

KANSAS FARMER

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BREEDERS' DIRECTORY.

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HORSES.

PROSPECT FARM—CLYDESDALE STALLIONS, SHORT-HORN CATTLE, and POLAND-CHINA HOGS. Write for prices of finest animals in Kansas. H. W. McAfee, Topeka, Kas.

CATTLE.

ROCK HILL HERD OF SHORT-HORNS—Straight and cross-bred Scotch and Bates; good as the best. A No. 1, all red, 19 months old bull \$150. J. F. True, Newman, Kas.

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

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ENGLISH RED POLLED CATTLE—PURE-BRED. Young stock for sale. Your orders solicited. Ad. K. Haseltine, Dorchester, Green Co., Mo. on this paper when writing.

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SWINE.

D. TROTT, ABILENE, KAS., famous Duroc-Jerseys and Poland-Chinas.

CENTRAL KANSAS HERD OF THOROUGHbred Poland-China hogs. C. S. Snodgrass, Galt, Rice county, Kansas, breeds the best. Stock for sale now. Come or write.

KAW VALLEY HERD POLAND-CHINAS—One of the best sons of Chief I Know at the head. Pairs and trios not akin; of all the leading strains. M. F. Tatman, Rossville, Kas.

S. F. GLASS, Marlon, Kas., breeder of thoroughbred Jersey cattle, Poland-China and Large English Berkshire hogs, M. B. turkeys, B. P. Rock and S. C. White Leghorn chickens, peacocks, Pekin ducks and Italian bees.

KANSAS HERD OF POLAND-CHINA SWINE.—Has five choice yearling sows bred to my black U. S. boar, and one Tecumseh boar and thirty-five fall pigs by Model Sanders (20492) by Kiever's Model. They have typical ears and show fine markings. Address F. P. Maguire, Haven, Kas.

POULTRY.

PURE-BRED POULTRY.

Barred P. Rocks, White P. Rocks, Partridge Cochins, White Cochins, Light Brahmas, S. L. Wyandottes, White Wyandottes, Black Javas, Brown Leghorns, White Leghorns, Buff Leghorns, Silver Spangled Hamburgs, Pearl Guineas and Pekin Ducks. Two hundred this year's breeders for sale. Also 500 Spring Chickens, ready to ship after the first of July. Prices lower than any other time of the year. Circular free. A. H. DUFF, Larned, Kas.

ROCKS WHITE and BLUE BARRED

Empire, Lash and Conger Strains. Eight years experience in breeding Rocks exclusively. Five pens—three Barred, two White; all high-scoring birds. They are mated to produce prize-winners. Males score from 91 1/2 to 94; by Hewes; females from 89 to 95 1/2. Eggs, 13 for \$1; 50 for \$2; 100 for \$5. Write for descriptive circular. Printed recipe for making and using Liquid Lice Killer, 25c. Address: T. E. LEFTWICH, Larned, Kas.

SWINE.

M. H. ALBERTY, Breeder of Registered CHEROKEE, KAS. **DUROC-JERSEY SWINE.** Baby Pig Teeth Clippers, 35 cents by mail.

Mound Farm Herd of Poland-Chinas.

100 head. Foundation stock, Tecumseh Boars in service, Tecumseh Joe 1344 S., Chief 13840 S., Butler Wilkes 17764 S., U. S. Tecumseh 17850 S., 15 fall gilts, 30 spring pigs, 30 summer pigs. Inspection and correspondence invited. H. E. Bacheider, Fredonia, Wilson Co., Kas.

SWINE.

BOURBON COUNTY HERD BERKSHIRES. J. S. MAGERS, Proprietor, Arcadia, Kas. Correspondence invited. Satisfaction guaranteed.

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

THE SEDGWICK NURSERY CO., Sedgwick, Harvey Co., Kas.,—Breeders of—

Short-horn Cattle and Poland-China Swine Of the Best Strains. Stock for sale. Correspondence and inspection invited.

"HIGHLAND POLAND-CHINAS." Twenty-five very fancy fall boars, some of which will do to head any herd or to go in any show ring. Sired by Knox All Wilkes 1817 S., and Highland Chief 1834 S., by Chief Tecumseh 2d 915. No better sires in any herd. Our prices very low if taken at once. One hundred fine spring pigs by same sires. Plymouth Rock Eggs. DIETRICH & SPAULDING, Richmond, Kas.

HEADQUARTERS FOR POLAND-CHINAS IN KANSAS IS AT SHADY BROOK STOCK FARM.

H. W. CHENEY, Prop., NORTH TOPEKA, KAS. Cheney's Chief I Know 19513 (S) at head. All popular strains represented in matrons. Write for prices, which are always reasonable. Buyers met at train and shown stock free.

Wamego Herd Imp. Chester Whites and Poland-Chinas. Mated for best results. Also Barred Plymouth Rock chickens and eggs for sale. Correspondence or inspection invited. Mention FARMER. C. J. HUGGINS, Proprietor, Wamego, Kas.

Large-Boned Poland-Chinas—A Bargain. For the next thirty days we will sell fifteen extra fine boars and twelve sows, of September farrow, good enough to go in any herd, and some of them will win this fall in hot company. They go cheap while they last. 150 spring pigs representing all the fashionable families. Come and see us or write. WAIT & EAST, Altoona, Wilson Co., Kas.

SIXTEEN TO ONE HERD REGISTERED POLAND-CHINA SWINE.

Herd boars, Gold Standard Wilkes by Guy Wilkes 2d 1777 S., and Ideal Quality by Darkness Quality 2d 14361 S. Brood sows, Tecumseh, Black U. S. and Wilkes. Thirty spring pigs, both sexes, ready to go. Farm two miles north of Welda. J. M. COLLINS, Welda, Anderson Co., Kas.

PURE-BRED POLAND-CHINA SWINE. Brood sows by Wren's Medium, Hadley M. Washington, Protection Boy, Moss Wilkes Tecumseh (by C. T. 2d), Tanner 19212, a grandson of the famous Hildrestretcher, at head of herd, assisted by Prince Darkness, out of Darkness 1st. Corwin Sensation and Darkness 1st are very choice sows. Some October Tanner pigs for sale. Get one for a herd header. Also some One Price Medium 2d pigs for sale. Three young boars ready for service. Write for prices. J. R. WILLSON, Marlon, Kas.

HIGHLAND FARM HERD PEDIGREED POLAND-CHINAS.

One hundred head. Bred sows in pig to herd boars, Corwin I Know 18448 S., he by the great Chief I Know 19992 S., and others to Hadley U. S., a son of the great Hadley, Jr. 18314 S. Also ten extra choice fall boars and twelve gilts for sale at reasonable prices, breeding and quality considered. Fifty spring pigs by seven different noted sires. Write or visit the farm. John Bollin, Kickapoo, Leavenworth Co., Kas.

PLEASANT VALLEY HERD REGISTERED POLAND-CHINA SWINE

King Perfection 4th 18744 S. at head of herd, assisted by Tecumseh Wilkes 12694 S. and Lambing Ideal 14050 S. The sire of last named is Gov. C. by Black U. S. We have added several very finely bred sows to our herd. Write for particulars. Address either W. E. JOHNSON, E. A. BRICKER, Colony, Kas. Westphalia, Kas.

Kansas City HERD Poland-Chinas. W. P. GOODE, Lenexa, Kas.

SWINE.

V. B. HOWEY, TOPEKA, KAS. Breeder and shipper of thoroughbred Poland-China and Large English Berkshire swine and Silver-Laced Wyandotte chickens.

D. L. BUTTON, North Topeka, Kas., breeder of Improved Chester Whites. Stock for sale. Farm 2 miles northwest of Reform School.

DIVERDALE HERD of R. Chester White swine and Light Brahma poultry. J. T. LAWTON, BURTON, KAS., proprietor. All stock guaranteed. I can also ship from Topeka, my former place.

Standard Herd of Poland-Chinas A choice lot of gilts sired by Ideal U. S. and bred to Tecumseh Chief. Also some good Tecumseh Chief gilts bred to Look Over Me (he by old Look Me Over) and some good fall pigs, both sexes. Write and get my prices or come and see. WM. MAGUIRE, Haven, Kas.

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

BLUE MOUND HERD BERKSHIRE SWINE.

Herd boars, Victor Hugo 41799 (sire imp.), Barkis 30040 (weight 800 lbs.), Prince Jr. 17th, from World's Fair winner. Choice pigs from five different strains. Also bred Shropshire sheep, M. B. turkeys and B. P. Rock chickens. Write. Allen Thomas, Blue Mound, Linn Co., Kas.

Nation's Poland-Chinas.

Fifty boars and gilts for this season's trade. My herd boars consist of Darkness Quality 14361, Princeton Chief 14543, Col. Hildrestretcher 37247 and Standard Wilkes. My sows are splendid individuals and of the right breeding. Personal inspection and correspondence invited. LAWRENCE NATION, Hutchinson, Kas.

SUNFLOWER HERD OF SHORT-HORN CATTLE and POLAND-CHINA SWINE.

125 head in herd, with Sir Knight 124403 at the head. Females are by such imported Crutskhank bulls as Craven Knight 96923, Thistle-top, Master of the Bulls, Earl of Gloster 74523, Viscount Richmond, Knight Templar 69653, etc. Forty very choice brood sows. Young stock for sale. ANDREW PRINGLE, Harveyville, Kas.

OPUSCULE POLAND-CHINAS.

Guy Darkness 18292 and Best Nims 19612, herd boars. Sept. '97 boars and gilts for sale. Guy Darkness gilts will be bred to Best Nims for fall farrow. Correspondence or inspection of herd solicited. S. W. HILL, Hutchinson, Kas.

ROSE CREEK POLAND-CHINAS

ARE SECOND TO NONE. FARM READ THIS SPECIAL OFFER: Will sell February and March pigs during July for \$15 each, delivered at any railroad station in Kansas or Nebraska. H. WOODFORD, Mgr., Chester, Neb.

Mains' Herd Poland-Chinas

Headed by the two grand sires, One Price Chief 20114, he by Chief Tecumseh 2d 915, out of Alpha Price, she by One Price 4207; Model Combination 19853, grandson of Kiever's Model, on sire's side, and of Chief Tecumseh 2d on dam's side. I have pigs from other noted boars mated to a selected lot of sows as good as are known to the breed. A very fine lot of fall and spring pigs and quite an extra lot of bred sows of different ages. I will give very reasonable prices on all stock. Satisfaction guaranteed. James Mains, Oskaloosa, Jefferson Co., Kas.

Live Stock Artist.

F. D. TOMSON, 514 Monroe St., Topeka, Kas. Portraits for framing and outs prepared for advertising purposes. Breeders' correspondence solicited.

CATTLE.

SILVER CREEK HERD SHORT-HORN CATTLE.

Scotch and Scotch-topped, with the richly-bred Champion's Best 114671 in service. Also high-class DUROC-JERSEY SWINE. Can ship on Santa Fe, Frisco and Missouri Pacific railroads. J. F. STODDER, Burden, Cowley Co., Kas.

CLOVER CLIFF FARM.

Registered Galloway Cattle. Also German Coach, Saddle and Trotting-bred horses. World's Fair prize Oldenburg Coach stallion, Habbo, and the saddle stallion, Rosewood, a 16-hand, 1,100-pound son of Montrose, in service. Visitors always welcome. Address BLACKSHERE BROS., Emdale, Chase Co., Kas.

DEER PARK FARM.

H. E. BALL, Proprietor. Registered Jersey cattle. Young bulls and heifers for sale. Registered Poland-China swine. Young boars for sale. Farm two miles east of Topeka on Sixth street road. T. P. CRAWFORD, Mgr., Topeka, Kas.

SUNRISE STOCK FARM.

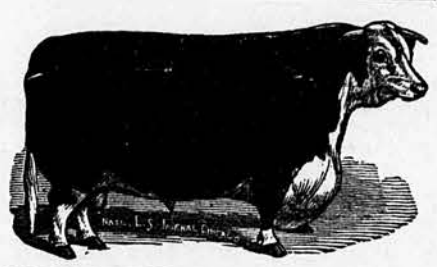
C. A. STANNARD, Prop., Hope, Kas. Breeder of Hereford Cattle and Large English Berkshire Hogs.

Bulls in service: Kodax of Rockland 40781, who has won more first premiums at leading State fairs in past six years than any other bull in Kansas; Java 64045. Thirty-five yearling heifers and seven bulls 3 to 7 years old for sale.

ELDER LAWN HERD SHORT-HORNS.



THE Harris bred bull, GALLANT KNIGHT 124466, a son of Gallahad, out of 8th Linwood Golden Drop, heads herd. Females by the Crutskhank bulls, Imp. Thistle Top 83876, Earl of Gloster 74523, etc. Size, color, constitution and feeding qualities the standard. Address T. K. TOMSON & SONS, DOVER, KANSAS.



HEREFORD CATTLE

Of highest quality, both as to form and ancestry, for sale—twenty cows and seven young bulls on hand. J. C. CURRY, Prop., "Greenacres" Farm, Quenemo, Kas.

TO DAIRY FARMERS!

We have here on the highlands of Southern Georgia a part of the best natural Dairy land in this country, to start a high-paying co-operative dairy business. Price between \$3 and \$4 per acre. Climate, health, water, soil excellent. Butter wanted for the cities in Georgia at a high price. We want a leader. Send for circulars. Address E. JULIUS HARTMAN, Enigma, Georgia.

Agricultural Matters.

AGRICULTURE LEADS.

More than three-quarters of the \$1,200,000,000 worth of our productions which were sent abroad during the fiscal year just ended went to Europe, while only one-half of the \$600,000,000 worth which we imported came from Europe. Nearly one-half of our exports of the year went to the United Kingdom alone, while our imports from the United Kingdom were less than one-fifth of our total importations.

While the full figures of the fiscal year are not yet complete, the reports of the Bureau of Statistics covering the eleven months ending June 1 are sufficient to show who have been the purchasers of the enormous aggregation of domestic productions which the United States has distributed to the world in this year of her greatest commerce. Our sales to Europe are more than three times as much as our purchases from that part of the world, the exports to Europe during eleven months of the year being \$901,014,786, and the imports from European countries in the same time \$281,091,002. To the countries of North America we have sold 50 per cent. more than we have purchased from them, our exports to them for the eleven months being \$127,125,929, against \$81,287,488 of imports from them. To Africa we have sold more than double the amount of our purchases, the exports to that part of the world being \$16,097,959 in the eleven months whose record is completed, and the imports \$6,786,017. Here the scale turns against us, for in our commerce with South America, Asia and Oceania our sales to each of these countries have been far less than our purchases from them. To South America we sold during the eleven months in question only \$30,748,846 worth, while our purchases from that part of the world were \$85,859,245. To Asia our sales were but \$41,561,531, and our purchases therefrom \$85,381,158. To Oceania our sales were \$19,979,555, and our purchases \$23,365,132. It is gratifying to observe, however, that in our trade with Asia, where all the nations of the earth are now striving to extend their commerce, there has been a material gain in our exports during the year, the total being nearly 15 per cent. greater than that of last year.

The figures for the year will show a marked improvement over those of last year, the exports to Europe being more than three times the imports from Europe, while last year they were not quite double the imports; the exports to North American countries will be nearly \$50,000,000 in excess of the imports from those countries, while last year the excess of exports was less than \$20,000,000; our imports from South America will be 150 per cent. in excess of our exports to that part of the world, while last year they were more than 200 per cent. greater than the exports.

There is not a country, indeed scarcely a spot in the civilized portions of the globe, which has not been a customer of the United States in the year just ended. From the United Kingdom, whose total purchases for the year are nearly \$600,000,000, down to Paraguay, with a total of less than \$1,000, the continents, countries and islands of the earth have purchased of the plenteous supplies which the United States has been able to offer to the world in this greatest year of her commerce. To the United Kingdom the exports for the eleven months were \$501,756,263, against \$452,926,890 in the corresponding months of the preceding year. Germany came next as a purchaser, our total sales to that country being \$143,416,065, against \$116,881,478 last year. The next largest purchaser was France, to which we exported \$87,012,841 in the eleven months of the year, against \$54,575,298 in the corresponding months of the preceding year. Next came British North America with purchases amounting to \$76,160,414, against only \$59,676,594; then Netherlands, with \$59,733,226, against \$46,436,034 last year; then Belgium, with \$44,006,379, against \$30,469,416 last year; Italy, \$21,849,377, against \$20,206,301 last year; Mexico, \$19,304,687, against \$21,396,395 last year; Japan, \$19,260,415, against \$12,466,433 last year; British Australasia, \$14,213,606, against \$16,197,092 last year; Brazil, \$12,694,163, against \$11,413,345 last year; Denmark, \$11,604,578, against \$9,627,047; British Africa, \$10,953,954, against \$12,216,080; Spain, \$10,193,809, against \$10,208,637, and China, \$9,036,727, against \$10,981,919 last year; while none of the other countries of the world reached the \$10,000,000 line in the eleven months whose record is now complete.

Our purchases abroad, as already indicated, are much less than those of last year, being for the eleven months \$563,

770,032, against \$679,547,391, and for the full year likely to be but a trifle in excess of \$600,000,000, against \$764,730,412 last year. This year our total exports will be practically double our imports, while last year they were less than 25 per cent. greater than our imports.

As above stated, one-half of our importations came from Europe. Our largest purchases during the year were from the United Kingdom, which, as already indicated, was our largest customer, our total purchases in the eleven months from the United Kingdom being \$101,454,480, against \$148,588,675 in the corresponding months of last year. The next largest purchases were from Germany, from which we bought in the eleven months \$61,916,809 worth of goods, against \$98,364,012 last year; Brazil next, from which we bought \$53,203,762, against \$64,695,383 last year; then France, \$49,480,413, against \$60,095,025; British North America, \$28,528,539, against \$34,757,841 last year; and during the eleven months of 1898 we bought \$24,164,842 from British India, \$23,180,892 from Japan, \$19,494,387 from China, \$18,209,368 from Italy, and \$16,142,491 from Mexico.

The following table gives our exports to and imports from the grand divisions of the world during the eleven months ending June 1, 1898:

	Imports.	Exports.
Europe.....	\$281,091,002	\$901,014,786
North America.....	81,287,474	127,125,929
South America.....	85,859,245	30,748,846
Asia.....	85,381,158	41,561,531
Oceania.....	23,365,132	19,979,555
Africa.....	6,786,017	16,097,959

Preparation of Land for Wheat in Ohio.

The good crop of wheat this year, and the better price than we have been accustomed to getting lately, when we had a good yield, will encourage the sowing of a wider area this fall. Unfortunately, too many think that the profit lies in getting out a large area, rather than a smaller number of acres sown on land having the best possible preparation. The tendency should be to put land in better order rather than to strive for a greater number of acres.

Then, too, the amount of work done on a small area at the wrong time would often, if done at the proper time, prepare a much wider breadth. In almost all cases there is too little working of land to secure a first-class seed-bed. If "tillage is manure," then the more work done on the land at the right time, up to a reasonable limit, and when the land is in proper condition, the better it is.

In the corn belt the practice is growing constantly to follow corn with wheat. By following this plan the wheat can be sown with less expense—the greatest objection being in the fact that sometimes the seeding cannot be done as early as it should be.

There is no doubt but that maximum crops can be had by sowing corn stubble, but the planning must be done for such crops in advance. The land must be brought up to a high state of fertility for the corn, and then the corn must have frequent and clean cultivation, the frequent cultivation putting it in condition to liberate abundant plant food when the young wheat plants demand it.

Then we also believe the corn should have level cultivation; this gives a better opportunity to get a proper seed bed of required depth.

Where corn land is to be seeded this fall, the farmer should take care to cut out all grass and weeds that have escaped the plow in cultivating the corn. They should be cut early, so that they will decay and not be in the way when the land is to be harrowed, or worked in some other way preparatory to seeding. In this, the southern central part of Ohio, nearly all the wheat seeding follows corn. Formerly the practice was to cut the corn twelve hills square; then, as the breadth of wheat sown after corn increased, the shocks were made larger, twelve by fourteen, then increased to fourteen hills square, now the almost universal practice.

If the stubs are cut low the field has a much neater appearance and the stubs are less in the way of successfully working the tools. If a corn harvester is used the farmer can control this, but if the corn is hired cut by the shock, hand work, this is not so easily done, as some cutters cut as near the ear as possible.

However, the stubs are not so much in the way as thought by some, if they are properly managed. Last fall they were twisted a good deal, making it ugly for the horses to follow the rows. With a light log roller, six feet long, by using a long double-tree and neck-yoke, we rolled down two rows at a time. If rolled directly after the corn was cut many of them broke off at the surface of the ground. The roller was followed with the disc harrow, straddling every row. This made two workings with the disc harrow. After the disc harrow we

used the drag harrow, lapping so as to make twice over the land. All these tools were worked in the same direction, and in lands the size that we wished to drill.

We make it a rule to drill in three shock row lands, finishing each time in the middle shock row. When drilled in lands, the finish is seldom just the required width to finish without lapping over, or leaving a little. The larger the lands drilled the less waste of time and grain by lapping.

When we have the land in the desired order, or as nearly so as possible by the use of the disc and drag harrows, we again run the roller over it to firm it, mash all clods and crush the soil loose from the stubs that have been worked out of the ground.

Uprooted stubs that have the soil clinging to them are very little in the way of the drill after the roller has passed over them. If not crushed in this way they often remain on the ground to be cut through with the mower the next year, when clipping the stubble, or even later, when a hay crop is to be cut. Without the last rolling it is sometimes difficult in driving the drill to tell the wheel mark from a hoe mark. In drilling corn stubble the drill hoes should be set zigzag; this allows the stubs to slip through without clogging. To make a nice job we drive the drill as nearly straight as possible, and to be able to give our entire attention to this we have some one follow the drill to keep the hoes clean. If there are any bunches of trash that will clog the hoes, they are scattered over the drilled land before the drill comes up to them. We make it a study to keep the hoes running unobstructed and at the same depth all the time. And we prefer to have this depth from one and one-half to two inches in loose soil, resting on well-packed, solid soil.—John M. Jamison, in Ohio Farmer.

Effect of Cultivation on Native Grasses.

By Prof. F. A. Waugh, Vermont Experiment Station.

The various native grasses are very differently affected by cultivation. Some do not do well at all and soon die out, others are but little affected either way, while still others respond very quickly and improve almost at once. This last class includes the most valuable of the native species, such as big blue-stem, Western wheat grass, wild rye and prairie June grass.

The effect of loosening up the soil is very apparent in a field which has "gone back" and seeded itself to wheat grass or blue-stem. In many parts of Nebraska and the Dakotas three tons or more of hay is often cut from such fields. The fine growth which most grasses make along the edges of cultivated fields is a sight familiar to all who have traveled over the Western prairies, and ought to be an object lesson to those to whom these same grasses are of so much importance.

The fact that cultivation improves the more desirable native grasses has been demonstrated by nearly every experiment station in the West and by a great many private parties as well.

An experiment made at the Kansas station in 1892 shows what a thorough stirring up of the soil will do for an upland prairie pasture. The experiment was made in a pasture in which the grasses had been dying out for some time and the weeds were beginning to appear in abundance. It had been reduced to this condition by drought and overpasturing. The surface was thoroughly loosened up by driving a weighted disc harrow over the field in several directions. The pasture was sown to a mixture of orchard grass, meadow fescue, blue grass, timothy, red top, clover and alfalfa, which was harrowed in and a roller was driven over the field to level the surface and firm the ground. The seed germinated quickly and the tame grasses made an excellent start, but by September the wild grasses had crowded them out and held complete possession of the field.

