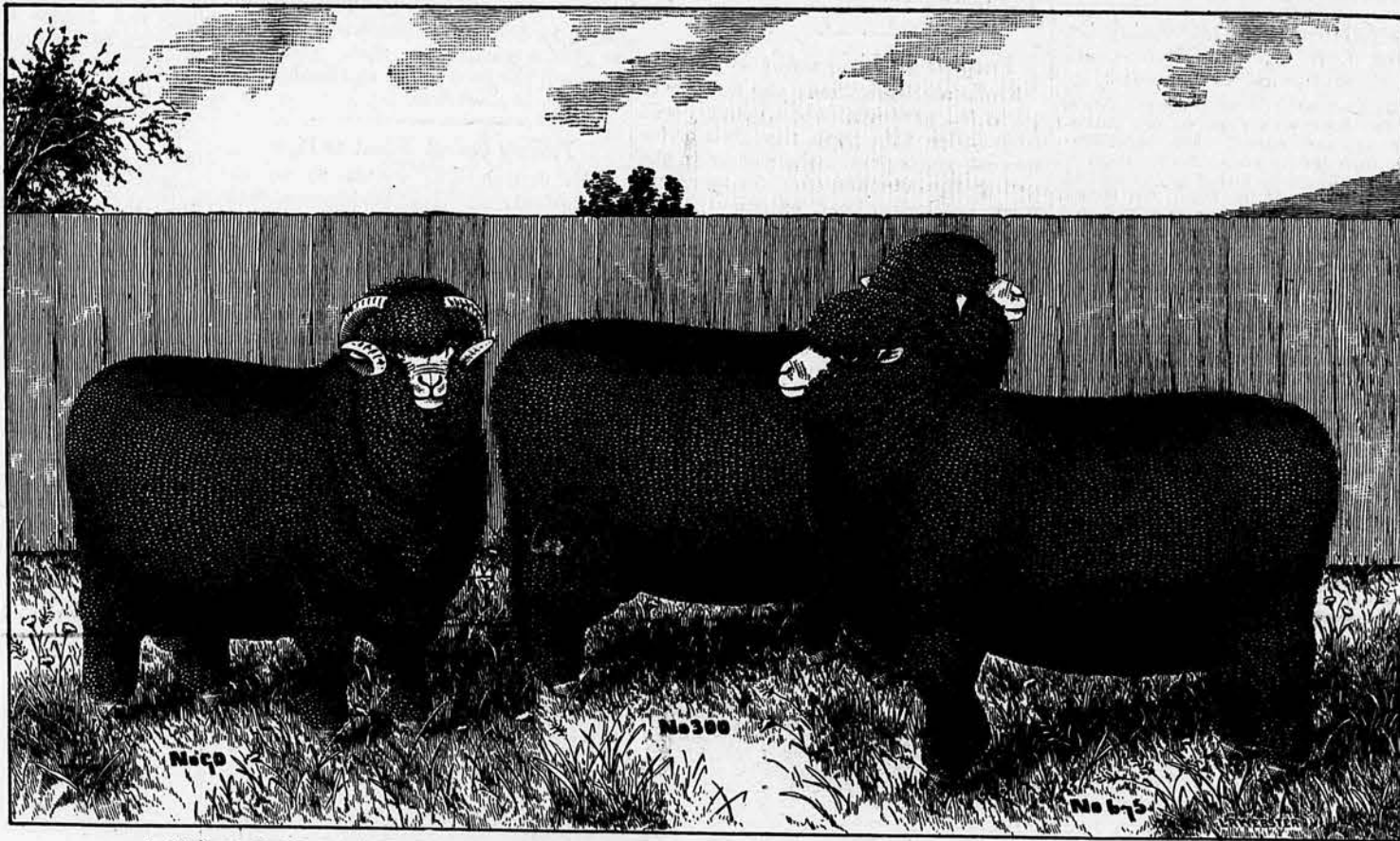


KANSAS FARMER

ESTABLISHED 1863.
VOL. XXXII, No. 35.

TOPEKA, KANSAS, WEDNESDAY, AUGUST 29, 1894.

SIXTEEN TO TWENTY
PAGES—\$1.00 A YEAR.



A GROUP OF DELAINE MERINO SHEEP, OWNED BY ALEX. TURNBULL & SON, CEDARVILLE, OHIO.

TABLE OF CONTENTS.

PAGE 2—THE STOCK INTEREST.—Un-threshed Wheat for Hogs. Prospects for Light Cattle Feeding. Feeding Soaked Wheat to Pigs. Cattle Feeding Machines.

PAGE 3—AGRICULTURAL MATTERS.—Agricultural Statistics. Thickening Up Alfalfa. Kaffir Corn. Cultivation of Small Grain. Manufacture of Sorghum Sirup. The National Farmers' Congress.

PAGE 4—IRRIGATION.—Profit in Irrigated Farms in Colorado. Who Will Deny? The Season Helpful in One Thing. Irrigation at Tribune. Alfalfa and Irrigation.

PAGE 5—IRRIGATION (continued).—The Perfection Irrigation Pump.... Our First-Page Illustration.... FAMILY DOCTOR.—Irrigation vs. Health. Answers to Correspondents.... Publishers' Paragraphs.

PAGE 6—THE HOME CIRCLE.—The Pitcher of Tears (poem). When Baby Puts on Pants (poem). Abandoned Yan kee Farms. A Literary Feast. Strange Case of John Smith. Badly Tangled.

PAGE 7—THE YOUNG FOLKS.—Gardens (poem). Gold Tried in the Fire.

PAGE 8—EDITORIAL.—State Fair at Wichita. Needed Irrigation Legislation in Kansas. The New Tariff and the Manufacturers.

PAGE 9—EDITORIAL.—Physical Changes. Winter Oats. Farmer's Account Book. Weekly Weather-Crop Bulletin.

PAGE 10—HORTICULTURE.—Drying Peaches. The Kansas Currant.

PAGE 11—IN THE DAIRY.—The Bill Shaw Milk. Guernsey Cows as Economical Butter Producers. Good Butter.... THE POULTRY YARD.—Early Moulting Hens. Poultry Notes.

PAGE 12—Gossip About Stock. The Allen County Fair.

PAGE 13—VETERINARIAN.... Horse Markets. Market Reports.

SHEEP.

BUCKEYE DELAINE SHEEP FARM.

We keep strictly to the Delaine sheep—wool on a mutton carcass—and we guarantee satisfaction in size and in quality of wool. Eighty rams and 100 ewes for sale at a low price, considering quality. Write at once to

ALEX. TURNBULL & SON,
Cedarville, Ohio.

BREEDERS' DIRECTORY.

Cards of four lines or less will be inserted in the Breeders' Directory for \$15 per year or \$5.00 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.

HORSES.

PROSPECT STOCK FARM.—Registered, imported and high-grade Clydesdale stallions and mares for sale cheap. Terms to suit purchaser. Thoroughbred Short-horn cattle for sale. Two miles west of Topeka, Sixth street road. H. W. McAfee, Topeka, Kas.

CATTLE.

ENGLISH RED POLLED CATTLE AND COTSWOLD SHEEP.—Young stock for sale, pure-bloods and grades. Your orders solicited. Address L. K. Haseltine, Dorchester, Green Co., Mo.

NEOSHO VALLEY HERD OF SHORT-HORNS.—Imported Buccaneer at head. Registered bulls, heifers and cows at bed-rock prices. D. P. Norton, Council Grove, Kas.

HOLSTEIN-FRIESIANS.—From this herd were furnished some of the winners at the World's Fair. Write for catalogue. M. E. MOORE, Cameron, Mo.

H. W. CHENEY, North Topeka, Kas., breeder of HOLSTEIN-FRIESIAN CATTLE. Farm four miles north of town.

VALLEY GROVE HERD OF SHORT-HORNS.—For sale, choice young bulls and heifers at reasonable prices. Call on or address Thos. P. Babst, Dover, Kas.

HOLSTEIN-FRIESIANS

From this herd were furnished some of the winners at the World's Fair. Write for catalogue. M. E. MOORE, CAMERON, MO.

CATTLE AND SWINE.

CHOICE Poland-Chinas J. H. TAYLOR, Pearl, Short-horns, Kas.

M. H. ALBERTY, Cherokee, Kas., Registered Holstein-Friesian cattle, Poland-China and Duroc-Jersey swine, Rose-comb Brown Leghorns. Stock of all ages and both sexes for sale. Orders booked now for pigs and eggs.

ASHLAND STOCK FARM HERD OF THOROUGHbred Poland-China hogs, Short-horn cattle and Plymouth Rock chickens. Boars in service, Admiral Chip No. 7910 and Abbottsford No. 28351, full brother to second-prize yearling at World's Fair. Individual merit and gilt-edged pedigree my motto. Inspection of herd and correspondence solicited. M. C. Vansell, Muscotah, Atchison Co., Kas.

CATTLE AND SWINE.

MIDLAND STOCK FARM.—F. M. Owens, Melvern, Kas., breeder of Galloway and Holstein cattle, Poland-China swine and thoroughbred poultry. Best of strains. Come, send or write.

SWINE.

V. B. HOWBY, Box 103, Topeka, Kas., breeder and shipper of thoroughbred Poland-China and English Berkshire swine and Silver-Laced Wyandotte chickens.

TOPEKA HERD OF LARGE BERKSHIRES.—Breeders strong-framed, growthy and prolific; eight to fourteen pigs to a litter this year. Boars and sows of all ages ready to ship. H. B. COWLES, Topeka, Kas.

DIETRICH & GENTRY, OTTAWA, KAS.—Our Poland-China spring pigs are sired by W. Z. Swallow's Ideal Black U.S. 29505 O, Guy Wilkes 8d 121310, Pet's Osgood and the great Loyal Duke 29223 O. For choice pigs write us.

D. TROTT, Abilene, Kas.—Pedigreed Poland-Chinas and Duroc-Jerseys. Also M. B. Turkeys, Light Brahma, Plymouth Rock, S. Wyandotte chickens and R. Pekin ducks. Eggs. Of the best. Cheap.

A. W. THEMANNSON, Wathena, Doniphan Co., Kas.—Large Poland-China pigs sired by Early Sisson 11933 S, and other good boars. Write to-day. Mention KANSAS FARMER.

MAPLE GROVE HERD OF FANCY BRED POLAND-CHINA SWINE. Also Light Brahma fowls. Owned by Wm. Plummer & Co., Osage City, Kas. Stock of all ages for sale at reasonable rates.

J. F. THOMAS, MAPLE CITY, KAS., breeder of REGISTERED POLAND-CHINA SWINE AND FINE POULTRY. Stock for sale cheap. Mention FARMER in writing.

OHIO IMPROVED CHESTER SWINE.—Pure-bred and registered. Stock of all ages and both sexes for sale by H. S. Day, Dwight, Morris Co., Kas.

BERKSHIRES.—Wm. B. Sutton & Sons, Rutger Farm, Russell, Kansas. Choice February and March pigs. Young boars ready for service. Young sows bred. Good individuals and choicest breeding.

POULTRY.

HARRY T. FORBES—FINE S. C. BROWN LEG-HORNS. Eggs for sale, safely packed and sent by express to any part of the United States. Address 701 Polk St., Topeka, Kas.

PURE-BRED LANGSHAN, BARRED PLYMOUTH ROCK and S. C. B. Leghorn eggs, one dollar per thirteen. Address Robert Crow, Missouri Pacific Railway Agent, Pomona, Kas.

A. B. DILLE & SONS, EDGERTON, KAS., breeders of choice B. P. Rocks, S. L. Wyandottes, Light Brahmas and M. B. turkeys. Chicken eggs \$1 to \$2 per lb; turkey eggs \$3 per lb. Satisfaction guaranteed.

POULTRY.

RIVERSIDE POULTRY YARDS.—Have for sale M. B. Turkeys, S. L. Wyandottes, B. P. Rocks, S. C. White Leghorns, Brown Leghorns, Light Brahmas, Pekin ducks, and their eggs in season. Chickens at all times. Lucille Randolph, Emporia, Kansas.

EMPIRIA POULTRY YARDS.—L. E. Pixley, Emporia, Kas., breeder of Plymouth Rocks, S. Wyandottes, Buff Cochins, B. and White Leghorns, B. Langshans, M. B. Turkeys and Pekin ducks. Chickens at all times. Eggs in season.

KAW VALLEY HERD FANCY POLAND-CHINAS.—Of the most noted families, bred for feeding qualities as well as fancy points. Bebout's Tecumseh at head of herd. M. F. Tatman, Proprietor, Rossville, Kansas.

WHITE GUINEA FOWLS—\$2 each; eggs, \$1 per thirteen. Plymouth Rock Cockerels, \$2 each; eggs, \$1 per thirteen. White Holland Turkeys, \$3 each; eggs, \$2 per thirteen. MARK S. SALISBURY, Independence, Mo.

CATTLE.

SUNNY SLOPE FARM,

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

Breeder of pure-bred Herefords. Beau Real 11055 heads the herd. Young bulls and heifers for sale. Also for sale, Poland-China swine. Choice bred young boars and sows by the World's Fair prize-winner, Longfellow 29785; and Berkshire swine of the noted Duchess and Lady Lee strains of N. H. Gentry. Bismarck and General Lee, both Gentry bred boars, in service.

Brookdale Herd of Red Polled Cattle.

Has won more prizes in 1892 and 1893 than any other herd out, including championship at six State fairs and World's Columbian Exposition on Iowa Davyson 10th 3149. His calves for sale. Write.

WM. MILLER'S SONS, Wayne, Neb.

SHORT-HORN CATTLE

Poland-China Swine, Buff Cochins Fowls. Inspection invited.

E. L. KNAPP, Maple Hill, Kansas

SHANNON HILL STOCK FARM.

G. W. GLICK, ATCHISON, KAS.

Breeds and has for sale Bates and Bates-topped SHORT-HORNS. Waterloo, Kirklevington, Filbert, Cragg, Princess, Gwynne, Lady Jane and other fashionable families. The grand Bates bulls Waterloo Duke of Shannon Hill No. 89879 and Winsome Duke 11th 116,137 at head of herd. Choice young bulls for sale now. Visitors welcome. Address W. L. CHAFFEE, Manager.

(Breeders' Directory continued on page 16.)

The Stock Interest.

THOROUGHbred STOCK SALES.

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

SEPTEMBER 7—Bert Wise, Poland-China swine, Reserve, Kas.
 SEPTEMBER 19—W. H. Babcock, Poland-China swine, Hiawatha, Kas.
 SEPTEMBER 27—June K. King, Berkshire swine, Marshall, Mo.
 OCTOBER 2—C. C. Keyt, Short-horn cattle and Poland-Chinas, Verdon, Neb.
 OCTOBER 3—W. H. Wren, Poland-China swine, Marion, Kas.
 OCTOBER 4—J. A. Worley, Poland-China swine, Sabetha, Kas.
 OCTOBER 5—E. L. Zimmerman, Poland-China swine, Hiawatha, Kas.
 OCTOBER 24—F. M. Lall, Poland-China swine, Marshall, Mo.
 OCTOBER 24—J. B. Davis, Duroc-Jersey swine and cross-bred Short-horn and Red Polled cattle, Fairview, Kas.
 NOVEMBER 7—Martin Meisenheimer, Poland-China swine, Hiawatha, Kas.

UNTHRESHED WHEAT FOR HOGS.

Prof. W. A. Henry, of the Wisconsin Experiment Station, sends to the *Breeder's Gazette* a valuable contribution to the wheat feeding discussion. He says:

"The following very interesting letter from J. B. C., Mad River, Clark Co., O., is sent to me for comment:

"In the discussion of the feeding value of wheat for hogs why does no one advise feeding in the sheaf? My experience teaches that but a very small ration of threshed whole grain, either dry or soaked, is digested properly by hogs. To thresh and grind is an item of expense. I would suggest to farmers having surplus straw to try feeding fattening hogs wheat from the stack in the sheaf, scattered over a dry field or lot. It will not be eaten so fast and will be digested better. For best results they should be taken out at night to a small ration of corn. With the cows and pigs or stock hogs turned in to clean up the wheat after them there will be very little waste during dry weather.

"I claim for this plan that the 10 cents per bushel that it costs to thresh and grind is saved; that it is easier to feed a large number this way than to feed slop; that the straw is not wasted if properly distributed in feeding over a meadow or pasture field intended for corn next season, as it will be so broken up and scattered as to be readily plowed under in the spring, or if fed in the manure yard after the manure is drawn out they are bedded for the next crop of manure.

"I would like to ask Prof. Henry if the portion of chaff eaten with the wheat is not likely to aid digestion.

"The foregoing is a valuable contribution to 'The Feeder's Corner,' and I am sure will be read with interest by scores of farmers at this time who are puzzling their heads over the perplexing problem of what to do with their wheat, corn (if they have any on hand or in prospect) and hogs.

"In the first place, let me say that I am in general strongly in favor of the scattered system of feeding hogs wherever it is practicable. To pile feed up in a trough is to invite the bolting of the feed, and that this occurs too often is shown by the number of reports we have had in 'The Feeder's Corner' from correspondents who state that wheat fed to hogs, even after soaking, comes through them still in the grain form, showing that much of it has been practically wasted. When whole corn passes through steers there is not necessarily much loss, for hogs can gather and use the softened grains, but such grains are certainly largely lost so far as the steer is concerned. We have no animals to follow up the hogs and so must be careful to prevent food materials passing through unutilized.

"We have all observed how industriously hogs work in the harvest field as gleaners, and how well such animals thrive where the scatterings are at all abundant. Every farmer has observed this year after year and knows that the hogs gain rapidly and that whatever chaff they may swallow at least does not hurt them. For one I confess that I do not know whether the hog really swallows much of the chaff or spits it out. We have not any grain at this time in shape to study this point. Can't some of our boy readers of 'The Feeder's Corner' watch the hogs closely and settle this nice little point for us? I do not think the chaff has any feeding value with the hog, whose stomach can at best digest very little of such material.

"But we need not let the chaff question deter the feeding of the hogs in the way proposed if there are no other or more serious objections. The distribution of straw over a meadow or pasture lot is all right in many cases and the straw may as well rot there as

in the barn yard, the only advantage of barn yard use being that the straw may serve as a sponge for soaking up liquid manure. Where one does not need it for this purpose nor for feeding, then it may well go at once as here suggested. This system gives the hogs considerable exercise, keeping them much of the time on their feet. For the first stages of fattening I believe this is not at all harmful; for the last stages perhaps there is too much exercise, but many farmers can use threshed wheat or corn, or a mixture of the two, to finish off on, keeping the hogs during that time in comparatively close confinement.

"We must cut the corners in our farming at every point possible. The saving of 10 cents a bushel in handling a wheat crop is a large percentage of its whole value. I commend this letter as one full of suggestions worthy of thoughtful attention and most timely. Will not some of our farmers try this experiment and let us see if our correspondent's experience can be duplicated?"

Prospects for Light Cattle Feeding.

From all indications the number of cattle fed throughout the country will be smaller this year than last or for several years past. Since early in the spring the demand for feeders and stock cattle has been extremely light everywhere, and the number of young cattle turned to grass this summer with a view to finishing them off on corn during the coming fall and winter was comparatively small. The scarcity of money and favorable opportunities for investments in other directions

ago is causing much conservatism among feeders, although there is plenty of money in the country at present. (3) The general depression of business in all lines has discouraged and disheartened many who are generally ready to push business to the limit of their opportunities if there is any prospect of making a dollar or even coming out whole. (4) The dry weather and short pastures have caused the marketing of numberless bunches of young cattle that would otherwise have been kept through the summer and finished off in the feed lots in the winter. A large proportion of the receipts at the fat stock markets for the past few months has consisted of cattle that were but little if any better than feeders.

Other reasons might be assigned, but these are enough to show the prospects at present. There is time yet for changes to take place which may affect the situation somewhat, but from the present outlook the markets will not be over-supplied with good fat beefs next winter and spring. Those in position to feed advantageously may find as good a market for their corn crop through the feed lot as at the elevator. —National Stockman.

Feeding Soaked Wheat to Pigs.

Mr. Jediah Hill writes to an exchange, giving his experience in feeding wheat to pigs. He says:

"I have been experimenting a little in wheat feeding this season, not with steers, but with pigs. Early in May I commenced feeding forty-two head of pigs, weighing about 84 pounds, giving them about all the wheat they would



THE PORTER CYLINDER FEED-CUTTER.

Manufactured by E. A. PORTER & BROS., Bowling Green, Kentucky.

for those who had the cash was the greatest reason for this, no doubt, but feeders as a rule seem to have but little confidence in the cattle markets and they backed their judgment by letting cattle alone. The drought and consequent light pastures was another good reason for not stocking up heavily.

July and August are the two months which generally find the heavy feeders in the great corn-producing States most active in laying in their supplies of feeding cattle. So far this year but little has been done in many of the best feeding districts. The failure of the corn crop has had much to do with the light investments in feeders, for in some sections where large numbers of cattle are turned off annually not enough corn will be raised to feed the stock necessary to run the farms. Where such conditions exist cattle feeding is out of the question, and probably much territory which furnishes a great deal of fat stock each year under ordinary circumstances will not be heard from this year for this reason.

There are various other reasons for predicting lighter feeding this year than usual. (1) The prices for corn, both present and prospective, are so much higher than the present prices for fat cattle that it takes a man of considerable courage to feed his grain with a view to getting more out of it than by marketing it. (2) A great many feeders had trouble last year in procuring money to handle cattle, and were forced in many instances to sacrifice their stock to pay their obligations which they calculated upon carrying as long as they desired. The influence of this pinch in money matters a year

ago is causing much conservatism among feeders, although there is plenty of money in the country at present. The wheat was soaked until soft, and very often had begun to sprout. Allowing the milk and grass to produce 15 pounds per day of gain, I had 12 to 13 pounds of gain for each bushel of wheat fed.

