

KANSAS FARMER

ESTABLISHED IN 1863.
VOL. XXXIV. NO. 27.

TOPEKA, KANSAS, THURSDAY, JULY 2, 1896.

SIXTEEN TO TWENTY
PAGES--\$1.00 A YEAR.

TABLE OF CONTENTS.

PAGE 418—AGRICULTURAL MATTERS.—How to Start Alfalfa to Insure a Stand. Implements for Hay-Making.
PAGE 419—THE STOCK INTEREST.—Exhibitors, Judges and Judging. The English Farmer and Small Beef Cattle. The South-down Outlook. Wolves. Spring Lambs.
PAGE 420—IRRIGATION.—Seepage or Return Waters From Irrigation.
PAGE 421—What Ails the Fairs?
PAGE 422—THE HOME CIRCLE.—Tying Her Bonnet Under Her Chin (poem). Dainty Bedrooms. Should Women Promise to Obey? Empire Lamp Shades. Preparation of Beef. Scrubbing Machines. To Cook Cornmeal. Fad for Pocketless Women. How to Make Mince Scallops. How to Clean Glass Globes. How to Wear Your Handkerchief.
PAGE 423—THE YOUNG FOLKS.—A Plover on Guard (poem). Mr. Justice Skippie. How Eskimos Trap Wolves. A Clock Made of Bread. A Swiss Watch That Speaks. Two Famous Cats. Pugnacious Plants.
PAGE 424—EDITORIAL.—Smite the Grasshoppers. Wheat Crop 475,000,000 Bushels. Cultivation vs. Possible Drought.
PAGE 425—EDITORIAL.—Washburn College. The Nebraska State Fair Farmers' Institute. Weekly Weather-Crop Bulletin. Hay Market Review.
PAGE 426—HORTICULTURE.—Horticultural Organizations. Sheep in the Orchard. Sensitive Plants. Clean Culture Indispensable to Successful Strawberry-Growing. Thayer's Berry Bulletin for July, 1896.
THE APIARY.—Absconding Swarms. Bees and Alfalfa. Handling Bees. Extracted Honey.
PAGE 427—IN THE DAIRY.—Butter and Oleo Further Separated. The Latest About Bacteria in the Dairy. What Our Milk and Butter Costs. Dairy Notes.
PAGE 428—Gossip About Stock.
PAGE 429—THE VETERINARIAN....Market Reports.
PAGE 430—THE POULTRY YARD.—The Farmer's Daughter. Ducks for Profit. When to Use Soft Food.

BREEDERS' DIRECTORY.

Cards of four lines or less will be inserted in the Breeder's Directory for \$15 per year or \$8 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 FARM.—CLYDESDALE STALLIONS, SHORT-HORN CATTLE.
POLAND-CHINA HOGS.
Write for prices of finest animals in Kansas.
H. W. McAFEE, Topeka, Kas.

CATTLE.

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.

FAIRVIEW STOCK FARM.—Registered Short-horn cattle. 7th Earl of Valley Grove 11907 at head of herd. Young stock for sale. E. H. Littlefield, Newkirk, Oklahoma.

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 106658 at head of herd. Registered bulls, heifers and cows at bed-rock prices. Address D. P. Norton, Council Grove, Kas.

CATTLE AND SWINE.

ASHLAND STOCK FARM HERD OF THOROUGHbred Poland-China hogs, Short-horn cattle and Plymouth Rock chickens. Boars in service, Admiral Chip No. 7919 and Abbottsford No. 23351, 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.

SWINE.

Holstein - Friesians. M. H. ALBERTY, Cherokee, Duroc-Jersey swine. Kansas.

TEN POLAND-CHINA BOARS—\$10 to \$20 apiece. J. H. Taylor, Pearl, Kas.

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

WM. PLUMMER & CO., Osage City, Kas., breeders of Poland-Chinas of the best families. Also the poultry. Pigs for the season's trade sired by five different boars.

PRINCETON HERD OF POLAND-CHINA SWINE contains the most noted strains and popular pedigrees in the U. S. Choice animals for sale. Address H. Davidson & Son, Princeton, Franklin Co., Kas.

D. TROTT, ABILENE, KAS., headquarters for POLAND-CHINAS and the famous Duroc-Jerseys. Mated to produce the best in all particulars. Choice breeders cheap. Write.

SWINE.

OHIO IMPROVED CHESTER SWINE—Pure-bred and registered. One hundred spring pigs at hard times prices. Also a few boars ready for service. H. S. DAY, Dwight, Morris Co., Kas.

FOR SALE—Duroc-Jersey pigs; also Poland-China. Bronze turkeys, Toulouse geese, Pekin ducks, Barred Plymouth Rock and Brown Leghorn chickens. Ready to ship out. J. M. Young, Colfax, Kas.

POLAND-CHINAS FOR SALE.—Young Model 9857, King's Royalty 1897. Their get, either sex. Cotswold bucks. The above stock will be sold right if taken soon. Address H. H. Hague & Son, Walton, Kas.

POULTRY.

VALLEY FALLS POULTRY YARDS.—The most extensive and best equipped yards in the State. Thirty-five varieties of chickens. Breeding pens scoring from 90 to 96. Eggs \$1.50 from pen No. 1 and \$1 from pen No. 2. All kinds of Cochins, Brahmas, Langshans, P. Rocks, Leghorns, Minorcas, Wyandottes, Hamburgs, Jays, Games, Sherwoods, Red-caps and Bantams. W. B. McCoy, Proprietor, the Kansas Poultryman.

POLAND-CHINA BOAR PIGS.—From Wren's celebrated Wren's Medium and Lady Orient, Long-fellow, etc. Nearly all solid black. Price \$7 for choice. No better bred stock anywhere in the West. EGGS.—B. P. Rocks (from prize-winning stock at Topeka in 1895). White and Brown Leghorns, Buff Cochins, Black Langshans, Black Minorcas, Silver Hamburgs, now all for 65 cents per thirteen. ZACHARY TAYLOR, Marion, Kas.

Barred Plymouth Rocks.

All the leading strains. Thirty young cockerels and twenty-five pullets for sale. A 93-per cent bird at head of the flock. Eggs \$2 per setting of thirteen. S. McCullough, Ottawa, Franklin Co., Kas.



Round Top Farm

PRAIRIE STATE INCUBATORS.

Plymouth Rocks, Light Brahmas, Langshans, Indian Games, Buff Leghorns, Bantams. Eggs \$2 per fifteen; \$3.50 per thirty. Forty-page catalogue, 10 cents, treats on artificial hatching, diseases, etc.

Fred B. Glover, Parkville, Mo.

SWINE.

BERKSHIRES. H. B. COWLES Topeka, Kas.

T. A. HUBBARD
Rome, Kansas,
Breeder of
POLAND-CHINAS and
LARGE ENGLISH
BERKSHIRES. Two hundred head. All ages.
25 boars and 45 sows ready for buyers.

BERKSHIRES.

We offer choice selections from our grand herd, headed by a great imported boar. New blood for Kansas breeders.

WM. B. SUTTON & SON, Russell, Kansas.

WYNDALE FARM HERD.

Registered Berkshires and B. P. Rock Chickens.

Only the best stock for sale. Eggs in season. Correspondence solicited. M. S. KOHL, Furley, Kas.

SELECT HERD OF BERKSHIRES

For ten years winners at leading fairs in competition with the best herds in the world. Visitors say: "Your hogs have such fine heads, good backs and hams, strong bone, and are so large and smooth." If you want a boar or pair of pigs, write. I ship from Topeka. G. W. Berry, Berryton, Shawnee Co., Kas.

J. T. LAWTON (successor to John Kemp), NORTH TOPEKA, KAS., breeder of Improved Chester White swine, Young stock for sale. Also Light Brahma fowls.

BELMONT STOCK FARM

Geo. Topping, Cedar Point, Kansas.

Breeder of English Berkshire and Poland-China swine, S. C. Brown Leghorns, B. Plymouth Rocks, Mammoth Bronze turkeys and Imperial Pekin ducks. Write for prices. Farm six miles south of Cedar Point, Chase county, Kansas.

W. S. ATTEBURY, Rossville, Kansas, BREEDER OF Chester Whites Exclusively.

Young stock at all times. Satisfaction guaranteed.

SWINE.

Thoroughbred Duroc-Jersey Hogs

Registered stock. Send for 44-page catalogue, prices and history, containing much other useful information to young breeders. Will be sent on receipt of stamp and address. J. M. STONEBRAKER, Panola, Ill.

Quality Herd Poland-Chinas.

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

PLEASANT VALLEY HERD

REGISTERED POLAND-CHINASWINE

Westphalia, Anderson Co., Kas.

Breeder of high-class pedigreed Poland-China swine. Herd headed by Tecumseh Grand 9178 S., assisted by Guy Wilkes 3d 12131 C. Tecumseh Grand 9178 S. is now for sale, also fifty choice April pigs. Write. E. A. BRICKER.

ROYAL HERD

POLAND-CHINAS and B. P. Rock chickens. Cunningham's Choice 18731 S., second premium State fair, 1895; his grandsire Victor M. First premium State fair, 1895, on Plymouth Rocks. Fifteen eggs for \$2. Ward A. Bailey, 1470 E. 15th St., Wichita, Kas.

TOWER HILL HERD

Registered Poland-Chinas.

175 head, 30 brood sows. Herd boars are Black Stop 10550 S.; U. S. Butler 18988 S.; George Free Trade 21053 A., and a grandson of J. H. Sanders 27219 C. Young boars ready for service and bred gilts for sale. B. R. Adamson, Fort Scott, Kas.

VERNON COUNTY HERD

PEDIGREED POLAND-CHINAS.

Forty-five spring pigs sired by Silver Dick 14180 S. and out of high-class dams. Write or visit herd.

J. M. TURLEY, Stotesbury, Vernon Co., Mo.

Kansas City Herd Poland-Chinas

The future villa of Hadley Jr. 13314 O., the greatest boar of his age. I have pigs for sale now by Hadley out of Tecumseh Mortgage Lifter 32649 S. Order quick and orders will be booked as received. Farm nine miles south of Kansas City, on Ft. Scott & Memphis R. R. Postoffice Lenexa, Kas.

W. P. GOODE, Proprietor, Lenexa, Kas.

R. S. COOK

Wichita, Kas., Breeder of Poland-Chinas.

Won seven prizes at World's Fair—more than any single breeder west of Ohio.

J. R. KILLOUGH & SONS,

Richmond, Franklin Co., Kansas,

POLAND-CHINA SWINE.

Herd headed by Upright Wilkes 13246 S. and J. H. Sanders Jr. 13730 S. 25 brood sows, 100 spring pigs; 16 young boars, 6 Sanders and 4 Wilkes, ready for service. Orders for youngsters being booked. Write or come.

Highland Herd of Poland-Chinas.

Herd headed by Breckenridge 12987 S. Fifteen brood sows of Black U. S., Tecumseh and Corwin strains; 75 choice spring pigs, March and April farrow; 5 fall boars, large and growthy, sired by Seldom 14251 S. We have some fall gilts that are bred to Claude Sanders. These gilts are large, growthy and with extra fine finish. We will sell as cheap as you can buy the same class of pigs elsewhere. Come or write. Dietrich & Gentry, Richmond, Kas.

1,309 POLAND-CHINAS

Shipped by express to eighteen States and Canada. Original Wilkes, Corwin, Tecumseh and World's Fair blood. Write for one to W. S. HANNA, Ottawa, Kansas. Box 218.

WILLIS WHINERY, Salem, O.

BREEDER OF IMPROVED CHESTER WHITE SWINE.

"The Champion Herd of the World."

Holstein & Jersey Cattle.

17 Varieties of POULTRY

Fine 32 Page Catalogue FREE.

CATTLE.

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 Winsome Duke 11th 115137 and Grand Duke of North Oaks 11th 115736 at head of the herd. Choice young bulls for sale now. Visitors welcome. Address W. L. CHAFFEE, Manager.

FINE BLOODED Cattle, Sheep, Hogs, Poultry, Sporting Dogs. Send stamps for catalogs. 150 engravings. N. P. BOYER & CO., Coatesville, Pa.

PATENTS.

T. S. BROWN,

Patent Attorney and Solicitor. Fifteen Years' Experience.

335 Sheildley Bldg. KANSAS CITY, MO.

DIRECT-UM ♦ BIT!

Best Combination Bit made. Severe or Easy as you want it.

Sample mailed, XC \$1.00. Nickel..... 1.50.

RACINE MALLEABLE IRON CO., Racine, Wis.

Pete's Coffee House

AND LUNCH COUNTER.

The popular restaurant. Opposite Kansas - City - Stock - Yards

P. S. RITTEK, Proprietor.

The Ten Year Test

This is attracting considerable attention among fence buyers. They realize that all wire fences are nice when first put up, but that very few are presentable after two or three years. After ten years service there is but one able to answer roll call—The Page Woven Wire Fence, made at Adrian, Mich.

Washburn College,

TOPEKA, KANSAS.

Progressive Management, Thorough Courses of Study, Economical for Students.

Academic and Collegiate departments. Special teachers of Oratory, Music and Art. THE FALL TERM begins Wednesday, September 16, 1896.

GEO. M. HERRICK, President.

COOPER DIP

KILLS AND PREVENTS TICKS, LICE AND SCAB. MAKES WOOL GROW.

Dipping pamphlet free from. COOPER & NEPHEWS, Galveston, Tex.

\$2 packet makes 100 gallons; 50c. packet, 25 gallons. If druggist cannot supply, send \$1.75 for \$2 packet to Evans-Gallagher Co., Kansas City, or J. W. Allen & Co., Atchison, Kas.

Agricultural Matters.

HOW TO START ALFALFA TO INSURE A STAND.

EDITOR KANSAS FARMER:—There has been much said about the high value of alfalfa as a forage crop; about the necessity of a thorough preparation of the ground to be seeded to alfalfa; about the time of sowing and the quantity of seed to the acre, and about the curing and handling of the crop when grown, but if any one has tackled the above problem with a view to its solution, I have so far failed to learn his name.

I have just finished a careful review of the alfalfa reports made to the State Board of Agriculture two years ago, and excellent as they are and valuable for the information they contain, yet of the thirty-five reports examined not one attempts to tell us how to start alfalfa with assurance of a stand. This is a vital question—none could be more important, because a failure to secure a stand is equivalent to a loss of \$4 per acre, that being about the cost of thoroughly preparing and seeding an acre to alfalfa, and a poor stand of alfalfa is practically a failure, because in the end the expense of reseeded will be incurred. Some farmers have failed so many times that they have become discouraged and have abandoned the idea of sowing altogether, but such failures need not occur, and, in my judgment, if judicious care is exercised in seeding when soil conditions are right they will not.

Of course, all agree that a thorough preparation of the soil is necessary to the best results. Ground must be well plowed, well harrowed, well leveled, well smoothed and well packed, to the end that the seed may be deposited an even depth and in an ideal seed-bed. But all this will avail nothing unless soil conditions are right when seed is planted. Right here is the vital point in securing a good stand of alfalfa.

In the spring of 1892 I prepared a field for alfalfa—prepared it thoroughly—and gave instructions that whenever in the spring or summer a good, soaking rain fell, sufficient to thoroughly saturate the subsoil, the seed should at once be sown. No such rain fell that year until the 26th day of June. The seed was then put into the ground and the stand was perfect. The plant grew a foot or more in July and August and the first cutting made considerable hay. My neighbors also sowed alfalfa the same season, one as much as thirty acres, but they followed the general rule of sowing at the usual time of planting spring crops, trusting to providence for rain in time, or if that failed, to sheer luck. The result in each case was an utter failure.

Since that time I have known a number of persons who have adopted the same rule—that is, preparing the ground in early spring, and if soil conditions were not right, then put off seeding until such time as the soil was thoroughly saturated with moisture, and in every such case an excellent stand of alfalfa has been secured. In case the interim between the preparation of the soil and the seeding to alfalfa is long the harrow should be run over the area to be sown, once or twice, to prevent weeds from starting.

The reasons why proper soil conditions when the seed is planted are necessary to secure a good stand of alfalfa are so apparent that we need but mention them. If seed is planted in the spring, when the ground is too dry for germination of seed, or if it germinates, a weak plant is produced; unless rain comes soon weeds will gain the ascendancy and kill the plant.

The only sure way to start alfalfa successfully is to defer seeding until the soil is abundantly supplied with water to promote quick germination and rapid growth. In this way the plant is enabled to protect itself against the encroachments of its enemies, in form of weeds, which otherwise would be fatal. The necessity of good supply of water in the soil when the seed is sown is recognized by irrigators.

In an exceptionally good paper, pre-

pared especially for the Kansas State Board of Agriculture, by Rev. B. F. Shuart, of Oberlin, Ohio, and published in that excellent alfalfa report issued by Secretary Coburn, we read as follows—(Mr. Shuart's alfalfa lands are in Montana): "After the land has been graded and immediately before sowing the seed the land should be copiously irrigated." One reason why he would thus irrigate, he says, "is that irrigation before seeding insures the prompt and complete germination of the seed." "This," he says, "is a point of vital importance." Again, "Another advantage secured by irrigation before seeding is that it supplies the earth with a reservoir of moisture sufficient to sustain the plants in unchecked and vigorous growth until they become strong," etc., and he adds, "The critical time with alfalfa is the first six weeks of its growth."

Now, we cannot all irrigate, and those who cannot should secure, if possible, the same soil conditions before seeding, by natural means, which we would seek to produce by artificial means if we could, conditions which are most favorable to quick germination and rapid growth.

From the foregoing we conclude that alfalfa, differing from plants generally having generations in which to grow, is not particular as to the time in the growing season when it takes its start, but it is particular as to the condition of the seed-bed from which it commences its career.

These thoughts and suggestions are intended for starting alfalfa on old ground. It has been discovered, however, in recent years by numerous tests that alfalfa may be successfully grown on new ground. Whether it is equally successful on new land with all kinds of soil has probably not yet been fully determined, but in the Arkansas valley and in other places where the subsoil is porous its success has been thoroughly demonstrated.

Last week, while in Edwards county, I saw a small piece of alfalfa sown on sod ten years ago, and it is the equal now in stand and in yield of any alfalfa in the Arkansas valley or elsewhere outside of the irrigated districts. The average annual net profit for ten years from this piece of alfalfa has been about \$30 per acre.

Because such highly satisfactory results have been obtained on new ground, all persons who have new land prefer to sow alfalfa on it rather than on old ground.

They do so because it is much easier to secure a good stand on new ground. (1) The sod when broken up and well cut with disc serves to a large extent as a mulching, and the firm, compact soil below constitutes a first-class seed-bed, which, with the mulching over it, is in the best possible condition to retain moisture, and give to the plant a vigorous start and an opportunity to sink its roots deep into the subsoil "before the evil days come." (2) There are no weeds on the new ground to rob the alfalfa of needed moisture in the early stages of its growth and to contend with it for supremacy. With soil fairly saturated with moisture when seed is sown a good stand is practically assured.

It is said by some that for best results alfalfa should not be sown until the wild sod has been thoroughly disintegrated by one or two grain crops. Others believe that it is not necessary to grow grain crops, but that the sod should be broken up a considerable time before seeding—for instance, in the fall or winter for spring seeding, and in the spring for fall seeding. Still others claim equally good results from seeding immediately on the green sod—that is, following the breaking plow with the disc, chopping up the sod and an inch or two of subsoil below, then leveling and smoothing with harrow and seeding with drill.

In this way a company in western Kansas last spring seeded about 2,500 acres to alfalfa on new ground, and I found, by a personal visit to these lands last week, a good stand of alfalfa on most of the area sown. On much the stand is very good. On last sowing the plant at that time had not made much showing. The only objection visible to the naked eye is the appar-

ent unfarmerlike condition the soil is apt to be left in. The stubborn sod in many places refuses to yield to the persuasive powers of the harrow or the crusher, and the ground is left in a rougher condition than is desirable.

However, the important thing is to get a good stand of alfalfa, and if we succeed in this, we can well afford to give nature time to disintegrate and decompose the lumps of sod which for the time being are something of an eye-sore to us. In addition to the 2,500 acres sown on new ground, the company above referred to has also seeded to alfalfa this spring about 400 acres on old ground. The indications at present are that this seeding will be to a large extent a failure.

Topeka, Kas.

M. MOHLER.

Implements for Hay-Making.

When engaged in the heavy work of handling hay the farmer—particularly the young farmer—often wonders whether he is doing it the easiest way, and whether it would be good economy to have more implements. The implement dealer in town throws his influence on the side of purchasing many new things, and there is hesitation as to whether the investment ought to be made. Prof. Thomas Shaw, of the Minnesota Experiment Station, always sensible in what he says, has had the subject under consideration, and, being a man of much experience, will be read with profit and interest:

"There is no little difference," says Prof. Shaw, "in the implements used in hay-making to-day as compared with those used forty years ago. At that time the mower had not been invented, and there were but few of the old revolving horse rakes in existence. The contrast between hay-making then and as it is now carried on out on the native prairie is very marked. Chief among the improved implements and machines now used in hay-making are the mower, the tedder, the sulky rake, the bull rake, the hay loader, slings, rack lifters, horse forks and stackers. These are not equally applicable to all sections of the country; at least some of them are not and the special adaptability of each will be mentioned below. Of course the field mower is adaptable to all situations where the land is smooth and free from obstructions, and where it is not smooth it should be made so, at least when the roughness arises from primeval hillocks on the native prairie, for the wearing power of a mower can easily be more than doubled by suitable preparation of the land. Good farmers in the East are wont to roll their meadows every spring, and they do so as much to smooth the land for mowing and raking as for the benefit of the plants. There are many kinds of mowers in the market and nearly all of them are good. The tendency to-day is to buy those with a long cut, but such a choice is not always a good one; and where grass is usually heavy and often tangled, more good work will be done in a given time with a mower of average cut than with one with a long cut, and it will be done with less wear on the team and less strain on the machine. But out on the native upland prairie where the areas are wide and the grass is often short and light, it is greatly important to have a mower with a long cut. And the merciful man will always keep the knives well sharpened. There is no implement, perhaps, that renders greater service in proportion to its cost than the hay tedder. By its aid a boy and a horse can do as much work as ten men; the hay will generally be cured in half the time usually required. By its aid hay may be cured more with the wind than with the sun, a fact of great significance because of the bearing which it has upon the superior quality of the hay; and by its aid hay that has been wet by the rain can be speedily stirred up to dry, whether lying spread over the ground or in the windrow. When hay is tossed up in the air with the tedder it comes down topsy turvy, and when thus lying loose the wind has ample opportunity to drive through it, consequently drying it rapidly. Every farmer who has much hay to cure should certainly try to have a tedder, and in purchasing one

SPECIFIC FOR SCROFULA.

"Since childhood, I have been afflicted with scrofulous boils and sores, which caused me terrible suffering. Physicians were unable to help me, and I only grew worse under their care. At length, I began to take



AYER'S

Sarsaparilla, and very soon grew better. After using half a dozen bottles I was completely

cured, so that I have not had a boil or pimple on any part of my body for the last twelve years. I can cordially recommend Ayer's Sarsaparilla as the very best blood-purifier in existence."—G. T. REINHART, Myersville, Texas.

AYER'S

THE ONLY WORLD'S FAIR
Sarsaparilla

Ayer's Cherry Pectoral cures Coughs and Colds

he should give the preference to tedders which have a spring at the upper end of the forks or tines. Such an arrangement prevents the breaking of the tines when driving over uneven ground. The sulky rake is too well known to require much notice here. The rake used on the open prairie should cover much ground for the same reason that the mower there should have a long stroke. The bull rake is not so well known save on the prairie where hay is put up with the stacker. It is made to gather the hay from a windrow and deposit it on the stacker. It is drawn by two horses, one of which walks on each side of the windrow, while the hay is being gathered for stacking. When thus loaded it is drawn to the stacker and unloaded on the same. The advantage arising from its use consists in the quickness with which it draws hay to the stack. The hay loader is a great invention. The writer is puzzled why it is not more generally used. Of course, when hay is put in cocks it cannot be used, but for taking up green hay for the silo or cured hay from the windrow it works like a charm. The size of the windrow must be gauged by the power of the loader. As a rule, windrows should be made small when the loader is used. One boy with a sulky rake can usually prepare the hay for loading as quickly as two teams will draw the same, and he will also be able at the same time to bring the gleanings from the loader where the latter will take them up while doing its work. Slings are used to facilitate unloading rather than loading, and the same is true of rack-lifters. When slings are used ropes are so placed while the load is being put on that it may be lifted up in sections and carried bodily to the mow. They are only adapted for storing hay in barns or places under cover and they are much better adapted relatively for sheaves of grain than for hay. The rack-lifter elevates the load, rack and all, and the individual on the load then pitches it down into a mow. It can only be used in buildings.

"The advantages of the horse fork are well known, and of the various makes several are good. The fork with a double barb renders excellent service, and it is easily worked. The use of the horse fork has become so general where hay is stored under cover that where any quantity of it is to be stored away the aid of the horse fork is almost invariably secured. And it is generally known that the loader can so build his loads that the horse fork will do its work more speedily.

