. 29th, 1892.

DR. B. J. KENDALL CO.,

Gentlemen:—I have the pleasure of writing you again in regard to my mare, about whom I wrote you about two years ago, she being afflicted with Blood Spavin. After following the directions you gave me for using "Kendall's Spavin Cure" I obtained perfectly satisfactory results after using six bottles.

The Spavin Cure was not known in my part of the country until I purchased the first bottle, now all my neighbors use no other liniment but "Kendall's Spavin Cure." It is all you claim. You may publish this if desired.

Very respectfully, ADAM BRITTAIN.

Price \$1.00 per bottle.

DR. B. J. KENDALL CO.,
 Enosburgh Falls, Vermont

SOLD BY ALL DRUGGISTS.

In writing to our advertisers please say you saw their advertisement in the KANSAS FARMER.

ALLIANCE CARRIAGE CO., CINCINNATI, OHIO.

UNION LEAGUE F.M.B.A. PATRONS

GRANGE

ALLIANCE

You should order no BUGGIES, CARRIAGES, WAGONS or HARNESS from any one until you have seen our New Grand Catalogue for 1893, which is mailed free to any address. It shows over one hundred new styles, with prices of vehicles ranging from \$30 upward, and Harness from \$5 upward. Our goods are strictly hand-made and fully warranted for two years, and our Spiral Springs are warranted for 12 years. We are recognized manufacturers for the above organizations. Examine our mammoth display at the World's Fair, in Chicago. The only manufacturers in the world that sell their entire output direct to the consumer.

Factory and Salesrooms: CINCINNATI, O.

Wroughton & Co., Cambridge, Furnas Co., Neb.

IMPORTERS AND BREEDERS OF

SHIRE, PEROHERON AND CLEVELAND BAY

GLYDESDALE, BELGIAN, GERMAN COACH, AND STALLIONS.

FARMERS' COMPANIES A SPECIALTY.

We have a system whereby we can organize companies and insure absolute success. Our stock is all guaranteed. Prices low and terms easy on long time. Visitors always welcome. Write for particulars. Mention this paper. Address: WROUGHTON & CO., Cambridge, Neb.

E. BENNETT & SON

TOPEKA, KANS.

The Leading Western Importers of

Clydesdale, Percheron, Cleveland Bay AND FRENCH COACH HORSES.

An Importation of 125 Head, Selected by a member of the firm, just received.

Terms to suit purchasers. Send for illustrated catalogue. Stables in town.

E. BENNETT & SON.

HE CANNOT GO ANY FURTHER, NEITHER CAN WE, But if you will write to us and say you saw our ad. in this paper, we will send you Free our PRICE LIST of goods that should be in Every Family in the land. We Guarantee our goods. You will be pleased, sure. Write to-day

CHAS. J. DOLD CO., Kansas City, Mo.

Look Here!

THIS WILL INTEREST YOU

If You are Thinking of Buying

A SEWING MACHINE.

The wool cut herewith represents The Kansas Farmer Sewing Machine, made under a special contract with the publishers of this paper. It is an elegant high-arm machine, beautifully finished in antique oak, with the name "KANSAS FARMER" artistically lettered on the cover and on the arm.

Economy is a virtue in itself, and, when judiciously applied, it becomes financial wisdom. Of course the family must have a sewing machine, but it is poor economy to pay \$40 to \$60 for what you can have for less than half the money.

READ:—We will deliver, express charges prepaid, at any express office in Kansas, the "Kansas Farmer" high-arm sewing machine, all complete, with full attachments, and warranted by the manufacturers for five years, for only \$20, including a year's subscription to the "Old Reliable" KANSAS FARMER.

OR, if a less expensive machine is wanted, we will deliver, express charges prepaid, at any express office in Kansas, the "NEW SINGER" high-arm sewing machine, all complete, with attachments, and manufacturers' warranty, for only \$15, including a year's subscription to the "Old Reliable" KANSAS FARMER.

These prices are, of course, for strictly cash with the order.

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

PLEASE MENTION "KANSAS FARMER" WHEN WRITING TO ADVERTISERS.

J.I.C. DRIVING STILL LEADS THEM ALL.

IT WILL CONTROL THE MOST VICIOUS HORSES.

75,000 sold in 1891. 100,000 sold in 1892.

THEY ARE KING.

Sample mailed X C for \$1.00 Nickel, \$1.50.

Stallion Bits 50 cts. extra.

RACINE MALLEABLE IRON CO. RACINE, WIS. J. P. DAVIES, Mgr.

AMERICAN ROOFING CO.

Largest Manufacturers in the U. S.

