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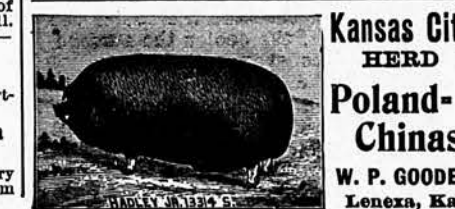
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King Perfection 4th 18744 S. at head of herd, assisted by Tecumseh Wilkes 12694 S. and Lambing Ideal 14050 S. The sire of last named is Gov. C. by Black U. S. We have added several very finely bred sows to our herd. Write for particulars. Address either

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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.

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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.

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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 breed Shropshire sheep, M. B. turkeys and B. P. Rock chickens. Write.

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

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125 head in herd, with Sir Knight 124403 at the head. Females are by such imported Cruikshank bulls as Craven Knight 90223, Thistle-top, Master of the Hollis, Earl of Gloster 74523, Viscount Richmond, Knight Templar 66658, etc. Forty very choice brood sows. Young stock for sale.

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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.

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FARM READ THIS SPECIAL OFFER:

Will sell February and March pigs during August for \$16 each, delivered at any railroad station in Kansas or Nebraska. They will weigh 150 pounds.

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Mains' Herd Poland-Chinas

Headed by the two grand sires, One Price Chief 20114, he by Chief Tecumseh 2d 9115, out of Alpha Price, she by One Price 4207; Model Combination 19853, grandson of Klever'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.



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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.

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SEVENTY-FIVE HEAD OF SHEEP FOR SALE. Pure-bred Cotswold and American Merinos. This includes our tops and show sheep; must be sold by October 1; rams and ewes, all five years old and under. Write at once to Hague & Son, Box 140, Walton, Harvey Co., Kas.

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For sale, a few very fine early and large ram lambs from eligible to registry sires and high-grade ewes. Write for description and reasonable prices to L. A. Seely, Lyons, Kas.

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A splendid lot of yearling and spring lambs at low prices. Write your wants, or better, come and select. Address,

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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.

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

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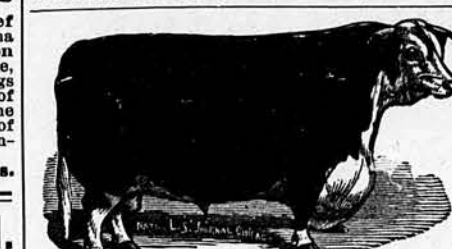
Bulls in service: Kodax of Rockland 40731, who has won more first premiums at leading State fairs in past six years than any other bull in Kansas; Java 64045. Thirty-five yearling heifers and seven bulls 3 to 7 years old for sale.

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THE Harris bred bull, GALLANT KNIGHT 124466, a son of Gallahad, out of 8th Linwood Golden Drop, heads herd. Females by the Cruikshank 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.



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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.

Agricultural Matters.

MIXED HUSBANDRY.

Paper read in the short course in agriculture, at the Agricultural College, by the late Hon. Joshua Wheeler, of Nortonville.

What do we mean by mixed husbandry? A mixture is a compound of different ingredients. Hence the man that practices mixed husbandry is a man that raises different kinds of crops—a variety of crops.

We believe that facts and experience will show that the man that raises a variety of crops is the most successful farmer. Let us note some of the reasons for this and the advantages of a system of mixed husbandry. First, in a system of mixed husbandry there is a more equal distribution of the labor upon the farm. There is but a limited time for the sowing and planting of all kinds of crops. Commencing with the winter wheat, we have from August 1 to October 1—sixty days—to prepare the ground and sow the seed, and that in a season of the year when we are subject to intense heat, and a lack of sufficient moisture to put the soil in proper condition for seeding. Hence the ordinary farmer cannot sow a very large acreage. I question if the farmer owning 200 acres of land can sow to advantage more than twenty-five acres of wheat.

In the spring we find the season quite limited for the sowing of spring wheat, oats or flax. It is quite doubtful if a good crop of oats can be expected unless sown by the first week in April, and flax by April 15. This brings us to the time for preparation for the corn crop. We have but about eighty days for preparing the land, planting the corn and tending the crop. This brings us to the time of harvesting the wheat, cutting the hay, harvesting the oats and flax. All farmers know how rapidly the grains mature with our hot sun, and how it taxes our strength to secure them without waste. It requires some thought and business calculation to adjust the acreage of the different crops so as to secure them in their season without loss. But the man that has twenty-five acres of wheat and twenty-five of oats has a better chance to secure them than the man that has fifty acres either all in wheat or all in oats. The wheat can be secured before the oats are ready for the harvester. To sow all the farm to wheat or oats or plant it all to corn it would be difficult to tend and secure the crop in season without loss; but divide the farm between the three and you have the labor more equally divided, and all the crops can be better cared for. Another advantage in a system of mixed husbandry is that it is a safer system. There are but few seasons when all crops are equally successful. We are almost certain to have a partial failure of some.

Our seasons are variable. No weather prophet has yet arisen who can forecast what a Kansas season will be. It often occurs that in the spring and early summer sufficient rain will fall to mature our crop of wheat and other small grains and be insufficient for our crop of corn. The next season may be the reverse—insufficient for the small grain and abundant for the crop of corn. If we plant some of all kinds to which our climate and soil is adapted, we shall be quite certain to succeed with some. Eastern Kansas, at least, is well adapted to the growing of wheat, rye, oats, flax, corn, sorghum, potatoes and the tame grasses. These crops have been successfully raised in this part of the State for almost half a century.

The great advantage in the system of mixed husbandry is that it enables the farmer to maintain the fertility of the soil. The planting or sowing of the same crop year after year must eventually exhaust the soil. This is probably the main cause of the impoverished condition of the soil in the Southern States, and the same cause is producing the same effect on the rich lands in the West. This method of farming will in the end make rich land poor. We believe the impoverishment of the lands in the West has done more damage to farmers of these Western States than corporations, trusts and combines.

The rotations of crops is practiced everywhere by successful farmers. It has been practiced in Great Britain for centuries, and to-day these lands that were in cultivation before the Norman conquest are yielding abundant harvests. In the systems of mixed husbandry and rotation of crops the tame grasses are an important factor. The changing from wheat to corn and from corn to oats, and back again from oats to corn and wheat will not enrich the soil, although it may not exhaust it as rapidly as planting one crop continuously. To keep up the soil there must be seeding to grass and the application of fertilizers; hence the grass raised upon the farm and the grain

raised upon the farm (except wheat) should be fed upon the farm. Even the straw and the corn fodder should be carefully saved and fed; so the keeping and feeding of stock is an important part of the system of mixed husbandry. But keep good stock. This is not the age for scrubs of any kind.

The dairy should be a part of the system of the general farmer. If properly attended to nothing will pay him any better. Neither should the poultry yard, vegetables and fruit be neglected. The aggregate amounts of revenue from these will be a considerable increase to the income of the farmer. Last year the potato crop was the best paying crop in our section of the State, from \$30 to \$40 per acre being realized from many patches.

In conclusion, let me say to my brother farmers: What is expected of us is that we keep our calling abreast of the times. To do this there must be better methods and marked improvement all along the line of farm management and farming operations. Margins are close and there is sharp competition. It is thus with farm products. Australiasends her meats from the other side of the globe and puts them in competition with ours to the consumers of Europe. Wheat raised in the valley of the Ganges competes with that raised in the valley of the Kaw and the prairies of the West. In the markets of London and Liverpool a necessity is laid upon us that we produce two blades of grass where one grew; more bushels of wheat on a less acreage. Diversify our products as much as possible. Our products put upon the market must be of the best quality. Use brains as well as brawn, thereby maintaining our position in the battle of life in the struggle of the century.

Wheat for Low Ground.

A gentleman in southern Sumner county, Kansas, has written to the State Department of Agriculture, saying:

"I would like to be informed as to the best variety of hard wheat to sow on the rich bottoms here; something that will not winter-kill, and has a stiff straw. Our hard wheat here appears to have about run out; having too fine a straw it falls down before ripe enough to cut with a binder. On the uplands it does not grow so rank and stands up all right."

Secretary Coburn has submitted this inquiry to some of our leading millers and wheat experts for their opinions, and their replies are as follows:

Messrs. Colburn Bros., of the Queen Bee Roller Mills, at McPherson, say: "The hard Turkey wheat is undoubtedly what he should sow. We have a choice quality for this purpose, small in size of berry and heavy in test, of the darker variety. We also have a small quantity grown from seed imported from Russia two years ago, having been sown the first year since in Harvey county, and one year in McPherson county, which makes it well acclimated."