"The stacker is used to great advantage when hay is to be put up in a wholesale way. The bull rake deposits the hay on the stacker. By the aid of

a horse the hay thus deposited is elevated and then thrown onto the stack. With two or three rakes bringing the hay to the stacker the person building the stack is kept so busy that unless he moves with some nerve the hay will bury him. It will be apparent from what has been said that the choice of implements for hay-making will depend largely upon the requirements of those who have such work to do."

The Stock Interest.

THOROUGHbred STOCK SALES.

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

SEPTEMBER 17—W. H. Wren, Poland-Chinas, St. Joseph, Mo.
OCTOBER 1—E. E. Axline, Poland-Chinas, Oak Grove, Jackson Co., Mo.
OCTOBER 30—J. E. Killough & Sons, Poland-Chinas, Richmond, Kas.

EXHIBITORS, JUDGES AND JUDGING.

Nothing is more natural than that a breeder who has invested his money in animals of high cost, exercised his best skill in their mating and care, and performs the very arduous labors incident to a proper exhibition at perhaps a distant fair or fairs, with the expectation of making or maintaining a reputation in the show-ring, is considerably less than human if not somewhat anxious as to the manner of man or men who as judges for the time being hold him and his in the hollows of their hands. Fortunate he is if, as the hour of the contest arrives, he can say to his superintendent; "I am satisfied with your judge; he knows the points of superiority and the characteristics of the breed; he is an honest man who respects his manhood and has the courage of his convictions regardless of consequences. I will cheerfully abide by his decisions."

The exhibitor who comes into the ring in this frame of mind and adheres to it, even when most of the prizes go to others; who wears a smiling front, answers questions politely with few words, refrains from trying to fill the judge with information not asked for as to the excellence, pedigree and previous prizes of the animal on view, has his stock in blooming but not overdone condition, brings it forward promptly under good control and is not too persistently fussy with lamp-black and spit-curls, is very likely to find a share of the ribbons coming his way. I have never known an exhibitor at any fair or under any circumstances who was not the gainer there and afterwards by being a gentleman. He at once wins consideration by it from the judges and officials, and reputation that has a money value, and more later on, because purchasers will seek him out from the mere fact that he is recognized as a self-respecting gentleman rather than a small-bore boor whose highest ambition is a blue ribbon and to "beat" somebody by being "sharp." As I now recall my show-ring experience at many county fairs, various State and two world's fairs, the great prizes and enduring victories have been won by men who kept their mouths shut and never "kicked;" men who, if defeated (and all encounter defeat at one time or another), wasted none of their precious time in whining, cursing the managers or belittling the judges, but went home to renewed efforts for better deserving the next year's prizes. It is these that are the leaders in the business to-day, possessing the most friends and widest trade. On the other hand, no exhibitor who is always suspicious, always being wronged by judges and managers, constantly afflicted with abdominal pains, and always sure some unseen but very improper influence is depriving him of a fair deal, so far as I know, ever attained any considerable eminence or permanent success among the stockmen.

I will say, further, I have seen very little of the rascality so freely talked about in connection with many shows, and the alleged corrupt practices have never come under my observation. I have never seen a board of managers who did not seem to do the best they knew; I have never had actual knowledge of any exhibitor's seriously attempting to tamper with a judge, nor have I seen a judge work (when all the

responsibility was his) whom I did not believe did the very best he was capable of. There are, to be sure, what others regard as more or less glaring mistakes made on every fair ground, but I am satisfied that in the main they are errors of the head and not of the heart. Judges are sometimes chosen, who, from one cause or another, may not be well qualified and they make erroneous awards—not necessarily because the judges are bad but because, like those who selected them, they are human. This is likely to continue until human nature is very materially modified.

It should be borne in mind that the competition is often very close; that there may be in a ring two or a half dozen animals so evenly matched as to make it a very trying task to determine which possesses the little shade of superiority entitling it to the prize as against others which an exhibitor, a bystander or even another judge with somewhat differing ideas and ideals would give preference. In fact, the same judge with the same exhibits before him next day, upon a more deliberate and extended examination under but slightly variant conditions might conscientiously reverse himself, and yet render no more substantial justice than was done in the first instance.

As a rule, fair managers would, if equity permitted, be glad to have the prizes quite generally distributed among as many exhibitors as possible, and occasionally those making awards are given a hint to bear such an outcome in mind, but I think no one is of the right material for a judge if not courageous enough to give every prize to one exhibitor if he is satisfied that exhibitor is entitled to it—and cheerfully take the consequences.

The ideal judge needs many and varied qualifications, but among the greatest of these is a backbone that will stand alone.—F. D. Coburn, in *Homestead*.

The English Farmer and Small Beef Cattle.

The figures in the markets of Great Britain, as well as in this country, are stirring up the beef-growers. Referring to this subject, the *Mark Lane Express* says that the grazers have been assured that the popular taste for meat has changed, having become more pronounced for small joints, and a larger proportion of lean meat to fat than it used to be. This is not a new thing of yesterday, the statement having been almost as rife twenty years since as now, but it is only latterly that farmers have been told by those who profess to know their business better than the sons of toil do themselves, that they ought generally to change their breeds and feed smaller animals, for the pleasure of the butchers and the consuming public. They are, of course, very unlikely to do this; those who have bred Short-horns, Herefords, Aberdeen-Angus and Sussex cattle in the past will most likely continue to do so in the future, because, no doubt, the respective varieties are best adapted to the soil, country and climate. But there is one way in which those who have herds of all these breeds can thoroughly meet the object in view. This is by feeding for early maturity from calldom, and turning out baby beef at from eighteen months to two years old. Unless very high feeding be resorted to, neither Short-horn, Hereford, Aberdeen-Angus nor Sussex yearlings will disappoint expectation, for we should imagine their joints would be small enough, and not too fat. There are a large number of other young steers likewise, which could similarly be raised from South Devon cows and the blue-gray cross-breeds of the North country.

"The consideration of this subject (breeding and feeding for early maturity) is all the more important owing to the excessive, largely increasing imports of fat cattle crowding our ports from abroad. British farmers are destined to be put to their trumps in beef-making, just as they have already been in corn-growing, butter-production, and, more recently, bacon yield. To meet this there must be the strictest economy in raising the cattle, and the latter must be of the very best kind possible. According to the *North British Agriculturist* the Scotch breed-

ers are so well aware of this, that they do not hesitate to give from 50s. to £3 (\$12 to \$15) each for calves a few days old, if from high-class pedigree herds, and as much as £5 (\$25) each if they have had a few weeks' milk-raising. This only shows the real value of good blood for quick grazing purposes. Store cattle may be very scarce now, and likely to be more so as the season advances, but the canny Scotchman would not give these extraordinary high prices for such young calves, if they did not believe that they were better worth the money than those three or four times the age of a more mongrel, ne'er-do-well kind."—*Indiana Farmer*.

The Southdown Outlook.

From report of Secretary John G. Springer, of the American Southdown Association:

"While the sheep industry continues in a 'bad way,' yet there are thousands of flock-owners who do not let discouragement get the master hand. If the sheep they have been raising, wool-producing ones, is not now a paying business, they are willing to change their flocks into the sort that the times demand.

"The large number of sheep that have been forced upon the market in the last few years made mutton prices lower than beef or pork, hence caused its use by many who have never before been consumers of this sort of meat. While the class of mutton that has been thus sold has not always been such as to make its continued use desirable, yet as a rule the excellency of this meat has made a very much greater demand for it, especially so if of the right sort. As in the case of beef and pork, the old, over-fatted, heavy carcass does not find a ready sale; top market prices are only paid for young, fast-grown and light-weight animals. The type of mutton now in demand and that always finds ready sale at the highest price must be a lamb 10 or 12 months old that has been kept in rapid growth from birth, and weighing from ninety to 100 pounds, and has the lean well marbled with the fat.

"To fill these requirements the Southdown is unquestionably the best; in fact, is the only breed, purely bred or scrub, that within its own blood 'fills the bill' for mutton that is now in greatest demand and commands the highest price; it is the standard breed, with which all comparisons as to mutton are made. Another breed may be larger, and it may be sometimes claimed the mutton of other breeds is equal to it, but it is never heard that any mutton is the superior of the Southdown. It can be safely said that well-bred and well-fed yearling Southdowns, if properly dressed, will produce meat more pleasing to the palate, more easy of digestion and more nutritious than the meat from any other animal, not even excepting venison and wild fowl, with all their reputed richness in gamy, spicy flavor.

"It is not practicable to supply purely-bred Southdown in filling all of the demand for superior mutton, nor is this required. The first cross with a purely-bred Southdown will do wonders in the way of improving the quality of mutton in any breed, and the more of this blood that is introduced the better will be the production. The lack of Southdown, and the inferiority of that from other breeds, has caused a call for 'cross-bred' mutton. A leading breeder and feeder who is using Dorset rams on Shropshire ewes writes: 'Cross-bred lambs are the sort for feeding every time.' If it be so that the cross of two breeds, inferior as to mutton qualities, will improve the sale of meat, it is certain that the crossing of the Southdown, superior in all of the qualities desired, with either of these or any breed, will produce a greater improvement.

"In times past our flocks have been largely wool-producing, mainly Merino or Merino crossed; it now being necessary that these flocks be changed in the quality of mutton, the character of the wool must be also changed, because the breed that excels in both these productions has not yet been found. The Southdown, compared with the

Cures

Prove the merit of Hood's Sarsaparilla—positive, perfect, permanent Cures.

Cures of Scrofula in severest forms, Salt Rheum, with intense itching and burning, scald head, boils, pimples, etc.

Cures of Dyspepsia, Rheumatism, Catarrh, by toning and making rich, red blood.

Cures of Nervousness and That Tired Feeling, by feeding nerves, muscles and tissues on pure blood. For book of cures by

Hood's Sarsaparilla

Send address to C. I. Hood & Co., Lowell, Mass.

Hood's Pills are the best after-dinner pills, aid digestion. 25c.

Merino being next in quality in wool, and their equals in hardiness and ability to care for themselves, and with less liability to disease, will more quickly and effectually make superior mutton sheep out of the great flocks of our country, without detriment to health and hardiness, and less loss as to wool qualities than any other breed, and yet have in these flocks animals that may be naturally and easily returned to the wool-bearing kind when this sort is again in demand. Except in some cases as to the quality of wool, the introduction of Southdown blood into any breed, pure or scrub, will be beneficial.

"As the situation now is, the Southdown being at the head of all breeds of sheep for filling the requirements of the market, and the best for muttonizing the wool-bearing flocks with less detriment to their health, hardiness and wool-producing qualities, there can be no doubt but that the Southdown breeders will, during the coming season, find ready sale at reasonable prices for all the surplus breeding animals they have. The opportunities thus afforded are such as are seldom presented for pushing the introduction of any breed of domestic live stock. The 'sun shines' for Southdown breeders; they only need to push the advantages thus afforded them, and by only selling animals purely bred, so guaranteed by registry, in order that the reputation of these sheep shall be increased and demand for them increased."

Wolves.

What shall we do to reduce the ravages of wolves? There are so many in some localities that it is a serious drawback to both sheep and cattle raising. An immense wolf recently chased our sheep into our very door-yard, killing several valuable lambs on the way. They are certainly much more plentiful and bolder than they were fifteen years ago. A \$10 bounty is about the only thing that will bring them to time, and the tax such a bounty would call for would scarcely be felt by any individual tax-payer.—*Exchange*.

Spring Lambs.

The unusual number of spring lambs that have been marketed this season has fairly paralyzed the trade for anything but the best. Spring lamb, like spring chicken, must be very good, or it is not wanted. Everybody who can afford this luxury demands the best, and so the common and medium classes suffer from a decided neglect. The supply of these lambs never was larger than it has been this year, and there were never so many that were poor in quality. The result is that the inferior are the lowest on record and should not be marketed. It would not require much more care to improve the quality of these lambs, and it would be labor well applied.—*Drovers' Journal*.

"One of my sick headaches," you will hear people frequently say, as if the complaint was hopelessly incurable. As a matter of fact, Ayer's Pills not only relieve sick headache but effectually remove the cause of this distressing complaint, and so bring about a permanent cure.

Every man should read the advertisement of Thos. Slater on page 15 of this paper.

Irrigation.

SEEPAGE OR RETURN WATERS FROM IRRIGATION.

From Colorado Experiment Station Bulletin No. 33, by L. G. Carpenter.

In countries where irrigation is practiced it is often the case that, though streams may be drained dry by the diversion of the waters into canals, not far below the stream will again be of considerable size, and this without the inflow of visible tributaries.

This may become of considerable economic importance, as it already has in the valleys whose measurements are here reported. In the valley of the Poudre the seepage water is worth, at prices at which sales have already been made, from \$300,000 to \$500,000 at the least, and the waters of the Platte from two to three million dollars. It is of corresponding importance in the valleys of Clear Creek, St. Vrain, and others. Of such importance already, it promises, if the deductions of the bulletin are correct, to be of still greater importance in the future and in the development of the State. Certainly it is true that the value of water will steadily increase.

The experience of all irrigation countries shows that their prosperity is largely bound up in the water question—in the certainty of water, in the security of their rights, and the freedom from abuse. * * *

The increase which is found in such rivers is attributed to the inflow from innumerable springs fed and supplied by the water which has been applied in irrigation upon the higher lands. In irrigation more water is applied than the crop uses. Of that applied, some is used by the crop and stored in its tissues; more is transpired in the process of growth; some is evaporated from the soil; a portion is usually lost by surface run-off; a certain amount passes down into the ground and disappears. This varies in amount and depends upon various conditions. Usually concurrent observations show that this water passes directly downwards, with little or no lateral movement except capillary imbibition, until reaching an impervious stratum, when, filling the interstices, it gradually rises in the subsoil, and passes laterally with a slow movement due to the slope of the water surface which is thus formed. When the passage takes place through the interstices of the soil the movement is very slow, much slower than is ordinarily supposed by those first encountering the subject. It is faster as the material is coarser. Where there are perceptible channels the movement may be relatively rapid.

One of the first effects noted in irrigation where the soil is pervious is in the filling of the subsoil. The first evidence is found in the gradual rising of the water in the wells which may have been sunk. Throughout the United States where irrigation is practiced the evidence is ample, for as the application has been made within a single generation the changes which have ensued from the application of water are within the memory of hosts of living observers. In many places in the Poudre valley, where it was originally forty or fifty feet to water, water now stands from ten to twenty feet from the surface, the subsoil having been filled to a depth of twenty to forty feet.

There is sometimes a lowering during some seasons of the year, due to the lateral passage of the water. The lateral passage has had the effect in some places of filling in the ground until in some places the water shows on the surface, water-logging or seeping the ground, rendering it unfit for cultivation and capable of growing only sedges, cat-tails and other water-loving plants. Sometimes, on the evaporation of the water, a deposit of alkali is left, rendering the land unfit for cultivation without draining. These effects are found underneath the lines of ditches. * * *

The phenomenon has been but little studied. The reason has doubtless been that in most countries irrigation is of such age that there is no record

with which to compare the condition now and before irrigation, and the changes due to the construction of canals have been lost in the centuries which have elapsed. There is, however, land in Lombardy which is manifestly seeped and water-logged, and has every appearance of being due to irrigation. Pavia canal, between Milan and Pavia, built in the early part of this century, has damaged much land. There is loss from the canals themselves, as well as from the water which is applied to the soil.

Wherever the conditions before the construction of canals are within the range of memory the fact has been observed to a greater or less extent.

Year by year the effect is found farther and farther away from the canal or from the irrigated locality, as the case may be. In course of time the waters which are percolating through the subsoil reach the thalweg or the depression of a "draw," or a river, and increase the waters passing therein.

It therefore happens that the depressions or draws, which in Colorado are usually dry before irrigation is practiced, contain living streams after irrigation has been carried on for some time. While the Poudre river varies during the year from a maximum of 3,000 to 5,000 cubic feet per second to a minimum of fifty to 100 cubic feet per second, or may vary by forty to eighty times the minimum flow, and other streams correspondingly, these seepage waters will not often vary twice their minimum flow. In consequence the water rights in the seepage channels are usually considered more valuable than those in the river waters.

The particular places at which the waters come to the surface will generally be determined by the nearness of the underlying rock. Frequently the water shows in a particular locality, so that there is a localized gathering area. There may be several on some of the channels, so that different seepage ditches may be supplied.

The present measures which are reported include measurements made on the Cache a la Poudre river and on the South Platte, in Colorado. Most of the measurements have been made on former, and have been for the object of determining the amount of the increase in the stream; the relation between the increase and the amount of water applied; between the increase and the area irrigated; and to collect data which should give the means of studying these facts and other phenomena of the return of the waters. The measures on the Platte have been for the same purpose and in connection with the office of the State Engineer of Colorado. To a greater degree the measures on the Platte were taken because of the light they might show on certain interstate questions which have or may arise, and on some points that could not be decided from the Poudre alone.

The present and future importance of the inflow was under-estimated. In the course of the measures the facts determined have led to much wider and more useful application than was anticipated during their progress.

[Here follows descriptions of methods and details by which the information was gathered. Again recurring to the bulletin and its description of the Poudre valley, it says:]

As we pass out of the first bottoms we reach successively two or three terraces, or mesas, which are generally sandier and stretch back for varying distances. On the north side of the stream the watershed extends many miles, and the streams here indicated as Dry creek, Box Elder creek, Lone Tree creek, and several smaller channels, are simply ravines or depressions which at times after storms are filled with water and may become at such periods raging torrents. Ordinarily their beds are sharply marked and have a clear tributary country; they are entirely dry, giving almost no indication whatever of water. After their channels cross the lines of the canals and enter the irrigated country these streams begin to carry running water.

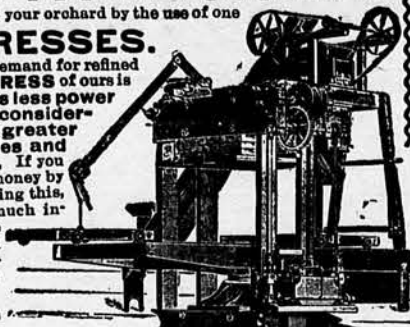
The crops grown in the valley are principally the cereals, alfalfa and potatoes. Potatoes have been extensively

MAKE CIDER AND MAKE MONEY

You can more than double the value of the product of your orchard by the use of one of our **HYDRAULIC CIDER PRESSES.**

When the raw fruit will not sell there will be a steady demand for refined cider, boiled cider, apple jelly and apple butter. This **PRESS** of ours is superior to others for these reasons: because it takes less power, takes less labor, takes less time, costs less considering capacity, and because it will produce a greater yield of cider from the same quantity of apples and leaves the cider pure and free from pomace. If you have no orchard of your own, put in a press and make money by making cider for your neighbors. Many others are doing this, why not you? Send for illustrated catalogue, giving much information as to the profitable marketing of the apple crop. There is more money in the manufactured product than in the raw material.—Write today.—Your neighbor may buy a press tomorrow....

DAVIS JOHNSON CO. CHICAGO, ILL.



grown only during the last few years, and the greater part of this crop has been grown near the lower end of the valley. The upper end of the valley is confined almost exclusively to alfalfa and grain, with some market gardens. The distribution of the crops affect the application of the water, both in amount and time of application. The grains receive water early in the season, and rarely any after July 1. Alfalfa receives from one to three irrigations, commonly two, one often in May. Two will be given, then, and if late water be sufficient, a third in August, after the second cutting; this is by flooding. For potatoes the ground may be irrigated before plowing. If not, then irrigation will usually be commenced in July or early in August, and is practically over by the end of the first week in September, the active period being confined to five or six weeks. With the crops thus grown irrigation extends from May to September, with minor quantities applied to orchards and gardens both earlier and later. More water is applied in June than in any other month. Until the development of storage capacity by the construction of reservoirs the amount of water applied in August was necessarily limited by the stage of the river. Since then more is applied, and this being for potatoes, is largely applied to the section composing the east half of the valley.

Of the canals on the north side of the river the Cache a la Poudre No. 2 is the oldest of the large canals, being one of the original Greeley colony canals. The land irrigated under the Cache a la Poudre No. 2 has been almost fully occupied for a number of years. Some of the land near the upper end has become too wet to need water, and the stock representing the water hitherto applied to this land has been sold and the water is now largely applied to land lower down the canal. * * *

[After further and exhaustive consideration of the details of the investigation the bulletin gives the following summary of conclusions:]

CONCLUSIONS.

We may draw the following conclusions from the observations and considerations shown. The facts are presented in sufficient detail to show the bases of these conclusions, or to enable independent conclusions to be reached, if the reader so desires:

1. There is a real increase in the volume of the streams as they pass through the irrigated sections.
2. There is no such increase in the streams as they pass through the unirrigated sections. On the contrary, there is an actual loss, even when the drainage of a large area enters.
3. The increase is more as the irrigated area is greater.
4. The increase is approximately proportional to the irrigated area, and it seems probable that with more intimate knowledge of the amount of water applied and the features of the drainage, the proportions would be found to be close.
5. The amount of the increase depends very slightly, if at all, upon the rainfall, and, so far as it does, it is influenced principally by the rainfall on the irrigated lands. Only where the lands are already saturated, is the rainfall sufficient to cause seepage.
6. There is no perceptible underflow from the side channels, even where they drain several thousand square miles.
7. The inflow is practically the same throughout the year. It is more in

summer, less in winter, principally because of the effect of the temperature of the soil.

8. The passage of the seepage water through the soil is very slow, so that it may take years for the seepage from the outlying lands to reach the river.

9. The amount of seepage is slowly, but constantly, increasing.

10. It may be expected to increase for some years to come.

11. An increased amount of land may be bought under cultivation, with time, more especially on the lower portions of the streams.

12. The seepage being nearly constant throughout the year, while the needs are greatest in summer, the use of storage will best utilize the water from inflow.

13. The seepage from one thousand acres of irrigated land on the Poudre river gives one cubic foot per second constant flow; on the Upper Platte, one foot to about 430 acres; on the lower Platte, one foot to 250 acres. The difference is due mostly to the greater distance for the seepage to reach the main stream, and to the time and amount of water applied.

14. One cubic foot per second of inflow is obtained on the Poudre river for each 2,400 acre feet applied, or the inflow is about one-third as much as the water applied.

15. On the Poudre river about 30 per cent. of the water applied in irrigation returned to the river.

16. The use of water on the upper portions of a stream, when water is not immediately needed by prior appropriators, will increase the flow of the stream late in summer and prevent such low stages as it would have without this regulating action.

17. The seepage water is already an important factor in the water supply for the agriculture of the State. The capital value of the water thus received in the valley of the Cache a la Poudre alone is not less than \$300,000, and perhaps \$500,000, and for the Platte is from \$2,000,000 to \$3,000,000. It is large for the other streams, but of unknown amount.

18. An actual loss is incurred in carrying a stream like the Platte through sandy beds.

19. Ultimately, the returns from seepage will make the lower portions of such valleys as the Platte more certain of water, and probably enable a larger acreage to be grown.

20. The results here shown may be expected to apply with limitations to other valleys similarly situated, where irrigation is as copious, crops the same in character, subsoil and rock strata of much the same inclination. Where the soil is less pervious, a greater time must elapse for these results to hold good.

21. Measurements are greatly needed in the Arkansas and Rio Grande valleys, for the determination of facts which will soon become of importance. In the Rio Grande, especially, because of the claims made by Mexico that irrigation in Colorado is proving an injury to her people and infringing privileges guaranteed them by treaty. If the results of this investigation apply to the Rio Grande, then any injury must be largely compensated by the return, and the greater regularity in the flow produced in the river.

Millions of Gold

In sight at Cripple Creek, Colo. Only twenty-three hours from Topeka by the Santa Fe Route, the only broad-gauge route passing right by the "Anaconda" and all the famous mines. See the nearest Santa Fe agent for all particulars, or write to Geo. T. Nicholson, G. P. A., Chicago, Ill., or W. J. Black, A. G. P. A., Topeka, Kas.

What Ails the Fair?

The general complaint of fair managers is that the people do not appreciate them sufficiently to patronize them. Experience is the same all over the country. The fair was made the subject of a paper recently read before a West Virginia farmers' institute, and since this paper gives in a farmer's way a farmer's views on the subject, we reproduce it, as follows:

"The question, 'Are our agricultural fairs profitable to our agricultural classes as at present conducted?' is one in which the farmers of our county have a deep interest. All persons, be they young or old, male or female, take delight in attending agricultural exhibitions. Among educational institutions the agricultural fair stands well up in the list. Here farmers and stock-raisers bring the products of their labor in comparison and competition with one another, and as 'iron sharpeneth iron,' so a man sharpeneth the countenance, and while the exhibits are kept within proper limits there is no question as to the profitable character of such exhibitions. But while there are many features of our fairs that are to be commended, there are many more (we had almost said very doubtful, but that is not the word) that are entirely out of place in such an exhibition. Perhaps our own West Virginia State fair is a fair sample of the fairs of our country, and if you please we will take a trip through the grounds of that exhibition, as shown at their last annual fair. We will enter the grounds at the main entrance, where we find the genial ticket agent, who kindly furnishes us a ticket for the small consideration of 50 cents. Passing to the right, along the row of sheep pens, we are surprised at the very meagre show of that once highly-prized and valuable animal, three or four pens, and all is told. Passing on to the quarters assigned to the hogs, and we have the same thing repeated, but a small representation of that valuable animal, which perhaps means more in dollars and cents to our farmers than any other class of domestic animals. Passing on to the cattle sheds we find a much better exhibit, and yet far below what we would expect at such an exhibition. Returning to the quarters assigned to horticultural exhibits we find a meagre display in comparison to the interests involved.

