

KANSAS FARMER

FOR THE IMPROVEMENT OF THE FARM AND HOME

TOPEKA, KANSAS, APRIL 22, 1911.

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MAN must have friends.

They may be animate or inanimate; human or animal or plant. His human friends make for his mental, moral and spiritual uplift; others, for his material well being. Without friends he becomes a savage.

His present civilization were beyond him without the help of his four-footed friends, and yet one of them, ever since its ancestors "ran down a steep place into the sea," has been scorned, abused and villified.

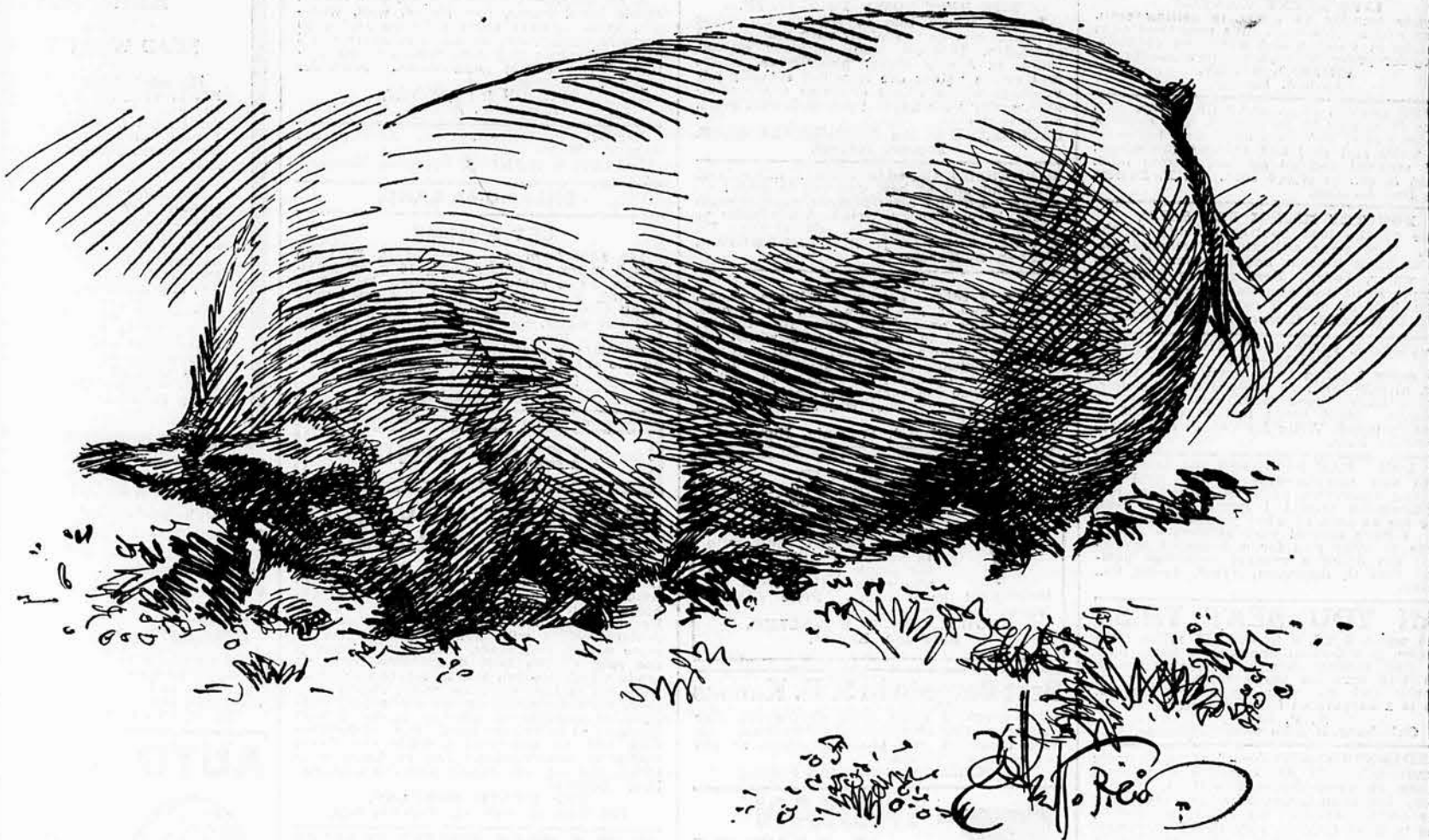
Cleanly of habit and a vegetarian, the pig has been forced by the "slings and arrows of outrageous fortune" to house in filth and dine on carrion; yet he has never faltered in his friendship nor failed in his duty.

Philosophically accepting his man-made environment, and knowing that his master seeks his own profit and not his, he continues to supply the table with the most delicious of viands and the purse with an opulence of coin.

Democratic always, he feeds the poor and adorns the rich, builds great factories, moves the wheels of commerce and enriches the state.

As is the man, so the hog. Reared in the filth of the hovel, a beast; well bred and housed, a gentleman among his fellows.

I. D. G.



A Gentleman Among His Fellows

BARGAINS IN LANDS

GET OUR BOOK OF 500 FARMS and properties everywhere to trade. Graham Bros., Eldorado, Kan.

IMPROVED FARMS in S. W. Kansas and N. W. Oklahoma, \$10 to \$25 per acre. Write Moore & Falls, Liberal, Kan.

I MAKE a specialty of Ford county land and Dodge City property. F. H. SUGHRUE, Dodge City, Kansas.

ESTABLISHED 1885—Write for free list. Park H. Thornton, Real Estate Dealer, Weldwater, Comanche Co., Kansas.

32 YEARS IN NESS COUNTY. Write me about cheap farms here. W. P. ANDERSON CO., Brownell, Kansas.

200 ACRES, 14 miles south of McPherson, Kan.; good farm; price \$90; exchange for mds.; mostly alfalfa land; imps. good. J. M. Clabbe, Durham, Kan.

FORD COUNTY—Good, smooth wheat and corn land; rich, deep loam; all tillable; all sizes; \$12.50 per acre up; terms. WILSON & WRIGHT, Dodge City, Kansas.

HURRY, IF YOU WANT this 160, all broke, 5 ml. north, offered 30 days at \$1800. Write R. B. IRWIN, Modoc, Kansas.

IMPROVED Anderson county corn, wheat, oats and alfalfa farms at \$40 to \$60 per acre. Write for our free list. Also good exchange propositions. Rice-Daniel Land Co., Garnett, Kan.

1120 ACRE COMBINATION RANCH. 25 head horses and colts above average, and one registered Percheron stallion. Write for particulars. 80 acres first-class alfalfa land in famous Artesian Valley at a great bargain. WM. MILLER, Meade, Kan.

IF YOU ARE INTERESTED IN CENTRAL KANSAS, WESTERN KANSAS OR COLORADO LAND FOR A HOME OR INVESTMENT, STATE YOUR CHOICE TO C. C. WALLACE, BROOKVILLE, KANSAS.

10 DOLLARS PER ACRE UP TO \$25 buys best improved farms in Wichita county, Kansas. WHEAT BELT LAND CO., LEOTI, KAN.

FOR SALE. 160 acres one mile from good town in Harvey county; all tillable. Price for quick sale \$9,000. S. R. McArthur, Newton, Kan.

FOR SALE—160 a. 5 miles from Hamilton, Kan.; all smooth, tillable land; 35 a. under plow; fair improvements; on public road and phone line. A bargain at \$30 per acre. A. F. Dove, Hamilton, Kan.

FOR SALE. 160 a., 2 miles from town, every foot tillable, 120 under plow, 20 pasture, 10 meadow, good 6 room house, large barn and outbuildings, well and mill, cistern, 2 miles to high school. Price \$12,500. Send for new list. EBERHARD & MELLOR, Whitewater, Kan.

YOU'LL LIKE LINN COUNTY, KAN. We have abundant coal, wood, natural gas and good water. The land raises magnificent crops of alfalfa, timothy, clover, bluegrass, oats, corn and wheat. R. F. D. and phone at your door. Price \$20 to \$30 per acre. List free. A. E. ROOT, Pleasanton, Kan.

LIVE AGENT WANTED in your locality to assist in selling corn, wheat and alfalfa land. We own thousands of acres in Pawnee and adjoining counties. Write for proposition on our own ranches. FRIZELL & ELY, Larned, Kansas.

FINE HOME, 48 a., one mile of this city, about 38 a. now in cultivation, bal. pasture, 6 room house, new barn 34x60 and hay lot; two wells and mill and other outbuildings; good orchard and all second bottom land. Priced to sell at \$5,500 cash. E. F. Dewey, Blue Rapids, Kan.

POULTRY RANCH FOR SALE. One of the best poultry ranches in the state. Two acres adjoining Washburn college campus 9-room house, cellar, cistern, well water, barn. Best poultry house in county. Fruit and ornamental trees. Price \$4,000, half on time if desired. No trades. POULTRYMAN, Kansas Farmer Office.

100—CHOICE DICKINSON AND CLAY CO. FARMS—100. 80 acres 3 miles from town, 70 a. under plow, alfalfa land, 20 pasture and meadow, 5 room house, good well, barn and other buildg. \$2,000 cash; rest to suit; 25 a. wheat included. Write for list. J. J. Bishop, Wakefield, Kan.

IF YOU MEAN BUSINESS and have real estate and merchandise of any kind for sale and exchange, and are willing to pay a commission should I make you a deal, write me at once several very attractive propositions to offer you for a home or investment; am doing a general exchange business. Carl G. Anderson, Athol, Smith Co., Kansas.

CAN YOU BEAT THIS? 120 acres, 8 miles to town, 8 miles from Parsons, new 5-room house, new barn, land lays just rolling enough to drain, fenced with hog wire on three sides, nearly all timothy and clover; some native pasture. This is a bargain at \$45 per acre. A. F. ROSA, Galesburg, Neosho County, Kansas.

ANDERSON COUNTY—282 acres, 65 acres in cultivation, 25 acres mowland, balance pasture. 10 acres fenced hog tight. Plenty water. Six-room house, new barn 46x50 and other improvements. Six ml. to Garnett, 3 miles to Bush City, 1/2 mile to school. Price \$35. This is a bargain. Geo. W. Her & Sons, Garnett, Kansas.

HERES A GOOD ONE—BUTLER COUNTY, KANSAS. 480 a. smooth land, 80 a. cultivated, 4-room house, small stable, good well and windmill, 400 a. fine grass, school 1 mile; Orient grade just misses farm; townsite 1/2 mile. Price only \$28 an acre. Full description, land list and Kansas map for the asking. WHITEWATER LAND & LOAN Co., Jas. A. Thompson, Manager.

HAMILTON CO. land \$7 to \$10 per acre. F. L. McAdam, Syracuse, Kansas.

240 ACRES, 9 rm. dwelling, close to town; bargain. Buckeye Agency, Agrícola, Kan.

WHAT have you to trade for lands or city property? Hale, Coffeyville, Kan.

HALF SECTION improved farm in Woods Co., Okla., to trade for Kansas or Mo. land. Taylor & Bratcher, Coldwater, Kan.

KANSAS LAND FOR SALE—For description of farms and price list, write Matthews, Oswego, Kansas.

LAND IN FORD COUNTY and the Southwest at \$4 per acre up. Wheat lands a specialty. BROWN & VERNON, Dodge City, Kansas.

160 ACRES, 3 miles of Towanda. A snap at \$7500. Other good farms in western Butler county. Write for particulars. G. W. MOORE, Towanda, Kansas.

MONTGOMERY CO., Kan., best improved farms sell at \$40 to \$60 per acre. For descriptive booklet write BOWMAN REALTY CO., Coffeyville, Kan.

BARGAIN IF TAKEN QUICK. 80 a., 30 a. timothy hay, balance meadow; no improvements; fenced; 10 ml. Iola, 3 ml. from R. R. J. E. POWELL, Iola, Kansas.

WRITE G. L. PAINTER & CO. About Ford Co. Land. \$15 per acre up. DODGE CITY, KANSAS.

WHITE FOR FULL DESCRIPTION. Fine imp. farm near town, school and church. 70 a. alfalfa land, square section, \$12.50 per a., half cash. This is a bargain. Come quick if you want it. V. C. CUTLER COMPANY, Scott City, Kansas.

160, 240, 200 and 100 acres, foot of Ozarks, McDonald Co., Mo.; highly improved; 3 ml. from R. R.; level prairie; bargain at \$40 acre. COL. G. W. MITCHELL, Anderson, Mo.

WE THINK we have the best snap in southeast Kansas; 240 acres, well improved, 80 acres valley land. Price \$40 per acre. Lands to exchange for merchandise. Write or call. D. W. NEILL & CO., Yates Center, Kansas.

FOR TRADE. 80 acres, 4 miles of Garnett, Kan., 70 acres in cult., 6 room house, barn, cribs. Price \$5,000; mortgage \$1,300. Wants grocery or gen. mds. 315 acres, 5 miles of Bush City. Price \$16,000; mortgage \$5,600. Wants small farm in northeast Kansas. SPOHN BROS., Garnett, Kansas.

FOR SALE. 480 acres 5 miles north of Lawrence, Kan., 1 1/2 miles from Midland; 400 acres tillable, mostly second bottom; no overflow land; is watered by two never falling streams; has three large barns; a large house and numerous outbuildings all in good condition. There is no better grain or stock farm in Eastern Kansas. A BARGAIN at \$75 per acre. CHARLES E. SUTTON, Lawrence, Kansas.

THE BEST TOWN TO LIVE IN. If you would like to live in the most beautiful city in the West, with unsurpassed education, business and religious advantages, in a city clean, progressive, where real estate values are low, but steadily advancing, where living expenses are reasonable, a city with natural gas at lowest price, address the SECRETARY of the COMMERCIAL CLUB, Topeka, Kansas.

McPHERSON CO.—160 acres 2 miles from town and one of best colleges in state; all wheat, corn and alfalfa land; good 5 room house, barn, granary, well and windmill; on R. F. D. and phone line. Better than Ill. or Iowa. FREE LIST. A. W. BREMEYER, McPherson, Kansas.

FOR SALE. 335 a. Verdigris bottom, big house, phone, 2 fine wells, 2 big barns, etc., all in cult. and meadow except few acres fine timber; have produced 80 bu. corn, 40 bu. wheat and 8 tons of alfalfa per acre; in oil and gas belt and unleased; 3 miles good town and 9 miles to county seat; an estate; no agent's profit. Price \$95 acre. You can't buy better land at any price; will soon double in value. LOCK BOX 656, Fredonia, Kansas.

YOU CAN'T BEAT IT. 160 acres, level, sub-irrigated land, fenced, 100 a. in wheat, 1/2 goes; best in county; 60 mow land; all can be farmed; half mile to school; 3 miles to trading point; on R. F. D. and phone line; first class for investment or a home. Price \$6,000; terms. All new land. Write BROWN, GRANT & WALTER, Kingman, Kansas.

Best Bargain in S. E. Kansas. 240 acres, 6 miles from Coffeyville, fair improvements, 80 acres in cultivation, balance mowland and pasture. Snap at \$26 per acre. No trades. H. H. KAHN, Coffeyville, Kansas.

INDIAN LANDS! 50,000 Acres of rich black corn land in EASTERN OKLAHOMA for sale, trade or rent. Write ALLEN & HART, Owners 308 Commerce Bldg., Kansas City, Mo. And Claremore, Okla. Agents Wanted.

Louisiana, The Land of Opportunity

The Louisiana Farm Land Congress takes this method of extending an invitation to the readers of this paper to attend their Second Annual Land Congress to be held in the city of Monroe, La., on the 4th, 5th and 6th of May.

Special rates are being made for this occasion. The regular seekers' rate to Louisiana takes effect on the second, giving homeseekers and buyers an ample opportunity to reach Monroe before the opening of the Congress.

Much has been said of the possibilities of Louisiana; seeing is believing; therefore we invite you to come and see the exhibits and examine the soil, enjoy our climate and meet our people.

Bring your bathing suits and enjoy the free baths at our famous salt water resort, the only place in the world where a salt water lake can be found in a water country. Again we invite you. Write W. E. MONROE, President, DELHI, LA.

TWO FIRST CLASS FARMS. 320 a. 1/4 ml. town, 260 a. cult., all tillable; some imp.; lots of fine water; No. 1 neighborhood; \$6,000; terms. 160 a., 1 1/2 miles town; A1 imp. \$5,000. F. T. McNICH, Ransom, Kansas.

800 ACRES, well imp., fertile soil, well of water 20 ft. deep; 500 a. tillable; 2 1/2 ml. of town. \$12,500 per a. BUXTON BROS., Utica, Kansas.

FINE 160, Woodson Co.; highly improved; good soil; write for complete description; only takes \$2,000 to handle this. Y. C. LAND CO., Yates Center, Kansas.

COME QUICK FOR THIS! Nicely improved 160 acre farm 4 miles from town; 60 acres in cult.; 60 acres blue-stem meadow; no rock; offered at \$35 per acre. Must be sold to settle an estate. A. B. ESTEP, Yates Center, Kansas.

A SNAP FOR QUICK DEAL. Good 160, lays nice, well improved, 1 1/2 miles from good small town, new house and barn, young orchard, 20 acres timothy and clover, 45 acres corn, 25 acres native hay, balance pasture, immediate possession. Want quick deal. Price \$6500. Carry \$4000 four years at 5 per cent. DONAHUE & WALLINGFORD, Mound Valley Kansas.

HAMILTON COUNTY relinquishment, stonehouse, shallow to water, not a better piece of land in the county, in Bear Creek Valley, for sale cheap. J. B. PRATT, Co. Treas., Syracuse, Kansas.

FINE SECTION NESS COUNTY. 640 a., 1 1/2 ml. from town, 500 a. smooth; all be farmed; 300 a. in cult.; fine spring with reservoir, NEVER DRY; also a good well where a person would want to build; 1/2 ml. to school. Price \$25 per a. This is as fine section as there is in the county and with little expense can be made a very fine place. Will trade for general mds. or income property. RUTHERFORD & OLIVER, Utica, Kansas.

LIFE is worth living in Kearney county. Hunting and fishing on Lake McKinney; 7 ml. long; rich soil; one crop pays for land; we have R. F. D. and telephones. Write for information about Kearney county. LAKIN LAND & IMMIGRATION CO., Lakin, Kan.

A HUMMER—160 acres, house of 3 rooms, stable for 2 teams, cow stable, well, windmill tank, cement chicken house 10x30, 80 acres in cultivation, 80 acres in pasture, all can be farmed; rich soil, second creek bottom. Price \$8500; good terms. Send for big list. Address STINSON & SHELDON, Spearville, Kansas.

MONEY in western land. Live agents wanted. Write WALTER & WALTER, Syracuse, Kansas.

OKLAHOMA LAND. GET A HOME. 160 acre farm 2 1/2 miles of R. R. town and 5 miles of county seat, 10 a. in cultivation, 40 a. pasture, 10 a. mow land, 6 a. orchard, 5 a. alfalfa, good 6 room house, small barn and granaries, all fenced, 2 fine wells of water, fine grape vineyard, 1/2 mile to school, farm drains well. Price \$7,000. Immediate possession. One-half cash will handle this. Write for our land list. BATTEN REALTY CO., Medford, Oklahoma.

TEXAS LAND LOWER PECOS VALLEY IRRIGATED LAND. In West Texas is absolutely the best location for safe and profitable investment in America. 40 acres will provide an ideal home and a yearly income of \$3000 to \$5000. Development has only fairly started and present values will double and treble in price within two years. We own or control the sale of the best dependable irrigated lands which we can sell in tracts to suit at from \$50 to \$100 per acre, water rights fully paid, on easy terms, or we can supply sections of artesian or shallow pumping well lands at \$5 to \$10 per acre. For productiveness and all the year climate the Pecos Valley is unsurpassed. Let us know your wants and we will supply detailed information. Address THE HEATH COMPANY, 100 West Seventh St., Topeka, Kan.

OZARK ORCHARD BEARING and Small Fruit Lands on level roads, close to Distributing Station are at their BEST around "Goodman Community," McDonald county, Missouri. CLIMATE, HEALTH AND WATER the best. Markets at YOUR DOORS. Grower's Association established. Beautiful Booklet showing scenes and conditions with PRICES and TERMS mailed on request. JAMES B. WELSH REALTY & LOAN CO., Ozark Dept 8, Kansas City, Mo.

BUY OR TRADE with us. Exchange free. Bersie Agency, El Dorado, Kan.

IMP. and unimp. land in western Kan. W. G. Ruth, Scott City, Kansas.

IMPROVED 160 a. fine land, Montezuma Co., 2 ml. Ry. market, \$40 acre. A.mond, Owner, Box 372, Independence, Mo.

FOR SALE BY OWNERS—160 acres, miles Parsons, Kan.; well improved, watered. A bargain at \$9,000. Bogg Parsons, Kansas.

1480 ACRE RANCH, all fenced, 10 house, tenant house, barn, granary, 20 a. alfalfa, 200 a. in wheat, 6 ml. City; telephone and R. F. D. \$20 a. J. C. WHARTON, McCracken, Kan. Agents wanted to co-operate.

SNAPS FOR THIS WEEK. Improved 160, 2 miles Ness City, in nut Valley, \$25 per acre. Raw quarter miles Ness City, \$15 per acre. Have good bargains for quick sale. J. G. COLLINS, Ness City, Kansas.

BUY TOWN LOTS in rapidly growing city, Plains, Kan. make big profits. Prices \$12.50 to \$18. terms. Ask for literature. Act quick! best locations. JOHN W. BAUGHMAN, Plains, Kansas.

320 ACRES, 2 1/2 miles from town, imp., 140 a. wheat, looks fine, 55 a. \$10,000; terms. Let me send you my list. W. A. OGDEN, Ness City, Kansas.

240 ACRE farm in Linn Co., Kan., 4 miles from town, 4 miles north of Mapleton, Kan. cultivation, 80 good for grass only, 4 house, good barn. \$2,600 cash, balance 6 per cent. CHENAULT BROS., Fort Scott, Kan.

A Genuine BARGAIN. 320 acres, Rush county, Kansas, 1/4 mile from good railroad town, house, barn, 40 a. alfalfa, 240 acres under cultivation and in wheat; one-third of crop goes to the place is sold quick. Price \$8,500. JAMES H. LITTLE, LaCrosse, Kan.

My advertising in KANSAS FARMER brought me many replies. I had the paper to be a live farmer's paper for I used to take it years ago. I used to be a farmer. James Henderson, Newport, Ark., March 1911.

We have been advertising steadily for several years in KANSAS FARMER. We have found it pays, so we keep it up for the part of each year, using it as much as quarter page space. Donahue & Wallingford, Mound Valley, Kan., January 10, 1911.

Recently we ran a one-inch estate ad in KANSAS FARMER for four weeks and received a fine list of replies. We consider the result from that ad as very good indeed. Fox-Cook Agency, Topeka, Kan., February 15, 1911.

25 high grade Holstein cows and calves for sale; 3 to 7 years old; a fine lot; marked; nearly all pure bred but not recorded. Also one registered 2-year-old stein bull. B. L. BEAN, Cameron, Missouri.

Choice Fall Big Type Bred Sired by the 1600-lb. Fulton's Chief and of dams by such sires as Smith's Big Boy. Size and quality combined. Low price for quick sale. W. F. FULTON, Waterville, Kansas.

Largest and best equipped Tire Repair Shop in the West. Makes tires repaired and retreaded. Satisfaction guaranteed. Money refunded. Agents for Mopac & Wright Standard Tires. Write for prices with guarantee.

KANSAS FARMER

EDITORIAL

BRAINS ON THE FARM.