The Moundridge Milling Company, of Moundridge, in the same county, expresses about the same views, and add: "We think it would be a good idea to have some new seed of the Russian Turkey variety imported every year, in order to keep up the quality, as there appears a tendency of this hard wheat to become softer here, in course of time, both as to standing the winter and losing the hardness of grain, and so approaching more and more the quality of our soft wheats."

The Rea-Patterson Milling Company, of Coffeyville, in Montgomery county, writes: "In our section of the State only soft wheat is raised; we think, however, that the Turkey Red might be sown to advantage, as that variety is commanding a premium of 1 or 2 cents per bushel over the ordinary hard wheats in the markets at the present time."

Finney & Company, of Neosho Falls, Woodson county, say: "In our section of Kansas not much hard wheat is raised, but from what we know of it we think the Turkey wheat would not be subject to the objections your correspondent raises to the wheat he is now growing, as the Turkey has a stiff straw. Last year we procured from Parsons, Labette county, and distributed to some of our farmers a new wheat called 'Currell's Prolific,' which has given the best satisfaction of any wheat grown in our section. It is a soft wheat, not bearded, with a strong, stiff straw, and where sown alongside of other varieties has yielded from one-third to one-half more, and has a much plumper berry. We think it will prove a very valuable variety."

Santa Fe Route dining cars are equipped with electric fans.

The electric fans now operated in Santa Fe Route dining cars are desirable and seasonable accessories to an already unsurpassed service.

Water Losses by Evaporation and Seepage.

The Colorado Experiment Station has issued a bulletin dealing at length with the losses of water from storage reservoirs. The conclusions reached are summarized as follows:

1. The losses from reservoirs are from seepage and evaporation.
2. The seepage losses are dependent on the condition of the reservoir site, therefore different for different sites.
3. The seepage losses were determined on a series of reservoirs near Fort Collins, in the winter of 1895-6 and 1896-7.
4. The seepage losses may be great. In the lakes under measurement, the losses in some cases were less than from evaporation alone.
5. In some cases lake may gain from seepage from irrigated lands, and the gain may be more than the combined loss from seepage and evaporation.
6. In the cases where loss from seepage occurred, the loss was at the rate of about two feet in depth over the area of the lake, per year.
7. This amount does not necessarily apply to other sites, and other observations are needed before general statements respecting loss from this source can be made.
8. The seepage decreases after the lake is first filled from the effect of silting, and from having filled the porous ground underneath and connected with the site.
9. Even in sand there is a limit to the amount of seepage and the time during which the loss is large.
10. After sand beds connected with the reservoir are saturated the losses from seepage will decrease.
11. The loss increases with the depth, probably nearly as the square.
12. The losses may be lessened, though not entirely prevented, by silting.
13. The silting process is more efficient with small reservoirs, because of the better distribution of the silt.
14. If the loss from seepage is not more than two feet per annum, the sites may be considered as practically water-tight. In the case of canals, the losses often average more than that in twenty-four hours.
15. The losses from evaporation, in the cases examined, are greater than those from seepage.
16. The evaporation is not necessarily the same from adjacent bodies of water.
17. The amount of evaporation increases with the temperature of the water, with the wind, and diminishes with increased moisture in the air.
18. From the standard evaporation tank at the experiment station, the average evaporation for eleven years has been fourteen inches.
19. Evaporation proceeds when the water is frozen, but at a diminished rate, averaging about one to one and one-half inches per month.
20. The evaporation at night is the same as during the day, the difference being less with the increase of the size of the bodies of water.
21. The loss by evaporation from several lakes exceeded that from the standard tank.
22. The loss from the lakes was about sixty inches per year.
23. The increase is due to higher temperature of water and to freer exposure to the wind.
24. In some of the summer months, the lakes lost twice as much as the standard tank.
25. The lower temperature of water at high elevations, and the lower dew points, tend to decrease the evaporation.
26. The diminished barometric pressure tends to increase the evaporation, amounting to 14 per cent. at 3,000 feet, and to 18 per cent. at 10,000 feet, over the evaporation at 5,000 feet.
27. Every mile of wind movement in twenty-four hours increases the evaporation by from 1 to 2 per cent. over the evaporation if calm.
28. The winter period is longer at the high elevations.
29. For the whole year, the evaporation in all probability is considerably less at the high elevations than at the low ones.
30. Evaporation is lessened by any influence which diminishes the wind or decreases the temperature of the water.
31. Protection of lakes by wind-breaks is in many cases practicable, and in small lakes sometimes desirable. In the large lakes the benefit is by reducing the wind velocity; in small lakes both from effect on wind and by lessening action of sun.
32. The deeper the lake the cooler the water as a whole, the cooler the surface, consequently less evaporation.
33. Assuming a loss of five feet in depth per annum, an area of 100 acres would require three-fourths cubic foot per second for the whole year to make good the losses from evaporation; one of 500 acres would require three and one-

half cubic feet per second, considerably more than would be used to irrigate an equal area.

34. The net loss to the reservoir would be the sum of the above losses from seepage and from evaporation, diminished by the rainfall, a combined loss which may be considered as a depth of six feet in one year.

35. As irrigation reservoirs are usually full for a few months only, the loss is much less than this for the high water area.

Alfalfa-Growing in Shawnee County.

Editor Kansas Farmer:—This valuable forage plant has not yet been introduced to any large extent in Shawnee county, but tests have been made which demonstrate beyond a doubt that on the high, well-drained uplands (as well as on the sandy loams of our river bottoms) it will succeed admirably, and produce more and better forage than any other known grass.

Any well-drained upland that has lime soil will grow this valuable plant successfully. It should be planted upon land which has been very thoroughly broken and subsoiled to the depth of sixteen to twenty-four inches. Any care and expense incurred in thorough preparation for this crop will be amply repaid, as it lasts for many years, constantly increasing in value. It should never be pastured the first year, but if any weeds make their appearance the mower should be run over the ground with the cutter-bar high enough so as not to cut off the young plants, and in that way you can keep the weeds from smothering the young plants, and the cutting will be a mulch to protect the young plants from the hot sun. After the first year it will take care of itself.

It should be cut for hay as soon as in full bloom. Three and sometimes four cuttings can be made during one season. I don't think it is a good plan to pasture this plant at all with any stock but hogs, as with cattle, sheep and horses it is liable to cause bloat, as they will never stop eating. It is very rich in protein or muscle-forming elements, which makes it valuable in connection with corn. All animals relish it and thrive upon it and it is a splendid feed both for flesh and milk. It contains rather more water than red clover, so that it requires care, considerable time and good drying weather to make it into hay.

As a renovator and enricher of the soil alfalfa resembles all the clovers, and its long roots draw ash elements from depths to which no other crops can go. The toughness and size of its roots make it somewhat difficult to plow under.

After the second year it will produce enormous yields per acre. One acre of good land well set to this plant will feed twenty head of hogs through the whole season, even if it was as dry as the past spring, which we all know was a hard test for all other tame grasses. On the farm I now live on, is about twenty acres which was sown some four or five years ago. It was sown in the spring on wheat, and pastured all fall and winter. This plot of land never has been half cultivated, and was a very poor stand to begin with. I cut about ten acres of this plot the first week in June and got near a ton of hay per acre. The second crop I cut for seed. The seed crop would easily have made five bushels per acre, but the amount of rain we had at the time of cutting made the loss very heavy, as it had to be stirred a number of times to get it dry and the seed shattered very badly. I cut this again the second week in October for hay, and by the 25th of October there was fine pasture on this.

Now, to get a stand of alfalfa, more depends on the manner of sowing than on the season. If I was going to plant alfalfa, first I would subsoil the plat as deep as possible, then harrow and plank the seed-bed till the ground was thoroughly pulverized, then let it rest for a couple of weeks, put the harrow on and harrow it thoroughly (and if it was dry use the plank), and sow the seed with a press drill if I could get one; if not, sow broadcast and harrow with the smooth way of the harrow and roll or plank, and I will guarantee you a stand if you put it in this way.

Alfalfa makes the most growth the first year below the ground. If you are sowing for seed, fifteen to eighteen pounds of seed is enough for an acre, but for hay or pasture twenty to twenty-five pounds ought to be sown. If you sow alfalfa don't sow it with a nurse crop. If you sow in spring, sow as soon as the danger of frost is over. If you sow in the fall, sow the last of August. Every farmer ought to have a piece of land sown to alfalfa and see how his pigs will thrive on it. It is one of the best all-round forage crops one can raise. Try it.