In this case the stirring of the soil and the season's rest not only enabled the prairie grasses to recover and overcome the weeds, but to crowd out a good stand of tame grasses as well.

This has been the experience in Nebraska and South Dakota where like attempts have been made to renew worn-out pastures. The tame grasses are undoubtedly valuable aids, since the harder of them will retain at least partial possession of portions of the pasture and add considerably to the forage obtained. Many of them, though they do not as a rule stand drought so well as the native species, start earlier in the spring or make a better growth in the fall, and thus lengthen the season during which the pasture may be used.

The continual trampling of the stock cannot help but pack the soil more or

FACTS ABOUT HEALTH

It is Easy to Keep Well if We Know How—Some of the Conditions Necessary to Perfect Health.

The importance of maintaining good health is easily understood, and it is really a simple matter if we take a correct view of the conditions required. In perfect health the stomach promptly digests food. The blood is employed to carry nourishment to the organs, nerves, muscles and tissues which need it. The first great essential for good health, therefore, is pure, rich blood. No medicine has such a record of cures as Hood's Sarsaparilla and it is because it is the one true blood purifier. Hundreds of people are alive and well today who would have been in their graves had they not taken Hood's Sarsaparilla. It is depended upon as a family medicine by thousands.

Hood's Pills are the only pills to take with Hood's Sarsaparilla.

less, and consequently prevent its proper aeration. This packed condition also keeps the water from gaining ready entrance and it runs off and is lost. This, too, when lack of moisture is perhaps the principal reason for the failure of the pasturage. The old grass roots become crowded out or are weakened through lack of available food and suitable soil in which to develop.

It is very readily seen, then, why the treatment which was given to the pasture at the Kansas station produced such excellent results. The tearing up of the soil gave ready access to air and moisture, putting new life into the roots of the grasses, which were cut up and separated by the disc harrow, so that thousands of new shoots sprang up immediately. The rest for one season gave these new plants time to get well established and form a new sod.

If this treatment is given before the pasture is too badly damaged, there is usually no need of sowing so much tame grass seed. There is little doubt that an occasional tearing up of this kind and a little care given to the time and manner of pasturing will get as much pasturage from the native grasses as can be obtained from tame varieties under the same conditions.

How About Artichokes?

Editor Kansas Farmer:—If any of your readers have had experience in raising and using artichokes for swine, I would be very glad to read of their methods and results, in the Farmer. It seems to me we do not know or hear as much about the artichoke for this purpose as is desirable. STUDENT.

There is more catarrh in this section of the country than all other diseases put together, and until the last few years was supposed to be incurable. For a great many years doctors pronounced it a local disease, and prescribed local remedies, and by constantly failing to cure with local treatment, pronounced it incurable. Science has proven catarrh to be a constitutional disease, and, therefore, requires constitutional treatment. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, Ohio, is the only constitutional cure on the market. It is taken internally in doses from ten drops to a teaspoonful. It acts directly on the blood and mucous surfaces of the system. They offer one hundred dollars for any case it fails to cure. Send for circulars and testimonials. Address, F. J. CHENEY & CO., Toledo, O. Sold by Druggists, 75c.

The Continental Limited

Is the name of the new fast train just put on the Wabash, running through to New York and Boston. The time is the fastest ever made by a high standard, wide vestibule limited train.

Sleeping car accommodations can be secured through to New York and Boston at the Wabash ticket office, northwest corner Ninth and Delaware street, or wire to HENRY N. GARLAND, Western Passenger Agent, Kansas City, Mo.

Chicago to New York—Quicker Time via Pennsylvania Short Lines.

Under schedule taking effect Sunday, June 26, train No. 20—the Keystone Express, a solid vestibule train of sleeping and dining cars and Pennsylvania standard coaches leaving Chicago Union station daily at 10:30 a. m. will arrive Twenty-third street station, New York city, 2:35 p. m., over one hour quicker than heretofore. For details address H. R. Dering, A. G. P. Agt., 248 South Clark St., Chicago.

The Stock Interest.

THOROUGHbred STOCK SALES.

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

AUGUST 24—Henry Comstock & Sons, Poland Chinas, Cheney, Kas.
AUGUST 18—H. W. Cheney, Clifton George, E. E. Axline and H. C. Sydnor, Poland-Chinas, Fough's sale barn, Kansas City.

FATTENING STEERS IN WINTER.

This paper is a condensation of the facts contained in Bulletin No. 58, Section 1, recently issued by the Animal Industry Department of the Minnesota University State farm. It relates to the fattening of steers reared upon the farm, and under circumstances most untoward so far as concerns the prices of meat, as steers were selling high at the commencement of the regular feeding season, but before it was over prices were unprecedentedly low. That any profit was possible under such circumstances was surprising. It could not possibly have been secured had it not been that prices of feed were away down also.

The feeding period commenced January 6, 1896, and ended June 4, thus covering a period of 150 days. The delay in entering upon the work was caused by the difficulty experienced in getting steers. It was the aim to feed three lots consisting of Galloway, Short-horn and Hereford grades. Though the first lot was secured as early as September 1, the last lot was not secured till January 1. The average of cost was \$3.70 per 100 pounds live weight, unshrunk, and the price for which they were sold when finished was \$4.10 per 100 pounds, shrunk weight. Those who understand about feeding cattle will know that, under these conditions, with feeds dear, there would have been much loss, but as it was, the experiment resulted in a small profit.

Those familiar with Western feeding know very well that in the open feed lot in the West it is customary to feed not less than twenty-five or thirty pounds of corn per day to one animal that is being fattened. But the animal is followed by a pig which would probably consume not less than five pounds per day. The quantity utilized by the cattle beast, therefore, if it were all digested, would be not less than twenty to twenty-five pounds. This to the writer has always seemed most wasteful feeding, and the experiment was undertaken with the object of getting some information regarding the amount of meal a cattle beast can utilize per day, with suitable adjuncts. It was thought wise to use steers of different grades in the experiment, although breed capabilities were not considered an important factor of the same.

The steers were placed in stalls, those of each grade standing side by side. The animals which stood at the right in each instance are spoken of as Lot 1. Those standing in the center are spoken of as Lot 2, and those standing at the left are spoken of as Lot 3. There was, therefore, one steer of each grade in each lot. The steers in Lot 1 were fed what is termed a light meal portion, those in Lot 2 an intermediate quantity, and those in Lot 3 a heavier meal portion. When put under experiment the steers in Lot 1 were fed five pounds of meal per head per day, those in Lot 2 seven pounds, and those in Lot 3 nine pounds. This was to be increased one pound per animal every four weeks, but for reasons not quite in consonance with the judgment of the writer, it was increased a little faster than that. On February 10 a pound of oil cake was added per animal per day to the other meal, and on March 16 a second pound was added. On May 11 the maximum amounts of meal fed had been reached. These were 10, 12 and 14 pounds respectively per animal per day.

The average amounts of meal fed per day per animal throughout the experiment were, for the steers in Lot 1, 8.58 pounds; for those in Lot 2, 10.48 pounds; and for those in Lot 3, 11.94 pounds. But it must be borne in mind that some corn was fed in the ensilage given as mentioned below, but probably not more than 2 or 3 pounds per day. The meal fed consisted of bran, oats, barley and corn, equal parts by weight, until March 16. It was then changed to bran, barley and corn, in the proportions of 1, 1 and 2 parts respectively. The fodder consisted of corn ensilage of somewhat less than medium quality, and native hay of a very inferior quality.

The food was charged at average market values in the State, which were very low at the time. These were as follows: Bran, \$6.50 per ton; oil cake, \$14; native hay, \$3; corn ensilage, \$1; oats, 14 cents per bushel; barley, 16 cents, and

corn, 18 cents. But the charges for grinding raised the oats to 16½ cents, the barley to 18½ cents, and the corn to 20½ cents per bushel. These prices, low as they are, are more in some instances than was actually paid for the food. Bran, for example, was bought at the Minneapolis mills for \$4.50 per ton, and in some remote parts of the State it was being used at the same time for fuel. Market values on the food, therefore, must have been dangerously near the line of the cost of production.

The average weights of the steers in the different lots when put under experiment were 1,037, 1,055 and 1,047 pounds respectively. The average weights at the close of the feeding period were 1,284, 1,314 and 1,277 pounds respectively. The maximum gain made by the steers in Lot 1 was 741 pounds; by the steers in Lot 2, 776 pounds, and by the steers in Lot 3, 692 pounds. The average daily gain made by the steers in Lot 1 was 1.65 pounds; by those in Lot 2, 1.72 pounds, and by those in Lot 3, 1.54 pounds. These were only moderate gains, but they are as much, probably, as may be looked for from feeding when the hay is inferior and for so long a period of feeding. In any event, the fact is significant, first, that the steers in Lot 1 made a net increase of 49 pounds more than those of Lot 3, although the latter were fed daily 3.36 pounds more meal per animal.

The food fed to the steers in Lot 1 cost \$2.49 less than that fed to those in Lot 2, and \$3.66 less than that fed to the steers of Lot 3. Had the prices of foods been normal, the contrast in the cost would have been much greater. The average daily cost of the food fed was 5.50 cents with the steers in Lot 1, 6.40 cents with those in Lot 2, and 6.66 cents with those in Lot 3. These figures contrast strangely with the cost of feeding steers in Ontario and certain of the Eastern States as detailed in bulletins in years gone by, when in some instances the daily ration fed cost from 18 to 21 cents. The average cost of making one pound of increase was 3.55 cents with the steers in Lot 1, 3.72 cents with the steers in Lot 2, and 4.37 cents with the steers in Lot 3. As the selling price was 4.10 per pound, each pound of increase made by the steers in Lots 1 and 2 was worth more than it cost to make it, notwithstanding the abnormally low price obtained for the meat.

The profit made on the steers of the respective lots without shrink being deducted was \$16.52, \$15.68 and \$10.97 respectively. Accounting for the shrink, it was reduced to \$10.21, \$9.20 and \$4.70 respectively.

The net profit per animal was \$2.68. Such an outcome under the conditions of sale and purchase was almost surprising. One lot of the steers, namely, Herefords, cost more per 100 pounds than they sold for. And the mean difference between the buying and the selling price was only 40 cents per 100 pounds. And had the steers been valued when the experiment began on the basis of shrunk weights, it would have been considerably less.

The profit was indeed small, but it must be remembered that it was an off year in feeding. Many of those engaged in it lost money. It is what is made in the average of years that counts, and that forms the basis of the profitable character or otherwise of a business. We will reach averages in due time. In the meantime the great point in the experiment is not to be lost sight of; that is to say, the fact, first, that the steers in Lot 1 made a higher average gain per day than the steers in Lot 3, although they were fed 3.36 pounds less meal daily while making it; and second, that because of this they made the said gain at an average cost of .82 cent per pound.

In the breed contest the Galloways stand first. The average weights of the Galloway, Short-horn and Hereford grades at the beginning of the experiment was 1,012, 1,114 and 987 pounds respectively. The average increase in weight per animal was 259, 240 and 238 pounds. The average cost of food was \$9.38, \$9.91 and \$9.06. The average cost of making 100 pounds of increase was \$3.62, \$4.18 and \$3.84. And the average net profit was \$9.52, \$6.62 and \$7.91.

THOS. SHAW.

University of Minnesota.

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Is the Swine Business Overdone?

By J. A. Meissner, of Reinbeck, Iowa, before 1898 meeting of Iowa Swine Breeders' Association.

If our business is overdone, we are on the road to ruin; if not, we are on the road to prosperity. The way I understand the word "overdone," it may mean raising too much pork, or raising too many thoroughbreds of the present quality and excellence. I will try to touch on both these topics.

Is there a man in this audience who can name any enterprising line of business, private or public, be it in the line of improved machinery, or of manufactured articles, where the greatest efficiency possible to attain has been reached? Perry's fleet in 1812 was undoubtedly considered magnificent. Naval science had been exhausted in its construction, yet a single shot from one of our modern battleships would have sunk the combined fleet of Perry and Barclay, if they had been placed in a line. Three or four men with Gatling guns would have indefinitely defied the millions of Persians in forcing the pass of Thermopylae.

The genius and science of man has not only been applied in one, but in every line. Mechanically speaking, the hog of fifty or seventy-five years ago was very crude; its engines were imperfect, wasting all but a small per cent. of its energy and fuel. Still, I have no doubt the razor-back of those days, though it required from two to three years to mature him, and he was almost as fleet as the swiftest horse, and could clear any rail fence constructed by man, was nevertheless pointed to with pride by his owner, who might justly be proud, for they were the best the times afforded.

The hog of to-day in form has almost reached the standard of perfection. Its machinery for converting corn into pork is of the latest design; the science of breeding knows none better. Can we raise more pork than the world is able to consume? I do not think we ever can. While our hogs were the lowest in price, there were plenty of our own people, and many more in foreign countries, who did not taste pork once a week. Increase your facilities for transportation and get the foreigner to lower his tariff, then you will not only extend and widen our market, but you will feed the millions in Europe, Asia and Africa who practically get along without the hog product. I do not think we ever could raise more than the demand would consume, but, supposing we could, which class of hogs would suffer first? Those with the best or those with the poorest machinery? Be it governments, corporations, merchants, farmers or hog-raisers, it is always a question of the survival of the fittest. Those equipped with the best machinery will drive the poorer from the field.

To suppose that the hog of to-day is no more perfect than the hog of seventy-five years ago is as inconsistent as to suppose that one of Perry's ships would be a match for one of modern design. Furthermore, such a statement throws a slur on the ability of hog breeders. It would mean that their work of the last seventy-five years was a waste of energy.

Hogs have been cheap; so has corn. Corn is the principal factor in the product called lard. Increase the price of corn and an increase in the price of lard will follow. Corn will be 50 cents a bushel again, and it may not be long. As soon as corn goes up, lard will follow, reaching its old-time price. It is possible the product from cotton seed will permanently depress the price of lard to some extent, but it will never drive it from the market.

When we feed less corn to our Poland-Chinas we will produce more lean meat. The well-bred hog will not only make more pounds of pork from a bushel of corn, but will also produce more from an acre of blue grass and clover. To stop and consider for one moment the advisability of going back to the rail-splitter type is absurd. We have passed the age of razor-backs and Tamworths. They are back numbers. We are in the era of improved breeds. I might compare these back numbers to the Spanish commodore with a fleet of ancient design. A few admirers of these breeds have within the last two years, on account of the low price of hog products, declared war on their more refined cousins of the improved breeds, accusing them of producing too much lard and not enough bacon, threatening to drive them from the field. The result of this war will be as disastrous to Mr. Rail-Splitter and his consort as the present war will be to Spain. The improvement in hog breeding has been scientific and is permanent; it will progress, not retrograde. The cheapness of hogs the last two years has led a few of our intelligent type of "I told you so" citizens

A Free Summer Excursion

to Lake or Mountains for every dairy farmer in America who has twenty or more cows. Sell four of the cows (the poorest ones). Use half the money received for a nice summer trip; with the other half buy a



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to cry: "You breeders are breeding too fine; you produce too much lard and not enough bacon. You will have to go back seventy-five years and try it over. Your improved breeds are out of date. We have just what you want; we possess the bacon hog in the rail-splitter and his consorts." Ah, my friend, we are living in an age of advancement; we take no backward steps. If you want more bacon, we have the ideal bacon hog in our Poland-Chinas, Berkshires and other improved breeds. If they produce too much lard, we will feed less corn, more grass, and produce all the bacon you want of a much nicer and sweeter quality than your hog of ancient design ever dreamed of.

What I have said of hogs is equally true of all lines of pure-bred stock.

DISCUSSION.

After the reading of this paper the following discussion took place:

Mr. Niles: Do I understand you to mean that you would change the type of our heavy breeds by feeding differently? Would you produce bacon by changing the type of the hog?

Mr. Meissner: Do you mean whether we would change the type of our hog?

Mr. Niles: By difference in the feeding would you change the type of the hog?

Mr. Meissner: Probably not change the type of the hog, but change our product by a different line of feeding.

Mr. Niles: Would that be more easy than to start with the other hog?

Mr. Meissner: I do not think we would want to start with the other hog and wait seventy-five years to get him. In breeding hogs we select those that respond most to the feeding. That has been the rule with all breeders, and if we start with the Arkansas hog, or some hog of that description, we would have to select those that respond to the feed, those that make the most pounds of pork from a bushel of corn, and discard all others, and in that way if we bred for 100 years we would probably get back to where we are now. We see it in horses; some horses will live on half the feed that it takes to keep others, and some hogs will make two pounds of pork on the same feed that another will make one pound on.

Mr. Cownie: I do not think it necessary to change either the feed or type of the hogs we have now. I have been shipping hogs to Chicago for the last thirty years and I have never yet seen the time when the American Tamworth would bring more money on the market than a Duroc, Poland-China or Berkshire. The fact is that last spring the heavy hogs commanded fancy prices. Every one who feeds or ships hogs knows that is a fact. We do not need to change either type or feed.

Mr. Lambing: Isn't that the position, Mr. Cownie, that you took twelve months ago? You told them then that before another meeting the present lard hog would bring the higher price, and before we would adapt ourselves to the bacon hog the heavy hog would have the advantage in price.

Mr. Cownie: That was my position and is yet, and those that change from the Poland-China or Chester White and go back to the Tamworth or to the Arkansas rooter will find their mistake in a very short time.

Mr. Lytle: Can you tell us the difference between the Tamworth and the Arkansas rooter?

Mr. Cownie: Well, they look a good deal alike.

Mr. Jones: There is a man up in Cass county that calls them "The Tamworthless hog."

Mr. Lambing: Prof. Curtiss has made an experiment of sending a lot of them to Europe, and he told me he was not going to send any more.

Mr. Hosick: Armour & Co. bought some Canada hogs to make bacon, and it has not been a success, either. They paid about \$1.50 a hundred extra for them.

WEEKLY WEATHER-CROP BULLETIN.

Weekly Weather-Crop Bulletin of the Kansas Weather Service, for week ending July 18, 1898, prepared by T. B. Jennings, Section Director:

GENERAL CONDITIONS.

A dry, cool week; a few light local showers in some of the southern, central and eastern counties. The nights have been cool and days pleasant, giving a fine week for harvesting, threshing, haying and plowing.

RESULTS.

EASTERN DIVISION.

A very favorable week for haying and threshing, and the hay is proving a fine crop in quality and quantity. Wheat and oats are nearly all stacked, with threshing in progress; yield poor in quality and quantity, except that oats are good in Doniphan. Flax harvest has begun, some threshings showing good yield and quality. Corn is tasseling and silking, and in south is earing; it has improved very much, but now needs rain. The apple crop is light; peaches a good crop; grapes abundant, but in Montgomery and Wyandotte they are rotting on the vines.

Allen county.—A fine week for haying; all crops need rain, as the soil is very hard. Anderson.—Favorable week, but now needing rain; threshing, haying and flax harvest in progress; yield of flax better than expected, wheat disappointing; corn doing well to date.

Atchison.—A fine week for farm work; corn growing; oats all harvested; grain stacking and haying in progress; flax looking well; early peaches ripe, wormy, and rotting badly; corn plowing not finished yet; threshing begun.

Bourbon.—Crops are growing moderately well, but are needing rain; flax about cut and a very good crop; early corn is doing fairly well, but the acreage is small.

Chase.—Harvest over; corn doing finely; haying in progress.

Chautauqua.—Threshing continues; plowing for fall seeding in progress; corn earing finely.

Cherokee.—Cool week; corn beginning to need rain; threshing progressing; yield and quality of wheat and oats not up to expectations; flax an average crop.

Coffey.—Haying and flax harvest in progress, both crops good; corn doing well, but needs rain, it is tasseling and silking; chinch bugs in some corn fields.

needed; corn improving rapidly; plums, peaches and apples in market.

Shawnee.—Corn doing finely, better than we dared to hope a month ago; wheat and oats stacking progressing in southern part, threshing in western part, yield fair; apples a light crop; grapes abundant; pastures fine and cattle doing well; chinch bugs from wheat and oat fields damaging corn.

Wilson.—Rain needed very much; corn silking and tasseling; some haying in progress; native grass very good.

Woodson.—Corn doing well, but needs rain; flax being cut, acreage small, yield good; a large crop of hay being secured; peaches ripe.

Wyandotte.—Fine week for work; corn growing rapidly, but beginning to need rain; wheat all stacked; grapes rotting badly; apple crop almost an entire failure; plowing for wheat begun.

MIDDLE DIVISION.

Harvest is about finished and threshing is in progress, the wheat yielding better in quality and quantity than in the eastern division. Corn is in good condition and growing fairly well, but is needing rain; in Harvey and central part of Ottawa it is suffering; it is tasseling and silking, is coming into roasting ear in Dickinson, with roasting ears on the market in the south. Apples light; peaches, grapes and apricots good.

Barber.—Wheat, rye and oats harvest completed; early corn needing rain; roasting ears on the market; feedstuff looking well and cattle in fine condition.

Barton.—Wheat harvest finished and threshing begun, yield fair; corn tasseling and silking; corn and forage plants need rain; plowing for wheat begun; second crop alfalfa is cut.

Cloud.—Good week for finishing harvest, stacking and threshing; corn is weedy, ground dry and hard; cool nights and still days have prevented material damage from drought.

Cowley.—Corn is doing nicely, but beginning to need rain.

Dickinson.—Early corn in roasting ear, late in tasseling, all looking well, but will need rain soon; ground getting very dry; wheat yielding better than expected during harvest.

Edwards.—Harvest about finished, stacking in progress; corn and grass still doing well.

Harper.—Very dry; rain needed to keep corn in growing condition; threshing in

fine for haying and harvesting; all crops look well.

Decatur.—Bright, dry, but cool week, fine for ripening late wheat and for harvesting; corn growing well and in good condition; grasshoppers injuring some late wheat, not seriously.

Finney.—Cool, dry week; cattle taking on flesh rapidly.

Ford.—Corn looks very well; second crop alfalfa being cut, hay is fine; cattle are in good condition; range grass fine; wheat turning out poorly.

Gray.—Forage crops look well, but begin to need rain; wheat harvest not completed; grains harvested fall below estimate in yield and quality.

Greely.—Dry week; crops holding their own; grass coloring; stock doing well; grasshoppers threatening corn.

Kearny.—Wheat harvest, nearing completion; second crop alfalfa being cut; rain is needed for late crops.

Logan.—Barley and rye harvest about ended, yield good in quality and quantity; late wheat harvest begins next week; corn, late not tasseling yet.

Morton.—Good week for growing crops; wheat harvest begun, yield is better than expected a month ago.

Ness.—A dry, cool week; harvesting nearing completion; early corn and the forage crops need rain; range grass cured; barley and rye good quality, but wheat is light; stock in fine condition.

Rawlins.—Cool; grain not ripening too rapidly; harvest progressing, yield not as large as expected; corn growing finely; grasshoppers causing some pieces of grain to be cut early.

Sherman.—Harvest in progress; wheat, barley, oats and rye fair, not as good as expected a month ago; corn growing finely, and most of it clean; forage crops looking well.

Thomas.—Rye, barley and oats nearly all harvested; wheat ripening slowly; harvest just begun; corn needing rain; grasshoppers destroyed the gardens, now injuring the corn; yield of oats and barley very good.

Wallace.—Fine growing week; barley, rye and a little wheat cut, very good; corn doing finely where clean; second crop of alfalfa ready to cut; range grass very fine; gardens fair; grasshoppers doing some damage; potato crop injured by bugs.