"Finding that considerable of the wheat passed through the pigs without being digested, I concluded to try having it ground. Commenced feeding ground wheat, in connection with skim-milk and dry corn, on June 21, the pigs having at that date reached an average weight of 138 pounds. In the twenty-eight days following they ate 53 bushels ground wheat, 45 bushels dry corn and 40 to 50 gallons per day of skim-milk and buttermilk. In this time the lot made a gain of 1,700 pounds. I credit the milk with 450 pounds, leaving 730 pounds to show for the 53 bushels wheat, or about 14 pounds per bushel. The pigs are not excessively fat, but plump, active and vigorous, and in splendid condition for future feeding."

Cattle Feeding Machines.

The Porter cylinder feed-cutter, made by E. A. Porter & Bros., Bowling Green, Ky., has proven by trial to be a first-class feed-cutter. The manufacturers claim that it cuts corn fodder with the ears on or off faster than one man will throw it into the cylinder by the large bundles without unbinding, or by the armful. Cuts sheaf oats as fast as a man can pitch the binds to machine by hand or with a pitchfork. Cuts ear corn as fast as two men can

Leather

gets hard and old fast enough; to keep it new and soft, use

Vacuum Leather Oil.

It saves half the money spent for leather. It's food and life to leather.

25c. worth is a fair trial—and your money back if you want it—a swob with each can. For pamphlet, free, "HOW TO TAKE CARE OF LEATHER," send to VACUUM OIL CO., Rochester, N. Y.

feed it to machine with grain scoops. Cuts straw, hay, roots, etc.; in fact the machine has no equal, and is the most rapid, effective, complete and lasting feed-cutter ever made. A trial will not only convince you of these facts, but its use will prove to all that the feeding value of the corn crop is doubled if cut and shocked at the right stage—just when the husk is brown and before the blades are dried, and run through this machine, before feeding. Will prove that an acre of good bright corn fodder is worth more for feeding than an acre or two tons of the best timothy hay. Will prove to you, when you fail to save and utilize the stalks of your corn crop, that you have wasted half the feeding value of your corn crop. Will prove to you that you can do without hay, and winter or feed more stock than if an equal number of acres of meadow hay was used, thus releasing your hay for market. Will prove to you the correctness and value of the practical experiment made by Prof. Patterson, of the Maryland Agricultural Experiment Station, when he ascertained, after a practical test:

1. "All parts of the corn plant contain valuable food material.
2. "The corn stalks and husks contain 60 per cent. of the total digestible matter produced by the plant.
3. "There is more digestible matter contained in the corn fodder from one acre than in the ears from one acre.
4. "The corn fodder from one acre yields as much digestible matter as two (2) tons of timothy hay.
5. "By cutting and crushing the corn stalks, cattle will eat nearly all of them.
6. "The butts and large part of the corn stalk contains a greater per cent. of digestible matter than the tops and blades.
7. "There is enough digestible matter produced by the corn fodder grown in the Southern States to winter all the live stock existing in those States, if it was properly preserved and prepared in a palatable form."

With a good crew of hands and a good power to machine, thirty to sixty acres of corn fodder, with ears on or off, can be run through the machine in a day, and at less expense than husking the corn from the stalks, requiring much less barn room to store the crop. Then, too, the feed is in the best shape and makes a complete ration for cattle, horses and sheep and but little trouble to feed. The large part or butts of the stalk is cut into suitable lengths and then torn to pieces or shredded, making it a soft and palatable feed, the stock consuming the entire stalk, and the stock do not reject this, the most nutritious part of the stalk, as they do when cut with the ordinary feed-cutters.

Save the fodder and turn your hay into cash. Bright corn fodder is better and cheaper food for cattle, horses and sheep than hay. The market value of two tons of timothy hay is, therefore, the money value of the acre of corn fodder that can and ought to be saved for feeding on the farm.



Five World Beaters.

"SICKLES" BRAND HARNESS. All genuine stamped with this "Trade Mark." Made in five styles at \$6.50, \$9.00, \$10.00, \$15.00 and \$25.00 per set complete. The best harness for the money on the market. Ask your harness dealer for them. Manufactured only by J. B. Sickles Saddlery Co., St. Louis, Mo.

G. A. R. National Encampment.

Begins at Pittsburg, September 10. Low fare over Vandalia & Pennsylvania Short Lines from September 5 to 10, inclusive. Connecting lines in West will sell reduced rate tickets over these direct routes via St. Louis or Chicago, good returning until September 25 inclusive.

Agricultural Matters.

AGRICULTURAL STATISTICS.

Ohio stands at the head of the list of States for having the largest number farms, 251,430; Illinois comes second, with 240,681; Missouri third, with 238,043; Texas fourth, with 228,126; New York fifth, with 226,223; Iowa sixth, with 201,903, and Kansas seventh, with 166,617. In the amount of area under cultivation, however, Illinois comes first, with 25,669,060 acres; Iowa second, with 25,428,899; then Kansas, with 22,303,301; Texas, 20,746,215; Missouri, 19,792,313; Ohio, 18,338,814, and New York, 16,389,380 acres.

The returns of the census bureau furnish a surprise in respect to the amount of unimproved farm land in the Eastern and Southern States as compared with those of the West and Northwest. It is a very remarkable thing that less than half the farm land in Maine and New Hampshire is under cultivation, while in Massachusetts 1,341,258 acres are uncultivated and only 1,656,024 are cultivated. Taking the entire north Atlantic States, from Maine to Pennsylvania, the total area of farm lands is 62,743,525 acres, of which nearly one-third is idle, while in the Middle and Northwestern States—that is, from Ohio to Dakota in one direction and to Kansas in the other—the proportion of uncultivated land is very much smaller. In none of the States in that section does the uncultivated area bear so great a proportion to the cultivated as in New England.

In the south Atlantic States there are 100,000,000 acres of land in farms, of which 42,000,000 acres are cultivated and 58,000,000 acres idle. Delaware and Maryland have very little waste land, but in Virginia there are 1,000,000 acres less of improved than of unimproved. In West Virginia the proportion is about the same. In North Carolina the unimproved property is double the area of the improved. In South Carolina of a total area of 13,000,000 acres, 5,000,000 are improved and 8,000,000 unimproved. In Georgia of a total of 25,000,000 acres, 9,500,000 acres are improved and 15,500,000 acres unimproved. A similar proportion exists in Florida. In Illinois there are 30,000,000 acres of farming lands, of which 4,000,000 acres are idle. There is a much larger proportion of unimproved land in North Carolina, South Carolina, Georgia, Alabama, Mississippi and Louisiana than there is in Texas, which will surprise people.

Illinois stands at the head of the list in the value of her farm property, which amounts to \$1,262,870,587. Ohio comes second with a valuation of \$1,050,031,838; New York third, with \$968,127,286; Pennsylvania fourth, with \$922,240,233, and Iowa fifth, with \$857,581,022. But when you come to fancy farming and fine equipment in the way of implements and machinery, New York State heads the list, with Pennsylvania second, Iowa third, Illinois fourth, Ohio fifth, and then Michigan, Indiana, Missouri, Wisconsin, Kansas, Minnesota, Nebraska, Idaho and California, in order.

The farming lands in Illinois are worth more than all the south Atlantic States from Delaware to Florida, and all the Rocky mountain and Pacific coast States combined. They are worth nearly as much as all the southern central States combined, including Kentucky, Tennessee, Alabama, Mississippi, Louisiana, Texas, Oklahoma and Arkansas.

The farmers of Illinois have more money invested in farming implements and machinery than all the south Atlantic States and all the Rocky mountain and Pacific coast States combined. In the value of farm products Illinois stands first, \$184,759,013; New York second, \$161,593,009; then Iowa, \$159,347,844; Ohio, \$133,232,498, and Pennsylvania, \$121,328,348.

Thickening Up Alfalfa.

I have tried successfully the sowing of alfalfa and barley on poor stands before the rain comes in the fall, then harrowing well with a sharp harrow to cover the seed with dust or put in cracks, or low places in the ground, to

come up with the first rains. The barley keeps down the foxtail and weeds, and being sown so early the crop of alfalfa and barley will be taken off before the moisture has gone out of the land, and it will be likely to thicken your stand of alfalfa, besides yielding a good cutting of hay.

Nothing has ever paid me better returns than this plan. Last year and this I have had fine crops, and my stands are much improved. About twelve pounds of seed per acre is plenty. When the crop is cut it should be put in stack as soon as possible, even if it be necessary to roll over the shocks in the morning to dry the bottoms before stacking. To my mind nothing shows such bad results as allowing hay of any kind to stand in the field to bleach and shrink in weight and lose its nutritive qualities and value. I believe hay will lose one-fourth of its weight by standing in the field as we often see it, besides its militates against its selling qualities.—B. Walton, in *Rural Californian*.

Kaffir Corn.

EDITOR KANSAS FARMER:—If our after-thought could only be brought into play, we might make some changes in our program. If we had known that we were going to have such a "scorcher" as this season has been, we could have planted Kaffir corn instead of Indian corn and got it in early enough to ripen by this time. We have raised it for two years but have not given it a fair test, as we did not have the facilities for planting. We either got too thick or too thin.

I met a gentleman, some time ago, from the western part of the State, who said he used his header to take the tops off, and run it about three feet high. I think that would do very well if there is plenty of store-room. It is not a very slow process to take the seed off with a knife and gather in a sled narrow enough to run between the rows. In that way two pickings may be made and nothing but the heads saved, taking care to have a circulation around it to cure it.

The fodder is good for all kinds of stock. We cut with a low corn-cutting sled, laying an armful down on the row and another across and then stand the rest around it. There will be scarcely any waste.

This has been a season of disappointment. The yield of wheat was very much greater than was expected. Oats cut short by the freezing; the corn ruined by hot, dry weather. Some of our people have been feeding wheat with very favorable results.

D. W. KINGSLEY.

Independence, Kas.

Cultivation of Small Grain.

I have learned by trying many experiments that harrowing wheat, barley and oats, after they come up, has been a benefit to the crop in almost all cases where I have tried it.

Harrowing often makes the crop look badly at first, but in the end the grain is thicker, the yield better and only a few days later.

I have harrowed almost all of my wheat, barley and oats on my home farm this year.

If deeply harrowed when the ground is very dry, I think the grain would be damaged. If harrowed in a very dry season, when the surface soil is fine, the dirt of course would be liable to drift in this Red river valley. Harrowing might be done after the grain is of sufficient height to break the force of the wind at the surface, but I feel quite sure that early harrowing is much better for the crop.

When the grain is large the weeds are also large, and the harrow will not affect them much.

I have tried late harrowing, but it seems to neither help nor hurt the crop.

I think I will make a cultivator to pare the surface between twelve-inch rows. To cultivate in that manner would kill the weeds, even though done late, and would probably help the crop, and also benefit the land. I am nearly sure that wheat in rows twelve inches apart, will yield as much as it will if nearer. I have tried wheat both ways, and am not afraid to sow all at that

distance, though I have tried it only on small pieces. This year I harrowed mostly with a harrow made the width of the drill, having slanting teeth rounded at the ends to prevent cutting the grain while turning it on the piece; and worked the land between the six-inch rows, but some in different places, harrowed with a common four-horse harrow with upright teeth, working without regard to rows, was the best. I harrowed the most of it three times, but once with a common harrow would probably have stirred the soil as much and saved expense.

Many farmers in this vicinity have harrowed wheat this year and report good results, and I presume they will harrow much more in future.

They used the common drag, working without regard to rows.

There have been failures, but I am satisfied that, if properly done, cultivation of the small grains will be of as much advantage as the cultivation of corn, potatoes, beans, etc.

A. L. Wentworth & Son have a piece of very heavy barley, which they sowed in rows eighteen inches apart and hand-hoed once.

I judge it will yield three times as much as any other piece which I have seen. They think the extra growth was caused by the hoeing, the land not being better than an average.—L. S. Safford, in *Northwestern Farmer*.

Manufacture of Sorghum Sirup.

The production of sorghum sirup of good quality, free from many of the objectionable features of this product as ordinarily made, requires a considerable degree of skill on the part of the workmen. In order to answer inquiries along this line the United States Department of Agriculture has issued a circular giving the method adopted by Prof. A. A. Denton, of Sterling, Kas., under whose direction the experiments were conducted.

According to his method the cold juice, as it comes from the mill, is treated with sufficient cream of lime to render slightly alkaline. Blue and red litmus papers, which can be procured from dealers in chemicals or from druggists, are employed in making the tests for alkalinity and acidity. The blue paper is reddened by an acid juice and the red paper is blued by an alkaline solution. If no red paper is at hand it may be prepared by dipping the blue paper in unlimed juice. If sufficient lime has been added, the precipitate formed will settle to the bottom of the tank, leaving the liquid clear and bright. Mr. Denton says that a test sample should be examined in a narrow white glass bottle, or in a test tube, in order to note the effect of the lime. A little experience gained by a few trials will enable any one to judge with reasonable certainty the quantity of lime required. A considerable excess of lime will increase the expense of manufacture in the subsequent stages without corresponding advantages.

The addition of clay is recommended to facilitate the settling of impurities. Coarse-grained clays subside so rapidly they do not carry down the impurities. Fine clays subside too slowly. Yellow or brown clays are considered best, being much superior to fine clays, the pure white, the blue, gumbo or waxy clay. The clay is added to the juice in the form of a smooth, thin batter. Experiments on a small scale, using small round bottles to permit observations of the progress of the precipitation, will soon give one the necessary experience. For the sake of economy as little lime and clay should be used as is consistent with good work.

When the lime and clay precipitate has thoroughly settled, the clear juice should be carefully drawn off and heated nearly to the boiling point, then sufficient superphosphate of lime should be added to render it distinctly acid. This point is determined by the use of blue litmus paper, which turns red in an acid solution. A distinct change in the paper from blue should be considered an indication of sufficient superphosphate. About one gallon of superphosphate of lime (concentrated) is sufficient for from 400 to 500 gallons of juice, the amount depending largely on the excess of lime employed. Use the superphosphate with care, since too



GARLAND STOVES AND RANGES
The World's Best

You can easily have the best if you only insist upon it. They are made for cooking and heating in every conceivable style and size for any kind of fuel and with prices from \$10 to \$70. The genuine all bear this trade-mark and are sold with a written guarantee. First-class merchants everywhere handle them.

MADE BY The Michigan Stove Company.
LARGEST MAKERS OF STOVES AND RANGES IN THE WORLD
DETROIT, CHICAGO, BUFFALO, NEW YORK CITY.

great an excess will result in a sirup of disagreeable taste. After permitting the precipitate formed in the above process to settle, draw off the clear juice and rapidly concentrate it in a suitable evaporator.

The sediment from the treatment with lime and clay and that formed by the addition of the superphosphate should be mixed, a quantity of water added and the whole thoroughly agitated. Settle and decant as before. The clear liquid should be added to the fresh juices coming from the mill, and the sediment rejected. After the sirup has been evaporated to a suitable density, it should be rapidly cooled, but not barrelled until it reaches the ordinary temperature of air. It is claimed that if these principles are observed, care, attention and experience on the part of the maker will give a good article of sirup.

The National Farmers' Congress.

The fourteenth annual meeting of National Farmers' Congress will be held at Parkersburg, W. Va., October 3-6 next (both dates inclusive). The congress is composed of delegates. Each State and Territory is entitled to as many delegates as it has United States Senators and Congressmen, and each State bureau of agriculture is entitled to a delegate. In the meetings held for many years, more than thirty-five States and Territories were represented by duly appointed and properly accredited delegates.

The National Farmers' Congress, while instituted to discuss all economical and social questions affecting the farmer, is strictly non-political. This feature has been strictly observed.

At a meeting of the Executive committee in Chicago, attended by the President of the congress, B. F. Clayton, of Indianola, Iowa; Major W. G. Whidby, Atlanta, Ga.; John M. Stahl, Quincy, Ill.; Dennis Kenyon, McLean, Ill.; D. C. Waggoner, Chicago, and Henry Hayden, Indianola, Iowa, the following ladies and gentlemen were selected as speakers at the meeting in October next, viz.: W. B. Powell, Pennsylvania; John S. Cunningham, North Carolina; William Lawrence, Ohio; H. C. Brown, Georgia; Mrs. B. E. Thompson, Michigan; T. J. Appleyard, Florida; Mrs. M. M. Coad, Nebraska; Hon. Hector D. Lane, Alabama; Mrs. C. B. Foley, Illinois; Prof. G. A. Stockwell, Rhode Island; J. S. Slaughter, Tennessee; Mrs. M. G. Rockhill, California; Jeff. D. Welborn, Sr., Texas.

It is desired that each State and Territory be fully represented. It will afford pleasure to any of the officers of the congress to give any information desired about the congress.

The officers are: President, B. F. Clayton, Indianola, Iowa; Vice President, G. M. Ryals, Savannah, Ga.; Secretary, John M. Stahl, Quincy, Ill.; Treasurer, Henry Hayden, Indianola, Iowa; First Assistant Secretary, W. G. Whidby, Atlanta, Ga.; Second Assistant Secretary, T. J. Appleyard, Sanford, Fla. B. F. CLAYTON, J. M. STAHL, President, Secretary.

The press generally are requested to publish the above notice, and further the good work of the congress.

Irrigation.

PROFIT IN IRRIGATED FARMS IN COLORADA.

EDITOR KANSAS FARMER:—On account of the fertility of the soil, the superiority of the climate and the great advantages of irrigation, Colorado, as well as western Kansas, is peculiarly adapted for the successful operation of small and medium-sized farms, if conducted by men of intelligence, experience and enterprise, and there is perhaps no greater opportunity for this class of farming in any State in the Union than at present exists in Colorado. Over \$5,000,000 is annually sent out from Colorado to other States for the purchase of small farm products which this State could and should produce.

The soil of Colorado ranges from light sandy loam to the deep alluvial. A large percentage of the soils are of scoriac origin, rich, productive and easily worked. They are suitable for the crops of all the Eastern States and for many of the crops of the States north and south. No better climate exists for agriculture in its various forms. The freezing of winter is sufficient to secure a mellow, clodless soil for spring plowing and planting. The springs are usually early, with usually sufficient precipitation to germinate all crops without irrigation. Under the influence of perfect summer days, coupled with the superior benefits of irrigation, the growing crops are forced to early and complete maturity. The characteristic mildness of late autumn weather gives exceptional opportunities for the harvest of root crops and the last cutting of alfalfa, while the splendid winter weather affords excellent conditions for stock feeding.

Irrigation is of great advantage because of its positive security against drought. The water, with its rich mineral ingredients may be applied in proper quantities when needed, insuring thereby successful crops. Farmers unaccustomed to irrigation readily acquire a practical knowledge of it and infinitely prefer it to dependence on natural rainfall to which they have previously been accustomed.

One-half the population of Colorado lives in cities and towns of the plains, more than one-fourth in mining districts, furnishing a good home market for the products of the less than one-fourth living in rural districts. As a matter of fact, Colorado is annually sending to other States about \$1,000,000 for dairy products, \$1,500,000 for pork supplies, over \$1,000,000 for poultry produce and considerably over \$1,000,000 for fruits, all of which ought to be raised at home.

There is a growing public sentiment on the part of the citizens of Colorado to give the preference in their purchases to Colorado products, not only to encourage home industries but because of their superior quality.

DAIRYING.

While dairying is annually growing in importance, the creameries and cheese factories throughout the State have often more local orders than they can supply. The fact is there are not nearly enough milk cows in the State to supply the home market for dairy products. While some of the dairymen are conducting the business on the most improved methods and consequently making money; others, who sell milk to the creameries, keep cows which do not yield above eight quarts per day and do not milk some of their stock to exceed three months in the year, in fact, they are simply range stock producing calves and some milk. The creameries pay an average price the year round of 85 cents per hundred pounds for fresh milk, and keep only the separated cream. The cheese factories pay about 8 cents per hundred pounds more than the creameries and return the whey to the farmers. The average annual wholesale price of Colorado creamery butter is 28 cents a pound. There is a State law against oleo and a State Dairy Commissioner to see to its enforcement. If more cows were kept in Colorado and more butter and cheese made, the by-products would result in a greater number of hogs being raised and fattened, and

Colorado would no longer, as now, send \$750,000 per annum to other States for live hogs and an additional \$750,000 for hog products.

FRUIT-RAISING AND MARKET GARDENING.

Colorado does not yet produce more than 20 per cent. of the fruit it consumes, and notwithstanding the great increase during recent years of the area planted to fruit, principally orchards, it is not at all likely that the supply will equal the home demand for many years to come. Taking the averages of crops and prices actually obtained during 1893, as reported by the Denver Fruit-Growers' Association, the following were the money yields to the acre for small fruits and vegetables: Strawberries, \$350; blackberries, \$600; raspberries, \$400; currants, \$500; onions, \$200; celery, \$450; cabbage, \$100. The establishment of more fruit preserving factories will increase the demand for small fruits. As to tomatoes, the average yield to the acre is ten tons and the canning factories pay 50 cents per hundred pounds, or \$100 an acre, but as a matter of fact, the great bulk of the crop is sold at much higher prices in the retail markets and only the surplus taken to the canning factories, which, however, put up annually considerably over 1,000 tons, besides large quantities of peas, beans, pumpkins, etc., while the pickle factories put up hundreds of tons of cucumbers, cauliflower, onions and the like. A factory recently paid \$1,500 to one grower for three acres of pickling onions. Similar interesting particulars could be given did space permit, of the returns, ranging from \$200 to \$1,000 an acre, from orchards, according to age.