"The question arises, 'Why this state of affairs?' Why is it that so few of our stock-raisers or our fruit-growers or our agricultural classes in general are represented? Let us pass around the race track, and perhaps we will find a solution of the question. One of the methods by which the State Fair Association secures revenue is by selling special privileges, such as the right to sell whips, the pounding machine, where a man or a boy for a small consideration, etc., but let us take a look at this part of the exhibit. Just back of the halls we find a man screeching and hollowing and slashing with a whip. What is he doing? Oh, just selling whips, that's all, but he is making that part of the fair ground hideous with his ugly noise. Passing on a little farther we come to the man with the colored babies and balls. For the small consideration of 5 cents your boy can have the privilege of throwing a certain number of balls at the colored dolls. A small colored boy peeping through an opening in the canvas with the encouraging call to those participating in the fun, 'The harder you hits him the better he likes it.' Then we have the man with the canes and rings, a little harmless amusement that savors just the least bit of gambling. Passing numerous other small special privilege shows we come to the 'Midway show,' an exhibition for men only, an exhibition so vile that in Cincinnati the exhibitors were arrested, fined, and given a short time to leave the city; a show which has long since been banished from the lowest order of theatres of Boston, New York and other cities; an exhibit that would be more in place in Sodom and Gomorrah than at a State fair, where ladies in passing can scarcely help seeing the warning displayed, 'For men only.' It is a matter of congratulation

that some of our State fair officials have announced that the Midway performances were so near the extremes of the proprieties that in the future this attraction would be excluded from their grounds. We have not yet learned that our State fair officials have taken action in the premises. The patrons of the Indiana State fair were treated to the same abomination, and notwithstanding a strong hint from Governor Claude Matthews, who is found invariably on the right side of every moral question, they have so far failed to own up to the wrong they have inflicted on their patrons. But enough of this abomination. Let us pass on down by the grand stand. Passing to the rear of the stand the uninitiated would stop and wonder why such a jam. On closer inspection he will find that this is where Gambrinus holds his revels. Beer in untold quantities is being dispensed to the droughty customers. Island water, you know, is awful bad, and for a change we will take Fulton water mixed with sour mash. But, oh, my! this noise makes my head ache; let us go. We come to the lower end of the grand stand and—what's that thing? Some one posted says, 'That's a wheel of fortune.' On inquiry we find that the fortunate possessor of \$1 lays it down on the table, gives the wheel a turn and takes up \$5, that is, if he is in luck; if not in luck (which is the case nine times out of ten) he leaves the dollar and takes its value in experience. In this neck of the woods gambling is carried on in full blast. Wheel of fortune gambling, race track gambling, is carried on here in the most public and shameless manner, with none to molest or make afraid. Why should they be afraid? Have they not paid for their privilege to the West Virginia State Fair Association, and who dare interfere? They can snap their fingers at West Virginia's laws against gambling and go on in their base attempts to rob your boy and mine of their hard-earned pennies and dimes, and why are such things permitted? Simply that the West Virginia State Fair Association may fill its coffers. If this very laudable purpose be accomplished, what matter it how many boys are ruined, how many introduced into the mysteries of the gambler's paradise? Now we will pass on and take a look at the horses, and if you will keep your eyes open you may see the small gambler with his shell racket, but he must keep dark or the cops will pull him in. He's only a small affair and doesn't stand in with the big fish. There he is! Let's take a look! He has a few shells and a little ball. 'Now we'll stir 'em about and stir 'em about, and I'll bet you a dollar you don't know where the ball is,' but he has purposely left it under the edge of a shell where Mr. Hayseed can see it, and he bites, and lo! Hayseed gets the shell man's dollar. But we must try again. Mr. Hayseed feels somewhat elated over his success, and he gives very close attention while Mr. Sharper stirs the shells and ball about and then calls out, 'I'll bet you \$5 you don't know where the ball is now.' Now, Mr. Hayseed knows just where that ball stopped. He has a sure thing on that \$5, so he sets up his V, and lo, the ball wasn't there. Mr. Sharper picks up his traps and goes on his way looking after fresh fish, leaving Mr. Hayseed staring into vacancy and wondering how it happened, anyway?

"It is now, 2 o'clock, and the races are on, and if we want to see the horses go we had better take a seat in the grand stand. We pass up another 25 cents to the agent of the West Virginia State Fair Association, and present our ticket and pass in; but oh! what a jam. Why, we can't get a seat. Well, we can watch our chance and stand. There they go. No they don't. Well they will next time. Now that looks like a start, but its no go yet. And so it goes, until you leave, weary and disgusted.

"Now, have I not accounted for the very limited show of farm stock? Who wants to be at the trouble and expense of exhibiting fine stock at a fair where it only takes second or third place in the attractions, and where the bulk of

the premiums go to the fast horse and his still faster owner.

"Now how many farmers are there in Ohio county who wish to endorse the acts of the West Virginia State Fair Association by exhibiting their stock and in other ways patronizing it? The writer was present at a meeting of a farmers' club near Roney's Point when we were honored by a visit from two gentlemen, representatives of the West Virginia State Fair Association who were soliciting subscriptions to stock. They were recommending the stock and in doing so stated that one method of securing income would be by selling special privileges. An innocent member of the farmers' club suggested that this might include the right to run a speak-easy or to sell beer. One of the gentlemen at once replied: 'No, sir, if you come down there with an application for privilege to sell beer, we'll tell you no sir, you can't do it.' The member subscribed, blushed and sat down amid roars of laughter from his fellow members.

"They sold a number of shares before they left, but some way the laugh soon got on the other side. * * * Perhaps I have not answered the question as explicitly as might be done. I have endeavored to show some of the abuses to which our fairs are subject and which also militate against farmers participating in them as they would wish to do were they conducted in a manner that would not be deleterious to the best interests of themselves and their families.

"To the young man or boy it may seem a small matter. You may say it is but a small thing to witness a horse race, or, perchance, make a small stake on the result of the race, and yet the principle of gaming, of taking that for which no just compensation is rendered, is involved. Selfishness, which is the controlling impulse of the gamster, is exemplified in your case on a small scale, and may be compared to lion's cubs—playful as kittens and as harmless, but let them mature and they become the terror of whole communities. Men do not become gamblers at one bound. Little by little, step by step, the approach is made from what seems an innocent little venture to the act of the full-fledged gambler. There is no class of transgressors that seems to degenerate so rapidly as the gambler, and it matters not whether his gambling is done at the faro table or at a horse race, the principle is precisely the same. He is reaching for his neighbor's money without giving any just equivalent, and no matter how small the transaction the principle is precisely the same; the one is the blossom, the other the matured fruit."

Young men or old should not fail to read Thos. Slater's advertisement on page 15.

Enclose a stamp to any agent of the Nickel Plate road for an elaborately illustrated art souvenir, entitled "Summer Outings." Address J. Y. Calahan, General Agent, 111 Adams street, Chicago, Ill. 110

DEMOCRATS.

Your attention is called to the following announcement: The Transportation Committee of Democratic Delegation to National Convention at Chicago, consisting of Messrs. J. G. Johnson, Frank Bacon, Chas. Stackhouse, L. C. Stine, T. J. O'Neal, have selected the A., T. & S. F. as the official route to the National Convention of 1896.

We have arranged to leave Kansas City by special train over the Santa Fe line at 7 p. m., Saturday, July 4, reaching Chicago Sunday morning at or about 9, where we will proceed direct to the Leland hotel, but a few blocks from the A., T. & S. F. depot, where accommodations have been reserved for the Kansas delegation.

You will note the leaving time from Kansas City of our special will enable those located on other lines to reach Kansas City before our departure.

We are especially desirous of having all Democrats and their friends arrange to join this train, so as to send a solid delegation to Chicago which will be a credit to our State.

First-class Pullman sleepers, chair cars and dining cars will be attached to the train, insuring comfort for all who join us.

It would be advisable to notify Mr. W. J. Black, A. G. P. A. Santa Fe Route, Topeka, Kas., as soon as possible what reservations are desired in sleepers or chair cars by yourself and friends.

If you are not located on the A., T. & S. F. line, see that your ticket reads via that line between Kansas City and Chicago.

THE STRAY LIST.

HOW TO POST A STRAY.
THE FEES, FINES AND PENALTIES FOR NOT POSTING.

BY AN ACT of the Legislature, approved February 27, 1886, section 1, when the appraised value of a stray or strays exceeds ten dollars, the County Clerk is required, within ten days after receiving a certified description and appraisal, to forward by mail, notice containing complete description of said strays, the day on which they were taken up, their appraised value, and the name and residence of the taker-up, to the KANSAS FARMER, together with the sum of 50 cents for each animal contained in said notice. And such notice shall be published in the FARMER in three successive issues of the paper. It is made the duty of the proprietors of the KANSAS FARMER to send the paper, free of cost, to every County Clerk in the State, to be kept on file in his office for the inspection of all persons interested in strays. A penalty of from \$5 to \$50 is affixed to any failure of a Justice of the Peace, County Clerk, or proprietors of FARMER for a violation of this law.

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

No persons, except citizens and householders, can take up a stray.

If an animal liable to be taken up, shall come upon the premises of any person, and he fails for ten days, after being notified in writing of the fact, any other citizen and householder may take up the same.

Any person taking up an estray, must immediately advertise the same by posting three written notices in as many places in the township, giving a correct description of each stray, and he must at the same time deliver a copy of said notice to the County Clerk of his county, who shall post the same on a bill-board in his office thirty days.

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

The Justice of the Peace shall within twenty days from the time such stray was taken up (ten days after posting) make out and return to the County Clerk, a certified copy of the description and value of such stray.

If such stray shall be valued at more than \$10, it shall be advertised in the KANSAS FARMER in three successive numbers.

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

If the owner of a stray fails to prove ownership within twelve months after the time of taking, a complete title shall vest in the taker-up.

At the end of a year after a stray is taken up, the Justice of the Peace shall issue a summons to three householders to appear and appraise such stray, summons to be served by the taker-up; said appraisers, or two of them, shall in all respects describe and truly value said stray, and make a sworn return of the same to the Justice.

They shall also determine the cost of keeping, and the benefits the taker-up may have had, and report the same on their appraisal.

In all cases where the title vests in the taker-up, he shall pay into the County Treasury, deducting all costs of taking up, posting and taking care of the stray, one-half of the remainder of the value of such stray.

Any person who shall sell or dispose of a stray, or take the same out of the State before the title shall have vested in him, shall be guilty of a misdemeanor and shall forfeit double the value of such stray and be subject to a fine of \$20.

FOR WEEK ENDING JUNE 18, 1896.

Sedgwick county—A. M. Denny, clerk.

MARE—Taken up by C. C. McMurray, in Greeley tp., May 11, 1896, one sorrel mare, 3 years old, white stripe in face, weight about 700 pounds; valued at \$15.

Atchison county—Chas. H. Krebs, clerk.

HEIFER—Taken up by Ben Torkelson, in Grass-hopper tp., (Invermay P. O.), May 4, 1896, one red heifer, white flanks, 2 years old; valued at \$15.

PONY—Taken up by George T. McLennon, in Lancaster tp., (Edinburgh P. O.), May 20, 1896, one bay horse pony, some white on left nostril, small white spot on forehead, white hind feet, about fourteen hands high, about 3 years old; valued at \$15.

Logan county—J. F. Light, clerk.

MARE—Taken up by C. S. Franklin, in Russell Springs tp., (twelve miles southwest of Russell Springs), May 21, 1896, one brown mare, with collar marks, no brands, 12 years old; valued at \$10.

MARE—By same, one bay mare, white face, lump on right jaw, right hind foot white, no brands, 6 years old; valued at \$25.

FOR WEEK ENDING JUNE 25, 1896.

Crawford county—John Ecker, clerk.

HORSE—Taken up by Thos. Walsh, in Grant tp., (P. O. Brazilton), April 30, 1896, one bay horse, 12 years old, white hind feet and white face, branded C. on left shoulder and O. on right hip, had on halter; valued at \$10.

HORSE—By same, one roan horse, 8 years old, white face, spavin on left hind leg, had on halter; valued at \$10.

Hodgeman county—S. S. Kiehl, clerk.

HORSE—Taken up by Nelson Dean, in Center tp., (P. O. Jetmore), May 13, 1896, one bay horse, fourteen hands high, weight 1,000 pounds, right hind foot and left fore foot white, blaze face; valued at \$10.

Labette county—J. F. Thompson, clerk.

MARE—Taken up by G. W. Hart, in Canada tp., May 23, 1896, one sorrel mare, 5 years old, branded B on right shoulder, had on raw-hide halter; valued at \$15.

Cherokee county—T. W. Thomason, clerk.

STEER—Taken up by T. M. Gilmore, in Junction tp., (P. O. Overbrook), April 30, 1896, one red and white two-year-old steer, no marks or brands.

Osage county—E. C. Murphy, clerk.

MARE—Taken up by S. E. Harrold, in Salamanca tp., May 1, 1896, one dark bay mare, star in forehead, right hind foot and right front foot white, about 12 years old; valued at \$5.

FOR WEEK ENDING JULY 2, 1896

Riley county—James R. Young, clerk.

COW—Taken up by F. H. Dale, of Manhattan city, June 6, 1896, one small red cow, 3 years old, some white on hips and belly; valued at \$15.

Shawnee county—Chas. T. McCabe, clerk.

CALVES—Taken up by W. G. Kinnard, in Menoken tp., (P. O. Elmont), two red steer calves with some white spots, branded T on right hip; one red and white spotted steer calf with red neck, branded T on right hip; one black steer calf, branded T on right hip; one black heifer calf with white spots, branded T on right hip; all are supposed to be from three to nine months old; valued at \$35.

Crawford county—John Ecker, clerk.

MARE—Taken up by W. D. Nance, in Lincoln tp., (P. O. Englevalle, care J. A. Cunningham), June 2, 1896, one dark bay mare, 9 years old, small scar on left hip.

HORSE—By same, one dark iron-gray horse, 4 years old, small white spot on forehead.

The Home Circle.

TYING HER BONNET UNDER HER CHIN.

Tying her bonnet under her chin,
She tied her raven ringlets in;
But not alone in the silken snare
Did she catch her lovely floating hair,
For, tying her bonnet under her chin,
She tied a young man's heart within.

They were strolling together up the hill,
Where the wind comes blowing merry and chill;
And it blew the curls, a frolicsome race,
All over the happy, peach-colored face,
Till, scolding and laughing, she tied them in
Under her beautiful dimpled chin.

And it blew a color, bright as the bloom
Of the pinkest fuschia's tossing plume,
All over the cheeks of the prettiest girl
That ever imprisoned a romping curl,
Or, tying her bonnet under her chin,
Tied a young man's heart within.

Steeper and steeper grew the hill;
Madder, merrier, chillier still
The western wind blew down, and played
The wildest tricks with the little maid,
As, tying her bonnet under her chin,
She tied a young man's heart within.

O, western wind, do you think it was fair,
To play such tricks with her floating hair?
To gladly, gleefully do your best
To blow her against the young man's breast,
Where he as gladly folded her in,
And kissed her mouth and dimpled chin?

Ah! Ellery Vane, you little thought,
An hour ago, when you besought
This country lass to walk with you,
After the sun had dried the dew,
What perilous danger you'd be in,
As she tied her bonnet under her chin!

—The Late Nora Perry.

DAINTY BEDROOMS.

Quaint, Cool Apartments Furnished in Blue and White.

White enamel bedroom sets are as fashionable as ever for the bedrooms of country houses. The surface is either of plain enamel with brass trimmings, or with decorations of Delft blue in the form of little landscapes, showing where pretty blue bridges stretch over equally pretty blue streams where there are boats on the water and windmills by the shore, or bachelor-buttons are painted in clusters or scattered singly over each piece. The blue decorations may be conventional in design and take the form of empire wreaths of leaves or flowers, or of scrolls.

Often a few decorated pieces, a toilet table and a chair or two, or perhaps a cheval glass, may be the only decorated pieces used with a plain white set. Again, the blue may only appear in the wall paper or hangings, or in the mantel ornaments and clock and lamp shades, which may be of Delft blue and white. The light through the globe-shades of Delft blue and white is particularly pleasing when it lights up a really good little view of land and water. These shades are, however, high-priced. On the low-priced shades the drawing is very poor, and the boats ride in the sky, and the windmills occur in most impossible places and positions. These blue and white shades look their best on lamps of wrought iron. When blue and white is not chosen for a bedroom, green and white, old pink and white, or violet and white are cool-looking colors to put together. Often a young woman who can paint flowers well decorates a window seat, a rocking chair and a writing desk for herself. Such a room is charming when the decorations are violet and the white wall paper is also scattered with the same flowers, with many of them in a festooned frieze where there are many green leaves. This extreme daintiness of coloring should, however, only be chosen for a room where the maids who care for the house or the maiden who occupies it has leisure to keep it immaculate. When a light coloring is desired, and white is not liked, curly birch and bird's-eye maple are both used for bedroom furniture. White furnishings have most opposite effects on different persons. One woman who has a white room finds its glare tiresome, another thinks it restful.—St. Louis Republic.

Should Women Promise to Obey?

A dozen or so of San Francisco clergy men have been expressing their opinions on that objectionable clause of the marriage service that binds the woman to "obey." Their solemn decision, which will be a welcome one to western brides, is that the word and its implications are repugnant and that obedience will be optional with the woman of the future.

An Accomplished Musician.

The queen of the Belgians plays the harp exquisitely.

EMPIRE LAMP SHADES.

They Are All the Rage and, Thank Goodness, Easily Made.

Draped lamp shades are no longer the most fashionable things of their kind. A more inexpensive, and at the same time a more easily made-at-home kind, is now to be used. It is called the "Empire," as most decorative house furnishings are called now. The handsome lamp shades, flaring very much at the



FIG. 1.—SHADE SHAPE.

bottom, made of crinkled paper, silk, flowers, fringe, etc., are quite expensive, so that they are only suitable for piano or banquet lamps among people who are able to stand the expense. The new "tub" shades may be made of white or tinted heavy, plain paper or light cardboard, cut to shape, and the two ends fastened together with a small wire clamp such as is used in offices to hold manuscript together. So they are extremely inexpensive. They have to be used on wire frames on the lamps, like other shades, of course, but those of the right shape and size can now be had as cheap as any. Indeed, a very little ingenuity will enable anyone to make the wire frame herself. These little lamp shades may be made as pretty as desired by a little painting in water colors, pin-tracing or India ink outline sketching. The end fastenings may be concealed by rosettes or butterfly bows of ribbon. The materials used are so inexpensive that even if they do scorch at the upper edge soon, they can readily be replaced by new ones. I have tried them and like them very much. They

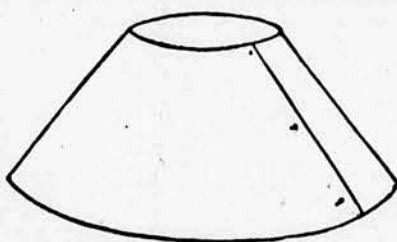


FIG. 2.—SHADE FASTENED AT ENDS.

will not scorch easily as they are so roomy at the top. I give the shape in the figures. The size must be regulated by size of lamp. For a large piano or parlor lamp, 24 inches diameter at the bottom is about correct with about 15 for depth between top and bottom of shade. The diameter of the upper edge should not be much less than that of the bottom. If anyone has an old-fashioned candelabrum with two or more sockets for candles, tiny "tub" shades can easily be made to fit them. Make them of "water color" paper, if you paint, powdered with small Dresden flowers. A yard and a half will make several small or one good-sized lamp shade. If you cannot paint, cut out a leaf and flower design from gold or silver paper, and paste on.—Ohio Farmer.

PREPARATION OF BEEF.

Some Practical Suggestions Regarding the Selection of Meat.

Beef is not only the most wholesome, but the most economical meat for a family. In choosing good meat it is well to be sure that the grain is smooth rather than open, and that the lean is of a fresh, bright red color. The fat should look white rather than yellow, and in young beef, which is the more tender, the fiber is elastic and rises when pressed with the finger.

The prime pieces of beef are the sirloin, the ribs and the round. The two first are usually roasted; the brisket and the shoulder are best for boiling or stewing. A delicate and tender steak is sometimes made from the inside or fillet of the sirloin. It should never be pounded, which is a vain attempt to make tough meat tender by bruising its fibers. If beef is intended for boiling, it is usually rubbed over with a little salt. A tablespoonful of vinegar added to the water will render it quite tender.

The loss of weight in cooking meat is from one-fifth to one-third, which is chiefly water, and beef shrinks considerably less than some other kinds of meat. Lean beef contains 72 per

cent. of water, and fat beef 51 per cent.

Roast beef is digested in three hours; salt beef requires four and a quarter to four and a half hours.

The great point in cooking meat is to render it tender without extracting the juices, and it is better to cook it slowly, so that the loss shall be only water. But it should first be subjected to a high heat, thus coagulating the surface albumen so as to retain the juices.

The usual time for roasting is calculated at a quarter of an hour for each pound of meat, and it should be frequently basted. When serving, the dish should be handsomely garnished.—Cincinnati Enquirer.

SCRUBBING MACHINES.

A New Device Which Saves Lots of Hard and Disagreeable Work.

Judging by the rate at which inventors are busying themselves in devising appliances for saving domestic labor, there will soon be little left for the housemaid to do. "Housemaid's knee," at all events, is a thing of the past, and the floor scrubbing of the future is to be done by machinery. In the course of time, the scrubber will undoubtedly be connected up to the electric motor, which does the rest of the household work, but in houses unprovided with the electric plant the machine will in the meantime be operated by hand. It is something like a lawn mower, and runs on four wheels. Above the two front wheels is a tank, which contains clear water, that may, of course, be heated, if necessary. The water is supplied to rotary brushes at the bottom of the machine, and these, revolving in an opposite direction to the motion of the machine itself, scrub the floor. The dirt and water are carried into another tank over the two back wheels. The wiping apparatus consists of an endless band of absorbent material, made specially for the purposes. This band is pressed on the floor by rotary brushes, so that the cloth accommodates itself to the inequalities of the floor. The cloth is rinsed and squeezed out automatically as it leaves the floor and passes through the tank at the back. It is not necessary to sweep the floor before scrubbing.

TO COOK CORNMEAL

When Properly Prepared It Is a Healthy Article of Food.

Women have always been more or less willing to show their skill in making cake and fancy desserts, but it is only recently that they have appreciated the value of good cookery. The simple, every-day things are usually considered of the least importance, and entirely neglected. Even the cook books give little, and some no information, about the things everybody should know. Among these is cornmeal. When it is properly prepared it is a healthy article of food. But as it is often cooked it is indigestible and unfit for even a strong stomach. The usual way of making cornmeal mush, for instance, is to stir the meal, without measuring it, into boiling water until it is thick, and when it has cooked five or ten minutes it is done. By this process it is hard and raw, and wholly unfit to eat. It is surprising how much it is improved by a little extra cooking, and it can be made a delicacy with very little trouble.

Take one quart of water, add one teaspoon of salt. When it boils stir in slowly one cup of yellow cornmeal. Let it boil for ten minutes, then set it back on the stove, where it will cook slowly and not burn, for one hour, stirring occasionally. Pour into a mold and let stand over night. In the morning it will be firm enough to slice well, and when it is dipped in grated bread crumbs and quickly fried it will be a pleasant surprise to those who have been accustomed to eating it the old-fashioned way.

Corn-bread, or "Johnny cake," as it is often called, is greatly improved by the following directions:

Put the milk that the recipe calls for on the stove, and when it is hot stir in the cornmeal and let it cook for ten or 15 minutes. An easy way to prevent it from burning is to set the dish on an asbestos pad. This extra cooking removes the raw taste of the meal, and greatly improves the flavor of the bread, besides making it entirely digestible.—Chicago Tribune.

Fad for Pocketless Woman.

Very many beautiful batiste and grass linen handkerchiefs have exquisite borders of Point de Venice or Irish lace. The handkerchief is worn tucked under the sleeve at the wrist and falls out, partially covering the hand. It is a caprice which, though a bit odd, is a novel idea, and therefore will outweigh every other consideration among women.

How to Make Mince Scallops.

A nice way to utilize cold meat is to cook one tablespoonful of onion cut fine in two tablespoonfuls of butter, until it turns a golden yellow. Add one cup of fresh bread crumbs, one cup of cooked meat chopped fine, one saltspoon of salt, a half saltspoon of pepper, a quarter saltspoon of nutmeg and one teaspoon of thin, yellow rind of lemon, and a half cup of water or weak stock. Allow to simmer five minutes. To this add two well-beaten eggs. Serve on thin slices of brown bread or between two square crackers.