J. B. ZINN.

The Stock Interest.

THOROUGHbred STOCK SALES.

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

AUGUST 16—H. W. Cheney, Clifton George, E. E. Axline and H. C. Sydnor, Poland-Chinas, Fough's sale barn, Kansas City.
AUGUST 24—Henry Comstock & Sons, Poland-Chinas, Cheney, Kas.
SEPTEMBER 8—Hornaday, Young and Turley, Poland-Chinas, Fort Scott, Kas.
SEPTEMBER 8-14—W. H. Wren, Poland-Chinas, Marion, Kas.

AN OUTING AMONG THE COWBOYS.

Editor Kansas Farmer:—The other day I went up into my 700-acre pasture to see my herd of Short-horns and to look after the fences a little. After looking over my calves of 1898 crop, concluded that they were as good as the 1897 crop, for which I secured, in spot cash, \$40 per head at weaning time, which "you know is a little interesting."

Thinking the boys all over Kansas would like to know what we are doing down here "on the Medicine river," I took a few notes of this trip for our old friend, the Kansas Farmer.

Nature was so kind as to make the western part of our county (Barber) so rough and hilly that a man nearly tips over horseback riding on these hills, that are too rough to be cultivated, and I am glad of it, for nature's crop of bunch and buffalo grass is the best crop that ever was raised.

My trip was to Deer Head, twenty-five miles west of Medicine Lodge, then to Sun City, on the Medicine river. My first stop was with Peter Hovers, on Cedar creek. He will pull a fellow off his horse with a warm handshake and take him into a nice white house, sheltered among the hills, with fields of waving cane and Kaffir corn. The hills are covered with a mat of buffalo grass. One sees two hundred head of Herefords and Short-horns, fat as eels, and some bulls, which the owner pointed out with pride, that he got of Cross at his sale, and they are smashing fine fellows.

Next I went on to the headquarters of our cattle industry, Deer Head. I could not stop and see all the boys, or I should not reach home in a month, but I stopped with Mr. Gentry, who has a heart big as a church bell kicking under his vest. On the morning after my arrival he ran in from a little pasture his saddle horses, fat, sure-footed, swift fellows, and a call brought six hounds, two trailers and four runners. Soon we had our saddles tightly girthed and were off for a whole day's ride in his forty-mile pasture. We had gotten nicely started, when the trailing hounds came out of some timber, baying, running like the wind, on a trail. Mr. Editor, if you want to feel your hair rise up and your horse bound off after those hounds, just do as I did—go and see Mr. Gentry. After a mile's run on the trail, up jumped Mr. Jackrabbit, and then see those grayhounds of his, that never fail to take in the game—rabbit, coyote, deer, or anything. The thing you will be doing is to sock the spurs into that horse's sides, trying to keep up with the "band," who are baying at every jump. You will forget all about publishing a paper, and everything else, until you see the hounds close up on their game, and then the dodging and the final struggle for life.

Then, on we went. I saw 100 big red three-year-old steers, got from bulls I sold him. Those 100 head are worth \$5,000 to-day, quick. Then on among hills, where 500 cows and pretty calves were lying; then steers of all ages—hundreds of them; then a coyote race; then a stop at a cool spring and a rest; then on to another, and it was noon when we reached the south side of his pasture, and at 4 o'clock we were back at his house.

The next morning I went with Mr. Screnton into his 7,500-acre pasture, where we found his thousand steers at home. Then we went on north, into Dole's and Shaw's miles and miles of pasture, full of fat cattle grazing on the hills, drinking out of cool springs and creeks. We passed through the 3,000-acre pasture of Riley Lake, that is filled with big four- and five-year-old Western steers, wild as deer. Here we are at the foothills of the Medicine, where our last Sheriff, Tonk Mills, is located. His pretty Herefords covered his pastures on the first bottoms of the Medicine river. Next is George Hindricks, who is building a big, fine house on the banks of Bear creek. He is never in his element unless he owns a thousand head and trades, next day, for 500 more, and then, next day, he is sure to sell the thousand head to some fellow; for George is a straight, good cattleman and a splendid fellow.

"On to Sun City," way up on a high divide, where some of our old-time cowboys are sleeping. As I rode my pony around among those graves, that were

made years and years ago, I saw the little fences that had protected those graves scattered down the hill, "by the wind and the rain." I was there once before, years ago, and such scenery! Oh, it is beautiful! And I thought—I just pulled my horse off down the hill, and I thought, when the final round-up comes we will all meet again!

Soon I was on Turkey creek, at Uncle Dan Pierce's, as every one calls him, who welcomes one and insists that he stay a month with him. He raises lots of currants and grapes. He will take you down in that cool cellar, all shut up. You will come out and he will set you down to a table loaded with all kinds of fruit, and everything. He did me. One just gets fat there, he has such a good time. Uncle Dan has a 12,000-acre pasture full of cattle and the best draft horses in the country.

Then I went on down the Medicine river to Mr. Heargis', who has a pasture six miles long and four miles wide full of she cattle. I was at his house all night and had a nice time.

Next I went on to Mr. W. C. Miller's, who is located on the Medicine river, one mile north of Lake City, in a lovely big white house. We had a half day's hard riding through his big pastures—four miles of river pasture and fields—and looking over his 400 Herefords and 300 Short-horns, the fattest cattle I saw on my trip. He has the all-round best ranch in this country, or any other, for he never has to feed a thing till January—from the 1st to the 15th—and there is timber in all his feed lots, and water,

fastened together by means of wooden pins inserted in the ends of the 2x4, which project through the mortise of the front and back sides. The roof is made of 12-foot grooved roofing, cut in 6-foot lengths and cut again into 2½ and 3½-foot lengths, and is fastened down with hooks, as shown in the diagram.

Mr. Killough sets it up facing the south in cool or cold weather, and when the sun shines the front section of the roof is turned back.

Being made in sections, it is no trouble to move it. If a sow has farrowed out in the pasture or lot, the pen may be set up around her without disturbing her, and leave her and the litter well protected in all kinds of weather.

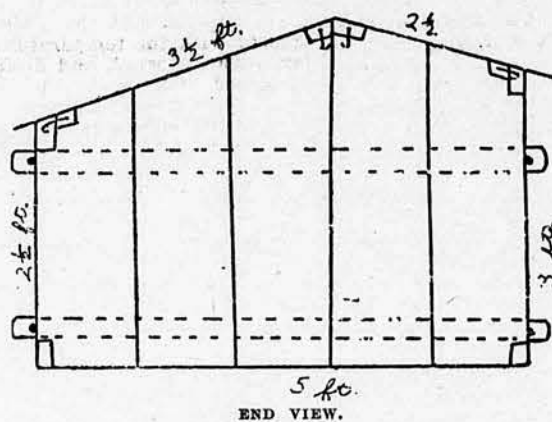
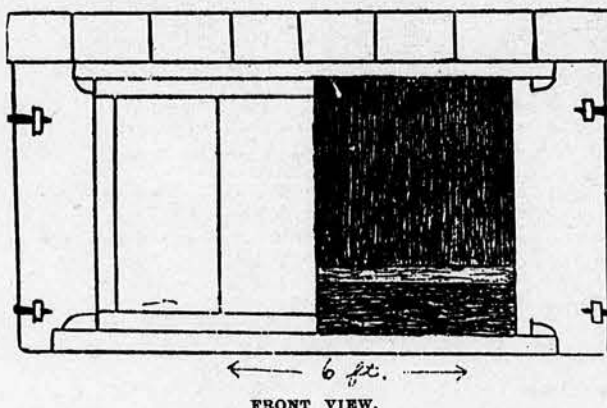
F. D. TOMSON.

Sheep Department.

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

Selling Sheep Young.

We have frequently advocated selling sheep which are intended for market as early in life as possible. Under present conditions of the live stock industry the earlier any animal goes to the market the more profitable it may be made to the producer. In the sheep industry this involves two or three contingencies. If a lamb is to be sent to the spring lamb market it is sent quite young and it is useless to castrate it if it is a ram lamb,



A CONVENIENT HOG HOUSE.

too. He has one feed lot of 330 acres, with grass as high as the fence, all in timber. There he keeps his late calves and cows, and they lie down in that big grass, while he lies in a feather-bed, happy, and he don't care whether the wind or snow blow or it is still. He told me he could sleep in the daytime this hot weather, for his calves grow just the same, as it is all Kaffir corn and "raising cane" with him. He is all right, just as hundreds of our cattle boys are here in the "short grass" country, in Barber county.