POULTRY FARMING.

As an adjunct to a small Colorado farm, there is no industry that will yield a more profitable return on the capital invested than poultry. Colorado is now sending other States over \$1,000,000 a year for eggs and table poultry, but the people of the State are steadily awaking to the fact that it is really cheaper to pay a higher price for home-raised eggs and fowls than for inferior imported eggs and poultry. Near the cities, poultry farmers get from private customers as high as 25 cents a dozen the year round, and from 10 to 15 cents more than the average store price for fowl.

PRICE OF LAND.

From the foregoing it will be seen that small farms, say of about forty acres, thoroughly cultivated, devoted to dairying, hogs, poultry, fruit and market gardening, have a home market for their products. The present Colorado farms usually run in size from 80 to 320, or even a greater number of acres, and many are now ready for sub-division, but small farms can frequently be purchased, leased or rented. The price varies according to proximity to city and railroad, ranging from over \$200 down to \$20 per acre, including water rights.

AN EVER-INCREASING MARKET.

The recent marvelous development of gold mining in Colorado, with its even more wonderfully certain future; the vast coal fields and equally vast iron and other mineral deposits of Colorado; together with the certain great manufacturing futures of Denver and Pueblo, in addition to the steady influx of population, all guarantee an ever-increasing Colorado market for farm products, and there is no reason whatever why they should be imported from other States. D. R. G.

Who Will Deny?

EDITOR KANSAS FARMER:—I want to make a few statements and ask a few questions, which I want the readers of the FARMER to take issue with and discuss through your paper:

- (1) There has been no new principle conceived, discovered or invented to raise water that was not known and used by the Romans.
- (2) The Chinese chain pump, which has been in use more than 2,000 years, will raise more water a given height in a given time, with less expenditure of power, than any pump made.
- (3) The double-plunger lift pump will deliver more water with the same power than any other pump of its class that depends on the atmospheric pres-

THE HOT WINDS

WOULD NOT AFFECT YOUR GROWING CROPS
IF YOU HAD A

FAIRBANKS, MORSE & CO. IRRIGATION PLANT.

ONE CROP WILL PAY FOR PLANT.

WRITE FOR PARTICULARS.

FAIRBANKS, MORSE & CO.,
1310 UNION AVE., KANSAS CITY, MO.

ure and mechanical power, all conditions being equal.

(4) That a driven well will furnish more water from the same strata or depth than an open well, in a given time.

J. S. SHERMAN.

The Season Helpful in One Thing.

EDITOR KANSAS FARMER:—If any man had wished to create irrigation sentiment in Kansas he could have done no better than to have prayed for just such a season as this has been. To be sure it is an expensive way to secure the end, but it is very effectual, and it is barely possible that without this providential aid there might have been failure to arouse a sentiment of sufficient strength to secure from the Legislature next winter that kind of aid which is necessary for the most thorough solution of the irrigation problem in Kansas.

We know we can irrigate. We know there are immense bodies of water beneath our feet which are anxiously waiting to be lifted to the surface that they may bless mankind, may give wealth and beauty, health and comfort to the inhabitants within our borders. We know all this, but we do not know how far it is practicable to lift water to perform these services, nor the best way to apply the water to the soil, and besides there are many other things which need to be determined. These are problems for the solution of which the State can well afford to extend aid.

This, indeed, is the great question in Kansas. It is more important than the silver question or the tariff question or any other question which concerns the people of our State, and every true Kansan, regardless of party affiliations, will assist in the passage of a law for developing the water resources of the State by the creation of a thorough and complete system of irrigation. In this way only can a man show himself worthy of citizenship in so great a State as Kansas.

M. MOHLER.

Irrigation at Tribune.

An enthusiastic two-day irrigation convention, attended by citizens of Greeley, Hamilton, Wallace, Wichita, Scott and Lane counties, besides several visitors from Colorado, was held at Tribune, Greeley county, on Wednesday and Thursday of last week, presided over by Judge V. H. Grinstead, of Dighton. The attendance was large at each session and the ladies vied with the men in interest and enthusiasm. The principal speakers were Judge Grinstead, Secretary F. D. Coburn, of the State Board of Agriculture, Prof. Robert Hay, the geologist, Mayor Wightman, Representative Glenn, and J. U. Brown, of Tribune, Geo. R. Allaman, of Wallace, and editor Hammond, of Syracuse; excellent papers sent by Engineer H. V. Hinckley, of Tepeka, and I. L. Diesem, of Garden City.

Water is found in the vicinity of Tribune at a depth of 120 feet, and so far as tested is inexhaustible; there are seven small irrigation plants in the town with windmills and pumps of two and one-half to three-inch capacity, and from the tests made the people of that region are much encouraged to undertake the work on a very much more extended scale than heretofore attempted.

The largest measure of credit for

WATER PIPE.

Our Hard Burned Vitrified and Glazed Clay Pipe is everlasting. With our Improved Joints this pipe will stand same pressure as iron and costs about one-fourth as much. Write for particulars.

W. S. DICKEY CLAY MFG. CO.,
Makers of all kinds of Burned Clay Goods.
Office 800 N. Y. Life Bldg., Kansas City, Mo.

working up this very successful meeting is due to Mr. Eugene Tilleux, editor of the *Western Homestead*, who, through his paper, is doing a good work for western Kansas.

Secretary Coburn found the Russian thistle growing by thousands in the vicinity of Tribune, and supposed by the people to be the ordinary tumble-weed. He forcibly called their attention to the serious misapprehension they were the victims of, and in each of the meetings showed them the peculiarities and dangers of the dreaded enemy, exhorting them to a united effort for its destruction before the ripening of its seed.

Alfalfa and Irrigation.

I have just read an article in an agricultural newspaper, headed "Alfalfa West of the Missouri." In the last three years I have seen this plant in all its different conditions in Colorado, Kansas, Utah, Idaho and Washington, and have watched its growth in different localities, and while at first I was not favorably impressed with its fattening qualities, I am free to say I consider it superior to any for cattle or sheep, and I have seen horses eat the hay in Colorado in preference to oats, and while it is claimed by some that horses can't work when fed on alfalfa hay, I have made a drive of more than fifty miles in a day, over a rough road, and the team had no grain and lived exclusively on alfalfa hay. It is dangerous to turn cattle on alfalfa, unless it be very short, for they are likely to cram so much down their throats as to kill them.

There is more danger in this respect with alfalfa than the common red clover, but after cattle become accustomed to it they will fatten very quickly, and the meat is exceedingly nutritious, I think fully as good as that made of the desert bunch grass, and will say right here that our Western bunch grass beef is luscious enough to gratify the taste of the most fastidious epicure. Red clover is good enough for the East, and I have never yet seen any place where alfalfa was what I consider a success, except on irrigated land.

The roots of alfalfa will go down a long way in the ground hunting moisture, but this plant thrives much better where plenty of water comes on the surface, as under a system of irrigation. In the summer of 1891 I came over the Santa Fe railroad, between Kansas City and Colorado, nearly every week, and quite early in the spring my attention was called to a field of alfalfa, I think east of Newton, Kas., and this was on the low lands, and that season there was a great deal of rain, so much that in many places along the railroad the wheat and corn were ruined. For a time this field of alfalfa did splendidly, but as soon as the rain ceased to fall the alfalfa began to fade, while that in western Kansas and Colorado on irrigated land made three crops of hay

in the season. Alfalfa is very successfully grown on the irrigated lands of Colorado, Utah, Idaho and Washington, and I have seen an immense yield along the north fork of Snake river, eastern Idaho, where there is nothing but white sand for a depth of fifty feet, and in the Wood river valley of Idaho, where it is coarse gravel, and seemingly no soil at all for a depth of twenty feet, alfalfa grows luxuriantly, but in each of these places named the land is deluged with water. Alfalfa is proving a success in the Yakima valley of Washington, on the irrigated lands, but I hear very little of it on the famous bottom lands of the Puget Sound country. In the arid region, where there is plenty of water for irrigation, it is, in my judgment, far more desirable than any other forage plant I have ever seen. It thrives best in the countries of perpetual sunshine, for it depends largely on the nitrogen of the air for its growth. Alfalfa and irrigation go well together.—L. C. Teed, in *Western America*.

The Perfection Irrigation Pump.

One of our representatives reports that last week he witnessed the working of a new irrigation pump that has been christened the "Perfection Irrigation pump" by the well-known and successful manufacturing concern, the St. Joseph Pump Company, of St. Joseph, Mo. The new pump, or water-elevator, is constructed something on the plan of the celebrated Perfection pump, but larger, heavier materials, and with a special end in view of meeting any capacity that may be desired by the practical irrigation farmer or gardener. The buckets are constructed with a peculiar yet very simple automatic valve, that provides for the rapid escape of the air from the inverted bucket as it descends and fills with water, and when it has reached the highest point in its ascent and turns to empty, the valve drops, admits the air, thereby rapidly and successfully emptying the bucket. The capacity and cost of this water-elevator is estimated about as follows: To raise eighty gallons in one minute, twenty feet, \$50; 200 gallons, \$70; 400 gallons, \$90; 1,000 gallons, \$165. The company manufacturing these pumps invite correspondence and estimates as to the quantity of water to be raised, the height and the kind of power to be used. Write them for further information.

Our First-Page Illustration.

Mr. Turnbull's flock was founded in 1847, and this is a very good specimen of the high-grade of Merino sheep that they have been breeding ever since. John Turnbull, the father of Alex. Turnbull, in 1847 had a flock of about 200 sheep. His selections were made from the most noted flocks of Ohio and Pennsylvania, such as those of Matthew Berry, of Washington county, Pennsylvania, and Jacob Stoolfire, of Harrison county, Ohio, and others. Stock rams used were of the smooth variety, and he always selected the best regardless of price, which ranged from \$50 to \$100. When the wrinkle craze became so fashionable he avoided sheep of that variety, as well as those producing the heavy, greasy, short-stapled wool. Length of staple, constitution, size and the strictly Merino blood was his model, and he always sold the inferior and retained the top of the flock. The Turnbulls believe that the big, smooth, Delaine sheep are the most profitable sheep for the farmer or wool-grower for two reasons—first, they have the size and constitution; second, they grow a Delaine fleece, which brings a much higher price than the old-style knotty, harsh Merino wools. Thus is produced a combination of wool and mutton. As to climate, they claim no sheep will stand a cold climate better than a smooth sheep, and will cross profitably with most any kind of breeds. Rams at maturity weigh from 150 to 200 pounds, shearing from sixteen to twenty-five pounds of wool. Ewes at maturity will weigh from 110 to 140 pounds and raise lambs, shear nine to fourteen pounds of Delaine, snow-white wool. This, in brief, is what Mr. Turnbull has at the present time to offer in great variety and he will be glad to answer any questions our readers may ask him concerning their ways.

A Nice Present.

If any reader of this paper who expects to buy a steel range or cooking stove this fall, will send us their full address and 10 cents in stamps, we will have them forwarded a cook book of 100 pages and a nice memento reminder. Address, MAJESTIC MFG. CO., care KANSAS FARMER, Topeka, Kas.

Its either Direct Legislation through the INITIATIVE and the REFERENDUM or another Revolution. Which shall it be? For books, information and plan write W. P. BRUSH, Topeka, Kansas.

The Family Doctor.

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

Irrigation vs. Health.

Several letters on our table ask for information as to the effect on the general health of the people, of a general system of irrigation, such as is now freely talked of in western Kansas. We answer, that, with the proper sanitary precautions all along the line, the effect will be beneficial rather than otherwise. But with careless habits and unsanitary conditions, the effect will be the decimation of population. With an extensive establishment of irrigation works, so that a considerable percentage of a large area is brought under the influence of the system, the atmospheric and magnetic conditions will be radically changed. The prevailing dry atmosphere will be displaced by a prevailing humidity, which will have special effect on the human system. Those cases of bronchial and pulmonary catarrhs, with incipient consumption, which heretofore have found asylum and sanitarium on our Western plains, will probably need to "move on" to some drier place. But as drought has its disease-breeding tendency, as well as humidity, it will but work an exchange of compliments.

Clean, pure water is never unwholesome or dangerous to health. Millions of people live long and well on the water or close beside it, and they show as good health records as those who live remote from water. But let the water in lake, river, pond, creek or pool become stagnant and filled with dead and decaying animal and vegetable matter, and then disease and death come marching in. With a good, clean and well-kept pond on every farm, only beneficial effects may be expected. But let the pond become stagnant, and dump into it all the dead cats and dogs and chickens; all the old shoes and hoopskirts and other rubbish that accumulate about the place; let the pump get out of order and remain so until the hot sun evaporates nearly or all the water in the pond; let leaves and weeds and grass rot in the shallow basin and death will claim its own. The grinning skeleton on the pale horse will thrust in his big scythe and reap the dread harvest that your McCormick's reaper has passed by and left untouched. Let your cows and horses and pigs and chickens wade into and trample your pond and drop manure all about its margin to putrefy and reek in the hot sun, and a coffin will not come amiss among the family supplies. If you allow your barn-yards and privies and cess pools to drain, or in the rainy season wash into your ponds, then you should have your doctor and undertaker employed by the year. If you will keep your pond full of living water, and keep it in motion by keeping the pumps going, filling the pond at one side while it overflows at the other, and see to it that no refuse from house or barn, no rubbish, no dead animals or leaves or grass foul the pool, you can hang the American flag over your lakelet and raise the shout of victory.

Probably the best countries in the world in which to study the relations of irrigation to health are Egypt, India and the Island of Ceylon, though the empires of China and Persia have spent mints of money on irrigation, but have no mortuary records.

The Nile valley swarms with a dense population, but the living water of the Nile on all the water meadows of Egypt and in all its aqueducts and ditches brings only the rose tints of health to its inhabitants.

The vast rice fields of India, flooded from the Indus, the Ganges and Brahmapootra and many other great rivers, are only unsalubrious when they receive the ofal and excreta of towns and cities or other dense centers of population.

Sir Emerson Tennent, the most careful and voluminous writer on Ceylon, where the most gigantic irrigation works in the world, in the way of ponds, pools, tanks and lakes, have been erected and maintained for hundreds of years, tells us that round about all the great tanks, some of them many miles in extent, and filled from rushing rivers and mountain streams, the highest degree of health prevails. He says: "The vast, level plains, whose stagnant waters are made available for the cultivation of rice, are seldom or never productive of disease." It is even believed that deadly air is deprived of its poison in passing over an expanse of still water.

Answers to Correspondents.

(NUMBER 32.)

FAMILY DOCTOR:—Can you recommend to me a cure for nasal catarrh? I am 14 years old; have had the trouble four years. I am otherwise healthy. Please answer through KANSAS FARMER.

Sharon, Kas. CLAUDE WOOLLOMES. Your question has been answered many times in the FARMER. I fear you have not been a diligent and observing reader. Mer-

curius sol., 3x trituration, used as a snuff and taken internally three times a day, is excellent. The internal dose is a powder the size of a grain of corn.

Publishers' Paragraphs.

Dates of the Frankfort, Marshall county, Agricultural fair have been changed to the following dates: September 4, 5, 6 and 7, 1894.

Chas. Engler, Topeka (six miles south), built hay-stacker after plans of Gates' patent—a Kansas institution and our advertiser. Material cost \$12, labor \$12, patent \$5, and wouldn't take \$100 for it. Has given it a severe test in millet.

We are in receipt of the twelfth annual catalogue of the Chicago Veterinary College, which should be examined by those of our readers who desire a course of study in this profession. For further information address Joseph Hughes, Secretary, Chicago.

The amount of light that *Harper's Weekly* was able to throw upon the remote and little-known country of Korea, the instant that public attention was directed to it, may be taken as an indication of the almost boundless resources of the paper, and its capacity to deal promptly and comprehensively with every occurrence of interest to the public.

The James Leffel Co., of Springfield, O., has issued a fine and complete new pamphlet, illustrating and describing their well-known line of upright and horizontal steam engines and steel boilers with latest improvements, which were awarded diploma and medal at World's Fair. A copy may be had free on application to the company. It is well worth sending for by any one needing an engine or boiler.

Louisville, Ky., contains, probably, the oldest, and certainly the largest plow works in the United States, namely, that of B. F. Avery & Sons. They make a specialty of steel, chilled and cast plows, also planters cultivators and harrows. Avery Sulky and Gang plows are noted the world over for simplicity and strength. Avery's Moon rolling coulters and plow gauge illustrated in our advertising columns is a wonderfully effective tool. Explorer Stanley found Avery plows in darkest Africa, and there is hardly a farming district on the globe where they are not used and praised. If you do not know and use them, write to B. F. Avery & Sons, Louisville, Ky., giving name of this paper, and stating your wants.

As the autumn draws near, the country boys are reminded of the approach of the cider season. Many of us who are confined to our city offices remember with much delight boyhood days on the farm, when sucking cider through a straw was an autumn treat. The methods of making cider in those days were very crude and laborious. The inventive genius has done for the cider-maker, as he has done for other farm machinery, much towards lessening labor and cost of production. The Hydraulic Press, manufactured at Mt. Gilead, Ohio, and sold by Davis-Johnson Co., 45 Jackson street, Chicago, Ill., who are general Western agents, is indeed a marvel of completeness. To get a full explanation of it, send for one of their handsomely illustrated catalogues, which they will mail free upon application. The Davis-Johnson Co. are also agents for spray pumps and various other fruit machinery.

George H. Stahl, of Quincy, Ill., manufacturer of the well-known Excelsior Incubator, has found it necessary, owing to the rapid growth of his business, to seek new and larger quarters where his capacity will be equal to the increasing demand. The new plant will be five stories high, giving a floor space of 85,000 square feet. It will be thoroughly equipped with the latest appliances, operated by electricity, and capable of producing, if necessary, a hundred incubators a day. That there is a reason for such a step as this during these dull times will be apparent to every thoughtful reader. It means, on one hand, that the poultry business must be in a comparatively healthy condition; on the other hand, it reflects the greatest credit on Geo. H. Stahl and his business methods. Those who are now engaged in poultry-raising, and those who are studying its possibilities as a source of profit, will do well to send 6 cents to Mr. Stahl for his catalogue. It contains much valuable information about incubators, brooders and poultry-raising in general.

Bethany College, Lindsborg, Kas.

Large, modern, well equipped. Just the place for farmers' boys and girls. Seven departments. Best and largest music school in the State. Fine Art department. A splendid business college. Hard work and rapid success are always popular at Bethany. 175 rooms, all steam heated. Board only \$2 per week. 440 students, twenty-five instructors. Fine catalogue and lithograph free on application. Surroundings safe and pleasant. Write the President,

DR. C. A. SWENSSON,
Lindsborg, Kas.

Metal Wheels for your Wagons



The season for cutting corn fodder being close at hand, it may be well for farmers to get a set of these low metal wheels with wide tires. They can be had any size wanted, from 20 to 56 inches in diameter, with tires from 1 to 8 inches wide. By having low wheels enables you to bring the wagon box down low, saving one man in loading fodder, etc. It is also very convenient for loading and unloading manure, grain, hogs, etc., and will save in labor alone their cost in a very short time. These wheels are made of best material throughout, and have every possible advantage over the high wooden wheels with narrow tires, and will outlast a dozen of them. There will also be no resetting of tires necessary, and consequently no blacksmiths' bills to pay. Wide tires save your horses and prevent cutting up your fields. For further information, write The Empire Manufacturing Co., Quincy, Ill., who will mail catalogue free upon application.

NOW FOR PITTSBURG.

28th Annual Encampment G. A. R. Low Rates via B. & O.

For the national encampment of the G. A. R. at Pittsburg, September 8 to 15, and the meeting of the Naval Veterans Association, September 8, the B. & O. R. R. Co. will sell excursion tickets to Pittsburg from stations on its line, September 5 to 10, valid for return passage until September 25 inclusive. The rate for the round trip from Chicago will be \$10, and correspondingly low rates for other stations. Tickets will also be placed on sale at all the principal offices throughout the West and Northwest.

No matter where you start from ask for tickets via Historic B. & O.

For information in detail write L. S. Allen, Asst. G. P. A., B. & O., Grand Central Station, Chicago, Ill.

Leasing Oklahoma School Lands.

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

Climate and Crops Just Right.

Oklahoma has thousands of acres of the finest farming land in the world, waiting for you or anybody else with a little cash and lots of gumption. Climate crops are just right. Farms will cost more next year than this. To find out if this is the country you want, ask G. T. Nicholson, G. P. A., Santa Fe route, Topeka, Kas., for free copy of Oklahoma folder.

Six Thousand Square Miles of Wealth.

The vast fertile valleys of the two Indian reservations in northeastern Utah, soon to be open to settlers comprise about 3,500,000 acres of the finest agricultural and grazing lands. The direct line to Uintah and Uncompahgre reservations is by the Union Pacific system via Echo and Park City. E. L. LOMAX, G. P. & T. A., U. P. system, Omaha, Neb.

Excursion to Pittsburgh.

The Baltimore & Ohio Southwestern railroad will sell excursion tickets, September 5 to 10, to Pittsburgh, Pa., account G. A. R. National Encampment, at special low rates, good returning until September 25. Best line from St. Louis, Springfield, Louisville or Cincinnati to Pittsburgh.

For rates or further information apply to any agent of the B. & O. S. W. railroad, or address A. C. Goodrich, Western Passenger Agent, P. O. Box 264, Kansas City, Mo.

MAILED FREE

to any Farmer or Farmer's Wife

"UP TO DATE DAIRYING"

containing full instruction how to secure Higher Grade Products, make

MORE BUTTER that will bring BETTER PRICE

and with Less Labor get More Money

Reviewing and explaining in a practical manner...