How to Clean Glass Globes.

Try washing glass gas shades or globes with tepid water in which a little soda and blue have been dissolved. Turn down to drain, wipe with soft, dry leather. If the globes should have the least crack or flaw in them be very careful to keep your hands well protected with the towel when drying them, as if the glass were to "fly" suddenly a painful and perhaps dangerous cut might result. When adjusting globes never screw them tight, or they are certain to break when the gas is lighted, as glass expands with heat.

How to Wear Your Handkerchief.

There is always a right and a wrong way to carry one's handkerchief, as to do everything else. Just now the only proper way is to tuck the little square of linen and lace in one's sleeve at the wrist, allowing it to fall and partially conceal the hand, somewhat after the manner of the pretty wrist flounces on the new sleeves. Do not commit so marked a breach of good form as to tuck your handkerchief in at any part of your bodice, but if you want to get the full ornamental value from its pretty border of point de venise or Irish lace, no more effectual method could be devised than this newest fashion. The single consideration, however, that it is a new idea is perhaps having most weight with the majority of women, who are rapidly converting the fashion into a fad.

Special Fourth of July Rates.

The Missouri Pacific will sell tickets on July 8 and 4, limited to the 6th for return, between all stations within 200 miles distance, at rate of one and one-third fares for the round trip.



FORTY FOR \$1.00.

For the next 30 days we make this extraordinary offer on our HIGH-ARM SINGER MACHINES. On receipt of \$1 we will send our No. 3 High Arm on 30 days' trial (price \$12.25), or our No. 1 (price \$16.75). Our machines are the best made; our No. 1 beats the world; 10 years' guarantee with each. Deal with a reliable house; buy at factory prices. H. R. Eagle & Co., 70 Wabash, Chicago.

Sparkling with life—rich with delicious flavor, HIRE'S Rootbeer stands first as nature's purest and most refreshing drink. Best by any test.

Made only by The Charles E. Hires Co., Philadelphia. A 25c. package makes 5 gallons. Sold everywhere.



BRIGHT'S DISEASE

can be cured by using

Dr. J. H. McLEAN'S LIVER AND KIDNEY BALM

The Peerless Remedy

For Sale at Druggists. Price, \$1.00 Per Bottle

THE DR. J. H. McLEAN MEDICINE CO. ST. LOUIS, MO.

The Young Folks.

A PLOVER ON GUARD.

O, little plover, still circling over
Your nest in clover, your house of love,
Sure none dare harm it, and none alarm it
While you are keeping your watch above.

'Tis she doth love you and well approve you,
Your little love-bird, so gray and sweet;
If hawk and falcon swept down above you,
'Tis she would trust you the twain to meet.

Now let me pass, sir, a harmless lass, sir,
With no designs on your eggs of blue.
I wish your family both health and wealth,
sir,
And to be as faithful and kind as you.

But not a shadow steals o'er the meadow
That he will swoop not to drive away;
The bee in clover and wind the rover
He fears mean ill to his love in gray.

The showers so sunny and sweet as honey
Have power to trouble his anxious breast.
Now might one purchase for love or money
That watchful heart and that pleasant
nest!
—Katharine Tynan Hinkson.

MR. JUSTICE SKIPPIE.

How He Got the Baseball Mask He Had
Coveted for a Long Time.

Most of the boys envied "Skippie" because his father owned the house he lived in, and back of it was a large yard. They all called him "Skippie" because his full name was Samuel Carl Ivers Partridge, and anyone will admit that S. C. I. P. is "Scip."

Skippie had deep red hair and freckles all over his jolly face. He was chunky and, if the truth must be told, rather lazy. But he could play baseball and had enough curves to puzzle any batsman. Put a baseball in Skippie's hand and his laziness vanished as rapidly as did the pumpkin pie when Skippie and his chum crawled through the pantry window.

Skippie hated the back yard that so much delighted the other boys. It had a small flower garden in it and plenty of good grass, with posts here and there for the clothesline. The coal shed was built up against the back fence, and the barn filled in the rest of the alley side of the yard. Skippie was expected to keep that back yard clean, cut the grass, weed the little flower garden and split the wood. His mother used up a heap of kindling wood, Skippie thought, and it seemed to him that he did nothing all day long but go to school, wash his face and split wood.

But there was one jolly thing about the back yard. It was the gathering place for the boys of the neighborhood, and once in awhile, when they wanted Skippie in a ball game, they pitched in and helped him split kindling wood.

One Saturday Billie Banks climbed over the woodshed and found Skippie sharpening a brand-new ax. He begged to be allowed to help. Skippie turned the ax over to him and sat down on a starch box to watch him. About the time that Billie had given the ax a sharp edge Tom Johnson appeared, and he wanted to sharpen the ax. Then Jack Young came along, and one boy after another held that new ax to the grindstone until it had been given a dozen different kinds of edges.

All this time Skippie was sitting on the starch box enjoying himself and



"WHAT HAS HE DONE?"

thinking harder than he had ever thought before.

"I went to a justice court yesterday," said he, finally.

"Jiminie! I wish I had been with you," said Tom Johnson.

"So do I," cried Billie. "Did they send some man up for life?"

"No; the judge fined him five dollars and costs."

"Say," cried Tom Johnson, who had climbed a clothesline post, "let's play police and justice and have an arrest and run out the police patrol wagon."

I'll go get my wagon," and he was off like a flash.

When he returned with his wagon he found Skippie sitting in a kitchen chair with a big box in front of him for a desk. Billie had turned his coat wrong side out and said he was to be a prisoner. Jack Young, Percy Pillows and Roger Martin had tied ropes around their waists in which were stuck clubs of wood. They were the policemen and the other boys were jailers, policemen and bailiffs and prisoners. Skippie had been made justice of the peace because he had been to court, and when he said "go" the boys who were to be hunted by the police darted out into the alley through the barn and hid.

Soon the patrol wagon dashed out on a riot call sent in by a policeman who had caught Billie.

"What is your name?" said Justice Skippie.

"Billie Banks."

"What has he done?" asked the justice of the policeman who made the arrest.

"I told him to move on, and he wouldn't."

"Ten days at hard work in the bridge well," was the sentence. "Take him to the woodshed and make him split kindling wood until I say 'stop.'"

And Billie was soon splitting wood, while two policemen guarded him to see that he did not escape.

The next boy arrested was made to rake the grass in the back yard, and the next to weed the garden, and the next to split wood, and before the game was finished, Skippie had three weeks' supply of kindling wood neatly piled up in the woodshed; the yard had been cleaned three times; every weed in the flower garden was in the garbage box in the alley, and the gravel walk was as neat as a pin. And Skippie did not open his mouth when his mother said to his father that night: "Samuel has been very industrious to-day. I wish you would go out and look at that back yard; it is simply beautiful," and his father smiled and said:

"Well, I guess I'll have to get you that baseball mask next week."—Chicago Record.

How Eskimos Trap Wolves.

Field and Stream tells of a curious way by which Eskimos catch wolves. They plant a stake in the ice, with a sharp piece of flint on the end, which is wrapped with seal or other blubber. Along comes the wolves and go to licking the frozen blubber. After awhile they get down to the flint and cut their tongues on it. Being ravenously hungry, when they taste the warm blood they fall to and chew the life out of one another. The familiar trick of putting a bent piece of sharpened whalebone into a ball of blubber which is released by the heat of the animal's stomach, is much less effective than the flint stake, because nearly whole packs of wolves are killed by the latter device.

A Clock Made of Bread.

Bread is the most curious material out of which a clock has ever been constructed. There was, and may still be, in Milan, a clock made of bread. The maker was a native of Milan, who devoted three years of his time to the task. He was very poor, and being without means to purchase the necessary metal for the making of a clock, he set apart regularly a portion of his bread each day, eating the crust and saving the soft part. To solidify this he made use of a certain salt, and when the various pieces were dry they became perfectly hard and insoluble in water. The clock was of good size, and kept fair time.

A Swiss Watch That Speaks.

A wonderful mechanical contrivance is announced from Switzerland in the shape of a watch that calls out the hours in a voice like that of a human being. This mechanical curiosity is the invention of one Casimir Livan, who based its principles upon his knowledge of the workings of the phonograph. The case, instead of containing a striking apparatus, as some of the late costly watches do, is provided with a phonographic cylinder, which is fitted with a sensitive photographic plate, which has received the impression of a human voice before being inserted in the watch.

Hall's Hair Renewer contains the natural food and color matter for the hair, and medicinal herbs for the scalp, curing grayness, baldness, dandruff and scalp sores.

TWO FAMOUS CATS.

Scratch Saved a Baby's Life and Felice Was a Great Thief.

The well-known cats of unknown men cannot fail to interest our readers. I have met many famous cats at one time and another. I have studied them, too. Of all animals the cat is really the most affectionate of household pets. Many will dispute this, but I can prove—but that's another story.

The best-known cat of the least known man that I ever heard about was a shrunken bit of fur and bones called Scratch. She belonged to a ragpicker who lived in a Mulberry street cellar. Scratch lost one of her nine lives by being run over by an ice cart, and was taken to police headquarters by a kind-hearted policeman. At police-headquarters Scratch made friends with ex-Superintendent Byrnes, who took a great fancy to the skeleton cat and made a sleek puss out of her. And then Scratch went back to her Mulberry street home and began to exhibit her bones again.

In one way and another Scratch got rid of her eight remaining lives, and then came to an untimely end in a Chatham Square fire. Everybody was talking about Scratch for a week after she was burned to death, for she was a



FELICE, THE THIEF.

true hero. An Italian baby was in the flaming building and Scratch sat on the window ledge and waited to the firemen below. When they finally paid attention to the cat she leaped back into the burning room, followed by a fire-Johnny, who discovered the baby and brought it safely to earth. But the cat didn't come back in this case. Her charred corpse was found in black ruins next morning.

Another noted feline, whose master was among the obscure of earth, was Felice, whose extreme fondness for fish led her to commit burglary and theft. Felice had her home in a cheap restaurant on Sixth avenue, and her chief duties were to keep the eating place free of four-footed vermin. Felice's master was a Frenchman, and he was the keeper of the restaurant. One day Felice wandered over to Fifth avenue, and made her way through a back door into a very swell mansion. Inside the palatial house Felice crept upstairs and unconsciously herself snugly in a fine bed of beautiful lace and linen, after the fashion of Garvey. After a quiet nap Felice made an inspection of her quarters and thought them better than the grimy kitchen of the Sixth avenue shop.

Then she espied a bowl in which swam half a dozen gold fish placid in their luxury. Felice knew fish when she saw it, and promptly ate two of the shiny, finny creatures. Her eagerness caused her to upset the globe, and then chaos reigned in the mansion. Servants chased Felice, and the latter escaped unharmed and died of old age the other day—and in Brooklyn.—N. Y. Recorder.

Bess is one of those astute juvenile autocrats who seem gifted with the power of knowing the secret and extent of their dominion over indulgent relatives. "Oh, no!" she was one day overheard to confide to another small girl. "Grandma can't make me mind, at all, but grandpa knows how to manage me." "How does he do it, Bess?" asked the interested male cousin, who had been eavesdropping in a corner of the piazza. "Why," replied Bess, gravely, "he waits until he sees what I'm going to do, and then he tells me to do it!"

PUGNACIOUS PLANTS.

How Nature Has Provided All Sorts of Living Things with Weapons.

Cats have claws, dogs have sharp teeth, porcupines have needle-like quills, small boys have fists and bees have little arrows with which to protect themselves when an enemy attacks them. Nature has provided all sorts of living things with weapons.

Even plants are soldier-like, and carry with them all the implements of war. There is the hawthorne, the locust and the orange trees, armed to the teeth with savage spears, which they stick into the enemy that seeks to destroy them. The gooseberry bush is full of needles, and the sword grass of the swamps carries sharp knives with which to cut any animal rash enough to eat it.

Of all these soldier plants, perhaps the most interesting is the nettle; for it arms itself, like the giant savages of Patagonia, with poisoned arrows. When it enters a vacant lot and begins to grow in thick clumps, choking out other weeds and grasses, the cattle let it entirely alone. They know how warlike it is; and the boys and girls don't try to pick it, for they have been nettled, and know how it feels.

The nettle plant is like the porcupine. It carries millions of arrows which it is ready to use whenever the enemy appears. These arrows, with the tiny hairs, barely large enough to see unless one looks very closely, have a broad base made up of a large number of little cells and a long, needle-shaped point, having at its tip a bulb or ball. When the small boy touches the nettle plant—he doesn't intend to, of course—the little bulb-like point cuts a small hole in his hand, and then, being very brittle, it breaks off.

That leaves a hole in the end of the arrow, and the plant shoots out a charge of thick, sirupy liquid, called protoplasm, into the cut in the boy's hand. This protoplasm is poison, and it isn't long before it has begun to work and the small boy's hand has begun to itch. Then he says he has been stung, and he takes care next time not to get into trouble with the warlike nettle.

The cactus also carries weapons with it, but they are entirely different from the poisoned arrows of the nettle, for the cactus fights with ugly-looking barbed spears, so small that they can hardly be seen, although, as many a youngster knows to his sorrow, they can be felt very readily.—Golden Days.

How's This!

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Props., Toledo, O.

We, the undersigned, have known F. J. Cheney for the last fifteen years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm.

WEST & TRUAX, Wholesale Druggists, Toledo, O. WARDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price, 75 cents per bottle. Sold by all Druggists. Testimonials free.

FREE! A DRESS. Every woman who reads this can get a dress FREE by writing at once to L. N. Cushman & Co., Boston, Mass.

FREE trial in your home. Cut this out and send for catalogue. Prices to suit you. Oxford Sewing Machines awarded World's Fair Medal. DOES WHAT ANY WILL DO. FULL SET OF ATTACHMENTS. YEAR GUARANTEE. FREIGHT PAID. ADDRESS: OXFORD MFG. CO., 240 Wabash Ave., CHICAGO.

BRASS BAND
Instruments, Drums, Uniforms, Equipment for Bands and Drum Corps. Lowest prices ever quoted. Fine Catalog, 40 Illustrations, mailed free. It gives Band Music & Instructions for Amateur Bands.
LYON & HEALY,
Cor. Adams St. and Wabash Avenue, Chicago, Ill.

FREE A GENUINE 14 K. GOLD-FILLED WATCH and chain to every reader of this paper. Cut this out and send it to us with your address and we will send you FREE for examination the Best and Only Genuine American watch ever offered at this price. It is 14k. Solid Gold filled, with Genuine American Movement, 30 Years' Guarantee, and looks like a Solid Gold Watch sold at \$40. Examine at express office and if you think it a bargain, pay \$7.50 and express charges, otherwise pay nothing. A Handsome Gold Plated Chain, sold in certain stores for \$3 goes free with each watch.
OUR GRAND OFFER.
One of these \$7.50 watches and a chain, if you buy or sell SIX. Write to-day, as this price holds good for 60 days only. ROYAL MFG. CO., 607 Unity Bldg., Chicago, Ill.

Topeka Business College
TOPEKA, KAN. BEST BUSINESS, SHORTHAND, PENMANSHIP COURSES.

KANSAS FARMER.

ESTABLISHED IN 1863.

Published every Thursday by the
KANSAS FARMER COMPANY.OFFICE:
No. 116 West Sixth Avenue.

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 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 cash with the order; however, monthly or quarterly payments may be arranged by parties who are well known to the publishers, or when acceptable references are given.

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

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

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

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

The program for the "First National Co-operative Congress," to be held at St. Louis, July 24 and 25, is received. A number of eminent names appear.

Samples of alfalfa brought to this office by Shawnee county farmers remove all doubt as to the success of this great forage plant in this part of Kansas. L. C. Waters, of Berryton, brings a sample of second crop—first crop cut three weeks ago. The second crop is now nearly two feet high. It has made a growth averaging at least an inch a day.

In his address to the English Co-operative Congress, last month, the Earl of Winchelsea said that within thirty miles of the heart of London 20,000 acres of good land could be had rent free or could be bought at a nominal price. But in the discussion on co-operative agriculture it was freely maintained that even if farms were given free of cost they could not be made to yield a profit because of foreign competition.

"Belvidere Illustrated" is the title of a tasty and artistic book by the National Sewing Machine Co. This company, which makes sewing machines and bicycles of the highest grade and sells them at reasonable prices, is the leading institution of the town. It produces the sewing machines furnished by the KANSAS FARMER to its subscribers. There is no more satisfactory company than the National with which to do business.

The Marion County Horticultural Society was organized June 27, by Acting State Secretary Wm. H. Barnes, with the following officers: President, James McNicol, Lost Springs; Vice President, R. L. Clancy, Marion; Secretary, Mrs. C. R. Doster; Treasurer, H. J. Hansen; Prompter, J. B. Dobbs, Antelope. Mr. Barnes states that it is desired that every county in the State be organized, and any counties not having a horticultural society should address him at Topeka.

From many quarters comes the news that harvesting operations have been seriously interfered with by the rains, which made the fields so soft that it has been difficult to enter them with the harvesting machines. In many places the rains have come in such a way that almost the entire precipitation has gone into the soil, wetting it to considerable depth. If the wheat fields be plowed and harrowed immediately after harvest, and later receive such cultivation as to prevent the growth of weeds, much of the present store of moisture will be retained and available for the germination and fall growth of the next wheat crop.

SMITE THE GRASSHOPPERS.

The frightful increase in the numbers of native grasshoppers in many portions of this and several other States is a matter requiring careful attention and prompt action. The migratory locusts have ceased to be a terror as they once were, but the ravages of their near relatives constitute a serious consideration. They are especially fond of alfalfa; they enjoy most garden plants; they injure fruit trees; they revel in corn, and later in the season they will feast on the young wheat. They increase rapidly. Their eggs are laid in hard ground along roadways, in hard prairie soil, and in fields where the ground is undisturbed, as in alfalfa meadows. They hatch in April or May and arrive with appetites in good order and they continue their operations until cool, frosty weather begins in the fall.

It is evident that the farmer in the infested regions will have to contend with them for his crops. In the early days of Utah the Mormons fought a winning battle with the grasshoppers. Farmers of Kansas can do the same. At present the contest is over the corn and the alfalfa. They may be driven out of the corn and caught upon adjacent prairies, meadows or wheat fields. When the wind is from the south, by beginning at the south side and cultivating back and fourth it will be found that the hoppers travel towards the north, leaving only a few stragglers behind. But they will return to the corn if not destroyed.

But in the meadow or prairie they are rapidly taken by diligent farmers. We republish from the FARMER of

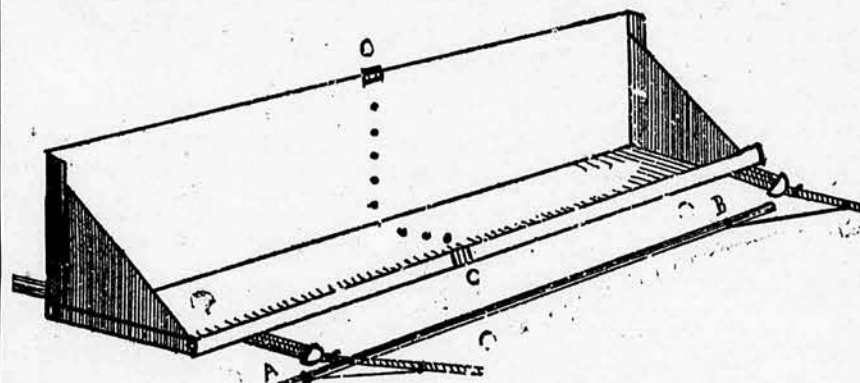
time it was usually seen to be partially filled with dead or dying insects."

As to the effect of the kerosene on the hoppers, the Minnesota Experiment Station bulletin from which the illustration and description were copied, observes:

"The slightest touch of kerosene, either from the pan or from the canvas sheet, means death to the hopper, for the oil spreads over its body in the same way that a single drop will spread over a large surface of water. It seems to produce a paralysis, which is first shown by the stiffening of the legs. A very large proportion of the hoppers that came in contact with the oil in the pan immediately jumped out again, but they invariably died in the course of a few seconds or minutes. A narrow strip was cut around the margin of the field and the hopper-dozer drawn around in this strip, with great success."

Those who have tried the hopper-dozer on Kansas grasshoppers find that it is effectual. The expense is merely nominal and the fields are rapidly gone over. It may be necessary to go over some fields two or three times.

A somewhat different machine is used in some portions of Kansas. This is made much like the hopper-dozer except that the sheet-iron pan is omitted and the light wooden frame is placed on the front instead of the rear of the sled. Burlap sacks are placed, mouths opening to the front, in this frame. When the machine is drawn rapidly over the land the air distends the sacks and the grasshoppers jump into them. When the sacks are partly filled the hoppers are destroyed with kerosene or by burying or by burning. Other devices have been used, but



A HOPPER-DOZER. (After Riley.)

May 28 an illustration of Prof. Riley's "hopper-dozer." This is described as follows:

"A sheet of ordinary sheet-iron, such as is used for making stovepipes, was turned up one and one-half inches around the edges and riveted at the corners. This made a shallow pan about eight feet long, two feet broad and one and one half inches deep. To the bottom of this were riveted the six small strips which could be fastened to the three runners on which the pan rested. To the rear side of the pan was screwed a light wooden frame as long as the pan and one and one-half feet high. Over this frame a piece of canvas was stretched. This frame served the important office of throwing back all those grasshoppers that otherwise would jump clean over the pan, and throw them into the oil.

"The runners on which the pan stood were usually made from saplings or small pieces of board having an upward curve in front to prevent them from catching in the ground. The front ends of the runners were all fastened by screws to a cross-piece, which was, in turn, drawn by two ropes, one at each end. These ropes were joined in front and fastened to a single-tree. Sometimes two hopper-dozers were fastened to a long pole by means of short ropes; this was very easily drawn by one horse. Just in front of the pan was fastened a piece of rope which swept the ground a few inches in advance, and served to stir up the hoppers and make them jump into the pans. In the pan was laid a piece of cloth which was first thoroughly saturated with water. About a pint of kerosene was then thrown in and the upright sheet or sail of canvas moistened with oil. The machine was then drawn over the pasture or wherever the hoppers were thickest. In a short

there is scarcely a doubt but that the hopper-dozer is the best and most satisfactory and by its diligent use any farmer may protect his fields.

After the grasshoppers have laid their eggs they may be destroyed by fall plowing and harrowing the ground. Early spring plowing answers fairly well but is not as sure as fall plowing. Smite the grasshoppers.

WHEAT CROP 475,000,000 BUSHELS.

A telegram from Washington says: "The Department of Agriculture unofficially estimates this year's crop at 475,000,000 bushels. This has been exceeded only six times since 1880. The wheat outlook is particularly good in the Western States, taking them as a whole. The acreage in the principal States is given as follows: Winter States—California, 3,011,000 acres; Kansas, 2,684,000; Ohio, 2,422,000; Indiana, 2,294,000; Illinois, 1,900,000; Missouri, 1,418,000; Pennsylvania, 1,239,000; Michigan, 1,202,000; other States, 6,618,000; total winter area, 22,794,000, against 22,609,000 last year. Spring States—Minnesota, 3,200,000 acres; North Dakota, 2,530,000; South Dakota, 2,463,000; Nebraska, 1,224,000; other States, 2,408,000; total spring area, 11,825,000 acres, against 11,438,000 last year. The net increase in the combined acreage is 572,000 acres. The condition of spring wheat indicates a prospective yield that closely approximates a full or normal crop, the average for the country being 99.9 per cent. The average for the year 1895 was 97.8. Unofficial advices indicate a normal corn crop, probably equal to last year's large yield of 2,151,000,000 bushels. The outlook for oats, rye and barley is good."

Nothing pays better on the farm than to keep accurate accounts—to know what is raised at a loss and what yields profit.

CULTIVATION VS. POSSIBLE DROUGHT.

The beginning of July this year finds the soil in Kansas unusually well supplied with moisture. This condition prevails over much of the State. The importance of this condition is apparent when it is remembered that July is the critical month for corn in this State. During this month corn makes its great demands upon the soil for moisture. If the moisture fails the corn fails. During this month, also, evaporation is exceedingly active. Weeds also draw heavily upon soil moisture at this time.

Except by irrigation the farmer cannot increase the store of moisture in the soil, but modern experimentation has shown that he can, by proper efforts, greatly conserve that which is there. Of the stores now in the soil weeds and evaporation may rob the corn of the lion's share, but the farmer may, in a considerable measure, protect the corn against these robbers. It need scarcely be said that clean cultivation is the remedy against the robber weeds, and it is becoming continually more generally known that cultivation is a remedy, also, against the robber evaporation.