My article is too long now, for you can't follow me home, for I stopped at so many ranches that were so interesting. Come and see us, Mr. Editor. Go in any direction and it is just the same.

ELI C. BENEDICT.

Medicine Lodge, Kas.

A Convenient Hog House.

Editor Kansas Farmer:—I would like to inquire of some reader of the Kansas Farmer, through the columns of your paper, as it would benefit some one besides myself, for a design for a good handy hog house, adapted to the farrowing and feeding of sows and pigs.

Blue Rapids, Kas. J. C. FINLEY.

I submit herewith a diagram of a portable hog house and farrowing pen, in response to inquiry of J. C. Finley, of Blue Rapids, Kas., referred to me. It presents the front and end view of farrowing pen designed by J. R. Killough, and in use at Meadow Brook farm, Ottawa, Kas.

It is built of ordinary twelve-inch pine lumber, with frame of 2x4, and is made in six sections. The sides and ends are

Food Caused Pain

Catarrh of the Stomach Cured by Hood's Sarsaparilla.

"I was taken sick about a year ago with catarrh of the stomach. At times I would have a ravenous appetite and at other times could not eat. My food caused me excruciating pain. I was running down so fast I had to stop work. My friends urged me to take Hood's Sarsaparilla. I did so and soon began to feel better. The disagreeable symptoms of disease gradually passed away and flesh and strength returned. I owe it all to Hood's Sarsaparilla." MARY L. CUMMINGS, North Brookfield, Mass. Remember

Hood's Sarsaparilla

Is the best—in fact the One True Blood Purifier. Sold by all druggists. \$1; six for \$5.

Hood's Pills cure Liver Ills; easy to take, easy to operate.

be provided with plenty of feed, and the results will be more satisfactory and will be more quickly attained by giving the lambs access to feed during their life than to let them depend on their dams alone. When the writer was a boy lambs were worth from \$2 to \$3 each, and the man who could sell a lamb at the latter figure had the best sheep in the country. Many are the instances where flocks have been sold at weaning time for lambs, and the lambs were not counted in the sale. In this day, where is the man with a sixty to eighty-pound lamb at its mother's side, and perhaps two of them, worth from \$4 to \$8, who will consent to let them go in with the sale of a flock of ewes at the market price for the dams? These men are exceedingly scarce.

It will pay to get an early maturing breed of sheep, feed them well and sell the produce that is not to be kept for breeders as early as possible after they have attained a selling weight. It will not pay any man in this late day and with the present improvement in live stock lines to keep anything else. It is fooling away time, a waste of feed and energy, and an all-round loss to the man who undertakes it.—Iowa Homestead.

Kaffir Corn for Sheep.

Editor Kansas Farmer:—I notice, in Farmer of 21st ult., some inquiries about feeding Kaffir corn to sheep. I have had a little experience. We fed Kaffir to fattening sheep three seasons, with very satisfactory results. One season we had about 1,200 ewes and wethers and some 500 lambs (enough to judge feed by). We shocked the Kaffir, headed it, and cut heads up into half-inch lengths, with power cutter, and fed in troughs; used a wagon and drove around to the troughs, filling them quickly. They were made about three feet wide and four inches deep. The fodder, after heading, was fed for roughness. We also filled the hay racks daily with alfalfa hay. We fed the Kaffir grain in the evening, about all they would clean up. In the morning we fed shelled corn in the same way, always cleaning out the troughs after each feed. Water was always before them. Those sheep topped the Kansas City market two or three different times, at different shipments. So much for Kaffir in mixed feeding (and variety must be maintained). However, old sheep will not digest all the seed, nor will they regurgitate on the mixed feed as they will on corn alone, and that is quite an item. Have never fattened any on Kaffir exclusively. Now for actual experience of the next Kaffir man.

ISAAC DETHRIDGE.

Drought in Australia has carried off enormous numbers of sheep; the loss is estimated at 60,000,000. That this must materially affect the mutton market of the world cannot be doubted. Britain must look to this country and to Argentina for her supplies, and the latter country is not much better off than Australia just at present. A survey of the situation as to the world's mutton stocks indicates a highly promising future for sheep feeders in this country. Moreover, it should be remembered that wool is on the rise. The immense stocks accumulated in this country by the wool trust anticipatory to the enforcement of the new tariff have of course clogged the market and the activity is not so great as it would otherwise be, but with the demand from mills that have government contracts and the general healthy tone to nearly all branches of trade it seems but a matter of a short time before these huge stocks will pass into consumption, and with them once out of the way the wool market promises a gratifying degree of buoyancy.—Breeder's Gazette.

WEEKLY WEATHER-CROP BULLETIN.

Weekly Weather-Crop Bulletin of the Kansas Weather Service, for week ending August 1, 1898, prepared by T. B. Jennings, Section Director:

Topeka, Kas., August 2, 1898.

GENERAL CONDITIONS.

Hot weather prevailed till near the close of the week. The rains have been local, the best rains occurring in Logan, extending northeast through Sheridan, Norton and Phillips; in Kearny, extending southeast to Clark; from Hutchinson, in Reno, down the Arkansas valley through Sedgwick, Sumner and Cowley; in Labette, Cherokee and Crawford; in Johnson, Wyandotte and Leavenworth; from Cloud to the northern part of Marshall; thence southeast to the southern part of Brown; and in Lyon and Coffey; over the rest of the State lighter showers have occurred.

RESULTS.

EASTERN DIVISION.

Corn is in fine condition in the southern tier of counties and in Crawford, from Chautauqua north to Wabunsee, and from Greenwood northeast through Coffey, Franklin and Johnson; it has been damaged in Bourbon, Neosho, Wilson, parts of Woodson, Morris, Shawnee and Marshall, and is in fair condition only in the other counties. Plowing for wheat is becoming general where the ground is not too dry. Prairie hay is general and a good crop is being secured; much hay has already been shipped out of Woodson. Flax harvesting, stacking and threshing are progressing and a good yield is promised, though Franklin reports but half a crop.

Allen county.—The great drought has been broken and all crops are now doing well; flax yields the best ever known here.

Atchison.—Corn still needing rain; local rains have helped to keep things growing; flax being harvested; fall plowing begun but ground too dry for good work.

Bourbon.—Corn being damaged by the dry, hot weather; oats threshing out light weight; hay crop better than the average.

Chautauqua.—Corn has done finely; threshing still progressing; haying and plowing being pushed; soil in good condition for the plow.

Cherokee.—A fine growing week; good rains; corn in prime condition; wheat ground plowing up mellow.

Coffey.—Corn all right, will be a good

Osage.—Hot, dry week, relieved by showers, which have benefited the corn, especially late corn, although more rain is needed, early corn fired in spots; tomato outlook not very encouraging; haying progressing; but little improvement in pastures; stock water low.

Pottawatomie.—Corn needing rain; plowing for wheat nearly done.

Riley.—Temperature 3 degrees above normal, sunshine above, rainfall 0.70 below; early corn suffered some before the rain.

Shawnee.—Corn damaged some by dry weather, needs more rain; ground in fair condition yet; haying in progress, good crop.

Wabunsee.—Corn looking well but begins to need rain; prairie and tame hay very good; cattle doing well; fruit, except peaches and grapes will be scarce.

Wilson.—Hot, dry week; some corn badly fired; mulched potatoes are green and nice, all others are dying; grapes are rotting on the vines.

Woodson.—Corn considerably damaged by the hot, dry weather but was much revived by the shower of the 30th.

Wyandotte.—Corn badly blown down; ground in good condition for plowing.

MIDDLE DIVISION.

Hot winds have occurred in some of the counties on two or three days. The corn in this division has been more or less damaged by the dry, hot weather of the week, though in many of the counties local showers and rains have revived much of it, and in some it is in good condition at close of the week. Plowing for wheat continues where ground is not too hard. Threshing is in progress, and in Cloud, Harvey, Osborne and Reno good yields of wheat are being obtained. Haying is becoming general, but the grass is drying up in many counties.

Barber.—Hot, dry week; corn, cane and Kaffir needing rain badly; soil too dry to plow; water in streams plentiful and cattle doing well.

Barton.—Very dry; corn feeling the need of rain badly; Wednesday and Friday very hot winds; farmers cutting corn for fodder.

Butler.—Most of the grain fields cleared and plowing begun, some ground in fine condition; some corn suffering; Kaffir corn looking very fine; haying being pushed.

Cloud.—Hot, dry weather has damaged corn, upland corn badly damaged; threshing being pushed, with fair yield of wheat; oats not good.

ally are yielding well, though Ford reports late-sown wheat as nearly a failure. Cattle are doing well throughout the division, and range grass is generally good yet. Native grasshoppers are becoming quite a pest.

