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TABLE OF CONTENTS.

PAGE 434—AGRICULTURAL MATTERS.—Weeds, and How to Kill Them. Coal Oil for Cut-Worms. Kafir Corn Pasture.
PAGE 435—THE STOCK INTEREST.—Potassium Nitrate Poison—How It Acts. Advantages of Balanced Rations. Pig-Feeding on High-Priced Grain. Artichokes for Swine.
PAGE 436—IRRIGATION.—Test of the Underflow at Hutchinson. Orchard Irrigation at Riverside, California. Cement Pipes for Irrigation. Small Irrigation Plants.
PAGE 437—Look Out for the Swindler. Address of President J. B. McAfee, Before Kansas State Temperance Union, July 4, 1895.
PAGE 438—THE HOME CIRCLE.—John Moltaire (poem). Advantage of a Full Length Mirror. Our Government. Unhindered by Facts. Bedroom Ventilation. How to Fumigate a Room.
PAGE 439—THE YOUNG FOLKS.—Red Clover (poem). A Question of Pedigree (poem). Hares and Rabbits. Twenty-four-Hour Dials. Catching Turtles. The Musical Cricket. Rhyme of the Railroad Flags. Transparent Water. Certitude. A Wildcat's Fight for Life.
PAGE 440—EDITORIAL.—Potash in Kansas Soils. Industry Wins.
PAGE 441—EDITORIAL.—Weekly Weather-Crop Bulletin. Gossip About Stock. Publishers' Paragraphs.
PAGE 442—HORTICULTURE.—Curing Fruit. Agricultural Forestry.... Publications of United States Department of Agriculture for June.
PAGE 443—IN THE DAIRY.—Directions for Home Cheese-Making. Less Demand for Oleo. Dairy Notes.... Weather Report for June, 1895.
PAGE 444—THE APIARY.—Enemies of Bees. Watering the Bees. Bees and Bee Hives. Hints for Bee-Keepers.... Quotations.
PAGE 445—THE VETERINARIAN.... Market Reports.
PAGE 446—THE POULTRY YARD.—A Movable Henner. How to Face the House. Lice in House or on Body. Fattening Ducks and Geese.

BREEDERS' DIRECTORY.

Cards of four lines or less will be inserted in the Breeder's Directory for \$15 per year or \$2.00 for six months; each additional line, \$2.50 per year. A copy of the paper will be sent to the advertiser during the continuance of the card.

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Recorded Poland-China Swine.

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Poland-China Hogs, Holstein Cattle

and B. P. Rock chickens of the choicest strains. Butler's Darkness No. 6846 S. and Ideal U. S. Nemo at head of swine herd. Only choice stock shipped on order. Sows bred and a few extra good young boars for sale. Write your wants. Satisfaction guaranteed. Sixth Annual Clearance Sale, Sept. 17, 1895. BERT WISE, Reserve, Brown Co., Kas.

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MARTIN MEISENHEIMER, Registered Poland-China Swine. Hiawatha, Brown Co., Kas.

20 brood sows, headed by Tecumseh Free Trade 10783 S., assisted by a son of Benton's Last 8827 S. Some of best females bred to Butler's Darkness, Black U. S. Nemo (Vol. 9) and Victor M. Jr. (Vol. 9) Annual Clearance Sale, September 18, 1895.

ROYAL HERD POLAND-CHINAS and Plymouth Rocks. Herd headed by Cunningham's Choice 13731, from the herd awarded grand sweepstakes at World's Fair on boar and sow; Royal King 11874. My sows are royal-bred. Ward A. Bailey, Callista, Kingman Co., Kas.

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C. S. CROSS, Proprietor, Emporia, Kas.

Breeder of PURE-BRED HEREFORD CATTLE. Herd headed by Wild Tom 51592, a son of Bean Real 11065 and assisted by sons of Cherry Boy 26475, Archibald 1st 39268 and Washington 22615. 200 head, all ages, in herd. Strong in the blood of Lord Wilton, Anxiety and Horace. A choice lot of young heifers, fit for any company. Bulls all sold. Correspondence solicited, or, better still, a personal inspection invited.

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SWINE.

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PEDIGREED POLAND-CHINAS.

B. R. ADAMSON, Prop., Ft. Scott, Kas. 25 highly-bred brood sows of best strains, headed by Black Dandy 2899 S., Black Stop 10650 S. and J. Oker Wilkes 12683 S. About 100 selected individuals sold this season. 25 youngsters coming on now for choice. Write or come and visit my herd.

Quality Herd Poland-Chinas.

For first choice pigs from stock producing winners of seven prizes World's Fair. Darkness Quality 2d and Ideal U. S. by Ideal Black U. S. head the herd. Both first-prize winners Kansas State fair 1894. Come or write your wants. Willis E. Gresham, Burrton, Kas. Secretary Kansas Swine Breeders' Association

PLEASANT VIEW STOCK FARM.

J. A. WORLEY, Sabetha, Kansas.

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Herd headed by Anxiety 20251 A., assisted by Combination U. S. 13408 and America's Equal 12279. Have some choice fall pigs, both sexes, for sale, and a few Light Brahma cockerels. Eggs \$1 and \$1.50 per setting. Write. [Mention KANSAS FARMER.]

Evergreen Herd Poland-Chinas.

Winterscheidt Bros., Prop'r's, Horton, Kas. Headquarters for Admiral Chip pigs. The great \$250 boar, Admiral Chip 7919, heads the herd, assisted by Kansas Chief 13076, Winterscheidt Victor 13294, Geo. Wilkes Jr. 11895. Also pigs from Orient's Success 27259 and Banner Chief 12714. Sows of following strains: Tecumseh, None Such, Wilkes Admiral Chip, etc. Prices reasonable. Write or come.

J. R. KILLOUGH & SONS,

Richmond, Franklin Co., Kansas,

POLAND-CHINA SWINE.

Headed by Upright Wilkes 13246 and assisted by J. H. Sanders Jr. 13739. Our brood sows are all richly bred and high-class individuals. A fine lot of fall pigs, both sexes, ready to go at reasonable prices.

HILLHURST STOCK FARM

GARNETT, KAS., (Anderson Co.)

Walter Latimer, Prop'r.

POLAND-CHINA SWINE

of the Tom Corwin and I. X. L. strain. None better. Public sale, Friday, Sept. 6, 10 a.m. Send and have your name recorded for a catalogue at once. Stock grown by Latimer are sure winners. Col. Sawyer, auc.

STANDARD POLAND-CHINA HERD.

CHAS. A. CANNON, Proprietor,

HARRISONVILLE, CASS COUNTY, MISSOURI

Breeder and shipper of registered Poland-China swine of the best strains. Herd headed by Chow Chow 9903 S., assisted by a Black U. S. son of Imitation 27185 O., also a son of Tecumseh Jr. 10207 O. 220 head in herd. Young boars and gilts yet on farm. Write or come and visit me.

SUNNY SLOPE FARM, EMPORIA, KANSAS.

200 head of Poland-China hogs, headed by Long-fellow 26985 O. (who has the best Columbian record west of the Mississippi). J. H. Sanders Jr., Hadley Jr. 27505, Sir Charles Corwin. We also combine the blood of Black U. S., Ideal U. S. and Wilkes. 100 head of brood sows.

Also 100 head of Berkshires, headed by the well-known boar, Major Lee 31139. We have 25 gilts bred by him to General Lee of Gentry breeding and Royal Peerless the Great. We have one of the largest herds of hogs in the United States. Why not come to the fountain head for brood sows? 200 head of fashionably bred Herefords. H. L. LEIBFRIED, Manager.

(Breeder's Directory continued on page 18.)

Agricultural Matters.

WEEDS, AND HOW TO KILL THEM.

Investigations of Lyster H. Dewey, Assistant Botanist, United States Department of Agriculture.

During the season of 1894, which was remarkable for its extreme drought, the ordinary farm crops were checked in their growth and the weeds became more conspicuous than usual. This fact, together with the attention attracted by certain species recently introduced, has awakened particular interest in the subject of weed eradication, and there has been an enlarged demand for accurate knowledge in regard to injurious weeds. This fact has been amply recognized by the United States Department of Agriculture, and the time and pains devoted to the study and investigation of weeds in its Division of Botany have been greatly increased in late years, while its efforts have been directed to meet the growing demand for accurate information on the subject by the frequent publication of bulletins and circulars. Similar publications have also been issued from the experiment stations, and many agricultural papers have given the subject of weeds considerable space in their columns.

For the complete eradication of a noxious plant, the production of seeds must be prevented, and if the plant is a biennial or a perennial the rootstock must be killed. The processes by which seed production may be prevented or rootstocks killed are comparatively simple in most cases, and in no case are they impracticable. It would seem, therefore, at first thought that the best processes of weed eradication being known and practiced with reasonable fidelity the complete eradication of some of the farmer's worst enemies might be accomplished. But in the case of weeds which have already become abundant and widely distributed, the conditions under which many of them occur are such that the farming community regards their extermination as impossible, and we can only hope for their reduction to a state of comparative harmlessness. A species newly introduced, however, might doubtless be completely eradicated if taken in time. If the farmer on whose land the first Russian thistles grew in 1873 had known the evil character of the plant and had spent a few hours destroying them in his flax field, the species might have been completely annihilated in this country and millions of dollars and years of labor saved.

The same might doubtless be said, were their histories better known, of the king devil weed of northern New York, the Paraguay bur of Florida, Georgia and the Carolinas, the prickly lettuce of the Northern States, and many others. This emphasizes the necessity that each land-owner should be on the watch for new plants and learn their character, if possible, before they become established and assert themselves as aggressive weeds on his farm. This eradication of a species on its first appearance in a limited area forms practically the only possible method of complete and final extermination, unless public sentiment shall be aroused to the point of a more vigorous and universal destruction of weeds than has heretofore been practiced. Unless strongly supported and enforced by the people directly interested, laws for the complete extermination of weeds are of little avail, and in most cases thus far they have been found ineffectual, as is proved by the abundant crops, growing year after year, of Canada thistles in Pennsylvania, Ohio and Michigan, of wild carrots in Connecticut, and of cockle-burs and sunflowers in Kansas.

If weeds cannot be completely exterminated they may be brought under subjection, and in restricted localities this subjection may approach so near to extermination as to prevent any material damage without requiring appreciable extra labor. This is almost the ideal condition for a farm so far as weeds are concerned. There are all gradations from this condition to that of the farm so weedy that a profitable crop cannot be raised and that no one will buy the land at any good price

unless he has some assurance that wild onion, penny cress, horse nettle, Canada thistle or quack grass can be killed or controlled. Any species of weeds can be subdued and controlled within the limits of an ordinary farm, and unless the value of the land is low from other causes this may be profitably undertaken.

GENERAL METHODS OF ERADICATING WEEDS.

If the weed, like many of our most abundant kinds, is an annual, reproducing itself from the seeds only, and dying root and branch each year, it may be subjected by preventing seed production. The seeds of many annuals retain their vitality for several years, so that if they once become abundant in the soil they are likely to germinate at irregular intervals, and thus cause trouble for a long time, even though no fresh seed is introduced. In this case merely preventing the production of seed will gradually reduce the quantity of weeds and will prevent any further spreading.

For permanent pastures, lawns and roadsides this is often the most practical method, and it is quite sufficient if persistently followed. In cultivated fields the land thus seeded should first be burned over to destroy as many as possible of the seeds on the surface. It may then be plowed shallow, so as not to bury the remaining seeds too deeply in the soil. The succeeding cultivation, not deeper than the plowing, will induce the germination of seeds in this layer of soil and kill the seedlings as they appear. The land may then be plowed deeper and the cultivation repeated until the weed seeds are pretty thoroughly cleared out to as great a depth as the plow ever reaches. Below that depth—eight to ten inches—very few weed seeds can germinate and push a shoot to the surface. A thousand young seedlings may be destroyed in this manner by the cultivator with less effort than a single mature plant can be destroyed, and every seedling killed means one less weed seed in the soil. Barren summer-fallowing is often practiced to clear out weedy land by the method just described; but usually corn, potatoes, rape, cabbages or beets may better be grown, giving a profitable return for the extra cultivation. The best results can be obtained, of course, with crops that allow cultivation during the greater part of the season, and that do not shade the soil too much, as the direct rays of the sun heating the surface of the soil aid materially in the germination of many seeds.

As annual weeds usually thrive best in soil that has been broken but is not occupied, it is evident that broken land should not be permitted to remain idle. Abundant crops of annual weed seeds are matured every fall on potato and corn land and in stubble fields, where a profitable crop of crimson clover or winter oats or rye might have been grown. A little grass seed raked in on bare hillsides will often keep down annual weeds and will at the same time prevent washing. Mowing the roadside two or three times during the summer will subdue the dog fennel and ragweed. Mowing the stubble about two weeks after harvest in grain fields that have been seeded to grass or clover will check the annual weeds and at the same time produce a mulch that is very beneficial to the seeding during the August drought.

Biennials, such as burdock, wild carrot and bull thistle, store up nourishment in thickened roots during the first year of growth and during the second year they produce seed and die. Many species which are ordinarily true biennials will live three years, or possibly longer if seed production is prevented by mowing or cutting the stem above the crown of the root. In fact, mowing or cutting off the main stem often induces it to branch out at the base and send up several stalks in the place of the one. Cutting the roots below the crown usually kills them. If this work is to be done by hand with a hoe, grub hoe or spud, as is often the case with bull thistles on new ground, it can be done most effectively and with least labor in the fall, during the first year of growth. The stools or rosettes of leaves, close to the ground, often

give little suggestion of the prominent seed-stalk to be grown the following year; but they are sufficient to indicate to the observing eye the presence of weeds. The root at this time is more tender, and hence more easily cut than in the mature plant, and one does not have to strike so deep to be sure of killing it. In sod ground a spud—a tool like a chisel on the end of a fork handle—may be used to much better advantage than a hoe for cutting thickened roots below the surface.

Biennial weeds are readily killed by cultivation such as is given to hoed crops, and the seeds may be cleaned out of the land by this method. The weeds of this class are usually most abundant in old pastures, along roadsides and in waste places where the soil is seldom disturbed. The weeds must be destroyed in these places if the work of clearing the seed out of cultivated fields is to be made effective.

Perennial weeds reproduce themselves by seeds and also propagate by some form of perennial underground stem, as the rootstocks of Canada thistle and couch grass, the corm or solid bulb, of the nut grass and chufa, and the bulb of the wild onion. A few plants sometimes classed as noxious weeds have runners above ground, as Bermuda grass and cinquefoil. To destroy perennial weeds, seed production must be prevented and the underground portion must be killed. Seed production may be prevented by mowing when the first flower buds appear, the same as in the case of annuals or biennials. The best methods for killing the rootstocks vary considerably according to the soil, climate, character of the different weeds, and the size of the patch or the quantity to be killed. In general, however, the following principles apply:

1. The rootstocks may be dug up and removed, a remedy that can be practically applied only in small areas.
2. Salt, coal oil or strong acid applied so as to come in contact with the freshly-cut roots or rootstocks destroys them for some distance from the point of contact. Crude sulphuric acid is probably the most effective of comparatively inexpensive materials that can be used for this purpose, but its strong corrosive properties render it dangerous to handle.
3. Rootstocks may be starved to death by preventing any development of green leaves or other parts above ground. This may be effected by building straw stacks over small patches, by persistent, thorough cultivation in fields, by the use of the hoe or spud in waste places, and by salting the plants and turning on sheep in permanent pastures.
4. The plants may usually be smothered by dense, sod-forming grasses or by a crop like clover or millet, that will exclude the light.
5. Most rootstocks are readily destroyed by exposing them to the direct action of the sun during the summer drought, or to the direct action of the frost in winter. In this way plowing, for example, becomes effective.
6. Any cultivation which merely breaks up the rootstocks and leaves them in the ground, especially during wet weather, aids in their distribution and multiplication, and is worse than useless, unless the cultivation is continued so as to prevent any growth above ground. Plowing and fitting corn ground in April and May, and cultivating at intervals until the last of June, then leaving the land uncultivated during the remainder of the season, is one of the best methods that can be pursued to encourage the growth of couch grass, Johnson grass and many other perennial weeds.

(To be continued.)

Coal Oil for Out-Worms.

J. George, of Mason county, West Virginia, contributes the following experience to the *Ohio Farmer*:

"In taking advantage of the ruinous price of sheep and wool I am plowing all my old pastures and planting a crop of corn and reseeded to grass; consequently it would be expected that the worms would be very troublesome in my corn field, but they are not. I began plowing in December and finished the last week in March, but all got

Well Satisfied with Ayer's Hair Vigor.

"Nearly forty years ago, after some weeks of sickness, my hair turned gray. I began using Ayer's Hair Vigor, and was so well satisfied with the results that I have never tried any other kind of dressing. It requires only an occasional application of



AYER'S

Hair Vigor to keep my hair of good color, to remove dandruff, to heal itching humors, and prevent the hair from falling out. I never hesitate to recommend Ayer's medicines to my friends."—Mrs. H. M. HAIGHT, Avoca, Nebr.

AYER'S Hair Vigor

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

Take Ayer's Sarsaparilla for the Complexion.

some freezing. I began at once to prepare my land for planting and had it in fine order by the 20th of April, commenced to plant on the 22d and finished on May 3, treating all the seed corn to a soaking of carbon oil, which seemed to help it to germinate quickly, as when we finished planting the first planting was coming up, and I had a splendid stand and no worms, and, at this date, in spite of the freeze and frost, I have it worked out the third time and am about through 'thinning,' the corn being eighteen to twenty inches high and a good color, while my more unfortunate neighbors are still planting and no corn in sight.

"I am of the opinion the early plowing and planting is the proper thing to do and put on plenty of the carbon oil to keep ants and other insects from destroying the kernels. My experience last season was the same as this, while my neighbors are having the same bad 'luck' (?) this year as they had last.

"Some of my neighbors don't like fall or winter plowing and consequently can't plant early to get a start of the worms, and they would be afraid of the oil for fear the corn would not 'come up' on account of the oil killing the germ."

Kaffir Corn Pasture.

EDITOR KANSAS FARMER:—I notice a clipping from the *Breeder's Gazette*, in your columns, in which the writer, Frank E. Barnhart, of Wabunsee county, thinks second-growth Kaffir corn is poisonous to cattle, and gives as a remedy for affected cattle a teaspoonful of aconite and a drench of lard.

I have given much time to correspondence from all parts of the country and a careful study of all press reports. These facts seem to be established that while the percentage of danger is very low—perhaps not one in a thousand of cattle that are pastured upon sorghum are in any way affected—yet it is a fact that under some conditions of animal or of the sorghum, it is extremely dangerous. What those conditions are is for veterinarians to study and farmers, so far as possible, to observe. Hundreds of theories have been advanced, but I have seen none yet but what seemingly well accredited facts in my possession, in my judgment, refute. I shall not add another theory to the list.

Mr. Barnhart thinks it a poison that exudes from the stubs after cutting, yet his cattle were cured by giving such a medicine as I would give to a horse for the colic, and other cattle have been saved by simply drenching with lard or by letting the gas escape by an incision into the rumen or paunch.

While at first the danger, though

slight, was confined to second-growth common sorghum, there is now no doubt that it applies to first, second or any after growth, and to all sorghum, or that generally known as Kafir and Jerusalem corn, millo maize, African millet, etc. Though there is but little danger, yet where the precaution has been taken to feed a little of partially cured sorghum for a few days before turning cattle upon it and seeing that they have had water, salt and other feed before going in, there seems never to have been any trouble. While thousands of cattle have been turned upon it at all stages of growth, without any resulting trouble, yet we would advise this care and their close watching first hour and to have remedies at hand, for the only cow or even the whole herd has been lost. J. M. RICE.
Winview, Okla.

The Stock Interest.

THOROUGHbred STOCK SALES.

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

SEPTEMBER 6—Walter Latimer, Garnett, Kas., Poland-China swine.
SEPTEMBER 18—Martin Melsenheimer, Hiawatha, Kas., Poland-China swine.
OCTOBER 4—Winterscheidt Bros., Horton, Kas., Poland-China swine.
OCTOBER 9—Geo. W. Null, Odessa, Mo., Poland-China swine.
OCTOBER 10—J. R. Killough & Sons, Richmond, Kas., Poland-China swine.
OCTOBER 22—F. M. Lall, Marshall, Mo., Poland-China swine.
OCTOBER 23—C. G. Sparks, Mt. Leonard, Mo., and G. L. Davis, Elmwood, Mo., Poland-China swine.
OCTOBER 29—Chas. Cannon, Harrisonville, Mo., Poland-China swine.
OCTOBER 30—L. N. Kennedy, Nevada, Mo., Poland-China swine.

Potassium Nitrate Poison—How It Acts.