Many people, who get their edge at second hand, are advise more intensive methods and the use of brains in farming operations. They do not know that brains are used on the farm to a greater extent than in almost any other business. The farm is where brains grow and this they do by best methods. The conditions of farm life and the daily exercising of brain in combatting insect and fun-gemias, providing against ad-verse weather conditions and the use of ways and means, and yet the result is good.

In the early days of this state the farmer was compelled to bend every effort to secure the immediate dollar return. The habits then formed have re-sulted with him to the exclusion, in many cases, of better methods and of better results. The inexhaustible soil is showing signs of depletion and we are facing the problem of continuing the yield of dollars, and at the same time providing that the source of sup-ply shall not be cut off by the waste-ful methods which will impoverish the soil.

Some farmers are actually liv-ing upon their capital and are grow-ing poorer each year by reason of their methods.

It is where the use of brains is needed. Not brains in the ordinary sense of the word, but as foresight. The crop takes a large amount of food from the soil and unless it is restored ultimate disaster re-sults from the vicissitudes of the weather, practically all of the misfor-tunes that come to the farmer or his family can be traced to his haste to se-ize the present dollar without pro-viding for the future good of his soil.

The care of the soil and it will take of you, and any other method is worth while.

All cared for soil not only brings more dollars now, but gives assur-ance of better returns in the future. It does count on the farm as in any other business.

OUR SCHOOL SYSTEM.

Kansas has always been proud of her school system and yet there are many features about it which might be improved. State Superintendent Child has been instrumental in bringing the interests of the rural school to a greater degree perhaps than any of his predecessors, and yet, in his work he has done serves to de-velop certain facts that are well worth study and that indicate a need for more work yet in the future.

There are now employed in Kansas 13,000 school teachers, and in order to see that they do their work properly we elect 30,000 school offi-cers. In other words, there are 30,000 bosses set to oversee the work of 13,000 teachers, who in turn have charge of the training of the children of the state. If this machinery were lifted somewhat would it be expected to expect greater efficiency and satisfactory results?

Suppose that each county superin-tendent was made the head of a coun-cil of education whose duty it should be to oversee the work of the schools of the entire county, and who should be under the direction, to some extent at least, of the State Superin-tendent. Would there not then be an opportunity such as is not now of-fered for securing the services of thoroughly capable school officers, as well as teachers, and a resulting im-provement of the work done in the school rooms. These things are of great importance for legislation, but are worthy of consideration and should be the next legitimate step in the great advance that has already been made in our present school sys-

the danger from frost is not yet passed and the fruit crop may depend on the care with which the orchard is looked after. The changeable weather of the next few weeks, to-gether with a lack of attention to the vines, will tell the tale.

With which is combined FARMER'S ADVOCATE, established 1877.
Published weekly at 625 Jackson St., Topeka, Kan., by the KANSAS FARMER COMPANY.
ALBERT T. REID, President. J. R. MULVANE, Treasurer. S. H. PITCHER, Secretary.
Edited by T. A. BORMAN and I. D. GRAHAM.
CHICAGO OFFICE—First National Bank Bldg., Geo. W. Herbert, Manager.
NEW YORK OFFICE—41 Park Row, Wallace C. Richardson, Inc., Manager.
Entered at the Topeka, Kansas, postoffice as second class matter.

SUBSCRIPTION PRICE—\$1.00 per year; \$1.50 for two years; \$2.00 for three years. Special clubbing rates furnished upon application.

ADVERTISING RATES—25 cents per agate line—14 lines to the inch. No medical nor questionably worded advertising accepted. Forms close Monday noon.

PUBLISHERS' GUARANTEE TO SUBSCRIBERS—KANSAS FARMER aims to publish advertisements of reliable persons and firms only, and we will make good to any paid-up subscriber any loss he may suffer through fraudulent dealing on the part of any of our advertisers, provided complaint is made to us within thirty days after the transaction, and it is shown that the subscriber, in writing to the advertiser, plainly stated: "I read your advertisement in KANSAS FARMER." We do not, however, undertake to settle, or be responsible for the debts of bankrupts, or for petty and trifling disputes between a subscriber and an advertiser, although we extend our good offices to that end.

PICTURES—Good photographs, drawings and plans are especially solicited. Senders' names should always be written on the back of each picture. KANSAS FARMER can not be held responsible for any picture submitted, except under special written agreement.

CONTRIBUTIONS—KANSAS FARMER is always glad to have correspondence on all farm, live stock or household subjects. Your name should be signed to all communications and they should always be addressed to

KANSAS FARMER COMPANY, TOPEKA, KANSAS.

AGRICULTURE IN THE SCHOOLS.

Under the new law passed by the legislature last winter all Kansas teachers must pass an examination in elementary agriculture. In order to aid these teachers in their preparation for the new duties assigned to them, the Kansas Agricultural College will offer special short courses in the spring and summer. The spring term began March 28 and closes June 14. The summer term begins June 15 and closes July 27. In these courses instruction will be given in the subjects of soils, farm crops, live stock, horticulture, home economics, cooking and sewing, manual training and methods.

This is but a step in advancing the work inaugurated by State Superin-tendent Fairchild, who has been able to accomplish more for the good of the schools of Kansas than has been done in all of her previous history.

One of the remarkable facts in western agriculture, which has appar-ently only come to light in recent days, is found in the wonderful adapt-ability of Grimm's alfalfa to western conditions, and to the further fact that this variety has been grown con-tinuously in Michigan since 1857. Outside of this immediate locality this variety does not seem to have been known or thought of, and yet it has certain qualifications which render it immensely valuable to farmers of the best alfalfa regions, as well as to those who have heretofore been un-able to succeed with the ordinary type of alfalfa. The apparent difference between this variety and that which has descended from the Spanish con-querors of Mexico, is found in its habit of root growth. Ordinary alf-alfa as known in Kansas has a very strong spike root with very few large branches, while Grimm's alfalfa seems to have a considerable number of sep-arate roots of equal size that start downward from the crown. This gives it an immense feeding power, and en-ables it to withstand drouth and ad-verse weather conditions. The redis-covery of Grimm's alfalfa will un-doubtedly extend the area over which this valuable plant can be cultivated.

THE LIVE STOCK CENSUS.

Wonderfully interesting are the facts one reads in the census reports which some good soul in Washington mails free, thinks the Kansas Indus-trialist. For instance, the population of the United States is 92 millions. The country has one cow to every 1.3 persons; one pig to every two, and one sheep for every 1.6 persons. Mules have not increased as one might have hoped. Twenty-two persons will have to toil along with only one of the long-eared helpers. Horses, instead of being driven from the land by an excess of liking for motor cars, really show no lessening in numbers. The nation has one horse for every five human beings.

PROF. KINZER'S SUCCESSOR.

After taking some months in which to thoroughly consider the problem of filling the professorship of animal husbandry made vacant by the resig-nation of Prof. R. J. Kinzer, the Board of Regents of the Agricultural College have selected Prof. P. N. Flint. Prof. Flint is a graduate of the Michigan Agricultural College, though he received his master's degree from the Illinois University.

He began his active work as assist-ant in animal husbandry in the Geor-gia Experiment Station and within one year was made head of the de-partment. He comes to Kansas from Arkansas, where he has been head of the animal husbandry department during the past year. He comes with very high recommendations, and it is believed that the board has acted wisely and well in selecting him.

Tile drainage is the subject of a good deal of inquiry from our readers who are alive to their own interests and to its advantages. As land be-comes higher in price, and as taxes grow, with the increasing valuation, a greater income per acre is needed to pay for the investment. There should be no loafing acres, and land which is now of little or no use, and yet on which taxes are paid, can be rendered profitable by a small invest-ment in drain tile. Land which needs drainage is wholly unreliable. Some years it may be valuable for crop pro-duction. More often it is not. Most farmers are prevented from draining their land by the lack of exact knowl-edge as to both cost and the results obtained. Without the survey of the land itself it is difficult for even a skillful engineer to determine the cost of installing a drainage system. It may cost as low as \$5 per acre or it may run as high as \$50, though the average is perhaps about \$10 or \$15. The principle point in view, however, and the one which is generally over-looked, is the fact that when such land has been properly tiled it is for-ever after available as a crop pro-ducing area and a profit producer. Most soils of this kind will pay for themselves in a very short time when properly tiled.

The mild winter is likely to cause a decrease in the home manufacture of butter owing to the inability of farm-ers to put up ice. This, however, may not be an unmixed evil, as there is al-ways a ready market for good cream at every railroad station and the prices paid make it about as profitable as the home manufacture of butter.

"Get the crop out of the ground, the dollar out of the crop and happiness out of the dollar," is the farmers' problem. Through conservation of fertility he not only insures the pres-ent dollar, but a succession of dollars for his children.

CHOLERA SERUM AND THE STATE

A correspondent inquires why the farmers are charged for the cost of anti-hog cholera serum when the state has appropriated money for the equipment of a laboratory for its manufacture.

It is properly the province of the state to pay for the cost of making all experimented tests to prove the value or worthlessness of the serum, but once this is done the individual who benefits by its use should pay for what he uses. There are very many tax payers in Kansas who do not raise hogs and yet the knowledge gained from the experiments conducted at the Experiment Station and paid for by the people is of direct value to all. Doubtless every tax payer feels that the state money spent by that institu-tion is well spent in the increase of human knowledge, but perhaps each will agree that when this knowledge is turned to his personal advantage he alone should pay for it. In Kan-sas the experiment station has made more progress with hog cholera serum and has done so with less of means than has been true in any other state of which we have knowledge, and in addition the serum has been furnished to the farmers at a lower cost than in most other states.

Nothing in recent veterinary medi-cal science has been of greater impor-tance than the discovery and develop-ment of the anti-hog cholera serum, and much of the work necessary to this has been done by Kansas men.

One of the most important public documents that has been printed in Kansas in many years is the first an-nual report of the Live Stock Regis-try Board, which has just been issued from the printing department of the State Agricultural College. This re-port contains the old stallion law, ar-ticles on the breeding and care of horses, unsoundness in horses, the work of the board and a list of stal-lions which have been approved for public service in Kansas. This board has done great work and its report will be valued by farmers and stallion owners. Copies may be had by ad-dressing Dean Ed H. Webster, Man-hattan, Kan.

An eastern exchange tells of a Long Island farmer's experience in raising alfalfa. His expenditures were as follows: Seed, \$45.70; lime, \$185.60, and phosphate, \$145.60, or a total of \$376.90 on a 10-acre field. This field is only 20 miles from New York City, where the value of land is very high and alfalfa cannot be grown there without these fertilizers, and yet the owner makes money. Compare his expenditures with those necessary on a Kansas alfalfa farm and see our advantages.

The big state fairs and live stock expositions are busy with early an-nouncements of plans and attractions for the fall shows. This is a good sign. Interest in such fairs indicates an ap-preciation of work already done and suggests the possibilities of the fu-ture. Real agricultural and live stock shows of this kind always make for the betterment of the state and the nation and county fairs are their pre-paratory schools. Kansas will offer a splendid opportunity for the study of her resources this fall both to her own citizens and her visitors.

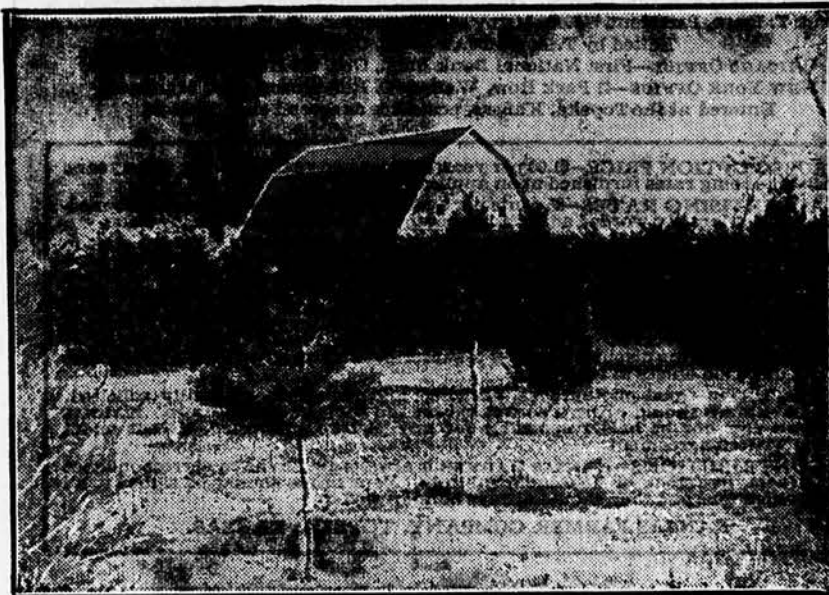
The high water mark for live stock advertising in Kansas farm papers was reached in February just passed, when KANSAS FARMER, of Topeka, broke all records for its entire 50 years' history, and incidentally overtopped the record-breaking records of all other Kansas farm papers at the same time. This high record was made without any special effort, which shows that Kan-sas is making great headway in the pure bred live stock busi-ness.—Agricultural Advertising, Chicago.

TREES FOR WESTERN KANSAS

Evergreens Are Well Adapted to Regions Where There is Little Moisture

By CHAS. A. SCOTT, State Forester

There is not a county in western Kansas in which trees cannot be grown successfully. I believe I am safe in saying that there is not a section of land in the state on which some kind of trees cannot be grown with a reasonable degree of success. There is no secret about growing trees; they require no elements of plant food that is not required by the buffalo grass or the Russian thistle. The fertility of the soil is not as important a consideration in growing trees as it is in growing agricultural crops. The one demand that all trees require is a sufficient amount of moisture to maintain a healthy foliage. This amount varies greatly with the different species of trees and it is on this point that the choice of species for western Kansas planting must be made. A species that has a large, soft leaf, with a great number of large stomata (breathing pores), the catalpa and basswood are examples of this class, cannot endure the climatic conditions and should never be planted. The leaves are too large, the winds whip and cut them to pieces. If they survive the winds, their large stomata allows an excessive transpiration and the trees are starved to death. Trees with small leaves of a firm texture, such as the honey locust, green ash and Osage orange, other factors being equal, are by all odds the more likely to succeed.



RED CEDAR WINDBREAK, EIGHT YEARS AFTER PLANTING, IN NESS COUNTY, KANSAS.

The evergreens transpire only about one-tenth as much water as the broad leaved trees, consequently they are trees that are well adapted for regions of scant soil moisture. Several of the conifers are entirely suitable for planting in western Kansas, and they are by far the most valuable trees that can be grown. The greatest service that any tree can render in a prairie region is the protection that it gives in both summer and winter. The evergreens give an equal amount of protection in both summer and winter. They afford almost as much protection to live stock against a winter storm as a frame shed provides.

The amount of available soil moisture is the one factor that will determine the success or failure of growing trees in western Kansas. The principles of controlling the soil mois-

ture in land devoted to growing trees are exactly the same as those that control the moisture in land devoted to growing wheat. It is impractical to attempt to water a plantation of any considerable number of trees by any pumping system. The annual rainfall must be depended upon to support the tree growth. Conservation of the soil moisture by proper methods of cultivation is, therefore, essential.

Trees do not succeed in virgin soil; they should be planted only on land that has been under cultivation for two years or longer. The ground should be summer fallowed one season before the trees are planted to insure a moist subsoil. The trees must not be planted too close together or they will use up the soil moisture faster than it falls. Eight by 10 or

even 10 feet by 10 feet is as close as they should be planted. If this spacing is found to be too close later in their development they can be thinned.

Cultivation that will maintain a soil mulch must be given the trees until they completely shade the ground and protect it from the sun and wind.

Growing trees for a commercial product is not a practical proposition in the western one-third of this state, but it is a practical proposition to grow trees for adornment and protection. A well cared for grove of trees on any western Kansas farm greatly enhances the value of the farm on which it is growing. The pride and satisfaction that an owner of a grove of trees takes in it cannot be estimated in dollars and cents. The advertising value of a grove of trees is a factor that is seldom considered.

Has it ever occurred to you that a farm in any community that has a grove of trees upon it, is known throughout the entire neighborhood because of the grove?

The most desirable trees for western Kansas planting are the following:

Broad-leaved deciduous trees:

- Honey locust,
- White elm,
- Green ash,
- Russian mulberry,
- Osage orange,
- Russian wild olive.

The cottonwood can also be grown if abundance of soil moisture is available.

Coniferous evergreens:

- Red cedar,
- Chinese arbor vitae,
- Austrian pine,
- Scotch pine.

The jack pine is a good tree for very sandy soil.

A common mistake that is made in setting out trees is that of planting trees that are too large. Not more than one-tenth of the root system of a tree is ever taken with the tree when it is transplanted. Then is it not unreasonable to expect the one-tenth to supply enough nourishment to maintain life and support the new growth? Cutting back relieves the situation in a measure, but how many planters ever cut back the top of a tree in proportion to the loss of roots? When handling small trees a much larger per cent of the roots are always taken with the trees. This enables them to establish themselves more readily in their new location and they can also be given better cultivation while they are developing their root system. The most satisfactory sized trees for extensive planting are 1 and 2-year-old seedlings. The broad leaved species of this age will vary from 2 to 4 feet in height. Most of the trees at this age will have very few branches, a single stem is all that is necessary.

The coniferous trees at this age will run from 12 to 18 inches in height and they will be covered with branches. However, this is a very satisfactory size for planting stock of this class of trees.

Cutting And Curing Alfalfa

By Dr. J. T. Axtell, Before Harvey County Institute

A mistake is usually made by allowing alfalfa to stand too long before cutting. From the time the alfalfa begins to bloom, it decreases in protein, which is the valuable part of the plant, and increases in wood fiber, which is an indigestible and undesirable ingredient. The usual rule has been to cut alfalfa when it is about one-tenth in bloom. A better rule is to cut when the new shoots of alfalfa are just starting from the crown and before they get high enough to be touched by the mower.

If the alfalfa is cut in this way and just at the right time it comes on promptly and covers the field quickly, while if the new shoots from the bottom get up until they are cut off by the mower, it will die down and the alfalfa will often not start until a rain stimulates a new growth and brings it up. It should never be cut when there is any foreign moisture such as dew or rain on the plant. For this reason many times the mower should not be started before nine or ten o'clock in the morning. Formerly we supposed the growing of corn and alfalfa did not go well together as both required work at the same time. It now seems to me an advantage to raise corn and alfalfa together and cultivate the corn in the mornings until the alfalfa is ready to work. If alfalfa is cut when loaded with dew as soon as the sun strikes it, it bleaches and becomes of a brown color, which is unsalable and is also damaged by the loss of protein. Alfalfa should be raked as soon as it is about wilted or just thoroughly begins to wilt. This may be two hours after it is cut in dry times and late cuttings, or if very wet and rainy, may be very much longer. But

under favorable conditions when raked promptly and allowed to come in a large windrow, or better in small shocks, the leaves will stick to the stems and the green color of the plant will be preserved. To cure alfalfa by spreading it in the hot sun wilts the leaves, making it impossible for them to draw the sap from the stem which still remains green and full of sap. The leaves are burnt instead of being slowly and properly cured. It should be cured in the shade and this can best be done in the windrow or in small shocks. The shocks may be left in the field two or three days if necessary, and in this way you will secure the best grade of hay. It pays to preserve alfalfa in sheds or barns instead of stacking it in the open. It is a very poor plant to turn water and is greatly damaged in the stack. When alfalfa is put in the stack full of the sap of the plant and too green for proper stacking, it will heat in the stack and result in a brown color. If this stack is large the part of the hay that is kept from the air will become what should be called "silocured" and is often called "tobaccocured" which is a very valuable feed. The carbohydrates of the hay are burned up to a certain extent and the hay does not weigh so much as when properly cured but it is greatly increased in protein, sometimes testing as high as 17 per cent protein while the ordinary hay is usually 14 or 15 per cent. It is true, however, that parts of the stack will be damaged and molded and this method of

curing hay is not one to be recommended. If we could sell our alfalfa by analysis it would be a saving of millions of dollars for the states of Nebraska, Kansas and Oklahoma. Alfalfa, as now sold, is sold entirely on its color, which gives Colorado and all the irrigated alfalfa lands an immense advantage in the markets, while the analysis of the stemmy, though green, irrigated alfalfa will show a much lower per cent of feeding value than the leafy, small stemmed alfalfa from the states mentioned.

The greatest mistake of all that we have made with alfalfa is in improper feeding. If horses or cows are allowed to run to a rack of alfalfa they will gorge themselves until they are so wide that they can scarcely get through a barn door. They will eat alfalfa until they are nearly stuffed then drink a quantity of water, and then back to the alfalfa again, often eating from forty to eighty pounds in a day per head, while the fact is, that fifteen pounds contains about all the protein that the average size animal can take care of properly in twenty-four hours. And the worst of it is that this protein is not simply wasted but the excretory organs of the animal are taxed to get rid of this waste. This will finally result in disease and is the reason why so many people condemn alfalfa, saying it weakens the animal and is unfit for feed. Fed in the proper manner, there is nothing more healthful than alfalfa for all the animals that eat it. The alfalfa must

then be fed in such a way that the amount is limited and some other cheaper forage plant used for roughness.

The question is often asked me, it pays a farmer to feed alfalfa meal and I will answer it in this way. It adds from 25 per cent to 33 per cent to the value of alfalfa in its digestive power to grind it. The man who must buy baled alfalfa or alfalfa meal should always buy the meal instead of the bale, as it has all the ingredients of the alfalfa in a much better form to feed. The bale will lose a large number of its leaves which is the cream of the alfalfa. It will always pay the farmer, who has local hay to haul his hay to the mill and go to the extra expense of handling and grinding when alfalfa is worth \$12 a ton or less, but as it becomes more expensive it pays better to grind it. However, in order to utilize corn as well as to balance it, mix the alfalfa meal with the corn, make the animal eat more slowly and it proves the digestion. A small amount of alfalfa meal may be profitably fed with all corn rations. Certainly in any place where it would pay one to use bran, alfalfa meal can be used in its stead to a better advantage in every way, except the little inconvenience of wetting the alfalfa meal for some animals. All experiments show that it is a better milk producer than bran. At the present prices of shorts, bran and corn, in my opinion, every ton of good alfalfa hay is worth \$20 in feeding value. The ideal way for farmers to do is to have enough alfalfa on the farm to feed up all their alfalfa instead of shipping it out of the state.

COST OF SILO CONSTRUCTION

Facts And Figures at First Hand To Answer Many Questions

Comparing to build his silo a will encounter as wide a di- opinion about cost and ma- when he buys a motor car writer. Hardly two men will on anything about silos. The on do is to give you the ex- of competent persons in the n department of the college. n have helped to build many r the farmers. They have n opinions about which is the d possibly they would give n opinions privately, but hardly

S. Hine, one of the exten- department's experts on this sub- whom I have obtained of the material presented in icle, has very interesting re- om farmers about their silos. reports show that where a was careful with his material, ood manager and economical his silo for very much less e average farmer. In this as other undertaking in build- management and brains are important. Here is a state- om Stanton Pearson of Ton- who built a concrete-metal- last May for \$256.17:

Cement, 40 cents.....	\$ 56.00
Lime, 30 cents.....	1.65
Shells, 40 cents.....	1.20
Tons, \$1.....	19.00
10x1/2, 5 cents.....	1.00
1/2, 15x13 sq. yds., 18 cents	33.42
Pointed tacks.....	.30
1/2-inch, 58 ft., 5 cents....	2.90
1/2, 12.....	2.00
Boxes, 25 cents.....	.50
at 20 cents.....	9.20
52 hours, 50 cents.....	26.00
33 hours, 40 cents.....	13.20
10 hours, 25 cents.....	2.50
stage builder, 63 hours, 25	
6 hours, 30 cents.....	15.75
and scaffolding, 70 hours, 20	5.45
.....	14.00
Manhattan and return.....	9.50
er, including hauling, exca- and helping build.....	30.00
depreciation on lumber.....	12.60
.....	\$256.17

used in the several coats: 5 sacks on..... 26 sacks cat..... 32 sacks at..... 33 sacks first and second coats com-..... 44 sacks 140 sacks used in staging and in building: 16 feet long, 20 1x 6 18 feet long. 14 feet long, 5 1x 6 12 feet long. 12 feet long, 5 1x 8 12 feet long. 16 feet long, 8 1x10 16 feet long. 2 1x 8 16 feet long. are feet of siding. ates on concrete-metal-lath ry from \$240 to \$300. They en built for \$180, exclusive of

the excavation. Mr. Pearson's report is shown because it is typical of dozens.