Clark.—Showers keep grass in fine condition; Kaffir corn and cane doing well.

Decatur.—First four days hot; fine for harvesting but getting dry for corn and forage crops; corn is not injured any but needs rain soon; growth of alfalfa on high ground checked.

Finney.—A growing week for all kinds of crops, with good rains on 24th and 28th; grasshoppers injuring vegetation badly in some places; cane doing well; cattle on range doing finely.

Ford.—Wheat harvest completed, early wheat turning out well, late-sown wheat is nearly a failure; oat crop is light; barley is yielding from thirty to forty bushels per acre; plowing for wheat has begun; corn promises well; range grass good and cattle are in fine condition.

Grant.—Very hot and dry; crops drying up; range grass cured nicely; stock doing finely.

Gray.—Several rains this week revived growing crops; second alfalfa crop being cut, lighter than usual; hot weather with little wind.

Hamilton.—A hot week; vegetation at a standstill in the southern part, all crops doing well in the north part; wheat harvest about over, wheat and barley are of good quality; fruit dwarfed; second crop of alfalfa almost a failure between drought and grasshoppers; no hot winds.

Kearny.—Hot and dry; corn and fodder crops have passed through a trying ordeal but the week ends with a good rain; the second crop of alfalfa is in stack; grasshoppers numerous in localities.

Logan.—Harvest nearing completion and yield fully equals expectations, what remains to be cut will be affected by lodging and grasshoppers.

Morton.—Hot and dry, needing rain; the wheat harvest about over, fair yield of good quality.

Ness.—Hot, dry week, damaging all forage crops; corn will be light crop, some fields of late corn are not suffering much; hot winds Wednesday, doing much harm to crops.

Norton.—Dry weather hurting corn in northwest part of county, over the rest of the county corn is doing finely; second crop of alfalfa being cut; grasshoppers doing some damage to crops and cutting the twine in some of the grain shocks.

Rawlins.—Very warm with some wind; harvest nearly over; corn needing rain; grasshoppers growing more troublesome.

Sherman.—A dry week; corn needing rain, is not injured yet; threshing begun, wheat yielding well.

Sheridan.—Harvest over and threshing begun, fair to good yields reported; corn doing finely; potato crop good; grasshoppers doing much damage; peaches and grapes very promising.

Thomas.—Harvest nearly over; getting very dry and corn needs rain; grasshoppers are doing much harm to corn; hot wind on 26th.

Trego.—Very dry and hot; corn and sorghum hay badly damaged; threshing begun, some pieces of bound (best grain is bound) grain yielding very well; millet is being cut; wild hay will be cut soon if it does not rain.

Wallace.—Wheat, barley and oats all about cut; cutting second crop of alfalfa about through; corn and other crops doing fairly well; need rain; grasshoppers doing considerable damage to gardens.

Gossip About Stock.

C. W. Southard, a hide and tallow merchant of Wichita, Kas., has recently brought from Texas a flock of 2,000 Angora goats.

Any stock farmer desiring the services of an experienced herdsman will do well to notice advertisement in "Want Column" of A. T. Ellison, Bunceton, Mo.

H. H. Hague & Son, of Walton, Kas., in sending copy for change of advertisement, inform us that they have rented their farm and now offer for sale their fine herd of Cotswold and Merino sheep, seventy-five, which have been selected by them with greatest care and which would be a valuable addition to any flock in the State of Kansas. They will be pleased to receive correspondence from any one desiring to purchase fine sheep. Write them at Walton, Harvey county, Kansas.

Clarence J. Norton, of Morantown, Allen county, Kansas, has sold a very nice Shropshire ram lamb to Noah L. Bowman, of Garnett. The lamb was sired by British Prince 85800, from Cooley's 21 72376 out of British Princess 63585. The lamb's dam was Kirk's 69 55940, from Grand Delight 2 31295 out of Miller's 1535 26320. The ram will be delivered in August, and Anderson county men should look him over and see what prairie grass will do. This lamb weighs 100 pounds and has never had any grain, neither has his dam since he was born, and she was roughed through the winter with as little corn as possible.

Elm Beach farm, of Irwin & Duncan, Wichita, Kas., was visited last week by a Farmer representative, and the grandest collection of Sir Charles Corwin swine in the West was seen. The stock is in the very pink of condition, with all the style and quality any one could desire. The young herd boar, Harry Faultless Jr., is the pride of the farm and will undoubtedly add to the laurels of Elm Beach. The young gilts and boars are an unusually thrifty and handsome lot and buyers should not neglect to visit this farm and see the stock. Several show herds could readily be strengthened here and then have some to spare. It is next to impossible to visit this herd and not make some purchases. There is



From the day that a young man starts out to seek his first position to the end of his business life, his health has a world to do with his success. When a young man applies to a business man for a position, his personal appearance has a deal to do with the outcome. "Personal appearance" does not mean dress alone. It does not mean exterior cleanliness alone. A young man may be clean, so far as soap and water will make him, but be disfigured by unsightly pimples, eruptions and ulcerations on the skin. These are due to impurities in the blood. The blood becomes impure because it is improperly nourished. Instead of receiving the life-giving elements of the food, it receives the foul emanations of indigestion, biliousness and costiveness. The reason that Dr. Pierce's Golden Medical Discovery is the best remedy for disorders of this description is that it goes right to first causes. It gives a man an appetite "like a horse." It facilitates the flow of digestive juices. It corrects all disorders of the digestion, and makes the assimilation of the life-giving elements of the food perfect. It invigorates the liver. It purifies and enriches the blood. It makes the muscles strong and active. It tones and steadies the nerves. It makes a young man look as he should—strong of body, alert of brain and clean and wholesome of skin. Medicine dealers sell it, and have nothing "just as good."

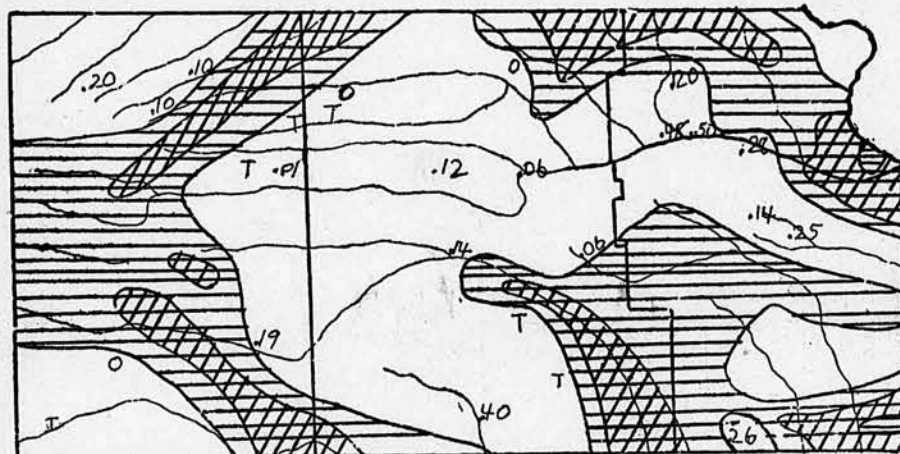
"I had eczema in its worst form," writes Austin Ramsey, Esq., of Saltillo, Huntingdon Co., Pa. "I tried three doctors but got no relief. I thought it would set me wild. It itched and burned so badly. The neighbors thought I would never be cured. I took your 'Golden Medical Discovery' and am now well."

also the best and largest lot of mature brood sows the writer has seen this season.

The Champion herd of Poland-Chinas, owned by R. S. Cook, Wichita, Kas., was seen by a Farmer man last week, and he was well repaid with the visit by the sight of a regular "cracker-jack" herd. This herd is now in the finest condition since its establishment and contains more richly-bred stock, and will certainly add to its reputation this season at the leading fairs. The crop of pigs and young stock can hardly be surpassed anywhere, and breeders wanting successful pointers on Poland-Chinas should not fail to visit Mr. Cook. The Poland-China push should keep their eyes on Wichita. Watch out for Cook and Irwin, as they now have the stock that will make Wichita famous.

The attention of breeders of Poland-Chinas is called to the coming sale of W. H. Wren, of Marion, Kas., on September 24. There are several features of this sale which should attract the attention of breeders generally: First, Mr. Wren is an established breeder; has been in the business for years; has a reputation for fair, square dealing; has been a prominent buyer at many of the public sales, not being content with anything but the best. Mr. Wren proposes to put nothing but the best in the ring and let buyers decide the question as to value. Full particulars will be found in catalogue, which will be mailed to inquirers. Send for a catalogue and attend the sale. Col. J. N. Harshberger, Lawrence, and S. A. Sawyer, Manhattan, will be the auctioneers.