After describing some cases of poisoned cattle, from eating corn stalks containing unusually large quantities of potassium nitrate, Dr. Mayo, of the Kansas Experiment Station, gives the following experiment, which may be useful as an accurate description of the action of this kind of poison:

"To test the toxic, or poisonous, properties of potassium nitrate upon cattle, 200 grams of nitrate of potash, finely pulverized and mixed with wheat chop and chopped green corn, was fed to a heifer weighing about 500 pounds. She began to eat it readily, and after eating probably one-third of the amount refused to eat any more. The animal had been well fed with hay and grain and was not especially hungry at the time. The animal appeared slightly sluggish afterward and passed more urine than normal, but further than this nothing unusual was noticed. A second experiment was made later upon another heifer weighing about 500 pounds. She was given 300 grams (about nine and two-thirds ounces) of nitrate of potash, dissolved in water as a drench. Her temperature before giving registered 102.5° F. The potash was given at 10:45 a. m. At 10:55 a considerable quantity of urine was passed. At 11 o'clock there was violent trembling of the voluntary muscles, causing the animal to fall to the ground. The pulse was small, rapid, and almost imperceptible. The animal was urged to get up and with considerable difficulty succeeded in doing so, and remained standing. At 11:15, thirty minutes after giving the potash, her temperature registered 102° F., having fallen one-half degree. Some urine collected at this time, and examined later, revealed the presence of nitrate of potash in considerable amount. The trembling of the voluntary muscles and shaking of the knees continued. The animal would void urine about every ten minutes. In voiding urine she would stand for some minutes with back arched and the abdominal muscles contracted. She seemed slightly uneasy, but did not seem to suffer severe pain. At 12:25 p. m., a small quantity of mucus was passed *per anum* and a small amount of mucus and tears dropped from the nose, and some mucus and saliva from the mouth. Her temperature registered 102.2° F. At 12:55 she lay down, resting her lower jaw upon the ground, and seemed to doze occasionally. At 1:20 p. m., her temperature had risen to 102.9° F.; her pulse was stronger but still very rapid. From this time onward she seemed to be getting much better, and at 4 o'clock in the afternoon was left, seeming likely to recover, but

she died during the night of October 6. An autopsy was held October 8, at least thirty hours after death, which revealed the following condition: The animal was lying in the yard on the left side. No signs of struggling were visible except a slight movement of the legs. The skin was dark with congested blood. The mucous membrane of the rumen and reticulum was highly congested, the mucous membrane being readily torn and peeled off. The abomasum, or fourth stomach, was highly inflamed; the small intestines congested in places, of a foot or more; liver congested; gall bladder distended with normal-looking bile; spleen normal. Both lungs were congested but not badly. The pericardium (heart sac) was inflamed in patches, the pericardial fluid being increased in amount. Both ventricles were contracted, the auricles being filled with blood. Both kidneys were congested, being much darker in color than normal; bladder empty. The cerebral meninges were congested with dark but not firmly clotted blood. The blood of the body appeared darker than normal and much more fluid; other organs apparently normal."

Other experiments are described in the bulletin. It will pay any farmer or stockman to write a postal card to the experiment station, at Manhattan, and obtain a copy of the bulletin (No. 49) giving a full account of this kind of poisoning.

Advantages of Balanced Rations.

EDITOR KANSAS FARMER:—What I attempted to show in my letter in the KANSAS FARMER of June 26, was, that the Farmers' Bulletin No. 22 gave us an idea of how to feed more intelligently. By actual experiment, the feed value of any feeding stuff agrees nearly with its fuel value. As Prof. Georgeson has shown in past bulletins, a balanced food gives the best returns, that is, where protein and carbohydrates are distributed in the proper ratio. Most authorities recommend 1 part of protein to 6 of carbohydrates for fattening animals. Any feed is the most valuable that gives the best returns from the money outlay. Nitrogenous foods, pounds considered, gives the greatest gain. The most concentrated of this class is cottonseed meal, being 1 of protein to 1.22 carbohydrates, while corn is the type of the carbonaceous foods, being 1 of protein to about 10 of carbohydrates. This we calculate from the table cited to above and it agrees with other authorities. This is calculated from the units of heat or calories which are taken from the digestible portion of the food.

For the past four months my brood sows have had a food of oats and pasture, sometimes a little bran. Now I have strong, healthy pigs. In the fattening lot are hogs fed on corn exclusively. To have fattened these hogs on oats would have been expensive, and, I think, an unprofitable venture, although there is more nitrogen in oats than in corn. If the brood sows had been fed on corn, some would have died in pigging, and what pigs would have come would not have bone and muscle to start out right. Skimmed milk could not fatten pigs without expense that could not be realized. The same is true in the so-called concentrated foods, which makes them almost valueless, only in conjunction with cheaper foods and a consultation of the feeding-stuff tables published quite extensively. Foster, Mo. ELMER LAUGHLIN.

Pig-Feeding on High-Priced Grain.

The advance in the price of corn and wheat will cause pig-feeding to be neglected by a great many, assuming that the pigs can be fattened cheaper on new corn than the old. In the effort to secure a good price for corn and sell as much as possible, important points bearing on the pig-feeding will be lost sight of.

The first and very important one is entirely lost sight of or else not believed, that there is more profit in making the pig do his best while young. The farmer that does not believe this never makes as much out of his pigs as he should; not as much out of the grain he does feed them for the reason that he does not feed as liberally as he

should. It will be assumed that corn will be cheap when the new crop is ready, though the prospects in this direction at present, June 1, are not such as to fill the farmer's heart with joy. If the new corn crop is short the hogs will have to be fattened from it, and at a much greater cost than if fed now, because the summer keep of the hogs is an added bill of expense if fall pigs have been carried to one year or over before sending to market. Distance from market prevents a great many men from making the blunder of marketing their corn that would do it without thought if the market was near their farms.

To return to the pigs. When under fifty pounds weight less than one and six-tenths pounds of dry matter made a pound of gain. Yet this is a time that we so often see pigs thin and hear them squealing from hunger, because of the mistaken belief on the part of the owner that they cannot profitably be fed a full ration at this age and size. From the manner in which pig-growing is now conducted, or should be, that of putting spring pigs on the market in the fall, it is evident that it is a losing game to stint the pigs in their grain ration.

Another point, if the corn is sold and not replaced by other food in the shape of mill products, the pigs lose their thrifty habits of growth which they can never fully regain, no matter how good care and feeding they may have when new grain comes. Then again, this limiting or dropping out the grain ration puts off the fattening period, losing to the farmer the advance in price that is secured by being first to market.

This lengthening of age or keeping time before getting ready for market necessitates feeding in cold weather, making the cheap feed of the winter as dear, on account of increased amount required to make a pound of gain in cold weather, as the high-priced feed to young pigs while on grass.

Pig-feeding, to a great extent, is in the hands of small farmers, and to secure the necessary living income from their farms the pigs must go to market as pig pork, in fact, all work must be pushed. The small farmer cannot rush the pig and yet sell his grain products whenever it commands a high figure.

When the farmer undertakes to change his operations to be able to catch the high grain markets with grain to sell, and the high pork market with fat porkers, the chances are that he will catch neither; more likely each time that he has one or the other product ready for market the price will be at a low point, so low that he is constantly discouraged with returns received for his labor.

Another most serious objection to the effort too often made to get a good return from selling the grain and getting a good return from carrying the pigs on a short ration is the fact that the land suffers. Plant food is not returned to it in the quantities that it should be. Too often we have noticed when the grain ration is short the pasture is also short. In fact, on farms that are so situated and have advantages favoring pig-growing, and on which a sufficient number of pigs should be grown to consume all grain, there is an effort made to grow a few hogs and market part of the corn grown, with a consequent result that the hogs never reach the market at as early an age as they should, and when they are marketed they have cost too much. Under this system of management the lands fail to improve in quality but rather grow poorer each year.

The matter of selling the corn or other grain would not be so bad if some other food more suitable for the pigs was purchased for them. But it is a noticeable fact that the corn-seller is seldom a purchaser of other feed for his pigs. When the idea of growing corn for market once gets a hold on him the liberality of his hand when he feeds his pigs grows smaller all the time. Directly the pigs become a secondary consideration when they should be first. Only the other day a man complained that the old sows in his care were fence-breakers. We told him he should feed them better. He

replied that he had nothing to feed them. Since then we have seen the same man hauling corn to market. We know that in the management of this farm too much attention is given to marketing the grain and too little to the systematic and careful feeding of the swine. And yet it is a first-class grain and swine farm, on which both are often produced without profit. For example, one year when corn was sold at 25 cents per bushel, had the hog supply been what it should have been, nearly twice that amount could have been made by feeding.—John M. Jamison, in *Ohio Farmer*.

Artichokes for Swine.

In response to a request for information as to artichokes, Mr. Geo. W. Fry, of Dunlap, Mo., gives the *Western Swine Breeder* his views and experience, as follows:

"The readers of the *Swine Breeder* remember that information was asked for in this paper a year ago about artichokes, but no reply came. As a test to the matter, we bought and planted a few last year, and have to say we are so well pleased with the venture that we planted three times as many this year and so we can arrive at some conclusions as to the best variety to plant. We have read big stories about yield and merit as stock food in artichokes, but they seemed so colored and unreasonable compared with other root crops with which we were familiar that they went by as just a little fishy. We are not in the business now and may be pardoned for sifting this matter a little. Last year was the driest we ever saw, east or west. The artichokes came up and grew nicely till about time for the tubers to set, when it became so dry that a small button was about all they could produce. They went through the severe drought still green, while potatoes and other crops went dry. In September we had some rain and the artichokes began to grow, and by frost, in October, late, plenty of tubers could be found large as a pint cup. As this year could not be a test on their yield, we selected three good, thrifty-looking hills (planted in corn spaces) which we dug and took up a heaping half bushel (to our surprise). These hills being so far apart gave no possible chance to get tubers belonging to other stalks. Now, if three hills make a half bushel, under very unfavorable circumstances, six hills will make a bushel easily with good conditions. Then an acre only lacks twelve feet of carrying 3,000 hills of corn, and will carry twice as many hills of artichokes or 6,000 hills. If six hills yield one bushel, an acre will yield 1,000 bushels at the same ratio. Now this looks a little extravagant, and we are like the old lady that saw the bicycle run away with a man. She thought it was a wagon wheel and said you need not believe it unless you want to, as she would not if she had not seen it herself. The proof of the pudding is in the eating. Try them and know for yourself. These tubers are as good cooked or raw as turnips and make splendid pickles. Men who have tested them claim them good for all kinds of stock. They are undoubtedly good for hogs. For sows at farrowing they are the finest thing we ever saw, as ours run on the patch all winter and spring till planting time and they never farrowed with less trouble. Even the gilts pulled through without any care or attention. These tubers need not be dug in fall unless you want to plant them then, which is probably the best time, as they start early in spring and are out of the way of spring work.

"Cheap feed is what we want and must have to make anything from hogs. Artichokes furnish green food in fall, winter and spring, a time most needed, and save feeding so much concentrated food. Breeders will live on them and do well, but it is nonsense to talk about feeding a bunch of hogs out on roots alone. We cannot speak now of the erroneous idea, but may in future."

Few medicines have held their ground so successfully as Ayer's Cherry Pectoral. During the past fifty years it has been the most popular of all cough cures and the demand for it to-day is greater than ever before. Prompt to act and sure to cure.

Irrigation.

Test of the Underflow at Hutchinson.

EDITOR KANSAS FARMER:—Enclosed find memoranda of test made at Hutchinson Reformatory on an eight-inch screen point, ten feet long, made of 20 gauge galvanized iron, with one-fourth inch holes one inch apart both ways, then covered with 60 gauze and connected to a four-inch standard pipe twenty-one feet long. This screen was plugged at the bottom with a wooden plug. A casing twenty inches in diameter was sunk twenty feet below the surface of water, the screen put in place and the space between casing and screen filled with coarse gravel. The last twelve to fifteen feet was through good coarse sand and gravel. This four-inch pipe was connected to a No. 3 Van Wie centrifugal pump, using two elbows, pump run at 710 to 725 revolutions per minute, discharging through a four-inch pipe to a point four feet eight inches above pump. Center of suction to pump on a level of the surface of ground. Distance from center of suction to top of water twelve feet seven inches at time of starting pump. Water was discharged into a reservoir, 100 feet inside, slope 1 to 1, ripped with stone. The pump filled the reservoir at the rate of six inches per hour at the start, but after getting up a ways the seepage was very heavy, owing to the very porous nature of the soil. It leaked away eighteen inches during the night. I put two one and one-fourth inch points well down in the water-bearing gravel, one at the side of the screen, the other fifty feet north. The water stood twelve feet seven inches from surface at the start. After eight hours run, the water was twenty and a half inches lower at pump and nine and a half inches at the point fifty feet away. Vacuum gauge showed twenty-one inches at start and twenty-four to twenty-five inches at the last. A nine-hour run the next day did not lower the water at pump as low by one inch and two inches at the fifty-foot well. Temperature of water 58°, temperature of air 92°.

TABULAR RECORD OF TEST OF WELL AT HUTCHINSON, BY W. L. GAMAGE.

Hours	No. of test.	Depression of water in drive well.		Vacuum in suction pipe.
		50 feet away.	Best side well tested.	
		Inches.	Inches.	Inches.
First.	1	9	12	21
	2	10	13	22
	3	11	14	23
	4	12	15	24
	5	13	16	25
Second.	6	14	17	26
	7	15	18	27
	8	16	19	28
	9	17	20	29
	10	18	21	30
Third.	11	19	22	31
	12	20	23	32
	13	21	24	33
	14	22	25	34
	15	23	26	35
Fourth.	16	24	27	36
	17	25	28	37
	18	26	29	38
	19	27	30	39
	20	28	31	40
Fifth.	21	29	32	41
	22	30	33	42
	23	31	34	43
	24	32	35	44
	25	33	36	45
Sixth.	26	34	37	46
	27	35	38	47
	28	36	39	48
	29	37	40	49
	30	38	41	50
Seventh.	31	39	42	51
	32	40	43	52
	33	41	44	53
	34	42	45	54
	35	43	46	55
Eighth.	36	44	47	56
	37	45	48	57
	38	46	49	58
	39	47	50	59
	40	48	51	60

*A stop of five minutes.
†There is an apparent discrepancy in the readings of the vacuum gauge. This is caused by the gasoline engine not governing well, and at the time of reading might be too high or too low for the average.

After stopping the pump the water will fill up again to the original level in from thirty-five to forty-five minutes. Pump was throwing from 350 to 400 gallons per minute. This upsets all my theories of the underflow, and shall not be satisfied until I make some further experiments. Shall start up a plant, in a few days, of three times the capacity of this one and shall make a test of it.

Yours for more light on the underflow.
W. L. GAMAGE.

How to Prevent the Waste of Water.

EDITOR KANSAS FARMER:—I note, under the head of "Wasted Wealth," you state, in June 19th edition, that enough water has gone out of the State on the Kansas river alone, during a few days, "to constitute an insurance in the entire corn crop of the State."

Very true. But why did it go to waste? Because the prairie sod sheds water about as certainly and swiftly as the roof of a house, and the land that has never been broken more than a few inches in depth does the same thing as soon as the ground becomes saturated to the depth to which it has been plowed.

The remedy: Subsoil with any good subsoil plow that, with the least power, will enable you to break the soil to the depth of sixteen, twenty or twenty-four inches. The deeper your plow goes the more of these flood rains it will retain. You can't save much water after it gets to the river. Retain it in the soil as it falls and you won't see these high rivers again. Let your readers ask P. H. Meyer, Abilene, Dickinson county, how subsoiling worked during the rains you refer to. Subsoil now, while the moisture which has penetrated the hard subsoil to a small extent renders it less difficult to break. Do this universally over the State and do it now. It will save the State.
JNO. H. WURTZ.

Dawson, Pa., June 24, 1895.

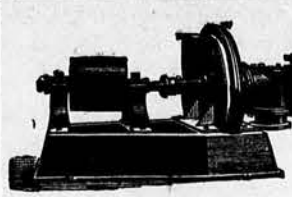
Orchard Irrigation at Riverside, California.

Along the head of the tree rows is placed a flume of wood or cement, into which the water comes from the measuring-box of the water company. This is made large enough to carry water sufficient for all the furrows, and opposite each proposed stream is a little gate or outlet. A marker or irrigating plow has prepared the land to receive the water by making from four to six shallow furrows in each space between the tree rows. Into these the water is allowed to slowly run—that is if the irrigator be an expert. If he be not a good irrigator he will turn into each furrow a head sufficient to push the water through in a hurry, and in so doing wash down to his neighbor or back into the river the best of his soil, to say nothing of the fertilizer he has sown in his orchard at much cost of time and money. It is too often the case that careless use of water wastes it and the land it should benefit. There are orchardists, however, who boast that they can run water a week without running off their land 2 per cent. of the water received, but these are few in number.

The hasty application of water has another disadvantage. Where it runs rapidly it has a tendency to form a "slickens" that seems to prevent the water from penetrating into the soil as it does when it moves slowly. Given time it will soak so deeply that one may sink a hoe-handle its length in the deep and fertile soil.

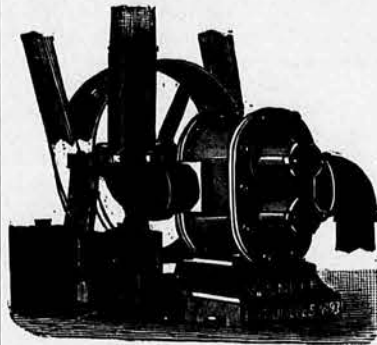
It is only occasionally that the conditions are so favorable that it is well to allow the furrows to be over sixty rods in length, although eighty is the more common distance. The ideal distance is about forty rods, where the grade is perfect. When furrows are too long it is often the case that trees at the head have their roots drenched and scalded while those at the end have not received the quantity needed. There are few orchards in Riverside where the grades make it necessary. In some cases, however, the flume is put at the side, and, to give a grade so that the soil may not be washed, the furrows are run diagonally or otherwise to prevent a too rapid movement of the water. But terracing is not popular because it involves constant watchfulness and expense to save the washing out of the land by the giving way of a furrow. Sidehill orchards may offer some advantages, but certainly their irrigation must always be a source of great trouble and expense. Where the grade of an orchard is as it should be it is possible for the irrigator, when water is once nearly through the furrows, to leave it to run by itself for half a day, or sleep comfortably at night with a reasonable hope that it will not go wrong.

I allow water to run forty-eight hours before turning into new furrows, and when the soil is in right temper [sufficiently settled to work properly] cultivate both ways to furnish the mulch of soft earth necessary to retain the moisture. — E. W. Holmes, editor Riverside Press.



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Cement Pipes for Irrigation.

In this country of perpetual sunshine and flowers the subject of irrigation has occupied the minds of many of our brightest men, and the strides forward in its manipulations since the time of Spanish supremacy have been marvelous. For many years the only irrigation systems were carried on where water was abundant and the benefits derived from it were small. But latterly in some sections of the country, where the supply of water is limited and the fertile soil is extensive, the water has been cared for and economized to the greatest possible degree.

The first irrigation system to adopt as a distributing medium the cement pipe as a means of economy was the Santiago Water Company, near Santa Ana, Orange county. Their pipe, which was laid in 1879, was in diameter from twelve to sixteen inches, and in thickness from one to one and one-half inches, being made in joints thirty inches in length, and was laid with a grade of one-half to four inches per rod. This pipe stands to-day and with but few repairs, and has been in constant use since its construction. It was made by being tamped in molds of sheet-iron, using one part cement to five parts sand and gravel, the molds being removed as soon as a joint was finished. The pipe was then kept wet by sprinkling three or four days till it was thoroughly hardened, when it was submitted to a cement wash on the inside, and when laid with the joints cemented together makes a conduit from which practically no water escapes.

The first cement ditch ever constructed in southern California was built by the Santa Ana Valley Irrigation Company in 1884-5. This was put in to save water and to successfully carry the large amount of quicksand which accumulated in the canal near its head to a sand-trap one mile below where it could easily be discharged through a sand-gate to the river.

The canal was cemented ten feet wide on the bottom, five feet high on each side, and carrying water four feet deep with a grade of one-half inch per rod. The banks were carefully prepared, all loose ground being thoroughly tamped and brought to a smooth surface, when the cement put on as common plaster would be, the proportions being one to five. This work, where the proportions were strictly adhered to, is in good repair to-day. The cost of cementing was \$1.12½ per linear foot of canal.

Since that time a considerable amount of cement work has been done by different irrigation companies throughout southern California, and it has been found that the most durable, practical and economical canal lining is obtained by using either cement or asphalt. In use of cement, six parts sand and gravel to one part cement, put on two and a half inches thick, tamp behind board moulds, which are left in place till the cement is thoroughly set, is most durable, and costs \$1.35 per twenty-two square feet. Asphalt requires the same proportions, with the

exception that much coarser gravel and broken stones may be used. The asphalt, however, where it is easily obtained, is preferable to cement. It is more durable, stands a higher pressure and is more impervious to vegetation and roots of trees than the cement. It requires in its construction about the same labor as the cement.—G. E. F., in The Californian.