Experience teaches me that the concrete silo is the cheapest and best and most durable that can be built. Of course you can make good silage in any air tight silo. It doesn't matter a whoop whether it is built of wood and plastered interior or of stone, brick or concrete. The point is which will do the best work and last the longest. The Agricultural College in Wisconsin has recorded a concrete silo built for \$171, last summer. Here are the figures. Cement is higher now, and you should add about \$40 for the wooden form if you have to buy it. You needn't use first class lumber for the form, and sometimes you can rent it or buy it second hand:

For a 16-foot silo 36 feet high:	
Portland cement, 40 bbls., \$1.40.....	\$ 56.00
Wire for reinforcing.....	10.00
Gravel, 40 loads.....	40.00
Labor, four men 15 days.....	60.00
Rent of form from school.....	5.00
Total.....	\$171.00

The foregoing figures do not include the roof. Right now cement is worth about \$1.70. Wisconsin reports a thoroughly reliable concrete silo built in that state for \$100 but does not supply the details. Crushed rock might cost you more than gravel, too. It is impossible in the limits of this article to consider stave or concrete block silos. An excellent stave silo, put up to stay up, should be built for \$300, but many cost twice that much—and they burn very easily. Here is a little list of the silos built last summer under the direction of men sent out, upon request, from the extension department of the Agricultural College:

By C. H. Hinman; W. S. Jones, Linwood; H. C. Williams, Edgerton; Al Howard, Mulvane; Marion Howard, Mulvane; G. H. Randolph, Emporia; J. E. Walker, Wellington; W. K. Green, Homewood; C. W. Loomis, and Stanton Pearson, Tonganoxie.

By G. C. Wheeler; R. G. Campbell, Meriden; Charles Smedley, Marion Scott, Ed. Dixon, and W. C. Whitney, Agra; Absolom Myers, Olathe.

By A. J. Reed; Frank Howard, Mulvane; C. J. Conlon, Atchison; Frank Hoover, Columbus; J. G. Mil-

ner, Crestline; H. H. Kimmell, Mc-Louth; L. H. Kimmell, Oskaloosa; H. C. King, Olsburg.

In the making of corn into silage, the entire plant is taken from the field at the time when it contains nearly its maximum of digestible nutrients, and is preserved in a manner that enables the feeder to have at his command, in convenient form, a palatable and succulent form of roughage which more nearly corresponds to pasture grass than does any other food stuff. From 35 to 40 per cent of the digestible nutrients of the corn plant are in the stalk and leaves, and these are nearly or entirely wasted in ordinary Kansas practice. The silo affords, then, a means of adding one-fourth to one-third to the feeding value of corn, our chief forage plant.

Owing to the climatic conditions of Kansas, the silo is particularly adapted to use in this state, and especially in the western part of the state. Practically every season a good growth of forage is obtained and the corn develops to the stage in which it should be cut for silage, or nearly to that stage. The lack of moisture, if there be any lack, usually comes at that stage when the moisture, if there be any lack, usu- crop.

While silage from differently constructed silos may vary considerably, and this is particularly true in small silos constructed for experimental purposes, yet in the same silo, if properly constructed, the quality of the silage from a uniform field will be uniform throughout, and practically so from year to year. No other method of handling roughage produces so uniform a product.

It is impossible to give a definite figure for the cost of growing corn for the silo, as conditions vary so much. It may be said, however, that the cost of growing corn for silage is the same as that of growing corn for grain up to the point of harvest, and that the factors governing this cost are: Seed, interest on value of land, plowing, harrowing, seeding, subsequent cultivation.

In these records, the time work began in the morning and stopped at

night was noted, allowance being made for whatever time was taken at noon. With the exception of a few cases on dairy farms, where some of the men quit early to milk, no allowance was made for time lost after the cutter was started and men and teams were ready for work, a full day being counted unless for some reason all work stopped and men and teams were at liberty to leave. To reduce the cost of filling the different silos to a like basis, the charge made in these records for each of the various operations was uniform, and as near as possible to the average price paid. The labor of the men was charged at \$1.25 and of the teams at \$1 each for a day of ten hours. This was considered a fair price, as the time of the year in which silos are filled is not usually an especially busy season on the farm. In most cases, the man who had the silo also owned an ensilage cutter, and a uniform charge of \$2 a day was made for wear on the machine and interest on the money invested. The engine, including the engineer, was charged for at \$5 a day; fuel at \$3 a ton for coal and 15 cents a gallon for gasoline; twine at 11 cents a pound. To this should be added interest and depreciation. Labor is figured low for Kansas conditions. The cost of filling ranged from 40 cents to 76 cents a ton, the average for the total number of tons put up being 56 cents. This variation was caused by the distance the corn was hauled, and the ability of some farmers to arrange the work systematically and push it with greater energy than others.

A Dickinson county (Kansas) farmer estimated the cost of his silage at \$1.35 a ton in the silo, this estimate covering all factors of growing and filling (interest and depreciation on silo excepted) and being based upon a production of ten tons an acre, which is regarded as a fair average for that vicinity. In general, \$2 a ton should cover the entire cost of producing silage and filling a silo.

Prof. A. L. Haecker, of the Nebraska Agricultural College, estimates the feeding value of corn silage as follows: 1 ton silage equals 1 ton sugar beets, 3 tons silage equals 1 ton clover hay, 3 1/2 tons silage equals 1 ton alfalfa hay, 2 1/4 tons silage equals 1 ton marsh hay, 3 1/2 tons silage equals 1 ton prairie hay, 1/2 ton silage equals 1 ton pumpkins.

Tree Growing In Western Kansas

Thorough Preparation of the Soil One Of The Aids to Vigorous Growth

By J. W. LONGSTRETH

growing tree growing in western we have found little difficulty ing those adapted to our lati- altitude when we have com- with the necessary conditions. ure, these conditions are more in a lower country with more and less evaporation, but om the extra care and work, really drawbacks.

preparation of the land has paid. The land should be at least 12 inches deep and verized and settled. Vigorous trees, both for orchard and eaks, have given best results, to stand and growth. By hav- ground worked deep and using e stock, large, deep holes are essary. The holes are never ept just ahead of the planter. way moist earth is always to for packing around the roots, should be tramped down well. irt around the roots will not

weather is dry when setting ees or evergreens, we leave a epression around the tree and a pail of water, covering with l just as soon as water has into the ground. The main o guard against is drying of ts, and this is especially true eens. Keep the roots wet andling and planting and by mean wet, not merely damp. a the water and keep it on. the one thing that pays. We like to puddle the roots, pre- to have moist soil, well packed the wet roots.

planting the care required is e as for any other crop and

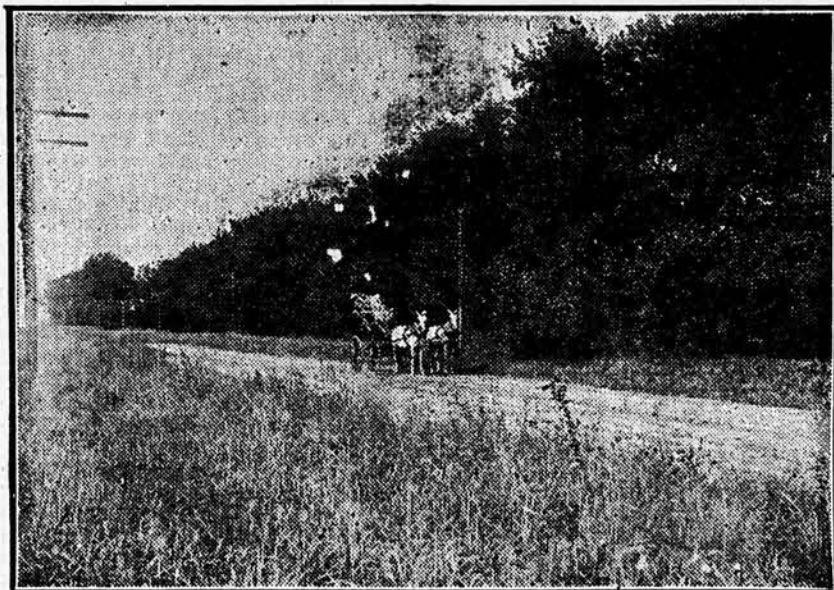
does not differ materially from that required in eastern Kansas, excepting that the necessary moisture must be supplied either by irrigation or wider spacing and more intense cultivation. As to varieties, most of those of-

fered by eastern Kansas nurseries are adapted to western Kansas. For wind break purposes we have found nothing to equal the Red cedar. It is one of the easiest trees to grow when properly handled. It is also one of

the easiest trees to fail with. To be successful they must be of small size, one to two feet high, having been transplanted once or twice while growing to this size. They should be planted early before growth starts, and the roots kept wet all the time. A little drying is fatal, but no amount of water can desolve the resin in the sap when once hardened. For immediate effect larger trees may be handled by the "ball and burlap" method, but this is too expensive for any number, and as a rule smaller trees will outgrow the larger size.

Our favorite way of planting is to set trees 8 or 9 feet apart in a single row. In this way they soon grow together in the row, grow equally on each side, and make a light break from the ground up. They are deep rooted, cast no shadow, and crops grow up close. A single row takes up little land and does not cost much to plant. With the kind of trees I speak of they need not exceed 50 cents per rod set. To be sure, they do not grow as fast as some deciduous trees, but when they do get into action they certainly do the work. For quick, temporary effect a row of fast growing trees may be set parallel with cedars, taking care that there is room and moisture for both.

The 10-year-old trees are 12 to 15 feet high and a light break for about half that height. This is with irrigation. Others with a little better care have made this growth in seven years. My only regret is that we did not begin earlier and plant more. Taken altogether, under proper treatment, trees are sure to grow, make as rapid growth and are as healthy and vigorous here as anywhere.



OSAGE ORANGE TREES, TWENTY-TWO YEARS AFTER PLANTING. IN NESS COUNTY, KANSAS.

THE FARM



Milo Maize in Central Kansas.
After reading your article on milo maize would like to ask if this crop would be profitable in Clay county when planted on ground that does not produce corn at a profit.

If so, where can I procure seed and how thick should it be sowed to secure the most grain? When used for hog feed is it fed after threshing it or while yet in the head? Would you soak the grain or grind it and then soak? Would you advise treating the seed with formaldehyde for smut?—Robert Arnett, R. 2, Clay Center, Mo.

Milo maize is a member of the non-saccarine sorghum family, and is very closely related to Kafir corn, though its habits of growth are different. It is recommended for the high western prairies, where the rainfall is 20 inches or less, and may be grown either for a grain or a forage crop. It is difficult to determine whether the milo maize would thrive on the land you inquire about without knowing anything about it. If this is high upland or has a hard pan subsoil milo maize would probably do very much better than corn, though there are two serious objections to growing this crop as far east as Clay county. One of these is the rainfall, which is sure to blast the heads if it falls when the plant is in bloom, and the second one is the destruction that is wrought by English sparrows and other birds at harvesting time. The first may be partially provided against by making several plantations at different times, as the rain is then not likely to catch all of them. The birds can be outwitted by harvesting the crop promptly before they do great damage. Our judgment is that you will find the black hulled white Kafir corn much more satisfactory for your locality, and that it is a wise policy to plant some of it on nearly every farm as a protection against possible loss of the corn crop. Being a sorghum, milo maize is handled exactly like Kafir corn, and it will even mature a crop when planted on oats stubble. Its chief advantage for western Kansas lies in its rapid growth and early maturity and its heavy yield with its drought resisting qualities.

Milo maize may be fed most profitably in the head if fed to hogs, though the entire stalk and head may be fed to cattle and horses. It does not seem necessary to go to the expense of threshing it for any kind of stock. Neither is it necessary to soak it, though some farmers prefer to do so. Formaldehyde is valuable for use on almost any seed, though. As milo maize has apparently not been raised in your locality, there might be no advantage in using it if the seed is free from disease.

Corn for Norton County.

I live on the upland in Norton county about half way between the Prairie Dog and the Solomon rivers. Would like to know what variety of corn will do the best here. If you have any seed corn for sale at the station would like to know price per bushel. This land has been farmed about eighteen years and has had only two crops of small grain. Was in wheat last year but I want to plant it in corn this year. It has never been plowed in the eighteen years. Would like to know if it would be advisable for me to plow as early as possible, then list the corn. I am a new man here and haven't got the hang of farming in a dry country. This ground was single disked. Last fall was too dry to plow, or would have had it fall plowed. Is there any variety of cow-peas that can be successfully grown here?—C. C. Drullinger, Norton, Kan., Route 3.

I am mailing circular giving information regarding seed corn and other seed grains. Our supply of seed corn is practically exhausted. Sherrod's White Dent comes originally from Norton county and is one of the best producing varieties on upland. I take it that the land in question has been almost continuously in wheat for the

last ten years and has not plowed. It would have been better to have plowed last fall in preparation for corn, but since this was not done would advise early spring plowing not too deep, four or five inches, list a little deeper than the plow when the corn is planted or you double list this ground, starting lister as early in the spring as possible and split the ridges at plow time. Any method of early cultivation given may cause an increase in yield in the corn crop.

If you practice early plowing would advise to follow with the harrow in order to pulverize and settle the soil and put it in better condition for listing. In fact more one disking may be advisable if weeds have started, since the soil can be more cheaply killed by disk harrow than by cultivation. Cultivation of the land conserve soil moisture and the plant food as well as destroy a number of weeds.

The early varieties of cow-peas as New Era, Groat, and Extra Blackeye are grown successfully in Norton county. I am mailing you information regarding cow-peas.—A. M. Eyck.

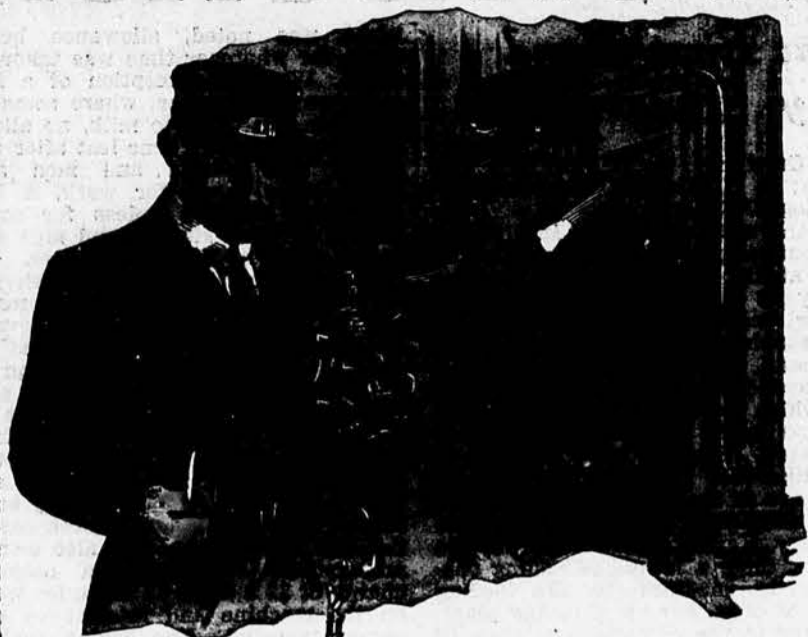
The Silo and the Small Farm.
Will you please give me all information you can about silos. Are profitable for the small farmer? Ordinary means? Can the ensilage used for all kinds of stock and be relied upon to take the place of other rations? What is the best of silo and what should be the size of a 14 by 30 silo complete, and that size be large enough to feed to 40 head of all kinds of stock? Elisha Freeman, Route 8, Paola, Mo.

Each farmer must determine questions for himself. There is no doubt that ensilage is the best for cattle and if one is keeping 40 head he can use the silo very economically. The silo alone costs according to size, quality of material used, price of labor, etc. It will cost from \$150 to \$300, but about \$225 may be taken as the average price for the size desired.

Silage is eaten by all classes of stock, including poultry, but it is not for the ruminants such as sheep, etc. It cannot be relied upon to take the place of all other rations although it is possible for animals to live upon it. Its real value lies in supplying a succulent feed to animals in the absence of fresh grass and in producing heavier returns either of milk or milk at a saving of high priced grains or other concentrates. Corn fed on ensilage will produce more or more milk on less grain than possible by any other methods on June grass. The silo is valuable as a means of economy. It enables the farmer to save and feed his corn crop instead of the grain which contain but 60 per cent of feeding value.

A 14 by 30 silo will contain 90 tons of ensilage and will feed 90 head of grown cattle at the rate of 80 lbs per day for 180 days. A 15 by 30 silo will contain 101 tons and feed 101 head for the same time. The latter is more common size, as it has been found by experience that for convenience as well as economy, better to have two medium sized silos than one large one. Any silo mentioned in the KANSAS FARMER is available.

When the farmer remembers toil and sweat of his corn field and then recalls that he only harvests the ears and allows the stalks to rot, he sees the economy of the silo. He finds, too, that it will pay for itself within two years and that he can easily have 18 or more years of use free of all cost. Nearly half the feeding value of the corn crop is in the stalk and leaves and without silo these are practically wasted. The silo, therefore, doubles the value of the corn crop.



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Call on the HOWARD Jeweler in your locality and talk with him about the HOWARD Watch. Not every jeweler can sell you a HOWARD. The jeweler who can is a good man to know. Drop us a postal card, Dept. 11, and we will send you "The Story of Edward Howard and the First American Watch," an inspiring chapter of history that every man and boy should read.

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Sorghums for the West.

would like to know the results of our observations in feeding cane for roughage and also regarding cane as seed producer. What variety would you recommend for this section? I have tried the Black Amber and have but have had rather poor yields as sowed for feed.

Do you mention "Black Dwarf"? Is that the same as Black Amber? I wish you would tell me which you found to be the best yielding and most drought resisting of the following main crops, and if you have the seed for sale and the price: Broomcorn (dwarf or standard), Milo maize (dwarf or standard), corn, cane, cow-peas, Kafir corn.

A few years ago I got some black-hulled white Kafir corn which Professor Wheeler recommended and it was the best I ever saw. I am now out of the seed and wish to get some more. What is it worth now, and do you sell seed in less than bushel lots here a man buys several kinds to make up a shipment?

For several years I have tried some yellow dent seventy day corn and got good yields at first, but, either from drought or seed having failed, have had poor crops the last two years. I want to get my seed from the Experiment Station at Hays as far as possible, of all grains this year.

Last year I got some seed known as White African Millet. Owing to the dry weather it did not all make seed but seems to be a good fodder plant. Cattle and horses like it better than cane or corn fodder. Have you ever tried it out at Hays and if so what do you think of it?—A. M. Ten Eyck, New Ulisses, Kan.

We find cane a valuable roughage for feeding all kinds of stock, especially cattle; however, the fodder should be fed in combination with alfalfa in order to get the best results. Cane is not quite so good a roughage for horses as for other stock, on account of its laxative effect.

There is no other annual fodder crop which will produce more at this station than a crop of sowed cane. When planted in rows and cultivated, cane makes a good seed crop, 25 to 30 bushels of seed to the acre is not an uncommon yield and much larger yields may be secured.

The "Black Dwarf" is a type of the black cane, perhaps the same as the black Amber to which you refer. This variety, however, has been improved by breeding and selection. It is early, hardy and a good producer. It is a leafy cane and especially valuable for fodder. We have also a variety of Red Amber and a variety of White Amber which we are growing at this station, both of which are early maturing, hardy varieties. We are selling seed at \$1.25 per bushel for graded seed, sacked f. o. b. Hays. Of the crops named, Milo maize, dwarf broomcorn, Kafir corn and cane are the best drought resisting crops. Corn, cow-peas and millet are not so hardy or drought resistant, but certain varieties of these crops may be grown in the west under favorable conditions of soil and season. Prefer to plant "native" or western grown corn, early maturing varieties of cow-peas and the broomcorn type of millet, also called "Proso."

I am mailing you circular on dry land farming, which gives some information regarding drought resisting crops. The white Kafir corn which has been grown at this station for years is a superior variety for this western country, being early and especially hardy and more drought resistant than other varieties. It is superior to the black hulled variety for growing in this part of the state. I shall be pleased to supply you with seed under conditions named in circular which has been mailed to you. We will sell you a bushel of seed or less amount as you desire.

The "Allbright White Dent" is one of the hardiest varieties for growing in western Kansas on upland; Sherrod's is another hardy variety. Our seed supply at the station is now exhausted.

The "White African Millet" to which you refer is doubtless the shallu, a type of sorghum, and in my judgment less valuable than cane, Kafir corn or Milo maize. We have grown the Shallu at this station and also at Manhattan and I much prefer cane for fodder and Kafir corn or Milo maize for grain production. Or perhaps this is a large, late maturing variety of white Kafir corn.—A. M. Ten Eyck.



GET 100% HARVEST

WHAT is the harvest outlook? How is the grain coming up? Does it look like a bumper stand?

These questions are of vital importance to you. But there is another question of even greater significance—will you get a 100% harvest? It's the grain you harvest that really counts. That is why it means so much to you to harvest 100% of the stand of grain.

To get all the grain, you must have perfect harvesting machines. All good farmers are agreed on that point. And that is just the reason why they select harvesting machines branded with the IHC trademark—under any one of these six celebrated names.

Champion Deering McCormick

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They know by experience that IHC harvesting machines are absolutely dependable—that they go through season after season of hard work without a slip-up—without a serious delay of any kind. They know that the margin of safety in the strength of each part is assurance of their ability to stand up and do splendid work even when unusual strain is placed upon them.

They know that IHC harvesting machines work satisfactorily under adverse conditions—where the grain is lodged, tangled, and down—short or tall—when the land is hilly or level. They know that IHC harvesting machines are built so as to allow for a wide range of adjustment to meet every field condition—for example, if the grain is down and tangled, the reel and platform can be so adjusted that all of the grain will be cut and bound much the same as if it were standing straight.

They know, too, that on IHC harvesting machines, all the bearings are easily accessible so that they have no difficulty in oiling the

working parts and giving the machine the attention which it should have in order that the full measure of success may attend its work throughout the harvest season.

And IHC harvesting machine owners know that if by accident any part of their machine should happen to break, an exact duplicate of that very part can be obtained quickly from the IHC local dealer. You know what that means to you when the grain is rapidly ripening. No long delays—no worry—no sending all over the country for parts—no possibility of losing any part of the harvest. Consider that point very carefully when buying a harvesting machine. No one can foretell accidents. But you must be protected against big losses by quick action in repairing the damage. That is but one advantage of the wonderful IHC organization.

The harvesting machine proposition concerns you so vitally that you ought not to delay in getting the equipment you need. Why not see the IHC local dealer some day this week—tomorrow if you can? Let him tell you which of the six IHC harvesting machines meets your requirements best. Ask him about haying machines and tools of these lines.