In another column appears the advertisement of Messrs. J. R. Killough & Sons, Ottawa, Kas., offering for sale thirty pigs of March and April farrow. A Farmer representative recently visited the herd, which contains blood of the leading strains. In 1884 Mr. Killough brought the foundation stock from the famed Poland-China center—Butler county, Ohio. The present herd boars are J. R.'s Tecumseh 18147 by Sydnor's Tecumseh, dam Lady F. by Job Clark, and Klever's Me, dam Strong Bone 2d. The pigs offered are the get of J. R.'s Tecumseh and, like their sire, possess good size, bone and constitution, and at the same time style, color and markings. Among others is a line-bred litter of eight by J. R.'s Tecumseh, dam Tecumseh Jewel by Virgin Wilkes Tecumseh, by Chief Tecumseh, dam Ideal Sunset. Another choice litter is out of Ottawa Belle by Upright Wilkes, dam the large Bess McKinley. Bijou Wilkes by Missouri Wilkes, dam Lady Bijou, has a litter of seven that are extra. Two granddaughters of the World's Fair winner, J. H. Sanders—Dot Sanders and Ideal



SCALE LESS IN 1/2, 1, 1 1/2, 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, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100. ACTUAL RAINFALL FOR WEEK ENDING JULY 30, 1898.

crop; flax about all out and stacked, threshing in progress, yield fair; some early corn broken down by wind in eastern part.

Crawford.—Corn doing well; flax, wheat and oats which remain out are being damaged by rain; ground in fine condition for plowing.

Doniphan.—Corn doing well but needs a little more rain; oats fairly good.

Elk.—A good week for corn; the rain of the 29th and 30th will make early corn; prairie hay very heavy.

Franklin.—Showers; corn growing rapidly and doing well, except some of the late planting, which is being injured by chinch bugs; flax that has been threshed, yields half a crop.

Greenwood.—Corn generally in good condition, some pieces damaged by drought; haying in progress, quality and quantity good; plowing for wheat has begun but ground too dry to work well.

Jackson.—Condition of corn improved by showers and cool weather; tame hay harvest over, heavy crop, saved in good condition; in some places on low ground a worm is reported cutting off roots of corn.

Jefferson.—Local showers, but a good soaking rain is needed for corn; chinch bugs damaging millet, and corn near oat fields; corn has been much revived by the showers; prairie haying in progress; some corn broken off and stacks untopped by Thursday's wind in northern part; grapes rotting; apples poor crop; peaches medium, late peaches poor.

Johnson.—Early corn in roasting-ear and growing rapidly, late corn in good condition; early potatoes very good; pastures good and stock of all kinds looking well; ground in good condition for plowing; haying in progress.

Labette.—Plowing for wheat about done; corn and pastures doing well; grapes still rotting; haying and threshing in progress; fruit crop a poor prospect.

Leavenworth.—Good showers; timothy in stack; prairie haying in progress; plowing for wheat begun; corn improving.

Lyon.—Corn prospect now more certain. Marshall.—Week hard on corn but the rain of 28th benefited it in the northern part some, prospects for a crop are poor; ground too hard to plow; apple crop very poor; millet almost a failure.

Morris.—A hot week with a few scattering showers; most of the well-cultivated corn in good condition yet, late corn badly burned; haying in progress; ground getting hard to plow.

Neosho.—Corn in central part badly fired, in northern generally in fair condition; much plowing for wheat being done; apples and peaches a poor showing.

Cowley.—Showers have put corn in fine condition.

Edwards.—Hot week; most of the corn damaged; grasshoppers damaging late alfalfa.

Harvey.—Plowing for wheat, ground hard and dry; some threshing, wheat yield fair, oats better; corn needs rain badly.

Kingman.—Dry, hot and very windy; hot winds for three days; corn and grass suffering for rain.

McPherson.—Hot and dry; light, scattering showers over parts of the county; corn doing fairly well in places, in other localities dried up; plowing suspended, too dry and hard; much threshing being done.

Marion.—Local showers during the week have revived corn and pastures; corn damaged extensively by hot, dry weather.

Mitchell.—Dry and hot. Osborne.—Corn badly injured; pastures drying up; threshing in progress, wheat very good.

Ottawa.—Dry, windy week; corn about ruined; cane drying up very fast; some already cut; everything drying up.

Phillips.—Hot and dry, but no hot winds; clean corn is in fair condition; weedy corn past redemption; wheat threshing in progress, yield not up to expectations.

Reno.—Much corn damaged beyond recovery; ground too dry to plow; threshing still in progress, wheat generally turning out well and very good quality; the rains of last of week will bring out late corn and feed.

Russell.—Corn damaged by the hot, dry weather; hot winds on 27th, hard on all vegetation; threshing in progress.

Saline.—Corn badly damaged by hot winds; cane is badly wilted, pastures burn; some of the second crop of alfalfa left for seed.

Sedgwick.—Very dry week; hot wind Friday, followed by rain.

Smith.—A bad week for corn; fields are estimated to be damaged from a third to a half, although rain soon may make the crop much better.

Stafford.—A hot, dry week, very destructive on growing feed; corn is suffering for rain; threshing in progress.

Washington.—Some hot wind on two days; corn very much in need of rain, much damage to corn already in the southern part; threshing and haying progressing.

WESTERN DIVISION.

A dry, hot week, but corn is doing finely in Ford, Sheridan and most of Norton, and is doing fairly well in Wallace, Rawlins and Decatur; in the other counties where it is being raised it has been more or less damaged. Harvest is nearly over and threshing has begun; wheat and barley gener-

Sanders—contribute their portion to the offering. These pigs will be sold worth the price, and those desiring either males or females will do well to correspond with Messrs. Killough & Sons. A few females that are not registered but of fine quality are also offered and will prove a good investment.

A Farmer representative visited the herd owned by Mr. B. W. Gowdy, of Garnett, last week. The herd numbers about sixty head, with the Cruickshank Ambassador and Kirklevington Duke of Shannon Hill 126104 by Winsome Duke 11th now in service. Like Mr. Chambers' herd, there is an abundance of top Bates blood represented. Seven uniform yearling heifers are by Valley Champion. The most notable matrons of the herd are Constance of Hazelhurst by the \$3,000 Imp. Oxford Duke of Cothelwaite, a roan; 8th Lady Bates of Shannon Hill by Kirklevington Prince 103935, and Gazelle of Oakwood by Peculated Wild Eyes 109-348. Mr. Gowdy thoroughly understands the value of good blood and intends to build up a herd of unusual quality throughout. He has for sale several young bulls of high character.

A few years ago Mr. C. E. Chambers, of Mont Ida, Anderson county, brought from Iowa some choice bred cows, principally of the Bates strain, from the noted Elbert & Fall stock. The young things now in the herd, a number of

is a rare opportunity for the buyer to select from so large an offering of strictly high-class stock.

The Shady Brook herd, headed by Cheney's Chief I Know, was established some years ago and is still owned by H. W. Cheney, of North Topeka. It is a pleasant drive of four miles from North Topeka to the farm, for several adjacent farms compose Shady Brook, and it is the intention of Mr. Cheney to stock with Poland-Chinas to their full capacity a division on each separate farm, in which case Mr. Cheney will control the largest herd of Poland-Chinas in the West. In the selection of Cheney's Chief I Know to head the herd Mr. Cheney revealed sound judgment. This yearling boar represents a hardy, vigorous, growthy type which is always in demand and the type to which all successful breeders must adhere. The pigs, the get of Cheney's Chief I Know, manifest the same valuable qualities as their sire. The herd numbers in all more than a hundred, the greater portion of which were sired by World Beater Gem 19378 by World Beater 36563 (O), dam Gem's Sister 2d, litter sister of Gem, the World's Fair winner, bred and exhibited by R. S. Cook, of Wichita, Kas. A draft of ten gilts has been selected for the Kansas City combination sale, made by H. W. Cheney, North Topeka, Kas.; H. C. Sydnor, Corder, Mo.; E. E. Axline, Oak Grove, Mo., and Clifton George, Lathrop,

den Lad 115691, bred by C. B. Dustin, the famous Illinois breeder. A few choice young bulls only for sale this season.

Wait & East's Poland-Chinas.