Small Irrigation Plants.

Ranchers are evidently more convinced than ever that they can put water on their land themselves, when it does not have to be pumped too far, cheaper than an irrigation company will do it for them. The gasoline engine makes them perfectly independent and they are able to irrigate land with its help that was formerly considered irremediable, because no water was found near enough to pipe or flume to the land without too great a cost. Now all that is necessary is a good well or an adjacent river, and the tireless little engine will keep a constant stream of water flowing on the land or into a reservoir, to be used as needed.

W. H. Hobbs has recently put in a twenty horse-power Golden Gate gasoline engine, a centrifugal pump and 2,000 feet of ten-inch iron and steel riveted pipe for William Newport, the big rancher at Perris, who owns 10,000 acres of land, 1,000 acres of which is in alfalfa. There are several miles of wooden flume included in this irrigation plant, also a reservoir with a capacity of 5,000,000 gallons. This is without doubt one of the largest private irrigation enterprises in the State.

Mr. Hobbs has put in a twelve horse-power double cylinder gasoline engine for W. H. Bradley in the Chapparel mine at Julian for working a hoist and furnishing power for electric lights. The engine is located at the bottom of an 800-foot shaft.

S. W. Luitweller has sold a number of Foos gas and gasoline engines for all purposes where power is required. The Yucca Manufacturing Company is using a ten horse-power engine. The Meek Baking Company has a ten horse-power engine to run a mixer. John Bloeser also has a ten horse-power engine at his carpet cleaning works, and Llewellyn Bros. have a fifteen horse-power engine at the Columbia foundry.

J. J. McGrath, a new-comer, who has a fine ranch called Prospect Park, near Hollywood, put in a four horse-power Foos engine and a centrifugal pump to furnish water for irrigation.

R. Drews has put in a three horse-power engine at Moneta, near Redondo, for irrigating his place.

W. S. Derby, of Orange, has bought

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a three horse-power engine and a Gould's deep well pump to irrigate his ranch.

William Burnham, of Orange, has put in a four horse-power engine and an Ames deep well pump to supply water for irrigation.

James Lamb, of San Bernardino, has purchased a four horse-power engine and a Van Wie centrifugal pump with which he will supply irrigation water for his ranch.

H. B. Rice, of Fallbrook, is another enterprising farmer who has bought a six horse-power Foos gasoline engine and a Van Wie centrifugal pump to furnish his own irrigation supplies.

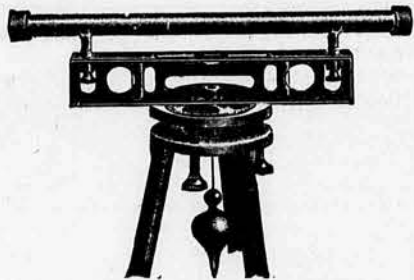
Wright & Whitman have put in a twenty-five horse-power Foos engine and a complete plant for making brick and terra cotta. Their machinery cost about \$3,000, and they propose to turn out a first-class product. They have ample capital to carry on their business.

Mr. Luitweiler has recently supplied a gasoline engine for Graham & Steiner's private electric light plant at Escondido.

A short time ago Judge Sherman Page put in a six horse-power gasoline engine for pumping and running a hoist in his mine at Danby. The mines have since been sold. Mr. Luitweiler has ordered a twenty-five horse-power gasoline engine mounted for threshing for Schee Brothers, who are tenants of Senator Jones on his big Santa Monica ranch. The outfit will weigh 8,000 pounds. This machine will occasion some comment, for it is the first time that so large an outfit of the sort has been made.—*Los Angeles Journal*.

Leveling Instrument.

In laying off land for irrigation, a matter of first importance is to determine the levels. The KANSAS FARMER has desired to offer its patrons a reliable, low-priced instrument for this purpose, and has finally secured the one herewith illustrated. It is



manufactured by L. S. Starrett, a well-known and reliable manufacturer of fine mechanical tools at Athol, Mass., who warrants it to be true in every respect.

The price of the instrument is \$12.50 at the factory. By a special arrangement we are able to furnish it to subscribers, together with a year's subscription to the KANSAS FARMER, delivered at any express office in Kansas, charges prepaid, at the manufacturer's price. Send orders with money to KANSAS FARMER Co., Topeka, Kas.

Look Out for the Swindler.

EDITOR KANSAS FARMER:—Farmers, beware of the man who travels through the country teaching the people "how to increase the butter by half," as he says. He tells people how to take a pound of butter and a pint of cream and make two pounds of butter out of it. He asks \$5 for his recipe. It is a swindle. The newspapers of Kansas ought to caution the people against him.

L. S. CRANE.

Marion, Kas., July 4, 1895.

Enclose a stamp to any agent of the Nickel Plate Road for an elaborately illustrated Art Souvenir, entitled "Summer Outings." Address J. Y. Calahan, General Agent, 111 Adams street, Chicago, Ill. 70

"Among the Ozarks,"

the Land of Big Red Apples, is an attractive and interesting book, handsomely illustrated with views of south Missouri scenery including the famous Olden fruit farm of 3,000 acres in Howell county. It pertains to fruit-raising in that great fruit belt of America, the southern slope of the Ozarks and will prove of great value, not only to fruit-growers, but to every farmer and home-seeker looking for a farm and a home. Mailed free. Address,

J. E. LOCKWOOD, Kansas City, Mo.

Address of President J. B. McAfee, Before Kansas State Temperance Union, July 4, 1895.

Friends of temperance, of the home, the church and the State, you have been called here to devise ways and means to advance the cause of temperance in our State and to banish the saloon and its attendant evils beyond our borders—to point the liquor dealer to the borders of Kansas, and say to him, in language unmistakable and forcible, "Thus far shalt thou come, and no further." Many good people differ as to the best course to be pursued. Moral suasion is the only remedy with some, and legal suasion with others. I believe in moral suasion for the drinker and legal suasion, and a good deal of it, for the seller. We may well pause, like the Georgia Congressman who stopped in the middle of his speech and asked, "Where am I at?" We temperance people want to know not only "where we are at," but what we are going to do about it. At some of our former meetings we passed good resolutions and then left them to take care of themselves. If the "prodigal son," after resolving to return to his father's house, had stopped there, he would never have tasted of the fatted calf nor worn the golden ring. If we resolve at this convention, as I believe we will, and then see to it that the good resolutions are faithfully executed, the last open saloon will be driven from our State in less than ninety days. Resolve that the law must and shall be executed by every officer whose sworn duty it is to execute the laws, from the highest officers to the lowest—then aid them to the utmost extent of your ability in the accomplishment of their work. Organize temperance leagues in every county seat in the State and auxiliary leagues in every town and village in the county. Let each member make it his individual business to know if the law is being violated in his neighborhood; if so report to the league and let the auxiliary leagues report weekly to the county league, and their officers monthly, and oftener if need be, to the Secretary of the State Temperance Union. If the law is being violated in any of the counties, let the officers of the league notify the proper officers of the city or county. If the County Attorney fails to do his duty, which he will not, if he sees you are in earnest—but if he should, then notify the Attorney General of the State, and if he realizes that you are in earnest and mean business (for public officers are too often what public sentiment makes them) you will soon have an Assistant Attorney General in your county to see that the law is enforced. Then don't keep the necessary information from him and stand off and throw stones at him for not doing his duty. Stand by his side and see that the work is well done. While Moses held up his hands with the divine rod therein the army of Israel under Joshua prevailed, but when his arms became weary and sank down the army of Amalek prevailed. Aaron and Hur then stood by Moses, one on either side, and held up his hands and Joshua prevailed, and God commanded Moses to write it in a book for a memorial and rehearse it in the ears of Joshua: For "I will utterly put out the remembrance of Amalek from under heaven." Friends of temperance, stand by your officers; hold up their hands and write it in unmistakable language upon the hearts of your officers and rehearse it in the ears of all the people until the very remembrance of a saloon shall be utterly banished from Kansas. Rehearse it in the ears of the violators of law, as Andrew Jackson did in the ears of the nullifiers, of South Carolina, that "By the Eternal, the laws must and shall be obeyed."

There are times when strong language seems to be a necessity. The good old York State parson had doubtless realized that fact or he would not have urged the necessity of the conference "providing suitable forms of expression whereby Christian people might express their feelings under aggravated circumstances and still not be guilty of profanity." I have often heard it said that the German is a much stronger and more expressive language than the English. If that is so, I have often wished, when viewing the accursedness of the liquor traffic, that I had perfect command of that language, for my present knowledge of the English language is wholly inadequate to do justice to it.

Now, friends, while I am a firm believer in prayer, I don't believe the good Lord will do anything for us that we can do for ourselves. And if any fiend in human form, disgracing the image of the God that made him and the mother that gave him birth, has the temerity to open a saloon in your midst, cast him out, for he is not one of the kind of devils that can be cast out by fasting and prayer. "The wicked flee," we read, "when no man pursueth," but they will flee much faster when well pursued. Stand by your officers and see to it that he is well pursued beyond the limits of your city.

Most liquor dealers secure a United States tax receipt before violating our prohibitory law. It is very clear that they

Fertilizers containing a high percentage of potash produce the largest yields and best quality of

Wheat, Rye, Barley, Oats,

and all winter crops.

Send for our pamphlets on the use of potash on the farm. They are sent free. It will cost you nothing to read them, and they will save you dollars. Address, GERMAN KALI WORKS, 93 Nassau Street, New York.

intend to violate the law or they would not have the tax receipt. If you suspect any one of having such receipt write to some friend at Leavenworth to examine the books in the office of the United States Revenue Collector. (Governor Morrill has secured such authority from Washington). If any one has such receipt, he did not pay for it for the fun of having it, but to protect himself against the vigilance of United States officials. See to it that your temperance league votes for no man for Congress who will not pledge himself to do all he can to secure such orders or legislation as will prohibit the issuance of United States tax receipts in prohibition States to persons not having a State permit.

Women of Kansas, don't fail to avail yourselves of the municipal franchise already granted you, at every election, and then it will not be long until the good people of Kansas will realize the absolute necessity of your full enfranchisement. God bless the Woman's Christian Temperance Union, for without their labors and efforts in behalf of temperance I should almost fear of final success. The rum power is well aware of the mighty influence the women would have at the ballot-box for the overthrow of their accursed traffic, therefore no effort will be spared on their part to prevent female enfranchisement. Therefore we who favor good government should put forth every effort to secure the desired result. We would then see the last vestige of the accursed rum traffic, the deadly foe of the home, the church and good government, driven from our State. God forbid that any of us should ever see the day when the sun of constitutional prohibition shall set upon our fair State. Kansas loved liberty and destroyed slavery. Kansas loves sobriety, and may God give us the power to pulverize the rum tyrant in Kansas—to kill it and bury it a Sadducee's burial, without any hope of a resurrection. See to it that the Metropolitan police law is so amended that the Commissioners shall have power to levy a tax for the maintenance of the police force.

I saw an article, a few days ago, in one of our daily papers, that there would be no need of fireworks in Topeka on the Fourth of July; that the fireworks in Hamilton hall would be all-sufficient. It has also been reported that certain parties would be here to capture the convention for partisan purposes. I have too exalted an opinion of the intelligence and high moral and Christian character of the delegates to this convention to give credence for one single moment to any such rumors. Let the utmost harmony and good feeling characterize all your deliberations; but make yourselves clearly and unmistakably understood, that the law must and shall be enforced by every public official, from the highest to the lowest. Let the one controlling motive be the greatest public good. United we stand, divided we fall. In union there is strength.

Before concluding, I wish, by carefully-prepared statistics, to refute an oft-repeated and much-believed misstatement, that saloons are conducive to the prosperity of a city. The figures are taken from the returns of 1894. The comparisons will be made from counties denominated "wet" and "dry."

Atchison county, with a population of 26,000 in round numbers, returns to the assessors \$687,000 of personal property, and Atchison city, the county seat, notwithstanding the revenue derived from her saloons, etc., levied a tax of 28 mills for city purposes. This doesn't include school taxes.

Shawnee county, with a population of 45,000, returns personal property for assessment \$2,397,000, and Topeka, the county seat, without any revenue from licensed saloons, etc., levied a tax of only 20.6 mills for city purposes.

Shawnee county, with 70 per cent. more population than Atchison county, returns 240 per cent. more personal property for taxation, and the rate of taxation in the county seat of Atchison county is 36 per cent. greater than in Topeka.

Brown county, a "dry" county, with only 60 per cent. of the population of Atchison county, returns \$221,000 more personal property, and in the county seat of Atchison county the rate of taxation for city purposes is 44 per cent. greater than in the county seat of Brown county.

Wyandotte county, "wet," with a popu-

lation of 56,000, returns \$768,000 personal property, and the rate of taxation in their county seat (Kansas City, Kas.) for city purposes, 29.8 mills.

Lyon county, "dry," population 23,000, returns \$1,317,000 personal property. Emporia, the county seat, 17 mills for city purposes.

Wyandotte county has 140 per cent. more population than Lyon county, yet Lyon county returns 70 per cent. more personal property, and the rate of taxation for city purposes in the county seat of Wyandotte county is 73 per cent. greater than in the county seat of Lyon county.

If saloons are wealth-producing institutions, these statistics fail to show it. A comparison of sixteen counties shows a very decided advantage in favor of the "dry" counties:

County.	Population in round numbers.	Personal property returned.	Taxation for city purposes in county seat.
Atchison (wet)	26,000	\$ 687,000	28.0 mills
Anderson (dry)	13,000	708,000	18.0 "
Brown (dry)	19,000	908,000	19.5 "
Pottawatomie (dry)	16,000	764,000	12.0 "
Wyandotte (wet)	56,000	768,000	29.8 "
Miami (dry)	15,000	899,000	21.0 "
Lyon (dry)	23,000	1,317,000	17.0 "
Sedgewick (wet)	39,000	1,243,000	25.0 "
Shawnee (dry)	45,000	2,397,000	20.6 "

From a residence of over forty years in Kansas, and from careful observation, I unhesitatingly declare that I believe prohibition one of the greatest blessings, socially, morally and financially, ever bestowed upon the people of this State.

Friends, upon your deliberations and your labors depend in a large measure the success of the great work in which we are engaged.

At the close of this meeting I shall retire from the duties of my present position, and I beseech you select some one solely on account of his qualifications for the duties of the office, and may God's blessing rest upon you all and crown your labors with abundant success.

Respectfully submitted.

J. B. McAfee,
President Kansas State Temperance Union.

Summer Tours.

You can get more for your money in the sure return of health and enjoyment at any of the many resorts on the Union Pacific System than anywhere else on this continent. See your nearest Union Pacific agent. Summer tour tickets on sale to September 30.

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The Home Circle.

To Correspondents.

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

JOHN MOLLAIRE.

BY HENRY W. ROBY, M. D.

In the cell of a great asylum
I saw a fair woman's face,
As she stood at an upper casement,
The picture of love and grace.
But the smile on her face departed
As a cloud that was floating by
Its banner of black unfolded
And waved in that azure sky,
And over her face came creeping
A shadow more black and dread
Than any the soul has ever
Seen hovering over its dead,
And the lightning's leaping, glancing,
Flashed out of her eyes up there,
As the keeper stood fast to tell me
The story of Jeanne Mollaire.

Ten years ago, in that summer
When Jeanne was a woman grown,
And fair as the Queen of Sheba,
And sweet as a rose unblown,
Old John Mollaire, her father,
Reeled home to his cottage door,
In a fury of drunken frenzy,
As oft he had done before,
And his timid wife and his daughter
Crouched low in a corner there
While his curses and imprecations
Poured forth through the morning air,
Till at length, in a quaking terror,
And with courage of danger born,
They fronted his frowning menace,
Unheeding his words of scorn,
And sought by their prayers to placate
The rage that was not his own
But the fury that, born of liquor,
Hurled reason from off its throne.

But the demon of drink, at banquet,
With the demons of want and care,
Was in that sacred temple
That God had given Mollaire,
And the drunkard whom Jeanne called father,
A scowl for a smile on his face,
Struck down his wife as she met him,
New come from her hiding place,
Then smote with a maniac's fury
The prostrate form that lay
Stretched out on the floor before him
In the light of that fatal day.

The sight of her weltering mother
Froze Jeanne to the core that morn
And waked the avenging spirit
That came to her when she was born,
And fierce as a jungle tiger
She sprang to her mother's side
And seizing that carnate demon,
And tugging again, she tried
To drag him away from his murder
And out of the cabin door,
But like the Numidian lion,
That startles the world with its roar,
He turned and smote down his daughter,
With an oath that rang far and wide,
While the blood that he gave her with being
Poured forth in a crimson tide.

Then seizing an axe from the corner
She whirled it aloft in the air
And sent it resounding, crashing,
Through the brain of John Mollaire,
And he sank on the floor before her
And hissed out his dying note,
While the curse that he tried to mutter
Stuck fast in his burning throat
Then the soul of that fairest woman
Yet seen with these mortal eyes,
Reeled down from its throne and vanished
Like a star stricken out of the skies;
And the temple wherein her spirit
Had dwelt and was richly clad
In the garb of a matchless beauty
Stood vacant—and Jeanne was mad!

Up there in that guarded window
I saw her wild eyes a-glare,
While the scowl on her face reflected
The storm that was raging there,
And I heard her appeal for mercy
In a maniac's wildest shriek,
While a hot and vermillion splendor
Flamed over her brow and cheek.

Then I heard, as I gazed on that horror,
The sound of that maniac's prayer,
As it rose in the tenderest pleading
And thrilled through the ambient air.
And there comes, as I stand here and listen,
A voice that is clear and profound;
It comes like the roar of the ocean
And rings through the spaces around:
"Who tramples my law is a traitor,
As God liveth let such beware,
And whose defileth my temple
My wrath shall in no wise spare."

That voice is the voice of the people,
And I call to you, sirs, have a care!
Lest sons whom you love shall yet curse you
In the likeness of John Mollaire!

Advantage of a Full Length Mirror.

Every house should contain at least one mirror of sufficient length to enable one to see oneself within it at full length. No woman ever knows quite what an appearance she makes until she thus sees herself, and there are many little defects of dress only to be remedied by such observation. Many gowns would hang very differently, or be of different lengths and sometimes, too, very much better boots would be donned, if the "gift" were thus given "to see ourselves as others see us."

OUR GOVERNMENT.

As Influenced by Some of Our Social Classes.

Abstract of graduating thesis of T. W. Morse, of Mound City, at Agricultural college commencement, 1895.

A nation is an organic unity of people and domain, and, no matter whether it is a republic or monarchy, if the people are hindered in their natural development the wrong will some day show itself in wreck or revolt.

The limits of a nation's power and the course of its conduct are fixed by the nature and development of its people, and these limits have never been overstepped but the transgressor has, through disaster, been obliged to retract.

As the people come in closer and more direct communication with their rulers or administrators, there is less chance for the long-continued action in one direction and the subsequent violent reaction which formerly accompanied almost every step in national progress. But though the existence of the ties between the governing and the governed may never again be manifested by such violence, the ties themselves are becoming more vital rather than less, and this is especially the case in the United States. Here every man is a politician or a politician's tool, and the liberality, or perhaps more properly, the looseness of our public sentiment and our laws, makes it too easy for every new element of population, either developed or introduced, to enter at once into political and industrial affairs. It is with this thought in mind that economists have given their time and study to classes of doubtful utility here and have called attention to them and to immigration as imperiling the health of our body politic. However true this may be, it is evident that humanity as well as safety require that we understand the conditions of those who, either by our consent or our silence, have become our brothers.

In this section of the country we realize little of the immensity and less of the evil of our foreign population, for the part we know is a beneficial and an assimilated one; but in our large cities and in the mines of the East, and West also, is an almost pure foreign element. Every city slum has its foreign quarter, if it is not all foreign, and the polyglot districts are usually the worst. The slums themselves and the accompanying evils of "sweating system" and "tenement house" are foreign institutions, but are even more imbruting here than on their native soil. The people under their influence become powerless to better themselves and careless as to their betterment. Not only do they obstruct the way of their advancement but effectively aid in their own degradation.

How greatly the course of government may be changed by these social forces can hardly be guessed, but whatever the uncertainty of the conclusions, an understanding of the conditions is necessary. A nation can realize its strength only through unity and parallelism of action. This means unity of feeling, sympathy, and we see at once that an appreciation of the interests of every class is essential.

UNHAMPERED BY FACTS.

Woman's Ideas of Figures and Measurements Usually Unreliable.