Let him tell you about binder twine too. Get the facts about these seven dependable brands and be sure of perfect twine. Choose Champion, McCormick, Osborne, Deering, Milwaukee, Plano, or International—in Sisal, Standard, Manila, and Pure Manila brands.

If it is not convenient for you to see the IHC local dealer, write direct for full information and the catalogues you want.

INTERNATIONAL HARVESTER COMPANY OF AMERICA (Incorporated) Chicago USA

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The Bureau is a clearing house of agricultural data. It aims to learn the best ways of doing things on the farm, and then distribute the information. Your individual experience may help others. Send your problems to the IHC Service Bureau

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Is What J. M. Grant

A Big Horn Basin Farmer

received for his 1910 sugar beet crop. This was Mr. Grant's third crop of beets on a farm bought five years ago for \$3000. Here is where the Government is spending

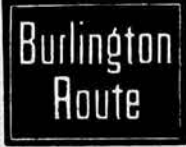
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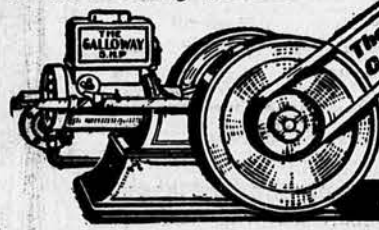
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An engine that is made so good in the factory that I will send it out anywhere in the U. S. without an expert to any inexperienced users, on 30 days' free trial, to test against any engine made of similar horse-power that sells for twice as much, and let him be the judge. Sell your poorest horse and buy a

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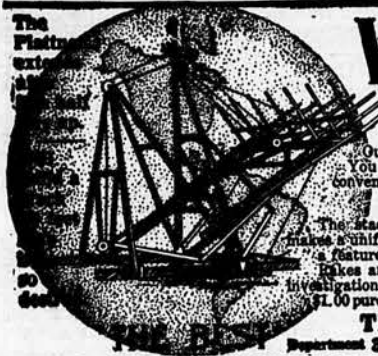
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LIVE STOCK



As the Breeder Sees It.

While hogs have been on the down grade for some time and we cannot expect 10 cent hogs soon again, there is no surplus nor is there likely to be any, and paying prices will rule.

The farmer is an exception who will use anything but a pure bred sire and many of them are buying pure bred sows. They are learning the value of the breeder's work in maintaining and raising the standard. I think the outlook is good for the breeder who raises good hogs and sells at a reasonable price. The boomer and jockey are a curse to the hog business.

Kansas can be made a great live stock state by educating, not only the farmers as to the value of pure bred stock, but the breeders to work for a better and more uniform standard, and above all, for clean, straightforward dealing, working to eliminate the shark and the grafter.

Also by working to make our county and state fairs really and truly agricultural fairs and not what most of them now are, horse racing and gambling meets, that many of our best people do not feel justified in patronizing.—W. C. Milligan, Breeder of Poland Chinas, Route 5, Clay Center, Kan.

Taxing Mares in Foal.

A Nebraska subscriber states a case in this manner and asks by what warrant of law the difference in taxation is made: "In 1910 two mares of equal age and quality were assessed \$300. Neither in foal. In the spring of 1911 one is in foal and they are assessed at \$350, one at \$200 and the other at \$150. One is valued at \$50 more than the other because she is in foal. Is it legal to assess the foal when the law says that only such animals as are 6 months old or over shall be assessed?"

"We might give more for the mare in foal, but is the unborn foal assessable under the laws of Kansas? The same is true of pigs and calves. Does the foal give a value to the mare or is it only a temporary value? Have such cases been matters of litigation, and if so, what was the decision?"

There is no warrant of law for taxing a mare in foal at a higher rate than one of equal value which is not in foal. Moreover, it is unjust to do so. While it is possible that a farmer would pay more for a mare in foal than for the same animal not in foal, this does not fix her value nor that of the foal for taxation purposes.

The law expressly exempts from taxation all animals under 6 months of age and certainly gives the assessor no right to assess a value upon an unborn foal.

As stated elsewhere the state should encourage the breeding of good farm stock and not discourage it by excessive taxation.

No assessor has any right to fix a higher value upon an animal merely because it is registered, nor upon a mare merely because she is in foal.

What do our readers say about this?

The Real Value of Pure Breeding.

The greatest drawback I find in my breeding business is in the fact that most buyers do not seem to realize that there is any difference between a good individual with a short, common pedigree, and the same quality of animal with a royal pedigree, which has a line of great producers back of it for four or five generations.

The fact is, that if you have a poorly bred animal among the first 30 ancestors, his characteristics will crop out in the produce. If the farm papers could instill this fact into the brains of the farmers, it would help the pure bred business more than any other thing I can think of. Keep hammering upon a combination of royal breeding and good individuality.—G. C. Norman, Breeder of Duroc Jerseys, Winfield, Kan.

This is just what KANSAS FARMER has been doing for nearly a half century, but we have had to work against

great odds and often with but little help.

Dean Webster of the Kansas Agricultural College explains this proposition very pointedly when he says:

"A question often asked is: 'Why not use the grade sire if he is a good individual?' These same questions to prove that they are right in using this kind of a sire will quote the repeated and more often misinterpreted law that 'like begets like,' either forgetting or not knowing the limitations of this law, or the conditions under which it finds its widest application. It is because of this law that 'like begets like' that the grade sire should never be used as a sire for (a) 'like begets like' in proportion to the purity of the breeding of the parents; (b) 'like begets like' in proportion to the duration of the period during which this particular sire has been bred pure; (c) 'like begets like' in proportion to the closeness of the blood relationship of the two parents; (d) 'like begets like' in proportion to the similarity of the physical characteristics of the two parents.

The last two conditions mentioned find their widest application after the first two conditions obtained. It is the intensified inheritance of the pure bred which triumphs over the diversified inheritance of the grade or cross and thus enables us to grade up our stock. Similarly, it is the diversified inheritance of the grade which precludes his success as a sire, even though he apparently possesses the characteristics of a pure bred."

Cross Breeding.

In reply to my inquiry concerning the advisability of crossing Galloways on Holsteins, you seem to ridicule the idea. Now I think that anyone who lives out here in the short grass country and tries his hand at dairying with a herd of Jerseys or Holsteins and then tries to sell the surplus calves to the local buyers, should be crossing the dairy herd with something to cover up that predominant Jersey nose or perhaps those white spots on the calves from the Holstein cows.

In one of Mr. Coburn's tests of cows he found that the Galloway test was higher than even the Jersey, and that the Holstein gave the largest quantity of milk but the lowest test. Now why not cross these two breeds and get both quantity and quality in a cow. Mr. Warrick of Yates Center has found that this cross overcomes those objectionable white spots on the steers and also removes the horns which I think make two points in favor of such a cross. Suppose the heifers of such a cross are good for dairy purposes. With such able steers we can well afford to place the old cows as they wear out. However, I am not an experienced breeder and am only endeavoring to learn all I can of those who are able and have had an opportunity to handle these questions, both by observation and experience. I hope to bring to the truth of this theory.—L. B. Mendenhall, Brownell, Kan.

It is never the purpose of the KANSAS FARMER to ridicule any idea, especially when it is held by one who so earnestly endeavors to obtain knowledge. Local conditions may make it temporarily more profitable to cross Galloways on the Holsteins than to use pure bred stock of either breed. This, however, is doubtful. The pure bred Galloways will undoubtedly produce better beef animals than will such cross, while pure Holsteins are unquestionably better milkers. It has taken a great many years and a large fund of experience to build up the two breeds into what they now are and any crossing of the two is a direct step toward tearing them down.

It is not urged that the farmer who is desirous of producing a milk crop only shall buy high priced pure bred animals to begin with. If he is experienced in the business he will unquestionably find them more profitable

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EACH CORN CROP—HELPS SOLVE THE HIRED HAND PROBLEM—ENDORSED BY ALL THAT USE IT.

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Dear Sirs: Received the two-row cultivator and have tried it and like it very much. It is all right. It does fine work and I can manage it easily.

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Yours truly, C. S. HUNTER.

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however, and the produce of the can then be sold for breeding ani- at greatly advanced prices over steers would bring. still believe that our corre- dent will find it more profitable confine himself to the Holstein and a pure bred high class bull for ling up his herd, than any opera- of cross breeding. This proba- would not be true the first year, its influence would be felt very and the profits would be very greater when the herd was once lished.

Kidney Troubles in Horse.
I have a 7-year-old horse that is ted with kidney trouble. Have d since I bought him that he was ed too hard as a colt and broke in the kidneys. If you know of a good prescription please let me from you in next week's KANSAS MER.—S. A. Stitt, Charleston,

elixir calisaya ferit et strychnia Fowler's solution, each 12 ounces give a tablespoonful three times y in feed.

About the Stallion Law.
Attention is especially called to the wing statements and provisions he stallion law:

No stallion can legally stand public service in Kansas without ate license issued by the Live k Registry Board.

To procure a state license the er must have the stallion exam- for soundness by an authorized rinarian. If any owner does not w who the authorized veterinarian his district is, he should write to secretary of the live stock regis- board, at Manhattan, for the in- ation. After the stallion has examined for soundness, the er must send to the registry rd all pedigrees and other papers ring upon the breeding of the ion in question, or a certified copy he same, together with a fee of \$2 issuing the state license, as pro- d by law.

Section 4 reads as follows: ery bill, poster or advertisement ed by the owner of any stallion olled under this act, or used by for advertising such stallion, ll contain a correct copy of its cer- ate of enrollment."

The term certificate of enrollment ns the license issued by the regis- board.

Section 6 reads as follows: e owner of any stallion standing public service in this state shall and keep affixed, during the en- breeding season, copies of the li- se certificate of each stallion, is- d under the provisions of this act, a conspicuous place upon the main r leading into every stable or dding where the said stallion ds for public service."

It is very important that this sec- be strictly adhered to that the re owner may know what kind of orse he is patronizing.

Section 8 reads as follows: pon the transfer of the ownership any stallion enrolled under the ovisions of this act, the certificate enrollment may be transferred by state live stock registry board on submittal of satisfactory proof such transfer and upon the pay- ment of a fee of fifty cents." Parties buying stallions that stood public service in Kansas last year

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The ordinary tire, when punctured, may be ruined in a moment by running flat on the rims. And the damage is beyond repair.

Goodyear No-Rim-Cut tires avoid all this worry, all this expense. They have done it for tens of thousands.

Our No-Rim-Cut feature is controlled by our patents. Others cannot make it. That is the only reason why the old-style tire—the clincher tire—is now recommended by anybody.

Tires 10% Oversize

The removable flanges on your rims will be set to curve outward—instead of inward—when you use Goodyear No-Rim-Cut tires. You simply move them to the opposite sides. There is nothing else to do.

The extra flare lets us fit the rim and still make the tires 10 per cent oversize. And we do it without extra cost.

That means 10 per cent more air to carry the load. It adds 10 per cent to the carrying capacity. With the average car this adds 25 per cent to the tire mileage. Yet it costs you nothing extra.

We say 10 per cent, but late comparisons with standard clincher tires show the average actual oversize to be 19.9 per cent, measured by air capacity. And it is the air that carries the load.

This is a vital fact.

Nine times in ten, tires are overloaded by the extras one adds to a car. And all cars at some time are overloaded with passengers.

That is what causes blow-outs.

It would pay you to pay for this extra size. It certainly pays to accept it when oversize tires cost the same as ordinary tires.

These two features together—No-Rim-Cut and oversize—will cut the average tire bill in two.

12 Years Spent in Testing Tires

The demand for Goodyear No-Rim-Cut tires seems like a sudden

sensation. Last year our tire sales trebled—jumped to \$8,500,000. Yet, until a few months ago, these patented tires cost one-fifth more than other standard tires.

This year 64 leading motor car makers have contracted for Goodyear No-Rim-Cut tires to equip their latest models.

But back of this all lie twelve years spent in tire making. During that time we have tested out 200 separate fabrics. We have made comparisons of forty formulas for use in Goodyear treads.

We have had experts and inventors constantly studying how to improve these tires. And our tires today—which have become the sensation—are the final result of all these years of effort.

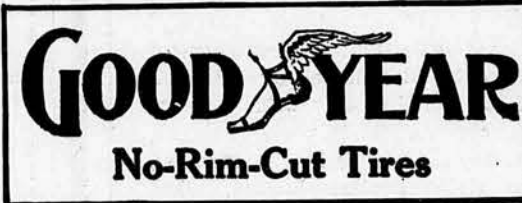
Tire Book Free

If you buy tires it is wise to know what a difference there is between one tire and another.

If one tire will carry you twice as far as another, you ought to know that tire. This question of tires is important.

Our Tire Book pictures all the facts in the clearest sort of way. There are scores of facts good for you to know.

We will mail it to you if you send us your address. Simply a postal will do.



THE GOODYEAR TIRE & RUBBER COMPANY, Forty-Second St., Akron, Ohio
Branches and Agencies in 103 Principal Cities We Make All Sorts of Rubber Tires

should be sure to have such transfer of ownership recorded in the books of the registry board as required by law. When such transfer of ownership is made the new owner should send to the registry board the old state license and a new one will be issued in the name of the new owner. The law provides a fee of fifty cents for making such transfer.

"Any stallion standing for public service that is not a pure bred and registered horse must have conspicuously posted on the door of the stall in which he is kept and in black type not less than one inch in height a statement that such stallion is a grade or a cross bred, as the case may be." The spirit of the law is that every owner shall advertise his stallion for

exactly what it is. The law has been in effect one year and stallion owners have had time to familiarize themselves with its provisions. The registry board is always ready to render every possible assistance and service to the horsemen of Kansas. Address all correspondence to Dr. C. W. McCampbell, secretary live stock registry board, Manhattan, Kan.

FREE GOLD!

\$50 IN PRIZES GIVEN away to girls fourteen years old or younger who will write the best essay on "Why My Papa Should Carry a Life Insurance Policy in THE EQUITABLE LIFE ASSURANCE SOCIETY"

For this contest there will be seven prizes, so that seven young ladies are sure to be rewarded:

First Prize	- . . .	\$15.00 in Gold
Second Prize	- . . .	10.00 in Gold
Third Prize	- . . .	5.00 in Gold
Fourth Prize	- . . .	5.00 in Gold
Fifth Prize	- . . .	5.00 in Gold
Sixth Prize	- . . .	5.00 in Gold
Seventh Prize	- . . .	5.00 in Gold

We will cheerfully furnish authentic information regarding old line, fraternal and assessment insurance.

If interested please fill out, sign and return to me the attached coupon.

COUPON

Chas. A. Moore, General Agent.
The Equitable Life Assurance Society of the U. S.
412-16 Central Bank Bldg., Topeka, Kan.

Dear Sir:—I desire to enter your prize essay contest and would thank you to forward particulars and rules governing same. Also information regarding the various kinds of life insurance.

My papa's name is..... Age.....

I was born on the day of.....

Name,

Address,

Date,

"The Cement Workers Hand Book"

OR

The Uses of Cement on the Farm

THE ONLY STANDARD work on the subject. Over 400,000 copies have been sold. Written by an expert who for 20 years was a practical worker in cement.

THE BOOK is worth its weight in gold to any progressive farmer. It gives plain, practical, explicit directions how to make anything from cement on the farm from a modern home to garden walks.

SOME OF THE SUBJECTS are Composition and Mixing of mortars and cements, parts of cement and sand to be used, practical directions. Tells how to make foundations, walls, floors, ceilings, partitions, walks, drives, curbing, fence posts, cisterns, reservoirs, grave vaults, culverts steps, building blocks, troughs, tanks, chimney tops, sewers, cow stalls, poultry houses, silos, etc.

THE BOOK CONTAINS 100 closely printed pages, stoutly bound in yellow cloth. All possible formulas for mixing cement are in it. Its directions are so plain that any one can understand them.

THE PRICE is 50 cents a copy postage prepaid. Or given as a premium with one year's subscription to KANSAS FARMER, either new or renewal at the regular price, \$1.00 per year. Order a copy today and you will say it is the best investment you ever made.

If a big finer may be called an "ocean grey" hound, why not call an aeroplane a "skye terrier"?

Some men attain the distinction of living a long time because they have never done anything else.

DAIRY



In Defense of Cold Storage.

Apropos of the many denunciations of cold storage and its baneful effect upon the price of commodities and the health of the general public, the Detroit Free Press comes to the defense of the system. It reminds us that modern cold storage is but a broadening and systematizing of a very old and crude method of preserving perishable products. When a farmer buries potatoes in a pit, places apples in his cellar of packs eggs in oats or salt, he is using the principle of cold storage.

"Cold storage is the old way of preserving stuff made perfect, or nearly so. The temperature is fixed on scientific lines and held there by scientific methods. It is the farmer's pit, and the farmer's cellar reduced to a science, and is used for exactly the same purpose.

"It has done much for both the producer and consumer, saving the former from loss and giving to the other a better grade of goods. Of course, any good thing can be abused, and it may be that old stuff is sometimes passed off as new, but in its general principles and when properly used, cold storage is one of the blessings of modern times."

The Difference.

Economy of production must be the watchword of the future rather than quantity. The prize acre of corn is often produced at such a cost as to prohibit its methods in general farming. Big yields of any kind cost either in labor and materials or production or in fertility of soil and if these are not offset by proper returns they are unprofitable.

The average butter production of the Kansas cow is only about 150 pounds per year, and when reckoned of current prices, this just about pays for her keep. If she could be transformed by proper feeding into a 200-pound cow she would show a little profit for her owner who has invested her price, the cost of her feed and the value of his own labor.

Suppose the cow cost \$40 and her keep for a year is \$35, then the owner's investment is \$75 at the end of the year. If she produces only 150 pounds of butter, then she is barely paying for her keep with no interest on the investment. If she produces 200 pounds per year she not only pays for her keep, but pays interest as well.

By the use of a pure bred bull from a butter producing family the younger cows can be brought to a production of 250 or 300 pounds, and they will cost no more to keep. Such cows cease to be boarders and become profitable machines.

Calf Cholera.

Calf cholera is characterized by an unnatural, increased action of the bowels, the trouble usually originating from some derangement of the digestive organs. Indigestion often results from inactivity of the bowels, improper feeding, or from being improperly housed.

The inactivity of the digestive organs can be greatly increased by properly exercising the animals and giving them plenty of fresh air and sunlight.

When the digestive organs cease to do their natural duty the calf is subject to diarrhoea or scours, which at this stage is not infectious, but later on the germs may propagate and multiply, causing the animal to become afflicted with an infectious disease, which is commonly called scours in calves but properly called calf cholera.

Calf cholera differs from diarrhoea in the full grown animal, taking the form of an infectious, intestinal catarrh which is of a far more serious nature than diarrhoea, usually appearing suddenly in young calves and in many instances causing death.

Owing to the fact that this is a germ disease, it is very important

that the calf has none of the germs in its system before it is born and for this reason proper care and attention should be given the mother while she is pregnant.

When an animal is afflicted with the germs of this disease, the rest of the herd should be protected against same by moving the healthy animals into new quarters and carefully disinfecting the stables wherein they are housed and giving each animal a laxative to rid the bowels of the irritating contents. The roots of tail and hind quarters should be thoroughly washed with a disinfectant.—Dr. David Roberts.

Building up the Herd.

Whether you consider yourself a dairyman or not no doubt you keep cows and milk them. If so, then you may as well have as good cows as possible, for a good cow takes no more stall room, eats no more and requires no more attention than a poor producer. It would seem that every one that owns a cow would want better ones than they have, no matter how good they may be. The man who starts into the dairy business to stay should grow his own producing stock. The future success of his business depends largely on building up a good herd of high producing cows.

An animal does not have to be pedigreed to be good and a pedigree is not a sure indication of excellence in dairy production. But in starting with either pure bred or common cows and growing one's own heifers, the first thing to do is to select heifers to be kept from the best producing cows. One should know almost to a certainty just what a cow is doing and what she is worth. This cannot be done by guessing at her record but by testing or weighing her milk at frequent intervals during the producing year. A very small percentage have good dairy sires, so in choosing a bull it is necessary to know what his predecessors have been good for. If the sire come from a good cow and his lineage was noted for milk production the chances are that he will improve the herd he heads. By testing and selection the common cows can be rapidly improved so that it is not necessary to buy pure bred stock. In building up a herd of cows too much attention cannot be given the heifers which are to be kept in the herd.

The usual mode of growing calves now is to feed skim milk after they are about 2 weeks old. Many dairy men stunt their heifers by starting them out on skimmed milk too soon.

The calf that is expected to develop into a strong and profitable cow should be given all the chance possible during the early period of growth. Whole milk should be fed until the calf is at least 4 weeks old or old enough to eat grain, then it should have grain to eat when it is put on a skim milk diet. The saving of a few dollars on the feed of a calf during its early growth will mean many dollars less in the mature cow.—J. F. Lasley, Ozark, Ill.

Business of no kind can be carried on without advertising any more than it can without money. Advertise and the world buys from you; don't, and you fail alone.

We have always known that the KANSAS FARMER is a good paper and our latch string is always out to any of its force. No one has more good words for the KANSAS FARMER than we, and we have always maintained that no Kansas farmer can afford to be without it. No one scans its pages to see the good things always contained therein each week more carefully than we.—Achenbach Bros., Polled Durhams, Berkshires and White Plymouth Rocks, Washington, Kan.

Before you buy a Cream Separator See and try a DE LAVAL

Producing Market Milk.

Quality and flavor in manufac-
tured dairy products has a close rela-
tion to the methods of producing and
the quality of the raw product. Unless the
milk is produced from healthy cows,
in a sanitary manner, a first class man-
ufactured product cannot be made.
The recent Tri-State Grain and
Dairy Growers' Convention, held at
St. Paul, N. D., exhibits were made of
raw and market milk. The results
showed that the relation in quality
between the milk and the butter made
from the same milk. The milk exhibit
was scored according to the regular
score card used by the Bu-
reau of Animal Industry, Washing-
ton, D. C., and the average findings
of the total scores are as follows:
Score—Bacteria, 35; flavor and
odor, 10; fat, 10; solids not
fat, 5; bottle and cap, 5.
Score—Bacteria, 20; flavor and
odor, 9.5; fat, 8.8; solids
not fat, 5; acidity, 0; bottle and cap, 5.
It is quite noticeable that in prac-
tice every sample of milk where the
odor and flavor scored low more or
less visible dirt was likewise pres-
ent. The most prominent flavor and
odor most commonly found was
detected by the judge as "unclean."
No doubt was the result of al-
dirt from unclean stables,
utensils to enter and contam-
inate the milk. When dirt once gets
into the milk nearly all of it goes into
the butter, consequently cannot be
removed. In examining the milk
samples were allowed to
stand for some time undisturbed, then
the raised carefully to its nat-
ural position without tipping
higher than the head. The dirt
settled then with the naked eye
scored according to the amount
of dirt. A better way might be to ex-
amine with a reading glass, instead of
the naked eye, for then quite often the
nature of the dirt may be de-
termined and the cause for its presence
known.
In building examples were
set out in this contest which em-
phasized very forcibly the relation of
cleanliness to quality. From the same
sample of milk that
nearly perfect in respect to
dirt was exhibited a sample of
doubtless made from the same
milk which received the highest score
or. Again from the same farm
sample of milk showing much
dirt was exhibited a sample of
that scored lowest on flavor.
The results of the samples on exhibition
designated by the judge as "stale"
which is a result of not prop-
erly cooling the milk before bottling.
The animal heat was not all removed,
and the milk produced sickening fla-
vors. Besides this it caused the milk
to curdle prematurely, which made sev-
eral of the samples show to a decided
disadvantage. For example, two bot-
tles of milk from the same farm and
from the same animals
scored first and fourth in the final
contest. Efficient cooling is one of the
most difficult things met in market
milk that has to be more or less ex-
posed in distribution and is often the
cause for the poor keeping qualities.
Several of the samples on exhibi-
tion "kitchen" flavors were found.
They were often smothered flavors
difficult to trace the exact
cause but no doubt were due to keep-
ing the milk in the kitchen, pantry or
where vegetables are cooked or
where milk very readily absorbs all
floating in the air, so if kept in
places as is common where only
cows are milked objectionable
flavors are sure to result.
The butter fat is the portion of the
milk which absorbs and retains odors
readily, consequently if the milk

becomes contaminated these flavors
are retained by the fat and injure the
quality of the butter.