THE NORMANDY (FRENCH) SYSTEM, DANISH DAIRY SYSTEM AND ELGIN SEPARATOR SYSTEM

which have brought prosperity and ease to the dairy farmer. Write for this valuable information. Mailed FREE on application. Kindly send address of neighboring farmers who own cows. Address R. LESPINASSE, Ex. Sec'y Columbian & Illinois Dairy Associations, 246 W. LAKE ST. CHICAGO

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.

The Pitcher of Tears.

The woman had closed her eyes,
A-weary with weeping,
She leaned on the empty cradle
And sobbed in her sleeping.
Her breast, like the wave of the sea,
Was rising and falling;
Her heart, through the mist of sleep,
On her baby was calling.

Then her soul was lifted away
To the garden of heaven,
Where flowers shine like stars in the grass,
So smooth and so even;
And she saw where 'mid roses and May
An angel did wander,
With bright children who looked in his face
To dream and to wonder.

Alone, and apart from the rest,
A little child tarried,
And in his small arms, soft and round,
A pitcher he carried.
His sweet eyes looked wistfully toward
His mates in the meadow,
Heaven's glory was bright, but his face
Bore the touch of earth's shadow.

The woman knelt down where she stood,
"My own and my dearie,
Now why do you wander alone
With little feet weary?
If you cannot come back, come back,
To the arms of your mother,
'Tis your sweet hand the angel should hold,
And never another."

"O! mother, the pitcher of tears,
Your tears, I must carry;
So heavy it weighs, that behind
I linger and tarry.
O! mother, if you would smile,
And cease from your weeping,
My place by the angel's side
I'd gladly be keeping."

The woman waked by the cradle,
And smiled in the waking.
"My baby, the pitcher of tears
To my heart I am taking,
Go, frolic and sing with your mates;
My smiles shall be given
To make a new light round your head
In the Garden of Heaven."
—*Youth's Companion.*

When Baby Puts on Pants.

It's a day we all remember, and its scene of solemn state
Still casts a gleam of sadness, when at home we
congregate;
For a baby form is missing, and no childish
prattle grants
Its music sweet, refreshing, since the baby put
on pants.

'Twas a transformation truly, and it marked an
epoch grave,
It took away dear babyland and boyhood to us
gave;
The change could be discovered with the slightest
kind of glance
At the pride-flushed face of baby—that day he
put on pants.

It closed the doors of lullaby and opened wide
the gate
That leads from arms of mother to the bill of
man's estate;
The light of dawning future 'cross the fragrant
pathway slants
Of baby, and entralls him—on the day he put
on pants.
—*St. Paul Dispatch.*

ABANDONED YANKEE FARMS.

In the town of Mercer, in Somerset county, Me., is a decaying homestead which is typical of hundreds in New England. For this farm of about 207 acres, with house, barn, stable, etc., its owner, a thrifty and industrious deacon of the local Baptist church, was offered \$6,000 during the war. After his death in 1881, his widow, a shrewd, hard-working and pious woman of the best New England type, was offered \$4,000 for the property. Two or three years later she gave up the farm and moved to the adjoining village, where she has comfortably added to her income by entertaining travelers since the destruction of the village hotel by fire, and this week she has offered the farm for sale for \$1,500. It is on the road from Norridgewock to Farmington, and already there is talk of an electric railway between those two villages.

This farm, whose value had thus shrunk from \$6,000 to \$1,500, formerly cut seventy-five tons of hay. It comprises about seventy acres of hay fields, about the same amount of pasture, and perhaps an equal quantity of good wood land. Lack of attention for a dozen years or more has reduced the yield of hay from seventy tons to thirty, and the buildings are suffering from similar neglect. The great barn, well clapboarded and conveniently arranged with a large cupola on the roof, is capable of holding 100 tons of hay and accommodating a proportionate amount of stock. The house has a fine cemented cellar, a parlor, sitting-room, dining-room, kitchen, buttry and two bedrooms on the floor; on the upper floor are four spacious sleeping apartments; adjoining the house is a large stable for horses and cattle, with a connecting shed after a common New England plan for farm buildings. The land lies upon both sides of the road from Mercer to New Sharon. The barn is upon one side of the road and the house and stable upon the other, and back of the house, from which a beautiful view is obtained, the farm slopes gracefully to

the pretty Sandy river, that forms one of the boundaries of the estate.

The good Baptist deacon, who died in 1881, took his young wife forty years earlier to a farm of fifty acres of land. By the fruits of his own industry he acquired an estate of more than 200 well-tilled acres, and as time passed he erected the spacious and excellent buildings which enabled him to receive an offer of \$6,000 for the place thirty years ago. While the whole property is now offered for \$1,500, the barn alone cost \$1,200.

How easy it would be for a young man and woman, trained and equipped as were the young farmer and his wife, between 1840 and 1850, to take this place where they left it, and enjoy a comfortable and prosperous life upon this New England farm.

Did not the former owner leave sons? Yes. One of them is the village blacksmith, and another is a traveling salesman. They do not like farming.

Four or five miles beyond this farm is the village of New Sharon, at which a broad dam in the Sandy river furnishes a water power which would astonish the casual visitor. Like many other New England country villages, New Sharon is retrograding in population and industry, and yet it possesses greater resources than half the Southern and Western boom towns in which so much Eastern capital has been sunk in recent years. As I drove through the covered bridge and up the main street of New Sharon I asked some of the villagers why the place was going down, and the answer was usually, "Because the young men go away as soon as they grow up." Having in mind the possibility of profitably reclaiming through sheep husbandry the farm which I have described, I was informed that many sheep were sold in Farmington last fall for 75 cents and \$1 per head. Local butchers stated that they could pick from their purchasers this fall some hundreds of the very best ewes with which to stock a farm for \$1.50 to \$2 per head.

In Mercer and adjoining villages several honest and industrious young married men were introduced or mentioned as willing to take charge of such a farm as the one above. I talked with one of them who was willing to move into the house with what furniture he needed and run the farm for \$26 per month and what milk, butter and wood he required for his small family of wife and baby. All other supplies needed for his family he would provide out of his \$26 per month. With 100 sheep, costing \$150 to \$200; a pair of horses, costing \$75 each; two cows, at \$25 each, and the comparatively small amount of tools required, the farm would be ready for occupancy.—*American Wool Reporter.*

A Literary Feast.

The American mail reaches some of the missionaries in Micronesia only once a year. When letters and papers arrive, they have Christmas, New Year, Fourth of July and Thanksgiving all in one. And when the mails fail they have days of sorrow instead. Some years ago several missionaries had the latter.

The missionary schooner, Morning Star, left the mail at a certain point for distribution, and the boat carrying a number of pouches, left two, for a distant island, behind. When the missionaries heard of the neglect, they dispatched a boat immediately for the missing bags. But the vessel came too late.

The hungry natives knew that other supplies than mail came to the missionaries from America, and supposed the two neglected packages contained foreign dainties, so a great company assembled and prepared for a feast. They had heard much about foreign food, but had never eaten any. At last the time to sample it had come, and few were absent. Large pots were hung over the fire, and into each was hung a bag of mail. The blaze was bright, heat furious, the water boiled vehemently, but the bags did not soften, whatever might be said of the contents. Perhaps the cook thought them old ones and grew tired of waiting. The packages were taken from the pots and divided, that each guest might have a portion, and the feast began. The papers and letters were tender, the bags tougher than ancient poultry, but every particle was eaten. Foreign delicacies were too precious to be wasted. When the feast ended some of those sharing in it declared that for a steady diet they preferred their own to foreign dainties, though they admitted that they had not yet acquired a taste for such food.

The boatmen arrived after the feast, and sought in vain for the missing pouches of mail. Told what had become of them, they said:

"Why, that was food for the mind, not for the stomach."

"Well," answered one of the feasters, "as part of it was so tough for our teeth, we feel certain that it would have been far worse had they tried to take it into their minds. So we did them a favor, perhaps saved their lives. Surely it must have killed them, for it came near taking the lives of several of our number."—*Inter-Ocean.*

Strange Case of John Smith.

John Smith, sitting in the shade of the big maple, leaned back comfortably and opened the *Messenger*. He had just returned from town and now, as he waited for his supper, he would read his paper.

The lowing of the cows and the answering call of the calves, as the hired man drove them up from the pasture, came faintly on the breeze and mingled with the rattling of the dishes as his wife prepared the table. The farmer glanced approvingly about him, then turned to his paper.

Among other things he read of the man who had driven home and forgotten his wife, leaving her behind, and with it the comments made on the item. Was it true that men were so forgetful? Would it be possible for him to go on living and know that Anna, his dear, loving, patient wife, was not only gone, but was forgotten? He remembered the fate of his own dear mother, who had died when he was but 12 years of age, and how soon his father had married again, married a woman who, though kind and pleasant, could never take his mother's place in his childish heart, no matter though she seemed to fill his father's heart and life and crowd out all memory of that first love. He could never so forget his wife. The memory of Anna would keep sacred the place she had occupied in his heart and life; there would never be room for another.

Just then Anna came out at the door of the kitchen and he noticed with a start how worn and thin her face and form had grown. There was not a faint resemblance to the rosy-cheeked, bright-eyed girl he had so proudly brought to the farm ten years ago. She was drifting away from him, and the cares of life, borne alone without sympathy, were leaving their marks on her face. He had not noticed it until now.

She went swiftly past him and called the hired man to supper, and as they sat around the table John did not speak, but watched her furtively as she sat at the head of the table and poured the tea and waited on the two younger children. If she ate a mouthful he did not see her, although she drank her tea as if very thirsty. John was not an unkind man, and early in married life had insisted that she, too, must have hired help; but when she assured him that to teach them to do the work as she wanted it done, would be just as hard and require just as much time, he had assented and thought no more about the matter. He now remembered, with his aroused attention, that time after time he had awakened in the night to find her up and striving to quiet the fretful baby, but he had been so tired that he soon went to sleep and forgot her. Yes, he, too, had forgotten his wife. He had been so tired that he had not noticed that she came down the next morning, pale and languid, or if he did notice it he attributed it to the warm weather. Smith was not a demonstrative man, but never had his wife seemed more dear to him than now. The loss of all earthly goods seemed to be nothing compared with losing her. He would do better and be more thoughtful. Thank God, it was not yet too late to let her know that he yet loved her and had not forgotten her.

After supper the hired man went on to the barn-yard to begin milking. It had been her custom to help with this work, but to-night John took her pail and gently said: "Sit down, love, and rest until we get the milking done and then I'll help you; you look tired." And he stooped and kissed her.—*Tom Condry, in Minneapolis Messenger.*

Badly Tangled.

A jag is a bad thing even from a moderately temperate point of view, but there are few places where it is worse to carry a real, genuine, full-blown jag than into the underground windings of the capitol.

The capitol crypt is in some respects like a jail, a good deal easier to get into than out of, and a man who is in that state of mind that he sees two corridors branching out into infinity for every one that really exists, is likely to get helplessly and hopelessly lost in the crypt and leave his skeleton to be found by some wandering investigating committee of the next century who are poking into odd corners in hopes of improving the ventilation and earning their salaries by some easier method than staying upstairs to reform the tariff.

A Post man was down in the basement of the capitol the other day with a telegraph lineman, who was running in wires for some new 'phones. Just about that time a jag came wandering down the corridor. He was a large, luscious, extra super jag, such as a man can't find every day, or at least such as he is not likely to hold onto very long after he finds it.

"Shay, stranger," lisped his jaglets, "zou be sho kind ash ter tell me wish ze outshide zish place."

"Want ter find the door?" said the lineman.

"Yesh, been huntin' 't fer ages."

The lineman turned the wanderer around at right angles, told him to go to the right the first opening he came to, and he would see the door in front of him. It was only about fifty feet.

The jag disappeared in the right direc-

IVORY SOAP

99 ⁴⁴/₁₀₀ %
"PURE"

FOR THE BABY.

THE PROCTER & GAMBLE CO., CINCINNATI.

tion, but after about ten minutes he came steering carefully down the corridor in the same direction from which he first appeared.

"Shay, pardner," said he, when he reached the lineman, "zou 't gem'n zish now show'd me zoutshide zish place?"

The lineman acknowledged the effort.

"Well, 'rection's all right, I guesh, but dorsh moved."

The workman was pretty well convinced the door had not been moved, but he led the jag around the corner in full sight of the door and turned him loose. Some time passed, and the work on the wires had carried the party deeper down into the depths of the building, for the capitol is three stories under ground in places, when the same jag hove in sight, with a worried, anxious look on his face.

"Pardner," said he, brightening up when he saw the lineman, "pardner, ish all my fault, but you know I lost zat door 'gen."

Seeing that it was a hopeless case, the lineman called a messenger and started him off with the jag toward the nearest door. The pair went on till they were near the lower west front door, when the messenger, who did not know the jag's propensity for getting lost, turned him loose, and the lineman, who was watching from afar, saw the inebriate lurch off into one of the openings of the new terrace addition instead of keeping on toward the door, and, as he had about three-quarters of a mile of corridor before him in that direction without a door to the outside world, it is likely he spent the rest of the night in the building.—*Washington Post.*

Every season of the year has its own peculiar malady. To render the system malaria-proof during these "muggy" and oppressive days, the blood should be kept pure and vigorous by the use of Ayer's Sarsaparilla. It will help you wonderfully through the dog-days.

AGENTS WANTED 'STRIKING LIFE'

Laborer's side of the labor question, by John D. Swinton, the pillar of light of labor movement. Send 10c. for agents' outfit. Quick, large profits. Address NATIONAL PUBLISHING CO., Chicago.

High Arm Sewing Machine **MY HUSBAND** Canteen how you do it.
\$50 Kenwood Machine for - \$22.00
\$50 Arlington Machine for - \$19.50
Standard Singers - \$5.00, \$11.00, \$15.00, and 27 other styles. All at cash prices. We pay freight ship anywhere on 80 days free trial, in any home without asking one cent in advance. Buy from factory. Have agents large profits. Over 100,000 in use. Catalogue and testimonials Free. Write at once. Address (in full), CASH BUYERS' UNION, 158-164 West Van Buren St., B 64, Chicago, Ill.

MY WIFE CANNOT SEE HOW YOU DO IT AND PAY FREIGHT.
\$14 Buy our 2 drawer walnut or oak improved High Arm Singer sewing machine. Finely finished, nickel plated, adapted to light and heavy work; guaranteed for 10 years; with Automatic Bobbin Winder, Self-Threading Cylinder Shuttle, Self-Setting Needle and a complete set of Steel Attachments; shipped anywhere on 80 Day's Trial. No money required in advance. Buy from factory and save dealer's and agent's profits. Cut This Out and send to-day for machine or large free catalogue, testimonials and glimpses of the World's Fair. FREE OXFORD MFG. CO. 342 Wabash Ave. CHICAGO, ILL.

EQUAL IN APPEARANCE TO A SOLID GOLD WATCH.

FREE A fine 14k gold plated watch to every reader of this paper. Cut this out and send it to us with your full name and address, and we will send you one of these elegant, richly jeweled, gold finished watches by express for examination, and if you think it is equal in appearance to any \$25.00 gold watch pay our sample price, \$3.50, and it's yours. We send with the watch our guarantee that you can return it at any time within one year if not satisfactory, and if you sell or cause the sale of six we will give you five Free. Write at once, as we shall send out samples for 60 days only. Address THE NATIONAL MFG. & IMPORTING CO., 234 Dearborn St., Chicago, Ill.

The Young Folks.

Gardens.

The wide fair gardens, the rich lush gardens,
Which no man planted and no man tills,
Their strong seeds drifted, their brave bloom
lifted,
Near and far o'er the vales and hills;
Sip the bees from their cups of sweetness,
Poises above them the wild free wing,
And night and morn from their doors are borne
The dreams of the tunes that blithe hearts
sing.

The waving gardens, the fragrant gardens
That toss in the sun by the broad highway,
Growing together, gorse and heather,
Aster and golden-rod all the day,
Popples dark with the wine of slumber,
Daisies bright with the look of dawn,
The gentian blue, and the long year through
The flowers that carry the seasons on.

And the dear old gardens, the pleasant gardens,
Where mother used to potter about,
Tyne and pulling, and sparingly culling,
And watching each bud as its flower laughed
out:
Hollyhocks here, and the prince's feather,
Larkspur and primrose, and lilies white,
Sweet were the dear old-fashioned gardens
Where we kissed the mother, and said, "Good-
night."

—Margaret E. Sangster, in Harper's Bazar.

GOLD TRIED IN THE FIRE.

"Old Gold and Silver Bought Here," was a sign hanging in front of a shop that attracted the attention of two passers-by.

One of the passers was a Sun reporter, and the other was Mr. J. Robley Dunglison, registrar of deposits in the Philadelphia mint, who probably knows more about the unseen supply of gold than any other man in this country. The "unseen gold supply" is a term the mint people use to describe the tons of gold and silver that lie in the half-forgotten boxes in bureau drawers—old gold pencils, old watch cases, neglected pocket pieces, broken chains, spectacle rims, and a thousand other bits of metal that have an intrinsic value. Most of these things are sure to find their way to the mint sooner or later, and when they do it is Mr. Dunglison who makes an entry of their weight in the mint's big books. His name will have a familiar sound to all the doctors, because "Dunglison's Medical Dictionary" is found in every medical library. Mr. Dunglison, of the mint, is a son of the author of the dictionary.

"There is one of our feeders," Mr. Dunglison said as he read the sign. "You would be surprised to know how much of the gold and silver that we turn out in coin comes to us through such places. There are thousands of buyers of old bullion in this city and tens of thousands of them throughout the country. In the aggregate they send us a great many tons of bullion every year, and so put a great deal of money into circulation that would otherwise lie idle.

"There is no piece of gold or silver so large or small," he continued, "that the dealers will not buy it. Do you know that gold fillings out of extracted teeth make a considerable item in the mint's gold? They do. When a dentist extracts a tooth he is sure to extract also any gold that may be in it, and these tiny bits after a while make a little boxful, which is sold to a dealer. The idea seems unpleasant, but it is not, when you know how thoroughly all bullion is refined and cleansed in the mint before it is coined.

GOLD THAT IS NOT GOLD.

You will find that all these dealers would a little rather buy old silver than old gold, because there is more profit in it. The price of silver fluctuates so much that they can always buy it for considerably less than its real value; but the price of gold never varies. An ounce of gold is worth \$20.67 always, in all civilized countries, and this is so well understood that the dealer must pay pretty nearly that much for it. He generally increases his profit a little by paying in goods instead of in cash. The dealer must be able to do a little crude assaying himself, or he is likely to make mistakes. Gold jewelry, for instance, is rarely made of pure gold. Our mint standard for pure bullion is 1,000, and we rarely get a watch case or a ring or a chain that assays more than 500, showing that it is half of gold or silver and half alloy. You think you are carrying a gold watch, but the chances are ninety-nine in a hundred that the cases are half copper. The cases will reach the mint some day, almost to a certainty, and then the copper will come out.

"The flow of old jewelry to the mint is almost as certain and steady as the flow of water down an incline. The old trinkets are broken and useless, and you lay it away. Perhaps it is an heirloom, or for some other reason you are attached to it, and you must not think of selling it. But a rainy day may come, and you are glad to sell it. In any case, you are sure to die some time, and your heirs will not care for the chain; then we get it, and turn it into dollars or eagles.

"We do not buy bullion in small quantities at the mint—nothing less than \$100 worth of gold or silver at a time, and then we do not pay for it until it has been assayed. If you bring us \$100 worth of metal

that you suppose to be gold, we weigh it and give you a receipt for it, and three days later you can call and receive the money for whatever gold we find in it. No matter if the lot contains only a dollar's worth of gold, we will receipt for the weight and extract the gold for you and pay you for it. But you lose all the base metal, because in the refining everything but the gold and silver is destroyed. That is, it is practically destroyed, because our work is with gold and silver only, and we do not make any effort to save the base metals. It could easily be done, but it would not pay for the time and trouble. We could separate not only the gold and silver, but the copper also, and the lead and whatever else is present.

"When you take a quantity of old gold to the mint to sell, your metal is not mixed with any other metal. Each lot is kept separate until it has been assayed. Your gold is put into an iron box with two locks, and when its turn comes the box is taken to the melting room, where it is opened by two men, each of whom has a key to one of the locks. The metal is put into a crucible, with a little borax to prevent its sticking. The crucible is put into a furnace, and when the metal is melted it is moulded into a bar. That bar contains all the metal in your lot, whether it be gold or brass, and it is the assayer's business to find out how much gold it contains. While it is in the crucible it is stirred constantly and thoroughly, so that all its metals may be distributed equally throughout the bar.

"When the bar is returned to the weighing room the assayer chips from it a tiny piece that must weigh just half a gramme, or 7.7 grains troy. The bar and the sample are numbered to correspond, and the bar is locked up in the iron box again. But the chip is taken to the assaying room, where it is put through one of the most delicate mechanical processes in the world. No danger of visitors following the chip to the assaying room, for a man who is working with scales that will weigh the thirteenth-hundredth of a grain cannot be talking to visitors.

ABSORBING THE ALLOY.

"You are not familiar with the bone-ash cup, I suppose, that we call the cupel? To the uninitiated that is one of the wonders of the mint. It is simply a little shallow cup made of bone ashes moistened and pressed, but it does some wonderful work. It will absorb any metals that are melted in it, except gold and silver. That sounds a little doubtful, but it is a fact that can readily be accounted for on scientific principles. You melt a lump of mingled gold and copper in this little cupel and every particle of the copper disappears, leaving the gold alone in the bottom of the cup. That is the first step in assaying gold, taking no account of a dozen minor operations.