Among others that are engaged in breeding pedigreed Poland-Chinas very successfully in Kansas are Messrs. Wait & East, whose farms are situated one mile west of Altoona, Wilson county, where one now finds over 200 head, consisting of five herd boars, forty brood sows and 150 fall and spring pigs. The present herd was founded early in 1895 by as fashionable blood and strong individuality as could be had within the corn belt of this country. Last year the premier herd boar, Black Stop Chief 41419 A. or 16316 S., was out at the head of a show herd that made a two-months' circuit at the fairs held in southern Kansas. On return home the herd had captured more first premiums and sweepstake prizes than had all their competitors combined. This harem master, Black Stop Chief, was bred by Adamson, of Fort Scott, sired by Black Stop 10550 S., he by the World's Fair winner, Short Stop 6938 S. His dam, Lady K. 2d (30198), was by Cherokee Chief 9372 S. Individually he is a good one, a prize ring winner, and, better still, the getter of big, smooth, growthy, early-maturing pigs. If a little different breeding is sought and as strongly fashionable as the most advanced breeder would want,

Kill Competition.



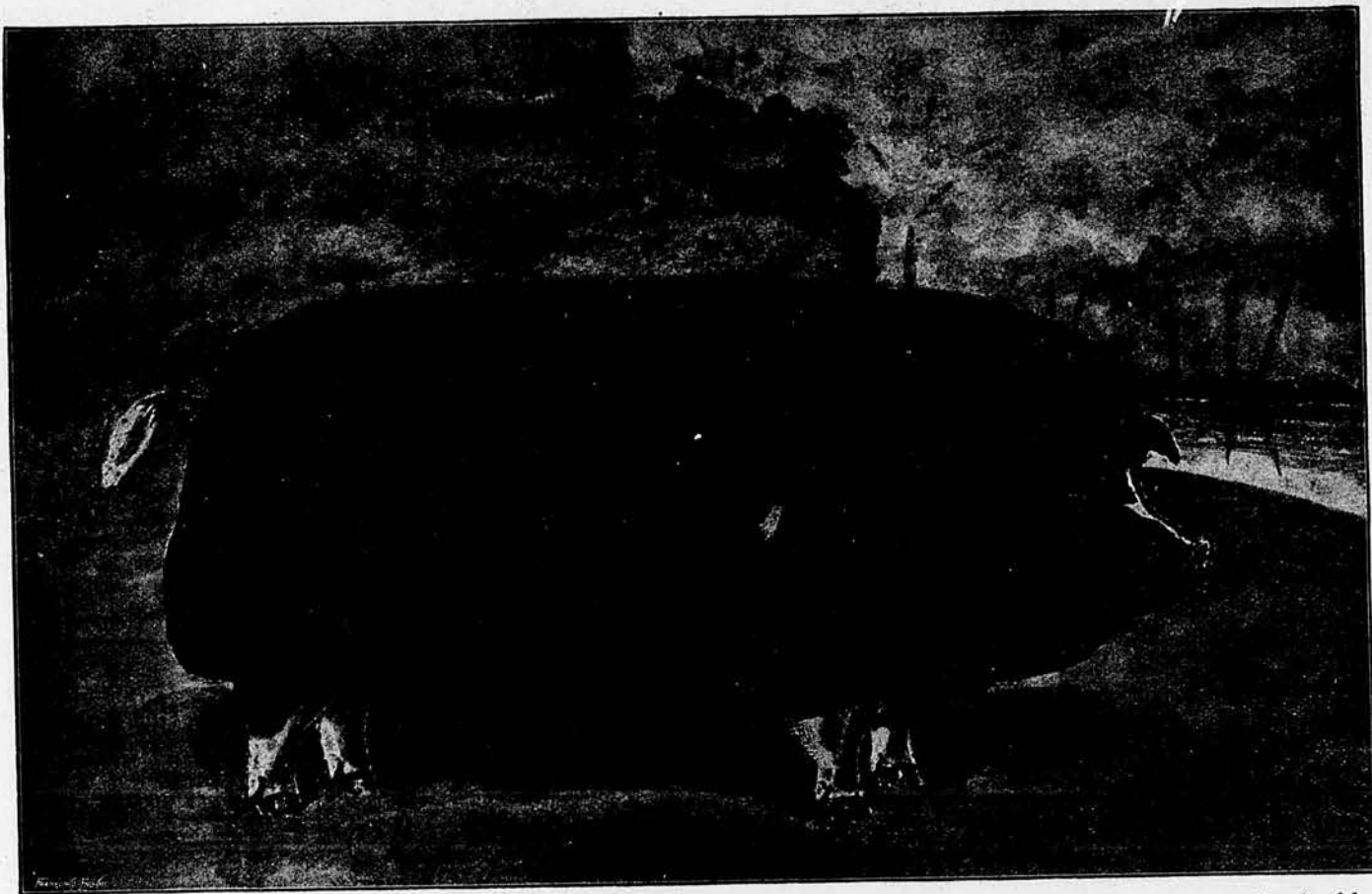
The way to kill competition is to make a better article than the other fellow. Common butter has lots of competition. First-class butter has little competition. The dairyman who uses a

**SAFETY HAND
SHARPLES
SEPARATOR**

takes out all the butter fat and makes butter that is beyond competition.

P. M. SHARPLES,
West Chester, Pa.
BRANCHES:
Elgin, Ill.
Omaha, Neb.
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wire and the buyer sure of getting just the thing wanted. Of the 150 spring pigs coming on, one can select a toppy lot out of the bunch, pigs not akin and just as good as anybody's. Messrs. Wait & East expect to make a two-months' show, beginning the third week in August and will have some extra pigs along, other than their show herd, for prospective buyers to select from. They cordially invite their customers of 1897, when at the fairs, to call and renew their acquaintance. Mrs. L. E. Wait and Mrs.



The above illustration, drawn from life by F. D. Tomson, Topeka, represents Cheney's Chief I Know 19513 S., sired by Chief I Know, dam Miss Corwin Tecumseh (45676) by Black Corwin 16136 S. out of Tecumseh I Know (30887). See Gossip.

which are roan, are sired by Duke of Kansas 123126, he by Waterloo Duke 8th 89876, dam 6th Duchess of Kingscote, and possess splendid feeding quality. Two vigorous young bulls by the same sire, one a roan out of the roan cow 5th Constance of Hilldale by 60th Duke of Oxford 55734, and tracing to Imp. Constance, the other a red, out of Daisy (Vol. 38) by Gilt Edge 92519, dam Golden Blossom by Imp. Orlando 48379, tracing to Imp. Golden Galaxy, possess top breeding and individual merit and should not be overlooked by any one wanting a herd bull. One of the most esteemed matrons of the herd is Rose Leaf (Vol. 42), a Rose of Sharon by Acklam Geneva 101463.

In another column appears the combination brood sow sale advertisement. To this sale, to be held at Tough's sale barn, Kansas City, August 16, Clifton George, of Lathrop, Mo., contributes twenty head; E. E. Axline, of Oak Grove, Mo., twenty; H. C. Sydnor, of Corder, Mo., ten, and H. W. Cheney, of North Topeka, ten, containing blood of Chief I Know, Black U. S., Model Boy, Sydnor's Tecumseh, Chief Tecumseh 2d and others of equal note. As the catalogue states, the stock will be sold as represented on the day of sale. The breeders making this sale are too widely known to need individual mention. The consignments from the various herds are of high individual character and breeding. It is, throughout, a very unusual offering of combined blood and merit. The sale stock has in each case been running in pastures and is developing healthy, rugged constitutions. It

Mo., August 16, at which time sixty or more head will be sold. These gilts, five of which are the get of World Beater Gem, one sired by Broad George by Dandy Jim Jr., one by Comet Medium, and three by Moore's Chief I Know, are all bred to Cheney's Chief I Know and ought to command the attention and the prices which their merit deserves. This consignment, like the offerings of the other participants in this sale, is running in a good-sized pasture, and therefore making a strong, vigorous, healthy development, which renders them the more desirable and a surer investment for the purchaser. The sale advertisement appears in another column.