Sheet Iron Building Material

Sidings, Ceilings, Roofings, Shutters, Imitation Brick or Weatherboarding, Gutters, Downspouts, etc. For a 2 per cent. discount, mention this paper.

St. Louis. • • Cincinnati.

ROOF Your Buildings WITH Black Seal Roofing

TOUGH and DURABLE as leather, FIREPROOF as asbestos, WATERPROOF as rubber, and at prices within the reach of every one. Put on by anybody and good in any climate.

PAINT Your Roofs and Buildings with ROYAL ROOF PAINT

In Red or Brown; or with our glossy jet black, IMPERIAL ASPHALT PAINT, all fully guaranteed. Cheapest and best paint for metal and wood in use. Send for Pamphlet, Catalogue and Color Card to the manufacturers—W. E. CAMPE ROOFING & MFG CO., Kansas City, Mo.

DEMAND THE OLD RELIABLE

FRAZER

TRADE MARK

GREASE

SOLD EVERYWHERE WILL WEAR TWICE AS LONG AS ANY OTHER. TRY IT!

USE THE BEST TAKE NO OTHERS

ENGINES

If you want to buy a strictly first-class outfit at low figures, address The W. C. LEFFEL CO. Greenmount Av. SPRINGFIELD, O.

A Small THRESHING MACHINE of great capacity for Light Power

The Columbia something new.

EVERY FARMER can now **DO HIS OWN THRESHING**, with less help and power than ever before. Send for free Illus. Catalogue.

We make a full line of Horse Powers. **BELLE CITY MFG. CO., Racine, Wis.**

Write Advance Thresher Co. for Illustrated Catalogue and Price List of their

Band-Cutters and Self-Feeders,

Six, 10, 12, 15 and 20 horse-power Traction Engines, 24x40 to 40x64 Separators, Wagon-loading Elevator and Measure, Automatic Stackers, etc.

ADVANCE THRESHER CO., Kansas City, Mo.

FARMERS AND THRESHERMEN

Catalogue FREE.

All the Latest Improvements. Cushioned Gear, Steel Tire, Return fire-Boiler, 1/3 Fuel Saved.

Traction, Plain or on Skids.

3,000 IN USE and never an explosion.

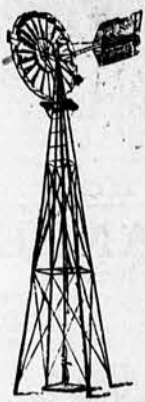
BUY THE NEW HUBER ENGINES.

ALL SIZES THRESHERS.

HUBER MFG. CO., Marion, Ohio.

VERY PLANTER CO., Agts., Kansas City, Mo.

27" Oscillator Threshers, Horse Powers, Engines JOHN S. DAVIS' SONS, Davenport, Iowa.



THE KIRKWOOD Steel Wind Engine

Has been in use since 1882. It is the Pioneer Steel Mill. It has beauty, strength, durability, power; it is the best, hence the mill for you to buy.

Thousands have them! **OUR STEEL TOWERS** Have four angle steel corner posts, substantial steel girts and braces; not fence wire. They are light, strong, simple in construction, much cheaper than wood and will last a lifetime. Our mills and towers are ALL STEEL and FULLY GUARANTEED.

Write for prices and circulars. Address, mentioning this paper, **KIRKWOOD WIND ENGINE CO.** Arkansas City, Kas.



MONEY SAVED By Buying Direct from Manufacturer.

We make Wood and Galvanized Steel Mills, Wood and Steel Towers. Mills Sold on Trial and on Time.

GET OUR PRICES BEFORE YOU BUY. Write for circulars, prices and terms. Address

CURRIE WINDMILL CO., Manhattan, Kansas.

BE HAPPY WHILE YOU LIVE, FOR YOU WILL BE A LONG TIME DEAD.

To be Happy buy a DANDY STEEL MILL



With Graphite Boxes. Never needs Oil. The Dandy Steel Tower is a 4 Cornered Tower, and the strongest and best in the market. Will be sent on 30 Days Test Trial, and if not entirely satisfactory can be returned to us, and WE WILL PAY FREIGHT BOTH WAYS. We also manufacture the old Reliable Challenge, O. K. Peerless and Daisy Wind Mills, Pumps, Cylinders, Tanks, Feed Mills, Corn Shellers, Horse Powers, &c.

Challenge Wind Mill & Feed Mill Co., Batavia, Kane Co., Ill.



IDEAL in Name and in Fact.

Steel WIND MILL and Three Post STEEL TOWER.

The LATEST and BEST. 8-9-12 ft. Geared. Sizes 10 and 12 ft. Ung geared. TOWERS, 20, 40, 50 & 60-ft. Mills with or without graphite bearings.