"This melting in the cupel does not purify the gold, however, for gold is often alloyed with silver. After the tiny button that remains in the cup has cooled sufficiently it is flattened with a hammer and run between rollers till it comes out a little spiral that we call a cornet. This is put in a little vessel like a thimble with a slit in the bottom and is boiled in nitric acid. The acid dissolves the silver, which runs out through the slit, but it cannot dissolve the gold. The tiny chip that remains in it is pure gold.

"You see the reason for this process now, I suppose. The sample weighed 7.7 grains at the beginning; if the pure gold taken from it weighs half as much then the sample was one-half gold and consequently the bar is one-half gold. Whatever proportion the weight of the gold bears to a half gramme that is the proportion of gold in the bar.

"The refining of silver is an entirely different process. Our visitors never tire of seeing silver disappear in the big tank. There stands a big tank of boiling water, apparently, and we drop in lumps of silver, and they disappear in a second. But we take good care to get them back again. It is not boiling water in the tank, but boiling nitric acid, which is colorless and looks precisely like so much water. We take the metal that is supposed to be silver, or to contain silver, and cut it into small pieces and throw them into the tank, and in the twinkling of an eye they are gone, and nothing is to be seen but the clear boiling liquid. Of course, the silver is not gone, for even boiling nitric acid cannot destroy silver or any other metal; it merely changes its properties and converts the silver into nitrate of silver, which is a colorless fluid like the acid. All the base metal that may be mingled with it is destroyed, practically, for it is converted into other nitrates, which are thrown away. We might rescue the base metals, but our business is to receive the liquefied silver.

"The liquid is drawn from the tank into large tubs and a little salt water is poured into them. Immediately a whitish sediment begins to form and fall to the bottom—to precipitate, as we call it. This is the silver again, but in another form. The salt has converted it into chloride of silver. The sediment looks like slaked lime, and to the touch feels like soft cheese. After it

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

Royal Baking Powder

ABSOLUTELY PURE

has all settled we pour off the acid, and the tubs are half full of chloride of silver. You can make this experiment for yourself by dropping a silver coin into some boiling nitric acid; but I advise you not to, for boiling nitric acid is dangerous stuff to handle.

SILVER CHEESES.

The deposit is put in a hydraulic press and pressed into round cakes that look very much like huge cheeses. These cakes are then treated with spelter or zinc, which turns them into metallic silver again. When gold and silver are massed together the mass is boiled in nitric acid, which does not affect the gold but dissolves the silver. The resulting nitrate silver has to be drawn off carefully with a big siphon. The acid liquefies any metal except gold or the still more costly platinum, so the siphon used is made of gold and contains \$4,000 worth of it.

"I have explained these processes to you to convince you that no matter what uses gold or silver may have been put to before they reach the mint they are absolutely pure when they are turned out in coin. Nothing can go through that bath of acid without losing all impurities. Some strange things happen in the big acid tank. We have had big assignments of rare old family plate that disappeared utterly when the acid took hold of them. That is, there was no silver whatever in the articles, though all the ordinary tests led us to believe that they were made of bullion. The acid always tells the story, and tells it truthfully. When there is no deposit of chloride of silver in the tubs there was no silver in the articles. After the silver is refined it is moulded into bars, and in this shape it may lay in the mint vaults for ten or twenty years before it is coined. When it is to be coined the bars are run into ingots and in the form of coin it may lay in the vaults for twenty years more.

"I suppose you know how to tell where any American coin was made. The mint at Philadelphia was the first one in this country and after others were established it was for a long time the head establishment, the mints at New Orleans, San Francisco and Carson City being branches; but a few years ago each mint was made a separate concern. When you see a small one anywhere on a coin that tells you that it was minted in New Orleans. An s shows that the coin was made in San Francisco; C. C. stands for Carson City, but you will not find that on any new coins, as no coining is done at Carson City at present.

THE MINT'S FIREARMS.

"The mint's neighbors in Philadelphia have become used to hearing a fusillade of firearms in our court yard every month, as though we were having a battle. The law requires us to keep a supply of firearms and direct how they shall be handled. In the corridor close to the assay office are two racks and a large cabinet. The racks contain twenty rifles, with bayonets attached, and the cabinet is filled with revolvers. It is necessary to have these things to defend the government's property with in case of attack by a mob, for there is too much money in this building to take any chances. We have at present about \$150,000,000 worth of gold and silver deposited in the vaults, besides a great number of relics in the museum that could not be replaced. By an act of Congress we are required to have all the firearms examined every day, and they all have to be fired and cleaned once a month. When the twenty night watchmen go on duty in the afternoon they take the revolvers from the cabinet and lay them in convenient places about the building.

"There are many other curious things about Uncle Samuel's mints. I suppose you know that two men are under heavy bonds for the safe keeping of the treasure in each mint. One of these is the Director of the mint, who has charge of all the establishments, and the other is the Superintendent of each mint. Every vault door has two locks and there is a man for each key, so that the door cannot be unlocked without the presence of both men. One of the men represents the Director, the other represents the Superintendent.

"One of our curiosities in Philadelphia is a small consignment of gold from Mada-

gascar. It was mined and smelted and done up for shipment by natives and is the brightest gold we have. They took a piece of bamboo about six inches long and two inches in diameter and polished the outside till it is as smooth as glass. Then they put a wooden cork in one end and poured in the melted gold and corked up the other end.

HOW COINS ARE COUNTED.

"One of the simplest and most useful contrivances we have is the counting board. Formerly all the coins were counted by hand, and this took longer than to make them, for the coining machines work very fast. One of the old employes invented the counting board, which is now in use in all the mints in the country. It is a smooth, flat board, about six feet square, divided into longitudinal columns with thin metal strips, each column being just wide enough to hold the coins to be counted. The board is laid over a big bin containing the coins and one man scoops up a shovelful of coins and scatters them over the board. Another man gives the board a shake and sees that every space in every column is filled. Then with a tip of the board the counted coins are dumped into another bin. Fifty dollars' worth of five-cent pieces can thus be counted in thirty seconds."—New York Sun.

Investigate advantages at Wichita Commercial College before deciding to attend elsewhere. It will pay you. Y. M. C. A. building.

WILL YOU distribute Circulars and samples for us? No commission. Salary and expenses to travel. Send stamp. ADVERTISING BUREAU, 447 6th Ave., NEW YORK CITY.

BUY DIRECT AND SAVE DEALER'S \$12 AND AGENT'S PROFITS. Buy our Oxford Boss Bicycle, suitable for either sex, made of best material, strong, substantial, accurately adjusted and fully warranted. Write to-day for our large complete catalogue of bicycles, parts, repairs, etc., free. **OXFORD MFG. CO.** 338 Wabash Avenue, CHICAGO, ILL.

WANTED YOUNG MEN to learn Telegraphy and be assisted to positions. Only exclusive and co-operative school. Reduced rates until September 1. Address W. H. SKELTON, Box 565, Salina, Kas.

McKILLIP VETERINARY COLLEGE Thorough, Practical, Scientific. Three CHICAGO, winter terms. Fees moderate. Backed by the largest private practice in the country. For information or catalogue address: OLOF SCHWARZKOPF, DEAN, 1639 WABASH AVENUE, CHICAGO, ILLINOIS.

You expect to attend College soon? The **WINFIELD BUSINESS COLLEGE** stands first. Our course is complete and Thoroughly Practical. We assist our students to paying positions. We pay your railroad fare to Winfield. Send for Catalogue and Specimens of Penmanship. Address, C. S. Perry, Prin. Winfield, Kas.

PIERRE S. BROWN'S School of Business and Shorthand

We make specialties of rapid calculating and simple and concise methods of recording and posting as they are used in actual business. Commercial course, six months, \$30; Shorthand and Typewriting, six months, \$40; English course, three months, \$10. Bayard Bld., 1212-14 Main St., Kansas City, Mo.

Commercial College
Actual Business Practice with Eastern Colleges through U. S. Mail the crowning feature.
The Commercial leads, others follow.

Actual Business Practice with Eastern Colleges through U. S. Mail the crowning feature.
The Commercial leads, others follow.

KANSAS State Agricultural College

Largest Farmers' College in the Country.

TUITION FREE! NO FEES! EXPENSES LIGHT!

Its course gives the best of training for sons and daughters of farmers, whether they stay one term or four years. Good English, genuine science, industrial arts, are included. Students received from district schools. Write for catalogue to President or Secretary, Manhattan, Kansas.

CHICAGO VETERINARY COLLEGE. FOUNDED 1883.

The most successful college on this continent. For further particulars address the Secretary, JOS. HUGHES, M. R. C. V. S., 2537-2539 State St., Chicago, Ill.

KANSAS FARMER.

ESTABLISHED IN 1863.

Published Every Wednesday by the
KANSAS FARMER COMPANY.

OFFICE:
No. 116 West Sixth Street.

SUBSCRIPTION PRICE: ONE DOLLAR A YEAR.

An extra copy free fifty-two weeks for a club of six, at \$1.00 each.

Address **KANSAS FARMER CO.,
Topeka, Kansas.**

ADVERTISING RATES.

Display advertising 15 cents per line, agate, (fourteen lines to the inch).
Special reading notices, 25 cents per line.
Business cards or miscellaneous advertisements will be received from reliable advertisers at the rate of \$5.00 per line for one year.

Annual cards in the Breeders' Directory, consisting of four lines or less, for \$15.00 per year, including a copy of the KANSAS FARMER free.

Electros must have metal base.
Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.
To insure prompt publication of an advertisement, send the cash with the order, however monthly or quarterly payments may be arranged by parties who are well known to the publishers or when acceptable references are given.

All advertising intended for the current week should reach this office not later than Monday.
Every advertiser will receive a copy of the paper free during the publication of the advertisement.
Address all orders

KANSAS FARMER CO., Topeka, Kas.

The call for extra copies of KANSAS FARMER of August 8 and 15 has been so great, on account of the articles on irrigation and alfalfa, that this office is no longer able to supply copies of those dates.

NAMES WANTED.

It is not often that this paper makes a special request of its readers, but we want the name and address of every farmer in Kansas who is not a subscriber. Will every one of our readers favor us with a postal and a list of names?

The volume of business in the United States, as well as the more hopeful tone of public sentiment, indicate that the great depression has reached a maximum. The end of the tariff controversy is looked upon as a turning point and the financial prophets are predicting a revival of prosperity. We are ready for it in Kansas.

FOR FIRST-CLASS FARMERS.

Kansas farmers are not the only people that appreciate the "old reliable" KANSAS FARMER, as shown by the following from W. W. Parks, of Oklahoma, who writes: "Here is one dollar for another year. We think the FARMER a valuable paper and think all first-class farmers should take it."

The new tariff law went into effect at 12 o'clock last Monday night, without the signature of the President. The measure was so far short of what Mr. Cleveland had expected, as he explained in a letter to a Congressman, and yet in his estimation was so great an improvement on the McKinley law, that he would neither approve nor veto it. He therefore held the bill the ten days prescribed by the constitution, at the expiration of which it became a law without approval.

THE STATE FAIR AT WICHITA.

The premium list of the State Fair Association is out and the premiums offered are quite liberal and should attract a large and creditable exhibit, as this fair will be the leading fair in Kansas this year and the only one of a State character. The management is in competent hands and Wichita promises the best fair held for years in the State, on October 2-6. For any information address C. M. Irwin, Secretary, Wichita, Kas.

A great Labor day parade and celebration is to be held at Garfield park, in Topeka, September 3, at which the following are announced to speak: Address of welcome, Mayor T. W. Harrison; Hon. David Overmyer, Democrat, 1:30 to 2:30 p. m.; Hon. Frank Doster, Populist, 2:45 to 3:45 p. m.; Hon. J. C. Caldwell, Republican, 4:00 to 5:00 p. m.; Laura M. Johns, Equal Suffrage, 7:30 to 8:45 p. m.; Hon. I. O. Pickering, Prohibitionist, 9:00 to 10:15 p. m. The speaking will be interspersed with music by Marshall's band. A long list of sports and prizes is announced and dancing is to continue all day and evening. Admission, 10 cents.

NEEDED IRRIGATION LEGISLATION IN KANSAS.

The great irrigation gathering of the nation, which is to convene next week at Denver, Colorado, will be composed of representatives of every irrigation interest in the country. The problem of irrigation is one the solution of which is so greatly variant with the conditions of localities, that what to one section will seem all-important will have little application in other sections. The methods of applying water to the land indeed vary but little, and important as is this branch of the subject and susceptible of vast improvement as it probably is, it will attract and really deserve little attention from the national convention of irrigators.

The first requirement for irrigation is water, and it is to the problem of obtaining the necessary supplies of water that co-operative efforts, that associated devising must be turned, and in the protection of the correlated rights of individuals and communities in and to water is found one of the liveliest concerns of society. In mountainous and rocky regions, in regions of open streams or periodical floods, much progress has been made. The earlier irrigation developments of the United States have been made in the mountain States. There a stream is diverted and its waters distributed over the land to be irrigated. If the area accessible to this water is small, but few owners become interested in the water, and if the supply is adequate but few questions arise, and these few are amply met in the provisions of statutes, customs and common law. Where large areas of tillable land lie so as to be reached from a common water supply, questions of larger moment are presented and not unusually the administration of the water service falls under the control of a water or ditch company. The questions which arise between this company and the users, etc., are not new but require adjustment. In some cases the entire subject of appropriation and distribution becomes so great as to be of over-shadowing importance. The questions of over-selling, of the times and seasons of supply, of the order in which users may take from the ditches, of payment of water rents, are also interesting and important to the patrons of large companies, whether private or co-operative.

The development of the water resources of the arid and semi-arid regions has presented an apparently attractive field to the capitalist, and large sums have been expended in enterprises, only a portion of which have proved remunerative. But whether in the control of a mountain stream or in the conservation of flood waters in reservoirs, the undertakings of the mountain States are usually of considerable magnitude, and only by the investment of large sums, perhaps in distant works, does the land become productive and valuable.

But a large part of the semi-arid region presents a far different situation. The great plains country, which spreads over a region some 300 or 400 miles wide, and more than 1,000 miles long, east of the Rocky mountains, is a land of even contour and fertile soil, but is almost destitute of reliable flowing streams. But it has at no great depth below the surface a phenomenal supply of hidden water. It has been demonstrated by the experience already had that in much of this region the individual or farm irrigation plant, whereby the user of water draws from the hidden reservoir so much as he needs, is cheaper and more satisfactory than any scheme of co-operation or large enterprise. Should this plan become universal over the plains it will remove from the irrigation problem, as it applies to this vast region, many of the questions which must be settled and are now uppermost in the mountain regions. But in their stead the problem of irrigating the plains presents other questions no less important and which have received less attention than those of the older irrigation districts.

In the appropriation of water from open streams, the rights of users have long ago been considered by the courts,

and the common law and the "code" furnish fairly good protection until statutes are framed to more specifically direct and regulate.

In the appropriation of hidden waters, there is much less definite information as to rights. There will be no question raised as to the right of the owner of land to bring to the surface and apply water, perhaps as much as he needs, to the land from under which he took it. But there have been constructed in western Kansas and in Colorado vast systems of ditches for the distribution of water over great bodies of land remote from the heads of these ditches. They were originally constructed with the expectation that they would be supplied from the flood waters of the streams. This method is found to be too unreliable, and various propositions are under consideration to supply them from the hidden waters near the upper ends of the ditches. There are no engineering impossibilities in these propositions, and there is little doubt but that large drafts will be made upon the hidden stores for this purpose. Possibly with their present dimensions the ditches already constructed may be supplied without seriously interfering with the availability of this supply for those under whose land it is now most accessible. The Kansas statute of 1891 attempts to make applicable to the appropriation of these hidden waters the same laws as have been enacted for the regulation of the use of surface waters. This law was enacted before the development of individual plants had made much progress and is likely to require modification before it will conserve the best interests of Kansas as the development is now being made. The best authorities agree that the total available supply of water will be adequate for only a portion of the lands in eastern Colorado and western Kansas. If, therefore, the ditches be greatly multiplied and extended to great distances from the source of supply, it will be quite possible to overdraw the supply to the great detriment of those now most favorably situated for the use of individual plants, as well as rendering a short supply alone available for ditch customers and all others.

The intelligent direction of the efforts put forth to make available the water resources of Kansas is a matter of the first importance. It has been shown that the best and most valuable development will consist of individual plants. The independence which accompanies these appeals most strongly to the best class of American farmers and assures a prosperity, good, both for the farmer and for the State. But the installation of these many small plants is sure to be accompanied by less engineering and less hydrographic investigation on the part of the projectors than would be devoted to the preliminaries were there to be only one or a few great enterprises instead of the many small ones. The inordinate waste of money and effort for lack of the requisite scientific investigation can be avoided only by the aid of a State Commission of Irrigation Engineering and hydrographic survey. Such a commission should consist of at least one competent engineer and one competent geologist, well versed in the water-bearing rocks and sands of the State.

The foregoing brief consideration of some of the more important elements of the situation in Kansas indicates a line of action by the next Legislature which should be insisted upon by every person interested in the welfare of the State, and especially by all in the districts in which irrigation interests are now being developed.

First, the law should clearly define rights of appropriation, use, conveyance and sale of the hidden waters, with reference to their largest use by individual appropriations.

Second, an Irrigation Commission or Bureau should be established and its duties and powers defined with reference to the situation as it exists in Kansas rather than modeled after the irrigation departments of other States.

Every voter in western Kansas should see that the man he helps to send to the Legislature is right on these questions and is not prejudiced in favor of some large scheme which "has something it."

THE NEW TARIFF AND THE MANUFACTURERS.

Public interest in the effect of the new tariff law upon American industries, as well as upon the prices which the consumer will have to pay and the quality of the goods he will get for his money, has led the *American Wool and Cotton Reporter*, of Boston, Mass., to interview a number of representative commission merchants and manufacturers on the subject. Below are given significant expressions from these interviews:

Arthur T. Sullivan, of Sullivan, Vail & Co.: "The Senate bill is much better than the House bill, of course; and I think that the manufacturers can live under it. It is going to make a great difference in the commission business; it will cut down the gross commissions very much. I think the woolen manufacturer will be able to hold his own with free wool; on the low grades we may have severe competition. Of course if we have it, it will turn the machinery now on low goods on the finer grades and make competition sharper in that line. I do not think it will revolutionize the industry very much. I think fine goods are going to be sufficiently protected to compete with foreign goods."

George W. Bramhall, of G. W. Bramhall & Co.: "I think everybody, irrespective of party affiliations and views as to the merits of the bill, will be happy in the thought that we have reached a conclusion; and we have reached a conclusion on a bill formulated not so much on the merits of the schedules as upon the political necessities to make a bill, a condition which made it a far more uncertain contemplation while it was under discussion than if it had been discussed on its merits."

"As to the effect the bill will have upon the manufacturers: There are certain of the lowest grade goods (and this may seem contradictory) that will continue to be manufactured in this country under a 40 per cent. rate; there are grades immediately above them that I do not see at present how they can be manufactured in this country in competition with the foreign goods."

"Still my faith is strong in the ability of our manufacturers to make goods for this market. The woolen manufacturer of this country has within the past six months, to my knowledge, gained information that is worth the terrible cost it has been to him of obtaining it. The impossible of twelve months ago is to-day a realized fact in woolen manufacturing. This is exemplified in the facility with which the manufacturer has supplied the Clay worsteds for this market this season, and he has a fighting chance to do so for next spring."

Thomas H. Cullen, of Converse, Stanton & Cullen: "My impression is that all good manufacturers in this country will exist under the Senate bill, and it will be as profitable in the future as in the past. Some of the old manufacturers with old ideas and old machinery may have to step down and out, and will not be able to compete; but all well-equipped manufacturers certainly can exist under the bill and successfully compete with their foreign competitors."

James Phillips, Jr., of Fitchburg Worsted Co.: "I think it is a very unjust schedule as compared with the cotton, iron, metal, silk and linen schedules."

A. W. Kingman, agent of the George H. Gilbert Manufacturing Co.: "In my judgment the effect of this Senate bill upon the wool dress goods industry of the United States will be to tend to develop a wider range of products."

"There is a question of just how far the labor question on its present basis may enter into the necessities of the developments as we go on. I am not certain that there must be a slice taken off the labor. That is one of the doubtful questions."

James C. Cooley, of Cooley, Turnbull & Co.: "Our great objection to the bill so far as pertains to the underwear business is that the duties are *ad valorem* instead of specific. If the duties are strictly collected under this bill, with free raw material, there is no doubt that the manufacturers of this country can hold their own. We are making goods of such a high class, and have made such progress in the last five years, that as a rule in the medium and low-priced goods we are ahead of foreign manufacturers. The same is true of fine goods. Our fine fashion goods are equal to foreign goods, both in fabric and finish. There will be practically no readjustment of wages."

George H. Sutton, knit goods manufacturer's agent: "I should say that I believe we can adapt our industry to the bill; that it may necessitate the changing about a little of some of our qualities on cotton hosiery, but I think that the fact that the bill is likely to become a law will give us some immediate business, and I believe that we will be able to run our mills to better advantage than they have been run for a long time. The general idea, I think, is that it is time for us to take off our coats and shirts and suspenders and get right down and face the music; and I have not the least doubt that we will be able to do some business."

F. Stanhope Phillips, of Phillips & Kunhardt: "I think the new bill will have a very damaging effect on the woolen industry of this country after it has been in operation six months. I think that the passage of the bill now will remove the uncertainty that has existed for over a year and which has produced stagnation in business to such an extent that the country

is absolutely bare of spring fabrics. The demand that will arise on account of this scarcity will be very great, so great that this iniquitous bill will not be able to damage the current spring business.