It is found that two or three inches of pulverized surface soil is a good protection to the moisture below against evaporation. On the contrary, a hard crust on the surface passes soil moisture rapidly into the air. It is common observation that well cultivated corn may be standing a dry spell remarkably well until a dashing rain comes, after which a surface crust is formed and the effects of drought become rapidly apparent; indeed, the soil is soon drier than before the rain. This has been well explained by Prof. H. R. Hilton, in communications to the KANSAS FARMER, so that it is necessary at this time to consider only the facts and the remedies. Proper cultivation breaks up the crust and in a measure prevents evaporation. Two questions of practical importance arise as to this cultivation. These are "when?" and "how?"

The time to lock the stable door is before the horse is stolen. So, too, the time to cultivate for the purpose of reducing evaporation is while the moisture is in the soil—as soon as the soil shall have settled sufficiently to be properly worked. It may do some good to cultivate corn after the effects of drought have begun to appear, but it doubtless does harm in some cases and with some methods of cultivation. But the cultivation which makes a fine mulch of the surface soil, while the moisture is still abundant below, always does good. The farmer who congratulates himself that there is now moisture enough in his soil to make his corn crop may later in the month see his prospects vanish before a hot wind, but it is within his power to protect this store of moisture against total loss by immediately cultivating the soil. With plenty of moisture in the subsoil to replace that which a hot wind pumps out through the corn blades there is little danger of tassel-blasting.

The kind of cultivation is scarcely less important than the time. Deep cultivation at this season tears out many of the corn roots and may be injurious. Cultivation which leaves hard ridges is sometimes worse than none in its effects upon soil moisture. The best cultivation at this season of the year is that which cuts the surface soil from that below and leaves a nearly level, finely-pulverized surface. Under a two-inch mulch of this kind the lower soil moisture will be retained to an extent which will surprise the farmer who tries it for the first time.

The farmer can scarcely go wrong who cultivates now, cultivates shallow, cultivates level, cultivates fine for the protection of his corn against the ever possible July drought.

Henry Clews, of Wall street, expresses his disappointment at the lack of buoyancy in the stock market. He had anticipated substantial advances in share values as a result of the adoption of the single gold standard plank by the St. Louis convention.

WASHBURN COLLEGE.

It is always a pleasure to record the prosperity and growth of an educational institution, especially a home institution. The time has gone by when Kansas boys and girls need to go outside of their own State to secure a college education. We do not believe it is the duty of Kansas boys and girls to get their education in a home school unless it is a good one, but there are good colleges in Kansas. Washburn college is one of them.

This institution is soon to begin its thirty-second year. It has long ago passed the experimental stage. It is established on a firm foundation and its future is assured. For twenty-five years Dr. McVicar has been its President, and during his administration the college has acquired a magnificent property, with elegant buildings, grounds and equipment. The vacancy caused by Dr. McVicar's resignation last September has just been filled by the election of Mr. Geo. M. Herrick, of Chicago. Mr. Herrick is thoroughly acquainted with the West and its needs. He is a practical educator and a thorough business man. Before accepting the Presidency he looked over the situation carefully and became enthusiastic in his belief in the opportunity which the college has in the immediate future.

Washburn college has an enviable reputation all over Kansas, and beyond the borders of the State. Its location, in Topeka, is unsurpassed; it has a splendid faculty, a fine body of students, loyal alumni and hosts of friends. It has had a steady and substantial growth since its organization, and it is in better condition to serve the people of Kansas to-day than ever before.

The question is sometimes asked, "What kind of education should farmers' sons and daughters have?" We answer, "The best." It is a well-known fact that country boys from the farm are the boys who are heard from when they have a chance. It is a great mistake to suppose that a little education is enough for a farmer's boy. He has health and vigor of mind and body which will enable him to use all the education he can get. The farmers' boys and girls of Kansas are to be congratulated on having among them so good an institution as Washburn college. We do not doubt that many of them will enjoy its advantages, as many have done already.

THE NEBRASKA STATE FAIR FARMERS' INSTITUTE.

At the Farmers' Institutes to be held in connection with the Nebraska State Fair, Senator William V. Allen, of Nebraska, and Rev. Henry Wallace, editor *Wallace's Farmer*, Des Moines, Iowa, will deliver popular lectures. The subjects of these lectures will be announced in a few days.

Prof. F. H. King, of the Wisconsin Agricultural college, will also give an agricultural address during the institutes. Professor King has made a national reputation by original investigation of water in the soil and his new book on "The Soil" has the commendation of the highest authorities. Professor King's presence at the Nebraska State Farmers' Institute cannot fail to be of vast benefit to Western farmers.

The sessions of the State Fair Institute will be held September 1, 2 and 3.

While the bicycle has undoubtedly decreased the demand for horses, it is now claimed that bicycle riders are great consumers of beef and that the use of the wheel has perceptibly increased the demand for prime beef.

To Chicago, St. Louis and the East via Burlington Route.

The traveling public is sure to find the best fast vestibuled trains from the Missouri river to the East via the "Burlington Route." Elaborate compartment sleepers (same rate as standard sleepers); free chair cars of luxurious pattern to St. Louis; standard sleepers, free chair cars, and dining cars to Chicago.

Ask ticket agent for tickets via Vestibuled Eli to Chicago, and via the Vestibuled Limited to St. Louis.

L. W. WAKELY, Gen. Pass. Agt., St. Louis, Mo.

Weekly Weather-Crop Bulletin.

Weekly Weather-Crop Bulletin of the Kansas Weather Service, for week ending June 29, 1896, prepared by T. B. Jennings, Section Director:

GENERAL CONDITIONS.

Warm the first days, followed by cooler weather and showers, which became general over the State. Excepting a few isolated localities, the rainfall is above normal all over the State; the greatest precipitation, however, occurs in the south-central counties, reaching 7.67 inches at Wellington.

RESULTS.

EASTERN DIVISION.

The wet weather has generally interfered with harvesting and threshing, but has rapidly advanced corn and other growing crops. Corn is now mostly laid by, with fields clean; it is tasseling north and earing south.

Allen county.—Corn laid by in good condition; daily rains, but work goes on; second crop of clover about ready to cut; Mammoth clover still growing.

Brown.—Wheat harvest nearly done; oat harvest has begun; most of the corn laid by; pastures improving since the late rains.

Chautauqua.—Rained six days; corn making rapid progress; too wet for farm work or threshing.

Coffey.—Corn growing fast; oats badly rusted, too wet to cut; flax doing finely; grass good.

Cherokee.—A terribly wet week, especially the south half of the county; grain damaging.

Douglas.—Some corn laid by; wheat harvest nearly done; oat harvest has begun; pastures fine, so are kine.

Johnson.—Oats rusting badly; all other crops doing finely.

Labette.—Wet week; much oats yet uncut, and badly rusted; pastures doing well; early corn shooting.

Marshall.—All conditions favorable for growing crops; wheat harvest about over and oat harvest commenced.

Montgomery.—The light rains first of week revived all growing crops; the heavy rains last days put ground in good condition for plowing for wheat.

Osage.—Corn doing fine, most all being laid by and clear of weeds; pastures in splendid condition.

Pottawatomie.—A growing week; corn growing fast, some tasseled out; oat harvest begun, rusted badly; great numbers of chinch bugs, just hatched, in the corn.

Riley.—Much corn laid by and in fine condition; oat harvest begun but stopped by the rains; second alfalfa crop being cut.

Wilson.—Fine week for vegetation, but too wet for threshing; corn fairly pops this fine weather; early roasting-ears too hard for table use.

Woodson.—Another good week for corn; oats are being cut but are much damaged by rust; most corn laid by.

MIDDLE DIVISION.

The fine rains this week have greatly improved the condition of all crops but those being harvested; they have seriously interfered with the harvest. Early corn is earing in the central counties.

Barber.—Fine general rain but too late to save early corn in some localities; oats an entire failure; farmers planting cane, Kaffir and millet; early apples, peaches, plums, roasting-ears and new potatoes coming into market.

Barton.—A wet week, delaying wheat harvest, which is nearly done; corn tasseling out fine; millet and alfalfa doing finely, the latter almost ready for the second cutting; early peaches coming into market.

Cloud.—Wheat nearly all harvested in good condition; corn never looked better.

Cowley.—The rain stopped nearly all work; corn making good growth; cut alfalfa getting wet.

Dickinson.—Too wet for harvest south of river; north of river wheat not filling well on account of cloudy weather; oats rusting badly; corn doing well, early corn in roasting-ear.

Harvey.—A cool, wet week, delaying harvest; splendid growth made by corn and pastures; early corn tasseling and roasting-ears coming in.

Kingman.—Fine rains, delaying harvest, but improving corn and weeds.

Marion.—Wheat at a standstill; oats

being damaged by rain; corn growing fine; pastures good.

Mitchell.—Good, quiet rains, helping corn, millet, gardens and late oats but delaying harvest.

Osborne.—Corn making rapid growth under these warm rains; harvest in full blast; potato bugs damaging potatoes.

Ottawa.—Fine rains, bad for harvesting but fine for all growing crops; wheat mostly harvested; oats ready for harvest.

Pratt.—Over three inches of rain this week, set all growing crops booming; corn in good condition to receive it.

Reno.—Rain for nine consecutive days, ground thoroughly soaked, too wet to work; corn booming and much of it in silk.

Rice.—Fine growing weather; farmers busy harvesting.

Rush.—Wheat dead ripe but ground too wet to harvest; all other vegetation making a remarkable growth.

Saline.—Cloudy, wet week, stopping harvest; corn making a splendid growth; grasshoppers and horn flies numerous.

Sedgwick.—Fine growing weather but too wet for wheat not stacked.

Smith.—Ground too wet for working in some parts of the county; harvest is going nicely.

Stafford.—Wet week and crop conditions have greatly improved.

Sumner.—Harvest not done yet, ground too soft; corn fine; oats fair; rainfall at Wellington 7.67 inches for the week, at Rome 5.41.

Washington.—Corn in splendid condition; wheat harvest about done; oat harvest begun; a fine growing week.

WESTERN DIVISION.

The rains have greatly improved all conditions except in the extreme southwest counties, where little or no rain fell. Early corn is tasseling as far north as Sheridan. Range grass, which was so dry that prairie fires occurred from lightning, is out green, affording good pasture for stock.

Clark.—General rain, favorable for late forage crops, which are the principal crops grown, as this is largely a cattle country.

Decatur.—A fine crop week; wheat is spotted but will improve; corn being laid by in fine shape.

Ford.—Cloudy, showery week, with good rainfall, has greatly helped corn, hay and alfalfa; the prairie grass has come out green and pastures are good.

Grant.—No improvements in crops; grasshoppers not doing so much damage.

Greeley.—Good growing conditions for forage and grass.

Hamilton.—Nice showers, greatly improving vegetation, and will save such crops as are not too far gone.

Kearney.—Cloudy, with frequent showers, an excellent week on corn and other late crops; some early wheat and barley harvested; forage crops are being sown; the alfalfa seed crop is doing well.

Norton.—Corn in excellent condition; small grain damaged.

Sheridan.—Small grain revived; barley and rye harvest will commence this week; corn doing splendidly and clean generally, early varieties tasseling; range grass good.

Thomas.—Whole county well soaked and all kinds of crops are improving; corn doing fine and grass getting green again.

Trego.—Fine rains, at first falling only at night, afterwards in the day, improving all vegetation.

Union Pacific Route.

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

Millions of Gold

In sight at Cripple Creek, Colo. Only twenty-three hours from Topeka by the Santa Fe Route, the only broad-gauge route passing right by the "Anaconda" and all the famous mines. See the nearest Santa Fe agent for all particulars, or write to Geo. T. NICHOLSON, W. J. BLACK, G. P. A., A. G. P. A., Chicago, Ill. Topeka, Kas.

Hay Market Review.

From our special correspondent at Kansas City:

"As regards the Kansas City hay market, at the present time there is no market and shippers are advised to stack their hay and let it pass through the sweat before baling and shipping to market. While this is the true condition of affairs among the hay dealers, one of the would-be Kansas City hay papers quotes prairie hay at a price which has been reached but twice during the past season. The paper in question quotes choice prairie, \$7.50 to \$8; No. 1, \$7 to \$7.50; No. 2, \$6 to \$6.50; No. 3, \$3 to \$4, and no sale. Farmers should take no notice of such figures. They are an imposition and misleading to the shipper. Choice prairie is slow sale at \$5 to \$6, while No. 1 is not wanted at the price quoted above for No. 3."

The Question of Grain Drills.

It is now universally acknowledged that small grain does better and is surer of a good crop when put in with a drill than when sown broadcast. The two classes of drills which have been in use many years both have their merits, and also very serious objections. In considering the question the farmer is obliged to sum up the advantages and disadvantages of each style and then endeavor to choose the one that seems to have the fewest objections and most points of excellence, but neither kind has been satisfactory.

There has been brought out, in the past few years, a drill which seems to have all of the merits of both of the others, and many additional ones, and to have overcome all of the objections which have been recognized in them. We refer to the Fuller-Lee Disc Press Drill, a cut of which is shown in their advertisement. If this drill accomplishes what is claimed for it it bids fair to revolutionize the drill trade of this country. And from uniform tenor of the testimony of those who have used the drill it would seem impossible to doubt that the company is justified in all the claims of superiority they make for their drill. This drill seems to be peculiarly adapted to Western agriculture, as evidenced by the strong points advertised and the fact that it was awarded first premium last year at the State fairs of Dakota, Nebraska and Kansas.

The following are some of the points of superiority claimed for the Fuller-Lee drill:

1. It is not a sled runner drill. All parts which touch the ground roll. It pulls one-third lighter than the runner drills.
2. Discs pulverize the soil and make an ideal seed-bed. They can be set to any depth or angle desired.
3. Opens a wider furrow than other drills; the seeds are dropped further apart; this enables the plant to stool much better and gives the roots more space to take nourishment from. You cannot raise good fruit in a nursery row.
4. The discs being eight inches apart, we are enabled to throw up a good ridge of pulverized soil between the rows, which acts as a mulch and is a great protection against drought. The deep furrows running east and west catch the snows, and the ridges protect the young plant from the winds.
5. The Fuller-Lee Disc Drill will cut right through stubble, weeds and all such trash and deposit the seed in the bottom of the furrow where it will grow, the trash giving no trouble whatever.
6. The whole weight of the drill, man and seed (except the discs) is on the press wheels, giving a pressure of eighty to one hundred pounds on each wheel, a greater pressure than is given by any other drill.
7. The team is hitched back close to the work.
8. By raising the discs from the ground, the machine is turned around with the greatest ease.
9. We know our disc bearings superior to all others. The greatest wear is on the axles, but with care as to oiling these will wear for years, and can then be replaced at a cost not to exceed 25 cents each.
10. Five years' trial and close observation, and all tests made justify our claim that land seeded with the Fuller-Lee drill will produce from 5 per cent. to 20 per cent. more grain than when seeded with any other drill, all other conditions being equal.

Reduced Rates to Washington.

The Young People's Society of Christian Endeavor will hold their Annual Meeting in Washington, D. C., July 7 to 13.

For this occasion the B. & O. R. R. Co. will sell tickets, from all points on its lines, west of the Ohio river, to Washington, at one single fare for the round trip, July 4 to 7, inclusive; valid for return passage until July 15, inclusive, with the privilege of an additional extension until July 31 by depositing tickets with Joint Agent at Washington.

Tickets will also be on sale at stations of all connecting lines.

Delegates should not lose sight of the fact that all B. & O. trains run via Washington.

Horticulture.

Horticultural Organizations.

EDITOR KANSAS FARMER:—After semi-annual meeting of the State Horticultural Society, at Iola, I went to Howard, in Elk county, and organized a county horticultural society (D. C. Harkness, Secretary). I saw fields of corn averaging seven feet high and not tasseled out yet. Oats in south Kansas badly rusted.

On Saturday (June 20) I met with the Missouri Valley Horticultural Society, at the home of Asa Chandler, the Secretary, at Argentine. There was a splendid gathering, with a fine picnic dinner served under the trees. Mr. Chandler has forty acres of fruit in excellent condition. His blackberry crop will be the best in memory. Mrs. Eby read an excellent, amusing and instructive paper on "How to Keep the Boys on the Farm." I read an essay on "Shall Our Boys Learn Our Business or Go to Work in a Store or Office?" which was well received. Instructive discussions were had on fruits of all kinds.

F. Wellhouse, President of the State Horticultural Society, met the Osage County Horticultural Society at the beautiful home of C. D. Martindale, of Scranton. Discussions were confined mostly to small fruits, and the company enjoyed the pleasure of examining the horticulture and landscape gardening of Mr. Martindale and were highly pleased with his ability and success.

WILLIAM H. BARNES,
Acting Secretary State Horticultural Society.

Sheep in the Orchard.

EDITOR KANSAS FARMER:—Mr. E. L. Sexton, of Topeka, Kas., has been improving his mind by reading the back numbers of the "Old Reliable," and has written me, stating that he has a farm of seventy-eight acres, mostly fruit. About ten acres of three-year-old apple trees have unfortunately been neglected, and he wants to know if sheep will eat out the rank growth of ragweed, black-heart, heartsease and lambsquarter, also patches of sand-burs, without injuring the trees.

I would not advise putting sheep in a young orchard. They would not hurt an old one, but young trees are small and tender and some one of the sheep is quite liable to soon teach all the rest to gnaw the trees. It is a fact that the sheep would clean out all the weeds, but they are liable to hurt young trees, and also large trees in winter time. I think the mower would be best for Brother Sexton to use in the orchard, but at the same time would advise him to get a few sheep, but to get good ones. I would much rather have one good Shropshire ewe for \$30 than thirty common sheep for \$30, to start a flock with.

Let us hear from some other sheepmen. Kirkpatrick, of Leavenworth county, and Rush, of Neosho, rise up and take the floor. Rush, tell us about your sheep fence and the comparative cost with barb wire.

C. NORTON.

Sensitive Plants.

"There are several plants," says a writer in *American Gardening*, "which, when touched, exhibit peculiar movements in the leaves and leaf stems. The best known of the number is the ordinary 'humble plant' (*Mimosa pudica*). The leaves of this species are known as compound leaves, that is, they are composed of a great number of little leaflets arranged on each side of a central stem; each leaf has four of these stems with their leaflets, and each of the four spring from about the same place on the main leaf stem. These little leaflets when disturbed in any way close upwards and the entire leaf falls downwards. There are a number of ways in which the leaf shows the sensitive nature of the plant. Usually the whole row of leaflets when touched will close up simultaneously, but a more interesting method is to gently pinch the end pair of leaflets, when pair after pair will close in regular succession until the whole row is shut. Another peculiarity about it is that the leaf can be made to fall down

without the leaflets closing by simply pinching the stem. Seeds of this plant are offered by all the seedsmen; they are easily raised. In the garden here at Washington it comes up annually from self-sown seed.

"*Mimosa sensitiva* is another kind exhibiting the same peculiarities. It has recently been discovered that the part of the leaf blade nearest the base changes color when the leaves are closing. This plant, though long in cultivation, is seldom met with.

"In the oxalis family there are several shrubby species more or less sensitive. *O. bupleurifolia*, *O. sensitiva*, *O. dendroidea* and *O. ortgiesi* are all very sensitive. The last three are ornamental plants for the greenhouse.

"The Venus fly-trap is a fine example of the sensitive plant. It has curious clam-shell like leaves, which not only close when irritated by a fly walking over them, but the leaf catches hold of the fly and eats it up.

"The sundews (*Drosera*) have sensitive hairs tipped with a gummy secretion with which they catch insects, and were it not for these denizens of the swamps mosquitoes would be much more common than they are now."

Clean Culture Indispensable to Successful Strawberry-Growing.

EDITOR KANSAS FARMER:—There are few if any plants to which clean culture is as essential as it is to the strawberry. Its peculiar nature, habits and time of ripening make this the case. It grows blooms and bears its fruit down on the ground, just where weeds and grass can choke and smother it. It bears and ripens its fruit just when the warm weather of spring is coaxing weeds into such rampant growth as to deprive the berry of sunlight, without which it cannot mature and color.

Being about 90 per cent. water, the strawberry, of course, needs an abundant and constant supply of moisture, and the yield can easily be lessened one-half or more by the presence of weeds voracious of moisture for their own needs.

The fact that the wild strawberry attains some degree of excellence in a wild and uncultivated state has led some people to question the necessity or even wisdom of giving this fruit too much culture. Observers of nature know that the wild strawberry plant is productive in proportion as it chances to grow in a spot free from weeds and grass. When its lot is cast amid grass and weeds it makes only a slender, spindling growth, and bears sorry and few berries, or, after, none at all.

It is the highest economy to give the crop which precedes the strawberries scrupulously clean culture, allowing no grass or weed seed to infest the soil. I have fields which have had such close attention in this respect that they are almost free from these pests. When one does appear it is killed before seed can be produced.

Just as a young cuckoo in a sparrow's nest appropriates all the food intended for the lawful occupants of the nest and soon gets strong enough to destroy the young sparrows, so weeds will appropriate the manure you intend for the strawberry till they get strong enough to overpower your crop.

The richer the soil the harder, but all the more necessary it is to give the weeds and grass short shrift. This care should extend not only through the summer, but begin as early the following spring as weather will permit, never forgetting that a weed, puny and insignificant amid the cold of March and April, may spring up into all the vigor of Jonah's gourd when the sun waxes warm. On fields once cleared of these, strawberries can be grown with comparatively little hoe work.

Take the advice of one who makes the strawberry his life business and gives this king of berries shallow cultivation, frequent enough to keep the above truceless enemies from ever getting a foothold. An ounce of prevention is worth not only a pound but a ton of cure.

O. W. BLACKNALL.

Kittrell, N. C.

Thos. Slater has a message for every man on page 15.

Thayer's Berry Bulletin for July, 1896.

When berry plants produce one crop they never bear again. A new plant must be grown every year for next season's crop.

In the effort to bear fruit and mature perfect seed plants become completely exhausted. In this weak condition they at once offer an abiding place for germs of disease and a depository for eggs of future insect pests. A dying plant also endangers health and vigor of new growth; hence all old canes and plants should be removed and burned immediately after fruiting.

In raspberries, not only remove all old canes, but all weak and unthrifty new growth. Four or five vigorous canes in each hill are sufficient for best results.

More than a score of distinct and separate diseases are found among raspberries. The most common are "orange rust" on black-caps and "curl leaf" among reds. Hills so affected should be dug out, root and branch, and burned at once. The removal of weak and dying canes, judicious pruning to admit free circulation of air, and thorough cultivation, are the greatest safeguards against insects and disease.

Bordeaux mixture, kerosene emulsion, white hellebore and kindred remedies are sometimes necessary, and the successful grower should know when and how to use them. All are quickly prepared and easily applied.

It is a question whether strawberry beds should be allowed to bear more than one crop. If the season has been favorable and a large crop produced, or if grass and weeds have been allowed to take possession, then do not hesitate to plow under and start new beds. If, however, a small crop was produced from vigorous vines and the beds kept free from grass and weeds, as they should be, then the second year, or even a third, may be profitable, depending much on season, fertility of soil, cultivation of soil, etc. When old beds are to be continued they should be mowed immediately after fruiting and burned over. Then reduce rows to six inches in width, hoe out all weeds and grass, apply fine manure, and cultivate often, same as new beds. With this treatment new runners will soon appear and a nice matted row may be secured, producing many berries the following season. As a rule, new beds every year are most profitable and satisfactory.

FEMALE DISEASES

Caused by Catarrh of the Pelvic Organs, Dr. Hartman Says.

If there is a disease which is more prevalent than all others it is chronic catarrh. Over half the people have it in some form or another; and yet probably not a tenth of these people know that their disease is catarrh.

One person has dyspepsia; another bronchitis; another Bright's disease; another liver complaint; another consumption; another female complaint. These people would be very much surprised to hear that they are all suffering with chronic catarrh. But it is so, nevertheless. Each of these troubles, and a great many more, are simply catarrh—that is, chronic inflammation of the mucous lining of whichever organ is affected. Catarrh of the pelvic organs is a very common kind of catarrh which leads to a condition known as female disease. Nearly every woman who has female complaint is a victim of catarrh of the pelvic organs. These women should write to Dr. Hartman, Columbus, O., a description of their symptoms and he will give prompt answer with directions for treatment free.

Any internal remedy that will cure catarrh in one location will cure it in any other location. This is why Pe-ru-na has become so justly famous in the cure of female diseases. It cures catarrh wherever located. Its cures remain. Pe-ru-na does not palliate; it cures. Send to Dr. Hartman for a free book on female diseases.

Train your young horses from the time they are colts. The best all-round gait that a horse can have is that of the brisk walker. While the colt is running beside its mother this brisk walking gait can be begun.

Special Fourth of July Rates.

The Missouri Pacific will sell tickets on July 3 and 4, limited to the 6th for return, between all stations within 200 miles distance, at rate of one and one-third fares for the round trip.

The Apiary.

Conducted by A. H. Duff, Larned, Kas., to whom inquiries relating to this department should be addressed.

Absconding Swarms.