Wichita.—Wheat harvest begins next week; barley and rye harvest ended, quality good, quantity above the average; no report of rust or lodging in the wheat.

New Process Corn Meal.

The United States Department of Agriculture has for several years taken great interest in the creation of markets for Indian corn as an article of human food. In a bulletin just published the chemical division of the department discusses the subject in many of its aspects. The following is said of milling of maize and qualities of meal:

The flour made from Indian corn is known in this country usually as corn meal. There are many different methods of preparing it. The simplest, and one of the most prevalent until within a few years, consisted in grinding the kernels between stones and using the whole meal, coarsely sifted, thus produced. Very large quantities of corn meal prepared in this way are still used throughout all parts of the country, especially in the Southern States. It is evident that this meal would have nearly the same composition as the kernels from which it is prepared. A finer grade of Indian corn flour is produced by grinding as above indicated and bolting to remove a large portion of the bran.

The flour thus obtained differs only from that first described in having a smaller content of fiber and mineral matters, due to the removal of all or a portion of the bran by bolting. On account of the high percentage of oil in the germ of Indian corn, and by reason of its hygroscopic character, the flour thus prepared is apt to become rancid or moldy. To prevent this change and also to secure a more palatable grade of flour, the modern improved processes of grinding and preparing Indian corn have been introduced. Following is the description of the process of preparing the flour from Indian corn as practiced by one of the largest mills in this country.

The Indian corn is passed through a machine called a degerminator, which breaks the grain and loosens the germ, but does not separate it. The separation is made by means of bolting cloths and currents of air. After the germ and hull are removed the corn is ground between iron rolls properly corrugated. The meal is again submitted to the process of bolting and purification by currents of air and the refined product is the granular meal. The offal consists of the hull, germ, floury particles, and some of the flinty portion of the corn which is lost by the process not being sufficiently perfect to remove it and include it in the granular meal. The offal thus removed constitutes from 30 to 35 per cent. of the weight of the corn, depending upon the conditions of the grain. Artificial heat is used in this method of manufacture. It insures better results, and the meal will keep longer. This granular meal is not in favor in the Southern States. They prefer a soft meal, made in the old way.

Aside from the method of manufacture there are two distinct kinds of corn meal in the United States distinguished



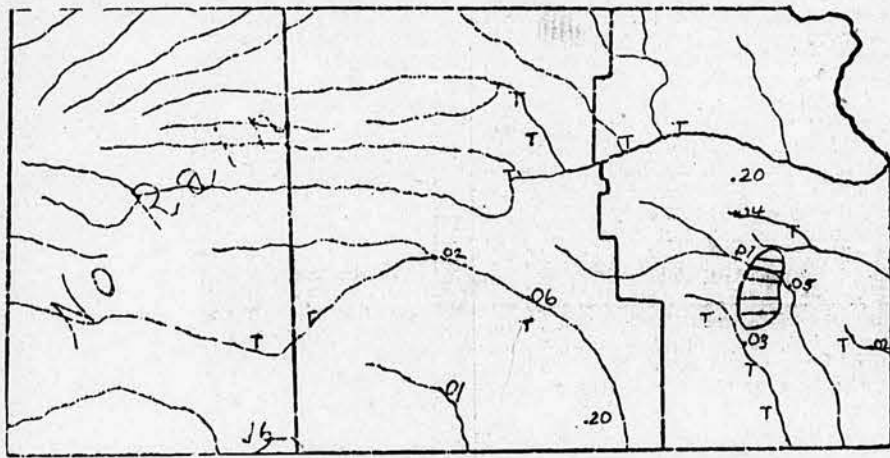
Of all the bereavements which are possible to a home, the loss of a child is perhaps the most disappointing, and the hardest to bear. During the heated spell in the summer in New York City as many as a thousand babies have died in a week. Of course, in a crowded city, with its unsanitary districts, many of these deaths would have occurred any way. The fact remains that this tremendous mortality was to a great extent due to the lack of inherent resisting power in the victims. These babies when born had in their bodies the seeds of disease. The deadly heated term only shortened the period of their sufferings.

If a woman wishes her babies to be healthy and strong and able to resist the usual ailments of childhood, she must take proper care of herself in a womanly way during the period of gestation. A woman who suffers from weakness and disease of the organs distinctly feminine is unfitted for wifehood and motherhood. Dr. Pierce's Favorite Prescription is a wonderful medicine for ailing women. It acts directly on the delicate and important organs concerned. It makes them well and strong. It allays inflammation, heals ulceration, soothes pain, stops exhausting drains and gives rest and tone to the tortured nerves. Thousands of women have testified to its almost miraculous merits. Many of them have permitted their names, addresses, experiences and photographs to be reproduced in Dr. Pierce's Common Sense Medical Adviser. This great book used to sell for \$1.50, now it is absolutely free. It tells all about the home-treatment of ordinary diseases. It contains 1008 pages, and over 300 illustrations. Several chapters are devoted to the diseases of women. For a paper-covered copy send 21 one-cent stamps, to cover cost of mailing only, to the World's Dispensary Medical Association, Buffalo, N. Y.; Cloth binding, 10 cents extra. "Favorite Prescription" can be obtained in any good medicine store.

by color, viz., the white and the yellow. White corn makes a flour which in color is quite like the flour made from wheat. On the other hand, yellow corn makes a flour of a rich yellow, which is highly prized in some quarters on account of imparting its color to the bread made therefrom. When prepared in the same way there is probably but little difference in the nutritive value and palatableness of these two varieties. In Europe, Indian corn is not considered fit for the manufacture of bread for the use of man. This prejudice seems quite baseless when we consider the very extensive use of this material for bread making in this country and the high nutritive properties which it possesses. With a diet of Indian corn bread and pork the workmen of this country are capable of enduring the greatest fatigue and performing the greatest amount of physical labor. The high nutritive value of Indian corn bread was well illustrated in a marked degree in the military service during the civil war between the States. Both experience and chemical analysis show that there is little, if any, difference between the nutritive properties of bread made from wheat and that from the whole Indian corn deprived only of the coarsest parts of the bran.

Lieutenant Colonel Andrew S. Rowan will tell, in the August number of McClure's Magazine, the story of the secret journey he made from Jamaica into and across Cuba, in order to learn from General Garcia what support and co-operation we were to expect from the Cuban insurgents in the war then just begun with Spain. Apart from the positive dangers that beset every step of it, it was a journey full of discomforts and difficulties, and General Miles pronounced Colonel Rowan's execution of it "an act of heroism and cool daring that has rarely been excelled in the annals of warfare." The article will be illustrated from sketches by the Cuban General, Enrique Collazo, who accompanied Rowan through the latter half of the journey.

WASATUSA.—Wedirect special attention to a large Kansas enterprise known as the A. B. Seelye Medicine Co., of Abilene, Kas. They are advertising as a leader Wasatusa, the great healer. It has already met with a large sale throughout the West and invariably gives satisfaction. This company also manufactures other proprietary remedies and extracts for household use. We are glad to note that there is such an institution in Kansas and trust that they will meet with a much greater success than heretofore.



ACTUAL RAINFALL FOR WEEK ENDING JULY 16, 1898.

Crawford.—Dry week, good for threshing, stacking and haying; ground getting dry for plowing.

Doniphan.—Wheat all in shock, poor quality, light yield; corn good color and doing finely; oats good, with few exceptions; hay good; potatoes a fair crop; apples a light crop.

Elk.—Rain badly needed for the corn and all late crops.

Franklin.—Haying progressing nicely, crop very good and heavy; corn growing well but uneven, some fields in silk and tassel, in others corn not knee high; very little threshing yet.

Greenwood.—Corn doing fairly well, but needing rain; some complaint of chinch bugs; gardens doing well yet.

Jackson.—Fine week for cultivation, corn improved and being laid by; chinch bugs damaging corn and millet in places; threshing in progress, yielding small crop of poor quality of wheat; apples poor; peaches fair.

Jefferson.—Fine week for farm work, but needing rain for corn now; flax ready to cut and a good crop; wheat a half crop; oats a failure; fruit prospect growing less every day.

Johnson.—Corn improving and nearly all laid by; favorable week for haying; wheat and oats harvest over, threshing begun, yield poor.

Labette.—Rain needed for corn and fall plowing; wheat and oats very poor and chaffy.

Leavenworth.—Wheat mostly in stack, threshing begun; corn cleaned and improving; haying begun, timothy good; oats very poor.

Lyon.—Good haying weather; corn doing well, growing slowly on account of cool weather.

Marshall.—Fine week for completing harvest and for tame haying, but too dry for corn and fruit.

Montgomery.—Cool, dry week, favorable for work; corn in fine condition, but chinch bugs more numerous than for several years past; hay crop good; fruit generally light crop; grapes rotting on vines.

Morris.—Too dry for corn; wheat mostly in stack; flax good crop.

Osage.—Rain badly needed; corn not doing very well; chinch bugs doing considerable damage in some portions to corn and sorghum; most of the corn laid by; oats poor yield; hay very good, some on market; Early Harvest apples on market; grapes doing well; stock water getting low.

Pottawatomie.—Fine week for haying; corn in silk; blackberries plenty; threshing begun, wheat very poor.

Riley.—Temperature 5 degrees below normal, rainfall none, normal being 0.84; rain

progress, yield light and quality poor, especially soft wheat.

Harvey.—Harvest is completed, some threshing, yield poor; corn suffering badly for rain and from chinch bugs.

Mitchell.—Clear, cool week; no vegetation seems to have suffered yet; need rain now.

Ottawa.—Fine weather for threshing and stacking, wheat yield fair; corn looks well except in central part, where some is past help from rain for grain, and where pastures are drying up and ponds lower than for ten years; in the southwestern and northeastern parts corn is in much better condition.

Phillips.—Corn in fine condition and being cleaned with hoes; harvest over, wheat being stacked; grasshoppers bad in places.

Reno.—Wheat stacking and threshing in progress, yield fair; corn earing, looks well but needs rain; cane and Kaffir growing finely; second early peaches beginning to ripen, moderate crop; everything needs rain.

Rush.—Wheat harvest nearing completion; late wheat light crop and berry shriveled; corn needs rain; all forage crops good.

Russell.—Wheat harvested, threshing begun, quality and quantity fair; corn beginning to tassel, and needs rain, though not hurt yet.

Saline.—Corn making fair growth; apple crop nearly a failure; peaches and grapes good; early potatoes fair crop.

Sedgwick.—A fine hay crop; cherries, peaches and berries good yield; corn is silking and tasseling and needs rain; wheat light yield, poor quality.

Stafford.—Harvest about finished, threshing begun, wheat yielding fair, quality good; corn tasseling and looks fine; feed of all kinds good; plowing for wheat begun.

Sumner.—Corn in good condition, in silk, needs rain; plowing for wheat begun; threshing in progress, yield fair.

Washington.—Corn tasseling and shooting, needs rain; threshing progressing, wheat shrunken, light yield; hay good; peaches fair; grapes good; apricots ripening; oats very light.

WESTERN DIVISION.

Barley, rye and oats harvest completed, showing a good yield in quality and quantity. Wheat harvest is progressing in the southern counties, beginning in the northern; the yield is below expectations. Corn and forage crops are doing well, but need rain. The second crop of alfalfa is being cut in the southern counties and is ready to cut in the northern. Grasshoppers are causing some damage in the northern counties.

Clark.—Good, cool, growing weather and

Sheep Department.

Conducted by J. CLARENCE NORTON, Moran, Kas., to whom all letters should be addressed.

Sheep Talk.

B. C. Lucky, of Golden, Kas., writes an interesting letter. Among other things, he says that he is coming east in a wagon and shall make it a point to call on all the sheepmen he can. As he will be looking for breeding stock, sheepmen will give him a warm welcome. He says he raised 715 lambs this season and they are doing well. His sheep wintered on the range without any feed save the range grass, and the abundant rains has made the buffalo grass extra fine this summer, and his sheep are in excellent condition. He shears his own sheep and averages fifty to sixty a day, and does his chores. He is certainly a smart shearer.

He asks for the prices of rams. I presume all those who have rams to sell will soon send in their advertisements, as the active shepherd must soon look around for his supply. This reminds me that sheep are very high in the market and flock-masters will soon be shipping to market their surplus stock, and all those who wish to stock up should be looking around. A sixty-pound ewe lamb will bring \$3.84, while a 150-pound

the Kansas Farmer whether sheep can be fattened on Kaffir (grain and fodder), and if so, what is the best way of feeding it?" I must ask other sheepmen to answer this question, which I regard as one of the most important ever asked. I have never fed Kaffir corn, but I shall give it a trial this winter. It seems to me to be the ideal feed for sheep, as they will chew up and wholly digest the round grain without any loss, while it must be ground for cattle, else a great waste occurs. Ground Kaffir corn has proven to be a splendid fattening feed for all kinds of other stock, and by the same rule it should be so for sheep. Every one I have talked with admits that Kaffir fodder is most excellent if fed before Christmas, but after that time it becomes hard and woody and stock will not eat it so well, but at this late period will eat corn fodder well.

Sheep droppings are said to be richer in plant food even than chicken manure.

Minnesota's State fair this year will open September 5, at St. Paul. A liberal list of premiums for sheep is offered.

Some breeders claim that raising a lamb reduces the mother's growth of wool about 20 per cent. for the season.

Keep the sheep growing and healthy all the time. If they slack up in growth once they will never do as well afterward.

Station indicate that lambs fed on corn and other fattening feed will not increase in weight so rapidly as lambs fed on protein.

Many inquiries came in asking how to make sheep dip. Don't make it. Buy it ready made. It is cheaper and much more satisfactory. The best dips are advertised in our columns.

The Boy in Blue.

Under the trees of beautiful Golden Gate park; characteristic of your unique energy, I watched the future conquerors of Spain going through the complicated movements of company drill. To me, as an Englishman, there was something particularly refreshing in the easy gait, the alertness and surprising good nature with which these lads, recruits of only a few weeks' standing, performed the intricate evolutions. I passed and re-passed the squads and companies which are, in reality, but raw material, and wondered, as the world is wondering, at this display of single-souled patriotism—the life strings of a nation's heart—for what? Not in retaliation for a diplomatic blunder of an underling of Spain nor yet in revenge for the dastardly act that engulfed the Maine and her gallant crew in the waters of Havana harbor. No; but as a great and generous nation's response to the far-off despairing cry of a down-trodden peo-

destroyed none of my happiest opinions. There may have been a boyish enthusiasm of the glory and panoply of war, a love of adventure, but underlying it all, deep and strong, the true nature of a real man was apparent, firm in purpose and indomitability of will.

So we shook hands and parted; he going his way, I mine. I watched him long and earnestly as he threaded his way through the throngs of people campward, six feet of stalwart manhood, sound of limbs, upright in bearing, clean in thought, cherishing above aught else the flag which his national courage and strong arm will uphold always. Happy the nation that produces such a son, and happy the son that fights for such a flag.

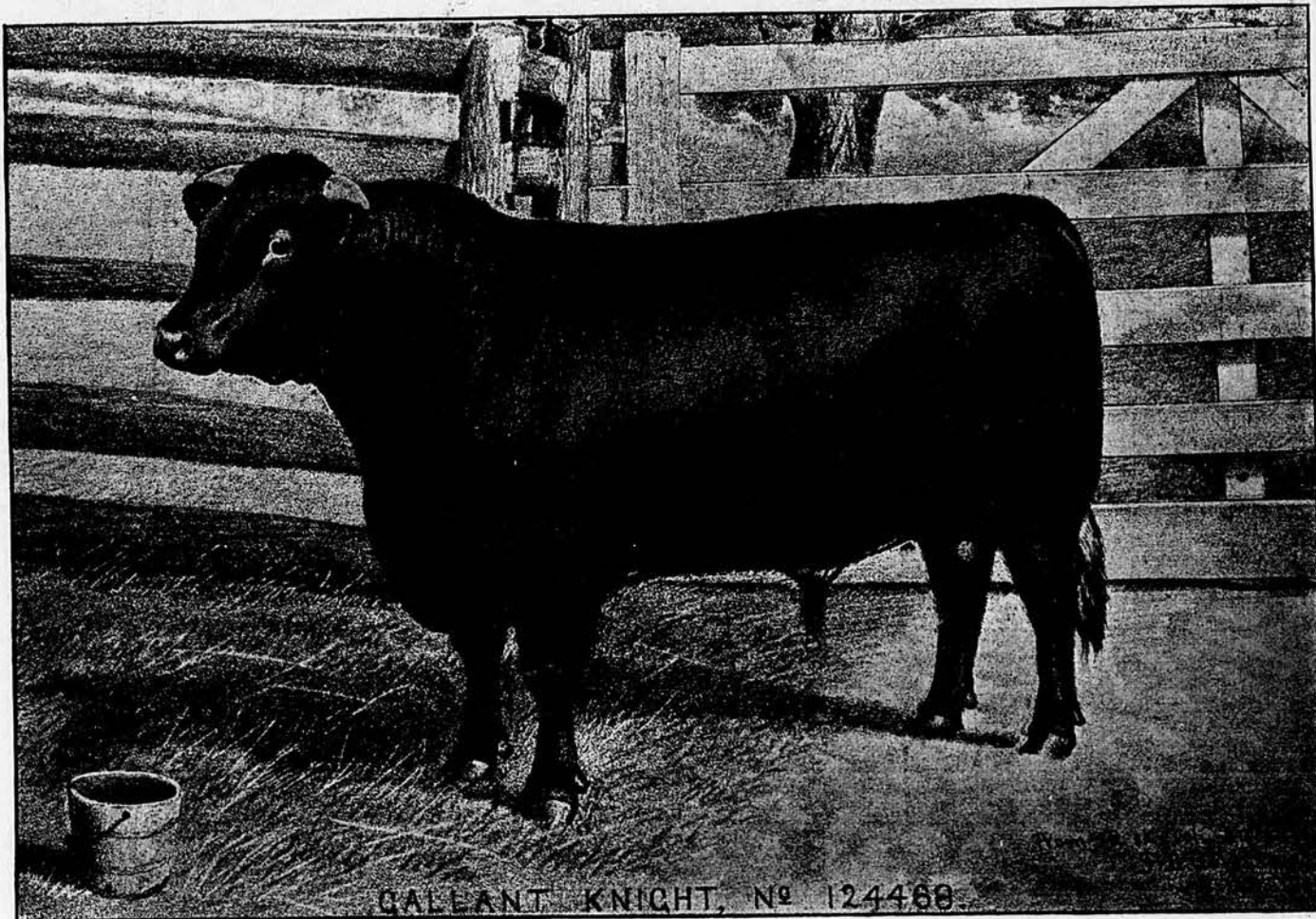
Good-by, then, my "boy in blue." We'll meet never again, but I'll cherish ever this slight memory of you and when shouts of joy go up from a people's heart for a victory gained, or a nation's pride rejoices in brave deeds accomplished, I'll remember an afternoon in the Golden West and you.

"To keep his flag a flying he's a doing and a dying;
Every inch of him a soldier and a man."

—N., in San Francisco Call.

Answers to Correspondents.

Family Doctor:—Will you kindly tell me if there is any wash that can be applied with safety to the scalp to kill lice



Herd Bull at Elder Lawn Farm, Owned by T. K. Tomson & Sons, Dover, Shawnee County, Kansas.

ewe will bring \$7.50, and all the quality they need is to be fat. Now, if you want a few choice lambs you must expect to pay about \$5 each, while good three or four-year-old Shropshire ewes of 150 pounds are worth \$8 to \$10 each.

For many years I have been convinced that in the near future the farmer would be obliged to cut up all his corn fodder, and in order to get it eaten up clean it must be cut up and reduced to small particles. As I said before, this question was raised at Topeka last winter at the annual Live Stock Breeders' meeting, but has not yet been answered. I am trying to get in shape to test it. I have ordered a machine made for me that will reduce corn fodder to a coarse meal and at the same time take out and thoroughly clean the shelled corn so it can be fed separately, if necessary. I hope to receive this machine by the time corn fodder is cut, and I will faithfully report the results. About ten tons a day can be run through at a very small cost after the first cost of machinery, which is rather expensive, as the power and machine are both first-class.

Frank Dibert, of Dibert & Hinich, who run a 1,440-acre live stock farm near Eureka, Greenwood county, Kansas, writes as follows: "Greenwood county is growing a large crop of Kaffir corn to feed to cattle. There is a large waste in feeding Kaffir to cattle. Would it not be more economical and possibly bring good results to feed Kaffir to sheep? We would like to learn through

Some Montana flock owners claim that 1893 will show the best clip since 1892. North Dakota also reports an extra fine clip.

They wash sheep in Australia by dipping them in a tank of hot water, though washing is rapidly becoming a thing of the past.

Don't figure to keep the Dorsets with little outlay, but keep stuffing them all the time (except the breeding pens) with all they will eat.

There are 200,000 sheep grazing on the Pecos timber reservation in New Mexico. Some of the cattlemen are beginning to object.

Shetland sheep, which grow a remarkably fine, soft quality of wool, are not sheared. The wool is plucked out by hand in the spring.

Sheep raising is again becoming one of the most important agricultural pursuits in the United States. The interest in it is extending rapidly.

Sheep always gnaw the bark of a fruit tree from the ground up. Protect close to the ground with lime or manure and they will not disturb the tree.

South African Angora goat breeders have started a register. These animals deserve more attention from flock-masters than they receive in this country.

South Dakota sheepmen are happy this summer. Their profits from wool will be double what they were last year, and the range is in splendid condition.

Experiments at Cornell Agricultural

ple, gripped in the iron hand of a tyrant who grips to the death.

Such thoughts as these filled me as I left the sunlit terraces to where inviting shade promised rest and reflection. I came across one of "our boys," an affectionate cognomen which has more of honest love than any other title his merit has gained him. Let it always be so, "Our Boys." It savors so much of a mother's love, a father's pride.

Whether from ranch or workshop, office stool or college hall, to me it mattered not. The man of the hour was before me; let that suffice. He has become a personality, of which every detail is known, every action noted, and it appears presumption in me to endeavor to make a faint sketch of the man which the whole of America, ay! and for that the Anglo-Saxon race speaks of with pride and dubs in admiration "The Boy in Blue." He had watched me crossing the green sward and I opine naturally understood my motive, and consequently we met as strangers do in like circumstances, with a shy nervousness of each other. He had taken off his felt hat, identical with that worn by the troopers in Australia and South Africa, and arranged the narrow slip that does duty as a band which truthfully needed no arranging, while I found a sulphur match is not one of the best means of lighting a cigarette. But soon our mutual reserve wore off and we talked long and earnestly of many things. It is not meet I set down here of what our conversation consisted, except to say he

and their eggs, where a child has unfortunately become infested? Or is the persistent use of the fine-comb the only remedy? An answer in the Kansas Farmer will oblige. A MOTHER.

Answer.—The sure remedy is the fine-toothed comb, persistently applied. That will soon end the matter, if the source of supply is cut off. But if some of your neighbors are engaged in the louse business and keep rubbing their heads against yours, then you may have an all summer's job. As to a lotion, about the best thing is to rub the scalp thoroughly with an ointment of a teaspoonful of sulphur to a half teacup of fresh lard, and, after an hour, wash it off clean with soap and warm water. One application may suffice, but two may possibly be needed.

Ticks! Lice! Fleas! Screw Worm!

CANOLINE (antiseptic and disinfectant) prevents all contagious diseases by destroying all bacilli, microbes, disease germs, foul odors and gases. It will kill ticks, lice, fleas, screw worms, bed bugs, ants, all insects and vermin; cure scab, foot-rot, sores, galls, bites and stings; keep off flies, gnats and mosquitoes. It is non-poisonous. Cheapest and best on earth. One bottle will make twenty or more ready for use. Twenty-five and 50 cents per bottle; or in gallon lots by all dealers; or the Cannon Chemical Co., St. Louis, Mo. Take no substitute.