"So far as the duty according to the Senate bill on woollens is concerned, 40 to 50 per cent. protection with free wool would seem at first glance to be sufficient. If the 50 per cent. were specific instead of *ad valorem* the American manufacturer might have a fair show. It is generally believed, however, that fraudulent valuations, which can readily take place under the *ad valorem* system, will reduce the real protection to 25 per cent."

Manton Metcalf, of Metcalf Bros. & Co.: "I think there will be a great business for the mills this fall. I think the domestic manufacturer will be able to compete with Bradford on plain worsteds. There is not the slightest question about this. We can deliver better and more honest goods for the same money. There will be a reduction in price of goods. Take, for instance, twelve-ounce Clay; they go at 80 cents; I don't know whether the American manufacturer can touch this price without making a still further reduction in wages. It is to be hoped he can."

Seth Milliken, of Deering, Milliken & Co.: "The woolen schedule will have a tendency to increase the price of fine goods in this country, and also increase largely the importations. When you stop the production of fine goods in this country you increase the price to the consumer. As to the low and mediums it is impossible to tell to-day what the result will be. In my judgment it means the destruction of the manufacturing of fine grades of goods here."

Clinton Blake, of Gowing, Sawyer & Co.: "My opinion is that the passage of this bill will clear the atmosphere and relieve this market from the suspense which has come over the trade, and this together with the low stocks of goods will enable manufacturers to make prices and place a fair amount of spring orders. The future cannot be absolutely determined at this time; but my opinion is that the tariff bill will not be found favorable to the woolen industries of this country."

A. F. Libby, of H. J. Libby & Co.: "We shall be very much surprised indeed if Mr. Cleveland can sign the bill on any ground. We doubt very much if it can stand with wool and lumber alone on the free list. As for the protection in it to woolen industries having free wool, of course we can adjust ourselves to the reduced protection, but it will be largely at the cost of wages. I have not studied the effect of the bill in all directions, nor have I studied it as to its effect upon the foreign and domestic wool market. I believe that the American manufacturer will adjust himself to the altered circumstances. I believe the immediate effect of the bill will be to revive business, but not with any degree of confidence until Congress has adjourned and is out of the way of doing mischief."

Edward D. Page, of Faulkner, Page & Co.: "I think the bill contains almost as much protection as the McKinley bill, and wool dress goods manufacturers certainly should prosper under it."

Immediately following the interviews is a bold-faced advertisement, "Shoddy Mill for Sale." Whether the new law is a blow at the "shoddy" industry, as claimed, none of the interviews disclose an opinion, but the suggestiveness of the advertisement in connection with the general opinion that prices are to be lower and that American manufacturers are still to live and prosper, cannot be escaped. And why should they not prosper? The foreign manufacturer lives from his craft, and yet under the reduced tariff of the new law the American manufacturer can charge 40 to 50 cents on the dollar's worth more than the foreigner gets in our markets before the foreigner can compete with him.

There are many features of this new law which the KANSAS FARMER does not like. So also the McKinley law was from its enactment criticised as unfair to the tillers of the soil. The present law makes wool entirely free, subjecting the American wool-grower to open competition with the wool of all the world, whether produced with cheap or dear labor. In the case of wool, protection was of consequence to the wool-grower because this country produces very much less wool than it consumes, so that the grower was able to obtain for his clip the foreign price plus the duty, subject, of course, to such reduction as combinations of buyers were able to enforce.

But the reductions on the manufactured articles even more than offset the advantage which the manufacturer gets from his ability to buy his wool cheaper. Still the consensus of opinion is that the manufacturer will live. It is to be hoped that the consumer will get both cheaper and better goods.

It will be observed that there is no contention that any of these tariff changes affect the prices which the farmer gets for either breadstuffs or meats. It is reasonable to expect that he can the more easily endure low

prices for these under the reductions on manufactured goods.

It is remarkable that many of the prominent manufacturers think that no reductions in wages will be necessary. How a reduction of duties from 163 per cent. to 40 per cent. can be made, as in the case of one grade of cloth in common use, without necessitating a reduction of wages, is one of the puzzles of the situation which the ordinary man will probably never understand. But farmers will be willing to wear the goods at the lower prices.

PHYSICAL CHANGES.

The uniformity of nature's methods and the constant repetitions by which she regulates her changes, create the impression that however men may come and men may go, nature, as typified by the brook, goes on unchanged forever. An exception will usually be allowed of the wind, which is proverbially uncertain, and of the weather, which is never exactly as expected, but is either the hottest or the coldest, the wettest or the driest ever experienced by anybody until the "oldest inhabitant" is touched up and recounts that "in eighteen hundred and — there was a spell of weather," etc., etc. So it appears that, after all, the fickleness of the weather and the unsteadiness of the wind, their phenomena are not new but mere repetitions of former antics.

A writer in the land of the Dakotas, however, relates some circumstances of that land of flowing wells which may well cause us to question nature's uniformity. He says:

"It is an absolute fact, well attested, that the general level of the surface of the water in Devil's lake has lowered over seven feet. Another beach is seen above the present shore line where the lake must have been and stood for several years that, judging from the trees now standing here, must have occurred sixty or seventy years ago. The surface of the lake has been, at no very remote period, thirty-five feet above the present surface. This is distinctly shown by the beach lines on the north side of the lake. About one-half of this subsidence, it is stated, has occurred within the memory of men now living—thirteen feet of this subsidence has occurred since 1867.

"Stump lake—so called because its bed was once a forest—has, at its eastern extremity, a well-defined shore line in hard shale some three or five feet above the present water line, and only a few years ago the water was up to this point. There is a legend among the Indians at Fort Totten that many summers ago, maybe fifty—they are uncertain as to that—what is now Stump lake was then a forest and was used by them as a winter camp. But one fall when they went there they found, instead of the forest, a lake which was so deep as to cover the tops of the tallest trees.

"Eight years ago Lakes Irvine, Hurricane and Lac au Morts were expansive sheets of water several feet in depth. Now they are grass-grown, and, in fact, a portion of the former bed of Hurricane lake is under cultivation. All that now remains of Church's ferry is the name. The 400 or 500 feet of water which formerly were ferried over are now replaced by waving grass. Where formerly from St. Paul butte, in the Turtle mountains, could be counted nearly three-score of lakes, now but twelve can be seen. It is beyond doubt that this region has experienced periods of greater dryness and humidity, and it may be that the present dry years are a variation in the curve which tends toward increasing humidity."

But, to come nearer home and go further back in time, we are told of physical changes in Kansas quite as remarkable as those which are reported to have taken place recently in the far north. Before the 1894 meeting of the Kansas State Board of Agriculture, President Sharp, of McPherson college, read an exceedingly interesting paper, in which it was shown that at some time in the past the present outlet of the Kaw river had been choked up with ice, the dam being so high as to make a great lake. Indeed, a great lake was formed

by the intercepted waters flowing east through the Dakotas, Nebraska and Kansas. The accumulated waters, which may formerly have found outlet through the Missouri as now, were then restrained by the fields of ice and accumulated to great depth. The waters of the north poured southward through the valley of the Blue river. The high hills south of the Kaw presented a barrier not easily passed, but as the water was backed further and further up stream a soft place, and possibly a slight depression, was found through and over which the floods escaped into the Arkansas, thence into the Mississippi and the gulf. Prof. Sharp shows that this outlet was across McPherson county, and thus accounts for some peculiarities of the surface of that county. Later, when the ice fields, which must have been several hundreds of feet deep, disappeared, the water again escaped into the Missouri through the Kaw, through the Platte, through the Elkhorn, and the present order was established.

That such changes and many others as great have taken place in the past, the priceless investigations of Prof. Robert Hay have well shown as to our own State, and others well qualified have demonstrated for other sections. But that these changes were very slow, that they were ages in coming about; that generations might have lived during their progress disputing as to whether "the climate was changing" and have left the question still unsettled, is likewise fully believed by those who have investigated the subject.

The great physical cause of these changes, the cause which covered all northeastern Kansas and many times more country with ice, both winter and summer, is scarcely conjectured.

It thus appears that while, by patient research, men may read something of what has transpired in the recent and even somewhat remote past, they are yet so little informed as to the causes and they know so little of the cycles of time through which these changes have run; they are so ignorant as to whether the events of the past are to be repeated in the future, that it is the merest charlatanry for any one to set up as a prophet of cyclic events.

The Chaldeans and the Egyptians of ancient times devoted great attention to the study of these subjects and to the making of records for reference. These were followed by later nations, and by the aid of the records made some recurring events have been traced as to their periods. Among these may be named the star showers which occur with great brilliancy about three times per century. At the present time careful records of all observable phenomena are being kept. It is not impossible that these may some time indicate the cycles of changes not now known. The attention given to the weather is now greater than ever before, and it is to be hoped that the time may come when the business of the "weather prophet" will be superseded by intelligent forecasts based on long recorded observations. Of course such forecasts may be liable to interference from the greater changes which are shown to have occurred in times past, should they, as well as the minor events, be of the recurring sort.

Winter Oats.

EDITOR KANSAS FARMER:—I hear a great many of the farmers of this Territory talking about "winter oats." They claim that these oats are sowed in the fall and they furnish good pasture—far surpassing wheat—and yield an excellent crop of oats the following year. Do any of your readers know anything about the merits of these oats? Where can I get some of these oats for seed? Parties who have tried them here claim that their yield per acre is much larger than the oats we sow in the spring.

H. H. HAGAN.

Guthrie, Okla., August 18, 1894.

Referred to Prof. Georgeson, who replies:

"There are several varieties of hardy, or winter oats, which can be used for pasture during fall, winter and spring, about as rye is used, but I am not aware that their yield exceeds that of spring-sown oats. Any seedsman can furnish the seed."

Get up a Club for KANSAS FARMER.

FARMER'S ACCOUNT BOOK.

The keeping of farm accounts is one of the important elements of farm prosperity which is too often neglected. This results largely from the feeling of uncertainty as to the correct method of making the entries. This is entirely overcome by the use of a book prepared expressly for the farmer and embracing a system both simple and satisfactory. Anybody who can write can keep all necessary accounts intelligibly by the use of this book. The KANSAS FARMER has, during the past, supplied many of its subscribers with copies of this book and has given them the advantage of discount rates, whereby they obtained a \$2 book for \$1. The FARMER Company has just now bought out the entire stock of these excellent books at panic prices and is now able to supply it to any subscriber, postage or express prepaid, to any address in the United States, for only 60 cents, or as a premium for three subscribers and \$3. The book contains 222 pages, 8x12 inches in size, substantially bound in cloth-covered boards.

The following is the table of contents:

Directions and Explanations.....	Page.
Introductory.....	4
Diagram of Farm.....	5
Inventory of Live Stock.....	6
Inventory of Farm Implements.....	7
Inventory of Produce on Hand.....	15
Cash Received from all Sources.....	23
Cash Paid Out.....	32
Field Account.....	63
Live Stock Account.....	79
Produce Account.....	91
Hired Help per Month.....	103
Hired Help per Day.....	119
Household Expense.....	131
Accounts with Neighbors.....	147
Dairy and Fowls.....	155
Fruit Account.....	167
Notes and Obligations Owning.....	175
Notes and Obligations Due You.....	179
Interest, Taxes and Insurance.....	188
Physician and Druggist Account.....	187
Miscellaneous Accounts.....	191
Improvement and Repairs.....	199
Weather Report.....	203
Recapitulated Annual Statement.....	211
Useful Information, etc.....	219

The sooner you adopt the business methods of all money-makers, the sooner you will begin to correct mistakes and prosper.

Weekly Weather-Crop Bulletin.

Issued by the United States Department of Agriculture, in co-operation with the Kansas State Board of Agriculture, for the week ending August 27, 1894, T. B. Jennings, observer:

An abundance of rain has fallen in the extreme southwestern counties, with light rains through the remainder of the western division. Little or no rain has occurred in the middle division, while in the eastern generally fair to good rains have fallen south of the Kaw, with light to fair rains north. The rainfall amounts to two inches and over in Bourbon, Crawford and Cherokee.

The temperature has averaged 5° above normal daily, while the sunshine has been less than the average, owing to the smoky condition of the atmosphere.

The fine rains in the southwest have improved pastures and late crops very much and fall plowing has commenced.

In the middle division the conditions have not improved. In the eastern division there has been an improvement, slight in some parts but decided in Anderson, Linn and Bourbon, while in Crawford and Cherokee, where the season has been favorable, the crop conditions are much above the average. Corn is being very generally cut and shocked. Haying is practically done and the crop is light. Apples still continue falling badly, are being ripened by the dry weather which leaves them small; grapes and tomatoes likewise. In Cherokee, where the crops are fine, tomatoes are selling for 20 cents per bushel.

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.

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

Horticulture.

DRYING PEACHES.

In some parts of Kansas there is this season such a peach crop as to make it desirable to dry some of the fruit. It is always well to know the best way, and for the information of those interested we reproduce from the *Rural Californian* some well-considered suggestions by J. E. Straw:

"To produce only a prime quality of dried fruit implies that every move must be thorough; no half-way and careless work will do. Not only should it be carefully picked from the tree in baskets, and from them poured into fifty-pound boxes, delivered to the cutting and pitting shed and graded, but all imperfect fruit—culls—should be first eliminated. By imperfect fruit is meant malformation, bruised, warty or wormy specimens. Only sound fruit should find its way to the trays. Next, as to grading. It pays to grade as to size in apricots and peaches, not only because the larger specimens bring better prices dried, but uniformity enhances the values of all grades. There is another advantage in drying: When ungraded fruit is piled promiscuously on the trays it dries unevenly—the small will be dry enough to remove while the larger fruit will yet be too green. If we wait until it is sufficiently evaporated or sun-dried, the smaller samples will have become as hard as bone and as tough as leather. Thus grading facilitates drying, secures a better product of dried, and of course commands a correspondingly better price.

"Touching the proper condition of ripeness at which apricots and peaches should be picked, is rather difficult to express specifically in words. Generally speaking, apricots and peaches should be 'full ripe'—somewhat more than 'hard ripe,' and yet not too ripe. Above all they should not be green. Unripe or green fruit produces a wretched article of dried fruit, while over-ripe fruit is apt to 'spread' and presents a negligible appearance dried. It will not retain shape and form so well as that picked just at the right time, and of course loses correspondingly in commercial value. From a purely utilitarian point of view it is wholesome and not deleterious as an article of food like the under-ripe. Possibly the best way to express what is meant by 'full ripe,' is to say when the fruit has attained its full bloom and lost the 'hard' feeling that is so pronounced in green fruit; it presents an elasticity, not a soft, sensation to the touch. The riper it can be had, and yet not be 'mushy,' the better.

"Most of the cutting and pitting of these fruits in southern California is done by hand. There are a number of fruit pitting machines on the market, several of which possess sufficient merit to justify their more general use, but owing possibly to their cost and other contingencies have not come into general use. The fruit should be cut entirely around, and the pit deftly thrown or lifted out. Under no circumstances squeeze or push it out, thereby jamming and breaking the natural formation of the pulp. This bad practice has been the direct cause of lowering the grade of much fruit that might otherwise have passed for prime quality.

"Having now got our harvesting, cutting and pitting under way, trays will next command attention. The regulation tray used by the largest growers hereabouts is 3x3 feet, made of one-half inch sugar pine, with ends of inch stuff two inches in depth, and sides of half-inch stuff and three-quarters of an inch in depth. These trays can conveniently be handled by one man, and the opening or less depth to the sides allows the free and full circulation of the sulphur fumes when applied. These trays can be used either stacked by themselves or put into racks, the side opening affording every facility for the thorough circulation of the fumes. In filling the trays care must be taken to lay the fruit *cut side up* exposed to sun, and only one layer to each tray. The drying grounds should be kept scrupulously clean and be chosen with a view to securing the

direct rays of the sun all day. The length of time it requires to properly dry the fruit largely depends upon the state of the weather. Along the coast it generally takes from four to five days; further inland where the air is drier and the sun warmer, less time is of course necessary. Possibly a good criterion is when the fruit does not feel sticky when taken between thumb and finger and is reasonably pliable. To bone dry is to deteriorate both the eating and selling qualities of the fruit, and should therefore be avoided. From the trays the fruit should be sacked ready for market; it will be found advantageous to do this while the sun is shining, as then there is less liability of moths and millers laying their eggs on much of the fruit. Some growers and dryers observe the practice of sweating their dried fruit before sacking for market. This is done by removing the fruit from the trays and putting it into bins in a perfectly dark room. This keeps out all insects and 'livens up' the fruit, making it pliable and more even in quality.

"So far I have made no allusion to sulphuring. On this subject there is considerable difference of opinion, not only among fruit-growers, but also in the trade, not to mention the learned men of medical science and physics. Most growers, however, believe in sulphuring in some form or other. That it enhances the appearance of the fruit there can be no question, while in the opinion of others it also deteriorates its eating qualities. There is another consideration, however, in favor of sulphuring, and that is that it has a tendency to repel insects, and of course thereby lessens the chances of wormy fruit. D. Edson Smith, of Santa Ana, lays down the rule that 'as fast as a tray is filled put it into the sulphuring box, and when the box is full ignite a small teaspoonful of sulphur under the trays of cut fruit, close tightly and let it remain two hours. * * * Use sulphur enough so that when the fruit is taken from the sulphur box there is liquid in each half where the pit was taken out.' Mr. S. R. Thorpe, who has had considerable experience in this direction, is of the opinion that 'probably the most important part of the drying is the bleaching. For this the best sublimed sulphur—French or the Brooklyn brand—should be used.' Prof. Hilgard is strongly opposed to sulphuring, and pointedly gives his reasons as follows:

"Sulphurous gas, which is formed when sulphur is burned, as is well known, is constantly used as a disinfecting, bleaching and deodorizing agent, second in virtue only to chlorine. The fact that it is the agent officially used in the disinfection of infected houses, ships and individuals is conclusive on these points. It is, therefore, idle to pretend that sulphuring does not diminish the flavor of fruit, or of anything else touched by it. It is perfectly certain that it does so; and the only debatable question is the extent to which it may be used for bleaching fruit without any material detriment in the flavor.

"It is in evidence that a reasonable amount of bleaching can be done by applying the gas to the freshly cut fruit without injuring the flavor to a material degree, since the flavor will penetrate from the inside outward to a sufficient extent to compensate for the loss of what naturally belongs to the bleached exterior portion.

"Mr. Tracy Abbott, who has had some fifteen years experience in fruit drying, is of the opinion that a small amount of bleaching is desirable. He recommends about three-fourths of a pound of sulphur to about 1,200 pounds of green fruit. Specifically he uses this amount to about sixty trays 3x3 feet in size, and estimates that on an average each tray contains about twenty pounds of fruit. His practice is to allow the trays to remain under the influence of the bleaching not less than three hours. Others say less time will do equally well. One fact must be strenuously observed, and that is this: The object of sulphuring is not to 'bleach' the fruit, but to retain its natural color and form. Consequently only a sufficient amount should be applied to sear up the outside of the fruit, and the quicker this is done after it has been cut and pitted, the better; indeed, if the cut fruit can possibly be put under the influence of the sulphur fumes *immediately* after the pit has been extracted, the best results will be obtained at the least expense of its eating qualities.

"The shrinkage in weight due to

drying the apricot and peach, in pounds is about 5.56 of green to 1 of dried of the former, and 6.04 of green to 1 of the latter. At least this was the result of careful observations made by a number of drying establishments in 1893. Of course some allowance must be made between irrigated and non-irrigated fruit, and also between a season of heavy and light rainfall."

The Kansas Currant.

EDITOR KANSAS FARMER:—By this name I speak of the wild black currant peculiar to western Kansas. I do not know how far its habitat extends. There is a black Missouri currant, a Colorado currant, and a Black Hills currant, and it may be the same as any or all of these, but the latter has, I am told, both red and black varieties. A description of these but slightly known varieties of this valuable fruit, from some of our experienced horticulturists, would make interesting reading and would doubtless lead to their more extensive culture and propagation from them of new varieties which would have the quality of resisting drought in which the tame varieties are quite deficient. The Kansas currant is quite different from the black currant of Iowa, both in leaf and fruit, the latter having a strong, unpleasant flavor and a leaf similar to the tame currant, while the Kansas currant is pleasant to eat when ripe and when cooked in any form is, I think, equal to any of the tame varieties. Its leaf few would recognize as a currant, it being deeply cut and its surface smooth as satin. Exposed to our hot and drying winds it makes a bush six feet high and four feet across, while the tame currant similarly placed rarely exceeds one-third this size. Its blossoms are nearly an inch long, golden yellow with red stamens, and, being sweetly scented, it is a very attractive shrub when in full bloom.

I have never seen the Crandall currant, but have read that it is identical with our wild ones, having been propagated from a choice specimen taken from our woods. I believe this statement, but may be mistaken. There is a great diversity of opinion about this currant. Mr. B. P. Hanan, a Kansas nurseryman of great experience, has expressed to me a high regard for the Crandall, while J. A. Sage, of Fairbury, also of wide horticultural experience, writes me that he would not give it nursery room.

In the spring of 1891 I planted several rows of this currant in my orchard, small plants from the woods. They made great wood growth every year since, but failing to give any adequate return in fruit I determined to remove them all this spring. Pressure of other work, however, prevented me from carrying out my intention, and I was very glad that it did so, as I never saw bushes heavier set with fruit than they were this summer. The fruit was more conspicuous than the leaves and the outer branches were mostly bowed to the ground with weight of fruit. The yield from several of the largest bushes was twelve quarts from each. As the extraordinary frost of May 19, which killed all of our large fruits, did not hurt these currants in the least, I conclude that they are of especial value for western Kansas and every locality where dry atmospheric conditions prevail. Their season, too, is very long, being this year from June 10 to August 10. They are more a family than a market fruit, as they ripen quite irregularly, green and ripe berries being found nearly always on the same bunch. For home use, however, this is not a material objection, as they are equally good for cooking. Their size ranges from less than one-fourth to fully half an inch in diameter, being larger than our tame ones.