Some of the samples presented a
salty flavor. This was due probably
to some physiological derangement of
the animal. In the first place, every
cow producing milk for human con-
sumption should be in a perfect state
of health all the time. Plenty of fresh
air in the stable, proper food and suffi-
cient exercise will insure health in the
average animal. Often flavors im-
parted to the milk by the animal are
due to the feeding of roots or silage.
If fed just before milking, so they
will be in the process of digestion
during the milking period, bad flavors
often result. The safest way is to
feed just after milking, so the food
will be completely digested before the
next milking time, then no bad flavors
will be imparted to the milk.

The source of most of the flavors
found in scoring this exhibit could be
traced to unclean stable, which ac-
counted for the presence of visible
dirt. This sort of contamination is
the most filthy and perhaps the most
common in the present day milk sup-
ply. There is no reason for such con-
tamination if the stables are suffi-
ciently lighted and kept clean and well
ventilated.

However, if the milk is immedi-
ately cooled then put into clean uten-
sils and kept where no odors are pres-
ent to be absorbed the raw product
and likewise the manufactured pro-
ducts may be greatly improved in
quality.—G. L. Martin, North Dakota.

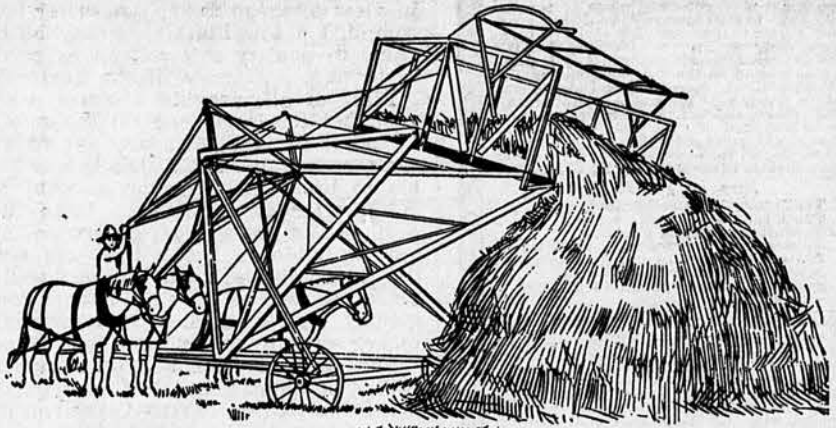
More About Silo.

When one begins to talk sorghum
crops to a Kansas farmer he usually
is supposed to be talking about cane.
It might be supposed that our people
would have understood long ago about
sorghums, but it is a fact that they
are only beginning to study these very
important plants.

Kafir, milo, durra, broom corn are
all sorghums, as are also the sweeter
kinds such as amber, orange, sumac,
and many others. Johnson grass is
also a near relative, and it is the only
dangerous one so far known to be in
our country.

Milo is a grain sorghum. On the
Texas high plains its early maturity
and its peculiar drought resistance
made it popular. It had by 1900 been
gradually changed into really usable
forms. Climate and altitude made it
possible to handle the crop in the field
like corn and Kafir because it could
not grow so tall there. About that
time plant breeding by selection was
started on this crop at the Govern-
ment Experiment Station at Amarillo,
Tex., and for some years it was un-
der my immediate supervision. This
work had definite, hard and fast
ideals. It might be well to state the
things we wanted. Milo is a crop that
is drought resistant and at the same
time early. Most sorghums "resist
drought" by stopping growth until
moisture comes, but Milo tries to keep
growing. Sometimes this is a good
feature and sometimes a bad one. The
plant grows rather irregularly and
stools considerably, and as a little seed
goes a long ways and was no consid-
eration, we decided to get single
stalked plants that we wanted to have
grow erect without stools. The plant
frequently produced several heads, all
ripening at slightly different times.
We wanted only one head on a plant
so all could be ripe at one time. The
heads mostly hung downward, or, as it
is said, grew on "goosenecked" stems.
This curved neck caught on headers,
binders or other tools, so it had to go.
We wanted a straight neck so tools
could be used. It will be seen that we
were striving to produce a crop which
could be handled by up-to-date labor-
saving machinery. Once progress was

NO TIME LOST HERE



Harvest time is expensive time and it comes only once a year;
is short and waits not the convenience of any man. And harvest
time means most to the man best equipped for it. The

Sunflower Stacker

Takes the hard work out of harvest—mighty important that—to
increase production and at the same time to lessen hard work, while
doing the work better than ever.

The picture above shows the beginning of a stack, how the Sun-
flower unloads itself—a regular barge load—up to 1,800 pounds—ab-
solutely without work—and under complete control of the driver.

The whole load or any part of it, can be placed on any part of the
stack—stacker can come up to either side or either end of stack.
Stacker takes its load direct from header, carries it on wheels,
elevates it on the way to stack—the horses doing all the work while
traveling. That saves all the pitching. Load dumps itself, whether
at a height of 6 feet or 20 feet.

FULLY GUARANTEED

This stacker has been thoroughly tried out for two years, in many
Kansas harvest fields. Its entire success is proven. We guarantee it
fully in every respect. Made of the best and most suitable mater-
ials, it will last a life time. It makes its cost every three weeks.

We want to tell you more about the profit in having a Sunflower
Stacker. Don't cheat yourself by failing to find out about it. Write
us now, while you think of it.

Sunflower Implement Co. Manhattan, Kan.

started in finding the forms desired,
we made yield of grain an absolute
necessity. No score card forms for
heads or large weight per head was
used. Everything was done on the
head-to-row plan, where each row rep-
resented the seed from one head. The
results in a few years were very
striking.

We now have dwarf varieties grow-
ing only half as tall as the old forms.
They ripen early, uniformly, and hold
their heads up straight. Last year
many fields were harvested with
wheat headers. The crop is easy to
grow, but in northern Kansas contin-
uous selection for early maturity must
be kept up just like that used for corn
in the northern states. The milo field
should be disked or plowed in the fall
after wheat seeding. Then early
spring tillage should be given if it has
rained any during the winter. Disk-
ing should be done before May 20 so
as to keep the land moist and free of
weeds. The planting date should be
late in May. The crop needs all the
cultivation it can get.

Now as to the particular part of
the farming. In the first place, don't
plant early. Next, remember you are
raising grain, so you must plant
sparingly. Many large crops are
raised where seeding uses 3 pounds
of seed per acre, 20 acres per bushel.
Then cultivate. Then have seed from
erect headed plants.

The insect enemies are at present
green lice and chinch bugs. If bugs
are present, don't plant.

The grain properly balanced and
ground is about equal to corn in feed-

AMERICAN STANDARD of POULTRY PERFECTION



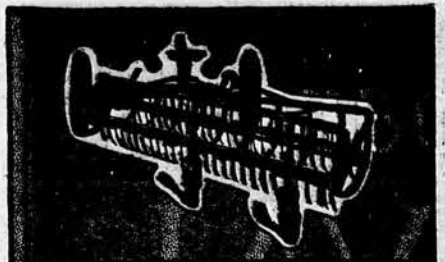
Get this book. It shows what is adopted by the American Poultry Association as the standard for each variety and breed of fowl. You can't know how good your fowls are or how good to breed them unless you study this book. Show prizes are awarded according to it. The only official standard. Sent postpaid on receipt of \$1.50, the official price. Address orders to

KANSAS FARMER, Topeka, Kansas.

DAIRYMEN, TAKE A LOOK AT THE STRITE GOVERNOR PULLEY. It's the original and the only thing for driving cream separators with gasoline engines. Once tried, always used. TRY ONE. Ask your dealer for a "Strite" or write us direct.

GOVERNOR PULLEY CO., 326 So. Third St., Minneapolis, Minn.

ing value. A good ration for horses is 10 to 14 pounds of milo and 1 pound of cottonseed meal or linseed meal. The grain this year has been worth more than corn at all eastern markets.—A. H. Leidigh, Assistant Professor of Agronomy, K. S. A. C.



Air Cure Your Hay It's Worth a Dollar a Ton More

If you sell hay, get this dollar clear profit on every ton. If you feed your hay, get the benefit of the better nourishment in air-cured hay for your animals. Don't sun-cure your hay when it's even easier and quicker to air-cure it with the

DAIN STEEL FRAME SIDE DELIVERY RAKE

Let hay lie in the swath and the sun scorches it, robbing it of its color and much of its nourishment. In the ordinary close-packed windrow, the air is shut out. But throw it up in loose, fluffy windrows with a DAIN SIDE DELIVERY RAKE and the hay is dried by the air and all the rich juices and natural color preserved. Moreover, the Dain handles hay so gently that the stalks are not bruised and broken, and the tender leaves and tops never shattered off. The finest, top-value hay that can be produced is the result. Besides possessing all the advantages of every other rake, the Dain Side Delivery Rake has these

Special Features

- Teeth may be raised or lowered
- Teeth turn with gentle motion
- Harmless to tender products
- Rakes clean, leaving no dirt
- All gears absorbed by cushion springs
- Easy regulation of bevel gears
- Easily adjusted to handle light or heavy hay

Make More Money With Dain Hay Tools
They're made by hay tool specialists, 30 years of experience back of every machine. They're the most simple, the most clean and work saving, the most durable and dependable. Ask your dealer to show you the DAIN line of mowers, rakes, stackers, loaders, presses, etc. Or write us for descriptive literature of the tools in which you are interested. We'll also send you Free "All About Hay," the most practical and valuable hay book ever published for farmers.

DAIN MFG. CO.
836 VINE STREET
OTTUMWA, - IOWA

FARM GATES

Figure on them now and get them up before you have to drive in and out of fields often. Save yourself lots of work and time. And get the best gates this time, save repair expense and cost of replacing. Get my 1911 proposition before you buy. I'll save you \$10 on every gate you need and sell you better gates than you can get anywhere at any price. Let me prove it.

Iowa Gates

are made of Special Made-to-order High Carbon Steel Tubing. Practically indestructible. Cutters 5 to 12 broad gates and any other metal gate made. Never sag, bind or bend. Easily raised over snow or down small to get under. We'll fit you best from the before you pay a cent for any gate. Write me now the kind and number of gates you are using and I'll also send you some "No Hunting" signs free. Address

See E. Clay, Mgr., IOWA GATE CO., 424 Street, Cedar Falls, Iowa

WE SHIP ON APPROVAL
without a cent deposit, paying the freight and allow 10 DAYS FREE TRIAL.
If you like it, you can keep it. If not, we'll take it back and refund your money.
We ship the highest grade sport model bicycles.
FACTORY PRICES Do not buy a pair of shoes from anyone at any price until you write for our large list of sample bicycle going to your town.
RIDER AGENTS everywhere are making big money selling our bicycles.
We sell cheaper than any other factory.
TYRES, Coaster Brakes, rear wheels, fenders, repairs and accessories at very small prices. Do not waste money today for our special offer.
HEAD CYCLE CO., Dept. F-523 CHICAGO

\$7.55 Buys Best 140-Egg Incubator
Double-cage all over; best copper tank; nursery, self-regulating. Best 140-chick hot-water brooder. \$24.85. Both ordered together \$41.50. Freight prepaid (C. of Rock). No machines at any price are better. Satisfaction guaranteed. Write for book today or send price now and save time.
Sells City Incubator Company, Box 18 Racine, Wisconsin

BROWN FENCE
Strongest, most durable fence made. Heaviest, closest wire. Double galvanized. Practically indestructible. Stock strong. Chalked light. 1 1/2 to 2 1/2 per rod. Sample free. Wopaynt.
The Brown Fence & Wire Co., Dept. 29 Cleveland, Ohio

POULTRY



Seasonable Hints.
Most everybody think they can set a hen, but everybody can't. That is, they can't set a hen as she ought to be set. Any one can put a dozen eggs in a box and set a hen thereon, but that is not setting a hen properly. It is no easy task to properly set a hen and thousands of eggs are spoiled every season, because people are careless or ignorant in this respect. In view of these facts, the writer has compiled a few hints that may be of value to poultry raisers and especially to new beginners in the business.

First of all, provide a warm, cozy nest, not too large, nor yet too small. If too large, the eggs are apt to be scattered; if too small, the hen is liable to break the eggs on account of being cramped for room. Have the nest box on the ground, otherwise the hen is liable to break the eggs getting in or off the nest. We generally place the box on its side, having previously nailed a slat four or five inches wide to prevent the eggs from rolling out. A box about 14 inches square is about right. Put some earth in the bottom of the nest, then chaff or cut hay on that. Hollow out the nest so the eggs won't roll around. Then get a good, quiet hen, not too large or clumsy, and you are ready for the eggs. If you have sent off for thoroughbred eggs, it would be a good idea to have the hen setting for a few days on china eggs, so as to have her good and steady by the time the expensive eggs arrive. A fussy, flighty hen is a nuisance and you had better wait for a steady hen, rather than risk your precious eggs under one that has not steadied down to the real work of setting. Should the hen break an egg and smear the balance of the eggs, they should be taken out and washed in warm water, for if left as they are, they will not hatch, the pores having been clogged up.

In the early part of the setting season do not put too many eggs in one nest. You will hatch a far greater percentage of chicks, if you put a setting of fifteen eggs under two hens, than to crowd them under one. Nine eggs is plenty under a hen in cold weather. The chicks could be doubled up after they are hatched, and placed with one hen, and the other could be accommodated with more eggs. As the weather grows warmer more eggs can be placed under a hen than in the early season.

You should arrange it so that you can close the box with a board every night for fear of rats or other vermin disturbing the hen or the eggs. Take the board away every morning so that the hen may get out for feed and exercise. See that the hen goes back on the nest in a reasonable time and close her up again. You may have to place her in the nest for two or three mornings till she gets used to the nest, then she will go back of her own accord.

Provide corn and water and ashes or road dust close to the nest. We do not believe in feeding anything but corn to a setting hen. If sloppy food or even other grain is fed, it is apt to produce looseness of the bowels and the eggs are liable to be soiled.

The hen ought to be dusted with lice powder two or three times during the hatch and especially a day or two before the eggs are due to hatch, so that she may be perfectly free from lice by the time the chicks come. Lice and mites often cause a hen to leave her nest before the eggs hatch. After the chicks are hatched, do not feed them anything for 36 or 48 hours. It seems cruel not to feed the little, chirping things, but they really do not need anything to eat. The yolk that they imbibe just before leaving the shell is sufficient food for them for two or three days. What they need at this time is warmth and with warmth they will gain strength. Feeding them too soon is a prolific cause of indigestion and bowel complaint and causes the death of thousands of chicks. After all the chicks are hatched, it may be well to take the hen out of the nest and feed her

well, then place her back to her chicks. This will make her more contented and she will not want to get out of the nest till the chicks are ready to leave it. If the hen has been dusted as suggested, there will be no danger of lice on the chicks for a few days, but they should be inspected quite frequently for these pests, and dusted and greased as the occasion requires.

A word or two as to the feeding of chicks. The old idea of feeding hard boiled eggs exclusively has been exploded. Such food is very indigestible, even to the strongest stomach, let alone to the tender stomach of a little chick, a few days old. Wheat or graham bread is the most healthful feed for the first meals. Either crumble the bread in its dry state or soak it in milk, then squeeze out as dry as possible and feed. Don't feed sloppy food of any kind. A Johnny-cake makes good feed for chicks. After the first week you can begin feeding small grains, such as millet, pin-head oatmeal, cracked wheat and cracked corn. Have plenty of coarse sand or small grit for them from the start, also granulated charcoal which is one of the best stomach correctives they can have. Provide plenty of pure water, but so manage the vessels that the chicks cannot get into the water with their feet and dabble themselves all over. Damp feet and legs cause many a chick's death. A little meat should be fed to them occasionally, or in place of it blood or beef meal and ground bone. Keep them growing right along by feeding plentifully and often till they are fully mature.

Do not expect the impossible from eggs which you may have purchased from a breeder of thoroughbred poultry. Chicks from eggs of the black breeds such as Black Langshans, Black Cochins, etc., often hatch out white chicks, but are none the less pure for all that, and will grow into perfectly black fowls. Chicks from the white breeds again, such as White Plymouth Rocks, White Wyandottes and White Orpingtons hatch out dark or yellow chicks, but they will outgrow that and become perfectly white after they shed their first feathers. Chicks from R. I. Reds hatch out several different shades of red and from Columbian Wyandottes and other new breeds they are never uniform in color. Fanciers often receive letters denouncing them as frauds because chicks hatch out a different color from the adult fowls. They are also denounced at times because there is a variation in the color of the eggs. Eggs from pure bred fowls vary greatly in color, yet are strictly from thoroughbred stock.

Do not expect too many chicks from the eggs you received. If you hatch out fifty per cent of the eggs, it is a good hatch, if seventy-five per cent a very good one. Do not write an insulting letter to the seller if every egg does not hatch. They don't do it for himself and will not for you. Out of those that do hatch do not expect them to be all high-scoring show birds. Ninety-five point hens do not all lay ninety-five point eggs. In a flock of several hundred pretty good chickens there may not be a dozen ninety-five pointers.

In conclusion, should anything occur to make you think the seller of the eggs is to blame, do not write him an insulting letter, calling him a fraud and a cheat before you are sure of the fact. Rather send him a plain note, stating the facts, and a hundred to one he will make it all right with you. Fanciers do not fix eggs so that they will not hatch, as a good many purchasers seem to think. It would not be to their interest to do so. Of course there is an occasional fraud among the poultrymen but they are being weeded out. A true fancier is always anxious for his customer to have a good hatch and is only too glad to hear from them to that effect and if the hatch is not a good one and the fault is his, he is very willing to make it right.

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These instruments have for over half a century been as standard as better instruments are made. No matter how much you pay for an instrument with a pure, richer tone, or one that is made to better than any other, you can't get the same family for fifty years - three generations of craftsmen and are sold direct from the factory at the lowest price possible for a first-class standard piano.

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Cornish Co., Washington, New York
Established Over Half a Century

STRONG CHEAP DURABLE CYCLONE GATES
May be raised above snow drifts or to allow stock to run through and keep back large animals. Frames are made of high-carbon steel tubing, the fabric of large heavy galvanized wire, and the fitting of malleable iron and wrought steel.

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generally less, than poorly made gates. We sell plain farm gates, single drive gates, double drive gates, lawn and cemetery gates, gates easily raised and lowered, and automatic gates. Every buyer a pleased customer. Cyclone Ornamental Fence with its quality, beauty, and strength, makes an investment you never regret. Our catalog awaits your perusal.
CYCLONE FENCE CO., Waukegan, Ill.
Dept. 131

Silage Pays
Our new free book tells you in plain figures the profits from silage feeding; also describes the new convenient features of the
Unadilla Silage
O. G. joints and patented adjustable door frame make Unadilla light, but can't stick. Rounds 14 inches apart, 14 inches wide and stand out 4 inches from doors. Hops easily up and from ladder. Fastener. The best Silage Chopper in the world. Write for book today. Write for book today.
Unadilla Silage Co., Dept. 131, 533 S. W. Ave., Des Moines, Iowa

To keep cats, rats, hawks and other enemies away from young chickens, especially for the first few weeks, use frames made out of half inch boards, say one foot wide, eight feet long and four feet wide and fasten wire netting on top. Attach these frames to the coops or brooders and let them be loose from the coop so as to be easily moved to fresh ground or sod. For early broods you should have warm coops, set on a board and put cut hay or alfalfa leaves in the coop for the chicks to scratch in. The coop should be cleaned out every few days.

Eggs always hatch best when the hens have a good sized run and are made to hunt for their food. When the hens are confined to a very small yard the eggs are infertile or at least a large proportion of them. If it is impossible to give your hens large runs then exercise will help in the matter of fertile eggs. Wheat thrown among the leaves, chaff or litter keeps them scratching and furnishes exercise. Overfeeding is not conducive to fertile eggs. Corn is too fattening, but wheat, buckwheat, barley and oats are all good in moderate quantities.

When fowls are given their liberty in the early spring to forage on green rye or early grass, they may suddenly appear to have bowel complaint, but such is often due to the laxative effects of the young green food, which contains a large proportion of water. The fowls should be fed on chopped cabbage before allowing them to forage and then only allow them to feed on the green stuff for an hour or two at first, gradually extending the time. If they should get sick from eating too much green food, pen them up for two or three days before allowing them out again, giving a mess of scalded bran and cornmeal in the morning, adding a teaspoonful of salt to every quart of the mixture.

While most poultry raisers know that green food is essential for old fowls, not so many know that green food is also very good for young chicks. It is not always handy to have the chicks run on grass or sod, so the green food must be provided for them. Oats are good for this purpose. Sow thickly and when up a few inches, cut it into suitable lengths for the chicks to eat. Lettuce is also a good seed to plant for the chicks. You will be surprised at the amount of green stuff the young chicks will eat. Their diet may consist of one-third green food to good advantage. It will be healthful for them and also economical. Chicks that have plenty of green food grow faster and are healthier and more active than others fed in any other way.

Does Poultry Advertising in KANSAS FARMER pay the man who pays the Advertising bills?

The small ad here reproduced appeared in KANSAS FARMER two times in March, 1911. It cost the advertiser 90 cents per week, \$1.80 all told:

SNOW WHITE ROCKS—BEST PEN scores 95 1/2 each; \$1.50 for 15; utility flock, \$2.50 for 100. Indian Runner duck eggs, \$1 for 15; \$5 for 100. Clarence Martin, Clarksville, Iowa.

The results from this ad are shown in Mr. Martin's letter of March 27, 1911:

Editor Kansas Farmer:
I want to write you in a few words in regard to results I had from your paper with my small poultry ad. I can honestly say I am surprised. My ad had not been published the second time, and I had received three orders and 11 inquiries. One order for \$6. Since then I have received eight more orders and a number more of inquiries, all Kansas, Oklahoma and Missouri. And me a perfect stranger; first time in your paper. I have been shipping eggs and poultry for over eight years and I know no class of people buy any more poultry than the class of farmers reached by farm papers such as yours. I have used classified ads by the dozens and prefer the good farm papers for my advertising. If I were not running in KANSAS FARMER—Clarence Martin, Clarksville, Iowa, Breeder of "Martin's Snow White Rocks." March 27, 1911.

Why Do the Chicks Die?
Will you please tell me, if possible, through your paper, what is the matter with our little chickens? They were hatched February 21 and when about two weeks old they would stagger around for a few minutes, fall down and jerk their heads back and in a few minutes be dead. On some of them it looked like their wing feathers were ready to drop off before they would get sick. They did not seem to have diarrhoea nor did they seem to be constipated. After

they died there would be a thick fluid come out of their mouths. We had 25 and lost 15 of them when we cut down on their feed and the rest seem to be doing all right. They were hatched under hens but were taken away as soon as hatched and kept in a box. Care was taken that they did not get too cold or too hot and they were as healthy as any chickens I ever saw. Their feed consisted of bread crumbs, coarse corn meal and a little hard boiled egg at first. Later they were given oat meal, bran and millet seed. They were given both milk (sour and sweet) and water. Feed of some kind was in front of them most of the time. They had plenty of dust to scratch in and sand for grit. Do you think we fed too heavy and caused apoplexy or was some of the feed too rich? I would appreciate it if you can tell me what was the matter with them.—James Eastman.