Bees will at times bid adieu to home and apiary and leave for parts unknown. This occurs more frequently in early spring, and arises principally from starvation. They seem to prefer swarming out, rather than to stay in the hive and starve to death. A cure for this may be effected at once, by giving them a frame of brood and honey from some other colony, or they may be brought about by feeding. Swarms will abscond occasionally, and after being hived will re-issue during swarming time. This frequently occurs from the cause of mismanagement in hiving them. When hiving swarms, the hive should be so arranged as to admit of abundance of ventilation, and in excessively hot weather the hives should be shaded. When bees swarm they fill themselves with honey to the utmost limit, and in this condition they cannot stand close confinement in hives, with the sun shining directly upon them. Every swarm thus hived should have a frame of newly-hatched brood given them from some other colony. This is practiced now by almost all apiarists, and is a sure preventive of absconding swarms.

Bees and Alfalfa.

The profits of alfalfa may be doubled by keeping bees in connection with the same. Alfalfa is the best honey-producing plant now known, not only in quantity but quality. Central and western Kansas seem to be the natural home of this plant, as it is grown successfully without the aid of irrigation, and produces a good quality of hay, a good seed crop and a good honey crop. I have watched this crop with interest in the Arkansas valley, and have known it to produce heavy crops every year for six years without a single failure, and I am reliably informed that it has done the same thing since first planted, some ten years ago.

The products in honey gathered by bees from alfalfa clover may reach from 200 to 500 pounds per acre. This alone, at the present prices of honey, would be worth more, or at least as much, as the crop itself. It is true that much depends upon the management of the crop as to its value in honey production, and also the same as to its crop value. If handled so as to produce the best results as a feed crop it is always in the best condition to produce honey. If it is cut before it blossoms it is of no value as a honey crop, and neither is it of value as a feed crop. The harvesting may be arranged to get the best results in either by cutting a portion at a time, just as it becomes ready, thereby having fresh bloom almost constantly, which would, of course, be necessary to get the best results in honey.

Handling Bees.


I have never yet seen any one that was not capable of handling and controlling bees. It is a mistaken idea that some have that bees have a special dislike for them, and that only certain individuals can handle bees. It is only necessary to know how to handle bees for any one to succeed. To handle bees properly it is not necessary to go to war with them. No, it is absolutely wrong. If we would under-

KANSAS HOME NURSERY now offers choice berries and orchard fruits of all kinds in their season. Fresh shipments daily by express. Prices to applicants. A. H. Griesa, Box J, Lawrence, Kas.

Carnahan's Tree Wash and Insect Destroyer

Destroys the bore worm and apple root louse, protects the plum from the sting of the curculio and the fruit trees from rabbits. It fertilizes all fruit trees and vines, greatly increasing the quality and quantity of the fruit. Agents wanted everywhere to sell the manufactured article. Address all orders to John Wiswell, Sole Mfr., Columbus, Kas., and Cleveland, Ohio.

CIDER MACHINERY
Hydraulic, Knuckle Joint and Screw Presses, Graters, Elevators, Pumps, etc. Send for Catalogue.
BOOMER & BOSCHERT PRESS CO.,
399 W. Water St., Syracuse, N. Y.



take to fight a colony of bees into submission the fight would continue until the last bee in the colony was dead—providing we held out that long ourselves. Bees can only be handled successfully by kind treatment, and by studying their habits and becoming well informed of their nature and habits any one will succeed with them by kind treatment. Smoke is the only controlling agent, and is also the principal remedy adopted in handling them. When bees are smoked they become excited and set about at once to fill themselves with honey, and when thus filled with honey they are perfectly peaceable and may be handled without making any resistance.

The Cyprian bees are the only bees that I have ever handled that would to quite an extent resist smoking. On account of this, and to avoid heavy smoking, I have handled them with success by simply kindness, by careful manipulation. Italian bees are much easier to handle than any other race, and during the honey season we seldom have use for the smoker in handling them.

Extracted Honey.

The bulk of the honey crop of this country is now secured by the use of the "honey extractor." The extractor is one of the most valuable helps to the bee-keeper. The largest yield of honey is thus obtained, and the pure liquid honey thus secured by its use is becoming more popular every year with consumers.

The extractor is a large tin can, of some thirty or forty gallons, inside of which is a revolving reel, with gearing and crank attached. Inside of this reel is placed the comb of honey, and by turning the crank the reel revolves, and the honey is dislodged from the comb by centrifugal force. The comb, after being emptied of its contents, is placed back into the hive of bees to be refilled, as it is not injured in the least by extracting. The saving of the comb in this manner is quite an item, as it requires the consumption of about twenty pounds of honey by the bees in the production of one pound of comb; or, in other words, bees consume twenty pounds of honey to produce a pound of wax. Hence it will be seen that a saving of one pound of comb in this manner is a gain of twenty pounds of honey.

Of the two methods of obtaining honey, on an average, there is perhaps double the amount, or more, of extracted honey secured than of comb by thus saving the comb, and hence the price of extracted being about one-half that of comb honey is the result.

To secure the best quality of extracted honey, the combs should remain in the hive until the honey is well ripened. Honey just stored in the combs by the bees is thin, and of a watery nature, and if extracted in this condition it will not mature into as good quality as it will if left in the hive for a short time. When honey is thoroughly ripened, the bees will seal it over, and when thus sealed, the capings must be removed with a sharp knife before being extracted. I think it is proper to extract just before the combs are sealed, and after the honey is pretty well ripened. This will save uncapping, and the combs are less injured.

There is but one way to handle extracted honey to have it remain in liquid form, as it will always granulate on the approach of cold weather, and remain in this form ever afterwards. Many prefer it in its candied state, and use it this way, and in this it is growing in favor rapidly. To restore it to the liquid form, it must be heated until thoroughly liquefied, and sealed up, while hot, air-tight. Great care must be used while thus heating honey, as boiling it will destroy its flavor. It is best to heat it by steam, but if this is not convenient it may be liquefied by placing the cans in hot water and allowing it to remain until it nearly reaches the boiling point.

Blood purifiers, though gradual, are radical in their effect. Ayer's Sarsaparilla is intended as a medicine only, and not a stimulant, excitant or beverage. Immediate results may not always follow its use; but after a reasonable time permanent benefit is certain to be realized.

In the Dairy.

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

Butter and Oleo Further Separated.

The French Chamber of Deputies has passed a very stringent measure with a view to preventing fraud in the sale of butter and in the event of the Senate's endorsing the bill it seems as if it will be impossible to palm off oleo or any other composition as the genuine article. It is made illegal for dealers in butter to keep oleo for sale, or oleo dealers butter; the fraudulent compositions are only to be sold at places specially assigned by the municipality of each town. All boxes, firkins or other packets containing oleo must bear the word "margarine" in large characters, and a full description must be given of the elements employed in making the composition. In the retail trade all oleo sold must be placed in bags, on the outside of which are to be found a description of the article with the name and address of the vendor. Full authority is given to inspectors to enter butter factories and shops and take specimens for analysis; in the event of the specimens being found pure, the cost will be borne by the State. The penalties for an infraction of the new law will vary from six days' to three months' imprisonment and a fine of from \$20 to \$1,000, while in the event of the same person's being convicted a second time within a year, the maximum fine will always be imposed. There will also be a heavy fine imposed on persons who place hindrance in the way of the inspectors.—*Country Gentleman*.

The Latest About Bacteria in the Dairy.

H. W. Conn, in Bulletin 16, Storrs Connecticut Experiment Station, says:

"The cream in ordinary creameries or in ordinary dairies always contains bacteria, a large majority of which are perfectly wholesome and which give rise either to good flavors and aromas in the butter, or at least produce no injurious effect upon the cream. They are perfectly consistent with the production of the best quality of butter.

"In the months of May and June the variety and the number of these types of bacteria is decidedly greater than in the winter months, and this probably explains, in part, the better quality of the butter at these seasons.

"Occasionally a dairy or a creamery may be impregnated with a species of bacteria that grows rapidly and produces a deleterious effect upon its butter. This will produce in all cases a falling off in the quality. The trouble may be due perhaps to a single cow, inasmuch as the milk of individual cows may sometimes contain species of organisms not found in others, even in the same barn. It is, however, commonly impossible for the farmer or the butter-maker to find the source of such injurious bacteria.

"Creameries and dairies will in many cases be supplied with bacteria giving rise to desirable flavors, aromas and a proper amount of acid. This is commonly the case from the fact that the good flavoring species are abundant, but it will not always be the case. It is more common in June than at other seasons of the year, simply because the variety of bacteria is greater at this time, and hence the greater likelihood that some species which produce the proper aroma and flavor will be present. Probably also some of the desirable species are especially abundant in the green food of cows in June.

"If cream be inoculated with a large culture of some particular kind of bacteria, this species will frequently develop so rapidly as to check the growth of the other bacteria present, and thus, perhaps, prevent them from producing their natural effects. Hence it will follow that the use of starters will commonly give rise to favorable results, even though the cream is already somewhat largely impregnated with other species of bacteria before the inoculation with the artificial starter. This fact lies at the basis of the use of artificial starters either with or without pasteurization. To produce the desirable result, it is necessary to have the

starter contain a large abundance of some favorable species which, by its growth, can both check the development of the ordinary cream bacteria and develop a proper flavor by itself. Such species certainly exist."

What Our Milk and Butter Costs.

To supply the demand for milk and its products in this country, 15,000,000 cows are required. To furnish food for them, the cultivation of over 60,000,000 acres of land is required. In caring for the cows and their milk, the *Interstate Grocer* says, 100,000 men and 1,000,000 horses are needed. Cows and horses consume annually 30,000,000 tons of hay, 90,000,000 bushels of corn meal and the same amount of oat meal, 275,000,000 bushels of oats, 12,000,000 bushels of bran, and 30,000,000 bushels of corn, to say nothing of the brewery and questionable feed of various kinds that is used all over the country. It costs \$400,000,000 to feed these cows and horses.

Dairy Notes.

Always strain the milk as soon as it is drawn.

A cow should never be allowed to go back in her milking.

Extremes of ups and downs in feeding will dry up a cow.

Butter once thoroughly warmed through will lose its flavor.

Bran, peas and corn mixed make a good butter-producing ration.

Reliance on the uniform quality of butter largely determines the price received.

The total solids in milk are largely dependent upon the quality of the food given.

If, for any reason, milk is kept in the cellar, it should be clean and free from taint of any kind.

See that the males come from milking ancestors on both sides to get the best helpers for milk.

It is the attention paid to seemingly insignificant things in dairying that make or mar the profits.

The butter product of all cows is more or less influenced by the feeding and care given to the animals.

It is essential in dairy that the food of the cows be uniform, and the supply should be arranged to have it so.

So far as is possible, the food for the dairy cow must be as nearly uniform in quality and quantity as possible.

More milk can be produced with the same number of cows per annum by the soiling system than by pasturing.

Over 22,000,000 pounds of milk was received during 1895 at the creameries of Messrs. Gurler Bros., of DeKalb, Ill.

A change of food is appetizing and the more good food a good cow eats the more milk she is capable of secreting.

Select as a sire an animal that is well developed, not merely in the region where the cow is defective, but in all other points.

Bad water will make bad milk, no matter what the other food may be; and bad milk will make bad butter, no matter how it is handled.

If the cow's teats are muddy or covered with other filth, they should be washed with water and then wiped dry before beginning to milk.

Flies are a serious annoyance in dairying during the summer time and the discomfort they cause reduces the milk flow and the profit. Dark stables kept clean and sweet will help greatly towards getting through fly time.

The Wholesale Co-operative Company, of Manchester, England, buys butter in Denmark to the value of \$5,000,000 per year. Here is a demand that it would pay some of our American exporters to investigate. We observe that another of the leading co-

operative companies of Great Britain is about to send a buyer to this country to negotiate for its stock of leather. If we can sell the co-operative people leather, why can't we sell them butter?

A writer in the *Creamery Journal* says that a principal reason for the low price of butter is that the filled cheese fraud has destroyed our cheese market and has driven those who heretofore made cheese into butter-making.

A recent test of the cattle in the Michigan Agricultural college herd showed that out of fifty-one pure-bred cattle eight were tuberculous, and out of six grades one was affected. Twenty of the pure-bred animals were of the beef breeds and thirty-one were dairy cattle. There were four tuberculous animals in each class.

The introduction of a legal standard of purity for milk in New York is reported by the Commissioner of Agriculture of that State to have produced a very marked effect. Before the enactment of the milk law three-fourths of all the milk sold was below the standard; now 99 per cent. of the milk marketed is above the standard.

DRIVE OUT the impurities from your blood and build up your system by creating an appetite and toning the stomach with Hood's Sarsaparilla if you would keep yourself well.

HOOD'S PILLS are the best after-dinner pill; assist digestion; cure headache. 25 cents.

Make Cheese at Home with such simple apparatus as every farmer now has. Send one dollar to C. M. KITTINGER, Powell, S. Dak., who will mail to you ten rennets, with such plain printed instructions as will enable you to make a perfect cheese the first time. Money refunded to all who fail.

CORRUGATED STEEL IRON ROOFING

\$1.75 PER SQUARE. The above, partly from World's Fair Buildings, we guarantee good as new. We have only a limited amount on hand and would advise forwarding orders at once. CHICAGO HOUSE-WRECKING CO., Largest Second-hand Depot in the World. 3025 N. Halstead street, Chicago, Ill.

Every Home Seeker

should investigate the lands of the Mobile & Ohio R. R. in southern Alabama and Mississippi. Delightful climate and bountiful crops the year round. Sold in tracts to suit purchasers. Write for full particulars. Address HENRY FONDE, President, Alabama Land and Development Co., Mobile, Ala.

ADAM
THE FENCE MAN
Makes Woven Wire
Fence that "Stands
Up." Cannot Sag.
Get his 1896 catalogue. It
tells all about The Best
Farm Fence Made.
W. J. ADAM, Joliet, Illinois.

Make Cows Pay.

Twenty cows and one SAFETY HAND CREAM SEPARATOR will make more butter than twenty-five cows and no separator. Sell five cows; the money will buy a separator and you save cost of their keep, while the butter you make sells for two cents more per pound. Send for circulars. Please mention this paper. P. M. SHARPLES, Rutland, Vt. West Chester, Pa., Omaha, Neb., Elgin, Ill.



Instantly and positively prevents flies, gnats and insects of every description from annoying horses and cattle. It improves the appearance of the coat, dispensing with fly-nets. Applied to cows it will give them perfect rest, thereby increasing the quantity of milk. It is also a positive insecticide for plants. We guarantee it pure, harmless and effective. Recommended by thousands using it. One gallon lasts four head an entire season. Price, including brush, quart cans, \$1.00; half-gallon, \$1.75, and one gallon, \$2.50. Beware of imitations. Made only by The Crescent Manufacturing Co., 2109 Indiana Avenue, Philadelphia.

BUTTER in 2 min. \$150 PER MONTH

Sells at sight. Every woman wants one when she sees the butter come and gathered in two minutes. Every machine guaranteed or money refunded. Butter churned and gathered by the same machine. Larger yield as all the butter is taken out. The Queen Butter Maker is the greatest invention of the age. We will send a trial machine to one family in any neighborhood; a good chance for agents to make big money; costs but little more than an ordinary churn. The Queen Butter Maker Co., 25 E. 3rd St., Cincinnati, O.

Gossip About Stock.

John F. Funkhouser, of Madison, Greenwood county, Kansas, would like to communicate with any of our readers having the Small Berkshires. How much will they weigh when matured?

G. W. Blackburn, of Wonsevu, Kas., reports that stock is doing well and that he sold a calf on the 25th inst., from Ellen Wilton, for \$100. Corn is growing rapidly but it is a hard time to save small grain, owing to unfavorable weather.

While light-weight sheep are now in best demand and nearly always command a premium, there has lately been quite a strong inquiry for heavy sheep for export. The receipts of sheep of this class have been small for some time past, but so, also, has been the demand, which fluctuates with the export requirements. With a good, steady export demand there would be an outlet for the heavy sheep which our own domestic market does not now seem to want.

Highland herd of Poland-Chinas, owned by Deitrich & Gentry, Richmond, Kas., are in fine shape. Pigs are growing well and of extra fine finish. They are sired by such boars as Breckenridge 12987 S., Seldom 14251 S., Upright Wilkes 13246 S., Riley Medium 12806 S., Favorite Duke (Vol. 11 Standard Record). Breckenridge was sired by Hoosier Boy 7880 S., he by Victor 2994 S. Breckenridge is a very large hog, weighs 700 pounds in good breeding shape. He has the best back we ever saw on a hog, extra large bone. Bonny Black U. S. 27972 S., by Black U. S. 2409 S., and out of Queen Teumseh 2d 27973 S., has an extra fine litter of pigs sired by Favorite Duke (Vol. 11 Standard), he by Loyal Duke 29823 O. These pigs will be an honor to any herd. Black U. S. Jewell 33298 S., sired by Ideal Black U. S. 12664 S. and out of Bonny Black U. S., has a fine litter by Upright Wilkes 13246 S. Sanders' Beauty 33975 S., sired by J. H. Sanders 11205 S., out of Irene 33974 S., has a fine litter by Breckenridge 12987. This shows the breeding of a few of our pigs. They have some fall gilts that are very fine that they are breeding to Claud Sanders (Vol. 11 Standard), he by Claud D. by Claud (the World's Fair winner) and out of Sanders' Beauty. They have recently bought of T. J. Harris, West Liberty, Iowa, a boar pig sired by Ideal Black U. S. 12664 S. and out of Sunshine 83200 A. She is the sow that won first in class and sweepstakes at the Iowa State fair last fall (1895). This pig is a corker and will be used in their herd this fall. Their recent sales are, one boar to G. W. McAtee, Nickerson, Kas.; one boar to N. C. Morgan, Richmond, Kas.; one boar to L. Lane, Pomona, Kas.; one boar to Jno. Morford, Richmond, Kas.

The Students' Standard.

The "Students' Standard Dictionary," now in preparation by Funk & Wagnalls Co., will contain upwards of 50,000 words and from 800 to 900 pages.

The volume, which will be issued under the supervision of Prof. F. A. March, has been edited by the Rev. James C. Fernald, editor of the department of synonyms, antonyms and prepositions of the Funk & Wagnalls Standard Dictionary, assisted by a staff of skilled workers formerly engaged on the same undertaking.

The "Students' Standard" will preserve the distinguishing excellences of the Standard Dictionary. Among others these comprise the clear definitive statement, respelling with the scientific alphabet to indicate exactly the pronunciation of every vocabulary word, and precise etymologies. The latter are in charge of Prof. F. A. March, Jr.

The chief feature, one not before attempted in any school dictionary, is the incorporation in the "Students' Standard" of the meanings of every word used in the sixty volumes of English Classics, selected by the Commission of Colleges for study preparatory to admission to the chief colleges of the United States.

The type is clean-cut and clear, the paper will be of superior quality and the binding attractive and durable.

DOGS.

HIGHLAND KENNELS, TOPEKA, KAS.—Great Danes and Fox Terriers. The first prize and sweepstakes winner, Great Dane King William, in stud. Dogs boarded and treated for all diseases; also, remedies by mail. Correspondence solicited.

KENDALL'S SPAVIN CURE. Certain in its effects and never blisters. Sold everywhere.

THOS. B. SHILLINGLAW, Real Estate and Rental Agency, 115 East Fifth St., Topeka, Kas. Established in 1884. Calls and correspondence invited.

AGENTS To sell cigars to dealers; \$18 weekly, experience not required. Samples free. Reply with 2c stamp. National Consolidated Co., Chicago, Ill.

FOR SALE!

Dairy of thirty choice cows, with well established route in city, fine farm, with large apiary and stock of pure-bred poultry. Horses, hogs, etc., if desired.

J. M. Anderson, Box 246, Salina, Kas.

WE SELL
DIRECT TO
FARMERS.

Write for Our Hay Catalogue.

Sections, Sickles, Guards, etc., for YOUR Mower or any Mower manufactured. DON'T PAY DEALERS' PRICES. THE KANSAS CITY MACHINERY CO., 1006 Hickory St., Kansas City, Mo.

Special Want Column.

"Wanted," "For Sale," "For Exchange," and small or special advertisements for short time, will be inserted in this column, without display, for 10 cents per line, of seven words or less, per week. Initials or a number counted as one word. Cash with the order. It will pay. Try it! SPECIAL.—Until further notice, orders from our subscribers will be received at 1 cent a word or 7 cents a line, cash with the order. Stamps taken.

WANTED—Horses to pasture. Good pasture and plenty of water. Address Stevens & Hammond, Dover, Kas.

FOR SALE—High-grade Merino ewes and lambs; also registered buck. John F. Crabbe, Macksville, Kas.

FOR SALE OR TRADE—A complete steam outfit for threshing, hay-pressing or corn-shelling. Outfit in splendid condition. Address Frank Chaland, 812 Morris Ave., Topeka, Kas.

KANSAS-GROWN PURE DWARF ESSEX RAPE seed, 10 cents per pound; twenty-five pounds 8 cents per pound. E. D. King, Burlington, Kas.

WANTED—Twenty-five Shetland pony mares. A. M. Mason, Box 327, Pittsburg, Kas.

FOR SALE—CELERY PLANTS.—Grown in pots; will grow right off; no shading required. Sixty cents per 100; \$2.50 for 500; \$4.50 per 1,000 by express (dirt left on roots). Tyra Montgomery, Larned, Pawnee Co., Kas.

MEADOW BROOK HERD OF SHORT-HORNS.—Registered bulls at reasonable prices. F. C. Kingsley, Dover, Kas.

FOR SALE—A new, solid rubber tire bicycle, for only \$15. Good for service anywhere. No fear of puncture. A bargain for some farmer boy. Call and see it at KANSAS FARMER office.

JERSEY HEIFER FOR SALE—Solid fawn with black points. Breeding the best. Address Professor Georgeson, Manhattan, Kas.

STRAWBERRY PLANTS FOR SALE.—Mitchell's Early, Crescent, Sharpless, Kentucky, Warfield, \$2.25 per 1,000. Remit with order. Address John E. Hardin, Foreman Eglantine Orchards, Koshkonong, Mo.

EGGS FOR HATCHING.—See advertisement elsewhere. Belmont Stock Farm.

SHORT-HORN BULLS FOR SALE—Cruikshanks and Bates breeding. Sired by Valley Champion 110477. Address C. Chambers, Mont Ida, Anderson Co., Kas.

FOR SALE—One hundred and sixty acre farm, one and a half miles from Bushong station, Lyon county, Kansas. Good spring. Price \$3 per acre. J. B. McAfee, Topeka, Kas.

WANTED—Sale bills, horse bills, catalogues and other printing. A specialty at the Mail job printing rooms, 900 North Kansas Ave., North Topeka.

WANTED—Buyers for Large English Berkshires and improved types of Poland-Chinas, from prize-winners, at farmers' prices. Riverside Stock Farm, North Topeka, Kas.

WANTED—On a small farm, before July 1, a farm-bred woman, healthy, neat and industrious, as working housekeeper. Address "X. Y. Z.," care this paper.

FOR SALE—A hedge-trimmer which can be attached to a McCormick mower. Will be sold at a bargain if taken quick. Inquire at KANSAS FARMER office.

900,000 TEN BEST KINDS SWEET POTATO plants for sale during May and June at low prices. Inquire of N. H. Pixley, Wamego, Kas.

WANTED—Buyers for Large English Berkshire gilts, bred or ready to breed to son of imported boar. Bargains! O. P. Updegraff, North Topeka, Kas.

FARMERS, SETTLERS, HEALTH-SEEKERS IN Florida. Write us for information and low prices on homes, orange groves, grape vine, pineapple, fruit, vegetable and farming lands. State requirements. Stapylton & Co., Leesburg, Lake Co., Florida.

DISEASES OF YOUNG AND OLD MEN—Private and skin diseases a specialty. Wm. H. Righter Ph. G. M. D., 503 Kansas Ave., Topeka, Kas. Correspondence solicited.

WE MAKE A GOOD FARMER'S SPRING WAGON, two lazy backs and let-down end-gate, for \$55. Warranted. Kinley & Lannan, 424-426 Jackson street, Topeka.

SHORT-HORN BULLS—Cruikshank-topped, for sale. Choice animals of splendid breeding. Address Peter Sim, Wakarusa, Shawnee Co., Kas.

PURE SORGHUM SEED—Three varieties, heavy crops of cane and seed; rich in sugar and best winter keepers. One dollar (\$1) per bushel. Mary Best, Medicine Lodge, Kas.

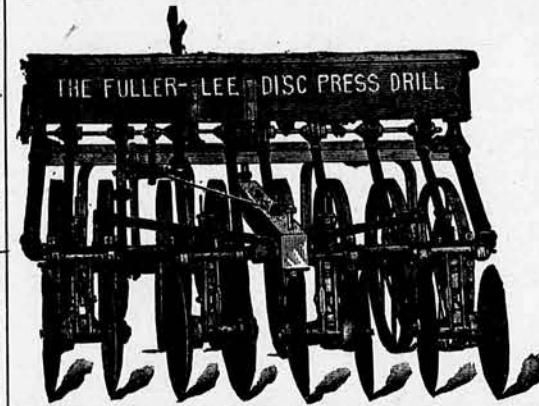
BERRY BOXES AND POULTRY SUPPLIES—D. Miller, cane, buckwheat and shipping baskets. T. Lee Adams, 418 Walnut St., Kansas City, Mo.