JNO. J. CASS.

Allison, Decatur, Co., Kas.

People with hair that is continually falling out, or those that are bald, can stop the falling, and get a good growth of hair by using Hall's Hair Renewer.

Going to Pittsburg?

Best route from West via St. Louis or Chicago is Vandalia & Pennsylvania Short Lines. Vestibule trains run into Pittsburg Union station, convenient to headquarters, hotels and boarding houses. Low rate tickets over these short routes will be sold September 5 to 10 inclusive by connecting lines, good returning until September 25 inclusive.



Saved Her Life.

Mrs. C. J. WOOLDRIDGE, of Wortham, Texas, saved the life of her child by the use of Ayer's Cherry Pectoral.

"One of my children had Croup. The case was attended by our physician, and was supposed to be well under control. One night I was startled by the child's hard breathing, and on going to it found it strangling. It had nearly ceased to breathe. Realizing that the child's alarming condition had become possible in spite of the medicines given, I reasoned that such remedies would be of no avail. Having part of a bottle of Ayer's Cherry Pectoral in the house, I gave the child three doses, at short intervals, and anxiously waited results. From the moment the Pectoral was given, the child's breathing grew easier, and, in a short time, she was sleeping quietly and breathing naturally. The child is alive and well to-day, and I do not hesitate to say that Ayer's Cherry Pectoral saved her life."

AYER'S Cherry Pectoral

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

Prompt to act, sure to cure

CONSUMPTION SURELY CURED.

TO THE EDITOR—Please inform your readers that I have a positive remedy for the above named disease. By its timely use thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy free to any of your readers who have consumption if they will send me their express and post office address. Respectfully,
T. A. Slocum, M. C.
No. 183 Pearl Street, New York.



\$1.98
CUT THIS OUT and send it to us with your name and address, and we will send you this elegant watch by express for examination. You examine it and if you consider it a bargain pay the express agent our sample price, \$1.98, and it is yours. Fine gold plate case and Charm FREE with each watch, also our written Guarantee for 5 years. Write to-day, this may not appear again.
CHICAGO WATCH CO.,
281 Wabash Avenue, Chicago.

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

\$5. CORDOVAN,
FRENCH & ENAMELLED CALF.
\$4.35 FINE CALF & KANGAROO.
\$3.50 POLICE, 3 SOLES.
\$2.50 \$2. WORKINGMEN'S
EXTRA FINE.
\$2.175 BOYS' SCHOOL SHOES.
LADIES.
\$3.25 \$2.175
BEST DONGOLA.
SEND FOR CATALOGUE
W. L. DOUGLAS,
BROCKTON, MASS.

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

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

ONLY 10% ABOVE FACTORY COST

\$8.78 buys a \$65 Singer
Style Machine. **\$19.88** buys
Highest Grade modern style machine in the world. **25** different styles at intermediate prices.
Warranted Ten Years.

We are the only manufacturers selling sewing machines direct.
Liberal terms for securing a Sewing Machine **FREE.**

CHICAGO SEWING MACHINE CO. 70 Halsted St., CHICAGO, ILL.

The FARMER has made arrangements by which we are enabled to make a number of good Premium Offers for new subscribers. Those interested in raising a CLUB should send us postal card for Premium Supplement.

In the Dairy.

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

THE BILL SHAW MILKER.

Bill Shaw, editor of Texas Farmer, is a great hand to tackle every agricultural device that is put on the market. For years he has been trying his utmost to induce the editor of the Harpoon to give up the study of politics, journalism and theology, and go into the patent right business right. For years we have evaded his arguments and solicitations, and so long as we could keep out of his reach we were pretty safe, but while Bill and the writer were in New York recently, in company with Governor Hogg and other capitalists, the Farmer got in his work, and we were induced to become general soliciting agent for a patent cow-milker called the Bill Shaw Milking Machine. It was a very complicated piece of machinery, but once you got the concern buckled onto a cow it would pump her as dry as a nigger on election day in two and seven-eighths minutes, Central time. Bill was very enthusiastic and he has a peculiar way of imparting his enthusiasm to others, and after he got us in the notion we were quite enthusiastic ourself, and could see tubs of cool, sweet milk and mountains of rich, golden butter sparkling in the sunlight. The trip was, of course, pleasant, and we enjoyed it immensely, but we were glad when we crossed into the Lone Star State at Texarkana, and our crowd began to split up for their respective homes.

We went on to Dallas and inspected Bill's "milking machine," and had one shipped to Tyler as a sample. It consists of a frame of wood, the legs standing far enough apart to allow a cow to be driven or dragged inside the frame, when, before she knows it, she is milked and fired out to pasture. The milking machines are intended for fine-blooded milkers, and when we proposed to try it on old "Speck," our long-horned east Texas fence-smasher, our wife urged us not to do it. She said that the old-fashioned way of tying "Speck's" hind legs together and her head to a tree was perhaps a little slow, but there was an element of safety and certainty about it that was an absolute joy forever. The more she tried to induce us not to try it the greater our determination to practice on "Speck." In fact, we had it in for our cow, on account of numerous cups of milk which she had at sundry times deposited in our face, or, missing that, had spattered it against the blue sky above. We went out and hired three good able-bodied niggers, and proceeded to put old "Speck" into the machine and buckled up the straps and running-gear. At the very start she was unruly, and when one of the niggers got to turning the cog wheels and chawed off about a quarter of a yard of "Speck's" off ear she got outrageous, and we could scarcely prevent her breaking away. We finally got "Speck" conquered, all the machinery was adjusted, the bucket placed to catch the milk, a big nigger seized the crank and began to turn. At first "Speck" paid no attention to it, but finally the suction valves began to work. Then a look of astonishment began to spread over face, and extended clear out to the tips of her horns. She tried to turn her head to catch sight of the queer sort of a calf that was extracting the milk, but the straps held her firm. She finally got to squirming and twisting, and I told the nigger to turn faster, as I wanted to milk about six gallons of devilment out of old "Speck." The faster he turned the more her eyes stuck out and the hair on her back stood straight up. She finally got to bellowing, and all the small boys, dogs and neighbors within the corporate limits came over to see what was the matter. At last I noticed a concave spot across old "Speck's" loin about the size of a watermelon, so I told the nigger to let up. We unbuckled the straps and turned her loose; when, instead of stopping to eat her cotton-seed, she took one hasty glance at the "Shaw milker," stuck her tail as straight up in the air as a

flag-staff, gave a "Mogul" engine snort, jumped the ten-rail fence four feet "clear light," and headed for Black Fork swamp. This was six days ago, and "Speck" has not come back. We had a letter from W. E. Foster, of the Canton Telephone, saying that something passed his office last Tuesday, and it went so fast he couldn't tell whether it was "Speck" or Colonel Kilgore running for Congress. On examining the milk bucket we found not only the regular morning's milking, but two milking's in advance and one of "Speck's" kidneys.

We regret exceedingly that we are unable to continue as agent for the "Shaw milker." While we like a success in all lines of business, this machine rather overdoes the thing. We consider the suction entirely too strong unless you want to draw a draft on a bank one thousand miles away. By reversing the machine it could be used to suck artesian water to the surface. Unless "Speck" shows up this week, we propose to charge her up to the firm, and unless Bill Shaw pays for her we will proceed to levy on the milker now in our possession. We can probably sell it to the third party, to be used as a drawing card in the coming election. —Tyler Harpoon.

Guernsey Cows as Economical Butter Producers.

EDITOR KANSAS FARMER:—Perhaps no breed has so honestly won their high rank as butter-producers as have the Guernseys. Never forced for large records, they have always stood upon the work they would do at the pail or churn. It is especially gratifying to notice how they are received in the sections where they are introduced. Go into New England, down the Hudson in New York, eastern Pennsylvania, Delaware and New Jersey and into Wisconsin, and you will see not only fine herds of thoroughbreds but you will notice that the dairymen of those sections have been impressed with their fine, substantial, business-like appearance and golden colored products, and have drawn on the breed to grade up and improve the dairy stock of those sections. Their ability to produce butter fat and butter at a low cost demands the attention of all dairymen. At the New York Experiment Station several of the dairy breeds are being carefully tested. The recently issued annual report of the Director gives the results of the first two periods of lactation. In both instances the Guernseys produced butter fat at the least cost, as the following shows:

	COST OF BUTTER FAT PER POUND.	
	First period.	Second period.
Guernsey.....	18.4 cents.	15.6 cents.
Jersey.....	20.0 "	18.5 "
Devon.....	23.0 "	19.0 "
Ayrshire.....	24.3 "	24.8 "
Am. Halderness..	28.3 "	22.8 "
Holstein-Friesian.	28.3 "	26.4 "

This agrees with the work done at the New Jersey Experiment Station, and with the average results of the butter tests at the World's Fair.

	COST PER POUND OF BUTTER PRODUCED.	
	New Jersey.	World's Fair.
Guernsey.....	15.3 cents.	13.1 cents.
Jersey.....	17.9 "	13.3 "
Ayrshire.....	20.6 "	24.8 "
Short-horn.....	20.8 "	15.8 "
Holstein.....	22.4 " "

This shows the Guernseys to be the most economical producers of butter; and such golden, yellow butter, too! There is no mottled color to it. This true, golden, cow color is the most attractive feature on the market. It is truly said that the Guernseys have but to be tried to be appreciated.

WM. H. CALDWELL.

Peterboro, N. H.

Good Butter.

But a small part of the butter sold in the Boston market is what is termed "gilt edge," yet the makers of this fancy article are those who reap the profit, and the secret of their success is cleanliness.

Perfume manufacturers realize the importance of fat as an absorbent of odors. In fact there is no substitute for it. Attar of roses is simply fat saturated with the perfume of roses.

This collecting of odors is precisely what many of our butter-makers are actually doing to-day. A little filth gets into the milk, the fatty part (the

THERE is but one way in the world to be sure of having the best paint, and that is to use only a well-established brand of strictly pure white lead, pure linseed oil, and pure colors.*

The following brands are standard "Old Dutch" process, and are always absolutely

Strictly Pure White Lead

"Southern," "Red Seal," "Collier."

*If you want colored paint, tint any of the above strictly pure leads with National Lead Co.'s Pure White Lead Tinting Colors.

These colors are sold in one-pound cans, each can being sufficient to tint 25 pounds of Strictly Pure White Lead the desired shade; they are in no sense ready-mixed paints, but a combination of perfectly pure colors in the handiest form to tint Strictly Pure White Lead.

Send us a postal card and get our book on paints and color-card, free.

St. Louis Branch, Clark Avenue and Tenth Street, St. Louis.

NATIONAL LEAD CO.

cream), gathers the odor and holds it; but this is not all; butter made from this cream may be contaminated so little as to leave the maker's hands apparently sweet, but the seed is there, and sown in good soil. The germs of the filth multiply, and by the time this butter is offered for sale the taint has so increased as to force its sale at cost, or perhaps less, with very little satisfaction for any one concerned. It is the money over and above cost that all butter-makers most desire, and this profit very much depends upon clean stock.—Exchange.

The Poultry Yard

Early Moulting Hens.

As a rule, when the hens begin to moult early in the summer they cease to lay, the result being that they are at once sent to market as no longer profitable. This is a mistake, for all hens must shed their old feathers and take on new plumage, some beginning early in the summer, while others do not commence till late in the fall, but the process requires about three months' time. In other words, a hen takes one-fourth of the time during the year to moult, giving her a period for laying not exceeding 300 days at the maximum.

The moulting period has something to do with winter laying. Granting that three months' time must be lost, it is plain that if a hen begins to moult the first of August, she will not be in full plumage again until the first of November, and she will not lay again until the moulting has been completed. If the weather is mild, however, during November, and winter does not set in before December, she will have a full month's rest, and will begin laying and then continue laying through the winter. Hence this rule must not be overlooked, which is, that if the hens begin to lay before cold weather they will lay during the winter, but if cold weather overtakes them before they begin to lay they will probably not lay before spring.

What then should be done with the hens that begin to moult early? Keep them, of course, as they will soon finish moulting and be ready for work long before some of the other hens begin. When you sell off the hens now because they are shedding their feathers, and do not lay, you will be selling the very hens that you should keep over for producing eggs during the cold months. So do not sell the moulting hens, but sell those that are fat and do not lay. Old hens moult earlier than the pullets, because they begin about eleven months from the last moulting, which causes them to moult a month earlier every year, and therefore it will be noticed that the hens which moulted in July last year will moult in June this year.

Feeding of the moulting hens is a matter to receive careful consideration. When making the new feathers they require food rich in nitrogen and mineral matter. Linseed meal, bone, meat and milk should be given in preference to grain, and they should have free access to grass, especially clover. It is also important to give them dry quarters, so as to protect them when

nearly naked, as dampness may induce roup, which is contagious and may carry off the whole flock.—P. H. Jacobs, in Farm and Fireside.

Poultry Notes.

A small flock well cared for will pay more dollars than a large one neglected.

Market your eggs when fresh and you will establish a reputation that brings money.

Feed little corn to the hens these hot days. Wheat or middlings make the best foundation for eggs.

Don't feed surplus cockerels until they become "old roosters." It takes corn and cuts the price to do it.

Some who supply customers regularly with fresh eggs use a rubber stamp to mark on each egg the date on which it was laid.

Gather the eggs daily, store in a cool, dry place and find, as far as possible, private customers that will take eggs weekly or oftener.

When shipping poultry long distances supply the coops with corn and water. Do not mix a lot of meal and compel the eating of sour stuff.

The hog has been called the mortgage-raiser. Have you ever tried to see what a few hens well cared for will do toward preventing a mortgage.

If you have old hens that are to be disposed of this fall it will pay to sell as soon as they quit laying. Grain is money, and fed to fat hens that are not laying it will bring no paying returns.

We hold that no farm is properly stocked unless it has at least a small flock of fowls that are not half roosters and that no farm is properly managed if the hens are not taken care of regularly.

If you are supplying "fresh eggs" to customers and happen to find a new nest in the straw pile or elsewhere, do not put the contents with the eggs you sell. Keep them for home use and you can "try them" when breaking. People that buy fresh eggs of private parties do not expect to have to "try" them before using—that is why they pay the extra price.

An interesting egg-laying contest is in progress under the auspices of the National Stockman and Farmer. It is to cover a period of one year and is participated in by over two hundred contestants, who have varying numbers of hens entered, ranging from three to two hundred. A similar contest was conducted four years ago in which first place was won by a pen of Single-Comb Brown Leghorns, which averaged 222½ eggs each during the year. A pen of Silver-Laced Wyandottes stood second, with 200½ eggs each. In the present contest the first six months closed August 1, with a pen of eight Single-Comb Brown Leghorns ahead with a record of 1,255 eggs to their credit, or nearly 157 for each hen and six months more for industry. Second place in the present contest is held by a pen of nine White Plymouth Rocks, with a credit of 1,295 eggs, or nearly 144 to each hen.

A dose of Ayer's Cherry Pectoral taken in time has prevented many a fit of sickness and saved numerous lives. This proves the necessity of keeping this incomparable medicine where it can be readily reached at all hours of the day and night.

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.

HORSE AILING.—I have a four-year-old horse that appeared well, but suddenly seemed to get stiff all over, and partly lose the use of his limbs, after going a mile or two on the road at a moderate gait; he got over it after standing a few minutes. Two days after he acted in the same way; and once since, on the farm, he seemed to be weak and staggering.

Answer.—The symptoms given are common to several diseases, with nothing upon which to base a definite conclusion. It may be a mild form of epilepsy or so-called stomach staggers; or the horse may have slight attacks of azoturia, due to liberal feeding and insufficient exercise.

Horse Markets.

Our report of last week's Chicago horse market states that the receipts were quite liberal, but there was a large number of buyers present, quite a few of them being from the Southern States for small shapely chunks, 900 to 1,000 pounds.

W. S. Tough & Son, managers of the Kansas City Stock yards horse and mule department, report the horse market as showing very unexpected activity.

Mule market quiet. Some little local trading, but none to speak of. Dealers will not touch a mule of any class unless he is fat and good hair.

Excursion to Washington, D. C.

On account of the Knights of Pythias Conclave at Washington, D. C., the Baltimore & Ohio Southwestern Railway offers a rate of one fare for the round trip from all points on its lines.

Horse Owners! Try GOMBAULT'S Caustic Balsam

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING.

MARKET REPORTS.

LIVE STOCK MARKETS.

Kansas City.

August 27, 1894. CATTLE—Receipts, 5,850 cattle; 813 calves. Dressed beef and shipping steers, \$3 45@4 75; cows, \$1 50@2 65; bulls, \$1 50@1 75; heifers, \$1 55@2 00; calves, \$6 00@7 00; stockers and feeders, \$2 00@4 10; Texas steers, \$2 60; Colorado steers, \$2 90@4 00; Texas and Indian steers, \$1 95@2 77 1/2; Texas and Indian cows, \$1 90@2 50; Texas and Indian heifers, \$1 50@2 00; Texas and Indian calves, \$2 50@7 00.

Chicago.

August 27, 1894. CATTLE—Receipts, 18,500. Beef steers, \$3 00@5 70; stockers and feeders, \$1 50@3 00; bulls, \$1 40@2 00; cows, \$1 00@2 75. HOGS—Receipts, 27,000. Mixed, \$5 30@5 95; heavy, \$5 40@6 00; light weights, \$5 25@5 75. SHEEP—Receipts, 9,000. Market active. Natives, \$1 50@3 35; lambs, per cwt., \$2 50@4 00.

St. Louis.

August 27, 1894. CATTLE—Receipts, 4,500. Natives strong. Texas strong. Top, \$3 80. Native steers, common to best, \$3 25@5 10. HOGS—Receipts, 2,900. Market steady. Bulk, \$5 60@5 80. Top, \$5 90. SHEEP—Receipts, 200. Market strong. Natives, \$2 00@3 00.

GRAIN AND PRODUCE MARKETS.

Kansas City.

August 27, 1894. In store—Wheat, 1,103,707 bushels; corn, 24,328 bushels; oats, 153,380 bushels, and rye, 2,303 bushels. WHEAT—Receipts for forty-eight hours, 186,200 bushels; last year, 173,400 bushels. A slow, but at the same time steady market was had, the increased offerings making buyers backward, while holders wanted old prices, hence slow sales.

RYE—Receipts for forty-eight hours, none; last year, none. Scarce and firm. By sample on track: No. 2, 58@59c; No. 3, 55@56c. FLAXSEED—Quiet and lower at \$1 11@1 13 per bushel upon the basis of pure, as to billing. BRAN—Firm and in good demand. Bulk, 60c; sacked, 68c per cwt. CASTOR BEANS—Steady and in good demand at \$1 20 per bushel in car lots and \$1 15 per bushel for less than car lots.

POTATOES—The market is firm and demand very good, both for local lots and orders. The former are bringing 58@60c, and the latter 55@58c. MELONS—Offerings good and values are low, with the supply being in the hands of growers, who are letting go at all kinds of prices, \$3 00@8 00 per 100. Cantaloupes at 30@60c per dozen. PEACHES—No natives coming in. CALIFORNIA FRUITS—The quality of stock offered is exceedingly fine and the prices asked are low. Pears are in fine condition for shipping and so are peaches, while the other kinds offered are plentiful and good keepers.

plums, per crate, \$1 25@1 50; prunes, per crate, \$1 25@1 75; grapes, per crate, \$1 25@1 50. GRAPES—Still plentiful and dull. Selling at 2@2 1/4c per pound from growers. FRUIT—The movement of California goods on sale hurts the movement of natives. Apples are steady and in good demand, with the offerings only fair. Jobbing prices: Apples, fancy, per bushel box, \$5@45c; choice, bushel, 26@40c; four-bushel barrel, \$1 50@2 50.

Chicago.

August 27, 1894. The following table shows the range of prices for active "futures" in the Chicago speculative market for the speculative grades of the commodities. This speculative market is an index of all prices and market tendencies:

Table with columns: Commodity, High-est, Low-est, Closed Aug. 20, Closed Aug. 27. Rows include WHEAT, CORN, OATS, PORK, LARD, S. RIBS for various months.

St. Louis.

August 27, 1894. WHEAT—Receipts, 76,000 bushels; shipments, 1,000 bushels. No. 2 red, cash, 50 1/2c; August, 50 1/2c; September, 51c; December, 54 1/2c; May, 59 1/2c.

THE STRAY LIST.

FOR WEEK ENDING AUGUST 15, 1894. Norton county—D. W. Grant, clerk. HORSE—Taken up by D. C. Mosher, in Leota tp., one mare pony, sorrel, white face, three white feet, branded S. on left jaw and character somewhat similar to B. on left thigh and S. on left hip; valued at \$12.

FOR WEEK ENDING AUGUST 29, 1894.

Montgomery county—J. W. Glass, clerk. HORSE—Taken up by H. L. Swisher, in Liberty tp., August 8, 1894, one iron-gray horse, 4 years old, sixteen hands high, white spot in forehead.

Armourdale Hotel,

Kansas City, Kansas. \$1 and \$1.25 per day. Five minutes ride on electric cars from Union Stock Yards.

CAMPAIGN RATE REDUCED!

The Kansas City Times

EVERY DAY TILL JANUARY 1, \$2.00! The Twice-a-Week Times TILL JANUARY 1, 30 Cents.

In order that no one may have an excuse for not being posted on the developments of the political campaign of 1894, THE TIMES has made these rates, which scarcely cover the cost of publication.