Ans.—Your question of what is the matter with your chicks and the cause of their death, is so important and one that comes from so many people at this season of the year, that we shall answer it at length so as to fully cover the subject, and the advice may be acceptable to other poultry breeders as well as yourself. You seem to have taken good care of your chicks and to have fed them all necessary food for their health and growth, unless it was animal food, such as meat scraps, though the hard boiled egg might have been sufficient in the way of animal food. We think the probability is that you have overfed your chicks for you can pamper them too much. We recall an instance this spring where a breeder had a great number of chicks in a brooder, that were dying off by the dozen every day. Professor Lamb of Manhattan diagnosed the case at once as too much feed. Feed was laying around everywhere, in the brooder and in the run, and as soon as the ration was curtailed, and the chicks were fed only what they ate up clean, the mortality ceased. Hence it is important that you feed no more to young chicks than they will eat up clean at a meal, and then not to feed again for some time. Four or five times a day is often enough to feed them. A small hopper of dry feed, composed of bran, cornmeal, alfalfa meal and meat meal, if left before the chicks will not hurt them as they will not eat more of this than is good for them, but it is the wet, sloppy food that is left after a meal that causes the havoc among the flock. Lice on the chicks will often cause them to act as your chicks did, stagger around, jerk their heads and die. You did not mention the matter of lice. Maybe you thought that because they were taken away from the hens that they were free from lice. But lice multiply very fast and if there were only a few on them when they were taken from the nest, they will soon multiply enough to kill them, unless precautions were taken to rid the chicks of lice. This should be done by greasing the head, vent and under the wings and dusting with insect powder. When chicks are taken away from the hens and placed in a box the question of the proper temperature comes up and it is quite a ticklish proposition to have it just right, though you say "Care was taken that they did not get too hot or too cold." After chicks get to be about a week old it seems essential for their good health that they should have a runway on the ground. This is obviated sometimes by having the floor of the brooder covered with earth, with an occasional sod for them to pick at. But they should be allowed on the ground after they are a few days old in order to thrive well. Granulated charcoal is a great stomach corrective and should be kept where the chicks can get it at any time. Grit should be handy at all times. It is almost needless to add that the brooder or box where the chicks are kept should be scrupulously clean and free from all sour feed.


A high grade, guaranteed Red Barn Paint is sold by the Sunflower Paint & Varnish Co., of Fort Scott, Kansas, at 85c per gallon in 5 gal. cans, freight prepaid. This is a paint proposition well worth considering by every farmer.

The use of gasoline as a motive power is only about 25 years old and a large share of this time was taken up in experimental work. The internal combustion type of engine did not become practicable until the distilla-

Ever-Ready

Safety Razor

With 12 Blades



Entire outfit \$1.00. 2,000,000 in use. Sold and guaranteed by dealers everywhere.
American Safety Razor Co. - New York.

I WANT FAIR PLAY - YOU WANT SCALES.

For 45 years I have fought all trust combinations, have kept prices where any man could buy a first class scale at a fair price, and have protected the dealer. Now he is controlled by the trusts and says that if I sell my scales to you, that I can't sell to him. All right, I am ready to fight for you. My price is the same to all. Money talks, and you can buy scales on approval to be paid for "Jones, He Pays the Freight"

on agreed terms at dealers' prices. Money or credit talks, and your request will bring my order on any kind of a scale, big or little. Money talks, and if you need them, I have scales to sell and the inclination to fight for you against that trusts which says you must pay a dealers' profit to get my scales. Write me and soon.

JONES

35 1/2 ea St. Binghamton, N. Y.

High Grade SEED CORN

ALFALFA, MILLET
KAFFIR CORN
AND COW PEAS.

—WRITE FOR PRICES—
Geo. T. FIELDING & SONS, Manhattan Kans.

PREMIUM Seed Corn

Purest and Best Strains of Boone Co. White, Reid's Yellow Dent, Golden Beasts and 80-Day Corn. First Prize, Manhattan, Kan., December, 1910, also Kansas State Fair, 1910. Also carry the finest lot of thoroughly tested for my large illustrated catalogue and special list of field and farm seeds. My "Pure Gold" brand of field seeds represent the highest quality possible to secure.

FIELD SEED

EARLY WINNER OAT The earliest and heaviest oat ever introduced.

ZIMMERMAN SEED CO., 625 Quincy Street, Topeka, Kansas

The Alfalfa King Hay Stacker

The great hay and labor saver, one of the biggest money makers you can have on the farm. The King's brother, the Hay Sweep. Our big success of 1910 makes us able to make a better stacker this year than ever. Make plans now for a big and profitable hay crop. Write today for our free hay saving plans and full description and price of Alfalfa King Hay Stackers, and the King's brother, the Hay Sweep.

HASTINGS FOUNDRY & IRON WORKS
HASTINGS, NEBRASKA
Box 87

It is no trouble to hatch chickens, but it takes the proper Feed to raise them: use Otto Weiss Chick Feed

a complete balanced Ration; it develops bone, flesh and feathers, gives your chicks, and they make a rapid growth. Send for circular and prices on Poultry Supplies

Otto Weiss Alfalfa Stock Food Co.
Wichita, Kansas

Why Incubator Chicks Die

The book entitled, "The History of White Diarrhoea or Why Incubator Chicks Die," will be sent absolutely free by return mail to any one sending us the names of 5 to 8 of their friends that use incubators. This book can save you \$100 this summer. It describes white Diarrhoea, or bowel trouble, the cause, and tells of a cure. Book absolutely free for the names.

Raisall Remedy Co., Blackwell, Okla.

WHITE PLYMOUTH ROCKS

Best All Purpose Fowls in Existence.

GOOD TO LAY, GOOD TO EAT, AND GOOD TO LOOK AT.

White P. Rocks hold the record for egg laying over all other breeds. 259 eggs each in a year for eight pullets is the record, which has never been approached by any other variety. I have bred W. P. Rocks exclusively for 20 years and have some fine specimens of the breed. I sell eggs at "live and let live" prices, \$2 per 15, \$5 per 45 and I prepay expressage to any express office in the United States.

THOMAS OWEN Sta. B. TOPEKA, KAN.

Johnson Gets Only 7 Per Cent Profit on 100,000 Old Trustys

Johnson says tell you to sure send your name this time for his 1911 price—less than \$10 for Old Trusty, freight prepaid (East of Rockies)—based on 100,000 capacity and only 7% profit.

My 1911 Book Tells You

Take 30, 60 or 90 days' trial. Remember Johnson's 18-year guarantee on Old Trusty. Covered with asbestos and again covered with hand some sheet metal. 80% or better hatches guaranteed. Simple and sure.

Send Name
My big 1911 book has hundreds of photos. Every page a poultry sermon. Write postal to
—W. W. JOHNSON
Clay Center, Nebraska

Under \$10 Now
Johnson Pays the Freight
East of Rockies

Eggs From Pure-Bred Poultry FREE

A GREAT OPPORTUNITY FOR YOU.

Here's a chance to get a start in pure bred poultry, any kind you prefer, without spending a cent of money. The Editor of the Poultry Department of KANSAS FARMER, who, by the way, is President of the Kansas State Poultry Association, and an expert judge of poultry, has suggested that there are many lady readers of KANSAS FARMER as well as many boys and girls, who are very anxious to secure a start in pure bred poultry and that if given an opportunity would gladly do a little missionary work for KANSAS FARMER in order to do so.

If you are interested in this matter, just drop a line to the address below and you will hear from us promptly. We will tell you how you can get a setting of eggs of any breed you want and with very little effort on your part. It will pay you to answer this at once. Address

Free Egg Department
KANSAS FARMER
TOPEKA, KANSAS.

When writing advertisements, please mention KANSAS FARMER.

tion of gasoline was perfected. The average man don't care so much about what he pays in freight rates as what he gets in service and the fact that everybody pays the same rate for the same service.

Red Barn Paint

AT 85c. PER GALLON.

ONLY 85c Per Gallon In 5-gallon cans Delivered

It is economy to use plenty of good Paint, but it is poor economy to pay too much for it. Our Red Barn Paint at 85c. per gallon, delivered, in 5-gal. cans, will give full value for your money—guaranteed for spreading and lasting qualities—is a strong, live, bright, rich red. You could not buy a better Red Barn Paint if you paid \$2.00 per gallon. Our price of 85c. per gallon in 5-gal. cans, freight prepaid, gives you the best paint and saves the money for your pocket that others ask you to pay retail dealers', wholesalers' profits and traveling men's heavy expenses. This company is in no trust and sells direct to consumer at factory prices, freight prepaid on shipments of 5 gallons or more. This is paint season. Send order now to Sunflower Paint & Varnish Co., Fort Scott, Kansas.

LITTLE GIANT HOIST IMPROVED



Has been tested among farmers for unloading hay and proven satisfactory. Save Time and Labor They are Simple Durable and Cheap. Have your dealer write for prices at once

THE BROWN CLUTCH CO.
Box 273, Sandusky, Ohio.



MAKE HAY EASY

Two boys can with a Kouns Galvanized Steel Rake Loader; Unloader; Stacker; Barn-Filler. It will load your shocks; it will place hay where wanted.

W. KOUNS,
W. North St.,
Salina, Kansas.

ONE MAN HAY PRESS

ONE OR TWO-HORSE, AND GASOLINE BELT POWER.

Self-Feeder, Self-Thresher and Knotter. All Steel, full circle. Guaranteed 1 ton an hour with ONE OPERATOR, 1 1/2 tons an hour with two men. FREE trial. Write **TUTTLE HAY PRESS CO.**, 621 S. Adams St., Kansas City, Kan.

12 Cents A Rod For 18-in Hog Fence

24¢ for 24-inch
16¢ for 28-inch
24¢ for 42-inch
26¢ for 46-inch
Heavy Poultry Fence
CATALOG FREE
78 other styles all sold on
30 DAYS TRIAL
rock-bottom prices

Ottawa Mfg. Co 603 King St., Ottawa, Kan.

BEE SUPPLIES
We Are Western Agents For
"falcon"
WRITE FOR CATALOG.
C. C. CLEMENS BEE SUPPLY CO.
134 Grand Ave., Kansas City, Mo.
Please mention this paper when writing.

Why Rent a Farm

and be compelled to pay to your landlord most of your hard-earned profits? Own your own farm. Secure a Free Homestead in Manitoba, Saskatchewan or Alberta, or purchase land in one of these districts and bank a profit of \$10.00 or \$12.00 an acre every year.

Land purchased three years ago at \$10.00 an acre has recently changed hands at \$25.00 an acre. The crops grown on these lands warrant the advance. You can

Become Rich

by cattle raising, dairying, mixed farming and grain growing in the provinces of Manitoba, Saskatchewan and Alberta in Western Canada. Free homestead and pre-emption areas, as well as land held by railway and land companies, will provide homes for millions. Adaptable soil, healthful climate, splendid schools and churches and good railways.

For settlers' rates, descriptive literature "Last Best West," how to reach the country and other particulars, write to Sup't of Immigration, Ottawa, Canada, or to the Canadian Gov't Agent.

S. S. CRAWFORD,
125 West 9th Street
Kansas City, Mo.

When writing advertisers, please mention **KANSAS FARMER.**

13 CENTS A ROD
For a 18-in. Hog Fence, 25¢ for 24-in. Farm Fence, 28 1/2¢ for 42-in. Poultry Fence, 55 styles and heights. Catalogue free.

WISSEMAN BROS. Box 51 MUNCIE, INDIANA.

The GRANGE

DIRECTORY OF THE KANSAS STATE GRANGE.

OFFICERS.
Master.....George Black, Olathe
Overseer.....Albert Radloff, Topeka
Lecturer.....A. P. Reardon, McLouth
Secretary.....O. F. Whitney, North Topeka
Chairman of Executive Committee.....
.....W. T. Dickson, Carbondale
Chairman of Legislative Committee.....
.....W. E. Coultas, Richland
Chairman of Committee on Education.....
.....E. B. Cowgill, Lawrence
Chairman of Insurance Committee.....
.....I. D. Hibner, Olathe
Chairman of Woman's Work Committee
.....L. Mabel Waters, Berryton

Officers elected for a new Grange in Shawnee county, a call from Marshall county for Grange information and good prospects from other counties. What are you doing to help the cause along?

That Lecture for the Lecturer.
The first lecture prepared by the Committee on Education is in the hands of the subordinate lecturers. There are many good features in this lecture that will commend it to every thinking Patron. It comes from one who has the qualifications of a teacher, and who is able to instruct along practical lines. It is based on scientific principles and we hope each lecturer will make special effort to present it and endeavor to have it discussed and investigated thoroughly. Then we will derive full benefit from the lecture.

Seldom has our order been favored with such a splendid chance for advancement along educational lines. An open meeting now and then to let the outside public know what we are doing, and also to instruct and interest the younger people who are members, will be an advance along proper lines.

What New Method for 1911?
"What new methods can we try in the Grange for 1911?" This is a good text—whether the sermon will be as good remains to be seen. First, study your individual members to learn as far as possible by observation what their abilities are. Emphasize that part of the installation ceremony, "Especially urge and encourage the young and the diffident to become writers, readers and speakers in the Grange and thus develop and direct to greater degree of usefulness the latent abilities of your members."

Make it a point to visit as many of the homes of members as possible and as you make the call keep your eyes open. When you return home note down the new and useful ideas that have come to you, that they be not lost. Then you can look back as you are preparing your program and find that Brother Brown had a fine field of corn or some other crop, and arrange with him to give a short talk on that subject; or perhaps his son had a thriving flock of poultry, then try and interest the young man to write a paper on the care and feeding of them; or maybe Sister White also had a good display of canned fruit, etc. These are all subjects worthy of discussion in the Grange. Also do not fail to keep the members posted on the events of the day; assign that part to several who, in turn, shall give a ten-minute talk on current events at each meeting. Keep your members informed on matters of state legislation, which vitally affect the farming interests, and appoint some member, who if possible, is in touch with the Legislature, to report at each meeting on the subject.

Don't forget plenty of fresh air and music. If you note a tendency to drowsiness or a lack of interest, call them all to their feet, open up the windows and have a good, rousing song. Don't be afraid to show your colors and let everyone know you belong to the Grange. How many there are who are unwilling to take any part in the meetings, but expect to be entertained, and when asked by people outside the Order if they belong will reply, "Well, yes; I belong, but the meetings are rather dull and not of much interest." Members of this stamp are a great detriment to any Grange, and the sooner they take withdrawal cards, the better for the Grange. What the Grange wants is active, hustling members, ready and willing at all times to take the part

assigned them, and help push the thing along.

Just a word to past officers: Don't think because you have been through the chairs that you can sit back and say, "I have done my part, now let the others take hold and do the work." The Grange needs the co-operation and assistance of every individual member, and no lecturer, no matter how good a program he may prepare, unless the members are willing and ready with their assistance, can make the meetings interesting. It is the duty of the lecturer to arrange an interesting program, and by an interesting one is meant one that will interest both the old and young; for without the older members you lose mature wisdom and understanding gained only by age, and without youth you lose that spirit of enthusiasm and energy which is the life of all society.

Keep the work of your Grange before the public through the medium of the Grange and local press, and thereby create an interest and desire in the public to know more about what a Grange is. Have you a boy or girl growing up? If so, when they become 14 years of age allow them, yes, encourage them, to join the Grange. How many patrons we hear say, "He has his school work and other duties; let him wait until he is through." What is the result? When he is through school he has drifted away to the city, not having perceived the beauty and happiness of farm life. Not only has the Grange lost a member, but the community a good citizen. Encourage the young to become members and interest them in Grange work, then, when age creeps over the present working force, there will be a corps of young, faithful, energetic members to take our places.

There is nothing so easy as finding fault. Faults are scattered everywhere in nature and art, and he who cannot find them must be senseless, he who does not see them must be blind, he who does not speak of them must be dumb or else uncommonly good natured. Fault finding is not a very amiable act, but it is a very useful one. Rightly uttered and rightly received, it does not hurt and is not meant to hurt. It stimulates flagging energies. It is little else than an act of good fellowship, for, knowing how faulty we are ourselves, how can we bear to live without occasionally reminding those around us, that they, too, are no better than they might be?

A mistake prevails in certain circles in thinking that fault finding is equivalent to disparagement. No such thing. It is rather complimentary than otherwise. It shows that the subject discussed rises above the level of the commonplace, that it has light enough to throw its defects in shadow. We find no fault with a pebble for its want of luster, but we criticize the water of a diamond, just because it is a diamond, and worth criticizing. Volumes have been written upon the spots on the sun, but nobody wastes a paragraph upon the freckles on Bridget's face. We criticize what we love, to make it better. In any case, we know it can bear discussion. The charm of many things and people is in their defects.

Try a field day this year. Not a picnic at some grove, but have all meet at a central point and drive from one farm to another during the forenoon and at noon let all have a basket lunch and rest for an hour, visiting the remainder of the afternoon. About a day or two before the Patrons are coming, just watch and see Brother Smith cleaning up that unsightly pile of brush that has been in that fence corner for more than a year, and note the general tidying up that is going on throughout the neighborhood. "No weeds to be found on my farm when the Grangers come!"

Let us remember that we are "working on immortal minds," and to be successful we must be confident; we must believe ourselves capable of doing whatsoever we undertake. Cultivate an observing mind. No doubt we shall encounter difficulties and obstructions in our way during 1911, but do not be discouraged. Behind the clouds the sun is ever shining.—National Grange.

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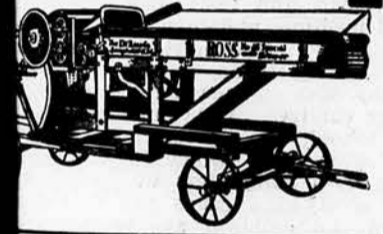


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EMPIRE BUILDERS

By FRANCIS LYNDE



"OUCH ROY! THAT'S MY ARM YOU'RE TRYING TO TWIST OUT OF JOINT." CHAPTER TWENTY-FIVE.

THE SIEGE OF THE NADIA.

WITH a horse that could have been handled Ford would not have run away when the charge upon the Mexican failed of its purpose. So far from it, he tried to wheel and charge again while the man was reeling from his collision with the rearing mustang.

But the broncho from the Copah stable, with the flash and crash of the pistol-shot to madden it, took the bit between its teeth and bolted—safely through the shallows of the stream crossing and up to the level of the railroad yard beyond, but swerving aside at the first of the car shadows to fling its rider out of the saddle.

But to show himself under the lights was to invite the fate he had so narrowly escaped. He knew Mattachecco's skill as a marksman; the Mexican would not be rattled twice in the same half-hour.

"Now, by recognizing him, I've fixed it so that he is obliged to kill me," he muttered. "It's my life, or his neck for a haltar, and he knows it."

There seemed to be no chance of doing that most desirable thing. The Mexican was now afoot and coursing the railroad yard like a baffled hound.

It was instinct rather than intention that made him duck and plunge head-log through the suddenly opened door of the private car at the glimpse of his pursuer standing beside his horse in the open camp street.

It was not empty, as he had expected to find it. Two men, startled by the shots and the crash of breaking glass, were prepared to grapple him.

"That's in case my assassin takes a notion to turn loose on the windows," he panted. Then he gasped out his story while Brissac got the aching

right arm out of its sleeve and looked for the injury.

Adair listened to the story of the attempted murder awe-struck, as one from the civilized East had a right to be.

"By Jove!" he commented; "I thought I had bumped into all the different varieties of devilry since I left Denver yesterday morning, but this tops 'em. Actually tried to kill you in cold blood? But what for, Stuart?—for heaven's sake, what for?"

"Because he was hired to; because his masters, the MacMorroghs, and their master, North, have staked their roll on this last turn of the cards. I know too much, Adair. The president was sent over here to get rid of me. That failing, word was passed down the line that I was to be effaced. A few hours ago this Mexican overheard me telling your sister what I proposed to do to North and the MacMorroghs. That's why he—Ouch! Roy; that is my arm you're trying to twist out of joint, man!"

"It's all right," laughed the Louisiana; "it is only a crazy-bone bump that you got when the bronc threw you. Say, Ford; I thought you claimed to know how to ride a horse!"

Adair was feeling in his pockets for the inevitable cigarette case.

"What he overheard you telling Alicia?" he mused. "I'm evidently two or three chapters behind. But no matter; this is the now; the very immediate now. Will your assassin keep on feeling for you?"

Ford shook his head. "Not any more just at present, I guess. He has waited too long. That fusillade of his will have turned the entire camp out by this time, and the Macs don't want any inconvenient witnesses."

"Witnesses!" echoed Adair. "Then you don't know—Say, Stuart; there isn't a white man in this camp besides us three—unless you count the MacMorroghs and their commissary garrison as white men. News of the great gold strike got here about three o'clock, and every laborer within hearing of it shouldered pick and shovel and lined out up the new track for Copah."

"What!" shouted Ford. "And these dash-dashed MacMorroghs didn't try to hold them?"

"I don't know about that. I had Mr. Brissac, here, over in the '91—I came across the mountain in North's car, you know—desing him with things out of Doctor Van Bruce's traveling case, and trying to get him in snags to show me the way to Copah. After the stampede, which took all the four-legged horses as well as the two-legged asses, I persuaded your man Gallagher to hitch his engine to our car to drag us up to Frisbie's camp at the front. I thought Frisbie would probably be in communication with you. Gallagher's intentions were good, but about three miles up Horse Creek he ditched the car so thoroughly that we couldn't inhabit it, so we got out and walked back."

"All of which brings on more talk," said Ford gravely. "From what you say, I gather that the MacMorroghs are still here. Did any one see you come back?"

"I don't know. It was after dark when we straggled in, and we didn't ring any bells or blow any whistles."

"Does either of you happen to have anything bigger than a pocket-knife in the way of a weapon?" he asked.

"Why? what are you going to do?" Adair demanded.

"I am going to separate you two

from my highly dangerous presence," said Ford definitely. "The MacMorroghs' outfit of a dozen or fifteen cut-throat scoundrels, captained, for the moment, by Eckstein, North's right-hand man, are doubtless just across the way in the back room or the commissary. You say the camp is otherwise deserted; the MacMorroghs don't know that you are here; and they do know that I am, dead or alive. Moreover, Mattachecco has doubtless told them by this time that I saw and recognized him. Wherefore, it's up to them to see that I never get a chance to go before a grand jury."

"You sit down on the floor," said Adair. He had found a cigarette and was crimping the end of it. "Have you a fraction of an idea that we are going to allow you to make a Jonah of yourself for us? Sit down, I say! Who's got a gun?"

Brissac had crept to a window and was reconnoitering the deserted camp street and the commissary through a peephole in the drawn shade. As Adair spoke, he sprang back, tripped Ford and fell with him, crying:

"Down! both of you!" At the cry there was a shot from without, and a window on the exposed side of the Nadia fell in shivers. There were yells of terror from the cook's pantry, and the two negroes came crawling through the side vestibule, their eyes like saucers and their teeth chattering. Ford jumped up and turned off the Pintsch lights; and he was barely down again when another shot broke a second window.

"Wouldn't that jolt you?" said Adair. "They are feeling for you with both hands. What a heaven's pity it is that we haven't so much as a potato pop-gun among us to talk back with. What did you see, Mr. Brissac?"