The Home Circle.

THE WILLOW STREAM.

A wondrous wealth of flower and fern,
Sequestered nooks at every turn,
And pools with tiny caves and dens
Enfolding timid citizens;
A stream from out whose ports of gloom
Float argosies of lotus bloom,
And arched with trees whose branches
Drop melodies adown the tide—
The tuneful branches whereupon
Were hung the harps of Babylon!
To-day these willow boughs are hung
With instruments more deftly strung—
The fairy viol, lyre and lute,
The elfin horn and fife and flute,
And sweeter still the pipes of Pan,
Soft-pressed by lips Aeolian—
An orchestra that seems to be
In league with gay Terpsichore,
To which the leaves all afternoon
Are dancing reel and rigadon.
Beside the willow-bowered stream
How soon came dusk and dew and dream!
Through interwoven shine and shade
I hear a night bird's serenade,
A note falls on a ripple's breast
So gently soothing it to rest;
And lo, the Lady Moon in white
Draws back the curtain of the night,
And with a kiss awakes a star—
How still the stream and willows are!
—Clarence Army, in Munsey's.

Written for Kansas Farmer.

REFORMED.

Corn plowing was being pushed on the best farm in Illinois, or as such its owner estimated it. At any rate, Miles and Cary Henderson, the sons of the owner, were doing the "pushing" and loyally seconding their father's efforts to get the crop ahead of probable dry August weather, also "cleaner" than that on the surrounding farms. It was now hot July weather, and as Miles remarked, they were literally "earning their bread in the sweat of their faces." Not only faces, but cotton shirts and hat crowns were wet with perspiration; then, the chance breezes through the thickening corn blades had powdered them all over with fine black dust. They emerged into an opening in the eighty-acre corn field nearly at the same time. Harlow Durgin, the new hired man from Kansas, could be heard hurrying his team toward the same spot. The attraction was a well in a "draw," where a stream ran in wet weather, and where a thrifty clump of willows had sprung up and grown since the prairie had been reclaimed from fires.

"I wouldn't swap this well, to-day, 'for an interest in a goose pasture,'" remarked Cary, making a dash for the first drink, after having lifted the lines forward over his head. Miles unharassed himself more leisurely, and turned to look in the direction from which the new man's urgent remarks to his team were coming. There was a tramping and rustling in the corn a little farther to the right. Cary's impatient exclamation recalled him to the well.

"Where's the drinking cup gone? I hung it right here, and I know it. Who's been here since our last round? Not Durgin, I know, for here he comes now. It's that little imp, Dan Craft, I'll bet!" Miles warmed to the subject more slowly: "Well, you hold your hands to the spout and I'll pump till you get a drink. I wish we could keep a cup here; I wish we could just catch him at his tricks, but he's too sharp." Then as a young man came in sight and threw off his lines and dropped his whip, Miles asked: "Did you see a boy in or near the field this afternoon? The cup's gone."

"Yes, I saw a boy of about 10 or 12 run through the corn just as I finished this round. Didn't you see him?"

"You're mighty right we didn't see him; he took care of that," answered Cary, with raised voice and angry eyes. "He knows better than to let anybody catch him at his tricks. I licked him once." And Cary's face relaxed into a smile of agreeable recollection. "I would like to do so again. This is the third drinking cup he has thrown away; you'll find them sown around among the corn—the third this summer."

"Of course, cups don't cost much," began Miles, apologetically; "but if it isn't cups, it's something else, eternally. Last winter he threw away one of my skates, and it was found accidentally where I hadn't been. Oh, yes, we knew no one else around was mean enough, and, besides, he was seen at the barn where I put the skates. Come, pump for me, Cary. Oh! this beats plowing in the hot sun. Take another drink, Durgin."

Durgin "soused" his head and face, took another drink, and asked, "What sort of a man is his father?"

"Dan Craft's father? A good man, a church member, pretty good neighbor; never heard anything against him. They say Dan's mother pets him too much for his good. He doesn't love to work any too well, either. Oh, his father whips him when he gets to amusing himself by

sawing off plow handles and breaking up things generally about home."

Cary laughed again: "Everybody likes to see him pounded."

"Still, 'pounding' doesn't seem to do him the most good in the world," mused Harlow, readjusting the red handkerchief around his neck, worn as protection from the blistering sun rays.

"He needed worse when he unspinned one of the lines on a pair of skittish colts father had been driving. The colts were hitched to Mr. Craft's fence, and when they were started again—well, there didn't anything happen, but there might have been some accident easily enough. You needn't smile; of course I know we can't prove anything, and that's just the trouble," complained Cary.

"I knew a boy just like him in Kansas," remarked Harlow, still smiling; "but this other boy reformed."

Cary arose from the edge of the horse trough where he had seated himself to empty his shoes of the dirt accumulated during his afternoon's work.

"How about it?" he asked.

"Maybe there's some hope for Dan, but I don't believe it," remarked Miles, turning toward the pump for another drink, or to make more time for a possible story.

Harlow walked toward his waiting cultivator.

"Let the horses rest a little longer," exclaimed Cary, authoritatively; "it's awful hot, and father won't care."

Harlow paused and smiled again. It's not much of a story; but I did know another such boy who was up to all sorts of mischief that no one could catch him at. His mother said he was merely mischievous, and his father scolded and sometimes whipped him when he found him out; but none of the neighbors felt like reporting him—I guess they thought it would be small business. They all dreaded to see him coming, and knew he had perpetrated some meanness when he would finally take himself off, though every one watched out for it, too, and couldn't catch him at it. Well, it grew worse as he grew older. When he got to be 13 years old everybody prophesied that if he escaped the reform school he would see the inside of the 'pen'—if he wasn't hung."

"Just the same way with Dan," murmured Cary, appreciatively.

"But what reformed him?" demanded Miles, with his eyes upon the resting teams.

"Well, he grew bolder, for one thing, and circumstances began to point toward him more exactly," answered Harlow, meditatively. "Two things which happened to him worked more good than anything else, as far as I can tell."

"His father lived next to a man with two sons about like you two boys, and they had suffered in silence for a long time, till old man Jenkins thought that patience and silence had ceased to be virtues. One Monday morning in spring Jenkins went out with his team to hitch to his plow; he found the plow dragged into a big mud hole, the whistle-trees scattered broadcast, the clevises most anywhere, and he knew that this boy had been spending his Sunday for his own amusement instead of going to Sunday school. Jenkins was mad—not especially about the Sunday school part, though, and started right across the field to the premises of the other man, and when he had found him invited him across the wire fence to a conference.

"Well," resumed Harlow, after another meditative pause, "the outcome, then, was a good-sized thrashing, and afterward a series of lessons upon good, moral conduct generally. The lessons were well timed and appropriate. If I remember right, one was in the shape of solitary confinement accompanied by bread and water. Probably his father wished to show him how hard the way of the transgressor was likely to become. I believe the father showed a good many symptoms of sorrow at a disposition he hadn't seemed to know much about before. I believe the mother joined in the reformatory work, and, altogether, I have an idea that this boy would eventually have become respectable without another lesson from another source, just about the same time."

Harlow sat down under a willow and fauned himself with his straw hat, while Cary carefully buckled his shoes, meantime keeping watch of the narrator. Miles stood ready to proceed with his work when the end of the story should come, first satisfying himself that the sun was as yet really too high to make immediate action necessary.

"This boy had plenty to eat at home, and took plenty to school for lunch; but he couldn't resist the fun he extracted from stealing the dinners out of the others' buckets. It was too funny to see the little ones look chop-fallen when they missed their slice of cake and big-

**Which do
You
wear most**



your thinking cap or your working cap? The woman who studies to save herself labor and expense—who strives to have her house look best at all times finds nothing so helpful as

**GOLD
DUST**

Washing Powder

Best for cleaning everything.
Largest package—greatest economy.

The N. K. Fairbank Company,
Chicago, St. Louis, New York,
Boston, Philadelphia.



gest apple, and especially funny to know the big ones were mad, yet didn't feel sure enough to accuse him of the theft.

"But it's strange; he wanted to be thought well of all this time—he really had a love of approbation in his make-up. There was one girl who went to school whose dinners he never touched, and they were the nicest in the school, too. She was a good deal older than he; but the truth is, he was 'sweet' on her—did everything to gain her good will, except to behave himself—followed her around like a puppy, hunted her pencils for her while he stole the knives and pencils from the other scholars, brought her flowers—she must have been disgusted! Strange he didn't realize that she knew what a confounded little sneak he was; but he must have been a stupid little beggar, else he wouldn't have been so mean in the first place; though he wasn't at all stupid in his studies, either."

"Well, the natural end came at last. There was a box social in the school house. (In Kansas everything was taken to the school house, from a revival meeting to a show.) Each girl filled a box—of the shoe variety, usually—with the best lunch she could get up, and put her name inside."

"I know," interrupted Miles, uneasily.

"That's about all," said Harlow, rising and covering his head, "only there was a young man who was acting as master of ceremonies who was particularly obnoxious to this boy, and when he drew a box and set it one side till his duties should be over and he could open it, this little sneak sneaked it and ran off with it away out of the school yard and ate the contents. Then he thought to look for the name, struck a match, and read it. It was the name of the very girl whose food hitherto he had never tasted. There was only one consolation, and that was small under the circumstances: The rightful owner of the lunch he had eaten had drawn the very box he would have chosen had he known whose it was, and he was so big feeling, so condescending to this younger boy, it was really good enough for him. But now what to do with the box! His first impulse was to burn it; but there were napkins and silver spoons which he had not devoured and which he could not bring himself to dispose of; besides, he had not been particularly careful to avoid detection by anybody but the big feeling fellow, and anybody else in the room might have seen him carry the box away. In fact, to shorten my long story, everybody knew all about the transaction before the evening was past, pretty girl and all. Everybody knew that I was the thief—those who saw me run with the box and those who didn't."

There was profound silence. Then one of the listening boys said softly, "You?" The other boy said afterward that he thought all the time that Durgin knew too much about that boy; but now he only said: "Then what happened?"

Harlow moved off towards his rested team and stood with his hands on the cultivator handles. "The most I can remember of what happened is that that girl used to look amused every time I caught her eye—not that I looked her square in the face, again, for a long time. But somehow I seemed all shaken up by that occurrence, so that my better nature came out on top. I really got into the habit of behaving myself so well that my self-respect began to grow; then other people began to respect and trust me. If something of that kind could happen to this Dan it might be the making of him—if he could apply the lesson in the right way. My father's methods helped me there."

"Well, go along, Kit—Molly!"

"But that girl! Did she marry that other fellow?" asked Cary, eagerly.

"No, nor me either; but she's been married these eight years, just the same. 'Get up! Molly—Kit!'"

PHOEBE PARMELEE.

Home Working Gowns.

On this subject a young lady writes in the Rural New-Yorker:

"These days of bicycling and outing suits see the stores offering cotton fabrics in medium and dark colors, and of considerable body, which wear longer and preserve their shape better than do the percales and seersuckers one chooses for every-day shirt waists. Denim in dark gray, olive, navy or red, cut in well-fitted, gored style, with a three-inch space of gathers at the back, and neatly finished at the foot, with a wide facing cut to fit, gives a well-hanging skirt, becoming and very serviceable. It launders well, but need not go to the wash nearly so often as lighter fabrics, especially those showing white in the stripes or plaids; indeed, unless the cook has an incurable habit of slopping and splashing, there need be no excuse for soiling such a skirt until several blouses have borne it company."

"Laundry work is thus materially lessened, and the housekeeper finds herself sufficiently well appared to take the unexpected drive to the village or station by merely laying aside her apron and donning cape or jacket. These cotton goods may lose their color in time, but hold it as long as ginghams or prints, and make durable linings, etc., when past other service."

"Two hooks at the back of the belt to suspend the weight from corresponding eyes or rings on the blouse are precautions that should never be omitted. If the weight still seems burdensome, wear a thinner petticoat, or even a pair of knickerbockers, which latter add no perceptible burden to the form."

"Although the dress worn by the trained nurse is certainly very tidy and invariably becoming, the expense of buying, making and laundering so many work gowns, even if all done by one's own hands, must prove a considerable tax where one would prefer many other things more enjoyable. The nurse is, when in uniform, attired for service; when work ends she assumes with relief a pretty house or street costume. Should not the house mother regard the eyes of her family enough to wear the pretty clothes of leisure whenever her duties will permit? Why go always swathed in aprons? Nothing soils more quickly than white aprons, and, though they have their occasions of use, I can see nothing desirable about them for habitual afternoon wear. The big work apron hanging always ready behind the kitchen door can be put on in a half second, and as quickly laid aside. Why wear a large apron, except when busy with work requiring complete protection? Smaller black saten aprons are tidy and inconspicuous, and sawor less of the kitchen."

"To some busy housewives it may seem as though the hour for laying aside working attire never came, but there are few who could not rest the eyes of their children by wearing something more attractive a part of the time. It is not good for husband and children to settle to the belief that 'mother's' sphere is always to be a drudge."

Free to all Women.

I have learned of a very simple home treatment which will readily cure all female disorders. It is Nature's own remedy and I will gladly send it free to every suffering woman. Address Mabel E. Rush, Joliet, Ill.

Cool and comfortable dining cars on Santa Fe Route are obtained by use of electric fans.

The Young Folks.

THE BURIAL OF GINGER JAMES.

A spell I had to wait
Outside the barrick gate,
For Ginger James was passin' out as I
was passin' in;
'E was only a recruit,
But I give 'im the salute,
For I'll never git another chance of givin'
it agin!

'E'd little brains, I'll swear,
Beneath 'is ginger 'air,
'Is personal attractions, well, they wasn't
very large;
'E was first in every mill,
An' a foul-mouthed cur, but still
We'll forgive 'im all 'is drawbacks—'e 'as
taken 'is discharge.

'E once got fourteen days,
For drunken, idle ways,
An' the colonel said the nasty things that
colonels sometimes say;
'E called 'im to 'is face
The regiment's disgrace—
But the colonel took 'is 'at off when 'e
passed 'im by to-day.

For days 'e used to dwell
Inside a guard-room cell,
Where they put the darbies on 'im for a
'owlin' savage brute;
But as by the guard 'e went
They gave 'im the present,
The little bugler sounded off the "General
Salute."

The band turned out to play
Poor Ginger James away;
'Is captain and 'is company came down to
see 'im off;
An' thirteen file an' rank,
With three rounds each of blank;
An' 'e rode down in a carriage, like a
bloomin' city toff!

'E doesn't want no pass,
'E's journeying first-class;
'Is trav'lin' rug's a union jack, which isn't
bad at all;
The tune the drummers play,
It ain't so very gay,
But a rather slow selection from a piece
that's known as "Saul."
—Edgar Wallace, in London Chronicle.

Written for Kansas Farmer.

YOUNG FOLKS IN THE OLD COUNTRY.

BY ANNA MARIE NELLIS.

NUMBER 30.

WE GO TO CHURCH.

We had intended to get an early start on Saturday afternoon, June 11, so as to be on hand when the church service began, for we had a matter of 160 miles to travel to get there; but several obstacles prevented, and we did not really commence the journey until 4 o'clock the next morning. We took our bicycles with us, as we felt certain we would be away at least two weeks. Daylight was beginning to show itself when we rode from 12 Kliest street, in Berlin, to the depot, where we were to take the train for Hildesheim to attend church. One hundred pfennigs (1 mark) was a sufficient gratuity for the guard (conductor) to give us a separate compartment for our little company of four. Our wheels with our other luggage were safely stored in the baggage car. After riding until 7 o'clock we had to "change cars" at a station whose name I do not remember. There were 200 people and a like number of dogs who reside there, and the whole "400" were at the depot to see the train come in. We admired the folks and the folks admired us, and then we mounted our wheels and had a ride for exercise while waiting nearly an hour for the train we wanted. Again aboard the cars we rode till 12 o'clock before we reached Hildesheim, which lies eighteen miles southeast of Hanover. We knew we would be late for church, but concluded to attend several to compensate for our lack of promptness; we attended eight different ones in the course of the afternoon. First we went to "St. Andrews," a Lutheran church, which is a fine building and has two lofty towers; we next visited "St. Godehards," and then "St. Michaels," both Catholic churches, and the eighth was the largest and finest of all—that was "The Dom," or cathedral. This ancient building occupies the site of one which was founded by "Louis the Pious" 1,080 years ago this summer, but the present edifice was erected only 888 years ago. It is Romanesque in style of architecture, for it was built by people from the banks of the Tiber.

The Cantabana—the big bell of the cathedral—began to ring as we entered. I don't suppose it rang because of our getting there, but it did ring, and it weighs eight and one-half tons. I didn't "heft" it, but my guide book gave me the information, for this is a church that is of considerable renown, and all guide books mention it. This cathedral has beautiful frescoes, and large bronze doors which separate the nave from the main vestibule. These doors were made in 1015 and are ornamented with sixteen reliefs, representing "The Life of Jesus," so the little card said which was given us. We took our places among the devout worshippers and for a half hour listened to the chanting of the officiating priests and

singing of the choir. After the mass we passed from the main wing of the church to the garden in the rear, along with many others who wished to see the famous rose tree. The sexton unlocked the big iron gate with a key nearly two feet long, but it was a very big gate.

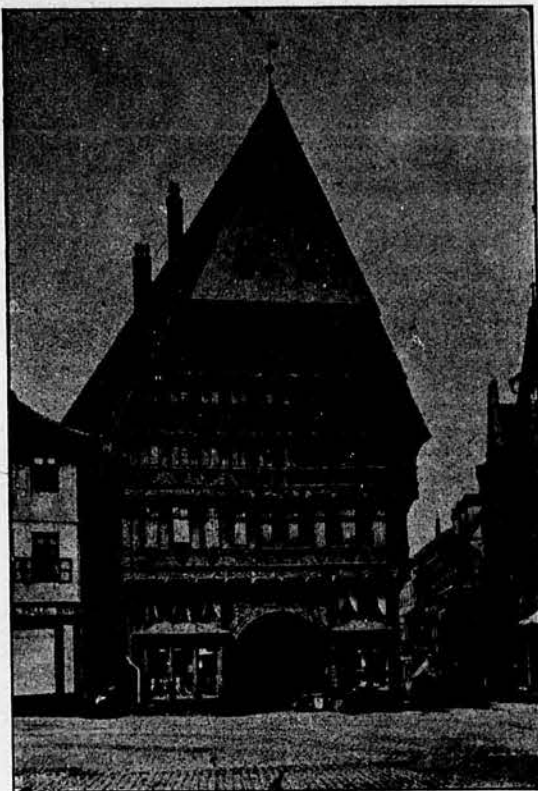
The apse of the cathedral which is over the crypt was at our left as we entered the garden, and close against this is the famous rose tree, which is more than 1,000 years old. The sexton explained to us that numerous slips had been taken from it and planted elsewhere. According to tradition this rose tree was planted by "Louis the Pious" himself or by his directions.

In the crypt underneath the apse are buried many notables who lived hundreds of years ago. We could see the sarcophagi through the grating, but visitors are not allowed to enter, and I suppose few care to do so.

The small chapel of St. Anne, erected in 1321, occupies the opposite end of the garden. It is decorated with a few good paintings. The cathedral proper contains a treasury rich in church plate and many famous relics and works of art.

HILDESHEIM.

This is a city of about 25,000 inhabitants, and was first mentioned in his-



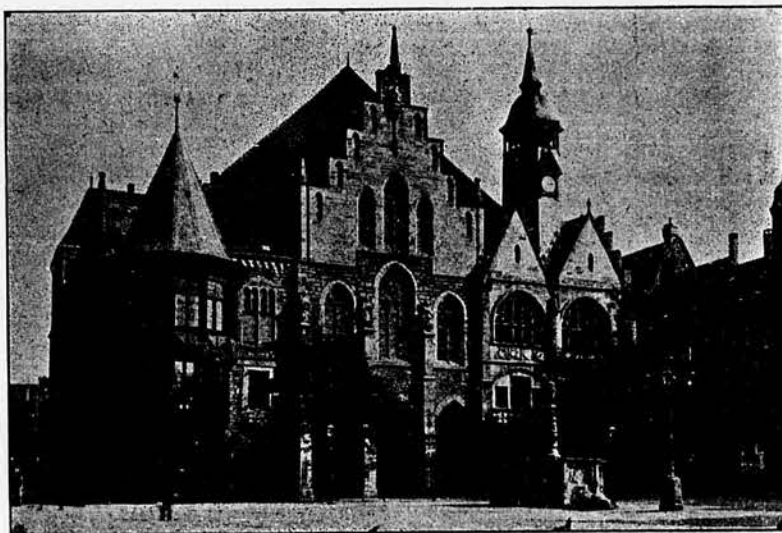
Old Gate House, Hildesheim.

someone or something, concerning the exact nature of which we did not receive information. It was a "fest-tag," and if one wants to see a city on any other than a holiday in Germany it would be well to consult the calendar carefully beforehand, for the number of holidays almost equals the number of days you will find in the almanac.

GOSLAR.

Monday morning we traveled by cars twenty-six miles southeast of Hildesheim to Goslar, a city at the base of Rammelsberg, one of the Harz mountains. This is a town of about 9,000 inhabitants with a handsome city hall built in the fifteenth century. It contains the ruins of imperial palaces, for it was the residence city of several German Emperors between the years 920 and 1,400. It is surrounded by walls, presenting a very antique appearance. One building, called the "Kaiserhaus," is the oldest secular edifice in Germany.

We mounted our bicycles and rode twenty-eight kilometers through the Ocker valley over the finest roads that could be wished for, to Ilsenberg, from which point we must ascend the Brocken, which was the chief point of interest to us. Goslar is the terminus of the railway, which fact necessitated the use of bicycles for us, but we enjoyed the change and traveled faster in



City Building (Rathhouse), Hildesheim.

tory about the year 818. It is now the seat of a Roman Catholic bishopric and was the capital of a great Episcopal see in the middle ages. It is now noted for its fine architecture, shown in ancient wooden buildings, the most attractive of which are the "Rathhouse," built 440 years ago, and the old gate house which was the former assembly house for the butchers' guild, but is now occupied as a bank; this was erected in 1500 and said to be the finest timber building in Germany.

The city has many old and fantastic but handsome private dwellings dating back to the fifteenth or sixteenth century; we saw many of them during our ride around the city in the afternoon, while watching a procession of men, women and children dressed in their best suits of clothes and marching in honor of

this manner than by train, for cars do not hurry much in Germany. There is no competition in railroading, as the routes belong to the government.

We rode the twenty-eight kilometers (about eighteen miles) in a little more than an hour, while we were over two hours coming from Hildesheim to Goslar. Our path lay between rows of beautiful shade trees, and in many places the forest extended to the path, and often we had the beautiful forest trees on either side of us. The wind was strong in the direction we were going and furnished force enough to drive us up small hills without exertion in our own behalf.