LADIES To sell toilet soaps, etc. Outfit free. Send two references from business men. The Minto Soap Co., Cincinnati, Ohio.

Salesmen Wanted!

\$100 to \$125 per month and expenses. Staple line; position permanent, pleasant and desirable. Address with stamp, King Mfg. Co., P. 79, Chicago, Ill.

THE FULLER-LEE DISC PRESS DRILL!



It is light draft. It cultivates the ground. It makes an ideal seed-bed. It scatters the seed two inches in the rows, giving ample room for stooling. It throws up good ridges between the rows, which act as a mulch. It presses the earth firmly over the seed. It cuts right through the trash and deposits the seed under it. Trash gives no trouble. Corn ground and oat stubble need not be plowed. It saves time, labor and money. It increases yield 5 to 20 per cent.

Write for Circulars.

FULLER-LEE MFG. CO.
1219 UNION AVE.,
KANSAS CITY, MO.

The Kansas City Stock Yards

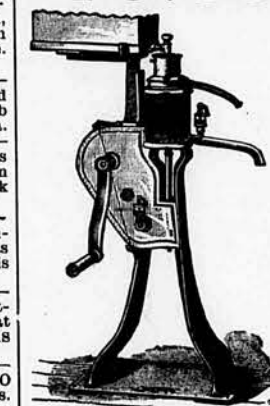
are the most complete and commodious in the West, and second largest in the world! The entire railroad system of the West and South-west centering at Kansas City has direct rail connection with these yards, with ample facilities for receiving and reshipping stock.

	Cattle and calves.	Hogs.	Sheep.	Horses and mules.	Cars.
Official Receipts for 1895.....	1,689,652	2,457,697	864,713	52,607	103,368
Slaughtered in Kansas City.....	822,167	2,170,827	567,015		
Sold to feeders.....	392,262	1,376	111,445		
Sold to shippers.....	218,806	273,999	69,784		
Total Sold in Kansas City, 1895.....	1,533,234	2,446,202	748,244	41,588	

CHARGES: YARDAGE, Cattle, 25 cents per head; Hogs, 8 cents per head; Sheep, 5 cents per head. HAY, \$1 per 100 lbs.; BRAN, \$1 per 100 lbs.; CORN, \$1 per bushel.

NO YARDAGE CHARGED UNLESS THE STOCK IS SOLD OR WEIGHED.

O. F. MORSE, E. E. RICHARDSON, H. P. CHILD, EUGENE RUST,
V. Pres. and Gen. Manager. Secretary and Treasurer. Assistant Gen. Manager. Gen. Superintendent.
W. S. TOUGH & SON, Managers HORSE AND MULE DEPARTMENT.

\$73.55 Gained in a Year
With the U. S. SEPARATOR.

"My account from May, 1894, to May, 1895, with the milk-setting-process, having 9 cows, showed 1294 pounds of butter made, netting me \$267.09

May, 1895, to May, 1896, with the U. S. SEPARATOR, having the same number of cows, I made 1499 pounds of butter, for which I received \$340.64

Making the difference in favor of the U. S. in one year, \$73.55

This was due to the fact that I make more and better butter with the U. S., commanding a better price."

June 6, 1896. J. M. JONES,
West Salamanca, N. Y.

A PRETTY GOOD PAYING INVESTMENT.

Our Catalogue will give you many more pointers. Ask for it.

VERMONT FARM MACHINE CO., Bellows Falls, Vt.

THIRD ANNUAL
KANSAS STATE FAIR!

AT WICHITA, KANSAS,

September 22, 23, 24, 25 and 26, 1896.

\$8,000 in Purses in Speed Department.

ENTRIES CLOSE SEPTEMBER 12, 1896.

Liberal Premiums and special inducements to exhibitors of Live Stock, Poultry and Pet Stock and for Agricultural, Horticultural, Manufacturers' and Merchants' Displays. Big Prizes for Largest and Best Displays of Farm and Garden Products Grown in One Township.

GET READY FOR THE BIG FAIR OF 1896.

For information about entries or Premium Lists, address

C. S. SMITH, Secretary, Wichita, Kas.

The Veterinarian.

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

BITTEN BY A DOG.—I was bitten by a dog two weeks ago. W. J. C. Belpre, Kas.

Answer.—We do not prescribe for human patients. Write to "Family Doctor," care of KANSAS FARMER, Topeka, or apply to your local physician.

SICK PIGS—WARTS.—(1) I have some pigs, four months old, that are weak in the legs; they walk on the first joint and the foot turns back. (2) I have a horse that has some large raw warts. Seabrook, Kas.

Answer.—(1) Give each pig a teaspoonful of turpentine in a little swill twice a day. Also rub a little turpentine along their backs. (2) Apply powdered sulphate of zinc to the warts as often as you find them raw. Do not allow the horse to lick them when the zinc is on.

ONE HONEST MAN.

DEAR EDITOR:—Please inform your readers that if written to confidentially, I will mail in a sealed letter the plan pursued by which I was permanently restored to health and manly vigor, after years of suffering from Nervous Weakness, Loss of Manhood, Lack of Confidence, etc. I have no scheme to extort money from any one whomsoever. I was robbed and swindled by quacks until I nearly lost faith in mankind, but thank heaven, I am now well, vigorous and strong, and anxious to make this certain means of cure known to all. Having nothing to sell or send C. O. D., I want no money. Address JAS. A. HARRIS, Box 807, Delray, Mich.

Kalamazoo, Mich., is famous for celery—also as the home of Thos. Slater, whose advertisement appears on page 15.

"Among the Ozarks."

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

To St. Paul and Minneapolis via "Burlington Route."

Two splendid through trains each day from Missouri River points to the north via the old established "Burlington Route" and Sioux City Line. Day Train has handsome observation vestibule Sleepers, free Chair Cars and Dining Cars (north of Council Bluffs). Night Train has handsome Sleepers to Omaha, Council Bluffs and Sioux City, and Parlor Cars Sioux City north. Consult ticket agent.

L. W. WAKELEY, Gen. Pass. Agt., St. Louis, Mo.

Ho! for Cripple Creek.

Remember that the Chicago, Rock Island & Pacific is the only line running directly from the East to Colorado Springs, the natural gateway for the Cripple Creek district. Colorado Springs lies at the foot of Pike's Peak at its eastern base, and Cripple Creek is part way down the southwest slope of Pike's Peak and near its western base.

Two all rail routes from Colorado Springs are offered you. One by the Midland railway up Ute Pass, via Summit, to Cripple Creek. Another over the Denver & Rio Grande, via Pueblo and Florence, to Cripple Creek. Take the Great Rock Island Route to this wonderful gold mining camp. Maps, folders and rates on application. Address JNO. SEBASTIAN, Gen'l. Pass. Ag't, Chicago.

Low Excursion Rates to the East, via "Burlington Route."

HALF RATES.

N. E. A. Meeting, Buffalo, N. Y., July 7 to 11.

Christian Endeavor Meeting, Washington, July 7 to 13.

Baptist Young People's Union of America, Milwaukee, July 16 to 19.

National Republican League, Milwaukee, August 25 to 27.

Democratic Convention, Chicago, July 7. Ask ticket agents for tickets via Vestibule "El" to Chicago, and via Vestibule Limited to St. Louis.

Both trains supplied with the most modern equipment.

L. W. WAKELEY, Gen. Pass. Agt., St. Louis, Mo.

MARKET REPORTS.

Kansas City Live Stock.
KANSAS CITY, June 29.—Cattle—Receipts since Saturday, 5,951; calves, 700; shipped Saturday, 691 cattle, no calves. The market for native steers was strong to 5c higher in some cases and steady as a rule on the Texas side. The following are representative sales:

No.	Ave. Price	No.	Ave. Price
56.....	1.416 \$4.30	40.....	1.216 \$4.25
14.....	1.289 4.25	182.....	1.091 4.23
1.....	900 3.25	1.....	1.030 3.50
1.....	1.140 3.00	1.....	790 3.00

TEXAS AND INDIAN COWS.
67..... 1.071 \$3.35 44..... 1.122 \$3.25
77..... 1.003 3.25 51..... 989 3.25
1..... 1.200 2.00 11..... 909 2.65
58..... 878 2.60 10..... 711 2.25

COWS AND HEIFERS.
3..... 693 \$3.75 8..... 735 \$3.60
2..... 880 2.90 1..... 730 2.70
5..... 1.064 3.90 9..... 817 3.10
2..... 1.130 1.78 1..... 1.220 2.00

STOCKERS AND FEEDERS.
17..... 1.097 \$3.90 1..... 1.230 \$3.85
1..... 910 3.15 2..... 980 3.00
70..... 407 3.70 4..... 637 3.67 1/2
2..... 890 2.85 5..... 382 2.75

Hogs—Receipts since Saturday, 4,328; shipped Saturday, 296. The market was barely steady and quoted uneven. Following are representative sales:

82...181 \$3.25	108...180 \$3.25	85...165 \$3.25
33...183 3.20	41...188 3.20	7...178 3.20
64...194 3.17 1/2	77...186 3.17 1/2	47...167 3.17 1/2
85...200 3.15	77...190 3.15	82...206 3.15
70...229 3.12 1/2	69...220 3.12 1/2	2...226 3.12 1/2
2...180 3.10	70...227 3.10	60...259 3.10
55...238 3.10	65...233 3.10	61...259 3.07 1/2
80...254 3.07 1/2	64...281 3.07 1/2	72...244 3.07 1/2
80...269 3.07 1/2	80...287 3.07 1/2	63...286 3.07 1/2
4...240 3.07 1/2	61...280 3.05	6...230 3.05
11...233 3.05	51...249 3.05	62...241 3.05
68...284 3.05	70...281 3.05	56...296 3.05
11...300 3.00	52...325 3.00	2...310 3.00
21...280 3.00	53...285 3.00	56...319 3.00
2...395 3.00	55...213 3.00	27...331 3.00
8...279 2.95	8...271 2.90	5...380 2.80
2...420 2.75	1...270 2.75	2...463 2.75
2...195 2.50	10...87 2.50	2...155 2.07

Sheep—Receipts since Saturday, 5,762; shipped Saturday, 691. Market steady on choice grades and weak to 10c lower on others. Following are representative sales:

1 lamb.....	74 \$5.00	58 lambs.....	58 \$4.75
15 Tex cis.....	71 2.25	13 cull lbs.....	@ .90

Chicago Live Stock.

CHICAGO, June 29.—Cattle—Receipts, 16,000; market steady to 10c higher; fair to best beefs, \$3.50 @ 4.60; mixed cows and bulls, \$1.50 @ 3.75; Texas, \$2.50 @ 4.00.

Hogs—Receipts, 41,000; market active, heavy 5c lower, others firm; light, \$3.25 @ 3.50; rough packing, \$2.75 @ 2.90; mixed and butchers, \$3.05 @ 3.40; heavy packing and shipping, \$2.95 @ 3.25; pigs, \$2.75 @ 3.50.

Sheep—Receipts, 14,000; market steady; native, \$2.00 @ 4.00; Texas, \$2.50 @ 3.65; lambs, \$3.00 @ 4.50.

St. Louis Live Stock.

ST. LOUIS, June 29.—Cattle—Receipts, 3,000; market steady to strong; native beef steers, \$3.40 @ 4.25; stockers and feeders, \$2.25 @ 3.50; Texas steers, \$2.60 @ 3.75; Texas cows, \$2.00 @ 2.50.

Hogs—Receipts, 4,000; market steady to 5c lower; light, \$3.10 @ 3.25; mixed, \$2.90 @ 3.25; heavy, \$3.00 @ 3.25.

Sheep—Receipts, 2,500; market strong.

Chicago Grain and Provisions.

	June 29.	Opened	High'st	Low'st	Closing
Wht.—June.....					53 3/4
July.....	54 1/2	54 1/2	53 3/4	53 3/4	53 3/4
Sept.....	55 1/2	55 1/2	55	54 1/2	54 1/2
Corn—June.....					26 1/2
July.....	26 1/2	26 1/2	26 1/2	26 1/2	26 1/2
Sept.....	27 1/2	27 1/2	27 1/2	27 1/2	27 1/2
Oats—June.....					15
July.....	15 1/2	15 1/2	15	15	15 1/2
Sept.....	15 1/2	15 1/2	15 1/2	15 1/2	15 1/2
Pork—June.....					7 00
July.....	6 87 1/2	7 00	6 82 1/2	6 82 1/2	7 00
Sept.....	7 05	7 17 1/2	7 02 1/2	7 02 1/2	7 15
Lard—June.....					3 87 1/2
July.....	3 87 1/2	3 87 1/2	3 85	3 87 1/2	3 87 1/2
Sept.....	4 00	4 02 1/2	4 00	4 00	4 00
Ribs—June.....					3 62 1/2
July.....	3 60	3 62 1/2	3 60	3 62 1/2	3 62 1/2
Sept.....	3 77 1/2	3 80	3 75	3 80	3 80

Kansas City Grain.

KANSAS CITY, June 29.—A few millers showed a disposition to buy wheat freely to arrive this morning, but most of them are still waiting for a further decline. The few samples offered sold slowly and at irregular prices. Some sales of hard wheat for export forward shipments were made.

Receipts of wheat here to-day, 6 cars; a year ago, 52 cars.

Sales were as follows on track: Hard, No. 3, 60,000 bu. choice, old 47c, 1 car special, 50c; No. 3, 1 car 40c; No. 4, 2 cars 38c; rejected, nominally 30c. Soft, No. 2 red, 2 cars new 52c, 6 cars new 53c, 1 car choice old 54c; No. 3 red, 1 car choice new 49c; No. 4 red, 1 car choice new 45c; rejected, nominally 35c @ 42c. Spring, none coming in. Wheat in the elevators generally held 5c under the Chicago July price.

Corn sold slowly and at irregularly lower prices. Futures, especially, were weak. July, 5,000 bu., 21 1/4c; August, 5,000 bu., 21 1/4c; September, 5,000 bu., 22 1/4c; July white, 10,000 bu., 22 1/4c. Receipts of corn here to-day, 45 cars; a year ago, 16 cars.

Sales by sample on track: No. 2 mixed, 1 car 21 1/4c, 3 cars 21 1/4c; No. 3 mixed, 1 car 21 1/4c, 4 cars 21c; No. 4 mixed, nominally 20c; no grade, 1 car 18c, 2 cars 17 1/4c; No. 2 white, 4 cars 22 1/4c, 4 cars 22 1/4c; No. 3, nominally 21c; No. 4, nominally 21c.

Oats were somewhat lower and they sold slowly.

Receipts of oats to-day, 10 cars; a year ago, 4 cars.

Sales by sample on track: No. 2 mixed, nominally 15 @ 16c; No. 3, nominally 14c; No. 4, 1 car 13c; no grade, nominally 12c; No. 3 white, 4 cars 18c, 2 cars 18c, 1 car 17 1/4c, 1 car 17 1/4c; No. 3 white, 3 cars 17c, 2 cars 17 1/4c.

Hay—Receipts, 11 cars; the market is weak. Prices are: Choice new timothy, \$8.00 @ 8.50; old, \$9.50 @ 10.00; No. 1 new timothy, \$7.00 @ 7.50; No. 2 new timothy, \$5.00 @ 6.00; No. 3 new timothy, \$4.00 @ 5.00.

Olander & Isaacson, Live Stock Commission

Special attention given to the feeder trade. Rooms 65 and 66, first floor Stock Exchange.

Kansas City Stock Yards, Kansas City, Mo.

ELM BEACH FARM POLAND-CHINA SWINE



The home of the great breeding boar, SIR CHARLES CORWIN 33095. Our 1896 crop of pigs are by six different boars and out of fashionably bred sows, including such grand individuals as the prize-winning \$500 Lady Longfellow 34099 (S.), that has eight pigs by the prize boar, King Hadley. STOCK FOR SALE at all times and at very reasonable prices. We also breed Short-horn cattle. Write or come and see us.

IRWIN & DUNCAN, Wichita, Sedgwick Co., Kas.

HAVE YOU HEARD OF THE HEFFLEY ROLLER-BALER

It completely revolutionizes baling machinery. The only baler on earth without plunger, head-blocks, beaters, or bale-ties. Wire fed from spools, tied on machine. No splicing. All steel and iron; nothing to burn up. Will last a lifetime.

Warranted Capacity a Bale a Minute.

ONLY PERFECT SELF-FEEDER ON EARTH. No way to get hurt. Draft very light; two horse-power; full circle. Can use for other purposes. Saves time, wire, horses, men and legs. Works mounted. Quickly moved and set. Weight 1,500 pounds. Can set it at middle of rick, or on barn floor. Bales hay, straw, millet, etc. Continuous feed. Bales smooth and even on all sides, any length or weight. Can make every bale exactly same weight and length. **FULL WARRANTY.**

C. G. OVERMYER, JOPLIN, MO.

A SMALL THRESHING MACHINE.

Something new for the farmer, who can now do his own threshing, with less help and power than ever before. We also make a full line of Sweep Powers, Tread Powers, etc.



BELLE CITY FEED AND ENSILAGE CUTTERS

Made in all sizes, for both hand and power use. Send for illustrated Catalogue and Price List. We will send latest publication on Ensiling to all who write for it.

BELLE CITY MFG. CO. BOX 85, Racine, Wis.

WOOL WOOL WOOL WOOL

TOP PRICES

for your wool will help out amazingly under the present conditions. We have topped the market many times in the 30 years we have been in business and reasonably expect to do so again. We sell direct to the manufacturer—that's much better than peddling.

SILBERMAN BROTHERS,
122-128 Michigan St., Chicago, Ill.

your wool about the street looking for a buyer. There are other reasons why you should ship your wool to us. We make liberal advances on consignments; we furnish free use of sacks to all our customers; we keep you informed by our circular letter as to the conditions of the market, and are vouched for by banks and reputable business houses of Chicago. Write us.

WOOL WOOL WOOL WOOL

othly, \$1.00 @ 4.50; choice prairie, new, \$5.00 @ 5.50; No. 1, new, \$4.00 @ 4.50; No. 2, new, \$3.00 @ 3.50; No. 3, new, \$2.00 @ 2.50.

Kansas City Produce.

KANSAS CITY, June 29.—Butter—Creamery, extra fancy separator, 13c; firsts, 12c; dairy fancy, 12c; fair, 10c; store packed, fresh, 7 1/2c; packing stock, 7c.

Eggs—Strictly candied stock, 7c per doz.; southern, 6c.

Poultry—Hens, 5 1/2c; roosters, 15c each; springs, 10 1/2c per lb.; turkeys, hens, 6c; gobblers, 5c; old, 4 1/2c; ducks, 7c; spring ducks, 11c; spring geese, 10c; pigeons, \$1.00 per doz.

Berries—Raspberries, home grown, \$1.25 @ 1.00; red stock, \$2.00 @ 2.50; Blackberries, choice home grown, 75 @ 90c per crate; shipped stock, 40 @ 50c. Huckleberries, \$2.00 @ 2.50 per crate. Gooseberries, domestic, fancy, \$1.75 @ 2.00. Currants, \$1.75 @ 2.00 per 16-quart crate.

Potatoes—Home grown, plentiful, 15c per bushel. The home potatoes are supplying the market and foreign stock is practically out of the market. Sweet potatoes, 50 @ 75c in a small way.

Tomatoes—Home grown, 85c per peck; Mississippi, 75 @ 85c per 4-basket crate; culls, 65c; Tennessee stock, 50c per peck box; Arkansas, 75 @ 85c per 4-basket crate.

—CONSIGN YOUR SHEEP TO—

KNOLLIN & BOOTH,

Sheep Commission Merchants.

Rooms 304-305 Exchange Bldg., KANSAS CITY, MO.

Direct mail to Station A. Market reports furnished free to all sheep feeders or breeders on application. Correspondence solicited and prompt reply guaranteed.

WINDMILL OWNERS, stop the jorking, breaking and lifting platform with a perfect spring. No good, no pay. Agents wanted. *Egis Mfg. Co., Marshalltown, Iowa.*

Consign Cattle, Hogs and Sheep to

LONE STAR Commission Company

For best results. A new company. Capital \$100,000. Telephone 1108. Market reports furnished.

Write us. KANSAS CITY STOCK YARDS.

HORSES SOLD AT AUCTION

on Tuesday, Wednesday and Thursday of each week. Private sales every day at the Kansas City Stock Yards Horse and Mule Department. The largest and finest institution in the United States. Write for free market reports.

W. S. TOUGH & SON, Managers,
KANSAS CITY, MO.

GROWERS OF AND DEALERS IN

Cattle, Hogs and Sheep

MAKE YOUR CONSIGNMENTS TO

Ben. L. Welch & Co.

COMMISSION MERCHANTS,

STOCK YARDS, KANSAS CITY, MO.

And EAST ST. LOUIS, ILL.

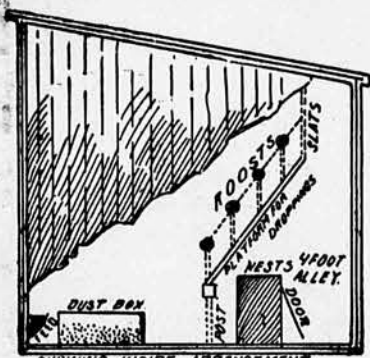
Stockers and feeders bought on order. Liberal advances to the trade. Write for market reports and special information.

The Poultry Yard

THE FARMER'S DAUGHTER.

Let the Dear Girl Hunt Hens Rather Than a Husband.

Much has been said and written on "keeping the boys on the farm," and many pleas have been made urging farmers to give their boys an interest in some kind of stock or crop, and thus make their labor of some pecuniary value to themselves. Every boy likes to have a little money that he may call his own, and that he can spend as he likes. But how is it in regard to the girls? Have you ever seen anything written in regard to "keeping the girls on the farm?" Or are they of so little account that the only thought is to get them married off as quickly as

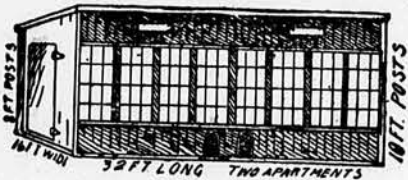


SHOWING INSIDE ARRANGEMENT.
A HENHOUSE FOR THE DAUGHTER.

possible, so that some other fellow can support them, and so save that item of expense? I say to farmers, give your girls a chance, and they will beat the boys all "hollow," not only in the thoroughness of their work, but in their enthusiasm for results, and in the results themselves.

But you ask: Shall I set my daughter to planting potatoes or hoeing corn? Or would it be better to start her in business by breaking the two-year-old colt, or the brindle steers, or feeding and caring for the hogs? No, my dear sir; while I have no doubt she would be successful if she undertook to do any of these things, and would surprise you by the results obtained, still it is not necessary for her to engage in any such masculine labor.

Again you ask: What, then, would you have her do? Let me whisper in your ear, the one little word, poultry. Now don't shrug your shoulders and exclaim: "Bosh!" for if you knew it there is more profit in the "hen business," for the amount invested, than in any other stock. And who is more fitted to attend to such "stock"



A CHEAP AND SIMPLE HENHOUSE.

than the daughters of the family? Just try it, if you have one or more daughters that have nothing to do, and are just eating their heads off; invest \$150 in poultry, and a house to put it in (the interest on this will be but nine dollars a year); or perhaps you already have some building that, with a few dollars expended for repairs, would answer. Let her keep strict account of all eggs used in the family, sold, or used for setting, all young chickens raised, either for home consumption or market, figuring the value of droppings as worth 25 cents for each mature fowl for the year. Also keep a strict account of all feed used, whether bought or raised on the farm. If you are not surprised at the result, then I would consider you beyond all hope of redemption, and be willing you should jog along in the "good old way," letting the hens spend the winters in idleness, and the girls hunting husbands.

The cuts show pictures of a convenient henhouse, which will accommodate 100 hens, and at the same time is not expensive. It may be constructed of matched boards, or of unmatched, and lined with tarred paper, the smell of which is not offensive, and tends to keep away vermin. If your daughter is not well posted on the "hen busi-

ness," get for her some good book on poultry. Give her what help you can by advice, etc., and then let her go ahead. By the time she is ready to buy her wedding outfit, she will have the money to pay for it, and thus save you the expense.—Rural New Yorker.

DUCKS FOR PROFIT.

They Can Be Made to Grow Almost Twice as Fast as Chickens.

When there is opportunity for giving the ducks a good range with access to water, ducks can readily be made profitable. They ought to be made to find the greater part of their own food if the best profit is realized from keeping. The breeding stock should be carefully selected, taking the best of the fowls, introducing new blood by purchasing ducks at least every two years. It is best to hatch the first eggs set under hens, and then push the growth as rapidly as possible, so as to get them ready for market by the latter part of June or July. When a little care is taken to push the growth, they can be made to grow almost twice as rapidly as chickens, and at the end of ten or twelve weeks will weigh twice as much as chickens of the same age.