However accurate in many things the average woman may be, her idea of figures and measurements are pretty sure to be vague and unreliable, says the New York Evening Sun. She has, seemingly, no compunction whatever about declaring a thing to be two yards long when she means two feet. A woman once came home from a yachting trip and described a 30-foot mast as measuring 300 feet, and all with such calm assurance that not one of her astounded listeners dared contradict her. Mr. Howells, who knows something of feminine nature, has not failed to touch upon this frailty. "Why, Agnes, that's only ten," says Mr. Roberts in enumerating "the elevator" dinner party; "you said that there were twelve guests." "Well, never mind," answers Mrs. Roberts, with complacent and characteristic logic, "I meant ten." It was not one of Mr. Howells' heroines, however, who triumphantly announced that a certain edifice that she had seen abroad measured three miles in length. Even her long-suffering husband, hardened as he was to such rash and reckless statistics, couldn't stand that. He therefore, slyly touched his wife's foot under the table. Whereupon the woman promptly added: "And two feet wide."

As the name indicates, Hall's Vegetable Sicilian Hair Renewer is a renewer of the hair, including its growth, health, youthful color and beauty. It will please you.

Agents wanted for Gearhart's Family Knitter. For particulars address J. E. Gearhart, Clearfield, Pa.

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

Royal Baking Powder

ABSOLUTELY PURE

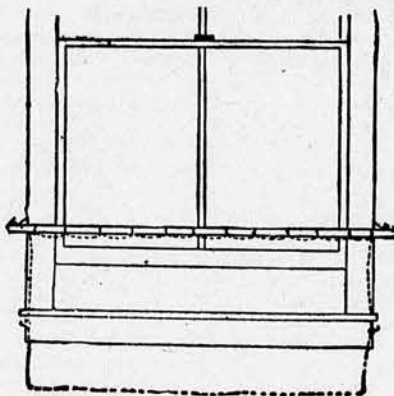
BEDROOM VENTILATION.

A Curtain Which Defends the Sleeper Against Direct Air Currents.

To get plenty of air into a sleeping-room at night without the cold or damp wind blowing directly upon the bed is necessary alike for comfort and health.

The familiar device of a board fitted to set tightly into the window frame underneath the raised lower sash answers for extremely cold nights; but it does not give enough air in moderate weather. On the other hand, if a severe wind is blowing upon the opened window, although the temperature may not be very low, the strong current is too trying for most sleepers.

To those who wish to enjoy the open window at night, and yet to be defend-



ed against a direct current of air, the wind-curtain will be valuable.

About a foot above the window-stool, on both edges of the casings, insert diagonally a pair of two-inch screw hooks. Being on the outside edges of the casings, they do not mar the wood, and are unnoticed during the day. Prepare a light curtain pole, say an inch in diameter, and insert screw-eyes to correspond with the hooks. This pole may be a regular curtain pole with brass knobs, or a bamboo pole, or a humble broomstick—painted, however, we will hope.

Hang upon this pole, either by rings or by a broad hem through which the pole is thrust, a short curtain of burlap, as indicated by the dotted line in the cut. This coarse cloth is suggested because of its very openness; while breaking the force of the wind, it admits much of it in a gentle way. This may be trimmed tastily with a half-inch hempen rope, or with cat stitching.

To prevent the curtain from flapping in the wind, sew to it a pair of small rings, which can be loosely attached to another pair of small hooks screwed on the under side of the window-stool at its extremities.

The chief admission of air will not be through the interstices of the coarse burlap, but above and around it, from the three or four-inch space between it and the sash. A shawl or afghan may

be thrown over the pole instead of a regularly hung curtain, and will answer the purpose equally well. In the morning the pole is lifted from its inconspicuous hooks, and stored away in the closet out of sight.

If it is preferred to have the window opened at the top, the same contrivance may be used—the window-shade being run up out of the way, and thus preserved from flapping or from damage by the rain.—Harriet Benton, in Youth's Companion.

How to Fumigate a Room.

To fumigate a room with sulphur, use two pounds of rock sulphur with one pound of flowers of sulphur to every 1,000 cubic feet. Put the sulphur in a tin dish, set in a pan of wet ashes or a pan containing brick, to prevent any danger of fire. Put the rock sulphur at the bottom, the flowers of sulphur on top, and pour two tablespoonfuls of alcohol over them just before you apply the match. Leave the room instantly. Every door, window, crack and crevice in the room must be closed. It may discolor the paper. That depends on the color. All the metal work must be removed.—N. Y. Tribune.

Money for Women.

In these hard times ladies as well as men should improve every opportunity to increase their bank accounts; and any man or woman can make from \$10 to \$30 a day, if they will only try. I have not made less than \$30 clear any day the past year, and I had no experience and not very good health. My husband assisted me evenings. I put notices of the dish-washer in the papers, but do not canvass any. I have examined particularly all the dish-washers made, and find the Climax decidedly the best. Address the Climax Manufacturing Co., Columbus, Ohio, and they will tell you just how to run the business. Every family wants a Climax Dish-Washer, and will buy as soon as they get a chance, as you can wash and dry the dishes in two minutes without wetting the hands. A READER.

Did You Live in Indiana?

Going back soon? Vandalia-Pennsylvania Lines run through forty counties in that State. Shortest and best route from St. Louis. Frequent daily trains; first-class service. All the principal cities and towns in Indiana are reached by these lines; all persons who wish to travel comfortably and expeditiously should take this route. Brunner, 500 Chestnut street, St. Louis, will furnish time of trains and other information.

The Christian Endeavor Convention for 1895 will be held at Boston, Mass., in July, and the Nickel Plate Road has effected arrangements by which the lowest rates will be offered, either going or returning, by direct lines or returning by different routes. The following points of interest may be visited without extra charge: Chautauqua Lake, Niagara Falls, Thousand Islands, Rapids of the St. Lawrence, Saratoga, Palisades of the Hudson and the Hoosac Tunnel. For further information address J. Y. Calahan, General Agent, 111 Adams street, Chicago, Ill.



CHILDREN GROW

healthy—grow happy—grow rosy cheeked and bright eyed, on HIRE'S' ROOTBEER. This great health-giving temperance drink should be kept in every home. It will benefit and delight every member of the family from the baby up, and prove a most delicious thirst satisfying beverage for callers. It's good all the time—morning, noon and night. Get the genuine

HIRE'S' Rootbeer

A 25 cent package makes 5 gallons. Sold everywhere. The Chas. E. Hires Co., Philadelphia.

The Young Folks.

RED CLOVER.

Robin, atilt on the apple tree,
Singing your love to the waking world,
What is the sweetest thing you see
From the quivering bough with the dew im-
pearled?
Do you love the golden daisies best,
Or the roses glowing with splendid fire?
What do you tell your mate in the nest
Of the flowers that bloom for your heart's
desire?

Robin, winging across the dell,
That the rippling wind goes swaying over,
As you dip and rise to the long sea-swell
Of the waves that pass o'er the blush-red
clover,
I think you say to your mate in her nest,
And she, I fancy, chirps back to you,
That the lowliest blooms you both love best,
While over your brood the sky is blue.
—Harper's Bazar.

A QUESTION OF PEDIGREE.

"Now who is that?" asked a dignified hen;
"That chicken in white and gray?
She's very well dressed, but from whence did
she come?
And her family, who are they?"
"She never can move in our set, my dear,"
Said the old hen's friend to her, later;
"I've just found out—you'll be shocked to
hear—
She was hatched in an incubator."
—Harper's Round Table.

HARES AND RABBITS.

Naturalist Hornaday Describes Their Ap-
pearance and Habits.

Like the true fur-bearing animals, all the varying hares have two kinds of hair—a dense, fine and downy-soft under-fur, through which grows a thin coat of coarse, straight hair. Usually it is the latter which gives the animal its color. In summer these long hairs are black; but in the fall, as winter approaches, they actually turn white. The brown color of the summer coat is due to the shedding of the coarse hair in early spring, which allows the color of the under coat to predominate for a time.

The habits of varying hares and rabbits are so much the same that one reference to them is well-nigh sufficient for all. These creatures all require brush, rocks, or rugged ravines in which to hide from the wolves, foxes, hawks, owls, and other enemies they are powerless to fight. When a member of the lepus family can have his choice, he burrows to get out of harm's way, either in a hole under the roots of



NORTHERN VARYING HARE.

a tree, a crevice among rocks, or a miniature cave in a ravine. Lacking all these, he hides in hollow logs or trees—which is frequently a sad mistake—under the top of a fallen tree, or in the tangle of a brush patch. When he is seldom disturbed in his haunts, he becomes quite bold, and works out for himself under a thick bush a little bower called a "form," where he sits in fancied security.

If the man with a gun approaches, he sits as motionless as a statue, ears cocked, eyes staring, breathing seldom and winking never, hoping that he will not be noticed. With beating heart he keeps tab on the distance between the hunter and himself, and draws an imaginary dead-line ten feet away. If the hunter does not cross that—well and good—he sits still; but let him take one step over it, and—zip! out shoots Mr. Hare like a long streak of gray light. You see a slim, straight body, stretched out to its extreme length, flying over hillocks, darting between brush-clumps, and four steel-spring legs reaching wildly for more ground; and finally, at the time for disappearing, a cotton-white flag of truce is waved back of you beseechingly.

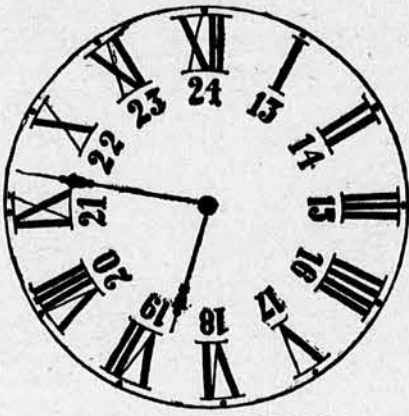
In summer these creatures grow fat on soft young twigs, buds of many kinds, grass, leaves and berries, but in winter their bill of fare narrows down to the bark of smooth-barked bushes or of small saplings, twigs, or the berries of the wild rose.—W. T. Hornaday, in St. Nicholas.

TWENTY-FOUR-HOUR DIALS.

In Italy All Kinds of Timepieces Are Sup-
plied with Them.

A movement was started in this country several years ago to substitute a 24-hour dial for the one at present in use—that is, a dial in which the hours should run from 1 up to 24, instead of from midnight up to 12 noon, and then, beginning again, up to 12 midnight. The idea did not meet with much favor. A few clocks were made on this plan, but they were regarded merely as curiosities. In the Dominion of Canada they were taken up by one or two rail-ways, and are still used.

In Italy this dial has been adopted by law of parliament as the official way of marking time in that kingdom. A session of parliament is reported to have



AN ITALIAN WATCH DIAL.

opened at Rome, on the 23d day of De-
cember, at 15:50, and closed at 17:40.

That is to say, in terms of the ordi-
nary dial, the session opened at ten
minutes before four in the afternoon,
or 3:50 p. m., and closed at twenty
minutes of six, or 5:40.

The railway train indicators now
mark the arrival and departure of
trains from 0 o'clock to 24 o'clock. A
train starts from Rome, for instance, at
8:10, passes Genoa at 18:48, Vintimiglia
23:35, and reaches Nice at 0:52—that is
to say, at 8:10 a. m., 6:48 p. m., 11:35 p.
m. and 12:52 a. m.

The watchmakers and jewelers are
everywhere selling clocks and watches,
and refitting old timepieces, with dials
which mark the hours for the first half
of the day with the old Roman numerals
from I to XII, and the second half of
the day with the figures from 13 to 24,
directly under the Roman numerals.

This system obviates the necessity of
changing the works of the timepieces.
The person who uses one of these
watches or clocks is supposed to know
which half of the day he is in. Both
watches and clocks are being prepared,
however, which are provided with dials
divided into twenty-four equal parts,
and works adapted to this system.

Although this system in Italy marks
an official change, it is by no means a
new system in that country, but rather
a return to an old one. It was the cus-
tom in Italy, up to a period about one
hundred years ago, to divide the day in-
to twenty-four successive hours. In
many parts of the country the peasants
tell the traveler that they sup at
eighteen, nineteen or twenty o'clock,
as the case may be.

Italian letters of the seventeenth and
eighteenth centuries always speak of
"fourteen o'clock" for two in the after-
noon, or "twenty-four and a half" for
half-past twelve in the morning. A
familiar Italian proverb speaks of him
who is "looking for noon at fourteen
o'clock," and by this is meant the per-
son who is always behind time—the
hopelessly lazy one.—Youth's Com-
panion.

CATCHING TURTLES.

Peculiar Method in Vogue in the Neigh-
borhood of Cuba.

In the neighborhood of Cuba, says a re-
cent visitor to that island, a most peculiar
method of securing turtles is pursued.
They train, or at least take advantage
of the instincts of a certain species of
fish, called by the Spanish, reve (mean-
ing reversed), because its back is usual-
ly taken for its stomach.

It has an oval plate attached to its
head, the service of which is traversed
by parallel ridges. By this plate it can
firmly adhere to any solid body it may
choose. The boats which go in quest
of the turtles each carry a tub contain-
ing a number of these reves.

When the sleeping turtle are seen
they are approached, and as soon as

they are judged near enough a reve is
thrown into the sea. Upon perceiving
the turtle, its instinct teaches it to
swim right towards it and fix itself
firmly upon the creature by means
of its disk. Sooner would the reve
allow itself to be pulled to pieces than
give up its grip.

A ring, which is attached to the tail
of the fish, in which a string is fastened,
allows the fisherman to pull in his
prize. By a peculiar manipulation the
reve is pulled off and returned to the
tub, to be ready for use the next time
a turtle is sighted.

THE MUSICAL CRICKET.

Only the Males Are Gifted with the
Power of Chirping.

Miss Edith Carrington, who writes so
instructively and so interestingly on
natural history subjects, gives a very
intelligible description of that familiar
insect, the house cricket. The chirping
noise, which is the main characteristic
of this beetle, is made by the male in-
sect for the purpose of serenading his
sweetheart. Having no voice, he uses
his wings, and in a most admirable
manner. Beneath the gray scales on
his back the cricket has a couple of
pairs of extremely lovely wings.
Through the upper pair of these, near
the middle, run two stiffish nervures,
which are hard and resemble little
files. When the cricket wishes to make
himself agreeable he raises his wings,
bends his body slightly forward, and
quickly runs his files against each
other.

The sound is made greatly louder by
a flat plate on each wing, which, acting
somewhat like the parchment of a
drum, causes the rasping of the files to
be heard far and wide. The female
cricket has no musical instrument of
her own, and she cannot reply to the
chirping, but, though dumb, she pos-
sesses a fine pair of ears, which are
situated not in her head but in her legs.
The cricket, being partly a burrowing
insect, has a protective mask, which
covers the face and, being hinged like
the visor worn by a knight of old, can be
lifted at will.

Beneath it the cricket's tongue ap-
pears, a curious kidney-shaped organ
of elaborate structure, which acts like
a sponge, and enables its owner to suck
up the moisture it needs. Its food is
slender, and consists of grains of flour
or crumbs too small for the broom to
remove, and where crickets are numer-
ous they are useful as scavengers in re-
moving dust.

Rhyme of the Railroad Flags.

When boys and girls travel they are
always interested in the flags which
are waved at the crossings and switch
boxes along the lines of the railroads.
Three colors are most seen—white,
green and red—and a little couplet
which railroad men all know will fix
the meaning of these signals in your
minds:

"White's for right, and red's for wrong,
And green's for gently go along."

Transparent Water.

In the floods on the Norway coast the
clearness of the water is wonderful.
Objects the size of a half-dollar may be
seen at a depth of twenty-five or thirty
fathoms.

Certitude.

"I know that this cornstarch is frozen."
And as Tommy this speech delivers,
"Oh! how do you know?" asks his mother.
"Why, because, mamma, see how it shivers!"
—Harper's Young People

It Pays

to use Vacuum Leather Oil on harness
and shoes. Get a can at a harness- or
shoe-store, 25c a half-pint to \$1.25 a
gallon; book "How to Take Care of
Leather," and swob, both free; use
enough to find out; if you don't like it,
take the can back and get the whole of
your money.

Sold only in cans, to make sure of fair dealing
everywhere—handy cans. Best oil for farm ma-
chinery also. If you can't find it, write to
VACUUM OIL COMPANY, Rochester, N. Y.

A Wildcat's Fight for Life.

While four section men were repair-
ing the track of a Florida railway, a
large wildcat sprang from the adjoining
woods with all-fours upon the back
of one of the men. The other men
rushed to their companion's assistance,
and then it required a dozen blows
with the pike-maul to make the beast
loose his hold. When the cat finally
ran away, the exasperated men fol-
lowed it up the track, and were sorry
for it, because the cat turned on them.
For five minutes he sprang from one to
the other, biting and clawing, until
felled with a blow from a crowbar.
Then they finished it, and the men ad-
journd to dress their wounds.

You see them everywhere.



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—\$100—

COLUMBIAS are the
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and best equipped bi-
cycle factory in America, and are the re-
sult of eighteen years of successful
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stronger, handsomer, more graceful
than ever—ideal machines for the use of
those who desire the best that's made.
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having closed its doors. Write for Journal to-day!

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sickness and weakness can be
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Strengthening Cordial
AND Blood Purifier.



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creates a good appetite and promotes digestion, clears the
complexion and restores the body to perfect health.

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

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KANSAS FARMER CO., Topeka, Kas.

If you want *KANSAS FARMER* and *Semi-Weekly Capital*, send us \$1.50. Or, *KANSAS FARMER* and *Topeka Advocate*, send \$1.50.

We want our readers to secure for us thousands of new subscribers for the *KANSAS FARMER* and we will pay well for such work. If you will get up a list, write this office for liberal terms.

In summing up the losses and gains in cattle in the United States during the four years ending with 1894, Cuthbert Powell, writing in the *National Stockman*, derives the following figures: Total decrease in four years, 2,561,435; total increase in four years, 563,226. This leaves a net decrease of nearly two million head in the four years.

The temperance convention of July 4, passed a unanimous vote of thanks to the railroads of Kansas for their liberality in granting a one-fare rate for the round trip for delegates, and especially to W. J. Black, of the passenger department of the Santa Fe, for his successful efforts to have the reduced rates extended from the 200-mile limit to include the entire State.

It is reported that in Colorado the grasshoppers are dying rapidly of consumption. It has been noticed in portions of western Kansas that there is rapid diminution in their numbers. Under the supposition that they have died of a contagious disease, parties in Minnesota and Idaho have sent to Colorado for dead hoppers, hoping to spread the infection, somewhat after Chancellor Snow's famous method with chinch bugs.

Seldom has more valuable service been rendered to the public than in the report of W. L. Gamage, of his pumping experiments at the State Reformatory, at Hutchinson. The experiments were conducted scientifically and a record of developments was kept at the time. Such a report is worth more than a whole paper full of guesses. Mr. Gamage will make other experiments and has promised to report them in the *KANSAS FARMER*.

An important invention, now making a place for itself in textile manufacturing, is a loom which feeds the bobbins into the shuttle automatically. As this hitherto has been one of the chief duties of the weaver, the new device promises to supplant a considerable amount of labor. Five persons can take care of eighty of these looms, where now six looms are commonly assigned to a single operator. They can be run an hour or two after everybody has left the factory at night, and throughout the noon hour, when the operatives are at dinner. How important the invention is may be judged from the fact that, where tried, it is saving one-half the labor cost in weaving, and about one-fourth the whole labor cost of manufacturing.

POTASH IN KANSAS SOILS.

LAWRENCE, KAS., July 4, 1895.

EDITOR *KANSAS FARMER*:—In the *FARMER* of July 3, is an article of more than passing interest, on "Potash in Kansas Soils." Your discussion of the geologic conditions favoring the production of soluble potash compounds is all right, excepting that it entirely misses the first and third instances given. The tertiary deposits referred to, although you did not call them by that name, do not extend as far east as either Pottawatomie or Cowley county. The soil in those two counties is wholly or almost wholly derived from the Permian shales and limestones. It is no surprise to the geologist that the tertiary soils are unusually rich in potash for they are so largely produced from the granitic rocks of the Rocky mountains that carry such great proportions of orthoclase, the potash feldspar. But it is exceptionally interesting to learn that the Permian soils are so rich in potash. The shales from which they are formed were undoubtedly deposited beneath ocean water. It is well known that they contain large quantities of salt, as is shown by every deep well in the State obtaining water from them. Unfortunately, we have few, if any, analyses of these soils or shales. The conditions reported by Dr. Mayo indicate that possibly along with the shales and salt, potash products were also deposited. The analyses of the salts and brines from our salt mines have not thus far given an encouragement for searching after potash compounds, although it is well known that the salt mines of Stassfurt and other European localities furnish large quantities of kainite, carnallite and other potash-bearing minerals. Extensive investigation of the salt deposits of Kansas are now being made by the University Geological Survey, and no pains will be spared in the search for potash compounds. Dr. Mayo's report shows plainly that this investigation should be carried beyond the salt deposits themselves into the whole of the Permian shales.