At Ilsenberg we learned that the stage which makes daily trips to the summit of the Brocken had left over two hours before our arrival, and no horses nor

Colorado burros could be obtained. Our wheels were no use to us from this point, and the man at the stage office ventured the information that we could go "zu fusse;" we accepted his suggestion and went "on foot." How far was it to the summit? we asked. He said: "Fourteen kilometers." We found he was correct so far as the first half of the way is concerned, but the last half proved to be several thousand miles—so it seemed to me. We soon passed the first kilometer mark, and the second and third found us in excellent spirits, but when the seventh was reached we found a long rest was needed. Then upward we journeyed, resting at every kilometer mark, and after the tenth was passed we had to rest twice as often. We met many people returning "zu fusse," and nearly all of them delighted in telling us it would require several hours more of climbing to reach the top. Our path lay along a beautiful ravine with a rushing stream of clear, cold water which reminded me of the Ruxton creek which flows down from Pike's peak into Manitou. When we finally found the fourteenth kilometer post we had been over four hours "on foot." We were very, very tired, but satisfied in the fact that we were on the highest point in northern Germany.

The Brocken—also called Blocksberg—is only 3,743 feet high, but that height we reached from almost the sea level where we started. A guide came to us from the hotel to escort us over the summit and do the regular explaining about everything. He first told us to look for violet stones, which are supposed to be pebbles violet in color, emitting a perfume of the violet, and can be found nowhere except on the Brocken. We hunted awhile and smelled a good many, when the thought occurred to us that possibly others had been sold in a similar manner, so we concluded to go see the "sunset" through the clouds.

It had become quite dark, as "thunder clouds" had settled on the Brocken and the sunset could not be seen; but we had the pleasure of seeing the lightning "playing" around the mountain below us. There were a goodly number of people on the summit, so we did not feel badly frightened; but if ever witches, spirits, warlocks and broomstick riders were seen on the Brocken we saw them then. We looked to see the "spirit of the Brocken" which has been made famous in the scene of "Walpurgisnacht" in Goethe's "Faust." I cannot truthfully say we actually saw it, but the dark clouds around us were lightened up by electric flashes until the imagination could picture anything that was ever attributed to this interesting place.

We hastened into the hotel, and after an excellent dinner immediately retired, for we must be up at 3:30 a. m. to see the sunrise, and oh, how tired we were!

I had scarcely touched the bed when the hotel bell began to ring to waken everybody to see the sunrise. The morning was very dark and the clouds still hung over the mountain. We could not see ahead of us a distance of fifty feet, but we waited patiently, looking down into the mists, and soon way off in front of us and seemingly a half mile below us we saw a huge ball of fire which gradually grew higher, until the sun in great glory burst through the clouds, and presented what was there called the finest sunrise ever seen on the Brocken. It was very beautiful—too beautiful for me to attempt a description. We hastened back to our beds and slept till 8 o'clock, and when we again saw the sun "the mists had cleared away."

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CROSS BREEDING GRAINS AND GRASSES.

The valuable papers appearing in the *Kansas Farmer* from the pen of Mr. George L. Clothier, assistant botanist at the Kansas State Agricultural College, are worthy of careful consideration. The fact that Mr. Clothier is in charge of the work of cross fertilizing, in the plant breeding experiments now in progress at the college, gives a force and sense of reality to what he says.

His contention that the breeds of wheat and corn and other crops, which are to attain the highest success in Kansas, must be "natives," is well taken. They need not, however, be natives in the sense that their ancestors were of Kansas origin. It would be impossible to secure parents, for the new wheats, that should be aborigines. But, from whatever source the seeds from which improved varieties shall come, it is important that they be bred and reared amid the conditions of soil and climate in which future generations are expected to thrive. In producing new varieties of plants the breeder often gets results in great numbers and possessed of varying characteristics. Those unsuited to their environment perish, or at least show by their feebleness or want of valuable development that further propagation is not desirable. Those well suited to produce valuable results under Kansas conditions are easily selected and are of course perpetuated.

But the plant breeders at the Kansas station should be given the range of the world in selecting stock from which to breed. The breeder seeking the highest possible results with swine for Kansas would not confine himself to Kansas herds for parents. The breeders of Hereford cattle find it advisable, though there are many fine herds of this breed in Kansas, to even go back occasionally to Herefordshire for new blood. So, in breeding wheat, it will doubtless be well to use seed from foreign countries for the introduction of certain desirable characteristics not possessed by any of the varieties of this grain yet cultivated here.

Experiments in this line have for several years been in progress in England with a view of enabling farmers in that country to produce on their soils and in their climate grains possessing the desirable characteristics of large yields, hardness, etc.

No better illustrations of achievements in plant breeding are needed than are found in some of the processes and results of the English breeders—the Garton brothers. In barley they have crossed the well-known six-rowed winter barley of that country with the finest spring types, evolving hardy winter types of the finest qualities. These winter-sown barleys are ready to harvest while the spring-sown types are quite green, thus enabling a second forage crop to be taken after harvesting.

One of the first crosses in barley made by the Messrs. Garton was in 1885, when they succeeded in crossing the Chevalier with the Golden Melon barley. The first products of the crossed barleys were vigorous plants with normal seeds. Additional barleys experimented with the next year were Fan, Italian, Nepaul, etc.

Entirely beardless varieties of barleys have also been produced. These resemble in growth a field of unbearded wheat, producing no beard whatever at any period of their growth; in fact, the differ-

ence could not be detected until a very minute inspection was made. This form of growth has been obtained by the use of an indigenous type of barley (*Hordeum aegyptiacum*) found in northern India, which possesses this peculiar form of growth.

A further important combination has been the crossing of hullless or naked varieties with the best malting types. Some very thin-skinned varieties have resulted from the union of these different characters.

Another point of no inconsiderable value to farmers is that by selecting a barley otherwise of very good quality, but weak in straw—this fault being a source of great loss to the grower at harvesting—and hybridizing it with a barley having great strength of straw, a grain is ultimately obtained, which, if not quite, is very near perfection.

Perhaps, however, the most striking result is the increase in size and weight of the grain. A number of seeds of barley from a sample taken at random weighed about 20 per cent. more than the seed from a good ordinary crop.

In the production of types of barley from a composite cross, the parents used were: Fan, Fruhlings, Golden Melon, Manschurian, Chevalier, Nepaul and Italian barleys.

The types produced are described as follows:

"(a) Ear beardless, and six-rowed like Nepaul, intermediate in length between Chevalier and Italian; grain naked like Nepaul.

"(b) Ear bearded, and six-rowed like Fruhlings, in length more like Italian than Fruhlings.

"(c) Ear two-rowed and bearded, very similar to the Fan parent, but the beards are erect, and not spreading as e and i.

"(d) Ear six-rowed, bearded, very similar to Manschurian, but elongated like Chevalier.

"(e) Ear two-rowed like Italian, but slightly longer, with spreading beards like Fan.

"(f) Ear six-rowed, and unbearded like Nepaul; grain husked, not naked as in Nepaul.

"(g) Ear six-rowed like Fruhlings, but longer and with upright beards.

"(h) Ear two-rowed, very like Chevalier.

"(i) This is a transition form between two-rowed and six-rowed barleys, inasmuch as the spikelets which are barren in two-rowed types here produce excessively minute grains."

The methods by which the desirable varieties were evolved are thus briefly stated: "Taking Bere as the hardy winter form, crossing with the best two-rowed spring types, sowing the produce always in the autumn, and breeding from the survivors, they ultimately secure a winter barley hardier than winter wheat. The grains show great energy and rapidity of germination; adverse conditions, however extreme, can scarcely impede the growth."

In the Garton brothers' experiments great difficulty was found in producing crossed breeds of oats. But in 1885 several crosses of oats—including one from Black Tartarian and White Canadian—were produced. In 1886 the first product of the crossed oats yielded an intermediate form, with vigorous growth and abundance of seeds. But fresh influence was wanted and several foreign types from China, France, Germany and Italy were introduced. The second generation was exceedingly sportive, the third less so, but repeated crosses eventually gave the desired results.

The parents used for raising a magnificent evolved breed of naked oats were Naked Oat, Waterloo, Tartarian, Scotch Potato, Thuringer, White Canadian and Rugenschier.

The "parents" are described in the *Cable*, from which information as to the work of the Garton brothers is derived, as follows:

"Naked oats (*Avena nuda*) is perfectly distinct in character from any of the cultivated forms, possessing a very peculiar habit of growth, and producing the seed naked or free from the shell which covers the seed of the ordinary types. The panicle or glume, instead of growing with one or two seeds between, the chaff is extended in form, and produces four or five naked seeds in each panicle; hence its value in crossing. They have been used with a view to introduce the extended form of panicle growth into the cultivated varieties.

"Waterloo.—Medium early, prolific bell-headed variety, long white grain, straw weak. Its special feature is prolific form of head.

"White Tartarian.—Late variety; the grain, which is thin and inferior in quality, is thickly clustered on one side; straw strong and medium length. Its special features are prolific head and strength of straw.

"Canadian.—Early, bell-headed va-

riety; straw of medium length but very weak; grain white and plump, with much skin. Its most desirable quality is earliness.

"Thuringer.—A German variety, very late, bell-headed, grain long, of a deep yellow color, prolific head, and very long straw. Its special features are prolific head, an abundance of very strong straw and a large grain.

"Rugenschier.—Hails from the Island of Rugen; bell-headed variety, straw long and strong, medium early, large, long grain, thick skin. Its special features are length of straw and size of grain.

"In form of head the evolved type is distinctly intermediate between the White Tartarian and the bell-headed varieties, the influence of the various parents used being equally balanced except in the case of the naked oat, the influence of which is very predominate, as shown by the perfect extended panicle and naked grain, both of which are true characters of *Avena nuda*.

"These judicious crossings of the 'bell-headed' variety with the Tartarian and others have produced specimens of the most exuberant vitality. One of the later had a head twenty-three inches long, with hundreds of panicles crowding on the stem, and from five to ten seeds depending from one panicle.

"One variety, which is a cross between the Potato and Black Tartarian oat, is specially notable for its prolificacy.

"Numerous distinct types of oats have also been produced for winter sowing by crossing the progeny of the finest spring types with hardy winter varieties, securing the hardy constitution of the winter variety combined with the quality of the spring forms."

The increase by weight, per grain, of some of the improved breeds, is given as 60 per cent., compared with Black Tartarian.

These descriptions are given here to illustrate, first, the manipulation necessary to plant breeding; second, the great range of seed selection for parents for the evolved varieties; and third, the character of results within reach. It will be observed that the climate has much to do with the characteristics of the evolved new breed. Thus, in a country having no winter the winter oats would scarcely be evolved.

The *Avena nuda* oat is alluded to as a "wild" variety, or would be if it had been found in this country. Perhaps the farmer would not call it an oat at all. He might admit that it was some sort of grass. But the botanist will tell us that all grains are species of grasses. This *Avena nuda*, although its seeds were not clothed with a husk like that of the common oat, proved to have similarity enough to be successfully crossed with oats with the valuable ultimate result above described.

This opens a beautiful speculation as to our native or wild grasses. The blue-stem, for instance, produces almost no seed. The farmer cannot, therefore, reseed his pastures and meadows with this valuable grass, once the native sod has been destroyed. But it blooms, and if its flowers can be crossed with those of some seed-producing grass may it not be possible to obtain a desired variety having the hardness, vigor and productivity of the blue-stem and the seed-producing quality of some of the cultivated grasses?

The field for the production of varieties of every cultivated plant especially adapted to Kansas conditions is so broad, so inviting, and destined to lead to such valuable results at small cost, that it is surprising that it has not long ago been entered. Now that the work has been well begun at our Agricultural College by Mr. Clothier, with 1,000 crosses of wheat, to be followed within a few days by like work with corn, there is reason to expect that, having found the competent man who is at the same time an enthusiast in the work, the State of Kansas will see to it that our college and experiment station shall have the opportunity to lead in the work which is to so greatly add to the certainty and value of the products of the farmer.

It is with a full realization of the valuable service rendered by Mr. A. E. Jones, as editor of the Dairy department of the *Kansas Farmer*, that we this week print his adieu. The expressions of appreciation of the practical value of Mr. Jones' work have not been few. His well-directed efforts against oleo frauds received the hearty co-operation of creamerymen generally. The columns of the *Kansas Farmer* will still be open to Mr. Jones, and we shall expect to place before the readers many terse and vigorous productions from his pen. Mr. Jones' connection with the business of the office is in no way affected by the change in the Dairy department.

EDUCATION FOR PRODUCERS.

One of America's philosophers of a generation ago said, "We must educate or we must perish." By "we" he meant the American people as a people. And he spoke truly. The enlightened nations lead the world and rule it. The helplessness of the unenlightened nations before the enlightened is now again being illustrated in our war with Spain. A nation which, like Spain, skulks in the darkness of the middle ages and clings to the superstitions of the past may borrow money and buy modern warships and weapons, but after all that, with her 80 per cent. of illiteracy, she cannot stand before a people educated in public schools.

What is true of the nation is true of the individual and the class. Modern development, through steam and electricity, is destroying the isolation that once prevailed; the railroad and telegraph are bringing men together, and the daily newspaper is making it possible for the people of a nation to become almost as well acquainted as were once the people of a neighborhood. Competition thus grows more keen, because more intelligent. Each one not sheltered by monopoly must measure his strength not with that of a few neighbors merely, but with that of men everywhere. In a load of apples jolted over a rough road the big apples come to the top, so in the jolting and elbowing of competition, the prepared men, those fitted for the fray, come to the top, and into their hands fall the rewards of the competitive struggle.

He who would be "fit" must be educated. The time was when uneducated and slightly educated men could win in this country, but that day is past. Before the days of thoroughbreds "scrubs" would answer, since they were brought into competition with "scrubs" only; but when the thoroughbred enters the field the "scrub" must go. Educated men are to-day crowding into every avenue of employment, and hence saving only in political positions, and even there in a constantly increasing degree, men of genuine fitness and recognized preparation are being sought out to do the world's work. He who would not be passed by, when the call comes for effective men, must prepare himself.

The time was when our higher schools were criticized on the ground that they failed utterly to fit the student for the actual work of life. They instructed him, it was said, in dead languages, when he would be expected to use his mother tongue only, and that with an accuracy and fluency not given by the study of the languages of the Greeks and Romans. They taught him the mythology and traditions of a people centuries dead, but left him ignorant as to the institutions of his own country, and even of the structure and functions of his own body. They educated him for the learned professions, thereby implying that all other lines of work were unworthy, and encouraging him in the notion that labor was degrading and beneath an educated man. They instructed the young woman in music, painting, polite literature and French, but left her in blank ignorance of the sciences of cook-ology, sew-ology, mend-ology and wash-ology, and of the vitally important functions of a wife and mother and head of the house. While, therefore, men might be willing to admit that their children should be fitted for their life work, they were unable to see that this fitness could be obtained in schools.

In large measure they were right; and the discovery by independent and courageous men that advanced schools and colleges were not doing their full duty by their students led to the reorganization of institutions, to reconstructions of courses of study, and to revolution in ideals and methods.

The Kansas school which first responded to the demand for practical education was the State Agricultural College, at Manhattan. John A. Anderson visited it and declared that if given his way he "would bust it from stem to gudgeon." He was awarded the contract, and executed his threat. The dead languages and Christian evidences went out, and manual training in wood and iron shops, printing office, and departments of cooking and sewing went in. He declared that it is impossible for most people to find time to study everything that it is important for some men to master; that the subjects discarded in whole or in part by each separate class of students should be those which it is supposed will be of least importance to them; that of those retained prominence should be given to each in proportion to the actual benefit expected to be derived from it; that the farmer and mechanic should be as completely educated as the lawyer and minister, but in

the lines most helpful to them; that 97 per cent. of the people of Kansas were in the various industrial vocations, while only 3 per cent. were in the learned professions; that therefore it was absurd to prescribe for the 97 per cent. the same education that was appropriate for the 3 per cent.; that the natural effect of exclusive head work as distinguished from hand work is to beget a dislike for the latter, and that the only way to counteract this tendency is to educate the head and hands at the same time, so that when a young man leaves college he will be prepared to earn his living in a vocation for which he has fitted himself to excel.

The ground gained by the Agricultural College under Anderson could never be lost. During the seventeen years' administration of President Fairchild, his successor, with the influx of revenue from State and federal governments, the departments of agriculture, horticulture, veterinary science, printing, cooking and sewing remained and developed. The realization of the changing needs of the agricultural and industrial classes and the new demands of the times led to its reorganization a year ago, and to the appointment of a President in full sympathy with the idea that, first, the institution should be conducted with an eye single to the well-being of the agricultural and industrial classes, and indirectly of the State and nation of which they are constituent parts; and, second, that whatever changes in course of study, personnel of faculty, or methods of work such a policy might demand must be made.

As in Anderson's time, the result was the dismissal of a number of members of the old faculty, the resignation of others, and the reconstruction of the course of study. To fill the vacant places with competent men and women the country has been ransacked, appointments being made solely on the ground of merit.

Not less complete has been the change in the course of study. Where, in the past, all students regardless of prospective callings, pursued practically the same course the college now offers four parallel courses of study.

Students preparing for agriculture are assigned to the agricultural course, offering, in addition to general culture and disciplinary studies, agriculture, hygiene of farm animals, tillage and fertility, crop production, entomology, agricultural chemistry, vegetable gardening and small fruit culture, stock feeding, biology, agricultural mechanics, breeds and breeding, agricultural bacteriology, pomology, agricultural physics, horticulture, agriculture, economics, forestry and veterinary science. A comparison of this new agricultural course with the old, which offered but two terms in agriculture and a few related agricultural studies, must arouse surprise that pressure was not exercised earlier to render the course of a nominally agricultural college more truly agricultural.

Students looking toward the mechanic arts are given a course in engineering, including culture and disciplinary studies, and such special studies as the mathematics through calculus, physics, drawing—including projection, axonometric, and perspective and sketching—mechanics, hydraulics, machine designing, principles of mechanism, mechanics of materials, measurement of power, mechanics of engineering, engineering of power plants and original designing.

That young women may be prepared for the duties of the home, a course in household economics is provided, containing both general studies and such special studies as hygiene, household economics, chemistry, vegetable gardening and small fruit culture, home architecture, physiology, chemistry of foods, floriculture, ornamental gardening, botany and dairying. The new Domestic Science hall, thrown open at the beginning of last winter term, offers admirable facilities for instruction in this course.

In addition to the above three special courses, a general course is offered to such students as may not yet have decided upon their life work. Even this, however, looks strongly in the direction of agriculture and the industries. Students of whatever course are trained from entrance to graduation in the use of hand as well as head, industrial work being given in farming, gardening, fruit-growing, wood work, iron work, printing, cooking and sewing.

Realizing further that under modern industrial conditions, hard work, the essential, does not always win in the warfare with trusts and monopolies, the college offers thorough instruction to all students in the principles of economic science, industrial history, finance, and the science of government, to the end that the student may be not only an

efficient producer, but an intelligent citizen.

With such opportunities for preparation for a life of usefulness as are to-day offered by the Kansas State Agricultural College, we can only say that the young person who fails to avail himself of them makes what may prove to be the fatal decision in planning his career.

NEW IDEAS IN FARM MACHINERY.

The display of agricultural implements at the Trans-Mississippi exposition is varied and complete. Many of the new models of these labor-saving implements are shown in operation so that visitors may have an opportunity to judge of the value of new improvements or inventions. Beet culture calls for a number of implements different from those in use for other crops, and there are beet planters, cultivators and pullers in endless array. The farmer who devotes his acres to the cultivation of King Corn naturally becomes absorbed in the operations of the corn planter that drops three kernels at a time ninety-five out of a hundred times. The new three-row cultivator for listed corn, the dustless corn sheller and the corn stalk shredder and husker are all interesting examples of man's ingenuity in perfecting labor-saving devices. The hay presses, the potato diggers, the combination feed grinders and the separator with glass sides to show its interior workings, the new disc plows and riding harrow with folding wings are only a few of the valuable implements which are displayed for the examination and information of the farmer.

The exhibit of irrigating windmills for raising water from rivers or ponds for storage is also an important feature of the implement department.

The dairy goods exhibit is arranged along the south side of the building and is not without attractions in the form of the latest and most improved milk cans and churns. The old-fashioned dasher churn seems to have passed away. The churn of to-day is operated with a crank, and a slat arrangement in the body of the churn works the butter.

There are churns for dairy and family use, likewise milk weighers and testers and cheese-making outfits complete.

An attraction in this department is the Klondike spring, where drinking water will be free to all visitors.

WHEAT CROPS.

The fact that great crops of wheat are in process of harvesting in North America does not entirely remove the apprehensions of short supplies in importing countries. A suggestion comes from Russia—a country whose capabilities of wheat production have been held up as a terror to American farmers—that the nations of Europe should emancipate themselves from dependence upon grain imports from the United States and provide against famine by the erection of public warehouses for storing grain against seasons of scarcity, after the example of King Pharaoh on the suggestion of Joseph. Whether Joseph shall have his way in Russia is perhaps of little moment to the farmers in this country. But the following review of conditions of crops in foreign countries on July 1 by Dornbusch's London List may assist the owner of wheat to determine the question of early or late marketing:

England—Weather in this otherwise favored country continues fickle and extremely uncertain, reminding one of the American saying that "England has no climate, only samples of weather." However, these samples are growing more alike, and it is not too much to hope, if not to expect, a bright, hot July, which would be a real wheat-making time. Barley and oats, too, want sunshine, but it is hardly to be gainsaid that the last fortnight has materially improved cereal crop prospects.

France—There is some murmuring in the tents of agricultural journalism, but, taken in the aggregate, the reports of the wheat crop are full of healthy promise. Marche Francais observes that weather recently has been favorable to all crops, and particularly wheat, which has bloomed in excellent condition, except in the extreme north. Harvesting has commenced in some of the southern regions, and the grain is fine, plump and heavy. The return of wet weather and a lower temperature, says the Marche Francais of the 27th inst., is beginning to excite some uneasiness among farmers, chiefly in the extreme north of the country, where the wheat requires a dry and warm period for the blooming to be effected in normal conditions. The Fermier affirms that wheat generally has bloomed well, but in the north and west it is not yet completed, and the least unfavorable change in the weather is

liable to modify appearances in a very short time.

Spain—Madrid advices speak of the wheat crop as follows: In Andalusia, rather disappointing; Castilla la Nueva, not so good as expected; Castilla la Vieja, a more regular crop; Catalonia, a fair to good one; Murcia, rather poor; Navarre, a very poor yield; Las Riojas, a most indifferent one; and Valencia, satisfactory in every respect.

Netherlands—The weather has been changeable, and in some localities the fields have suffered from night frosts.

Germany—The crops do not promise so well as they did. Ungenial weather with excessive moisture and low temperature have checked development, and in many places rust and laid fields are complained of.

Italy—The agricultural outlook is most promising, and with continued propitious weather wheat and other cereal crops are expected to yield bountifully.

Roumania—Wheat cutting will begin this week if weather conditions be favorable. Our correspondent says the agricultural situation leaves in general nothing to be desired except warm and fine weather until the crops be assured.

Servia—The winter wheat and rye, with few exceptions, stand very well. Barley is already ripening and cutting has begun in many localities. The spring crops are developing in good condition, and the maize fields leave nothing to be desired.

Russia—No remarkable change has taken place in the crop outlook. Wheat looks particularly well in the south, and good accounts are heard from the southwestern provinces. Rain has fallen in eastern provinces and spring crops have greatly improved. In other districts conditions appear to be normal.

Hungary—Recently heavy thunder storm with rain and hail caused considerable damage to the cereals and other crops. The wheat-growing regions of Banat and Alfold are reported to have escaped. Much of the loss will fall on insurance companies, which had insured the crops.

Poland—It is reported from Warsaw that in almost all the governments of that kingdom, sharp night frosts have inflicted considerable damage upon the winter and spring crops, as well as the potatoes. The previously favorable harvest prospects are now much marred.