"A crowd of them bunched on the commissary porch. One of them was sighting a Winchester at the car when I got busy."

Adair was again lamenting the lack of arms when the negro porter produced a pocket bulldog pistol of the cheap and uncertain sort. "F-y-y-yah you is, Mistuh Charles," he stammered.

"Ah, Williams—concealed weapons? That is fifty dollars fine in your native Tennessee, isn't it?" Then to Brissac: "Please go to the farther window and mark down for me, Mr. Brissac. I don't like to have those fellows do all the bluffing."

While the assistant was complying a third bullet from the commissary porch tore high through the car, smashing one of the gas globes. Adair crawled to a broken window and the cheap revolver roared like an overloaded musket.

"Good shot!" said Brissac, from his marking post. "You got one of them; he's down and they're dragging him inside. Now they have all ducked to cover."

"That settles any notion of a palaver and the pipe of peace, I guess," said Adair, as indifferently as if he had just brought down a clay pigeon. "Prophecy, Stuart; what comes next?"

Ford shook his head. "They can't quit now till they are sure I am permanently obliterated; they have gone too far. They'll credit me with that shot of yours, and they will take it as a pretty emphatic proof that I still live. Hence, more war."

"Well, what do we do? You are the captain." "Picket the car and keep a sharp lookout for the next move. Brissac, you take the forward end, and I'll take the rear platform. Adair, post your Africans in here where they'll do the most good, and see that they don't go to sleep on their jobs."

The disposition of forces was quickly made, after which suspense set in. Silence and solitude of the deserted camp reigned unbroken; yet the watchers knew that the shadows held determined enemies, alertly besieging the private car. To prove it, Adair pulled down a portiere, gave it bulk with a stuffing of berth pillows, and dropped the bundle from one of the shattered windows. Three jets of fire belched from the nearest shadow, and the dummy was riddled. Adair fired at one of the flashes, resting the short-barreled pistol across the window ledge, and the retaliatory shot brought Ford hurrying in from his post.

"For heavens sake, don't waste your ammunition!" he whispered. "One of them has gone up to the powder house after dynamite. I heard the creaking of the iron door."

Adair whistled softly. "Dynamite! That will bring things to a focus beautifully, won't it? When they have blown us up, I wonder how they will account to Uncle Sidney for the loss of his car?"

Brissac had come running in at the sound of the firing. He missed the grim humor in Adair's query.

"Car, nothing," he retorted. "Better say the entire camp and everything in it! There's a whole box-car load of dynamite and caps out here in the yard—sub-contractors' supplies waiting for the freighters' teams from the west end. If they smash us, the chances are ten to one that there'll be a sympathetic explosion out yonder in the yard somewhere that will leave nothing but a hole in the ground!"

"No," said Ford. "I gave orders myself to have that car set down below the junction when the Nadia came in."

"So you did; and it was," Brissac cut in. "But afterward it got mixed in the

(Continued on page 22.)

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HOME CIRCLE



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It is said that a tablespoonful of brown sugar or of granulated sugar added to the gravy which is used in basting a roast will improve the flavor.

The town of Forest Hill Gardens, Long Island, when completed according to the present plans, will be unique in the world's history. It is being built by the Russell Sage Foundation Company and the plan is to get away from the commonplace rectangular city blocks and have the streets crooked and irregular. Besides playgrounds which are open to every one, in the central portion of each block there are to be open spaces varying in size and shape, for the use of children of families occupying the surrounding houses.

Why They Laughed.

On a Pullman sleeper, about seven o'clock in the morning, when the passengers were about ready to leave their berths, a baby in the stateroom began to cry lustily. Just at that moment the porter opened the door and sang out, "First call for breakfast." Then everybody laughed.

Mum's the Word.

A Scottish parson, still on the under side of 40, was driving home from an outlying hamlet when he overtook a young woman. He recognized her as the maid of all work at a farm which he would pass, he pulled up and offered her a lift. Mary gladly accepted his offer and they chatted pleasantly all the way to the farm gate.

"Thank you, sir," she said, as she got down.

"Don't mention it, Mary. Don't mention it," he told her politely.

"No, I won't," Mary obligingly assured him.

8365. One of the Season's Smart Blouse Effects.

There is a sense of being "in turn" at all times when one has blouses of the right style, and the style here shown is most appropriate. It is made with body and sleeve in one, and provided with a "tucker" that may be omitted if the blouse is used for a dressy occasion. Net, voiles, crepe de chine and other soft materials, combined with silk or lace will develop this design effectively. Or



cashmere, poplin, cloth or velvet may be used. The pattern is cut in 5 sizes: 34, 36, 38, 40, 42 inches bust measure. It requires 2 yards of 36 inch material for the blouse and 1 1/2 yard for the tucker for the 36 inch size. A pattern of this illustration mailed to any address on receipt of 10 cents in silver or stamps.

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A very dainty and simple design to be executed in eyelet embroidery, with lace insertion. Stamped on mainsook 65 cents. Stamped on lawn



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50 cents. Perforated pattern 25 cents. Transfer pattern 10 cents.

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Blood must be purified in Spring.

Here is an Old Fashioned Remedy.

Everybody knows that in the Spring the blood is thick and sluggish and should be purified preparatory to the warm summer months. An old fashioned remedy, probably the older folks have all used when youthful, still holds good.

Get one pound of flour sulphur from any reputable druggist, and mix this with about five cups of FARMER JONES Sorghum Syrup. Mix thoroughly. DOSE: One teaspoonful for children; one desert spoonful for adults, taken each morning before breakfast. Repeat for period of two or three weeks.

We recommend FARMER JONES Sorghum because it contains just the right proportion of molasses to secure beneficial results. If you are unable to secure it from your retail grocer, write to the manufacturers, THE FORT SCOTT SORGHUM SYRUP CO., Ft. Scott, Kan., and they will tell you where it can be had.

For table and cooking purposes, also, FARMER JONES Sorghum is the finest that can be had.

The Education of the Farmer's Children.

Of course we all believe in education but there is a difference in our opinions of what education really is; for education is a word that is much misunderstood by most people. They think it is wholly a matter of books, of study, of schools. Education in the true sense is not mere instruction in English, French, Latin or history. It is the unfolding of the whole human nature. It is growing up in all things to our highest possibility.

Home life educates. Intercourse with friends and neighbors educates. Travel educates. Life from first to last with its ups and downs, its joys and griefs, educate. It means the unfolding of the powers of the mind and a drawing out and unfolding of but a drawing out and unfolding of all those powers of head, heart and body that will best help to develop the understanding, train the temper, cultivate the taste, and form good habits and good manners.

Education in this proper sense means learning to do things rather than reading about doing them. In short, real education is always practical. It is not merely the acquiring of knowledge but the application of knowledge to the best advantage in everyday life.

True education does not ignore the value of scientific knowledge or literary acquirements; but above information, it values power, above power goodness; above intellectual acquirements, character. The world does

not so much need men of great intellect, as of noble character. It needs men in whom ability is controlled by steadfast principle. Education really begins very early in life. Long before school days have been reached, traits of character have been acquired that will always be retained; for "as the twig is bent the tree is inclined." The child's first teacher is the mother. During the period of greatest susceptibility and most rapid development his education is to a great degree in her hands. To her, first is given the opportunity to mold the character for good or for evil. She should understand the value of her opportunity and above every other teacher, should be qualified to use it to the best account. Upon fathers as well as mothers rests a responsibility for the child's earlier as well as its later training, and for both parents the demand for careful thought is most urgent. Never will education accomplish all that it might and should accomplish, until the importance of the parent's work is fully recognized.

Another point is to watch closely what they read. Be careful they do not fill their minds with trashy, untrue or filthy reading. Don't make the mistake of doing all your children's thinking and planning for them; let them solve their own problems whenever it is possible. What if they don't get just the best at first? Let them have the experience. It is better to have tried and failed than never to have tried. Encourage them to try again. And praise them when they have achieved something, however small.

Then there is the dress question. Did you ever see a woman who could talk very long without saying something about dress? Children should be so dressed that their clothes will attract but little attention either from themselves or others. Let the dress be clean and neat and appropriate and medium, and then think of something else. One most essential thing for parents to do, is to keep in sympathy with the teacher. If you want your children to accomplish anything in school, don't give them the least encouragement when they come to you with complaints of the teacher. In ninety-nine cases out of a hundred the children are to blame. I know what I am talking about. I have sent four children of my own through school and have watched many others go to school. It is hard sometimes to keep cool and decide against your own children; but that is best, even when you are pretty sure the teacher is some to blame for if the child loses confidence in the teacher he won't take much interest in his work. The teacher positively can not consider each child's whims and fancies and ideas as the parents have probably done. Give your children to understand that it is their business to agree with the teacher. If you really think it necessary after careful consideration you can go to the teacher and talk the matter over kindly; but don't let the scholars know it, and don't be afraid to let the teacher know that you appreciate her work. A word of praise now and then would be much appreciated. And let me tell you it don't take a teacher long to tell which children are in the habit of mind at home. And for all these things that taken singly and at first glance seem so small that they are so often overlooked, but that aggregate so much when taken altogether, we can not blame our educational system, our deficient schoolhouses and equipment, unqualified teachers, etc.; but just our own selves.

In many cases the need is for better educated, better trained teachers, although it is a fact that some of the best educated teachers have the poorest success, simply because they have not the natural ability to control and lead children; or to impart what they themselves know. Such, however, will soon drop out and find other employment. A really good teacher should command a good salary, and we should not begrudge it; for school teaching, if well done, is head work. It takes far more time than the school or seven hours spent with the methods. There are lessons and methods to study and plan, papers to look over and correct, the scholar to be studied individually and collectively, etc., besides the years spent in preparation; and the institutes and training classes and teachers' meetings to be attended, and these things take

of time and money. Then in many cases the very best educated, most capable of teachers are unable to give satisfactory results, because they are handicapped by existing conditions in the schools, for which the patrons themselves are responsible.

This question of better schools for the country is being agitated more and more, many of us, know. Parents are getting tired of sending their children away to school and are demanding better facilities for education nearer home. It is an expensive thing to pay board and transportation, etc. Besides they are away from our watchful care surrounded by people who don't know how many evil influences.

Money, lands, houses or gold mines do not compare in value with our educated sons and daughters. Remember that it is the nicest thing ever given to mortals to train a delicate, growing mind for time and eternity.—Mrs. J. N. Miller before the Berryton Institute.

Costumes, Colors and Fabrics. As soon as tulip and crocus make bare brown earth in the city parks the gorgeous arabesques of color, the fashion rouses herself and bids her followers not to be outdone. This year she has gone still farther and bid them copy the flowers themselves as closely as possible and to the Avenue on a bright spring day indeed a gorgeous sight. The effect is unusually brilliant this season, because so many rich and vivid colors are seen and the costumes themselves are so chic and becoming. A change has been apparent in the costumes that is more marked each year. It was, and not so long ago either, a few exquisite toilettes from Paris were admired and envied by the world, without any possibility of competition, excepting by the very rich. It is all changed now, and it is in the power of every woman, no matter how little she has to spend, to be well and stylishly dressed. How? Of course, by selecting with care and judgment, but equally important, by taking intelligent advantage of the wonderful time and money being in the high class ready made garments of today.

Every woman can design, cut, make and have a tailored garment at home. The step in this direction was when a woman of moderate means in the city began her clothes and had a dressmaker finish them. That was not satisfactory and was very expensive, but suggested what is now one of the great industries of the country, the ready made garment house, which puts in the reach of every woman, no matter where she lives, the same styles, exquisitely made garments that a woman living in the great center city enjoys.

It was enthusiastically that the high class ready made proposition received, and rapid was its growth, that every woman, even in the remotest corners of the world now receives her orders, without a penny of expense for transportation, and has the choice of the latest Parisian novelties almost as they appear, and at no greater cost than the old time dowdy garments.

There are trim tailored suits of pongee or linen and many of the prettiest are wonderfully inexpensive. Ten dollars will buy a very nice model. There are a great many new satin and pongee top coats and graceful Parisian envelope wraps for about \$20. Perhaps it is one of the exquisite one piece dresses that are so much favored this season, of dainty lingerie in fairylke combinations of lace and embroidery, of gauzy and clinging satin, or in popular marquisette. The one dress is made of almost every material, from neat and serviceable to the elegant and dressy French styles in lingerie or silk. Tailors are, if possible, more varied than ever. Perhaps the most general demand and decidedly the most popular, are the man tailored models. Most of them have a charming touch of hand embroidery this season, and the exquisite tailored finish makes them very serviceable; yet you can buy a really beautiful tailored coat of pure linen, hand embroidered, too, for \$1.98. Then there are countless lingerie designs in filmy lace, fairy like lace or rich embroidery, but so perfectly made and finished that the most delicate are strong and durable. There are lovely marquisettes, many of them richly embroidered with brilliant colored long stitch Bulgarian embroidery, Trouville embroidery, or in any of the new and beautiful garnitures that are shown this season. The majority of severe tailored styles have the coat sleeve, open front and stiff collar and cuffs, while the more dressy designs very largely show the peasant shoulder and the always becoming dutch neck. Perhaps most important after all, however, are the underfittings upon which depend the fit and hang of the costume, even the lines of the figure itself, for the corset is the keynote of costume today. Three dollars buys a reliable corset, and no woman can afford to slight this most important factor in dress, especially the stout woman. The stout woman's corset of today is one of the best examples of what skill and experience can accomplish and its results are wonderful. There are petticoats, fitted as closely over the hips as the gown, and the new combination garments. Perfect fitting and ideal to launder, can be bought for the price of a single garment. It is impossible to give more than a glance here at the lovely things that fashion offers her followers. Send for a style book of one of the great mail order houses and see the rich and varied assortment culled from Paris, Vienna, indeed from every part of the world where pretty things are made, and whether you have \$5 or \$50 to spend, a reliable ready made garment will undoubtedly give you service, style and value, to say nothing of fit and finish. Every woman wants to be well dressed, and with the facilities afforded by the great mail order houses, there is no excuse, actually none at all for the woman who does not have a pretty and becoming wardrobe this season.—W. L. Bran, New York City.



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Are Diamond The Best?

Study The Table

TIRES

Here is the One Disinterested Answer

Motorists Who Used Them Got An Average of 2,213 Miles Greater Tire Service For Each And Every Car They Ran, That As Against The General Tire Field, Was Purely "Velvet."

You buy certain varieties of seed corn, seed wheat, etc., because exhaustive tests have proved them best. You buy your cattle, and in fact almost all your equipment, on this same which-has-been-proved-the-best principle.

Why not buy tires in the same manner?

So far as we know there has never been but one extended, disinterested Tire Inquiry. This thorough and impartial investigation was conducted by W. A. Weygandt, representative of leading trade and news publications. Here are the facts as found and compiled by Mr. Weygandt:

Mileage Results Obtained by Users of All Principal Makes of Tires

Diamond Tires—Greatest Mileage—Best!

Make of Tire	A	B	C	D	E	F	G	H	I	J
	Diamond	MAKE	MAKE	MAKE	MAKE	MAKE	MAKE	MAKE	MAKE	MAKE
Sets Reported	41½	43	13	12½	8	7	6	7	4	3
Grand Total Mileage	256,639	239,975	70,300	65,798	34,100	21,594	20,236	20,200	14,000	8,450
Grand Total Time in Use	339½ mo.	404½ mo	122½ mo	82 mo	93½ mo	61½ mo	37 mo	46½ mo	26 mo	12½ mo
Grand Average Mileage	6221	5580	5361	5371	4362	3084	3372	2825	3500	2816
Grand Total All Punctures	101	151	84	49	77	20	24	16	19	6
Grand Total Extra Casings used in time and mileage stated	23	34	6	6	9	6	9	3	5	1
Grand Total Extra Tubes used in time and mileage stated	54	73	24	10	9	17	7	9	5	4
Average Period of Use	8½ mo.	9½ mo	9½ mo	6½ mo	11½ mo	8½ mo	6½ mo	6½ mo	6½ mo	4½ mo
Average Monthly Mileage	775½	593½	573½	802½	364½	351½	546½	436½	538½	676

NOTE THAT Within a shorter total time—indicating their use on largest and fastest cars—Diamond tires gave more mileage than any other tire, by from 11½ per cent. up to 120 per cent. above competing makes.

Observe, also, that users of Diamond tires bought fewer new casings and new tubes than users of other tires. This saving was in addition to the greater mileage they obtained.

We are able further to state that the total number of reports received [by Mr. Weygandt, including those not tabulated for want of specific data, showed more Diamond Tires than any other in use.

Diamond Tires are just as good on the lighter lower priced cars as on the heavier machines and give even greater mileage.

Don't think you can't use Diamond tires on your car because your original tires were something else. No matter what tires you have been using you can get Diamond tires to replace them, and this whatever style of wheel rim you have. You must be careful to specify the size and style. If you do not know the name of your style we can tell you.

Write for Booklet Containing the Complete Story of Mr. Weygandt's Inquiry and our book of Tire Instructions. Both are free.

THE DIAMOND RUBBER CO., AKRON, OHIO

Distributing Points and Service Stations in 54 Cities, Including Chicago, Kansas City, Minneapolis, Milwaukee, Des Moines, Omaha, Oklahoma City, Houston, Dallas, San Antonio.

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You can buy anything you want for your Auto from us at much less than regular prices. If you need a new Top, Wind Shield, Spark Plugs, Oil, Grease, Tires Repaired, Tire Protector, New Tires (any make or size), write us about the same and ask for 1911 BARGAIN SHEET.

WESTERN AUTO SUPPLY AGENCY, 706 East 15th Street, Kansas City, Mo.

MAPLEINE FLAVORING

Use it like lemon and vanilla. A delicious syrup is made by dissolving white sugar in water and adding Mapleine. Grocers sell Mapleine; if not, send 35c for 2oz. bottle and recipe book. Write to Dept. 6 CRESCENT MFG. CO., Seattle, Wash.

BROTHER O. I. C. BREEDER

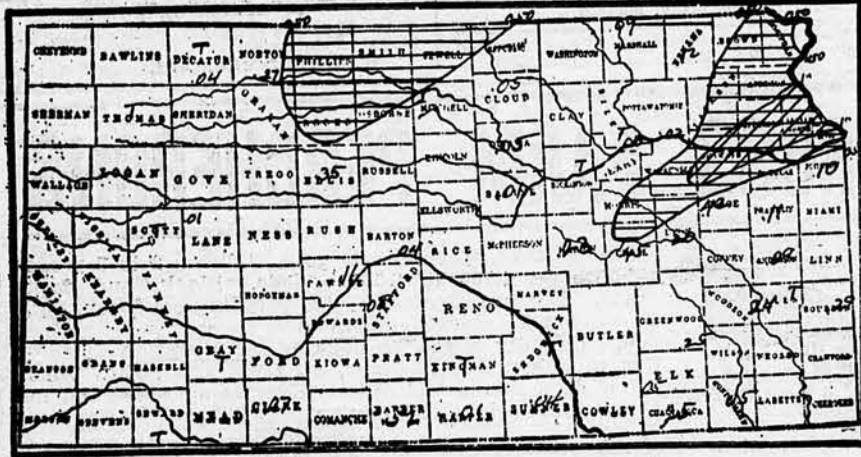
GET THE RIGHT WHITE HOG

We have bred toward ONE IDEAL until we can now offer you males that WE ARE WILLING TO GUARANTEE to produce the desirable head, face and ear, the strong bone and wide hind quarters; the type that has made and maintained the reputation of the SCOTTEA WHITE HOGS OF QUALITY

SCOTTEA FARMS, NELSON, MO.

KANSAS CROP REPORT

Rain chart prepared by T. B. Jennings from reports collected by the Weather Bureau.



UNITED STATES WEATHER OBSERVER'S REPORTS BY COUNTIES.

Allen—Weather conditions favorable for farm work. Soil is moist and vegetation growing rapidly. Temperature for week averaged nearly normal, with precipitation slightly below normal. Sunshine above normal. April 12 very windy.

Anderson—Wheat never looked better at this time of year. Small acreage. Oats up and looking fine. Heavy wind today. Little cold for comfort.

Barber—Good week for planting. Alfalfa growing nicely.

Barton—Dry and windy weather continues. At least 40 per cent of wheat will be plowed for oats, barley and corn. Corn planting will begin next week. Fruit trees in bloom. Dust storm and high wind on 10th, 12th and 13th.

Bourbon—Ground too wet to farm. Crop looking good. Wheat doing fine. Grain looks fine. Cherries in bloom. Frost has not done any decided damage.

Chase—Frost 8th and 9th; very strong wind on 12th. Oats coming up well. About 2,000 pasture cattle came in during week. Pastures doing unusually well.

Chautauqua—Vegetation backward; too cold. Wheat looks well; oats also. Half of 13th did no marked damage.

Decatur—Very little change in wheat condition. Oats and barley suffered from severe winds during week.

Ellis—Wheat condition still improving. Dust storms retard crops somewhat. Scarcely any peach trees will bloom heavily.

Cloud—Wheat in good condition. Oats need rain.

Dickinson—Dry weather retarding crops and grass. Severe dust storm on 12th; no material damage.

Doniphan—Hail on 12th at 7 p. m. Wind 36 miles per hour on 12th and 13th.

Douglas—No hail or storm damage. North part of county struck by a terrific hail storm and tornado on 12th. Oats in. Some corn planting done. Clover and alfalfa sown. Peaches, pears and plums in full bloom.

Ellis—Ground in good shape to work. Heavy frost morning of 9th. Did not seem to hurt fruit. Farmers planting corn. Hail on 12th, but not enough to damage.

Ellis—Cold winds. Generally fair.

Ellsworth—Heavy winds on 10th and 12th. Trace of snow on 7th. Wheat looking good.

Franklin—Farmers busy breaking ground for corn. Wheat looking fine; oats up with promise of great crop.

Gove—Very dry. Bad dust storm on 12th.

Gray—High wind. Ground getting dry on top.

Greenwood—Wheat and oats never looked better. Some corn planted. Alfalfa good. No damage from frost.

Harper—Week of high winds; some damage on exposed ground.

Harvey—Oats up in good shape. Wheat never looked better this time of year. Beginning to plant corn. Very high wind on 12th, but no damage done.

Jewell—Windy and dusty part of time. Oats up, fair stand. Ground in good condition since rain. Quite windy on 11th. Dusty on 12th. Fair 13th.

Johnson—Weather changeable. Cool nights; frost first of week. High wind from south all day 12th.

Kearney—Crops of all kinds needing more moisture. Alfalfa starting well, but slowly. Peach, pear and plum trees in full bloom. Good so far for all kinds of fruit.

Kingsman—Dust storm on 10th and 12th. Two-thirds of wheat ground will be put in other crops. Oats coming up. Some corn planted.

Lane—Frost on 7th and 8th; no damage. Spring crops doing well, but moisture is needed.

Lyon—Crops not damaged, but too cold for much growth.

McPherson—Dry, windy week. Oats coming up well. Rain needed. Surface very dry.

Marion—Oats coming up. Corn planting begun. Light rain with some hail. Ground in good condition.

Marshall—Cool showers on 12th. Wind and dust on 13th. Plowing for corn. Wheat coming satisfactorily. Some peach and plum in bloom. Ground in fair condition. More rain needed. Fair chances for fruit.

Montgomery—Too cool for growing crops. Frost on 9th. Corn planting progressing. Some stock turned on pasture.

Nemaha—Good weather for spring work. Rain needed. Windy, dry days on 10th and 12th. Pears in full bloom. Every kind of crop promising if we get moisture in time.

Pawnee—Heavy winds the past week. Farmers planting a large acreage of corn on ground where wheat failed.