ERASMUS HAWORTH,
Geological Department University of Kansas.

The editor of the *KANSAS FARMER* is pleased to get even so much endorsement as is contained in the foregoing letter, from so eminent authority as Prof. Haworth. But the Professor thinks our discussion of the geologic conditions, favoring the occurrence of soluble potash compounds in the soil, entirely misses the first and third instances given.

It will be remembered by careful readers of last week's *KANSAS FARMER*, that in this discussion we adopted the generally-accepted theory of geologists that the silty soils of the plains were formed by deposits, or settlements, in the bottoms of fresh water lakes, and that the richness of these soils in potash, is owing to the fact that, at least for a long time, the run-off from these lakes was comparatively small, so that the soluble salts—among which are the potash compounds—which were derived during the disintegration of the solid rocks, were not carried away to the ocean, but remained in the settlements. Prof. Haworth argues that this explanation is applicable to the case reported from Gove county, and dissents as to the Cowley county and Pottawatomie county cases, but finds, in these examples, great reason for examination of the Permian shales for potash. The importance of such investigation is not here questioned—on the contrary we add our endorsement to Prof. Haworth's suggestion.

Just here it may occur to the unsentimental reader, that the fact of most importance is the occurrence of the liberal supplies of this invaluable potash in the soil, and that it is a matter of small consequence where it came from, or how it got there. But a broader view recognizes as vastly important the generalization made possible by considering the source and the manner of distribution of potash in our soils, for, with these known, we need not analyze the soils of every locality but may indicate from a geologic map portions of the State having similar conditions.

Let us then examine, somewhat extensively, the first and third instances.

In a carefully-prepared paper read before the Kansas State Board of Agriculture at its twenty-third annual meeting, President S. Z. Sharp, of McPherson, pays a merited compliment to the geological researches, in Kansas, of Prof. Robert Hay, and quotes from him, as follows:

"The ice, by blocking up river valleys, affected the drainage of regions far distant from its actual presence and caused floods

and lakes far removed from the ice margin."

President Sharp continues:

This statement is doubtless correct, and applicable to an extent beyond what its author may have intended, and is supported by the following facts:

1. The Kaw river valley, from the mouth of the Blue river eastward, was blocked up by the ice from the north being pushed across the Kaw and packed against the water-shed which divides the streams flowing north and east from those flowing southeast. This water-shed, at Alta Vista, in the southeast corner of Geary county, is 500 feet above the Kaw river at the point where that river is crossed by the glacier at its western extremity.

2. From Alta Vista, the water-shed, for forty miles westward, through Morris and a part of Dickinson counties, is principally composed of the Permo-carboniferous formation, whose solid limestone beds form a strong embankment to the great fresh water lake north of this water-shed and west of the glacier.

3. Partly covering this Permo-carboniferous formation, and extending from the southwest corner of Morris county westward across Marion, McPherson, Rice and Barton counties, we find the softer sandstone and shales of the Dakota group. From the center of Rice county westward, these are also covered by the more durable Benton and Niobrara limestones.

4. That the waters of the great lake in north central Kansas flowed southward across the water-shed somewhere, or over an extensive portion of it, can hardly be questioned. The greatest erosion would also take place where the material was the softest. We must therefore look for an ancient outlet to this great lake through the water-shed somewhere between the western exposure of the Permian and the eastern outcrop of the Benton, or between the western line of Marion county and the eastern boundary of Rice, or, if at an equal distance from each, then the outlet must be south, through the middle of McPherson county. This is exactly what we do find.

5. The great trough and final outlet of this lake begins near the city of Salina, and extends a little west of south to the southern line of McPherson county or beyond, a distance of about fifty miles. At the city of McPherson it is six miles wide and about 140 feet deep. The west side of this trough at its southern end is marked by a rather steep slope, presenting a unique appearance in a country otherwise so level.

Taking the altitude of Alta Vista as a basis, and allowing the upward slope of the country to have been six feet to the mile, we would find the erosion at the water-shed in McPherson county to have been 600 feet deep, leaving the red beds of the carboniferous group exposed along the banks of Sharp's creek, Gypsum creek and other streams.

Time and the period following the glacial have again filled this ancient river bed, leaving, however, a chain of lakes and dry basins to mark its course.

The careful study of the subject, manifested in President Sharp's paper, entitles his conclusions to great consideration. His first-mentioned statement places the western line of the great dam of ice, which made a lake of the Kaw valley, near the mouth of the Blue river. This river constitutes the western boundary of Pottawatomie county, and the town of Olesburgh, at which the instance of potassium nitrate poisoning occurred, is but a few miles from the Blue. Its location, therefore, was near the limit of the great ice dam in the Kaw. At the present day, glaciers disappear at the edges first. It is not to be doubted that the great ice fields of the glacial period receded in the same way. The few miles of ice, from the the western face of the dam to Olesburgh, must have melted long before the obstruction to the eastward flow of the Kaw was removed so as to allow its waters to again pass out into the Missouri. During all these years—perhaps ages—the great lake, with its potash-impregnated waters, was settling in the vicinity of Olesburgh, and impregnating with that and other minerals the soil deposits left by the glacier. Thus, while the rocks of the region are Permian, there was ample opportunity for the soil to obtain its superabundant wealth of potash from lake waters which had fallen on the disintegrating rocks of the Rocky mountains and obtained therefrom their alkaline characteristics.

The soil of Winfield, Cowley county, can scarcely be excluded from the probability of having obtained its potash, also, in the manner suggested in the *FARMER* of last week. Cowley county is in the great Arkansas valley, the soils of which are largely silt. The indications suggest a great lake. On this Prof. Hay, in an admirable paper read before the twenty-second annual meeting of the Kansas State Board of Agriculture, said:

When any piece of land is covered with quiet water, it will become covered with mud or sand, according to the nature of the subjacent and circumjacent rocks. This

may go on till the water becomes shallow or even dries up. The process is silting; the deposit is called silt. Let the water all disappear, and this silt becomes a soil. Old lake beds have often a fine soil, soon covered by vegetation, soon changing on the surface to a black humus.

The soil on the uplands of Kansas is, over very extensive areas, a lake silt. The last great geological epoch, the glacial, supplied the conditions to cover all, or nearly all, Kansas with fresh water lakes; some part, before the ice reached its southern limit, some where the ice had been as it retreated before a genial climatic change to the north.

Before this all the great valleys had been cut out. The Kaw valley was at least 100 feet deeper than now. When the ice was advancing through the Dakotas and Nebraska, the waters of the Missouri and the Platte were dammed and scattered all over the Western plains. The valleys were filled up, and the highest parts of the plains received the silt formed of the debris of the White river and Loup Fork tertiary beds and of Cretaceous and older rocks on the flanks of the mountains. This silt forms the subsoil of the plains, from the Black Hills to Texas, from the neighborhood of Wichita to the precincts of Denver. This silt is in places 200 feet thick in Kansas, and thicker yet in Nebraska.

The place where the waters of the Kaw valley lake connected with those of the Arkansas valley lake, is shown in the foregoing quotation from President Sharp. The method of obstruction to the present course of the Kaw river is also shown. Perhaps it is not so easily determined what obstructed the Arkansas, or how great was this obstruction. It may be yet undetermined whether the broad connection between these two lakes was a river or a strait. But the Arkansas valley lake, whatever its dimensions, can scarcely have failed to cover the country around Winfield, whose present elevation above sea level is less than that of any other Arkansas valley town except Arkansas City. Thus, if the view that the silty soils of Kansas derived their characteristics from lake waters, both Pottawatomie and Cowley counties, at least the parts considered in the discussion referred to, were, during a portion of the lake period, supplied with potash from the same sources as were the plains of western Kansas, undoubtedly from the potash-rich rocks of the Rocky mountain region.

INDUSTRY WINS HONOR.

News of the marked success of a Kansas boy who has won his honors and his money by the only sure way, is read with interest by all who like to see merit win.

Clement G. Clarke, of Manhattan, a graduate of the State Agricultural college, class of '88, and later a student at Washburn college, at Topeka, for a time, has just taken the DeForest prize medal at Yale, which is the highest literary honor open to students. The medal is valued at \$100. This prize was founded in 1823 by David C. DeForest, of New Haven, "to be awarded to the scholar of the senior class who shall write and pronounce in public an English oration in the best manner," the President and professors being the judges. Mr. Clarke's subject was "The Religion of Milton and the Religion of George Herbert." Mr. Clarke was also the winner of the Ten Eyck prize of \$60 in the junior exhibition a year ago and pronounced the class oration this year.

Mr. Clarke went to Yale in 1891 "without a cent," his course at Manhattan and Washburn having exhausted his means. He waited on the table for his board, cared for the grounds for his room, and tutored for his tuition and books. Between his examination and entrance he laid up money enough to justify him in coming West and taking back as his wife Miss Mattie Cobb, of Waggoner, I. T., who had graduated in his class at Manhattan. It is understood that he finished at Yale with a good bank account.

Every farmer in Kansas, and especially the breeders and stock-raisers, should have the greatest live stock journal in the world, the *Breeder's Gazette*, of Chicago, price \$2 a year. We make a special offer of it and the *KANSAS FARMER*, both papers one year, for only \$2. Subscribe now through this office.

One dollar and sixty-five cents will pay for the *KANSAS FARMER* and the twice-a-week *New York World*. Everybody should read.

Weekly Weather-Crop Bulletin.

Weekly Weather-Crop Bulletin of the Kansas Weather Service, for week ending July 8, 1895.—T. B. Jennings, Observer Weather Bureau, Director: CONDITIONS.

The temperature has been slightly below normal the past week, with less sunshine than usual, while the average rainfall over the State is considerably in excess of the normal for the week. Fine rains have fallen generally in the western division. In the middle division the rainfall was light in the southern and western counties, but generally heavy in the other counties except Dickinson and Cloud. In the eastern division the rain was heavy except in the northern tier, the heaviest falling from Riley to Franklin, and ranging from four to ten inches.

RESULTS.

EASTERN DIVISION.

The damp weather of the preceding week and the rains of this week have brought corn, meadows and pastures well forward and greatly improved the oats and flax, but interfered somewhat with the oat harvest. Fruits generally are in very good condition, but gardens and potatoes in low lands have suffered from too much water.

Allen county.—Corn tasseled out; everything looking well.

Anderson.—Crops could not be better.

Brown.—Fine growing week; oats nearly harvested, a fair crop; corn looking very well, but needing rain.

Chase.—Corn fine; stock water plenty.

Chautauqua.—Fine growing week; flax doing much better than anticipated.

Cherokee.—Wet week; wheat sprouting in shock; but little oats cut; threshing stopped.

Coffey.—Corn, pastures, meadows and fruits doing finely; flax and oats greatly improved; oats being har-

vested; a few more rains will insure the biggest corn crop ever raised in the county.

Crawford.—Too wet; danger of spoiling wheat and oats in shock and delaying oat harvest; corn fine.

Doniphan.—Good growing weather; corn in splendid condition; oat crop fair.

Douglas.—All crops growing well; oat harvest on.

Elk.—Good growing week; rains interfered with threshing.

Franklin.—All crops doing well except where chinch bugs are at work.

Geary.—Rains have freshened and brightened everything.

Jackson.—Good growing week; oats mostly harvested, fair crop; corn never better; potatoes made; haying commenced.

Johnson.—Wheat cut, yield better than expected; too wet for oat harvest; corn very fine.

Labette.—Wheat and oats badly damaged in shock, too wet to stack; corn fine.

Leavenworth.—Corn growing very finely; early potatoes that were checked in May taking second growth.

Marshall.—A fine week for corn with a prospect never better; harvest over, threshing begun; oats yield good, quality fine.

Miami.—Corn in good shape; oats liable to sprout in shock.

Montgomery.—Wheat damaging in shock; corn and pastures fine.

Morris.—Crops doing well.

Nemaha.—Corn clean but growing slowly; wheat cut, half crop; oats short, being cut; meadows light; pastures short.

Osage.—Corn, gardens and pastures in No. 1 condition; stock water plenty.

Pottawatomie.—Splendid growing week; corn fine and tasseling; second alfalfa crop better than first; early apples in market; Prof. Snow's remedy killing off the chinch bugs.

Riley.—Early corn will almost certainly make a fair crop, while the

prospect for a big corn crop all through are fine.

Shawnee.—Corn prospects never better; oats generally cut, yield light; fruit of all kinds promises abundance.

Wabaunsee.—Corn growing fine; oats generally cut, well headed; peaches and plums ripe; soil washed from potatoes in low lands.

Wilson.—Fine growing week but bad for stacking and threshing; pastures fine; flax ripening slowly and weedy; roasting ears in market.

Woodson.—Corn laid by, some in silk; oats all out; flax ready to cut; everything growing finely.

MIDDLE DIVISION.

Corn has continued growing rapidly, is now generally tasseling and the early has begun to silk in the south and central counties. Wheat harvest generally over, and oat harvest in progress, the latter crop yielding better generally than promised. Pastures and meadows are fine; potatoes generally promise an abundant crop; fruits much improved; gardens fine.

Barton.—Corn tasseling and earing but needs rain; grasshoppers doing some damage to barley and oats; some oats being cut.

Butler.—Corn and millet never looked better; prairie grass much improved; pastures excellent; flax harvest begun.

Clay.—Corn in good condition; wheat cut; oats being cut, rains interfering.

Cloud.—Corn in fine condition, early has tasseled; wheat and oats being harvested, crop light.

Cowley.—Corn growing nicely, some too tall to cultivate.

Dickinson.—Corn never looked better, early is shooting ears and will soon be out of danger; oats ripening slowly.

Ellsworth.—Favorable for growing crops; corn prospects never better; oats will make a good crop; potatoes doing

fine; cabbage, beets and onions ready for market.

Harvey.—Corn fine and tasseling; oat harvest begun; too wet to thresh.

Jewell.—Ground wet deeper than for a number of years; wheat poor; oats and fruit light; corn, alfalfa, cane and millet good.

Kiowa.—Favorable for growing crops; corn tasseling short but promises good crop.

Lincoln.—Corn fine.

McPherson.—Corn and weeds fine; bad for harvesting.

Marion.—Corn excellent; oats in stack.

Mitchell.—The cool, wet weather has favored all growth; corn in very fine condition; potatoes and grass fine; oats growing some yet.

Osborne.—Good growing week; corn improved; potatoes and gardens O. K.

Ottawa.—Corn, potatoes and gardens in prime condition; oats short, not very good.

Pawnee.—Corn doing well; wheat, oats and barley good and will cut next week.

Phillips.—Very favorable to crops; corn, potatoes and hay promise an immense yield; early corn tasseling.

Reno.—Corn and oats looking well but need rain; apricots abundant.

Republic.—Corn growing rapidly; oat harvest begun, crop light.

Rice.—Farmers feeling good.

Russell.—Wheat harvest begun, crop much better than expected.

Rush.—Harvest will be general next week; corn growing nicely.

Sedgwick.—Corn good stand, color, size and growing well; oats ripening and promise an average crop; pastures good.

Smith.—Fine growing week; corn clean and fine; potatoes fine; wheat harvest begun, yield small.

Stafford.—Ground in splendid condition; corn growing finely; oat crop will be good; wheat in bad shape.

Sumner.—Crop prospect fine.

Washington.—Early corn tasseling, needs more rain; late corn in good condition; wheat cut; oat cutting begun and shows fair yield.

WESTERN DIVISION.

Small grain much improved and harvesting will generally begin next week, except in the southern counties, where it is in progress now. Corn is in fine condition. Grass is abundant and cattle are in splendid condition.

Cheyenne.—Growing weather for corn; small grain looks well; weeds bad.

Clark.—Conditions favorable; harvest progressing.

Finney.—All crops growing rapidly.

Ford.—Wheat harvest will begin next week; barley, oats and corn never looked better; prairies green; fruit prospects good.

Graham.—Crops all look extra fine.

Kearney.—Another excellent growing week and crops are doing unusually well; harvest not yet begun.

Meade.—The weather has been favorable for all crops.

Morton.—Good growing weather; abundance of grass.

Ness.—Harvesting will begin next week; small grain much improved; corn doing well; potato promise good.

Rawlins.—Corn doing finely.

Seward.—Crops in good condition; grass splendid.

Sheridan.—Corn doing finely; barley beginning to ripen.

Stanton.—All crops doing well; cattle in fine condition.

Thomas.—Corn doing finely; barley nearly ready to cut.

Trego.—Crops growing rapidly; never a better prospect for a bountiful harvest; corn tasseling; grass fine.

Wallace.—Fine growing week; small grain has improved; corn, potatoes etc., in fine condition.

The Lightning Hay Press.

We are pleased to call our readers' attention to the merits of the Lightning Hay Press, manufactured by the Kansas City Hay Press Company, Kansas City, Mo. The haying industry is rapidly increasing, and with the low prices on so many of the farm products in this country, and the almost universally good price on hay, we believe it would pay our readers to investigate the machinery that is necessary to secure the best price on this commodity. The manufacturers of the Lightning press claim that it is the simplest, most durable, strongest and most rapid machine on the market for the purpose for which it is designed; that they are the original patentees and inventors of the present style of hay press, namely, the full-circle all-steel machine, which has been so universally adopted, and that they have the largest feed opening, being full twenty-eight inches, and the shortest crank, being but ten inches, which, together with their twelve-foot sweep, enables them to secure an enormous pressure. The entire power end of the press is constructed of the best steel and chilled iron, while the baling-case and tying machinery are constructed wholly of steel. The warranty offered by this company is certainly a very satisfactory one, wherein they say that they guarantee that their machine shall give perfect satisfaction in every respect. It would seem difficult for any company to make a better one. This company is also manufacturer of the Champion Rakes and Stackers, which are a natural auxiliary to their hay press, giving them a very complete line of haying machinery. These goods are also well known in most grass-growing districts, and we would suggest to any of our readers who want machinery of this class that they write these people and secure from them one of their latest catalogues, together with bottom prices and terms. They are also placing on the market this year the Lightning Stump-Puller, which they guarantee to be equal to their other machinery, and we feel justified from our knowledge of this company in saying that they would not put out any line of machinery that was not as nearly perfect as it would be possible for them to make it. They will be pleased to quote prices and terms on application.

Did You Come From Ohio?

Expect to go there on business or pleasure? Vandalia-Pennsylvania Lines can take you comfortably and quickly from St. Louis, from which point they extend through forty-four counties in the Buckeye State. "Look at the map." Brunner, 509 Chestnut street, will send you one.

Just What You Need.

We feel it our duty to call the attention of our readers to the fact that they can secure entirely free a full set of samples of Neponset Red Rope Roofing Fabric by addressing Messrs. F. W. Bird & Son, East Walpole, Mass. This fabric is water-proof, wind-proof and frost-proof. Very much cheaper and better than shingles. In building hen houses and out-buildings it is the cheapest and most durable covering to be found.

Gossip About Stock.

Swine-raisers who are interested in Chester White swine should know that that well-established herd formerly owned and advertised by Jno. Kemp, of North Topeka, is now owned and advertised by J. T. Lawton, who had actual charge of the herd for ten years. Any of our readers who desire representative Chester Whites should call upon or write to Mr. Lawton, who reports an excellent trade and a splendid lot of young stock on hand.

Col. S. A. Sawyer, the fine stock auctioneer, of Manhattan, rises to remark as follows: "We shall soon send you some advertisements of public hog sales, from some of the best herds in the West. The corn prospects are fine and the outlook for good prices for fine hogs never better. You can suggest to your patrons that I am still at the 'old stand' and can get more money for Kansas stock than any other auctioneer on earth and at less cost to the seller."

DR. ORR'S BOOK.—Readers of the KANSAS FARMER will be pleased to know that arrangements have been made whereby they can obtain this concise and well high invaluable "Farmer's Ready Reference or Handbook of Diseases of Horses and Cattle" in combination with this paper at a slight saving in cost.

The separate prices of these are:
Dr. Orr's Book.....\$1.25
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Total.....\$2.25

Two dollars sent either to the Kansas Farmer Co., Topeka, or to Dr. S. C. Orr, Manhattan, will secure both, making a saving of 25 cents.

W. S. Hanna, Ottawa, Kas., ex-President Kansas State Alliance and Kansas Swine Breeders' Association, with fifteen years experience as a breeder, now reports 200 breeders on hand ready for the big corn crop. Recent sales were two sows to Wm. Markley & Son, Mound City, Kas.; a boar to U. S. Conwell, Paola, Kas., and one to W. W. Perkins, Kansas City, Mo. In 1893 Mr. Hanna shipped over 200 breeders by express, making sales in sixty-five counties in Kansas. He has been selling the original Geo. Wilkes (\$700 hog) pigs for \$15 each, while in Iowa and Dakota they sold for over \$100. His World's Fair boar contains blood that has topped not only Chicago but New Orleans World's Fair, while many of his sows are half sisters to the sweepstakes hog of the Chicago Fat Stock show. Latest addition, One Price, \$1,000 hog, and Ideal Beauty, a \$3,000 litter.