Norway—Postal advices from Christiania state that the spring sowings are not completed in most districts, the cold and rainy weather of the past month having been generally complained of. In Laurvig and Drammen the winter crops stand uniformly well.

Argentina—The acreage of wheat this year will be considerably increased because high prices and favorable weather have encouraged the preparation of land, and linseed has again proved a very uncertain crop that will be partly replaced by wheat. Mr. William Goodwin says a good start gives a fair prospect of a good crop, and although with expectation of locusts and the usual uncertainties of weather influences right up to the time of harvest there can be no certainty whatever, it is well to bear in mind that if by chance any season happens to be as favorable as 1894 there is a possibility of a crop being reaped in the Argentine Republic that will allow an export of over 12,000,000 quarters.

Saves Much Hard Work.

The following description of a labor-saver is from the Russell County Journal:

"At Mr. Cook's place we saw a most unique labor-saving device for stacking. With the exception of a few attachments it is wholly a home-made article and its total cost will not exceed \$25. With it the contents of a header box is lifted at one time onto a stack, and rapidly enough to unload a wagon every three or four minutes, when everything is working properly. When the stacks are close to the place of cutting, two header boxes are all that are necessary, thus saving one team, header box and two men on this score. In fact, but three good men besides three half-grown boys are all that is necessary to run an entire header crew, instead of eight men, as are generally used.

"The frame of the stacker is in the form of a simple derrick made of a center post 4x6 inches and twenty feet high, and the arm is made of two pieces of 2x6. The whole is mounted on two runners sixteen feet long and placed eight feet apart. This is for conveniently moving it from place to place without taking down the pole. A heavy wire from the pole, about half way up, to the corner of the sled, holds it erect while being moved, and guy ropes are used when in the operation of stacking.

"A simple net made of rope and a few cross-pieces of wood made about the

size of the bottom of the header box and perhaps a trifle longer is used. One of these is laid in the bottom of the header box before starting to load. A hook is fastened into a ring on each end of the net when the load arrives at the stack, and it is ready for a horse or team to pull it up. It swings into place quickly, and by pulling a trip-rope the net separates in the center and drops the grain on the stack at the pleasure of the stacker. Meanwhile another net is placed in the header box and it has left for another load. With this device, which was made by Mr. Cook and H. H. Pierce, stacks are made much higher and wider than customary, thus saving time lost in moving threshing machines made necessary by small stacks.

"Several of these stackers are in use in this county, and we understand something similar is used in the vicinity of Hays City. It certainly saves much hard labor in pitching grain."

Scab in Heads of Wheat.

J. C. Arthur, Botanist of Purdue University Experiment Station, reports as follows:

"The season, which has been so favorable to many kinds of crops, has also developed to more than usual prominence a number of fungous diseases. Many fields of wheat, that just before ripening promised a good yield, have suddenly been struck with a kind of blight that kills the heads or parts of them, and renders the grain worthless. The part of the head affected is easily detected at this time, as it turns prematurely white, while the healthy part remains green. The kernels become shriveled and soon look moldy.

"This injury is so considerable in different parts of the State that farmers are alarmed, and have accused the wheat midge and green fly of causing the damage. It is not due, however, to any insect, but to a minute fungus that attacks the wheat heads at the time of flowering. The spores of the fungus blow through the air, lodge on the delicate parts inside the flower and soon penetrate the kernel and envelop it with a mesh of moldy filaments which sap the life of the kernel, and forming new spores spread the disease to other flowers and throughout the field. Looked at carefully the heads appear pinkish from the abundance of the slightly colored spores. The disease is very appropriately called 'wheat scab.'

"Although there is no known remedy for this malady, in fact, it has not yet received as much study as its importance warrants, yet one or two precautionary measures have come to light and should be borne in mind. It is observed that some varieties are less subject to scab than others, and that, fortunately, these include some of the old, substantial varieties. On the experiment station grounds at Lafayette, the varieties Velvet Chaff, Early Ripe, New Hybrid Prolific, Harvest King and Michigan Amber showed almost no scab this season, while other varieties were much injured. For example, Oakta Chief had 25 per cent. of the heads affected; Diamond Grit, 40 per cent.; Pedigree Giant, 60 per cent.; White Golden Cross, 75 per cent., and others in intermediate amounts. By taking into account the date of ripening, however, it is seen that all varieties that ripened with us before the first of July are almost or quite free of scab, while those which ripened later are all more or less affected. This agrees with the observations of previous seasons.

"At present the best measures against scab are selection of early varieties, and hastening maturity by early seeding, good culture and similar methods. Nothing can be done to mitigate the injury after the scab shows in the field."

The hosts of friends of Rev. Geo. T. Fairchild, ex-President of Kansas State Agricultural College, will be pleased to learn that he has been elected Vice President and a professor in Berea College, Kentucky. The college is to be congratulated on securing the services of so strong a man and President Fairchild is to be congratulated on so readily stepping into a position for which he is eminently qualified.

If you have been sick you will find Hood's Sarsaparilla the best medicine you can take to give you appetite and strength and restore you to a condition of perfect health.

Hood's Pills cure nausea, sick headache, biliousness and all liver ills. Price 25 cents.

Electric fans are cooling. You get them and other seasonable articles in Santa Fe Route dining cars.

Horticulture.

GRAPES IN THE MISSOURI VALLEY.

By A. Chandler, of Argentine, Kas., before Missouri State Horticultural Society.

SITE AND CULTIVATION.

The Missouri valley possesses many favorable features the grape demands. Of course we recognize the advantages imparted to other localities, such as the Chautauqua grape belt, northern and western Texas, and southern California for the raisin grape. But to our own surroundings let me call your attention. In point of favorable location and rare adaptability of soil, I wish to emphasize the "Loess" formation along the Missouri river. This is a strip of country from six to twelve miles wide and contiguous to it for a greater portion of its length. The soil of this formation is in very many places fifty feet deep and equally good all the way down. We hear much of Klondike, but what a fortune is here for the present and future generations.

If we except five or six counties in the southeast part of the State, we think Missouri is the best all-round grape-growing section in the Union, with a maximum quantity of five tons per acre. Nor will I omit to notice my own State—the fair land of Kansas. On the maps, during my early school days, was printed the "Great American Desert." What a howling desolation we had pictured it in our mind's eye; the desert is gone, and in its stead the great commonwealth of Kansas; its vintage may yet astonish the world and share the honors along with its wheat, its corn and its cattle.

But to be more specific in regard to "grape-growing," I will just say that yonder hill with a good drainage and an eastern exposure is an ideal location; secure thrifty one-year-old plants, plant in the early spring on land prepared the previous year; place the plants in rows eight feet apart, also eight feet apart in the row; every seventh row should be eleven feet wide to facilitate driving through; cultivate well for two years, but allow no crop the first and second years; the subsequent cultivation should be thorough, both to prevent weeds and to overcome the effects of drought; in no case should the soil be allowed to crack, frequent and shallow cultivation is the remedy; if defoliation occurs the crop will be seriously damaged.

PRUNING.

Pruning will now claim our attention. Without any attempt at scientific explanation, I will just say that three or four canes of thrifty new wood should be left for the coming crop; these canes will have from thirty to thirty-five buds, which is a plenty if the vineyard is well up in fertility; if the land is thin and over-cropping has been allowed, one-half this number is ample.

The time for trimming should immediately follow our Indian summer; then the leaves are off and the wood is matured; we will get well punished if pruning is left until mid-winter or early spring. Mud and snow boot-top deep will be your portion with no mitigating compensation, besides you have contracted rheumatism, neuralgia or bronchitis. Another reason for pruning in the fall is we get rid of fungi spore and insect eggs by burning all trash and accumulated debris.

The only summer pruning we ever practice is to pinch off the end of the new vine beyond the second leaf just after the fruit has set; some question its utility, but we think it is beneficial.

VARIETIES.

The question of what varieties to plant is not the least important to decide; the black grape is the most popular.

For commercial planting three well-known varieties stand at the head, viz.: Moore's Early, Worden and Concord, ripening in the order named, with intervals of ten days.

Of the many new black grapes before the market one in particular is worthy of mention, viz., "Campbell's Early." Many speak in praise of it; we think it has come to stay. Telegraph, Janesville and Wilder are very popular with some growers.

Red grapes are evidently gaining ground; the best of all is the Brighton. We have not yet seen its superior. Then follow the Delaware, Lindley, Woodruff, Salem, Wyoming, Massosoit and Goethe.

White grapes have many admirers and the most fastidious tastes cannot fail to be pleased. Of the special favorites we name Niagara, Pocklington, Moore's Diamond, Martha, Lady Washington and Missouri Reisling.

We cannot pass the subject of varieties without calling attention to the new

seedlings and hybrids of T. V. Munson, of Denison, Texas; the new strains of Texas Post Oak or Vitis Lincecumier are worthy of the grower's careful attention. Some of these have been known to do well through a dry and hot season in the Southwest, where the Concord is a failure. The Virsifera varieties belong to southern and western Texas and California. They have no place in our catalogue.

ENEMIES.

In our experience with the vine we have not been afflicted with mildew or rot; the Bordeaux mixture is the great remedy. Apply it plentifully once before budding and twice after at intervals of two weeks.

The prophets of old have told us of the utter devastation of the vineyards more than twenty-eight centuries since. Thankful indeed are we that no such scourges are recorded in our time.

A little worm, classed entomologically as Thrips, does some damage. That dread destroyer of the European vineyard, "Phylloxera," has not visited this country to any considerable extent, but let us be watchful; neglect will only presage disaster and disappointment.

GRAPES ARE GOOD.

The subject of a market must be left to some one else. Besides the home-grown stock, many car-loads have found their way to Kansas City, but they are cheap. But be their commercial value what it will, they retain all the medicinal and delicious qualities just the same.

To the townsman we recommend the culture of the vine; the occupation will be both pleasant and healthful. Many an unsightly spot can be hid, also it can be made to lessen the expense account. A lack of room will be urged as an apology, no doubt; so used have all of us become to the broad prairies that we cannot place a proper estimate on a foot of land.

In closing, I will say to the fruit man, wake up. Study your fruits, your climate and your soil; God may have been a million years in preparing Missouri for your habitation and mine; let us do our own work in our own time. Some day this State will have ten millions of people and a new generation will be singing praises to a beneficent Creator for the abundant harvest of this vine.

The Canning Industry.

Excerpts from a paper by T. W. Ware, of Republic, Mo., read before Missouri State Horticultural Society.

About ten years ago, when we organized the Republic Canning Company, we bought our machinery from a promoter, paid about twice what it ought to have cost, and bound him up to furnish a processor. As we knew nothing about the business we had to put him in as processor and manager at a salary of \$1,000 per year, when we ought to have had a man for about \$300. But the thousand dollars would not have hurt us if he had been the right sort of a man, but he was anything else. He was drunk nearly all the time. He made as many again jobs as necessary, and the most of them for drunkards. I soon saw that he was going to ruin us. But how were we going to get rid of him? I laid a plan to get him to resign, and he resigned.

When we took charge of the business and found where we were, we found that we had lost about \$4,000 and had a factory on our hands that had cost us twice what it ought to. And none of us knew how to run it. We had to do the best we could the balance of the season. Our misfortunes with our experts and paying too much for our machinery naturally made us very cautious. The first time I had an opportunity I became a member of the Western Packers' Canned Goods Association. I met with them the first time in St. Louis about eight years ago. One of the first things was to get acquainted with the members and find out what the machinery was worth and what kind we needed, and I found we had everything we did not need and but very little of that we did need. That is to say, the machinery that we had we could not put up goods with for less than 75 cents per dozen and get out without losing money; but by studying the business I have been able to make many valuable improvements in the way of putting up goods by systematic methods, and many inventions of my own that I have put in use, leaving out the slow and bunglesome way that we had on the start, I can pay the same price to hands for labor and about the same price to the producer for produce and put up better goods at a cost of 50 cents per dozen to the factory.

Continuing my investigation as to the cost of all the material and labor, I find that southern Missouri can put up goods from 5 to 10 cents cheaper on the dozen than any other place in the Union. In

- ARMSTRONG & McKELVY Pittsburgh.
- BEYMER-BAUMANN Pittsburgh.
- DAVIS-CHAMBERS Pittsburgh.
- FAHNESTOCK Pittsburgh.
- ANCHOR Cincinnati.
- ROKSTEIN } Cincinnati.
- ATLANTIC } Cincinnati.
- BRADLEY } New York.
- BROOKLYN } New York.
- JEWETT } New York.
- ULSTER } New York.
- UNION } New York.
- SOUTHERN } Chicago.
- SHIPMAN } Chicago.
- COLLIER } St. Louis.
- MISSOURI } St. Louis.
- RED SEAL } St. Louis.
- SOUTHERN } St. Louis.
- JOHN T. LEWIS & BROS CO Philadelphia.
- MORLEY Cleveland.
- SALEM Salem, Mass.
- CORNELL Buffalo.
- KENTUCKY Louisville.

EVERYBODY who knows anything about painting knows that Pure White Lead and Pure Linseed Oil make the best paint; but there is a difference in White Lead. The kind you want is made by the "old Dutch process." It is the best. Let the other fellow who wants to experiment use the quick process, "sold-for-less-money," sorts.

See list of brands which are genuine.

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also folder showing pictures of house painted in different designs or various styles or combinations of shades forwarded upon application to those intending to paint.

National Lead Co., 100 William St., New York.

other words, southern Missouri factories can make from 5 to 10 cents on the dozen when others would be selling at cost. This would mean a 20 to 25 per cent. dividend to southern Missouri factories when others would not be making any profit at all. This seems to be our natural advantage, being able to produce the stuff cheaper and still leave the producer a better profit to the acre than any other section at a higher price.

Tomatoes in southern Missouri will yield the producer, at \$5 per ton, about \$20 to \$50 an acre, while other sections, paying \$6 or \$7 per ton, yield the producer from \$10 to \$25 per acre. This knowledge I have gained mainly from the packers themselves, coming in contact with them annually at the meetings of the association. Even the brokers have asked me how we could pack our goods 10 cents on the dozen cheaper and at the same time make goods of a better quality than any other section of the country. I have but one answer: We have bumped our heads on all sides of the business and in so doing have learned the best methods of putting them up, as well as the natural advantages.

If you were going to put out a fruit farm I would not tell you to go to the average nurseryman for advice; I would tell you to go to the practical grower. So, if you want to build a canning factory, go to a practical canning factory man, who has made it a study and knows what you need, and if thoroughly practical he can make you thoroughly acquainted with all the details of the business, namely: How to contract with the producers and how many acres to plant, what kind of seed to sow for plants, how to plant and cultivate them, when and where to buy your material, such as cans, labels, boxes, solder, etc., and other things necessary.

I feel that there are many things for me to learn yet in the business, but if I could have been made acquainted with all the details of the business as well as I could now make a man acquainted with them, I could have saved the company about \$8,000 the first year in management and machinery. In the case of Winfield, Lincoln county, Missouri, I could have saved them more than that amount. They came to me after they had made a failure and I made them thoroughly acquainted with the business, and they went home and started up and have made a success ever since. I simply refer to this to show that the ordinary promoter knows about as much about the practical working of a canning factory as the ordinary fruit tree agent knows about fruit-growing.

Now, if we had eight or ten more within a hundred miles of Springfield we could arrange with some large catsup factory to locate at Springfield. Then all the different factories could use pulp machines and separate the pulp from the peelings, save the juice, ship it in to the catsup factory and establish a big business there and leave a good profit to the factories. Even with what we will have after this year a catsup factory would pay at Springfield, with a large cannery attached, so it could work all kinds of fruits, at the same time putting up the pulp from the different tomato canning factories into catsup. This would employ one or two hundred hands.

Another factory that is needed badly in Springfield is one to make cans, as it is true that we have to order our cans from the East. Many times they get delayed and we have to shut down for want of cans, as they will be on the road from three to twelve days. With a few more factories located in southern Missouri they could keep a can factory run-

ning all the year with a force of 500 or 600 hands. With this would come box factories, label factories and a great jobbing trade. Some of our jobbers have built up a large jobbing trade in tomatoes.

With the fruit canning industry pushed in southern Missouri as it has been in Maryland, the effect it would have on Springfield would be to double the business and population. It would clear the wild and rocky timber lands now lying idle and make them worth from \$25 to \$30 an acre. It would build better homes, better churches, better roads, better towns and better schools all over southern Missouri, especially the timbered sections.

The Old South Historical Society, of Boston, have established the custom of making annual pilgrimages to points of historical interest, and the destination chosen for their third annual excursion of this nature, occurring the last of June, was the King Philip country. This includes the land in the immediate vicinity of Mt. Hope, R. I., where the most of Philip's life was spent. It was, therefore, most appropriate that in the July number of the New England Magazine there should appear a description of the "King Philip Country," by William Adams Slade. Mr. Slade, in making a careful study of the region, has followed up all the traditions and historical associations of that neighborhood, and his article is a valuable addition to the history of the period of King Philip's war. "The history of these aboriginal inhabitants of the land," says Mr. Slade, "is pathetically attractive, for in it is found the story of a dying race. Its great chieftain, the hero of that terrible war which bears his name, is now justly considered as the patriotic defender of his people, of his land and his religion against the encroachments of the white man." The principal places associated with Philip's name, and many memorials of him which still exist, are pictured on the pages of the article.

Tours in the Rocky Mountains.

The "Scenic Line of the World," the Denver & Rio Grande railroad, offers to tourists in Colorado, Utah and New Mexico the choicest resorts, and to the trans-continental traveler the grandest scenery. Two separate and distinct routes through the Rocky mountains, all through tickets available via either. The direct line to Cripple Creek, the greatest gold camp on earth. Double daily train service with through Pullman sleepers and tourists' cars between Denver and San Francisco. The best line to Utah, Idaho, Montana, Oregon and Washington via the "Ogden Gateway." Write S. K. Hooper, G. P. & T. A., Denver, Col., for illustrated descriptive pamphlets.

A Colorado Summer.

Under the above title the Santa Fe Route has issued a sumptuously printed book devoted to the attractions of the Rocky mountain summer resorts, intended, we understand, for free distribution.

Beside a graphic description of the more noted localities, the publication contains special articles on climate, the mountains, camping, fishing and shooting, and is embellished by eighty half-tone illustrations from special photographs. A map of Colorado, a table of altitudes, and a full list of hotels, cottages, boarding houses and their rates, are included.

This should be an invaluable hand-book for all who contemplate a summer trip to that charming region of lofty altitude, pure air and cool sunshine.

In the Dairy.

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

HOLSTEIN-FRIESIAN PRIZES.

Editor Kansas Farmer:—Your many readers interested in Holstein-Friesian cattle will be glad to learn of the special prizes offered by the Holstein-Friesian Association of America at the Trans-Mississippi exposition, Omaha, Neb., and at other fairs throughout the United States and Canada, if won by cattle recorded in its herd book.

In the ten days' test of milch cows, open to all, the exposition authorities offer only medals as prizes, but this association offers in the class for cows, first prize, \$75; second prize, \$45; third prize, \$25. In the heifer class, first prize, \$50; second prize, \$35; third prize, \$20.

The following prizes are offered for the exhibition of cattle to winners of first prizes: Bull, 3 years or over, \$20; bull, 2 years and under 3, \$20; bull, 1 year and under 2, \$20; bull, under 1 year, \$20; cow, 3 years or over, \$20; heifer, 2 years and under 3, \$20; heifer, 1 year and under 2, \$20; heifer, under 1 year, \$20; herd, consisting of one bull 2 years old or over, one cow 3 years old or over, one heifer 2 years old and under 3, one heifer 1 year old and under 2, one heifer under 1 year old, \$50; young herd, consisting of one bull and four heifers, all under 2 years old, heifer-bred by exhibitor, bull may be purchased, \$50; four animals of either sex, the get of one sire, \$25; two animals of either sex, the produce of one cow, \$25; bull any age, \$25; cow any age, \$25.

At the New England fair, Portland, Me., special prizes are offered as follows: Five females bred for butter and owned by the exhibitor four months prior to the fair, to be tested on the grounds by the Babcock test, first \$25; second, \$15. Butter-making cows owned by the exhibitor four months prior to the fair, tested upon the grounds by the Babcock test, first, \$25; second, \$15; subject to the general regulations.

In the test of milk cows to be made under the auspices of the Ohio State Board of Agriculture and the Ohio Agricultural Experiment Station, any time prior to August 22, 1898, following prizes are offered by the Holstein-Friesian Association of America: For the largest yield of fat from twenty-four hours' milk, taken from the cow at two or three milkings, at the option of the owner, the same day and determined by chemical analysis of samples taken by the tester from the experiment station, the cow having been milked out clean by the tester the evening before the test—first prize, \$20; second prize, \$15. For the largest yield of solids not including fat—first prize, \$20; second prize, \$15. In the championship class, cow making the largest amount of butter fat and largest amount of solids, not fat, in the above tests, \$25. In the grand sweepstakes, herd of five cows tested at one time, belonging to one herd and owned by one breeder, producing the largest amount of butter fat, and largest amount of solids, not fat, within twenty-four hours and according to the conditions of the test, \$50; cow producing the greatest amount of butter fat, \$50; cow producing the greatest amount of solid, not fat, \$25; cow producing the greatest amount of milk, analyzing not less than 3 per cent. butter fat, \$25. The above prizes are paid, of course, only in case the winning cows are of this breed and recorded in its herd book. The State prizes consist of silver cups for first prizes and medals for second prizes, except the grand sweepstakes, which is a plate.

At the Bethlehem, Pa., fair a \$10 prize is offered for the cow making the most butter in one day, which will be duplicated by the Holstein-Friesian Association if won by a cow recorded in its herd book; also a similar prize for cow making the most milk.

At the Eastern Maine State fair, beginning August 29, prizes for cow yielding the greatest number of pounds of butter fat from the milk drawn on the third day of the fair, of \$6 and \$4, respectively, first and second, will be duplicated by the Holstein-Friesian Association of America if won by a cow recorded in its herd book.

At the great St. Louis fair, St. Louis, Mo., the dairy cow test will be for a period of three days. The cows will be kept and fed at the option of the owners, but under the supervision of the superintendent of the dairy department or an assistant. Statements will be required from the owners giving age of cows, dates of calving and food given during the test. Milk will be tested for butter fat, and value of milk determined on basis of 25 cents per pound for the

butter and 15 cents per 100 pounds for the skim-milk. The milk product of the cows competing shall, during the test, be the property of the association, to be used in illustrative work in dairy hall. The prizes will be \$25, \$15 and \$10, to be awarded, respectively, to the three cows with three highest values of milk product. The Holstein-Friesian Association of America will duplicate any one or more of the premiums if won by cows recorded in its herd book.

A special prize of \$50 will be given by the Central Canada Exhibition Association, of Ottawa, and the Canadian Holstein-Friesian Association (being \$25 each) for the cow being the largest producer (products from milk only to be considered) at the Central Canada fair of 1898. Conditions: Rations fed to competing cows will not be considered. Cows will stand in the open stalls in full view of the public. Competition open to all pure-bred cows. The test will be conducted on September 21 and 22. Mr. J. A. Ruddick, resident superintendent of dairy school, Kingston, Ont., will conduct the test. Entries close Tuesday, September 13, with Secretary of Central Canada Exhibition Association. Entrance fee \$1 per head. The Canadian Holstein-Friesian Association will give \$15 for the best Holstein-Friesian cow which is registered in the C. H.-F. herd book which has not received first premium, and \$10 for the next best Holstein-Friesian cow registered in the C. H.-F. herd book.