Phillips—Two nice rains. Ground in fine condition for wheat planting. Wheat looking well.

Pottawatomie—Week dry and windy. Crops looking well. Apricots, plums, peaches and pears in bloom.

Riley—Needing rain. Fruit except peaches promising. Vegetation slow. High wind on 12th. No damage except dust.

Ground dry on surface. Grass needs rain. Oats sprouting. High wind on 12th with dust storm. Slight damage.

Russell—Some wheat badly damaged by dry wind.

Saline—Dry and windy with great extremes in temperature. Good weather for spring work, but rain needed.

Scott—Weather fine and spring work progressing well. High wind on 9th; no damage.

Sedgewick—Alfalfa looks fine. Oats coming up in some fields. No corn planted yet.

Wheat fair. Need rain.

Seward—Very windy week. Crops in fair condition.

Smith—Wheat doing nicely. Rain on 10th. Alfalfa made good start. Everything encouraging.

Thomas—No rain. Several very windy days.

Wallace—Windy week. Farming backward.

Woodson—Good week for farm work. Oats up and look well. Some corn being planted. Little damage by frost.

Wyandotte—Soil in fine condition for farm work.

EMPIRE BUILDERS.
(Continued from page 15.)

shifting, and it's back in the yard—I don't know just where."

Adair turned to the cowering porter. "Have you any more cartridges for this cannon of yours, Williams?" he asked.

"N-n-no, sah."

"Then we have three more chances in the hat. Much obliged for the dynamite hint, Stuart. Ill herd these three cartridges pretty carefully. Back to your sentry-boxes, you two, and make a noise if you need the artillery."

Another interval of suspense followed, thickly scored with pricklings of anxiety for the besieged. Then an attempt was made from the rear. Ford saw a dodging shadow working its way from car to car in the yard and signaled softly to Adair.

"Hold low on him," he cautioned, when the New Yorker was at his elbow. "those cheap guns jump like a scared cow-pony." Then he added: "And pray God you don't hit what he's carrying."

Adair held low and bided his time. There was another musket-like roar, and an instant though harmless reply from two rifles on the other side of the Nadia. But the dodging shadow was no longer advancing.

"I've stopped him for the time being, anyhow," said Adair, exulting like a boy. "If we only had a decent weapon we could get them all, one at a time."

"This was crude," Ford commented. "Eckstein will think up something better for the next attempt."

It was a prophecy which found its fulfillment after another sweating interval of watchfulness. This time it was Brissac who made the discovery, from the forward end of the Nadia. The nearest of the material cars was a box lying broadside to the private car on the next side-track but one. From behind the trucks of the box-car a slender pole, headed with what appeared to be an empty oyster tin, and trailing a black line of fuse, was projecting itself along the ground by slow inches, creeping across the lighted space between the two cars. Brissac promptly gave the alarm.

"This is where we lose out," pointed out and definitely, predicted Adair, still cheerful. "Anybody want to try a run for it?"

It was Ford who thought of the two negroes.

"Tell them, Roy," he said to Brissac. "Perhaps they would rather risk the rifles."

Brissac crept back to the central compartment, and the two watchers marked the progress of the inching pole, with its dynamite head and the ominous black thread of communication trailing like a grotesque horn behind it. At the crossing of the intervening track it paused, moving back and forth along the steel like a living thing seeking a passage. Finally the metallic head appeared above the rail, hesitated, and came on slowly. At that moment there was a shout, and the two negroes, hands held high, tumbled from the opposite side of the Nadia and ran toward the commissary stables. Three shots bit into the silence, and the fat cook ran on, stumbling and shrieking. But the man Williams stopped short and fell on his face, rolling over a moment later to die with arms and legs outspread.

"God!" said Ford, between his set teeth; "they say who they were—they couldn't help seeing! And there was no excuse for killing those poor devils!"

But there was no time for reprisals, if any could have been made. When Brissac rejoined the two in the forward vestibule, the stiff-bodied snake with its tin head and trailing horn was crossing the second rail of the intervening siding.

"We've got to think pretty swiftly," suggested Adair, still cool and unruffled. "I might be able to hit that tin thing at this short distance, but I suppose that would only precipitate matters. What do you say?"

Ford could not say, and Brissac seemed to have become suddenly petrified with horror. He was staring at the lettering on the box-car opposite—the one under whose trucks the dynamiters were hiding.

"Look!" he gasped; "it's the car of explosives, and they don't know it!" Then he darted back into the Nadia's kitchen, returning quickly with a huge carving-knife rummaged from the pantry shelves. "Stand back and give me room," he begged; and they saw him lean out to send the carving-knife whistling through the air; saw it sever the head from the stiff-bodied snake—the head and the trailing horn as well. "Good man!" applauded Adair, dragging the assistant engineer back to safety before any of the snarp-shooters had marked him down. "Where did you learn that trick?"

"It is my one little accomplishment," confessed the Louisianian. "An old Chickasaw chief taught me when I was a boy in the bayou country."

The peril was over for the moment. The severed pole was withdrawn, and for what seemed like an endless interval the attack paused. The three besieged men kept watch as they might, creeping from window to window. Out under the blue glare of the commissary arc-light the body of the negro porter lay as it had fallen. Once, Ford thought he heard groans from the black shadow where the fat cook had disappeared, but he could not be sure. On the other side of the private car, and half-way between it and the forty-thousand-pound load of high explosives, the petard oyster-tin lay undisturbed, with the carving-knife sticking in the sand beside it.

"What will they try next?" queried Adair, when the suspense was again growing intolerable.

"It is simple enough, if they happen

to think of it," was Ford's rejoinder. "A few sticks of dynamite in a plugged gas-pipe; cut your fuse long enough light it, and throw the thing under the car. That would settle it."

Adair yawned sleepily.

"Well, they've got all night for the inventive part of it. There's no reason for us unless somebody—a good husky army of somebodies—just happens along."

"The army is less than eight miles away—over at Frisbie's camp," said Ford. "With Dick to lead them, the track-layers would sack this place in about five minutes. If I could only get to the wire!"

Brissac heard the "if."

"Let me try to run their picket line, Ford," he said eagerly. "If I can get around to our quarters and into the telegraph tent—"

"You couldn't do it, Roy. There's the proof of it," pointing to the body of the slain negro. "But I have been thinking of another scheme. The track-camp wire is bracketed across the yard on the light-poles. I have a pocket relay. I wonder if we could cut in on that wire?"

"Wait a minute," Brissac interrupted. He was gone but a moment, and when he returned he brought hope with him.

"The wire is down and lying across the front vestibule," he announced excitedly. "They must have cut it somewhere by the telegraph tent and the slack has sagged down this way."

"Which gives us a dead wire without any batteries," said Ford gloomily. "Then: 'Hold on—are there electric call-bells in this car, Adair?'"

"Yes; several of them; one in each state-room."

"Good! that means batteries of some sort," said Ford. "Rummage for them, Brissac, while I get a wire in here."

The wire was successfully pulled through the front vestibule without giving the alarm. Ford twisted it two when he had enough of it to reach the central compartment. Adair's sentry duty while the two technicians wrought swiftly. The bell battery was found, the ground connection made with a bit of copper wire stripped from one of the state-rooms, and Ford quickly adjusted the delicate spring of the tiny field relay.

What he feared most was that few dry-cells of the bell battery would supply the current for the eight miles of line up Horse Creek. For time, which lengthened to dragging minutes, the anxious experimenters hung over the 'tiny field instrument. The sensitive magnet seemed weak and dead. Then, suddenly, it began to vibrate hesitantly in response to Ford's tapping of the key.

"Thank God, the battery is strong enough," he exclaimed. "Now, if there is somebody within hearing at Frisbie's end of the line..."

He was clicking persistently and tentatively, "E-T," "E-T," "E-T," alternating now and then with the Horse Creek call and his own private code letters when Adair came up from his post, one of the rear windows. The gaudy youth was the bearer of tidings. Ford held up his hand for silence: the one was breaking in to reply to Frisbie's—Frisbie, himself, as the unimpaired tickings speedily announced.

Ford snipped out his call for help, the fewest possible words:

"Arm McGrath's gang and bring by train to Horse Creek, quick, as Morrogs are trying to dynamite the Nadia."

Almost without a break in the latest like tickings the reply came:

"Stand them off; help coming."

The thing done, the master worked in Ford snatched at the helm.

"Did you catch and hold the lead and-shovel men from this camp?" he clicked anxiously.

"Got them all herded here and ready to go back to work—for more pay," answered Frisbie; and Ford ticked no more word, "Hurry," and closed the key with a sigh of relief.

Not until then, Adair said: "Is that all for the present? If it is, I'm sorry to have to report that the beggars on the side have hit upon your gas-pipe scheme. They are rolling a round black thing with a string attached down upon us from the commissary. The slant of the hill is just enough to keep it coming where the ground is smooth."

From sheer force of habit, Ford connected his field telegraph, cased and pocketed it. Then there was an instant adjournment to the rear window of the camp side. Happily, the round bomb was as yet only on the way. Bells and roughnesses intervened, and there to stop or to turn it as and since it was out of reach of the longest pole, the dynamiters started it on again by throwing stones at it.

Hereupon ensued a struggle which, under other conditions, would have ended as horse-play. One after another the three men in the car heaved cushions, pillows, obstructions of any kind in the path of the rolling menace. Behind the commissary barricade the dynamiters patiently twiddled the bomb as the firmly fastened fuse, or sent that to avoid obstacles, or sent forward under the impact of well-directed missiles.

Ford was the first of the three to recognize the futility of the barricades.

"They'll beat us—they'll drop the ditch right here under us in spite of fate!" he cried. "Brissac: go and break the glass in the ax, quickly, case and bring me the ax, quickly!" And when he had it: "Now get another piece of that telegraph wire and hook on the end of it—jump your gerts!"

(This chapter continued next week)

FIELD NOTES

FIELD MEN.

- Wayne Devine.....Topeka, Kan.
Jesse R. Johnson.....Clay Center, Kan.
W. J. Cody.....Topeka, Kan.

PURE BRED STOCK SALES.

- Sherthorns.
April 27--Harry R. Coffey, Savannah, Mo.
June 6--C. S. Nevius, Chiles, Kan.
Jerseys.
April 26--H. F. Erdley, Hiawatha Kan.
Poland Chinas.
April 12--C. S. Nevius, Chiles, Kan.
April 3--A. J. Swingle, Leonardville, Kan.
April 3--L. R. McClarnon, Bradyville, Iowa.
April 5--J. C. Salter, Jasper, Mo.
April 11--S. A. Hobson & Son, King City, Mo.
April 17--S. N. Hodgson & Son, Parker, Kan.
April 18--Geo. M. Hull, Garnett, Kan.
April 18--W. E. Long, Meriden, Kan.
April 21--W. C. Singer, Hiawatha, Kan.
April 20--Roy Johnston, South Mound, Kan.
April 23--Herman Groninger & Sons, Bendena, Kan.
April 25--T. J. Meisner, Sabetha, Kan.
April 24--W. F. Fulton, Waterville, Kan.
April 25--T. J. Meisner, Sabetha, Kan.
April 26--W. R. Webb, Bendena, Kan.
April 26--H. H. Foster, King City, Mo.
April 27--J. C. Halderman, Burchard, Neb.
April 27--J. O. James, Bradyville, Iowa.
April 31--W. T. Williams, Valley Falls, Kan.
April 1--H. B. Walter, Effingham, Kan.
April 2--H. C. Graner, Lancaster, Kan.
April 7--Verny Daniels, Garver, Mo.
April 9--Walter Hildwein, Fairview, Kan.
April 17--Miller & Manderschied, St. John, Kan.
April 9--W. E. Willey, Steele City, Neb.
April 27, 1912--L. R. McClarnon, Bradyville, Iowa.
O. I. C. Swine.
April 25--R. W. Page, Garnett, Kan.
April 28--Arthur Mosse, Route 5, Leavenworth, Kan.

P. Mast of Scranton, Kan., makes a change in his advertising card this week...

Willifoug's Poland Chinas. D. Willifoug, Poland China breeder located at Zeandale, Kan., has had his usual luck this spring...

Nevius' Shortthorns. S. Nevius of Chiles, Kan., who has had such a conspicuous success as a breeder of Shortthorns and Poland Chinas...

Terwilliger's Chester Whites. For the past six years Mr. Day Terwilliger of Mt. Airy, Iowa, has been recognized as one of southern Iowa's leading breeders...

The Designer Kind Sell May 12. There is little to be added to what has already been said about the Designer and Look kind of sows that C. S. Nevius will sell in his May 12 sale...

When selecting a windmill, first determine what you want it to do and the conditions under which it must work...

Home Mixed Fertilizers. One of the problems with which the eastern farmer has to contend constantly and one which is becoming more important to the corn belt farmer is that of retaining soil fertility...

W. J. Brinigar's Hampshires. W. J. Brinigar of Bluthedale, Mo., is the owner of one of Missouri's noted and valuable herds of pure bred Hampshire hogs...

Sunflower Barn Paint. At 85 cents a gallon, freight prepaid, in 5-gallon lots, Sunflower brand Red Barn Paint is of interest to every farmer...

S. N. Hodgson & Sons. A fieldman for Kansas Farmer called last week on the firm of S. N. Hodgson & Sons of Parker, Kan. Steve Hodgson, as he is widely known among breeders...

Saskatchewan the Golden. Did you ever stop to think of the tremendous increase in the values of land in the United States for the past 50 years? Here is a fact that may surprise you...

ter this section and put the residents in as close touch with the world's markets as though they were located in Iowa or Indiana. Land that sells for \$20 an acre is yielding 40 bushels of wheat per acre...



PUSH BINDER EQUIPPED WITH A 3 H. P. CUSHMAN BINDER ENGINE. THUS EQUIPPED TWO HORSES ONLY ARE NECESSARY ON THE BINDER TO RUN IT TO ITS MAXIMUM CAPACITY...

P. L. Ware & Son's Polands. A fieldman for Kansas Farmer called at the Ware farm at Paola, Kan., last week, and found the usual number of Poland Chinas. Ware & Son have gained a reputation for breeding Polands with quality...



BARN AND A GROUP OF O. I. C. SWINE OWNED BY ARTHUR MOSSE, ROUTE 5, LEAVENWORTH, KAN. THE GILT IN THE FOREGROUND IS AN AUGUST FIG.

Duroc Herd Boars. With this issue G. C. Norman of Winfield, Kan., is advertising for sale some very fancy young boars. They are very fashionably bred, sired by the Col. Scion 100471...

Erdley's Jersey Cattle and Berkshire Sale. H. F. Erdley's dispersion sale of Jersey cattle and Berkshire hogs to be held at Hiawatha, Kan., Wednesday, April 26...

brood sows, 11 summer gilts and 38 spring pigs. The Erdley Jersey herd is one of the best bred and best working herds in the state at this time...

Walter Hildwein Visited. Walter Hildwein at his farm near Fairview, Kan., has an unusually choice lot of spring pigs sired by his herd boars...

Ralph Bunnell's Polands. Ralph Bunnell is the name of a new Poland China breeder in Kansas. Mr. Bunnell lives on a farm about six miles northwest of Atchison, Kan., where he maintains a good herd of Poland Chinas...

niger, A. C. Lobtugh, W. R. Stump, W. F. Fulton, T. F. Walker and other well known breeders. Mr. Hildwein always aims to secure the best both in breeding and individuality...

from time to time. His present herd boar is R. B.'s Hadley, a son of Big Hadley's Ligeness, he by Big Hadley. There are a fine lot of pigs in sight by the boar just mentioned and Coupon by Banner Boy...

On May 12, C. S. Nevius will sell 50 head of positively the best sows and gilts ever sold from the Glenwood farm.

Copelands Polands. N. H. Copeland, at his place adjoining the town of Waterville, Kan., has an unusually choice lot of spring pigs...

FRANK IAM'S

The "King Bee"—"Peaches and Cream" Horse Importer—is an expert horseman on "easy street"—and 10 blocks in advance—and making all his competitors "go fast." He has just opened a "new barn" of 40 prize winners (not seen by public before)—they are Medal winners—"Ribbon grabbers" and "classiest bunch" of "Top-notchers" of big bone—size, quality and "fast movers" in U. S.—They are "Eyeopeners"—"Business propositions" that make the "wheels work" under a "buyer's hat." Iams sells "show horses"—at same prices others sell ordinary horses—and these "Show Horses" are "big bargains" never heard of before—all must be sold. Iams has

REDUCED PRICES

14n prize winners \$300.00 to \$600.00 each. Iams has all his largest and best horses yet. "Ikey Boy" wear a \$1,000.00 smile and sing "Iams' horse song." "Waltz me around again, Ikey Boy,"—and buy a stallion and mare to day of Iams—and save \$300.00. Iams is a "big fly in the ointment"—in the horse world. He makes buyers wear a "\$1,000.00 smile" and buy a "Top-Notcher" at "let live prices."

Owing to bad crops—big rains—close money—Iams' cash and 29 years' successful experience—he bought and is selling larger and better horses than ever before.—"Mamma"—Iams is a "money saver"—"a hot advertiser"—but "he has the goods"—and sells the horses at his home barns only. Buyers get "all middlemen's profits." Iams has

60 PERCHERONS AND BELGIANS—60

two to six years old, weighing 1,700 to 2,500 pounds; 90 per cent blacks, 90 per cent ton stallions. All registered and branded. He sells "Toppers" at \$1,000.00 and \$1,400.00 (few higher). Mares—\$700.00 to \$1,000.00 so good they need not be "peddled" or put on the "auction block" to be sold. IAMS' SELLING CLOTHES fit all buyers. No man with MONEY OR BANKABLE NOTES gets away from Iams. He BUYS, OWNS AND SELLS MORE STALLIONS than any man in the United States. Iams saved \$300,000.00 to stallion buyers in 1910. He is not in the stallion trust. Iams places \$1,500.00 insurance.

\$1,500.00—SAVED AT IAM'S—\$1,500.00

Ikey, what a "graft" these "stallion salesmen" are working on the farmer, selling fourth rate stallions at \$3,000.00 to \$5,000.00. Mr. Buyer, see Iams' stallions yourself. Take no STALLION SALESMAN'S WORD. "Iams HAS THE GOODS YOU READ ABOUT." His establishment is worth going 2,000 miles to see. Iams' competitors "holler" he is knocking "HIGH PRICES" out of the Xmas tree. Iams saws wood, "Butts in," sells more stallions each year. He makes every statement good. "Ikey Boy," buy a stallions of Iams. HIS \$1,200.00 STALLIONS ARE MUCH BETTER than our neighbors paid those Ohio men \$4,000 for. Then I can wear diamonds. Iams speaks the languages, buys direct from BREEDERS; pays no BUYERS, SALESMEN OR INTERPRETERS; has no two to ten men as partners to share profits with. Iams guarantees to sell you a better stallion at \$1,000.00 to \$1,500.00 than are sold to stock companies at \$2,500 to \$5,000.00 by SLICK SALESMEN, or pay you \$500.00 for your trouble (you the judge). Iams pays the horses freight and buyer's fare; gives 60 per cent breeding guarantee. Iams' guarantee is backed by one half million dollars.

WRITE FOR MILLION DOLLAR HORSE CATALOG

References: St. Paul State Bank, Citizen's National Bank and First State Bank, St. Paul, Neb. First National Bank and Omaha National Bank, Omaha, Neb., and Packers' National Bank, South Omaha, Neb.
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COLLYNIE HERD BULLS

In The Ninth Annual Hanna-Hill Short-horn Sale
At Fredonia, Kan., May 3, 1911

Prince Royal 270647 by Imp. Collynie. 1st dam, Imp. Princess Royal 62d by Spicy Robin. This cow bred by W. S. Marr and especially selected by him for Mr. Hanna as one of the choicest representatives of the celebrated Uppermill herd. This is one of old Collynie's very best sons—a great breeding bull with one of the richest Scotch pedigrees in the herd book.

Ingle Lad 266313 by Imp. Collynie, dam by Imp. Inglewood, the highest priced bull ever sold at the American Royal. This bull, twice a prize winner at the American Royal, is a remarkable breeding bull as his calves in this sale will demonstrate. Besides these bulls a number of grand young bulls sired by them are in the sale.

Mr. Hill sells all of his greatest breeding cows—most of them with calves at foot by Ingle Lad.

A grand young cow by Imp. Choice Goods sells with heifer calf at foot and bred again.

This is a dispersion of Mr. Hill's herd and includes the "cream of the cream" as he has been culling very closely for several years and selling for beef.

The catalog should be in the hands of every Shorthorn breeder and will be especially interesting to younger breeders because of interesting information it contains along with the tabulated pedigrees showing every ancestor for five generations.

Lot 3—Cow—Lavender of Calstock Farm, bred by G. M. Casey; sire Imp. Choice Goods; dam, Lavender of Hill Farm 15th, C. B. Dustin; Lavender Lad, Wm. Duthie, 2d Lavender of Hill Farm 8th, C. B. Dustin; Golden Rule, R. Miller. 3rd, Lavender of Hill Farm 2nd, C. B. Dustin; Golden Chief, Wm. Moffatt. 4th, Lavender of Oakland 2nd, J. H. Potts & Son. 5th, Imp. Lavender 31st, A. Cruickshank.

Lot 5—Cow—Emma Tillycairn, S. C. Hanna; sire, Tillycairn, W. S. Marr. Dam, Imp. Emma 33rd, W. S. Marr; Sittytown Pride, Wm. Duthie. Emma 2th, W. S. Marr; Marshfield, W. S. Marr. Emma 17th, W. S. Marr; Wm. of Orange A. C.

Lot 6—Cow—Wistful, S. C. Hanna. Sire, Imp. Collynie, Wm. Duthie. Dam, Wistaria, S. C. Hanna; by Royal Knight, W. A. Harris. 2nd, Spirea, W. A. Harris by Imp. Royal Pirate (A. C.). 3rd, Imp. Stephaniatis (A. C.); by Dunblane A. C.

Lot 10—Cow—Emma 16th. Sire, Violet King 123968. Dam, Emma 12th, J. H. Potts & Son; by Thistlewood, W. A. Harris. Emma 10th, J. H. Potts & Son; by Imp. King of Aberdeen (A. C.). Emma 7th, J. H. Potts & Son; by Antiquary (A. C.). Emma 5th, J. H. Potts & Son.

Lot A—Herd bull for reference only, Imported Collynie 125022, bred by Wm. Duthie. Sire, Scottish Archer, A. Cruickshank. Dam, Lavender 45th (A. C.); by Baron Violet, A. Cruickshank; 2d dam, Lavender 35th (A. C.); by Roan Gauntlet, A. Cruickshank.

Lot 32—Herd bull, in sale, Prince Royal 270647, S. C. Hanna. Sire, Imp. Collynie. Dam, Imp. Princess Royal 62d, W. S. Marr; by Spicy Robin, J. D. Willis. 2nd dam, Princess 52d, W. S. Marr; Sea King (A. C.). 3rd dam, Princess Royal 2nd, W. S. Marr; Wm. of Orange (A. C.).

Lot 33—Herd bull—in sale, Ingle Lad 266313, S. C. Hanna. Sire Imp. Collynie. Dam, Inglemald, S. C. Hanna. Imp. Inglewood, W. S. Marr. 2nd, Princess Royal, S. C. Hanna; Royal Knight, W. A. Harris.

Lot 34—Golden Rod 342048, S. C. Hanna. Sire, Prince Royal. Dam, Golden Queen 2nd, S. C. Hanna; Imp. Collynie, Wm. Duthie. 2nd, Imp. Golden Queen, Wm. Duthie, Goldspur, Wm. Duthie.

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