Publishers' Paragraphs.

We can furnish you KANSAS FARMER and Peterson's Magazine, each one year, for \$1.75. Or KANSAS FARMER and Arthur's Home Magazine for \$1.65. Send to this office amounts above named.

FARM RECORD.—Our "Farm Records" have been such a splendid seller because of their practical value that our supply is now quite limited. We have a number of the best binding only, which the KANSAS FARMER will deliver to any address for only one dollar.

Dr. Henry C. McCook's new volume, entitled "Old Farm Fairies; or, a Summer Campaign in Brownieland Against King Cobweaver's Pixies," will be published July 20, by Messrs. George W. Jacobs & Co., Philadelphia. It presents in a pleasant and most interesting form, some of his observations and findings in natural history. The spiders are assigned the part of Pixies or goblins, and the Brownies are made to personify insect forms, especially those useful to man and against which spiders wage continual war. It is a book that will interest old and young alike.

Tobacco-Stinking Breath.

Not pleasant to always carry around, but it don't compare with the nerve-destroying power that tobacco keeps at work night and day to make you weak and impotent. Dull eyes, loss of interest in sweet words and looks tell the story. Brace up—quit. No-To-Bac is a sure, quick cure. Guaranteed by druggists everywhere. Book, titled "Don't Tobacco Spit or Smoke Your Life Away," free. Address Sterling Remedy Co., New York city or Chicago.

That Trip East

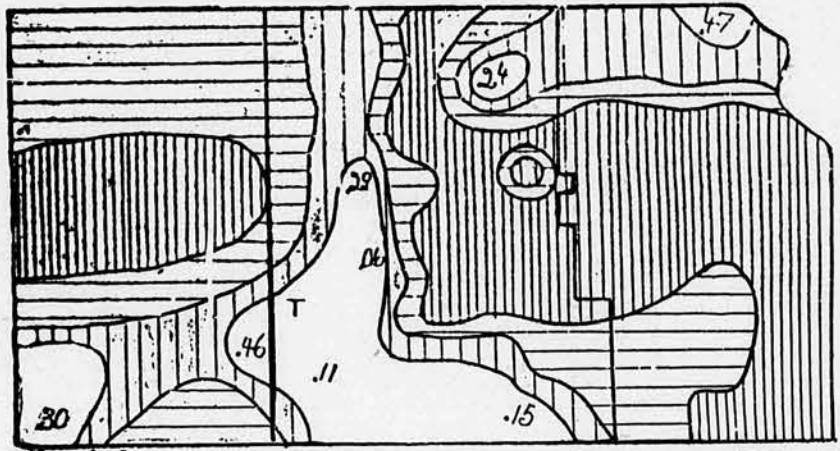
May be for business or pleasure, or both; but pleasure comes by making a business of traveling East over the Santa Fe Route as far as Chicago.

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ACTUAL RAINFALL FOR WEEK ENDING JULY 6.

vested; a few more rains will insure the biggest corn crop ever raised in the county.

Crawford.—Too wet; danger of spoiling wheat and oats in shock and delaying oat harvest; corn fine.

Doniphan.—Good growing weather; corn in splendid condition; oat crop fair.

Douglas.—All crops growing well; oat harvest on.

Elk.—Good growing week; rains interfered with threshing.

Franklin.—All crops doing well except where chinch bugs are at work.

Geary.—Rains have freshened and brightened everything.

Jackson.—Good growing week; oats mostly harvested, fair crop; corn never better; potatoes made; haying commenced.

Johnson.—Wheat cut, yield better than expected; too wet for oat harvest; corn very fine.

Labette.—Wheat and oats badly damaged in shock, too wet to stack; corn fine.

Leavenworth.—Corn growing very finely; early potatoes that were checked in May taking second growth.

Marshall.—A fine week for corn with a prospect never better; harvest over, threshing begun; oats yield good, quality fine.

Miami.—Corn in good shape; oats liable to sprout in shock.

Montgomery.—Wheat damaging in shock; corn and pastures fine.

Morris.—Crops doing well.

Nemaha.—Corn clean but growing slowly; wheat cut, half crop; oats short, being cut; meadows light; pastures short.

Osage.—Corn, gardens and pastures in No. 1 condition; stock water plenty.

Pottawatomie.—Splendid growing week; corn fine and tasseling; second alfalfa crop better than first; early apples in market; Prof. Snow's remedy killing off the chinch bugs.

Riley.—Early corn will almost certainly make a fair crop, while the

Horticulture.

CURING FRUIT.

The requirements of a drying peach are that it should be of good size with a fair share of saccharine matter in its juice, that the flesh should be firm and the pit small. Besides these it used to be considered very important that it should part readily from the pit. Several very efficient machines have been invented for removing the pit and some growers are so enthusiastic in their praise that they would as soon handle clings as freestones. In actual practice the great share of the cling peaches fail to keep their shape as well as others, and appearance is always an important factor in determining price.

The canners have a way of splitting the peach, pit and all, with a sort of cleaver working in a guide that is followed by a spoon that takes out the part of the pit left in each half. In this way they make the fruit appear as well as freestones, when in the can. There is a machine that catches the pit in a notch in a steel disk that looks like a little circular saw, then twists out the pit while the operator holds the peach in his hands. From specimens of its work it seemed likely to come into general use, but for some reason we have not heard much of it lately. The Tarleton knife has long been in extensive use. This consists of a common blade with a semi-circular knife long enough to reach half around the pit fastened near the point. This cuts the pit from the flesh by a quick turn and is very effective in practice. A spoon is made to run in and encircle the pit. Then the cling is easier handled than a freestone.

The Crawford family, from grandpa down to little bub, with all its uncles, aunts and cousins, is easily first among the groups of drying fruits. Against the Early Crawford it is urged that the tree is liable to overbear, the pit to split, and the fruit to ripen on one side at a time. These objections do not hold against the Foster with the same force, and the two varieties are so near alike that it would be hard to tell them apart from any other peculiarities. Indeed, it is no very uncommon thing, nor counted as a high offense among nurserymen, to sell one for the other. The Smith's Early Imperial and McKevitt's Early are new seedlings of the Crawford designed to extend the drying season for ten days or two weeks and to tread very close on the heels of the apricot season. The former is a hybrid between the Crawford and the St. John.

The Late Crawford and the Reeves Favorite ripen some two weeks later than the Early Crawford, and these and other varieties named extend the Crawford season for fully a month. For this reason they are more desirable than equally good kinds resting upon individual excellence. The larger quantity we can produce of a single kind of standard goods the better the sale.

So far as flavor of fruit and percentage of yield are concerned there is probably no peach quite equal to the Muir. Selected peaches of this variety, if grown where they get just enough and none too much water, whether applied naturally or artificially, will yield almost one pound cured fruit to four of fresh. One to five would not be an unsafe basis to figure on. The growth of the Muir is not as vigorous as that of some other varieties, and stringy fibres from the pit are often found on the product.

The Susquehanna is a great favorite through the San Joaquin valley. The tree is a vigorous grower, a good bearer and the fruit uniformly large if properly thinned and given sufficient moisture and cultivation. The color and quality of the fruit are such that it is classed with the Crawfords. Wherever the season is as long as in the upper San Joaquin valley it is safe to extend the season by planting the Salway. This is a very fine flavored peach with the general characteristics of the Crawford family, but ripens too late to be recommended for localities where they are likely to have early rains. These varieties are all large trees

stones so nearly alike in appearance and flavor as to sell to the trade under a single brand graded according to size, color and ripeness. Some share of consumers prefer the flavor of cling peaches, and they are, as a rule, larger and of firmer flesh, and for those who can handle them as cheaply as freestones they may be better for the above reasons. Whichever class is chosen it is well to have a succession of varieties to keep the crew going as long as possible. It is also well to have these varieties of one general type so as to have a brand of goods that will market to better advantage.

The peach is in more general consumption than any other fruit except the apple. If our California orchards were within 500 miles of the great Eastern markets we should have all their peach-growers with us in a hurry. As it is, our main chance is to supply their markets with fresh fruit in years when they have one of their frequent failures. It is true that our peaches are larger and much finer in appearance and will keep longer, but a protective tariff of 2,000 miles is in their favor.

On cured fruit this barrier is counterbalanced many times over by the difference in growth and fruitfulness of our trees and their exemption from their worst enemies. For these reasons California has just claim to the best conditions in America for producing cured peaches, and those who plant this fruit in large orchards have good ground for their faith.

In shipping and canning centers they dry the culls and the surplus. For this reason, if no other, we should be able in this part of the State, where we cure the bulk of the crop, to command an extra price for our goods.

People in unirrigated sections have talked so long about the superior quality of unirrigated fruit that they believe it as firmly as they believe the catechism. Members of one of the Santa Clara co-operative drying associations objected strongly to having their manager receive irrigated fruit on the same basis as their nice fruit that had never been watered. To arrive at a just basis of dealing they made the most careful test they knew how to devise, with the result that irrigated fruit came out ahead. This was explained because the irrigated fruit had received the necessary moisture to insure a constant and healthy growth and the fruit was so much larger that the proportion of pit and pulp was less. The fruit was evidently the product of some careful irrigator who used just enough water to keep the soil in good condition for plant food and secured that result by judicious cultivation. There is as much difference between samples of irrigated fruit as between a sack of water mildly flavored with peach and the finest product that pomology can show.—*The Californian.*

Agricultural Forestry.

Abstract of graduating thesis of R. W. Rader, Manhattan, at Agricultural college commencement, 1895.

In canvassing the works of nature, it is remarkable to notice what a vast amount of its make-up is left to the function of vegetation.

I feel safe in stating that few products of the soil enter so largely into the industries of the world as its forests. Coal fields may be exhausted, oil wells cease to flow, but as long as this earth is populated, our trees will ever be an important factor in its growth. Their true value is hardly realized by many, since they fail to see the influences at work, producing the various phenomena that directly affect the natural conditions of good farming.

Forests furnish the proper organic material to hold water in abundance. The leaves and stems, when they have fallen, form layer upon layer of loose, spongy, half-decomposed soil, that makes a natural reservoir which may receive a vast amount of water and give it up at intervals to suit the conditions of surrounding vegetation. Trees afford evaporating surface for the water they hold to escape; thus moisture is dissipated through the atmosphere by the leaves, at times when it would otherwise be dry. Treeless sections, on the other hand, allow the

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heat of the sun to evaporate the moisture from the soil, while the same condition is favorable to the bad effects of dry, sweeping winds.

Do not instances of the past speak for themselves a valuable lesson? When you cut away a forest, plant another, although I would not insist that it must be in the same place; rather not, but put it on land that is not so valuable. We cannot expect that by planting on the lowland the good will go uphill and be a benefit to the highest; rather the reverse.

The theory of the rapid extermination of our forests is by no means a new one. The records of the French government, as early as 1696, show that they were worrying about it then. They have worried since, still no practical solution has yet been offered.

I am of the opinion that when the people of America see the necessity of planting, and quit talking about what is being destroyed, then some of the worry may subside.

"Plant! Plant! Plant!" is written on every hill and knoll. Plant what is best suited to your soil in the place where it will best improve and modify your surroundings. The economic farmer should study the habits and characters of the most common trees, that he may be able to effect any result he may desire without costly experimenting, thus advancing the favorable conditions of his own industry.

The United States has yet to solve this problem or suffer for its negligence. But how are we going to do it? Through the tillers of the soil. Oh, farmer, noble farmer, foundation of our nation, I appeal to your patriotism. Where are your interests? They are in the present and future of agriculture. If you would save them, then, and must destroy, why you must plant. It seems to me that you should even sacrifice some of your individual rights and privileges in behalf of posterity. However, public policy and future welfare demand of you this imperative duty.

Publications of United States Department of Agriculture for June.

[All applications for the publications of this department should be addressed to the Secretary of Agriculture, Washington, D. C.]

Experiment Station Record, Vol. VI, No. 9. (Not for general distribution.)

Experiment Station Record, Vol. VI, No. 10. (Not for general distribution.)

Statistics of Agricultural Colleges and Experiment Stations, 1894. (Circular No. 27, Office of Experiment Stations.)

Report of the Statistician—May, 1895. No. 126.—Contents: Condition of winter grain; Condition of cotton; The cotton crop, 1894; Prices of wheat in England; Report of European Agent; Notes on foreign agriculture; Transportation charges.

Report of the Statistician—June, 1895. No. 127.—Contents: Crop report for June; Cotton—Increase and decrease of acreage, 1895; Temperature and rainfall; Report of European Agent; Notes on foreign agriculture; Transportation charges.

Synopsis of Report of Statistician—June, 1895. No. 127.

Peaches and Other Fruits in England. Pp. 4. (Circular No. 1, Section of Foreign Markets.)—This circular is a consular report giving practical information regarding the demand for peaches and other fruits in England, with particulars as to price, packing, etc.

The World's Markets for American Prod-

ucts. The German Empire. (Bulletin No. 2, Section of Foreign Markets.)—This bulletin is the second of a series designed to show the world's markets for American Products to all those who are sufficiently interested in increasing the demand therefor in foreign lands.

The Imported Elm Leaf-beetle. (Circular No. 8, Division of Entomology.)—Gives general appearance and method of work, distribution, natural history and habits, and remedies.

The Rose-chaffer. (Circular No. 11, Division of Entomology.)—Gives general appearance and method of work, natural history and habits, and remedies.

Good Roads. Extracts from Messages of Governors. (Bulletin No. 14, Office of Road Inquiry.)

Notes on the Employment of Convicts in Connection with Road Building. (Bulletin No. 16, Office of Road Inquiry.)

Regulations for the Inspection of Live Stock and their products. (Circular of Bureau of Animal Industry.)

Report of the Chief of the Weather Bureau, 1893.—This, the second volume of meteorological data published by the Weather Bureau, contains the results of observations made during 1893, and, as a special contribution, the records in detail of temperature, pressure, and wind at Pike's Peak and Colorado Springs, Col.

Protection from Lightning. (Bulletin No. 15, Weather Bureau.)—This bulletin is a revision of a circular formerly issued by the Bureau. It gives methods of protecting life and property from lightning and statistics of actual losses; also directions for procedure in cases of apparent death from lightning stroke.

Report of the International Meteorological Congress, held at Chicago, Ill., August 21-24, 1893, under the Auspices of the Congress Auxiliary of the World's Columbian Exposition. (Bulletin No. 11, Part II, Weather Bureau.)

Charts of the Weather Bureau. (Size 19 x 24 inches.)

Weather-Crop Bulletin (series of 1895), reporting temperature and rainfall with special reference to their effect on crops. Nos. 12, 13, 14, and 15 for the weeks ending June 4, 11, 18 and 25.)

Semi-daily Weather Map, showing weather conditions throughout the United States and giving forecasts of probable changes.

REPRINTS.

Peanuts: Culture and Uses. Pp. 24, fig. 1. (Farmers' Bulletin No. 25, Office of Experiment Stations.)

Sweet Potatoes: Culture and Uses. Pp. 24, fig. 1. (Farmers' Bulletin No. 26, Office of Experiment Stations.)

Wide Tires. Laws of Certain States Relating to Their Use, and Other Pertinent Information. Pp. 16. (Bulletin No. 12, Office of Road Inquiry.)

Flax for Seed and Fiber. (Farmers' Bulletin No. 27, Office of Fiber Investigations.)

Proceedings of the Virginia Good Roads Convention held in Richmond, Va., October 18, 1894. (Bulletin No. 11, Office of Road Inquiry.)

Experiment Station Record, Vol. V, No. 6. (Not for general distribution.)

Earth Roads: Hints on Their Construction and Repair. (Bulletin No. 8, Office of Road Inquiry.)

Virtue is more to man than either water or fire. I have seen men die from treading on water and fire, but I have never seen a man die from treading the course of virtue.—*Confucius.*

To prevent pale and delicate children from lapsing into chronic invalids later in life, they should take Ayer's Sarsaparilla together with plenty of wholesome food and out-door exercise. What they need to build up the system is good red blood.

In the Dairy.

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

Directions for Home Cheese-Making.

Strain the milk into a vat and add half a pint of rennet to 100 gallons of milk, which should bring the curd in one hour when the temperature is about 80 degrees. Stir the rennet and milk thoroughly. Many of the unknown troubles of the amateur cheese-maker arise from the use of ill-conditioned rennet. If doubts as to its purity exist, it should be filtered through a flannel or cotton fibre. As the condition of rennet, quantity of milk and temperature vary at nearly every cheese-making, the prepared tablets sold by dairy supply houses are undoubtedly more certain in results. To the beginner, a thermometer accurately graded, is essential to success. The curd is cut into one inch squares immediately after it is formed, to hasten the separation of whey and curd. The cutting is repeated two or three times at half-hour intervals, and then dipped carefully into a basket in which a strainer has been placed. Arrange the basket on a ladder over the whey-receiver and cut the curd occasionally to hasten draining. When compact and entirely free from whey, tie the strainer ends by opposite corners and hang in a cool place until the morning run is made. Proceed with the morning's milk precisely in the same way until ready to hang. This curd requires a little more draining that it may be firm and decidedly free from whey.

Cut the night and morning curds in slices, place in a bowl and chop into pieces a half inch in diameter. Pour over the curds a gallon of hot whey or water and stir until a squeaking sound is made. Drain off the scalding water, add salt to taste and thoroughly mix in the curd. Place a dry strainer in the hoop, carefully introduce the curd, fold the strainer neatly over the top, put the follower on and consign to the press. Only enough weight should be used to nicely consolidate the cheese and press out the small remaining portions of whey. If placed in the press in the morning, at night turn the cheese, substitute a fresh strainer, the next day remove from the press, butter the sides, top and bottom, and place on an odorless board in a cool, airy place to cure. Four weeks for curing is necessary, and during this time the cheese should be turned daily and buttered if inclined to adhere to the board. As cheese is liable to expand, a band of strong cloth should be drawn and sewed tightly around it to obviate cracking.—*American Agriculturist.*

Less Demand for Oleo.

The output of oleomargarine at Chicago, which is the greatest point of production in the country, has declined steadily since October, when 4,051,599 pounds were made, to only 2,142,043 pounds in April; January output 2,767,000, and March 2,350,000. Bogus butter always sells best when butter holds at prices almost prohibitive. No doubt something of the decline is due to relatively low butter prices during the last two months, and much of the loss to the successful fight waged against it, which has succeeded in narrowing the bounds of its freedom.

Dairy Notes.

The use of sterilized milk among the children on the "east side" of New York city last summer is claimed to have reduced the death rate in that class and section by more than 10 per cent.

Dr. Harrington, Milk Inspector of Boston, reports that the use of preservative in milk has entirely ceased. He recommends a legal standard for cream. He finds it to vary from 10 to 40 per cent. of fat. The United States court decision is driving oleomargarine out of the restaurants.

A gentleman had a cow which he wished to sell on account of her being very unruly at milking time. So he sent her to the fair with his man Pat, strictly charging him to tell no lies but to speak the truth about the cow. Pat returned in the evening with nearly

double the sum expected for the cow. "Pat," said the master, "you've been telling lies about her." "The devil of a lie, sor." "What did you say, then?" "They asked me if she was a good milker, and I says, says I: 'It's tired milking her you'd be before you'd done, sor.'"

Before the Babcock test came out it was not an easy matter to determine the amount of fat in each cow's milk. With that machine it is quite an easy task. The entire process is simple, and any one who is able to manage a herd can make the test. Its great value over the older methods is that it is a much shorter process.

Messrs. Brandt & Essley, of Canton, Kas., have sent us the following figures showing their business for the month of May: Milk received at Moundridge main factory, 447,706; Canton main factory, 151,023; Turkey Creek, Station No. 1, 192,787; Elyria, Station No. 2, 134,558; Roxbury, Station No. 3, 164,139; Spring Valley, Station No. 4, 113,292; total, 1,203,605. Amount of butter made, 52,841; average test, 3.67; price paid for butter fat, 15 cents.

Recently a separator exploded at the Artesian creamery, says the Waverly (Iowa) Independent. The butter-maker was working at the machine when it began to tremble, but before he could do anything the bowl jumped out of its frame, knocking the pans in the man's face, blackening his eyes, and at the same time the bowl was twisted off the spindle and flew around the room, the spindle being shot through the side of the building like a cannon-ball. It was fortunate that nobody was struck by the flying bowl or spindle.

Singing to cows was a novel topic discussed at the recent dairymen's convention, at Hartford, Conn. Some one asked the question: "What is the effect of singing to a cow while she is being milked?" One member answered that his Swiss milkmen frequently sang psalm tunes and hymns while milking, and the cows seemed to enjoy it. Another remarked that cows were creatures of habit and if you must sing to them, sing the same tune to the same cow every time. Don't sing "Old Hundred" to the "Yankee Doodle" cow.