STOVER MFG. CO., 535 River St., FREEPORT, ILL.



I. X. L. THEM ALL. QUALITY TELLS.

THE BEST STEEL MILL. STRONGEST STEEL TOWER. No long story here, but send for Catalogue of Wood and Steel Mills, Pumps & Tanks. For Goods or Agencies address

THE PHELPS & BIGELOW WIND MILL CO., KALAMAZOO, MICHIGAN. Goods shipped from DALLAS, KANSAS CITY, MINNEAPOLIS or KALAMAZOO.

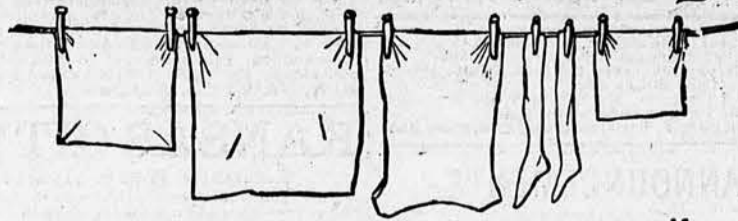
AGENTS LOOK HERE and Farmers with no experience make \$2.50 an hour during spare time. A. D. BATES, 164 W. Robbins Ave., Covington, Ky. \$21 one day, \$31 one week. So can you. Catalogue free. J. E. SHEPARD & Co., Cincinnati, O.

SPECIAL ANNOUNCEMENT.

We have made arrangements with Dr. B. J. Kendall Co., publishers of "A Treatise on the Horse and his Diseases," which will enable all our subscribers to obtain a copy of that valuable work free by sending their address (enclosing a two-cent stamp for mailing same) to DR. B. J. KENDALL CO., ENOSBURGH FALLS, VT. This book is now recognized as standard authority upon all diseases of the horse, as its phenomenal sale attests, over four million copies having been sold in the past ten years, a sale never before reached by any publication in the same period of time. We feel confident that our patrons will appreciate the work, and be glad to avail themselves of this opportunity of obtaining a valuable book.

It is necessary that you mention this paper in sending for the "Treatise." This offer will remain open for only a short time.

Your next week's washing



will look whiter, will be cleaner and will be done with less labor if

Clairette Soap

is used. The clothes will smell sweeter and will last longer. CLAIRETTE SOAP is pure, it cleans but does not injure the fabric. It does not roughen or chap the hands.

Millions use it. Do You?

N. K. FAIRBANK & CO., Mfgs. ST. LOUIS.

H. P. DILLON, President. ORGANIZED 1882. J. W. GOING, Secretary. **Shawnee Fire Insurance Company** TOPEKA, KANSAS. A Strong Western Company. Insures against fire, lightning, wind storms, cyclones and tornadoes. Losses paid, over \$105,000. Agents wanted everywhere in Kansas.

THE KANSAS MUTUAL LIFE, TOPEKA, KANSAS.

J. P. DAVIS, President. JOHN E. MOON, Secretary.

Issues all the most attractive policies of Renewable Term, Ordinary Life Limited Payment Life and Endowment Insurance. All, except the Renewable Term policies, have large guaranteed cash surrender values at the end of each year after the second from date of issue, and participate in annual dividends.

\$100,000 Deposited with the State Treasurer of Kansas.

Assets, January 1st, 1893, \$191,829.27. Death claims paid to April 15th, 1893, 410,000.00.

For policy or agency, address,

J. P. DAVIS, President.

MILWAUKEE

MILWAUKEE STEEL JUNIOR No. 10



Has won for itself the reputation of being the lightest, easiest handled, and most perfectly balanced Harvester and Binder manufactured. Its single lever reel, raising and lowering device, and carrying spring has no equal. Never before has a Harvester and Binder met with such grand success. It has an end drive sickle, one lever self-balanced reel. A spring carries the entire weight of the machine. It has no side-draft, and weighs only 1250 pounds.

MILWAUKEE CHAIN POWER MOWER.

Its perfection is guaranteed. It is the strongest and lightest running Mower manufactured. No side-draft. No weight on horse's neck. Cutter bar can be raised by either hand or foot lever. Has a spring to float the bar.

We invite your inspection before purchasing. Catalogue mailed free to any address.

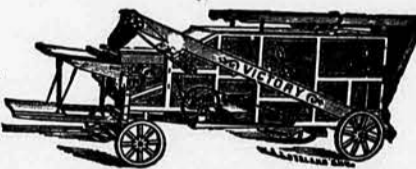
MILWAUKEE HARVESTER CO.

155-157-159 Huron St., Milwaukee, Wis.