The Holstein-Friesian Association of America will also give \$25 as first prize and \$15 as second for the cows making the highest product in accordance with the rules of the fair association in the Ottawa test; such prize winners to be animals which are recorded in the herd book of the Holstein-Friesian Association of America.

At Toronto Industrial Fair, August 29 to September 10, a special prize of \$50 is offered in the dairy test for the cow being the largest producer, products from milk only to be considered. The Holstein-Friesian Association of America will award \$25 if this prize is won by a cow recorded in its herd book, and also offers a second prize of \$15 under same conditions.

In the competitive dairy tests to be held at Vermont's greatest show, the Valley fair, Brattleboro, the Holstein-Friesian Association of America offers to duplicate all prizes if won by cows recorded in its herd book.

It is probable that other dairy tests will be inaugurated at various State fairs, and that liberal prizes will be offered and duplicated by the Holstein-Friesian Association.

Breeders of Holstein-Friesians in all sections of the United States and Canada will be interested more largely than ever in the dairy tests to be held at the various fairs of 1898.

The continued victories of the breed in all public tests for the past decade have made and continue to make a great impression upon enterprising farmers and dairymen, and tend more and more to convince the public of the enormous capacity of the breed in butter producing.

The Holstein-Friesian Association is very deeply interested in securing the full patronage by breeders of the dairy tests in all sections, and has this year again made a very large appropriation for duplicate prizes when won by cattle recorded in its herd books in competition with other breeds.

With the great revival of interest in all breeds, and especially in Holstein-Friesians, there will be no need of further urging of American and Canadian breeders to compete for the special prizes before enumerated.

F. L. HOUGHTON,
Secretary Holstein-Friesian Association
of America, Brattleboro, Vt.

Retrospect.

Five years ago, on the 12th of July, the undersigned took editorial charge of the Dairy department of the Kansas Farmer. With this issue the relationship of editor and reader is laid aside, as the management of the Dairy department passes into new hands.

In 1893 Kansas made a record at the World's Fair that astonished even our home people, outstripping many of the older dairy States with a splendid exhibit of high-scoring butter.

During these five years our State has advanced from a condition largely given over to the range cow, to a point where our dairy products have taken prominence in the leading markets of the world.

At that time we had less than 100 creameries; to-day there are nearly five times that number, and still increasing.

No prosperity is so permanent and lasting as that associated with the dairy cow. With her presence and motherly

help all our gloomy feelings and hard times give place to an era of substantial progress. The most intelligent and enterprising people are found where the largest number of cows grace the meadows and hillsides; where the cow and calf are reared, humanity and kindness are most likely to be shown.

During my term as editor it has been my highest ambition to see the dairy interests of Kansas reach that plane of financial standing that will reward the husbandman with an annual income that gives him an independence above the "ups and downs" of other farm products. Situated so favorably, Kansas should very soon, with broad acres of fine grasses and good water, be able to command the highest prices for the output of her numerous creameries and private dairies.

To pass an anti-oleo bill was my most earnest desire during the last two sessions of the Legislature, but "the best laid schemes o' mice and men gang aft a-gley."

The hope now is that Congress may pass an anti-color law, affecting all the States alike, and save so much bitter strife in our law-making departments at home.

In relinquishing the position of Dairy editor, it is with the utmost good feeling and well wishes toward that most important part of the Kansas Farmer, and I predict that in the change, no loss of interest or prestige will occur. My successor is Mr. D. H. Otis, of the Dairy department of the State Agricultural College, a young man reared on a dairy farm in Shawnee county, and now next to Professor Cottrell in his chosen profession. The propriety of placing this department in so close proximity to the State dairy school will be appreciated by the friends of dairying throughout the State, and will no doubt prove beneficial to both the Farmer and the college. Mr. Otis is a tireless student and worker and has the opportunity before him of helping the dairy business to grow and thrive with each succeeding year. In taking my leave I do not wish to drop into obscurity, or be soon forgotten by my friends and associates in this great cause, but follow in the wake of the up-rifted furrow as the light of experience may direct.

A. E. JONES.

Milk for Factories and Creameries.

J. H. Findlay, instructor in the "home dairy" at the Guelph, Ontario, dairy school, gives the following directions on the care of milk for cheese factories and creameries, in Bulletin 107, recently published:

"Patrons should exercise great care in the handling of milk supplied to cheese and butter factories. The cows should be kept in clean, light, warm and well-ventilated stables during the winter. Food likely to taint the milk should not be fed at any time. They should have access to pure water and salt at all times. The cow's udder should be brushed with a damp cloth or with a soft brush before commencing to milk. The milking should be done with clean, dry hands, and as quickly as possible, care being taken to get the 'strippings,'

"ALPHA-DE LAVAL" CREAM SEPARATORS.



De Laval Alpha "Baby" Cream Separators were first and have ever been kept best and cheapest. They are guaranteed superior to all imitations and in fringes. Endorsed by all authorities. More than 125,000 in use. Sales ten to one of all others combined. All styles and sizes—\$50. to \$225.—Save \$5. to \$10. per cow per year over any setting system, and \$3. to \$5. per cow per year over any imitating separator.

New and improved machines for 1898. Send for new Catalogue containing a fund of up-to-date dairy information.

THE DE LAVAL SEPARATOR CO.

RANDOLPH & CANAL STS., CHICAGO. 74 CORTLANDT STREET, NEW YORK.

which are the richest part of the milk. The main points to be observed in caring for milk are:

"1. Immediately after milking strain through a fine wire and cloth strainer.

"2. Remove the milk as soon as possible to a place where the air is pure.

"3. Aerate by using a dipper, by pouring, or an aerator.

"4. Keep the night's and morning's milk separate as long as possible. Use pails hung on hooks fastened to a pole under roof to hold each cow's milk separate over night.

"5. Do not cool for cheese-making, unless when holding Saturday night's and Sunday morning's milk until Monday. In hot, muggy weather, or at any time when it is likely to be overripe, milk should be cooled.

"6. Cool milk for the creamery to 60° or below after aerating.

"7. Protect the milk from rain and sunshine by having covered stands with latticed sides to allow a free circulation of air around the milk cans or pails.

"8. Wash all cans, pails, etc., immediately after use, in warm water; then with scalding water; and where possible, steam them. Wash cans at the creamery or factory where practicable.

"9. Do not return whey, sour skim-milk or buttermilk in the milk can."

The sunburned nose may thrive again some day, but no one brings the goodness back to sunburned hay.

Salt the ideas down in ink while they are fresh in mind.



Whether Uncle Sam

should acquire new territory, we don't know—but we seek conquests for Page fence in every zone. It is OUR POLICY, you know.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.



The Improved U. S. Cream Separators

In thoroughness of separation take the lead.
In completeness of design and ease of operation excel all others.
Are more substantially made and are superior in all points to all others.
All Styles and Sizes. \$75.00 to \$625.00.
Agents in all dairy sections.
Send for latest illustrated catalogues.
VERMONT FARM MACHINE CO., - Bellows Falls, Vt.



X RAYS SULKY PLOW.



HIGH LIFT.

Patented Stop

which carries the plowbottom when in the ground, thus saving bottom friction and making

Light Draft.



Powerful Lifting Spring

Small boy can handle it

Goes through Anything.

Plows gumbo or hard land when other plows will not work.

THREE YEARS of unparalleled success. Send postal for one of our X RAYS BUTTONS to wear in the lapel of your coat. Address,

DAVID BRADLEY MFG. CO.

189 E. Broadway, BRADLEY, ILL.

The Apiary.

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

Bees Robbing.

The most perplexing thing the bee-keeper experiences is robbing. At the close of the honey season there is always more or less of it. As a rule, colonies that are strong and in good condition generally do not allow robber bees to do them any injury; but, on the other hand, all colonies that are not in proper condition will sooner or later fall victims to the robber bees.

Almost any colony of bees may be induced to turn out robbers, as it is not beneath their modesty at all, but some colonies are much worse than others to pilfer and steal and turn to their account that which does not belong to them. While bees seem to be neighborly and may sit close to each other in hives on the same stand and never quarrel, yet they seem to deal with each other as strictly enemies, and at no time are they restricted from carrying off the property of another.

The bee-keeper need not have much trouble in this line if he is careful. Robbing in most cases may be traced to neglect on his part—of leaving honey exposed so the bees get access to it, and when they once thus get a taste of honey they will make a very diligent search for more, and every hive will be tried. Colonies that have no queen, as a rule, will not defend their hive and stores, and this causes more robbing than all other things combined. The oldest bees of the hive perform the duty of guarding the hive, and when all of the bees of the hive are young, as in case of moving a stand of bees to another location and the old bees returning to their former stand, places such a colony at the mercy of robbers. Hence this should not be done after the close of the honey season, except they are closely watched in this particular.

In nineteen cases out of twenty robbing is caused by mismanagement on the part of the bee-keeper, and is done by allowing colonies to remain queenless, or by thus depriving them of the guard bees by moving them from their location to a different one in the same vicinity. Bees do not always select the nearest hives to them to rob, but may go miles away to a neighboring apiary and do their nefarious work. I have had bees come from the forest—wild bees—and rob my bees in the apiary, or attempt it, and I have frequently got even with them by trapping them, in the following manner: Take an ordinary hive, without two frames of honey in it, leaving the hive sit on an ordinary bottom board, and on it a solid lid with a two-inch hole in the center. Take a piece of wire cloth about six inches square and roll it in funnel shape, having a hole in one end just large enough to allow a bee to go through, and the other end about two inches, or just right to fit in the two-inch hole in the lid. Fasten it securely in the lid, with the large end down, of course, and the small end of the cone pointing upwards. Now add an upper story to the hive, and instead of a lid on this, place wire cloth over it and have this upper story perfectly tight, so that no bee can escape from it except to go down the cone by entering the small hole in it, which not one in a hundred will do. Now locate this trap in the most convenient place for the robbers, and allow them to enter the hive in the usual manner. After they get well started, give them a small entrance to the hive and patiently await results. They will enter the hive, take a square meal of honey, and, seeing an opening directly above them, most of them will go right up through the wire cloth cone, into the empty chamber above and there remain. A part of them will go out at the entrance—just enough to go back home and bring their comrades with them. If at any time they become numerous in the hive, and you think they are not going into the trap fast enough, just close the entrance a minute and every one in there will go up into the trap. In this manner you can capture the entire working force of the bees in less than half a day, and they are yours, and, with a queen introduced to them and combs furnished them, you have a colony of bees. Bees thus captured must be kept in confinement five or six days, for if you let them out much sooner than this they will go straight back home.

We can only resort to the above plan with wild bees, for we cannot entrap our own or our neighbor's bees, so that we must adopt some other plan to stop robbing in this instance. How to tell when bees are robbing or are being robbed

is something that requires a little experience, at least to detect it at once. If there are many colonies present, and an unusual number of bees are seen flying about one colony and not another, it is some indication. But to look closely we can see the bees coming out of the hive full of honey and the lank, hungry-looking ones going in, which is always the reverse in colonies working. The only time this is imitated is in the case of young bees taking a first flight, when they, at or about 2 o'clock during the afternoon, come out thus almost in a body; but it is easy to distinguish these young, bright-colored bees from robbers.

The first thing to look after in case of robbing is the condition of the colony being robbed. But this cannot safely be done just at the time of discovery, for to now open the hive would expose them more than ever to the enemy, so to completely check it just throw a large blanket over the hive. This will end it at once and will remain so as long as the blanket is there. Frequently raise one corner of the blanket to let out the robbers and let in the occupants of the hive if any may be out. And right here let me say, that you can at any time of day bring all the bees of the colony home in a half hour's time by thus blanketing the hive. The hive being covered and darkened, no more bees will go out of it, and those coming home will go in when you raise the corner of the blanket, and then let it drop back again when these outside go in, and thus keep letting them in as fast as they gather about the hive. In the honey season there are perhaps one-third of the colony in the fields during the day, but none will be longer gone from the hive than half an hour, and the larger portion much less.

In exceptional cases, a colony seemingly in perfect condition will allow themselves to be robbed. They appear to be so dilatory as to allow robbers to pass by their guards seemingly unnoticed. This is a case to worry the apiarist most. I have made them fighting mad by killing a few bees on the entrance, and they would boil out of the hive and sting me, but, all the same, the robber bees could pass in, load up with their honey and carry it off. With all other cases, by giving a frame of brood or a queen to those out of condition would put the proper spirit of protection in them, but with the latter class there seems to be no redemption, and I have in such cases changed places with some other hive, and if the hive that was doing the robbing was discovered, I used it to make the change, with good effect.

Glory--Glory to God!

Dr. D. M. Bye, Indianapolis, Ind.:

Dear Friend and Brother:—I write to thank you for saving my life. I am now 76 years old; have had cancer for over twenty years. For the last six years it has been very bad—it was on my nose and under my right eye. Many physicians treated me. I was treated last by an old doctor who claimed to cure cancer, but I got worse. My nose was eaten nearly off. I was afraid to wipe my nose for fear I would wipe the end of it off. My nose and face had swollen so that I could not see. My sufferings were so intense that I was compelled to go to bed, as I thought, to die in despair. Some friend sent me the Religious Herald, published in Richmond, Va. Rev. H. H. Butler, who lives near me and who has visited me and given me much spiritual comfort during my sufferings, gave me your book, "The Message of Hope," saying, while there was life there was hope. He wrote to you for me. You sent the oils and I used them and began to improve immediately, and it was not long before my nose began to heal nicely. The great sore under my eye healed up, and I am now well. Glory—glory to God! I am now living and those terrible sores are gone. I can't find language to express my gratitude to you, dear Dr. Bye, for what you have done for me. I wish everybody suffering knew of your oil cure. God bless you.

Yours, in grateful remembrance, JESSE BALLARD, Suffolk, Va.

Suffolk, Va., May 8, 1895. Dear Dr. Bye:—You have made one of the most wonderful cures in the case of Bro. Jesse Ballard I ever knew. He was at death's door; now he is well. REV. H. H. BUTLER.

Persons afflicted will do well to send for free book, giving particulars and prices of Oil. Address Dr. D. M. Bye, Box 25, Indianapolis, Ind.

Now is a good time to turn the sheep into the apple orchard. They will eat all of the fallen fruit even better than the hogs. Sheep like the bitter taste of the small green apples.

MARKET REPORTS.

Kansas City Live Stock. Kansas City, July 18.—Cattle—Receipts, since Saturday, 6,804; calves, 957; shipped Saturday, 595 cattle; no calves. The market was steady on prime cattle and weak on grass and inferior offerings. The following are representative sales:

Table with columns: No., Ave. Price, No., Ave. Price. Rows include 69, 27, 38, 25 c & s.

WESTERN STEERS. 60, 40, 226 Tex., 108 Tex.

NATIVE HEIFERS. 3, 4, 3.

NATIVE COWS. 3, 1, 6, 1.

NATIVE STOCKERS. 2, 5 Jer.

Hogs—Receipts since Saturday, 5,212; shipped Saturday, 191. The market opened weak to 50 lower, but closed steady. The following are representative sales:

Table with columns: No., Price, No., Price. Rows include 73, 67, 77, 56, 55, 77, 77, 76, 84, 54, 98, 16, 10, 24, 21, 15, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50.

Sheep—Receipts since Saturday, 5,887; shipped Saturday, 1,841. The market was slow but steady. The following are representative sales:

Table with columns: No., Price, No., Price. Rows include 53 spg. lms., 10 spg. lms., 183 Tex., 234 Tex.

St. Louis Live Stock. St. Louis, July 18.—Cattle—Receipts, 1,800; market 100 higher for natives, Texans steady; native shipping steers, \$4.40@5.35; light and dressed beef and butcher steers, \$3.75@4.90; stockers and feeders, \$2.90@4.50; cows and heifers, \$2.25@4.75; Texas and Indian steers, \$2.35@4.25; cows and heifers, \$2.40@3.60.

Hogs—Receipts, 4,000; market 50 lower; yorkers, \$3.80@3.90; packers, \$3.75@3.95; butchers, \$3.90@4.02 1/2.

Sheep—Receipts, 3,500; market strong; native muttons, \$4.00@4.75; lambs, \$4.50@6.25.

Chicago Live Stock. Chicago, July 18.—Cattle—Receipts, 17,500; market steady to 100 lower; beefs, \$4.15@5.35; cows and heifers, \$2.50@4.75; Texas steers, \$3.60@4.65; stockers and feeders, \$2.10@4.65.

Hogs—Receipts, 45,000; market fairly active, 10 lower; light, \$2.70@4.00; mixed, \$2.80@4.02 1/2; heavy, \$2.80@4.07 1/2; rough, \$2.80@3.90.

Sheep—Receipts, 12,000; market strong; natives, \$3.25@5.15; westerns, \$4.10@4.85; lambs, \$4.00@6.60.

Chicago Grain and Provisions. Table with columns: July 18, Opened, High'st, Low'st, Closing. Rows include Wh't-July, Sept, Dec, Corn, Oats, Pork, Lard, Ribs.

Kansas City Grain. Kansas City, July 18.—Wheat—Receipts here to-day were 296 cars; a week ago, 68 cars; a year ago, 13 cars. Sales by sample on track: Hard, No. 1, 70@71c; No. 2 hard, 67 1/2@71c; No. 3 hard, 63@68c; No. 4 hard, 63@64c; rejected hard, 58@60c. Soft, No. 1 red, nominally 74@75c; No. 2 red, 72 1/2@75c; No. 3 red, 65@68c; No. 4 red, nominally 64@66c; rejected red, nominally 55@60c. Spring, No. 2, nominally 67@70c; No. 3 spring, nominally 62@64c; rejected spring, nominally 53@58c.

Corn—Receipts here to-day were 68 cars; a week ago, 68 cars; a year ago, 172 cars. Sales by sample on track: Mixed, No. 2, 31 1/2@32c; No. 3 mixed, 30 1/2@31 1/2c; No. 4 mixed, 31c; no grade, nominally 27@28c. White, No. 2, 32 1/2@35 1/2c; No. 3 white, 32c; No. 4 white, 30c.

Oats—Receipts here to-day were 13 cars; a week ago, 12 cars; a year ago, 30 cars. Sales by sample on track: Mixed, No. 2, 23 1/2@25 1/2c; No. 3 mixed, nominally 20@24 1/2c; No. 4 mixed, nominally 23 1/2c. White, No. 2, 27@27 1/2c; No. 3 white, nominally 26@26 1/2c; No. 4 white, 25c.

Rye—No. 2, nominally 40c; No. 3, nominally 36@38c; No. 4, nominally 36c.

Hay—Receipts here to-day were 71 cars; a week ago, 24 cars; a year ago, 58 cars. Quotations are: Choice prairie, new, \$5.25; No. 1, \$5.00; choice timothy, old, \$3.00, new, \$4.50; No. 1, old, \$7.00, new, \$6.00; clover and timothy, No. 1, old, \$6.00; new, \$5.50.

Kansas City Produce. Kansas City, July 18.—Eggs—Strictly fresh, 8 1/2c per doz. Butter—Extra fancy separator, 15c; firsts, 12 1/2c; dairy, 12c; store packed, 9 1/2c.

Poultry—Hens, 6 1/2c; broilers, 11c per lb.; roosters, 15c each; ducks, 6c; young ducks, 7c; geese, 4c; goslings, 7c; hen turkeys, 7c.

Horse Owners! Use



COMBAULT'S Caustic Balsam. The Safest, Best ELIXIR ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price, \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. WEE LAWRENCE-WILLIAMS CO., Cleveland, O.

young toms, 6c; old toms, 6c; pigeons, 75c per doz.

Small fruits—Blackberries, home grown, \$1.00 @1.10 per 24-box crate. Gooseberries, Michigan, \$1.00@1.25 per crate. Raspberries, red, home grown, \$2.50@3.00 per 24-quart crate; black, home grown, \$1.00@1.25. Cherries, home grown, \$1.50@2.00 per crate.

Vegetables—Roasting ears, home grown, \$5 @120 per doz. Cauliflower, home grown, \$1 @1.25 per doz. Tomatoes, 30@75c per peck basket. Cucumbers, \$2.00 per bu. box. Home grown peas, \$1.50 per bu. Green and wax beans, \$1.00 per bu. Lettuce, home grown, 30@50c per bu. Onions, new, 40@60c per bu. Beets, 25c per 3 doz bunches. Cabbage, home grown, 65@75c per 100-lb. crate. Celery, 40@50c per doz. Potatoes—New, fancy, home grown, 85@38c per bu. in car lots.

Elegant Sewing Machines. Buy direct. Get the best. Factory prices. Warranted 10 years; all attachments for fancy work. No money in advance. FREE 80 day trial. The Elegant Singer, \$15.50 to \$24.50; regular price, \$40 to \$48. The Handmade, Durable Ayres, \$16.50 to \$19.50; regular price, \$40 to \$60. The Singer Models, \$25.25. Send for large catalogue before you buy, and save money. Address P. ELY MFG. CO., 391 State St., Chicago, Ill.



The Farmer's Friend! Farmers, keep prepared for accidents or sickness in your family or among your stock by keeping on hand a remedy that has been tried by thousands and proven in every case to be what it is represented.

DR. A. B. SEELYE'S WASATUSA The Great Healer.

Is the quickest exterminator of pain, both internally and externally, in man or beast, that can be found. If every family knew what Wasatusa does when tried, they would not be without it.

The Dr. Seelye Medicine Co. offered time and again to refund the money when Wasatusa is used according to directions, and no benefit is experienced. Few bottles are returned but commendation is plenty. It immediately and swiftly relieves all pain of every kind. Farmers need it. A safe remedy for every home in America. Insist on your druggist getting it from the wholesaler for you. Price 50 cents and \$1 per bottle, or address

DR. A. B. SEELYE MEDICINE CO., ABILENE, KANSAS.

WASATUSA, The Great Healer, successfully cures Rheumatism, Colic, Cramps, Sprains, Cholera Morbus, Accidents, Summer Complaint, Diarrhea, Headache, Catarrh, Lumbago, Neuralgia, Scalds—all pain of all kinds whatever.

Have You Read These Books? They are devoted to the wonderful sights and scenes, and special resorts of tourists and health-seekers, in the GREAT WEST.

Though published by a Railway Company, THE SANTA FE ROUTE, they are literary and artistic productions, designed to create among travelers a better appreciation of the attractions of our own country.

Mailed free to any address on receipt of postage, as indicated:

"A Colorado Summer," 50 pp., 80 illustrations. 3 cents.

"The Moki Snake Dance," 56 pp., 64 illustrations. 3 cents.

"Grand Canon of the Colorado River," 32 pp., 15 illustrations. 2 cents.

"Health Resorts of New Mexico," 80 pp., 31 illustrations. 2 cents.

"Health Resorts of Arizona," 72 pp., 18 illustrations. 2 cents.

"Las Vegas Hot Springs and Vicinity," 48 pp., 39 illustrations. 2 cents.

"To California and Back," 176 pp., 176 illustrations. 5 cents.

W. J. BLACK, G. P. A., A., T. & S. F. Railway, Topeka, Kas.

Gossip About Stock.

Those of our readers who have any immediate need for representative Poland-Chinas will be very much interested in the new advertisement of Jas. Mains, Oskaloosa, Kas. He has quite an extra lot for ready sale and states that he will make very reasonable prices now.

We note with pleasure the increasing prosperity and demand for first-class Poland-Chinas in the Big Seventh district, southwestern Kansas. The latest announcement from that district is that S. W. Hill and T. H. Foley will hold a public sale of eighty Poland-Chinas, on September 27, at Hutchinson. Further particulars will appear in our advertising columns.