Then hen makes a better mother than the duck. For the first two weeks the duckling requires good treatment. They must be kept dry and warm. If allowed to get wet or chilled, it will generally prove fatal. The safest plan is to keep as comfortable as possible until the feathers get well started to growing. They should be kept out of water until they are reasonably well-feathered. They need plenty of water to drink, but can be raised to maturity with only what water they need to drink.

Either sprinkle the eggs well with warm water or drop them in warm water on the 27th day of incubation. Ducklings dying in the shell is largely caused by lack of moisture, and sprinkling will be found especially beneficial. Keep them warm and dry for the first 24 hours. They will not need anything to eat during this time. Stale bread, if soaked in milk until soft, and then squeezed reasonably dry, makes a good duck feed for the first three or four days. With ducks rather than with any other class of poultry it is important to give bulky food. If given too much grain, especially corn, they are liable to leg weakness or cramps. Give the run of a small yard during the day when it is warm and sunshiny. Do not give much range until two weeks old.

In making a start get either the Peking, Aylesbury or Rouen, named in the order of preference. The advantage of the two first is that the feathers are all white, and in selling will bring the best price.—Journal of Agriculture.

When to Use Soft Food.

One meal of soft food is sufficient, and it should be given early in the morning, warm. No meals are necessary at noon, as it is better to allow the hens to be hungry so as to compel them to scratch than to keep their crops full, in which case they become very fat. At night scatter the grains so that the hens will have a job searching for them. Should any be left over they will be found by the hens the next morning. Soft food may consist of anything that can be fed in that condition. It is the meal to which all the extra foods are added. It should never be very soft, but of a consistency to allow it to be crumbled.—Prairie Farmer.

Any kind of a sheep can be bred up to a high standard, says a writer, but it requires too long to do it with scrub sheep. Better start with good sheep.

MEN of all AGES



Quickly, Thoroughly, Forever Cured.

Four out of five who suffer nervousness, mental worry, attacks of "the blues," are but paying the penalty of early excesses. Victims, reclaim your manhood, regain your vigor. Don't despair. Send for book with explanation and proofs. Mailed (sealed) free. **ERIE MEDICAL CO., Buffalo, N. Y.**



Used and endorsed by Adams Express Co.

Lameness Cured

By a few applications. If your horse is lame and you cannot locate it, apply the Elixir, which locates lameness by remaining moist on the part affected, the rest drying out. A few more applications will effect a cure. Never scars or changes the hair.

TUTTLE'S ELIXIR

Is the standard remedy for Colic, Cuts, Splints, Contracted and Knotted Cords, Shoe Bolls, Callous of all kinds, etc. Will relieve all Spavins, Ring Bone, Cockle Joints, etc. It is warranted to give satisfaction. Highly endorsed by prominent horsemen.

Tuttle's Family Elixir cures Rheumatism, La Grippe, Pneumonia, Lameness, all Joint Affections, etc. Sample of either Elixir sent free for three 2-cent stamps to pay postage. Price of either Elixir is only 50 cents, and they can be bought of any druggist, or will be sent, charges paid, on receipt of price.

DR. S. A. TUTTLE, Sole Proprietor, 27 G. Beverly St., Boston, Mass.

"QUEEN" ALL Steel Sulky Rake.

Lock-Lever; Continuous Solid Steel Axle; Steel Wheels.

Steel Teeth with Spring Temper. Combination pole and shafts with 8 and 10 ft. rakes. Pole only with 12 ft. rakes.

Large, comfortable Seat.

Also Manufacture PLOWS, CULTIVATORS and other AGRICULTURAL IMPLEMENTS.

Head is of Angle Steel—strongest shape known. Made 8, 10 and 12 feet wide.

Ask your Dealer for CIRCULAR; if he has none write us for one.

DAVID BRADLEY MFG. CO., BRADLEY, ILL.

DEAD • EASY!

The Great Disinfectant Insecticide
KILLS HEN LICE

By simply painting roosts and dropping-boards. Kills Mites and Lice, cures Colds and Cholera, also kills Hog Cholera germs. If your grocer or druggist does not keep it, have them send for it.

THOS. W. SOUTHARD,
General Agent, 1411 Main St., Kansas City, Mo.

FARMERS

DO YOU WANT TO BETTER YOUR CONDITION? If you do, call on or address: The Pacific Northwest Immigration Board, Portland, Oregon.

VICTOR COW CLIP.

Holds cow's tail to her leg and keeps it out of the milk and milker's face.

Carried in the pocket. 30c. SINGLE; FOUR, \$1. If dealer hasn't it, sent postpaid on receipt of price by manufacturers, VICTOR NOVELTY WORKS, 914 Warren Av., Chicago.



"JONES HE PAYS THE FREIGHT." Farm and Wagon SCALES.

United States Standard. All Sizes and All Kinds. Not made by a trust or controlled by a combination. For Free Book and Price List, address

JONES OF BINGHAMTON, Binghamton, N. Y., U. S. A.

RUSSELL'S STAPLE PULLER



AND WIRE SPLICER

Drives and pulls staples, cuts and splices wire. Its special use is in building and repairing wire fences, but may be used for many different purposes about a farm. Saves its cost in one day's work. You can't afford to be without it. Price \$1.25. Ask your hardware merchant for it.

Russell Hardware & Implement Manuf'g Co., Kansas City, Mo.

The Baldridge Transplanter.



Soil, roots and plants taken up together, preventing stunting or injury. Vegetables, flowers, strawberries, tobacco, small nursery trees, etc., can be moved at all seasons. Invaluable for filling vacancies. Transplanter with blade 2 inches in diameter, \$1.25; same with 3-inch blade, \$1.50. SPECIAL PRICE with KANSAS FARMER: By a special arrangement with the manufacturers we are able to offer the Transplanter and KANSAS FARMER one year for price of Transplanter alone. Send \$1.25 and we will mail KANSAS FARMER to you and send you the Transplanter by express. Or call at FARMER office and get the Transplanter and save 25c. express charges. Address **KANSAS FARMER CO., Topeka, Kas.**

Stack Covers Cheap!

Also Awnings, Tents and everything made of cotton duck. Every farmer should have a stack cover. Address best house in the country for these goods. O. J. Baker, 104 W. Third St., Kansas City, Mo.

BUY THE BLUE VALLEY FEED MILL



If you want a mill that will grind corn and cob and all small grains. The largest mill made, hence the greatest capacity. FULLY WARRANTED! Made in sweep and power styles and five different sizes. Write for illustrated circulars.

THE BLUE VALLEY MANUFACTURING CO.,
(Successors to Blue Valley Foundry Co.)
MANHATTAN, KANSAS.

SUMMER IN THE EAST The Ocean Resorts

Atlantic City, Cape May, Asbury Park, Ocean Grove, Long Branch, and resorts along the New Jersey Coast are on the Vandalia-Pennsylvania Lines, which lead from St. Louis to Newport, Narragansett Pier, Martha's Vineyard, Nantucket and popular watering places along the Atlantic from Chesapeake Bay to Maine.

In the Mountains

Cresson, Bedford Springs, Ebensburg, Altoona and other resorts in the Alleghenies are also on the Vandalia-Pennsylvania Route, over which the White Mountains, the Adirondacks, Watkins Glen, Mt. Desert Island, and places of Summer sojourn in Eastern New York, Vermont, New Hampshire and Maine may be conveniently and comfortably reached from St. Louis.

For information concerning rates, time of trains and the first-class through service please apply to W. F. BRUNER, Assistant General Passenger Agent, St. Louis, Mo.

Chichester's English Diamond Brand. PENNYROYAL PILLS

Original and Only Genuine. SAFE, always reliable. LADIES ask Druggist for Chichester's English Diamond Brand in Red and Gold metallic boxes, sealed with blue ribbon. Take no other. Refuse dangerous substitutions and imitations. At Druggists, or send 4c. in stamps for particulars, testimonials and "Relief for Ladies" in letter, by return Mail. 10,000 Testimonials. Name Paper, Chichester Chemical Co., Madison Square, Philadelphia, Pa. Sold by all Local Druggists.

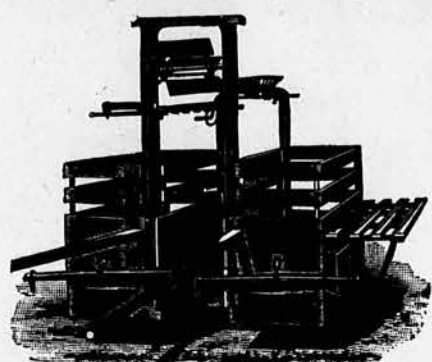
THE "HOOVER" DIGGER
DIGS POTATOES
Rapid, Clean
and Cheap.



Price greatly reduced.
Mention this paper
and get book FREE.

HOOVER, PROUT & CO. Avery, Ohio.

IDEAL FARM IMPLEMENT CO.



MANUFACTURERS OF

Eureka Knife Corn and Sorghum Header,
Climax Corn Cutter and Shocker,
Alliance Combined Hay Rake and Loader.
Cor. Vine & Water St., FT. MADISON, IOWA.

WIND MILLS AND PUMPS

Gem and Halladay Mills



FOR IRRIGATION OR
ANY OTHER USE.

Wooden and Steel Tanks,
Iron and Wooden Pumps,
Engines and Boilers,
Gasoline Engines,
Belting, Hose and Packing,
Pipe, Fittings, Drive Points.

WRITE FOR
CATALOGUE.

U. S. WATER & STEAM SUPPLY COMPANY,
KANSAS CITY, MO.

IRRIGATE or IMMIGRATE!!

THE

IDEAL
IRRIGATOR

WIND MILL

makes it possible to stay
where you are and live in
peace and plenty—the Ideal
Irrigator is the only mill
on the market made espe-
cially for irrigation work, all
others offer you their regular
farm style, entirely too light
and cannot stand continuous
heavy duty—the best is the
cheapest for this kind of
pumping. Ask your dealer
for the IDEAL IRRIGATOR and take no
other. If he does not have it, send for our cata-
logue and prices.

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

WIND POWER

may be turned to good account by
the use of the **GOODHUE WIND MILLS**
Back Geared or Direct Stroke. Made of Galvan-
ized Steel or Wood. Sizes 6 ft. to 18 ft. Equipped
with governors that govern. No weights, no
springs. Simple, durable, strong and effective.
MOST SUCCESSFUL POWER MILL MADE. \$9,000.00
worth of GOODHUE POWER MILLS in
use in one township alone.



WE HAVE BUT
ONE QUALITY—THE BEST

Sweep Powers, 2 to 8 horse; Tread Powers, 1, 2
and 3 horse, and the famous **SUGGEST** 1 horse
Tread Power adapted to use of cream separators,
pumping, etc. Much more of value than we can
tell you here appears in our New 160 page
Catalogue. It is FREE. SEND NOW FOR IT.

APPLETON MFG. CO., Batavia, Ill.

**BUGGIES, PHAETONS, SURRIES, WAGONS,
CARTS, HARNESS, SADDLES, BICYCLES, &c.**
At factory prices. Our record for the past eight years is the best guar-
antee that we turn out the finest, strongest and lowest priced vehicles
in the world, for the money. All work guaranteed. Send for our beau-
tifully illustrated Catalog for 1896. Prices in plain figures. Offices, sales-
rooms, factories: Court St. Alliance Carriage Co. Cincinnati, O.

"A" Grade, \$44.
Style, Finish.
Durability.

**LIGHTNING
HAY PRESS.**
IT IS THE BEST.
Our Catalog tells why.
Kansas City Hay Press Co.
172 Mill St. Kansas City, Mo.

HAY THERE! OMAHA HAY PRESS!



MARTIN & MORRISSEY MANUF'G. CO.,
Seventh street, Omaha, Neb.

FRENCH BUHR MILLS

23 sizes and styles. Every mill warranted.

For All Kinds of Grinding.

A boy can operate and keep in

order. "Book on Mills"

and sample meal FREE.

All kinds mill machinery. Flour

mills built, roller or burr system.

Reduced Prices for '96.

NORDYKE & MARION CO.,

285 Day Street,



Indianapolis, Ind.

THE STORY

....OF THE....

AMERICAN PEOPLE

The Latest and Most Complete

HISTORY OF THE UNITED STATES

Now on the market at the price, being a strictly correct narrative of the events
in our history, beginning with the first voyage of Columbus; then follow
accounts of the explorations of the English, French and Spaniards; the Mound-
builders and the American Indians; the Struggle for Independence; the Wars
of 1812, 1848 and 1861-5, and the numerous wars with the Indians; the great
Political Crises; the great Inventors and their Inventions—the Locomotive,
Telegraph, Cotton-gin, Sewing-machine, etc.—and a chapter on the more recent
but none the less wonderful inventions.

**IT IS ACCURATE
CONCISE
COMPLETE**

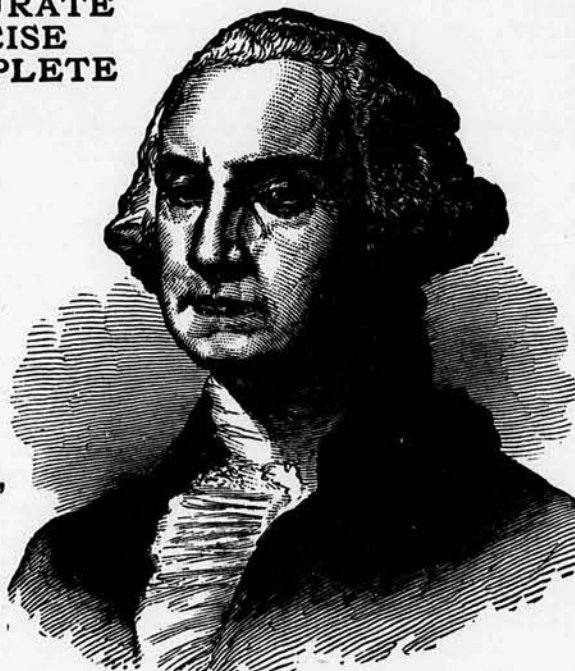
And while the array
of facts and figures is
both accurate and com-
plete, the authors have
woven them into a
thrilling tale of the
American People which
is as interesting as a
novel. The authors,

Arthur Gilman, M.A.,
Professor of History at
Harvard University,

AND

Francis W. Shepardson, Ph.D.,
Professor of History at
University of Chicago,

Are such well-known
educators and historical
authorities that they are
a sufficient guarantee
that the work is of the
highest order of excel-
lence.



Over 600 Pages and 240 Illustrations.

The pictures include portraits of each President; of the prominent men and
women of to-day, as, McKinley, Crisp, Reed, Hill, Edison, Parkhurst, Susan B.
Anthony, Frances E. Willard and many others. Tersely stated, the book is

Up-to-date, Complete, Reliable, Low-priced

It is a vast storehouse of information always at hand. Its exhaustive index
makes it an easy matter to find anything you want, and in order to get it into
the hands of everyone of our readers, we offer it, until further notice,

FREE TO EVERY SUBSCRIBER

Who will comply with the following OFFER! Send us \$2 for two years' sub-
scription for yourself—or one year for yourself and one year for another—and
we will mail you the Book as a premium. Or, send \$1.25, and we will send you
KANSAS FARMER one year and the book, also, to any address.

Address KANSAS FARMER CO., Topeka, Kas.

Please mention "Kansas Farmer" when writing to our advertisers!

THE GREAT ROCK ISLAND RY.

THE FAVORITE ROUTE TO THE

East, West, North, South.

Through cars to Chicago, St. Louis, Colorado,
Texas and California.

Half Rates to Texas Points!

LOW RATES TO ALL POINTS.

Especially California, Texas and Southeast
ern 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.

Burlington
Route

SOLID THROUGH VESTIBULED TRAINS

Kansas City, St. Joseph,
Leavenworth, Atchison,

TO

ST. LOUIS, CHICAGO, OMAHA,
PEORIA, ST. PAUL & MINNEAPOLIS.

WITH

Dining Cars, Sleepers
and Chair Cars (Seats).
(Free).

CONNECTIONS MADE AT

St. Louis, Chicago and Peoria

FOR

All Points East, South and Southeast.

L. W. Wakeley, G. P. A.,
ST. LOUIS, MO.

Howard Elliott, Gen. Mgr.,
ST. JOSEPH, MO.

H. D. Dutton, T. P. A.,
ST. JOSEPH, MO.

H. C. Orr, A. C. P. A.,
KANSAS CITY, MO.



Vitality Men Restored.

Falling Sexual Strength in old or young men can be
quickly and permanently cured by me to a healthy
vigorous state. Sufferers from.....

**NERVOUS DEBILITY,
WEAKNESS, VARICOCELE,**

AND ALL WASTING DISEASES should write
to me for advice. I have been a close student for
many years of the subject of weakness in men, the
fact is, I was a sufferer myself. Too bashful to seek
the aid of older men or reputable physicians I inves-
tigated the subject deeply and discovered a simple
but most remarkably successful remedy that com-
pletely cured me. I want every young or old man
to know about it. I take a personal interest in such
cases and no one need hesitate to write me as all
communications are held strictly confidential. I
send the recipe of this remedy absolutely free of
cost. Do not put it off but write me fully at once,
you will always bless the day you did so. Address

THOMAS SLATER, Box 960,
Shipper of Famous Kalamazoo Celery,
KALAMAZOO, MICH.

HENRY W. ROBY, M. D.,
SURGEON.

Office 118 Sixth Ave. West, TOPEKA, KAS.

Cure guaranteed. For partic-
ulars and free sample address
Hermit Remedy Co., Dept. L.,
183 Dearborn St., Chicago, Ill.

Piles

FARMERS, SPAY YOUR SOWS

Mares, cows and pig dogs with Howsley's Spaying Mixture. No knife, no deaths. Easy to use and absolutely sure. Price: Large bottle, \$3—spays twenty cows; sample bottle, \$1—spays twenty sows. Write us for testimonials and particulars. Address

THE HOWSLEY SPAYING CO.,
Room 217 Stock Yards, Kansas City, Mo.

WOVEN WIRE FENCE
Over 50 Styles. The best on Earth. Horse high, Bull strong, Pig and Chicken tight. You can make from 40 to 60 rods per day for from 14 to 22c. a Rod. Illustrated Catalogue Free. **KITSEMAN BROS.,** Ridgeville, Indiana.

To Cripple Creek

VIA COLORADO SPRINGS

The Chicago,
Rock Island & Pacific
Railway is

4 hours quicker

To Cripple Creek
than any other line.

Full particulars by addressing
JOHN SEBASTIAN, G. P. A., Chicago.

CRIPPLE CREEK

The Santa Fe Route is the most direct and only through broad-gauge line from Chicago and Kansas City to the celebrated Cripple Creek gold mining district. Luxurious Pullmans, free chair cars, fastest time, and low rates.

GOLD! GOLD!!

Address G. T. Nicholson, G. P. A., A., T. & S. F. Ry., Monadnock Bldg., Chicago, or W. J. Black, A. G. P. A., Topeka, Kas., and ask for free copy of profusely illustrated book descriptive of Cripple Creek. It is well worth reading.

SANTA FE ROUTE**Wanted, an Idea.**

Who can think of some simple thing to patent? Protect your ideas; they may bring you wealth. Write John Wedderburn & Co. Patent Attorneys, Washington, D. C., for their \$1,800 prize offer and list of 200 inventions wanted.

J. G. Peppard

1400-2 Union Avenue,
KANSAS CITY, MO.

MILLET CANE
CLOVERS
TIMOTHY
GRASS SEEDS.

SEEDS**WE ARE CONVINCED,****Breeders Are Being Convinced**

By Actual Experience that you can KILL THE GERMS with Bannerman's Phenyle
And Anglo Hog Food KILLS THE WORMS and Conditions the Hog,

THEREBY

PREVENTING AND CURING HOG CHOLERA

Any BREEDER using our Goods according to directions and not getting results we claim, can make a draft and get your MONEY RETURNED.

WHO ARE OUR REFERENCES?

Some of the most extensive BREEDERS in the country, who have used our Goods from one to three years. CAN WE CONVINCE YOU?

READ THE FOLLOWING:

Mr. Scoville, in ordering our goods, stated: "I have bought so many worthless compounds that I am almost discouraged, but will try yours and see if its what you claim for it."

Read his answer after using the goods: "I have used it on my hogs that had lice on them. Am highly pleased with the result. It fixed the lice in short order. In forty-eight hours after applying it, I could not find a live louse on any of them, but plenty of dead ones. It works equally as well in the hen-house. I keep my hog-houses and yards sprinkled with it, and they smell sweet and clean—not a trace of any bad odor about my hog establishment. With my breed of swine (Small Yorkshires) and Bannerman's Phenyle used in their quarters, I don't expect to have any disease. E. J. SCHOFIELD, Hanover, Wis."

Read what others say, and when through, if not convinced, write the editor of this paper. He has thoroughly investigated this.

Additional testimonials, with names of parties using, sent on application.

A prominent breeder writes, upon sending in an order for another 200-pound barrel of goods: "For two years I have protected my herd from disease with cholera raging around."

Another breeder writes: "I have great faith in your goods. Have got my fourth barrel this season, one of which other parties took. My hogs are in good shape and pens and yards as clean as a parlor and thoroughly disinfected. Hogs have never done better than they are doing now."

A prominent hog breeder writes: "I have my first crop of hogs all right. You can give the credit to your goods." Still another writes: "I used your goods and did not lose a hog. I stopped using it and lost two. Send me some more. I would not be without it, as I believe it to be the only thing that will prevent hog cholera."

ANGLO-AMERICAN STOCK FOOD CO.,

113 ADAMS STREET, CHICAGO.

**WILD TOM 51592.**

Sweepstakes bull Wild Tom 51592. Weight when thirty-four months old 2,205 pounds in show condition. He is the best living son of Beau Real 11055. Dam Wild Mary 21238. Winnings:—Iowa State Fair, 1895, first in class, first in special, first in sweepstakes, and Silver Medal; Kansas State Fair, first in class, first and special at head of herd, first bull and four of his got.

FARM—Two and a half miles northwest of city. We furnish transportation to and from the farm if notified.

SUNNY SLOPE FARM

***** EMPORIA, KANSAS, *****

Hereford Cattle Headquarters

Sunny Slope Farm is one of the largest breeding establishments in the United States. Three sweepstakes bulls in service—Wild Tom 51592, Climax 60942, Archibald VI. 60921, also the great breeding bull, Archibald V. 54433, who was the sire of two sweepstakes animals (Archibald VI., sweepstakes under one year of age, and Miss Wellington 5th, sweepstakes heifer over all beef breeds when twelve months and twenty days old. We have thirteen serviceable bulls for sale, ranging from eight to twenty months old. We also have forty bulls for sale, ranging from five to eight months old. Also a choice lot of heifers and cows. We combine the blood of Anxiety, Lord Wilton and Grove 3d. Breeders are invited to inspect our herd.

C. S. CROSS,

H. L. LEIBFRIED, Manager.

EMPORIA, KANSAS.

Italian Bees

Full colonies of Italian Bees shipped to any point, and at any time during the summer. Safe arrival guaranteed. Bee-Hives of the latest pattern. Smokers, Extractors, Comb Foundation, Books on Bee Culture, and everything pertaining to bee industry. Circular free.

Address **A. H. DUFF & SON, Larned, Kas.****VETERINARY SURGEON.**

DR. U. B. MCCURDY, Veterinary Surgeon. Graduate Ontario Veterinary college, Toronto, Canada. Can be consulted on all diseases of domestic animals at office or by mail. Office: 114 West Fifth Street, Topeka, Kas.

LIVE STOCK AUCTIONEERS.

Live Stock Auctioneer. JAS. W. SPARKS, Marshall, Mo. Sales made everywhere. Refer to the best breeders in the West, for whom I sell. Satisfaction guaranteed. Terms reasonable. Write before claiming dates. Mention KANSAS FARMER.

ELI ZIMMERMAN, Hiawatha, Kansas, Live Stock and General Auctioneer. Pedigreed and registered live stock a specialty. Write for dates. Sales conducted anywhere in the country. Best of references and satisfaction guaranteed.

S. A. SAWYER, FINE STOCK AUCTIONEER—N. Manhattan, Riley Co., Kas. Have thirteen different sets of stud books and herd books of cattle and hogs. Complete catalogues. Retained by the City Stock Yards, Denver, Colo., to make all their large combination sales of horses and cattle. Have sold for nearly every importer and noted breeder of cattle in America. Auction sales of fine horses a specialty. Large acquaintance in California, New Mexico, Texas and Wyoming Territory, where I have made numerous public sales.

USE**KANSAS LUMP****Ground Rock Salt for Stock.****ROCK SALT FOR STOCK.**

USE ROCK SALT

FOR
HIDES, PICKLES,
MEATS, ICE CREAM,
ICE-MAKING,
FERTILIZING, Etc., Etc.

Mines and Works: Address
LYONS AND KANOPOLIS, KAS.

WESTERN ROCK SALT CO., ST. LOUIS, MO.

SOLE AGENTS FOR LYONS ROCK SALT CO. AND ROYAL SALT CO.