At Pittsburg, Pa., on June 18, by the explosion of a milk and cream separator, revolving at the rate of 13,000 times a minute, an accident occurred at 2110 Carson street, resulting in the death of Philip Deihl, Vice President of the Milk Dealers' Exchange of western Pennsylvania, and the serious but not fatal injury of several milk dealers. It required 8,500 revolutions per minute to separate the cream from the milk. A greater number of revolutions is dangerous. In some manner the separator did not perform its work, and the revolutions increased suddenly to 13,000, when it exploded.

Deafness Cannot be Cured

by local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the eustachian tube. When this tube gets inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces.

We will give One Hundred Dollars for any case of deafness (caused by catarrh) that cannot be cured by Hall's Catarrh Cure. Send for circulars, free.

F. J. CHENEY & CO., Toledo, O.
Sold by druggists, 75c.

Are You From Pennsylvania?

Ever visit the old home? Best route via St. Louis is the Vandalia-Pennsylvania Lines. It's the favorite with the Pennsylvanians, and passes through the entire Keystone State. Trains run via Pittsburg without change. Full information may be obtained by addressing Brunner, 509 Chestnut street, St. Louis.

He who seeks the truth should be of no country.—*Voltaire.*

FARM CREAM SEPARATORS.
Power and Hand. Send for Catalogue.
P. M. Sharples, West Chester, Pa., Elgin, Ill.

Unless a tree has borne blossoms in spring you will vainly look for fruit on it in autumn.—*Hare.*

"THE ONLY SUCCESS."

The McCormick Corn Binder

LIGHT DRAFT—CLEAN WORK—SQUARE-BUTTED BUNDLES



Chas. McKissick, Supt. "Mayville Farm," Mayville, N. Dakota, says:

"It solves the question of handling corn."

Wm. E. Dana, East Avon, N. Y., says:

"I cut 24 acres of corn ranging in height from 3 to 14 feet."

P. F. Huntley Jr., Le Roy, Minn., says:

"Just what is wanted in corn districts."

A. S. Cotton, Manager "Sanitarium Farm," Clifton Springs, N. Y., says:

"Cuts and binds all corn—slightly lodged and tangled, as well as standing. Have tried many corn harvesters. The McCormick is the only success."

N. H. Leonard, Spring Valley, Minn., says:

"Binds the corn in great shape, with nice square butts for shocking."

Levi Wambaugh, Waterloo, Iowa, says:

"It works well and to my entire satisfaction."

J. R. McCullough, Solomon City, Kan., says:

"Two men and two horses can cut, bind and shock 12 acres a day."

John L. Taylor, Owego, N. Y., says:

"I cut 50 acres of ensilage corn (some of it very heavy). It is a machine which all ensilage growers must have."

Manufactured by McCORMICK HARVESTING MACHINE CO., CHICAGO.

Weather Report for June, 1895.

Prepared by Chancellor F. H. Snow, of the University of Kansas, from observations taken at Lawrence:

The temperature of the past June has been a little above the June average. The rainfall has been exceeded by only eight out of the twenty-seven preceding Junes, and was fairly well distributed over the month. Nearly all of the rains were accompanied by thunder. The cloudiness was slightly above the June average, the humidity much below and the barometer below.

Mean temperature was 74°, which is 0.6° above the June average. The highest was 94°, on the 24th and 25th; the lowest was 51° on the 4th, giving a range of 43°. Mean temperature at 7 a. m., 70.8°; at 2 p. m., 82.1°; at 9 p. m., 71.56°.

Rainfall was 5.93 inches, which is 1 inch above the June average. Rain in measurable quantities fell on eleven days. There were eight thunder showers. The entire rainfall for the six months of 1895 now completed is 13.3 inches, which is 4.41 inches below the average for the same months in the twenty-seven preceding years.

Mean cloudiness was 43.2 per cent. of the sky, the month being 1.97 per cent. cloudier than usual. Number of clear days (less than one-third cloudy), fourteen; half clear (one to two-thirds cloudy), ten; cloudy (more than two-thirds), five. There was not one entirely clear day, and but two entirely cloudy. Mean cloudiness at 7 a. m., 45.6 per cent.; at 2 p. m., 46.6 per cent.; at 9 p. m., 37.5 per cent.

Wind was southwest sixteen times; southeast, ten times; south, twenty-three times; east, eleven times; north, eight times; northeast, thirteen times; west, three times; northwest, six times. Total run of the wind was 9,461.5 miles, which is 372.6 below the June average. This gives a mean daily velocity of 815.38 miles, and a mean hourly velocity of 13.14 miles. The highest velocity was 50 miles an hour, between 6 and 7 p. m. on the 25th.

Barometer.—Mean for the month, 29.115 inches; at 7 a. m., 29.136 inches; at 2 p. m., 29.100 inches; at 9 p. m., 29.111 inches; maximum, 29.284 inches, on the 18th; minimum, 28.865 inches, on the 3d; monthly range, 0.419 inch.

Relative Humidity.—Mean for the month, 68.02 per cent.; at 7 a. m., 73; at 2 p. m., 56; at 9 p. m., 75.06; greatest, 97, on the 9th; least, 31, on the 6th. There were no fogs.

Invited to send for my latest price list of small fruits. Half million strawberry plants, 300,000 Progress, Kansas and Queen of West raspberry plants. B. F. Smith, Box 6, Lawrence, Kas. Mention this paper.

A. H. GRIESEA, Prop'r Kansas Home Nurseries, Lawrence, Kas., grows trees for commercial and family orchards—the Kansas Raspberry, Blackberries, standard and new Strawberries—also shade and evergreen trees adapted to the West.

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

ESTABLISHED IN 1873.

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Offers for fall of 1895 large stock, best assortment. Prices low. Stock and packing the best.

We should be glad to employ a few reliable salesmen. Address

A. WILLIS, Ottawa, Kansas.

[When writing mention KANSAS FARMER.]

LOOK for our announcement in NEXT issue of this paper. It will show a cut of 1 style of **DAVIS CREAM SEPARATORS**. It would take several pages to give details about these peerless machines. Handsome Illustrated Pamphlet Mailed Free. AGENTS WANTED.
DAVIS & RANKIN BLDG. AND MFG. CO.
Sole Manufacturers, Chicago.

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Cheese-Making is More Profitable Than Butter-Making.

The process is easy. Machines are complete and substantial. A ten-pound cheese made at each operation. Nothing like it on the market. Simple directions sent with each apparatus.

No. 1, 10 Gal., with 1 press and 1 hoop, \$15.00
No. 2, 20 " " " " " " " " 25.00
No. 3, 30 " " " " " " " " 32.00

Further information cheerfully sent by manufacturers.
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HIGH GRADE BUTTER

Cannot be made without a

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Look to your Dairy for Profit.

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BUTTER PACKAGES of every kind.

HAND SEPARATORS

For Small Dairy Farmers.

Every farmer having six or more milch cows should have one of these machines—the saving of butter alone in a single year will pay for it. For information, prices, etc., address

Creamery Package M'f'g Co.,
Department B.

Kansas City, Mo.

The Apiary.

Enemies of Bees.

Moths, worms and ants are the enemies of bees, says the Ozark Mountain Fruit and Farm.

The moth miller slips into the hive at night to deposit its eggs around under the edges of the box hive, where they hatch and then make their way to the combs. The black bees do not defend their hives as well as the Italian bees. If the bees become queenless, they soon get weak and the moths find easy prey, as the bees will not defend themselves. When the queens get old they decrease the number of eggs. They lay daily and they grow weak again. The moths then overpower them. It is then the duty of the apiarist to assist the bees. Get Italian bees, which are almost moth proof, and have good hives. Do not keep old queens in stock. Re-queen stocks that have four-year-old queens with young Italians. If the bees are black they will soon all be Italians. See that they are strong and will repel the moths.

The apiarist must sweep off the bottom boards and assist the bees in keeping the surroundings clear of weeds, trash and dirt. To get the moth out of the combs, fumigate with burning sulphur in a tight box, or give the combs to a strong colony of bees, one at a time. To keep the ants out of the hive set them on a bed of ashes about four inches deep and three feet square, tramped and saturated with coal oil. If the ants still bother a little, take a swab and rub a little coal oil around the entrance to the hive. Trail the ants to their beds and scald them till you destroy their nests; that is the only remedy. An apiarist cannot work with swinging hives. Bees dislike any motion or jarring about their hive. The proper time to rob the bees is a question the apiarist must answer for himself; he must know the condition of the season and the amount of honey in the hive. The surplus honey can be taken at any time of the year that it is not so cold that the bees would not chill upon opening of the hive. Bees cannot thrive upon scant supplies, therefore do not rob too close. Examine the hives often, and every time a surplus is found take out a reasonable portion without regard to time.

Watering the Bees.

Phillip Smith describes in the American Bee Journal how he waters his bees. I take, he says, a large cigar box, or any other box that can be made water-tight either with wax or paint—a tin box made purposely for watering bees might be still better. Make the lid to fit loosely inside of the box; bore the lid full of gimlet holes, nail two little strips on the underside of the lid at each end to keep it from warping, and one on top of the lid to lift it in and out with. While filling the box with water, if the lid gets too heavy, tack thin slices of cork underneath to keep it on top. The way I got my bees started to water in the boxes was to take sweetened water at first, very early in the spring of the year, and I was careful to always keep water in the boxes. I generally kept one box with salt water in it—say one teaspoonful to a quart of water. Sometimes the bees seem to be very greedy for the salt water, and at other times they would not touch it for three or four days. I think I have saved thousands of bees by having this watering place. It is located on the south side of the house in a cool, shady place, where there is not so much wind as in some places. During the ten hot days in July and August, when the mercury stood at 106 degrees, my bees drank three and one-half gallons of fresh water a day out of these boxes. I filled them every morning and noon during those hot days, and spent considerable time watching the bees coming and going for the water. I had 15 colonies at that time, and I have no doubt that some bee keepers will discredit this statement, for it seems hardly possible, but it is nevertheless true. I measured very particularly, and I know that the boxes did not leak. I was bothered very much the summer before, with bees in the watering trough and around the well bucket, where timid folks often did without water on account of

the bees being too thick. This was my third year with bees. I got 150 pounds of honey, and doubled my bees from nine to 18 colonies. I am very well satisfied with the business, and expect to continue.

Bees and Bee Hives.

The beehive everywhere represented as the emblem of industry, as for instance in pictures on the covers of savings bank books, is the old-fashioned round, sugar-loaf structure made of twisted straw; but as a matter of fact there are very few such hives now in use except in Germany and Austria, and even there the modern hive is taking their places. The modern hive is made of boards, and is square with some modifications in shape and style; it is not nearly so picturesque as the old-fashioned hive.

A gentleman farmer in New Jersey desiring to get two of the old-fashioned hives to set up on his place commissioned a New York dealer in beekeepers' supplies to buy them. The dealer communicated with many bee farmers in his search, and finally found one hive on Long Island. The gentleman had meanwhile found one himself, so that he had his desire.

Dealers in beekeepers' supplies sell everything required, including bees in the season. One can buy a colony of bees or any number of bees, just as he can dry goods or shoes. Queen bees are sent from here all over the country. They are shipped by mail in little boxes called queen cages. There is in each cage space for the queen bee and for a number of worker bees. In one of the cage is placed a sufficient store of candy for food to last the bees on their journey. Queen bees are frequently sent from here to Australia in this manner, and 50 per cent. of them reach their destination alive after a journey of forty-five days.—N. Y. Sun.

Hints for Bee-Keepers.

By using an extractor old combs may be saved and utilized.

EVERY bit of wax and old combs should be carefully saved.

THE queen must be prolific in order to keep the hive full of bees.

BEES bred in new comb are generally much larger than those reared in old.

IN order to obtain the best results it is essential to have the best grade of bees.

CLOVER and buckwheat are among the best honey producing crops that can be grown.

THE safest plan of securing a good crop of honey is to provide good pasturage for the bees.

IT is more profitable to melt up dirty combs or throw with dead brood and use, instead, good foundation. Whenever there is any doubt about the comb discard it and use foundation.

AS soon as spring flowers bloom there should be no natural swarming. In fact, the bees should not be allowed to swarm. Sometimes, however, the swarming fever seems to affect the whole colony, less than a pint of bees sometimes being left in the old colony.—St. Louis Republic.

Valuable Books Cheap.

By a special arrangement with the publishers, we are able to offer to subscribers any of the following named books at 10 per cent. less than the list price. These are new, fresh books, right up to the time, as is sufficiently guaranteed when it is known that they are put out by W. Atlee Burpee & Co., the famous Philadelphia seedsmen. Here is the list:

	Price, postpaid.
"The Beautiful Flower Garden." A delightful book by an artist.	50
"Injurious Insects." A valuable book.	50
"Selection in Seed Growing."	10
"Onions for Profit." A hand-book based on modern methods.	50
"Manures; How to Make and How to Use Them."	50
"Celery for Profit." An expose of modern methods in growing Celery.	30
"All About Sweet Peas." Revised and enlarged edition.	20
"How and What to Grow in a Kitchen Garden of One Acre."	50
"The Poultry Yard: How to Furnish and Manage It."	50
"How to Grow Cabbages and Cauliflowers."	30
"Root Crops for Stock Feeding, and How to Grow Them."	30
"How to Grow Melons for Market." Compiled from Prize Essays.	30
"How to Grow Onions." With a chapter on Growing by Irrigation.	30
"Pansies, Poppies, and Sweet Peas." A bright booklet.	10

Choice Quotations.

People do not lack strength; they lack will.—Hugo.

The weak have remedies, the wise have joys.—Young.

When the stomach is satisfied the food is bitter.—Swedish.

A man must become wise at his own expense.—Montaigne.

Ungratefulness is the very poison of manhood.—Sir P. Sidney.

Wit is the god of moments, but genius is the god of ages.—Brucere.

More water glideth by the mill than wots the miller of.—Shakespeare.

Every man has just as much vanity as he wants understanding.—Pope.

Nothing is rarer than the use of a word in its exact meaning.—Whipple.

The mind conceives with pain, but it brings forth with delight.—Joubert.

All are born to observe good order, but few are born to establish it.—Joubert.

To see and listen to the wicked is already the beginning of wickedness.—Confucius.

The sum of the whole is this: Walk and be happy; walk and be healthy.—Dickens.

Reproofs of a friend should always be strictly just and not too frequent.—Buddell.

A room hung with pictures is a room hung with thoughts.—Sir Joshua Reynolds.

A cock, having found a pearl, said that a grain of corn would be of more value to him.—Laroux.

Zeal is very blind, or badly regulated, when it encroaches upon the rights of others.—Queneau.

A stray hair, by its continued irritation, may give more annoyance than a smart blow.—Lowell.

Self-will is so ardent and active that it will break a world to pieces to make a stool to sit upon.—Cecil.

Do what good thou canst unknown, and be not vain of what ought rather to be felt than seen.—William Penn.

As land is improved by sowing it with various seeds, so is the mind by exercising it with different studies.—Pitmy.

The true epic of our times is not arms and the man, but tools and the man—an infinitely wider kind of epic.—Carlyle.

War kills men, and men deplore the loss; but war also crushes bad principles and tyrants, and so saves societies.—Colton.

The wisest woman you talk with is ignorant of something that you know, but an elegant woman never forgets her elegance.—Holmes.

Pursue not a victory too far. He hath conquered well that hath made his enemy fly; thou mayest beat him to a desperate resistance, which may ruin thee.—George Herbert.

Nature appears to me to have ordained this station here for us as a place of sojournment, a transitory abode only, and not as a fixed settlement or permanent habitation.—Cicero.

All travel has its advantages. If the passenger visits better countries he may learn to improve his own; and if fortune carries him to worse, he may learn to enjoy his own.—Johnson.

Every green thing loves to die in bright colors. It is never nature that is sad, but only we, that dare not look back on the past, and that have not its prophesy of the future in our bosoms.—Becher.

So many great, illustrious spirits have conversed with woe, have in her school been taught, as are enough to consecrate distress and make ambition even wish the frown beyond the smile of fortune.—Thomson.

Homes for the Homeless.

The opening of two Indian reservations in northeastern Utah to settlers opens up over three and one-half million acres of fine agricultural and stock-raising land for home-seekers.

The Uintah and Uncompahgre reservations are reached by the only direct route, the Union Pacific system, via Echo and Park City. E. L. LOMAX, G. P. & T. A., U. P. system, Omaha, Neb.

No Change to Chicago.

The through service offered the traveling public by the Union Pacific system and Chicago & Alton railroad is unsurpassed. The Perfect Passenger Service of the C. & A. with the well-known excellence of the service of the Union Pacific assures the traveling public that they "are in it" when they patronize this popular joint line from Denver to Chicago and intermediate points. Pullman Palace sleeping cars, dining cars and free reclining chair cars without change.

For all information apply at 525 Kansas Avenue. F. A. LAWIS, City Agent, Topeka.

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CROUP Positively cured by our remedies (if directions are carefully followed) or money refunded. Send 50c. for a trial. Dr. W. T. Kirkpatrick, Lincoln, Ill.

THE STRAY LIST.

FOR WEEK ENDING JUNE 26, 1895.

Ford county—J. H. Leidigh, clerk.

MARE—Taken up by E. S. Ralston, in Fairview tp. (P. O. Dodge City), one brown mare, 11 years old, branded lazy 3 (w) on left shoulder and half circle on left hip; valued at \$12.

Cherokee county—P. M. Humphrey, clerk.

PONY—Taken up by S. D. Harvey, in Lowell tp., May 15, 1895, one horse pony, blaze face, right hind foot white, saddle and harness marks, about 7 years old; valued at \$20.

HORSE—Taken up by J. W. Howell, in Lowell tp., June 8, 1895, one black gelding, fifteen hands high, weight 825 pounds, white spot in forehead about three inches in diameter—nearly round, about 4 years old; valued at \$20.

MARE—Taken up by Aaron McKinney, May 15, 1895, one sorrel mare, thirteen hands high, white in face, hind feet white, branded H on left hip, about 11 years old; valued at \$10.

Labette county—J. F. Thompson, clerk.

HORSE—Taken up by G. J. Sharp, in Hackberry tp., May 26, 1895, one bay horse, fourteen hands high, 6 years old, star in forehead; valued at \$25.

HORSE—By same, one dark iron-gray horse, fifteen hands high, 5 years old; valued at \$25.

Logan county—H. G. Kiddoo, clerk.

MARE—Taken up by A. P. Samuelson, in Winona tp. (P. O. Page), June 7, 1895, one bay mare, star in forehead, fifteen hands high, about 4 years old, no brands; valued at \$5.

MULE—By same, one black mare mule, fourteen hands high, 2 years old, no marks or brands; valued at \$10.

Allen county—James Wakefield, clerk.

HORSE—Taken up by W. M. Miller, in Marmaton tp., one gray horse, weight about 1,100 pounds, about 9 or 10 years old, illegible brands and some harness marks; valued at about \$20.

HORSE—Taken up by John Tillery, in Marmaton tp., one brown horse, 10 years old, white on one foot and spot in forehead; valued at about \$15.

FOR WEEK ENDING JULY 3, 1895.

Miami county—Jas. E. Caton, clerk.

MARE—Taken up by Fred Weir, June 10, 1895, one bay mare, fifteen hands high, white spot in forehead, right hind foot white.

Cherokee county—P. M. Humphrey, clerk.

HORSE—Taken up by Frederick S. Hodson, in Cherokee tp. (P. O. Garden), June 24, 1895, one sorrel horse, fifteen hands high, white in face, hind feet white, sprain on hind leg, saddle marks, high-lifted; valued at \$20.

HORSE—By same, one sorrel horse, fourteen and a half hands high, some white in face, collar marks, work horse; valued at \$10.

HORSE—Taken up by J. W. Hamilton, in Pleasant View tp., May 9, 1895, one bay horse, fourteen hands high, white hind feet, branded B. on left hip; valued at \$10.

Shawnee county—Chas. T. McCabe, clerk.

HORSE—Taken up by Callie Chiles, in Tecumseh tp., June 17, 1895, one light bay gelding, 3 years old, star in forehead, left front foot and both hind feet white; valued at \$25.

MARE—By same, one dark iron-gray filly, 3 years old, white face and nose and right hind foot white; valued at \$25.

FOR WEEK ENDING JULY 10, 1895.

Phillips county—J. D. Thornton, clerk.

MARE—Taken up by John Van Horn, in Rushville tp. (P. O. Powell), April 29, 1895, one light dun mare, sixteen hands high, weight 800 pounds, star in forehead, wire cut on front leg; valued at \$25.

Neosho county—W. P. Wright, clerk.