Canoline is a good disinfectant. It is manufactured and advertised by the Cannon Chemical Co., of St. Louis, Mo., and as the manager of the Clover Blossom farm, Nettleton, Mo., says, "It has no equal. I have used it for seven years for fine stock of all kinds, from the cow to the chickens. It will remove vermin of all kinds. It also seems to promote a growth of hair soft and glossy, and is the best thing I ever saw for putting fine stock of all kinds in bloom for show or sale. No owner of fine stock can afford to be without it."

ELDER LAWN FARM.—This Week we present the illustration of Gallant Knight 124468, who is the sire of as fine a lot of calves as was ever produced in the West, as may be seen at any time by a visit to Elder Lawn farm, owned by T. K. Tomson & Sons, Dover, Shawnee county, Kansas. A Farmer representative recently visited this farm, and through the courtesy of the proprietors was most cordially shown the other Short-horn breeding establishments in the vicinity, owned by Thos. Babst, Andrew Pringle, E. L. Knapp and F. C. Kingsley. One of the enjoyable features of this public-spirited firm is to invariably insist on their visitors, after looking over their Short-horns, visiting the herds of their neighbors, and this kind of a policy will make Dover and vicinity the Short-horn headquarters of Kansas. The Elder Lawn herd consists of about seventy-five head of Short-horns, besides other stock, such as Percheron horses and Standard-bred horses. They recently added to their draft horse stock the imported mare, Rosa Bonheur 10382, sired by Confident, he by Dunham's famous Brilliant. She was imported in 1889 and was first prize winner in Paris and at the Chicago horse show in 1890, besides receiving first premium wherever shown locally. Best Yet 15399, the grandson of Brilliant, is doing service at the head of Elder Lawn stud and has served this season over ninety mares. The main issue, however, at Elder Lawn farm is Short-horn cattle, and their old herd bull, Imp. Thistle Top 83876, who was bought at Col. Harris' in 1889 at a long price, has to his credit in this herd twenty females that are hard to beat. There are also three females by the Earl of Gloster which are a credit to any herd in the country. The herd at present is headed by the subject of our illustration, Gallant Knight 124468, sired by Galahad and out of 8th Linwood Golden Drop, by Craven Knight. Col. Harris still retains a lively interest in this bull, and in a recent letter he says: "Had you not taken him I should have kept him for my own use. When you are through with him I would be glad to know it, and if I have any Short-horns would like to get him back." The foregoing will give the reader a brief insight into the beauties of Elder Lawn herd, and a visit to the farm only is necessary to confirm all the writer has had to say about the skill, hospitality and other good things abounding at Elder Lawn farm.

Last week a Farmer representative visited Mr. J. M. Turley's farm, that lies near Stotesbury, Vernon county, Missouri, where the visitor now finds his herd of registered Poland-Chinas, that numbers over 100 head, coming on in a very satisfactory way. The herd boars are King Hadley 16766 S., Turley's Chief Tecumseh 2d 17978 S. and Missouri's Black Chief 19399 S. Here are three individual hogs that, taken separately or collectively, have in their immediate ancestry the equal of any herd boars in this country. It is actual merit and not combination or association boom value whose reputation is based on wind and deferred payments long since due and unpaid. King Hadley has for two grandsires two World's Fair winners, Claud 13375 S. and Hadley 9493 S. Individually King Hadley was good enough to win second money at the exhibit made last winter at Lexington by the Missouri Swine Breeders' annual meeting. Some thought him entitled to the first place. Turley's Chief

Tecumseh 2d was sired by the noted sire of show ring winners, Chief Tecumseh 2d 9115 S. His dam, B. B. Tecumseh 2d 42329, whose grandsires were Chief Tecumseh 7385 S. and Fountain Head, thus making her a granddaughter of old Chief Tecumseh. Here, then, is a line-bred Chief Tecumseh. Who has better breeding? His sons and daughters now coming on are plumb good ones and the kind every progressive breeder hopes to have but don't always get them. The boar, Missouri's Black Chief, is owned jointly by Messrs. Turley, Adamson and Hornaday. He was sired by Black Chief's Rival 19398 S. and out of Black U. S. Rose (42236), a granddaughter of old Black U. S. Such was his individuality and breeding that he cost his present owners \$450. The twenty brood sows are by such sires as Klever's Model (their birth antedating the reported death of their sire), Black Chief's Rival, Free Trade, Wilkes, Turley's Black U. S., King Hadley, Short Stop and Turley's Chief Tecumseh 2d. There are twenty very choice fall gilts ready for the prospective buyer and sixty spring pigs that are the pride of Mr. Turley's ambition to have extra fine Poland-Chinas. A few choice young boars will be priced. At the coming public sale, to be held at Fort Scott, Kas., September 3, Mr. Turley will have in fifteen head, eleven fall gilts and four spring pigs. The fall gilts are by Turley's Chief Tecumseh 2d, King Hadley and Chief I Am 2d. Of the spring offerings, four boars, two are by King Hadley and the others are to the credit of Turley's Chief Tecumseh 2d.

Recently a Farmer representative visited the Sunflower herds of Short-horn cattle and Poland-China swine, located at Harveyville, Wabunsee county, Kansas, and founded by Andrew Pringle. The Short-horn herd has been founded over twenty years, during which time general thrift, constitution and utility have been the objects sought. Mr. Pringle has always been a strong admirer of Scotch cattle, and while Col. Harris was conducting his Linwood herd he made annual visits there for the purpose of gaining information and selecting such stock as he thought would be of special value to the Sunflower herd. The result is the herd is full of the blood that made Linwood famous. The present stock bull, Sir Knight 124403, was bred by Col. Harris, sired by Golden Knight 108086, he by Craven Knight, out of Norton's Golden Drop, dam Imp. Sorrel, a daughter of Roan Gauntlet and universally considered one of the best cows ever at Linwood; second dam by Pride of the Isles, and third dam by Champion of England. Golden Knight was used freely by Col. Harris, and his get were good sellers in his closing-out sale. Sir Knight is a rich, strong red, and is a considerably heavier, deeper-ribbed bull than his sire. He shows good character, is an extra well fleshed bull, carrying his beef thick and good over the back, ribs, loin and thigh. His coat is of good texture, pleasing to the touch and, best of all, he is showing himself a sire of the right sort of stuff. The bull that preceded Sir Knight was Grandee 103468, also bred by Harris, sired by Imp. Thistletop, out of Golden Seal, she by Imp. Baron Victor, out of Imp. Thistle by Roan Gauntlet. The females in this herd are noticeable for their size, constitution and breed character. One of the families in which they take special pride descends from the cow Joyense (Vol. 39), bred by W. A. Harris & Son, sired by Golden Knight, dam Jolie (Vol. 28) by Reporter 113482, who was the sire of the dam of the champion show bull of 1897, St. Valentine. They have a heifer out of Joyense by Golden Lord, also a bull calf by Sir Knight. Another favorite family is the Juliettas. They come from the cow Julietta by Imp. Knight Templar 66658, the sire of the dam of the sire of Alice's Prince, now at the head of T. J. Wallace & Son's herd. This is good Scotch blood on the best of Bates foundation. They have been especially pleased with the cross of Craven Knight and Thistletop blood. Mr. Pringle considers his yearling bull, Sir Knight's Charmer, the best yearling bull in the West at the present time. A number of the cows in the herd have bull calves at foot. Intending purchasers of really first-class Poland-Chinas and Short-horns will make no mistake whatever by giving the Sunflower herd a call when needing stock.

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The Poultry Yard

KANSAS STATE POULTRY ASSOCIATION.
 President, A. M. Story, Manhattan.
 Secretary, J. W. F. Hughes, Topeka.

AN IDEAL BROOD COOP.

Editor Kansas Farmer:—As indicated in my communication in issue of July 14, I herewith present my idea of a perfect brood coop. It will be remembered that I stated that two or more hens should be set at the same time, so that the hatches could be doubled up, giving each hen twenty or twenty-five chicks to mother. This coop, built as below, will amply accommodate a brood of this size until time to place them in winter quarters, and will require the minimum of work to care for them properly and keep everything neat and clean. Five such coops would be amply sufficient to accommodate a colony of 100 to 125 chicks through the summer and fall. These five coops might be placed in a square of 30x30 feet, with the odd one in the center, thus occupying very little space and yet giving each brood sufficient room to preserve their identity, and prevent undue quarreling among the hens. They might be made without bottoms, in which case they should be so placed that during a storm no water would run under and make pools inside. (I prefer to be on the safe side, and use a good substantial bottom to all my coops, such as is shown in Fig. 2.) Many breeders and farmers continue to use old three-cornered coops, old bar-

ing his purse in the fall. If these same coops should be placed under a shed or even a tree, where they would be shaded through the heat of the day, at least, it would be an improvement, and would pay. The cracks can be battened, or the roof and sides could be covered with tarred paper, or "Neponset"—the latter much to be preferred, thus making them much cooler and absolutely water-proof.

Fig. 2 shows construction of the movable bottom mentioned. It should be made to just fit inside, not under edge, of coop. The object in this is to prevent any water from driving under coop during severe storms and flooding the inside. The pieces indicated by dotted lines are 2x4's, arranged as shown; the front ends projecting out exactly at the front corners, 1 or 1½ inches, for the coop to rest on; the back ends projecting the same distance, but placed 9 to 12 inches in from the corners; thus the coop rests solidly on the four projections, and fits snugly around the bottom. This is cheap, light and convenient, as it may be made of ½-inch lumber, and will keep the chicks up off of the cold, damp ground, and you can turn the coop back, or lift it off, so as to sweep or scrub the bottom and expose it to the sun. By turning the coop over on its back, free access is had to the entire interior to clean, spray with kerosene emulsion or carbolic water, and to whitewash thoroughly, keeping it sweet and free from all odors and lice.

For small flocks of twelve to fifteen chicks the coop may be divided by a partition in the center, to accommodate two broods, or the coop may be made

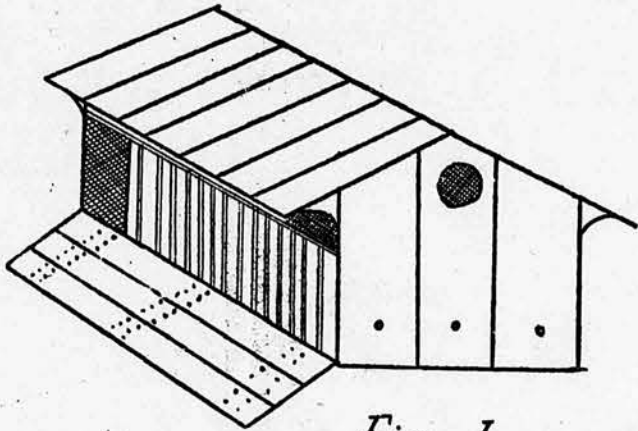


Fig. 1.

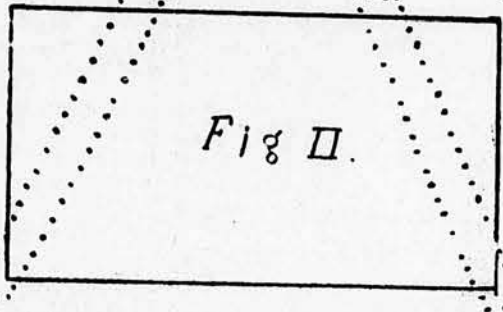


Fig. 2.

rels, leaky boxes, and I know not what, simply because they used to do so in olden times, or from sheer carelessness and neglect. Many know better, and are aware that the extra growth and value of one season's rearing would more than pay for new ones; yet they will keep on using the old out-of-date affairs, knowing that the sooner they shall resort to comfortable quarters, that the subsequent seasons will bring their reward in increased profit and satisfaction.

Fig. 1 shows the coop intended for a flock of twenty or twenty-five chicks with the mother hen until weaned. It should be 3 feet wide and 5 feet long at the base, with 30-inch posts, with a slatted frame in front, the slats to be 3 inches apart, this frame to be used while the hen is confined with her brood, but removed at weaning time, and three roosts inserted as indicated by the three dark spots near bottom. Above the slatted frame in front, which is 2 feet high, is an open space 6 inches wide covered with ½-inch wire netting, as is also a similar space at the back under the eaves, for ventilation. At the ends, also, are openings in gables 4 to 6 inches in diameter, also covered with ½-inch netting. In front, and hinged to the bottom of the coop, is a door the entire length of the coop and 2 feet wide, which is closed at night, making the coop cat, rat or vermin proof, and when let down serves as a feeding board. The roof should project at least 12 inches beyond the sides, forming an awning in front and rear to prevent rain beating in through the wire ventilators, and also to protect the flock from the sun, which would make the coop very uncomfortable in hot weather. He who thinks of these things, in building his coops even, does more than he is aware toward fill-

after the same plan, 30 inches square, which will give ample room for a brood of this size.

Any one handy with tools can make these coops, and most any old lumber will do, especially if covered with paper, and they will last for years, repaying in convenience, comfort to the flock, and therefore profit to the owner, their first cost every year, even if new lumber has to be bought and a carpenter hired to build them. Give this coop a trial, my professional or amateur friend, and see if I am not justified in calling it an "ideal coop," and if it will not do as I say—repay cost every season it is used.

C. B. TUTTLE.

Excelsior Farm, Topeka, Kas.

Poultry Points. THE OPEN FIELD.

The open field in poultry culture is the practical one; and the problem that is, or at least should be, of the greatest interest to the fraternity, is the utility problem—how to make poultry pay at market prices. There is money in the fancier's trade—in both eggs and fowls. That is generally granted. There is also clear profit to the farmer in the chickens he sells and the eggs that he takes to market, because the chickens grow up on what they find laying about loose in the odd nooks and crooks, and then hens go to the same storehouse for material to make their eggs, and so the farmer finds that poultry pays in a small way. There is not much to put out in raising chickens in the country, and hence a net cash balance when they are disposed of. This applies, of course, only to small flocks on the farm, for when extensive operations are undertaken, then in the

country as well as in town the expenses begin to count up.

There are seasons for raising chickens and seasons for forcing the layers, and it is only by observation of the season and the closing of operations at the right time of the year that a profit can be made from poultry in large numbers, selling the chickens and eggs at market price.

The laying season is now about over, and the person who has made it pay selling eggs for the market had now better sell the layers or during the comparatively non-productive autumn season the hens will eat more than they lay value in eggs, and so consume, in part at least, the profits of the egg season of the earlier months of the year.

Sell now the young stock, excepting some of the best specimens, and all the less valuable layers and the surplus cockerels—all of the latter, in fact, if the stock be not thoroughbred, and then, even, sell all of them but two or three that show decided superiority.

It takes close cutting in the big field—in the field of utility, to manage poultry in large numbers and make money at it, whether they be thoroughbreds or dunghills.

Because we can get a good lot of eggs from a few hens on the place—hens that have all the range they want, the table scraps, etc., it does not follow that we should get ten times as many eggs from ten times as many hens. Just why we need not expect to is one of the problems that the majority of us have not yet solved.

We believe, however, that the safest plan is to reduce stock to a minimum about this season of the year and branch out again about the time that frost shall have come again, and put our energies forth both for eggs and chickens at the season of the year when the products of the poultry yard are most in demand and bring the best prices.

THE DRY LAND DUCK.

Such a duck may exist, but we have no faith in it. Nature never put the web foot on a duck for it to wade through grass or to scratch for a living. The shovel-like beak, or "bill," as it is more commonly called, was attached to a duck's head for it to snap slugs and water bugs, to gather tender roots and herbs in marshy places. When a duck strikes the water its head takes a shoot downward just as naturally as the duck itself takes to the water, and the whole bent of its nature seems to be to revel in water, sand and mud.

There is the Muscovy duck, which we admit is a sort of a dry land fowl, but outside of the Muscovy we don't believe there is any other breed of ducks that will do its best away from pond, lake or stream.

People who have either of the latter three natural resorts for ducks can make them pay; but we would not advise any one to undertake the making of duck culture profitable on dry land.

TO GET RID OF LICE.

Where the chickens are still with the hen, go at night with a small can of kerosene and a rag. Saturate the latter with the oil, take the hen from over the chickens, hold her up by the legs with the left hand and rub the outer surface of her feathers with the oily rag,

and also give her feet and shanks a thorough oiling. Then replace her with the chicks and the lice will either die or leave if there should be any about.

Where the chickens are weaned but still roosting in the brood coop, put them out of the coop for a few minutes and saturate the bottom of it inside thoroughly with the oil and then put the chickens back. After doing this you need have no fear of lice about that brood for a week or more. This is a simple but very effective way to keep the young stock free of lice.—American Poultry Journal.

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A HERO'S LAST LETTER.

(Ensign Worth Bagley, killed in action in Cardenas bay, wrote his last letter to his mother only a short time before his death.)

Tiding of battle, of gloom and disaster,
Came from the spot where the war ves-
sels lay,
Like drops from the stormy clouds, faster
and faster,
Up from the waters of Cardenas bay;
There by the shots of the arrogant foemen,
Clad in his youth in the national blue,
Perished the best of America's yeomen,
Bagley, the hero, intrepid and true.

Over his last tender message a mother
Bends with a love that is holy and pure,
And as she reads with a grief that no
other
Can feel, she is praying for strength to
endure;
Dead is the boy whom she sent to the
battle,
Dead in the blue which he never dis-
graced;
Back from the years comes his innocent
prattle,
And babyhood's smile is by memory
traced.

Never again will he tell her the story
So modestly told of his deeds far away,
For silent he lies 'neath the folds of Old
Glory
That maddened the foemen in Cardenas
bay;
Softly and slowly she folds his last letter,
Written ere death struck the boy hero
down;
Long will it link her to him like a fetter
Which memories holy with kisses will
crown.

O, mother, weep not for thy boy in life's
even,
Though never again shall he come to thy
side;
The path is not long 'twixt the present and
heaven,
Remember how nobly and bravely he
died;
His affection for thee human kind cannot
measure,
A martyr he fell where the shattered
ship lay;
His last loving letter thy fond heart will
treasure
When Peace spreads her wings over Car-
denas bay. —T. C. Harbaugh.

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The Land of Big Red Apples, is an
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views of south Missouri scenery. It per-
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SPECIAL.—Until further notice, orders from our subscribers will be received at 1 cent a word or 7 cents a line, cash with order. Stamps taken.

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PIGS—Out of Victor Free Trade 38825, sired by Kiever's First Model 18245, \$20. F. W. Baker, Council Grove, Kas.

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CLOSING-OUT SALE—Of Light and Dark Brahmas, Buff and Partridge Cochins, and a few B. P. Rocks and S. C. B. Leghorn cockerels at \$1 each until gone. Some of these are show birds. Stamp for written reply. Address Sunny Side Poultry Yards, Walton, Harvey Co., Kas.

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FOR SALE—Thirteen fine Poland-China boars. Call on or address H. W. McAfee, Topeka, Kas. (Farm three miles west of Kansas avenue.)

WRITE TO ALEX RICHTER—Hollyrood, Kas., how to sub-irrigate a garden, etc., and cost of same. Send him the size or dimensions of your garden, and he will give full information.

FOR SALE OR EXCHANGE—Two Galloway bulls. Address W. Guy McCandless, Cottonwood Falls, Kas.

640 ACRES ARKANSAS LAND—Two miles from station, to trade on Kansas farm. Will pay balance or assume incumbrance. E. W. Melville, Eudora, Kas.

BLOSSOM HOUSE—Opposite Union depot, Kansas City, Mo., is the best place for the money, for meals or clean and comfortable lodging, when in Kansas City. We always stop at the BLOSSOM and get our money's worth.

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

FANCY BRED PIGS—Six by Hadley Jr. 13314, dam Kiever's Model Tecumseh 4244. Price \$15. F. W. Baker, Council Grove, Kas.

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THE STRAY LIST.

FOR WEEK ENDING JULY 7, 1898. Clay County—J. G. Cowell, Clerk.

COLT—Taken up by C. S. Malcolm, in Chapman tp. (P. O. Longford), on June 7, 1898, one sorrel colt with two white hind feet and white star in forehead, aged about 1 year; valued at \$20.

FOR WEEK ENDING JULY 14, 1898. Ellis County—Jacob Bissing, Clerk.

MARE—Taken up by Frank Staut, Hays City, June 15, 1898, one sorrel mare, 3 years old, spot in forehead, left front foot and left hind foot white; valued at \$15.

Rawlins County—Frank Johnson, Clerk.

MARE—Taken up by George W. Gordon, in Celia tp. (P. O. Elsmore), on June 20, 1898, one bay mare, weight about 900 pounds; valued at \$15.

Marshall County—James Montgomery, Clerk.

STEER—Taken up by Claus Nelson, in Marysville tp. (P. O. Elsmore), one one-year-old red steer with white face, no other marks or brands; valued at \$15.

Jackson County—J. W. Atwater, Clerk.

MARE—Taken up by W. F. Oden, Holton, June 15, 1898, one gray mare, about 8 or 10 years old; valued at \$10.

MULE—By same, one sorrel gelding mule, about 3 years old; valued at \$15.

MULE—By same, one mouse-colored stud mule, 2 years old; valued at \$15.

None of said stock have any marks or brands. Allen County—C. A. Fronk, Clerk.

MARE—Taken up by L. T. Donoho in Elsmore tp. (P. O. Elsmore), one bay mare, weight 1,000 pounds about 10 years old, badly wire out; valued at \$10.

MARE—By same, one bay mare, weight 1,000 pounds, about 10 years old, white on right hind foot; valued at about \$15.

FOR WEEK ENDING JULY 21, 1898.

Douglas County—Harry Dick, Clerk.

FILLY—Taken up by Theodore H. Rudiger, in Wakarusa tp. (P. O. Lawrence), May 10, 1898, one black filly, about fourteen and a half hands high, 2 years old, white star in forehead; valued at \$15.

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KNOCKED IT OUT in the First Round. Microbes are responsible for lots of misery. They cause the HOOD CHOLERA, CHICKEN ROUP, SHEEP SCAB and FOOT ROT.

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PUTS MICROBES TO SLEEP so they will never wake up. Will heal sores and bruises quickly. We have direct branches in the principal cities of the U. S. from whence goods are shipped. We will send you a sample gallon, freight prepaid, \$1.50. Agency is worth having. Write for full particulars. WEST DISINFECTING CO., 208 1/2 E. 57th St., New York.

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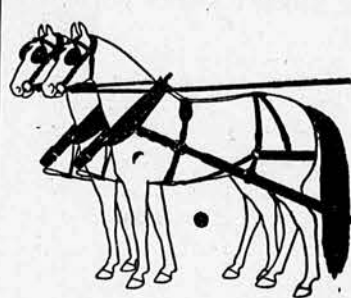
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125 head in herd. Herd boars, King Hadley 16766 S. and Turley's Chief Tecumseh 2d 17978 S. Forty-six head of fall pigs that would be considered "the best" in any herd in United States. Write for particulars. Prices right and stock guaranteed. J. M. TURLEY, Stotesbury, Vernon Co., Mo.

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We have been in the show ring for the last three years, always winning the lion's share of the premiums. If you want prize-winners and pigs bred in the purple, we have them. All ages of Poland-China swine for sale. Write or come and see us. We have an office in the city—Rooms 1 and 2 Firebaugh Building.

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ADDRESS ALL CORRESPONDENCE TO..... C. S. CROSS, Emporia, Kansas.

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Table with 3 columns: Cattle and Calves, Hogs, Sheep. Official Receipts for 1897: 1,921,962; Sold in Kansas City 1897: 1,847,673.

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