Subscribe Now. Address THE TIMES, Sample copies free. KANSAS CITY, MO.

The Chicago Times.

ESTABLISHED 1854. The People's Paper. 8, 12 and 16 PAGES DAILY; 32 to 48 SUNDAY.

No great daily in the United States is so closely in touch with the people as THE CHICAGO TIMES.

Its policy is progressive, liberal, tolerant. THE TIMES holds that existing social, political and industrial conditions are not founded upon the principle of equal rights to all and special privileges to none.

DAILY and Sunday edition with KANSAS FARMER, one year, \$4.50. WEEKLY TIMES and KANSAS FARMER, one year, \$1.75.

Send for samples to THE CHICAGO TIMES. Forward subscriptions to KANSAS FARMER.

An Opportunity for Settlers

The Orchard Irrigation Co., located at Orchard Farm, Idaho, on the Union Pacific railroad, can employ a large number of men and teams, beginning about August 15 and continuing as late as weather permits.

CHEAP HOMES

In San Luis Valley, Colorado, the Garden Spot of the Rocky Mountains. Sixty thousand acres of fine land, all under first-class irrigation canals, with perpetual water rights, for sale cheap, six years time, 6 per cent. interest.

WOOL+WOOL+WOOL+WOOL+WOOL+WOOL+WOOL COMMISSION WOOL SILBERMAN BROS. FOR 28 YEARS we have successfully conducted a WOOL BUSINESS and have maintained confidence and successful relations with wool growers and the trade.

At One-Third Regular Price

The following useful Agricultural Books have been placed at the disposal of the KANSAS FARMER to be sold at ONE-THIRD of publishers' list prices.

Table listing various agricultural books and their prices, such as 'Allen-Domestic Animals' for \$1.00 and 'Allen-American Cattle' for \$2.50.

HORSEMEN!

Try Dr. Orr's Veterinary Remedies. Tonic Cough Powder, for cough, distemper, loss of appetite, etc.

OKLAHOMA, INDIAN TERRITORY AND THE CHEROKEE STRIP

Constitute the future great Agricultural State of the Union and a prosperous country. The last chance for free homes for the farmer.

THE GREAT ROCK ISLAND RY.

THE FAVORITE ROUTE TO THE East, West, North, South.

Half Rates to Texas Points! LOW RATES TO ALL POINTS.

Especially California, Texas and Southeastern Points. If you are going to the Midwinter Fair at San Francisco, if you are going to Texas, if you are going East on business or pleasure—in fact, if you intend to do any traveling, be sure to consult one of the agents of the

Great Rock Island System

JOHN SEBASTIAN, General Ticket and Passenger Agent, CHICAGO. T. J. ANDERSON, Assistant Gen'l Ticket and Pass. Agent, TOPEKA. H. O. GARVEY, City Ticket and Passenger Agent, 601 Kansas Ave., TOPEKA, KAS.

MISSOURI PACIFIC RAILWAY THE GREAT Southwest SYSTEM.

Connecting the Commercial Centers and rich farms of MISSOURI, The Broad Corn and Wheat Fields and Thriving Towns of KANSAS, The Fertile River Valleys and Trade Centers of NEBRASKA, The Grand, Picturesque and Enchanting Scenery, and the Famous Mining Districts of COLORADO, The Agricultural, Fruit, Mineral and Timber Lands, and Famous Hot Springs of ARKANSAS, The Beautiful Rolling Prairies and Woodlands of the INDIAN TERRITORY, The Sugar Plantations of LOUISIANA, The Cotton and Grain Fields, the Cattle Ranges and Winter Resorts of TEXAS, Historical and Scenic OLD AND NEW MEXICO, and forms with its Connections the Popular Winter Route to ARIZONA AND CALIFORNIA.

H. C. TOWNSEND, Gen'l Passenger & Ticket Agent, ST. LOUIS, MO.

PATRONIZE YOUR HOME INSTITUTIONS!

STOCK COMPANY-CAPITAL \$100,000. Losses Paid Over \$100,000. Organized in 1882. Over Twelve Years of Successful Business. A Strong Western Company.

The SHAWNEE FIRE INSURANCE COMPANY of TOPEKA, KANSAS.

Insures business and farm property against Fire, Lightning, Cyclones, Wind Storms and Tornadoes. Agents in all the principal cities and towns in Kansas. J. W. GOING, Secretary and Manager, TOPEKA, KANSAS.

100 RICH MEN SUBSCRIBED \$1,000 EACH

To secure practically what readers of this paper may have for a cash outlay of

\$4.00

Reference is made to that Superb Memorial Collection known throughout America and Europe as

The White City Artfolio

Comprising 80 unequalled Photographs, secured by William H. Jackson, the world's greatest scenic photographer, who took first prize at the Paris Exposition and at the World's Fair, and was called to Chicago as being at the head of his profession.

Each Folio contains four superb plates, 14x17 inches in size, and descriptive text furnished by Stanley Wood, Esq., the pages of description being inserted from time to time in the Folios so that when the series is complete the possessor will have a connected commentary on all the views presented. Each plate is ornamented by a delicate India tint border, and placed uncut in the Folio, where it can remain, or it can be framed as an appropriate and artistic mural decoration. This method of presenting these souvenirs of the Exposition possesses many advantages over that of binding, and places the Folio at once in the domain of art works. The Artfolio will be kept by all who obtain it as the most noble reproduction of the magnificence of the White City that exists, and will become the one standard souvenir of that glory now departed forever. It is the single series which reveals in the highest form the rare and manifold architectural beauties of the White City.

THOUSANDS ALREADY HAVE THEM. THOUSANDS MORE WILL HAVE THEM ON THESE EASY TERMS:

SEND US ONE DOLLAR for a subscription one year to KANSAS FARMER and we will send you one number of the Artfolio free.

Send us two subscriptions and two dollars (\$2) and we will send you three Artfolios. And for each dollar subscription, after the first one, we will send you two numbers of the Artfolio. A little work at odd times, in any neighborhood, will soon entitle one to the whole series FREE. There are twenty (20) numbers in all.

The cash price of any number of the Artfolio is 20 cents. THIS IS YOUR CHANCE! IMPROVE IT!

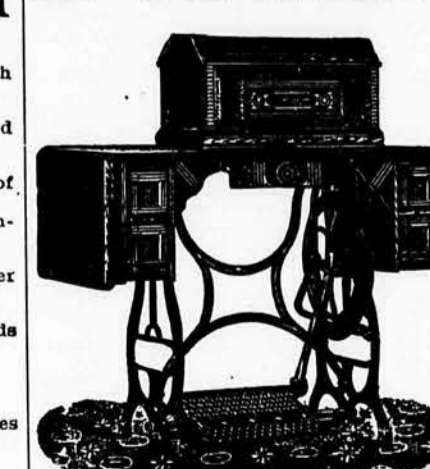
Address KANSAS FARMER CO., Topeka, Kas.

Look Here!

THIS WILL INTEREST YOU

If You are Thinking of Buying

A SEWING MACHINE.



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

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

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

OR, if a less expensive machine is wanted, we will deliver, express charges prepaid, at any express office in Kansas, the "NEW SINGER" high-arm sewing machine, all complete, with attachments, and manufacturers' warranty, for only \$15, including a year's subscription to the "Old Reliable" KANSAS FARMER. These prices are, of course, for strictly cash with the order. Address all orders to KANSAS FARMER CO., Topeka, Kas.

PROPOSED AMENDMENT TO THE CONSTITUTION.

Substitute for Senate Joint Resolutions Nos. 1 and 2.

Be it resolved by the Legislature of the State of Kansas: two-thirds of the members elected to each house thereof, concurring therein.

SECTION 1. The following proposition to amend the constitution of the State of Kansas is hereby submitted to the qualified electors of the State for their approval, or rejection, namely: That section one, article five of the constitution of the State of Kansas be amended so that the same shall read as follows: "Section 1. Every person of the age of 21 years and upwards belonging to the following classes, who shall have resided in Kansas six months next preceding any election, and in the township or ward in which she or he offers to vote, at least thirty days next preceding such election shall be deemed a qualified elector. 1st: citizens of the United States; 2d: persons of foreign birth who have declared their intentions to become citizens of the United States conformable to the laws of the United States on the subject of naturalization."

SEC. 2. This proposition shall be submitted to the electors of this State at the general election of the Representatives to the Legislature in the year eighteen hundred and ninety-four, for their approval, or rejection; those voting in favor of this proposition shall have written or printed on their ballots "For the suffrage amendment to the constitution;" those voting against the said proposition shall have written or printed on their ballots "Against the suffrage amendment to the constitution;" said ballots shall be received and such vote taken, counted, canvassed and returns made thereof, in the same manner and in all respects as provided for by law; as in the case of the election of Representatives to the Legislature.

SEC. 3. This resolution shall take effect and be in force from and after its publication in the statute book.

I hereby certify that the above resolution originated in the Senate January 16, 1893, and passed that body February 8, 1893.

PERCY DANIELS, President of Senate. W. L. BROWN, Secretary of Senate. Passed the House March 1, 1893. GEO. L. DOUGLASS, Speaker of House. FRANK L. BROWN, Chief Clerk of House. Approved March 6, 1893, 3:50 p. m. L. D. LEWELLING, Governor.

STATE OF KANSAS, OFFICE OF SECRETARY OF STATE, I, R. S. OSBORN, Secretary of State of the State of Kansas, do hereby certify that the foregoing is a true and correct copy of the original enrolled resolution now on file in my office, and that the same took effect by publication in the statute book May 18, 1893.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed my official seal. Done at Topeka, Kansas, this 25th day of July, A. D. 1894. R. S. OSBORN, Secretary of State.

TEXAS CHAIR CAR LINE.

THE MISSOURI, KANSAS & TEXAS RAILWAY.

Using the Celebrated Wagner Buffet Sleeping Cars and Free Reclining Chair Cars On all Trains.

THE BEST ROUTE FOR ALL POINTS IN KANSAS, INDIAN TERRITORY, TEXAS MEXICO and the PACIFIC COAST.

AND FOR St. Louis, Chicago, Hannibal, Kansas City and Sedalia.

For information apply to any Agent of the Company or JAMES BARKER, Gen'l Pass. & Ticket Agent, St. Louis, Mo.



SOLID THROUGH TRAINS FROM KANSAS CITY TO ST. JOSEPH

TO ST. LOUIS, CHICAGO, OMAHA, PEORIA, ST. PAUL AND MINNEAPOLIS

WITH Dining Cars Vestibuled Drawing Room Sleeping Car Reclining Chair Cars (Seats Free).

ONLY ONE CHANGE OF CARS TO THE ATLANTIC COAST

THE BEST LINE FOR NEW YORK, BOSTON, Baltimore, Washington, Philadelphia, Cincinnati, Niagara Falls, Pittsburgh, AND EASTERN POINTS.

For full information, address H. C. ORR, Ass't Gen'l Passenger Agent, Kansas City, Mo.

In writing advertisers please mention FARMER.

LIGHTNING WELL MACHINERY Works.
LARGEST All kinds of tools. Fortune for the driller by using our Adamantine process; can take a core. Perfected Economical Artesian Pumping Rigs to work by Steam, Air, etc. Let us help you. **THE AMERICAN WELL WORKS,** Aurora, Ill.; Chicago, Ill.; Dallas, Tex.


Well Machinery Wind Mills, Pumps, Etc.
 We manufacture the celebrated **TRETTZEL WELL AUGER AND ROPE DRILL** and the **LIGHTNING HYDRAULIC DRILLING MACHINE.** The latest improved and fastest driller on record. Rope Tool Rigs, Jetters. Also first-class Well Tools of every description. Write for prices. Catalogues free. Address Teetzal & Liebendorfer, Machine 14th paper, Ottawa, Ill.

Portable Well Drilling MACHINERY
 Established 1867. Covered by patents. Machines drill any depth both by steam and horse power. We challenge competition. Send for free illustrated catalogue. Address, **KELLY & TANEYHILL, WATERLOO, IOWA.**

WELL MACHINERY
 Illustrated catalogue showing **WELL AUGERS, ROCK DRILLS, HYDRAULIC AND JETTING MACHINERY,** etc. SENT FREE. Have been tested and all warranted. **SIOUX CITY ENGINE & IRON WORKS,** (Successors to Peck Mfg. Co.) **SIOUX CITY, IOWA.** 1217 Union Ave., Kansas City, Mo.

ALL STEEL LIGHTNING FULL CIRCLE

K.C. HAY PRESS CO., KANSAS CITY, MO
 Sixth and Mill Streets.

THE ELI STEEL HAY PRESS
 TWO FEEDS TO CIRCLE

MFD' BY COLLINS PLOW CO. QUINCY ILL.

A Small THRESHING MACHINE of great capacity for Light Power. **The Columbia something new.** **EVERY FARMER can now DO HIS OWN THRESHING,** with less help and power than ever before. Send for free illus. Catalogue. We make a full line of Horse Powers. **BELLE CITY MFG. CO., Racine, Wis.**

METAL WHEELS for your WAGONS.
 Any size you want, 20 to 56 in. high. Tires 1 to 8 in. wide—hubs to fit any axle. Saves cost many times in a season to have set of low wheels to fit your wagon for hauling grain, fodder, manure, hogs, &c. No resetting of tires. Cat's free. Address **EMPIRE MFG. CO., Quincy, Ill.**

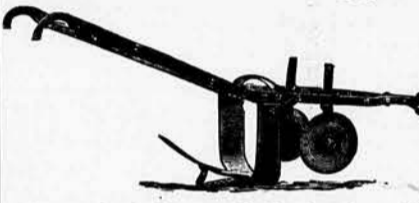
THE OLD RELIABLE PEERLESS FEED GRINDERS
 Grinds more grain to any degree of fineness than any other mill. Grinds ear-corn, oats, etc., fine enough for any purpose. Warranted not to choke. We warrant the Peerless to be **THE BEST AND CHEAPEST MILL ON EARTH.** Write us at once for prices and agency. There is money in this mill. Made only by the **JOLIET STROWBRIDGE CO., JOLIET, ILL.** Jobbers and Manufacturers of Farm Machinery, Carriages, Wagons, Windmills, Bicycles, Harness, etc. Prices lowest. Quality best.

The Kirkwood Steel Wind Engine
 has been in use since 1882. It is the pioneer steel mill. It has beauty, strength, durability, power; it is **THE BEST.** hence the mill for you to buy. Thousands have them! Our Steel Towers have four angle steel corner posts, substantial steel girts and braces—not fence wire. They are light, strong, simple in construction, much cheaper than wood and will last a lifetime. Our mills and towers are **ALL STEEL** and fully guaranteed. Write for prices and circulars. Address, mentioning this paper, **KIRKWOOD WIND ENGINE CO., Arkansas City, Kas.**

Gasoline Engine
 The best because the most simple; a few minutes attention a day will keep it running. Most economical; guaranteed cost of running is one cent per h. p. per hour. **WEBER GAS & GASOLINE ENGINE CO.,** For Catalog. ad. 421 S. W. Boulevard, Kansas City, Mo.

OSCILLATOR THRESHERS
 Engines Powers. Self-Feeders. Etc.
JOHN S. DAVIS SONS, MANUFACTURERS, DAVENPORT, IOWA.

The DANDY GALVANIZED POWER AND PUMPING WIND MILLS WITH DABBITT OR PATENT GRAPHITE BOLES THAT NEVER NEED OIL. Galvanized or Painted Steel Towers. Mills and Towers received the Highest Awards at the World's Fair. Dealers why not buy the best goods and from old responsible Manufacturers? Catalogue free. Address **Challenge Wind Mill & Feed Mill Co., BATAVIA, Kane Co., ILLINOIS.**

PERINE'S Sweet Potato Digger.

 Has gone to the front and holds that honorable position against all rivals. Is simple, effectual and cheap. Is a boon to sweet potato raisers. Call and see it or write for illustrated catalogue. **PERINE'S PLOW WORKS, Topeka, Kas.**

HOT WINDS!

 Save Your Fodder with the Improved **BLUE VALLEY CORN HARVESTER!** Send at once to **BLUE VALLEY FOUNDRY CO., Manhattan, Kas.**

HOW TO Buy your GROCERIES and other Household and Farm supplies of **JACOBY BROS.** 306 N. 2nd St., ST. LOUIS, MO. Send for free illustrated Price List. **PRODUCE** taken in EXCHANGE, Name this paper. **SAVE MONEY!**

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

Bargains for Sale. I am selling excellent farms of 160 acres in Rooks county, Kansas, and in central Nebraska from \$5 to \$10 an acre, and most of them improved. I have 8,480 acres in Lincoln county, Nebraska. If sold quick \$3 per acre, spot cash, will take it, which is only half its value. One of the best stock and grain farms in Kansas, well and extensively improved, and other great bargains. Don't pay rent any longer, but own your own farm. Write what you want to **B. J. KENDALL, Room 507 Brown Block, Omaha, Neb.**

Real Estate Bargains. I own the town site of Halsey, Thomas Co., Neb. It has depot and other railroad improvements located on the 160 acres. It is clear and will be sold for half its value or exchanged for Omaha property or a clear farm. Write for particulars. I have several fine lots near the Methodist college at University Place, Lincoln, Neb., for sale cheap, or will exchange them for farm lands. **B. J. KENDALL, 507 Brown Block, OMAHA, NEB.**

DISSTON'S

 It will pay you to buy a Saw with "DISSTON" on it. It will hold the set longer, and do more work without filing than other saws, thereby saving in labor and cost of files. They are made of the best quality crucible cast steel, and are **FULLY WARRANTED.** For Sale by all Dealers. **HENRY DISSTON & SONS, Philadelphia, Pa.** Send for Pamphlet, "The Saw," mailed free.

CIDER! A LITTLE MORE CIDER TOO!!
 You can make a little more cider, a little better cider, in a great deal less time and with a great deal less work on the Hydraulic Press than any other press made. Write for illustrated catalogue of Cider, Fruit Machinery, Spray Pumps, Etc. **DAVIS-JOHNSON CO., Western Agents H. P. Mfg. Co., 45 E. Jackson St., CHICAGO, ILL.** Mention KANSAS FARMER.

THE FARMERS HAY PRESS. Easily Set. TO SEE IT IS TO USE IT! Satisfaction Guaranteed

DEVOL-LIVNGOOD MANUFACTURING CO., KANSAS CITY, MO. Mention this paper when you write.

CHAMPION HAY PRESSES
 DETACHED POWER SIDE END HITCH. LARGEST LINE MADE IN THE WORLD. **GOOD AS GOLD** HAY PRESSES. **PERPETUAL & LARGE BALE. ALL STEEL OR WOOD. FRAME STEEL LINED.** **REVERSIBLE LEVER.** **STEAM, HORSE & HAND POWER.** **WRITE FOR CATALOGUE.** **CHICAGO, U.S.A.**

D. M. OSBORNE & CO., ESTABLISHED 40 YEARS.
 St. Louis, Chicago, Kansas City, Louisville, Indianapolis, Dallas, Denver, Minneapolis, Detroit, Omaha, Peoria, Des Moines, Fargo, Nashville, New Orleans, Mo., Ills., Mo., Ky., Ind., Tex., Colo., Minn., Mich., Neb., Iowa, N. Dak., Tenn., La.
WRITE QUICK Send two-cent stamp for Souvenir Catalogue & free premium offer to farmers guessing nearest 1894 wheat crop. **REPAIRS and STOCK ON HAND AT ALL THE PRINCIPAL POINTS.** **IF NO DEALER SELLS OUR GOODS WRITE US AT ANY OF THE ABOVE PLACES.** **WE MAKE FIRST-CLASS GOODS. NOT IN ANY TRUST.** **OSBORNE MACHINE OIL** **OSBORNE BUGGIES, FARM AND SPRING WAGONS, SURREYS, PHAETONS, HARNESS.** **Ready Rock Asphalt Roofing.** Any one can lay it. **OSBORNE BINDER TWINE**

HANG YOUR DOOR WITH **STANLEY'S Corrugated Steel Hinges.** They are Stronger, Handsomer and cost no more than the old style. For sale by Hardware Dealers generally, but if not in your vicinity write the Manufacturers. Send for "Biography of a Yankee Hinge," mailed free.

THE STANLEY WORKS, New Britain, Ct.

Canada Heard From. New use for the Page.
 A Canadian farmer was in need of a **Foot Bridge** and the Page agent was equal to the emergency. A five ft. fence for the bottom and three ft. for the sides stretched over 100 ft. span proves a grand success. With four men in the middle it sagged only 10 in., coming right up to place when relieved. Owner is so well pleased, he tears down 80 rods of good board fence to make room for Page. **PAGE WOVEN WIRE FENCE CO., Adrian, Mich.**

THE "ST. JOE" HIVE LATEST! CHEAPEST! BEST!
 We keep all kinds of bee supplies. Send for free circular. Satisfaction guaranteed. **ST. JOSEPH APIARY CO., 212 Edmund St., St. Joe, Mo.** E. T. ABBOTT, Manager.

THE "WESTERN SETTLER" IS A NEW PAPER. TELLS ALL ABOUT THE WEST. Will be sent free to you and your friends. Address **JOHN SEBASTIAN, Gen. Ticket and Passage Agent, Chicago, East Street and Pacific Railroad, Chicago, Ill.**

HANDY COBBLER Shoe and Harness Kit for home use. Can do all your own repairing. Best outfit ever sold for the price. More and better tools than any other. 4 best quality iron lasts. No. 1, 36 articles, \$2. Low express rate and safe delivery guaranteed. Cut this out and send with order and 20 addresses of parties who might buy, and get a present worth 50 cts. FREE. Liberal terms to agents. Send for cat. **KUHN & CO., Sta. D Moline, Ill.**