PONY—Taken up by Philip Shafer, in Lincoln tp., June 4, 1894, one gray pony mare, shagred, branded on left side and hip; valued at \$12.

Cherokee county—P. M. Humphrey, clerk.

MARE—Taken up by B. G. Jones, in Shawnee tp., June 15, 1895, one dark bay mare, sixteen hands high, 12 years old, both hind and one front foot shod, saddle and harness marks; valued at \$10.

Harvey county—T. P. Murphy, clerk.

MARE—Taken up by Charles Haering, Williams & Gardner's addition to Newton city, June 20, 1895, one black mare, 4 years old, scar on right fore foot, no other marks or brands; valued at \$25.

HORSE—Taken up by Maria D. Miller, of Walton tp. (P. O. Walton), June 5, 1895, one bay horse, collar marks on shoulders, no other marks or brands, about fifteen hands high, 9 years old; valued at \$15.

Union Pacific Route.

What you want is the through car service offered between Denver and Chicago via the Union Pacific and Chicago & Alton railroads, which is unexcelled by any other line. Magnificent Pullman sleepers, dining cars and chair cars, run through daily without change, Denver to Chicago via Kansas City.

The Veterinarian.

We cordially invite our readers to consult us whenever they desire any information in regard to sick or lame animals, and thus assist us in making this department one of the interesting features of the KANSAS FARMER. Give age, color and sex of animal, stating symptoms accurately, of how long standing, and what treatment, if any, has been resorted to. All replies through this column are free. Sometimes parties write us requesting a reply by mail, and then it ceases to be a public benefit. Such requests must be accompanied by a fee of one dollar. In order to receive a prompt reply, all letters for this department should be addressed direct to our Veterinary Editor, DR. S. C. ORR, Manhattan, Kas.

CATTLE DYING.—What ails my cattle? I lost four yearlings with supposed blackleg. I found one sick yesterday, about a mile from the rest of the stock; it looked hollow and reeled when it walked but showed no sign of blackleg. I bled it, then left it, and when I returned in four hours it was dead. The manfolds were very full and some parts so dry it would crumble. Do cattle have dry murrain at this season of the year? E. W. Lexington, Kas.

Answer.—From the description given I think your animal died from indigestion or so-called "dry murrain." This disease may occur at any season of the year when the feed is of the proper kind to produce it. It is most prevalent in winter, simply because cattle are then upon dry feed, but it frequently occurs in summer when pastures become dry and scant and cattle are compelled to drink stagnant and impure water. If you had found your animal in time a dose of Epsom salt might have relieved the constipated bowels, but bleeding should not be practiced, as it only tends to lower the vitality and lessen the chance of a cure.

Any of our subscribers who are about to renew subscription will find something interesting by reading the advertisement of "Samantha at Saratoga." If you have already renewed your subscription it will tell you how to get the book at the reduced rate.

"Dairying for Profit, or the Poor Man's Cow," by Mrs. E. M. Jones, is a most valuable book for every farmer's wife, that has had a large sale at 25 cents per copy. We have a number on hand which we will close out at a very low price to our readers, viz., 10 cents, or five 2-cent stamps. First come, first served. Order quick.

Some of the old Kansas friends of Henry Wallace, formerly editor of the Iowa *Homestead*, will doubtless like an opportunity to continue to read the emanations from his able pen. He is now editing *Wallace's Farm and Dairy*. By special arrangement we are able to send KANSAS FARMER and *Farm and Dairy* for one year for \$1.25.

The Knights Templar Conclave will be held at Boston, Mass., during August, and it will be of interest to Sir Knights and their friends to note that arrangements have already been successfully accomplished by the Nickel Plate Road, providing for the sale of excursion tickets over direct lines going and returning or by circuitous routes, viz., going one line and returning by another. By so doing many of the following notable resorts may be visited without additional expense: Chautauqua Lake, Niagara Falls, Thousand Islands, Rapids of the St. Lawrence, Saratoga, Palisades of the Hudson, and the Hoosac Tunnel. The above arrangements will no doubt make the low-rate excursion tickets offered by the Nickel Plate road very popular. Call on or address J. Y. Calahan, General Agent, 111 Adams St., Chicago. 76

Reduced Rates to Baltimore.

On account of the meeting of the Baptist Young People's Union at Baltimore, July 13 to 21, the Baltimore & Ohio railroad company will place on sale at all ticket stations on its lines west of the Ohio river excursion tickets at one fare for the round trip. These tickets will be sold July 16 to 17, valid for return passage until August 5. The rate from Chicago will be \$17.50 and proportionately low rates from other points. Tickets will also be placed on sale at all coupon offices west of Chicago.

Whatever point you start from be sure your ticket reads via B. & O. In addition to the historic country through which the B. & O. runs, the B. & O. is the only line from Chicago to Baltimore running via Washington, a double daily service of fast express trains run between the West and East.

For full particulars address L. S. Allen, A. G. P. A., Grand Central Station, Chicago.

Special Service to Cleveland.

The fast train on the Nickel Plate Road, leaving Chicago at 1:30 p. m., arriving Cleveland 11:30 p. m., is the best day train between Chicago and Cleveland. Give it a trial and be convinced. Uniformed colored porters in charge of day coaches. Lowest rates to all points. For further information address J. Y. Calahan, General Agent, 111 Adams St., Chicago. 77

The Nickel Plate Road has published a map of Boston, Mass., showing the location of the Christian Endeavor Convention hall and State headquarters of the fourteenth International convention, July 10th to 15th, and presenting the merits of their through Drawing Room Sleeping Car Line between Chicago and Boston. Write for a copy to any agent of the Nickel Plate Road or J. Y. Calahan, General Agent, 111 Adams street, Chicago, Ill. 72

MARKET REPORTS.

Kansas City Live Stock.

KANSAS CITY, July 8.—Cattle—Receipts since Saturday, 6,535; calves, 863; shipped Saturday, 833 cattle, 93 calves. The market was generally steady on all good offerings, and somewhat lower on common Texas cattle. The following are representative sales:

DRESSED BEEF AND SHIPPING STEERS.					
105.....	1,491	\$5.30	104.....	1,160	\$4.80
26 yr.....	969	4.75	13.....	1,226	4.70
4.....	957	4.70	49.....	1,366	4.60
88.....	1,212	4.50	19 Tex.....	1,272	3.40

TEXAS AND INDIAN STEERS.					
47.....	1,084	\$3.60	69.....	1,085	\$3.93
48.....	1,056	3.90	101.....	1,005	3.80
50.....	1,022	3.80	25.....	864	3.80
19.....	1,005	3.60	50.....	1,018	3.60

WESTERN STEERS.

88.....	1,196	\$4.15	110.....	1,021	\$3.70
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ARKANSAS COWS.

13.....	914	\$2.50	7.....	762	2.50
20.....	628	2.10	12.....	421	1.75

TEXAS AND INDIAN COWS.

6.....	1,030	\$3.50	1.....	1,100	\$3.25
22.....	781	2.65	2.....	800	2.65
5.....	740	2.35	36.....	655	2.31
11 hr.....	540	2.25	14.....	433	2.10

COWS AND HEIFERS.

1.....	1,250	\$3.10	1.....	1,180	\$2.75
23.....	861	2.75	1.....	1,080	2.70
3.....	1,120	2.65	1.....	940	2.65
4.....	870	2.35	1.....	1,280	2.35
1.....	1,020	2.25	1.....	1,150	2.30
1.....	1,120	2.25	3.....	900	2.25
1.....	1,020	2.00	1.....	830	1.75
1.....	650	1.70			

STOCKERS AND FEEDERS.

22.....	1,154	\$4.20	38.....	850	\$3.85
12.....	547	3.00	1.....	860	3.00
1.....	90	3.00	2.....	1,040	2.50

Hogs—Receipts since Saturday, 2,782; shipped Saturday, 1,110. The market was higher.

The following are representative sales:

67.....	295	\$5.05	52.....	323	\$5.05	44.....	346	\$5.05
5.....	368	5.05	183.....	368	5.01	71.....	256	5.00
72.....	292	4.95	39.....	325	4.95	39.....	334	4.95
66.....	213	4.92½	64.....	234	4.92½	62.....	234	4.92½
10.....	229	4.90	72.....	207	4.90	70.....	217	4.90
62.....	230	4.90	154.....	213	4.90	41.....	213	4.90
68.....	263	4.90	20.....	262	4.90	79.....	227	4.90
57.....	201	4.87½	65.....	165	4.85	39.....	219	4.85
74.....	213	4.85	31.....	210	4.85	98.....	159	4.82½
50.....	219	4.80	36.....	169	4.80	21.....	181	4.80
91.....	193	4.80	76.....	200	4.80	4.....	200	4.80
6.....	205	4.75	76.....	209	4.75	42.....	128	4.75
18.....	140	4.70	15.....	140	4.65	39.....	173	4.65
5.....	130	4.50						

Sheep—Receipts since Saturday, 117; shipped Saturday, none. The market was active and 25 to 50c higher. The following are representative sales:

46 lambs.....	67	\$5.75	2 lambs.....	75	\$5.75
4 mut.....	112	4.01	16.....	87	3.40

Horses—Receipts since Saturday, 45; shipped Saturday, 2. There were no changes in the conditions of the market to-day from those of Saturday. The outlook is about the same as last week, which was anything but promising.

Chicago Live Stock.

CHICAGO, July 8.—Cattle—Receipts, 13,000; market steady; fair to best beefs, \$3.50 to \$5.80; stockers and feeders, \$2.25 to \$4.00; mixed cows and bulls, \$1.75 to \$3.90; Texas, \$2.50 to \$4.50.

Hogs—Receipts, 25,000; market fairly active; prices opened higher, closed weaker; average steady; common closed very weak; light, \$4.85 to \$5.25; rough packing, \$4.75 to \$4.95; mixed and butchers, \$4.85 to \$5.35; heavy packing and shipping, \$5.00 to \$5.45; pigs, \$3.50 to \$4.90.

Sheep—Receipts, 9,000; market 2c higher; native, \$1.75 to \$4.25; western, \$1.75 to \$3.25; Texas, \$2.00 to \$3.25; lambs, \$3.00 to \$6.00.

St. Louis Live Stock.

ST. LOUIS, July 8.—Cattle—Receipts, 4,000; quality not extra; Texas steers, \$2.80 to \$1.30; Texas cows and heifers, \$2.10 to \$3.50; native steers, \$3.00 to \$5.40; stockers and feeders, \$2.25 to \$4.10.

Hogs—Receipts, 2,000; market opened 10c higher; closed weak; heavy, \$5.00 to \$5.25; mixed, \$4.60 to \$5.00; light, \$3.75 to \$5.45.

Sheep—Receipts, 1,000; market 15c higher than the close of last week.

Chicago Grain and Provisions.

	July 8	Opened	High'st	Low'st	Closing
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Wht—July.....	69	69¼	69¼	68¾	68¾
Sept.....	71	71½	71½	67¼	67¾
Dec.....	72½	72½	72½	69¼	69¾

Corn—July.....	44½	44½	44½	42	42½
Sept.....	44½	44½	44½	42¼	42¾
Dec.....	36¾	36¾	36¾	34¾	35½

Oats—July.....	24¼	24¼	24¼	23¾	23¾
Sept.....	24	24	24	22¾	22¾
May.....	27½	27½	27½	26	26½

Pork—July.....	12 17½	12 17½	12 00	11 85	12 00
Sept.....	12 17½	12 17½	12 00	11 85	12 00
Oct.....	6 62½	6 63	6 52½	6 52½	6 52½

Lard—July.....	6 62½	6 63	6 52½	6 52½	6 52½
Sept.....	6 62½	6 63	6 52½	6 52½	6 52½
Oct.....	6 62½	6 63	6 52½	6 52½	6 52½

Ribs—July.....	6 50	6 50	6 35	6 22½	6 35
Sept.....	6 50	6 50	6 35	6 22½	6 35
Oct.....	6 32½	6 32½	6 35	6 22½	6 35

Kansas City Grain.

KANSAS CITY, July 8.—There were few samples of wheat on sale to-day and there was very little demand even for those few, though 15,000 bushels of old hard sold out of store on

private terms at a stiff price. Some samples were offered 1 to 2c below Saturday's prices.

Receipts of wheat to-day, 12 cars; a year ago, 34 cars.

Sales of car lots by sample on track, Kansas City: No. 2 hard wheat, nominally, 66¢ to 67¢, 1 car old 68¢; No. 3 hard, nominally, 64¢ to 65¢; No. 4 hard, nominally, 60¢ to 63¢; No. 2 red, nominally, 67¢ to 69¢; No. 3 red, nominally, 65¢ to 67¢; No. 4 red, part of a car 63¢; rejected, nominally, 60¢ to 62¢.

A few cars of corn sold early at Saturday's prices. Later the market was about a cent lower. Most of the mixed corn offered sold early. Some samples of white were carried over unsold. Sales of twelve cars mixed corn to arrive at 83½¢ were made.

Receipts of corn to-day, 11 cars; a year ago, 45 cars.

Sales by sample on track, Kansas City: No. 2 mixed corn, 2 cars 39¼¢, 2 cars 39¼¢, 3 cars 39¢; No. 3 mixed, 1 car 38¢; No. 4 mixed, nominally, 37¢; No. 2 white, 2 cars early 39¼¢, 3 cars 39¢; No. 3 white, nominally, 38¢.

Oats were firmly held. Few samples were on sale.

Receipts of oats to-day, 6 cars; a year ago, 2 cars.

Sales by sample on track, Kansas City: No. 2 mixed oats, 2 cars 25¢, 1 car 22¼¢; No. 3 oats, 1 car 22¼¢, 1 car 22¢; No. 4, nominally, 20¢; No. 2 white oats, nominally, 27¢; No. 3 white oats, 1 car 26¢.

Hay—Receipts, 6 cars; market very firm: timothy, choice, \$11.00 to \$11.50; No. 1, \$9.50 to \$10.00; No. 2, \$8.00 to \$9.00; fancy prairie, \$9.50; choice, \$8.00 to \$8.50; No. 1, \$7.50 to \$8.00; No. 2, \$6.00 to \$7.00; packing hay, \$4.50 to \$6.00.

Kansas City Produce.

KANSAS CITY, July 8.—Butter—Market firm on choice grades; commoner goods move very slowly; extra fancy separator, 15¢; fair, 12¢ to 13¢; dairy, fancy, firm, 11¢; fair, 9¢ to 10¢; store packed, fresh, 8¼¢.

Eggs—Light receipts; candled stock, 8c per doz.

Poultry—Receipts light; market firm on hens and lower on springs; hens, 6¼¢; springs, 1¼¢ lb. and over, 11¢; roosters, 15¢. Turkeys sell slowly; gobblers, 5¼¢; hens, 6¼¢. Ducks, 5¼¢ to 6¢; springs, 10¢. Geese, dull and not wanted, 3¼¢ to 4¢; springs, 10¢. Pigeons, firm; \$1.00 per doz.

Fruits—Apples, market glutted; fancy, hand picked, 40¢ to 45¢ per bu.; windfalls, 20¢ to 30¢; shipped stock, 50¢ to \$1.25 per bbl.; boxes not wanted, as home grown stock is too plentiful; fancy stand, \$5.00 to \$7.00; common to choice varieties, \$2.00 to \$4.00. Texas plums, sand hill, 50¢ to 75¢ per crate; thirds, 15¢ to 25¢; wild goose, 50¢ to 90¢ per crate; 25¢ to 30¢ per ¼ bu.; 50¢ per 4 basket crate. Arkansas yellow plums, 50¢ to 75¢ per crate. Peaches, home grown, 50¢ to 65¢ per ¼ bu. basket, 30¢ to 35¢ per peck; Arkansas and Texas freestones, fancy, 35¢ to 50¢ per ¼ bu.; clingstones, 25¢ to 40¢. Arkansas apricots, \$1.00 to \$1.50 per crate.

Vegetables—Potatoes, new, 45¢ to 50¢ per bu.; sweet potatoes, slow; red and yellow, 2½¢ to 3¢ per bu. Cabbage, slow, home grown, 15¢ to 30¢ per doz. heads. Peas, 50¢ to 75¢ per bu. Onions, new, market active, 65¢ to 75¢ per bu.

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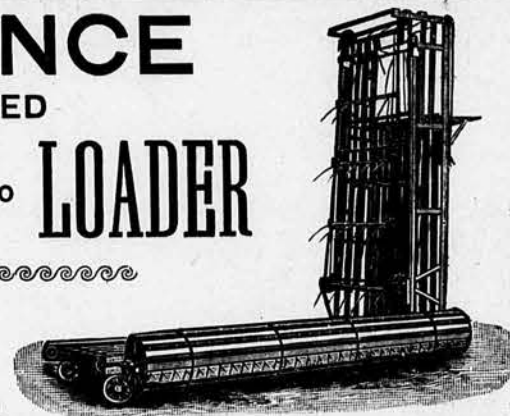
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MOVING THE POULTRY HOUSE.

The birds are quartered in it and drawn to the field, where they are fed once or twice in the house to accustom them to it. Then they are supplied with plenty of water and turned upon the stubble, changing them about to fresh forage as often as they seem to require new ground, to find sufficient of the fallen grain. If the house be built of half-inch matched boards, it will be found light enough to be moved easily, and will prove quite a saving in feed from year to year. During the winter months, when other more important work is not pressing, time may be put to good advantage by constructing such a movable poultry house.—American Agriculturist.

How to Face the House.

Custom places the front of the poultryhouse to face the south, yet the sun does not send the heat into such houses in winter till quite late in the morning. A poultry house should face the southeast, and then the heat and light will enter as soon as it rises, warming the interior at a time when the fowls desire warmth the most, which is when they first come off the roosts in the morning. In the winter the sun is in the south a greater portion of the day, and hence, if the house faces southeast, the fowls not only receive warmth early, but the sunshine in the house till about three o'clock in the afternoon.

Lice in House or on Body.

Don't labor under the supposition that because they do not get on you when you go into the poultry house that no lice are present. Pick up a hen and slowly and carefully look along the neck and the top of the head, and the chances are you will find them, and they will be large and easily seen. The lice that travel over the poultry house are very small red mites, but those that you will find on the bodies of the hens do not leave the birds at all, but remain and multiply. If you see a single one, grease the necks of all your hens, for, if one has them none are exempt.—Colman's Rural World.

Fattening Ducks and Geese.

This is best done when they are confined in little stalls or when only two or three are together. Like the pig, a duck or goose will eat more when it has a companion than when it is alone, as greediness is one of the characteristics belonging to both. The food need not be expensive. Boiled turnips, carrots, and potatoes, with corn meal, make the best mess to get ducks and geese fat quickly. They must be kept very quiet, giving plenty of water for drinking, and allowing pulverized charcoal once a day. Ten days is long enough for getting them in proper condition.—Prairie Farmer.

HAVING handy places of shelter in the poultry yard where the chickens can easily run under in time of a sudden shower, will save having to go round and hunt up and dry the little fellows after it is over, and will often save many lives. The shelter will also serve to keep off the hot sun's rays when desired.

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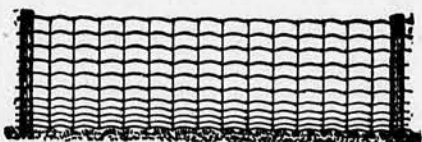
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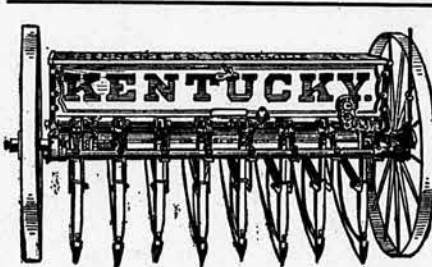


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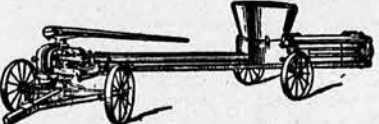
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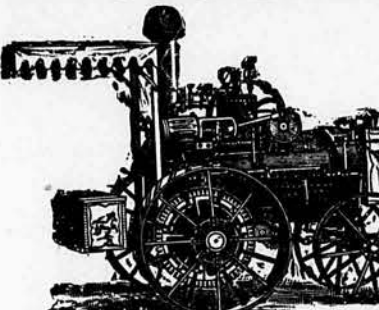
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(Continued from page 1.)

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Slaughtered in Kansas City.....	959,646	2,050,784	387,570		
Sold to feeders.....	308,181	11,495	69,816		
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Total sold in Kansas City, 1894.....	1,677,792	2,530,896	503,116	28,903	

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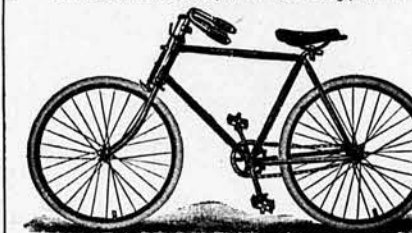
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