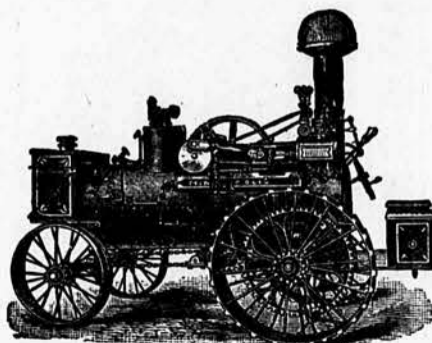


THE VICTORY SEPARATOR

has no equal for rapid threshing separating and cleaning all kinds of grain, flax and Timothy. Seven sizes from 28 in. cylinder and 42 in. rear, to 40 in. cylinder, 62 in. rear.



THE MINNEAPOLIS TRACTION ENGINE



will draw a heavier load, steam easier; use less fuel, than any other engine in America. Sizes 10-12-14-16-18 horse power, Wood and Coal or Straw-burners, as desired. Also Victory Self-feeders, Reliance Horse Powers, Weighers, Bagger Attachments, etc., etc.

Manufactured by

The Minneapolis Threshing Machine Co., Minneapolis, Minn.

Write for catalogue.

G. J. FERGUSON, General Agent. KANSAS CITY, MO.

FREE Illustrated Publications, with maps, describing lands now open to settlers. Mailed FREE. Address **CHAS. R. LAMBORN, Land Com., P. O. Box, St. Paul, Minn.**

6,000,000 Acres

Will soon be opened by the Government FOR HOMESTEAD SETTLEMENT IN CHEROKEE STRIP.

Full information necessary to enable you to secure a farm or town property, contained in

MORGAN'S MANUAL of Homestead and Town-Site Laws.

A standard authority used by the Government and endorsed by the land officials in Oklahoma. This book will place you in possession of knowledge that many persons will be glad to pay you for, as it shows just how all corners are marked by the Government, knowledge that a professional locator would charge \$10 to \$25 for.

Certain pieces of land are reserved for special purposes by the Government. Morgan's Manual tells you how to distinguish these. This information alone ought to be worth hundreds of dollars to you. The book contains 150 pages, with fine colored map, and will be sent to any address on receipt of price, 75 cents. Agents wanted in every town. Write for liberal discounts. **ROBBINS & THOMAS,** 117 So. 2d St., Guthrie, Oklahoma.

"DIETZ" TUBULAR DRIVING LAMP.



It is the only practicable and perfect Driving Lamp ever made. It will not blow out. It gives a clear whitelight. It looks like a locomotive head light. It throws all the light straight ahead, from 200 to 300 feet. It burns kerosene.

Send for book.

R. E. DIETZ CO., 45 Light St., N. Y.

THE GREAT SOUTHWEST!

Kansas. Colorado
Oklahoma. Texas.
New Mexico. Arizona.

Unparalleled Resources of Climate, Products and Markets.

Write to Jno. E. Frost, Land Commissioner SNTA FE ROUTE, Topeka, Kansas, for latest FREE PAMPHLETS.

The Atchison, Topeka & Santa Fe Railroad is offering for sale, on easy terms and at reasonable prices, 100,000 acres choice farming and grazing lands in fertile Arkansas River valley in South-Central and Western Kansas. These are not cuttings, but valuable original selections, which have reverted to the company. No better lands can be found for general farming purposes or investment. Fine fruit lands in wonderful Mesilla valley, near Las Cruces, N. M., equal, except for citrus fruits, to any California fruit lands, are also offered at less prices than this class of property usually commands. The prosperity of the great A. T. & S. F. system being largely dependent upon the prosperity of the farmers of the Southwest, it is naturally willing to aid the deserving and industrious immigrant seeking to establish a new home, by giving him all the facts and data at its disposal.

MISSOURI PACIFIC RAILWAY THE GREAT Southwest SYSTEM.

Connecting the Commercial Centres and rich farms of **MISSOURI,** The Broad Corn and Wheat Fields and Thriving Towns of **KANSAS,** The Fertile River Valleys and Trade Centres 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 Wood lands of the **INDIAN TERRITORY,** The Sugar Plantations of **LOUISIANA,** The Cotton and Grain Fields, the Cattle Ranges and Winter Resorts of **TEXAS,** Historical and Scenic **OLD AND NEW MEXICO,** And forms with its Connections the Popular Winter Route to **ARIZONA AND CALIFORNIA,** For full descriptive and illustrated pamphlet of any of the above States, or Hot Springs, Ark., San Antonio, Texas, and Mexico, address Company's Agents, or **H. C. TOWNSEND,** Gen'l Passenger & Ticket Agent. **ST. LOUIS, MO.**