M. C. Vansell, of Muscotah, Atchison county, Kansas, again places his card in this week's Kansas Farmer, of fancy-bred Poland-China swine and Short-horn cattle. The new herd boar is Gold Bug 18698, bred by J. S. Sharp, of Taylorville, Ill., and sired by Free Coinage 16435 and out of Minnie's Model, the sow that sold for \$1,310 at Springfield, Ill., in 1896. Another boar in use is Tecumseh '96, sired by W. B. Tecumseh out of Graceful Fantasy 37011, bred by S. E. Shellenbarger, also tracing back closely to Latest Fashion and Corwin U. S. The pig crop numbers about 170 head, but the present bargains for the trade are thirty sows, 1 and 2 years old, that will be sold now to make room for the herd youngsters. Mr. Vansell says he will sell these sows at once at taking prices that will prove a great bargain for the purchasers. The Short-horn herd numbers only about thirty head, mostly of Bates foundation with Scotch tops. The herd bull is Gol-

then the get of Corwin I Am 44341 A. by Chief Wilkes 44339, a grandson of Chief Tecumseh 2d 14579 A., will fill the bill. His dam, Clover Leaf Queen 121968 A., was by the noted Sir Charles Corwin 40881 A. and out of Silver Bar U. S. 121966 A., she by the World's Fair winner, Longfellow 34919 A. This 15 months of age fellow is just as stylish as he is highly bred. The best son of Black Stop's Chief, Chief's Rival, and out of Bess by Best of '93, is doubtless one of the best yearlings in the State and will be a very formidable show ring competitor this fall. He now weighs right around 600 pounds, and not up in show yard dress. It's just hard to fault him, such is his conformation, finish and character. If size, extra big ones, be wanted, then the get of Big Tecumseh, a son of Tecumseh Chief 40911 A., he by Chief Tecumseh 2d 14579 A., his dam Cora 2d (41807) by Seldom 14251 S. and out of Cora (27127) by Osgood 3177 S. Six of the largest, big-boned brood sows are in expectancy by him, the object being to have the big-boned, useful kind that are sought after by farmers and stock hog raisers whose breeding animals have run down a little too fine. There are eight fall boars—one by Gold Bar Sanders 16000 S., two by First Choice Sanders 40515 A., two by Black Stop Chief 16316 S., one by Turley's Chief Tecumseh 2d 17978 S., and two by Kansas Wilkes, a grandson of the noted Guy Wilkes. Here are a string of extra good boars, three of which are show animals and all good enough to go anywhere. Then there are eight fall gilts good and handsome enough to order by mail or

Nannie East have an extra attractive line of pure-bred poultry, consisting of Plymouth Rock, Buff Cochins and Light Brahmas. The foundation stock are all selected and high-scorers, hence these fanciers are well fixed for the coming season's egg trade.

Do You Intend Moving?

Why not investigate southwest Missouri, southern Kansas, northwest Arkansas, Indian Territory or the Texas coast country?

The manufacturing, farming and stock raising industries of these sections are attracting considerable attention. The chief centers are reached via the Frisco line. For ticket rates and full particulars, address Geo. T. Nicholson, Gen'l Pass. Agt. St. Louis, Mo.

Send Kansas Farmer Co. \$1.20 and get one year's subscription to your State agricultural paper and Rand, McNally & Co.'s "War Atlas," containing sixteen pages of colored maps—Cuba and Havana harbor, Philippine islands and China, West Indies, Spain and Portugal, North America, United States, Europe, and one page showing flags of all nations.

1898 High Grade BICYCLES
for Men, Women, Girls & Boys. Complete line. All brand new models.
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Large Illus. Catalogue Free. **CASH BUYERS UNION,**
168 W. VanBuren Street, R. 64, Chicago, Ill.

The Home Circle.

LIFE AND NATURE.

I passed through the gates of the city,
The streets were strange and still,
Through the doors of the open churches
The organs were moaning shrill.

Through the doors and the great high win-
dows
I heard the murmur of prayer,
And the sound of their solemn singing
Streamed out on the sunlit air.

A sound of some great burden
That lay on the world's dark breast,
Of the old, and the sick, and the lonely,
And the weary that cried for rest.

I strayed through the midst of the city
Like one distracted or mad.
"Oh, Life! Oh, Life!" I kept saying,
And the very word seemed sad.

I passed through the gates of the city,
And heard the small birds sing,
I laid me down in the meadows
Afraid from the bell-ringing.

In the depth and the bloom of the mead-
ows

I lay on the earth's quiet breast,
The poplar fanned me with shadows,
And the veery sang me to rest.

Blue, blue was the heaven above me,
And the earth green at my feet;
"Oh, Life! Oh, Life!" I kept saying,
And the very word seemed sweet.

—Archibald Lampman.

HARPER'S LITERARY NOTES.

The warm discussion which Mr. Howells has excited by his fortnightly letters to Literature on "American Literary Centers" has been productive of many good-natured witticisms. Mr. Aldrich once noticed, it is remembered, that whenever an author died in Boston, New Yorkers thought they had a literary center, and perhaps it is fair to say, in spite of the New England protestations, that by some such means the primacy has passed from Boston, even if it has not passed to New York. The fact seems to be that Boston has outgrown that peculiar literary consciousness which once distinguished it from all our other large towns. Mr. Howells in the last issue of Literature, finds the New York claim to resolve itself into the facts that there abide the majority of authors and journalists, and that so many of the great publishing houses are in operation there. But he adds: "If these things do not mean a great literary center, it would be hard to say what does; and I am not going to try for a reason against such facts. It is not quality that is wanting, but perhaps it is the quantity of the quality; there is leaven, but not for so large a lump. It may be that New York is going to be our literary center, as London is the literary center of England, by gathering into itself all our writing talent, but it has by no means done this yet. * * * In fact, I doubt if anywhere in the world there was ever so much taste and feeling for literature as there was in that Boston. At Edinburgh (as I imagine it) there was a large and distinguished literary class, and at Weimar there was a cultivated court circle; but in Boston there was not only such a group of authors as we shall hardly see here again for hundreds of years, but there was such regard for them and their calling, not only in good society, but among the extremely well-read people of the whole intelligent city, as hardly another community has shown. New York, I am quite sure, never was such a center, and I see no signs that it ever will be. It does not influence the literature of the whole country as Boston once did through writers whom all the young writers wished to resemble; it does not give the law, and it does not inspire the love that literary Boston inspired. There is no ideal that it represents."

Somebody once said that the future historian of British politics and social habits during this century would be able to find no more helpful material for his work than the pictures in Punch. It would indeed be difficult to overestimate the value of a great modern illustrated paper as an historical record; the marvellous improvements in the arts of engraving and photography, reproduction and printing, make a journal of the standard of the Illustrated London News or Harper's Weekly the most vivid and accurate pictorial chronicle of public events. It is an undoubted national advantage that the people should be well informed as to the progress of the Spanish war, and the conditions and surroundings of our troops and fighting ships. One has but to remember the disaster to the French arms in 1870 to appreciate that any popular misapprehension regarding the true course of operations in the field may hasten a great national calamity. The presence at the front of such able artists as Chapman, of Harper's Weekly staff, readily secures to the people at home the most striking

and reliable representation of the important incidents of the war. The work of American journalism in this respect promises to be as signally efficient of its kind as the work of our army and navy.

Americans who are fortunate enough to be going out in London during the present season, which is now at its height, are apparently enjoying the fullest measure of social popularity. The London correspondent of Harper's Bazar, in a letter appearing in the issue of July 9, describes entertainingly the various ways in which the smart set of the British metropolis is showing its approval of the idea of the Anglo-American alliance, and has actually adopted several social customs, hitherto known as distinctively American. To have thus overcome insular conservatism and exclusiveness is an astonishing achievement for the bright women who are representing our country abroad.

Fate has awarded a strangely incongruous fame to the peaceful little town of Santiago, which has been slumbering so long on the sunny southern coast of Cuba. The scene of the first encounter of American troops with the soldiers of Spain is a spot of characteristic tropical beauty, with wooded hills surrounding the placid waters of the harbor, and a typically lazy village resting at the head of the bay. Harper's Weekly has secured a charming photograph of a view of the town and harbor from one of the neighboring heights; a reproduction of this picture is an attractive feature of the issue of July 9.

The Women's Club department in Harper's Bazar for July 9 is devoted to



SANTIAGO DE CUBA FROM THE RESIDENCE OF THE BRITISH CONSUL

an interesting preliminary description of the fourth biennial convention at Denver of the General Federation of Women's Clubs. The Bazar's representative at the convention was Mrs. Margaret Hamilton Welch, and her report of the proceedings is comprehensive and valuable to club women everywhere. It is embellished with portraits of some of the newly-elected officers of the Federation, and will be supplemented in another issue by a further account of the Biennial.

Buzzards and Christian Science.

On our ride to Xochicalco we chanced upon a valuable piece of information, which I do not feel like withholding from this superstitious age, and I think it will be of great use to our mind-curists and healers. When I wondered at the size of the buzzards we encountered, our guide, who was a volunteer guide and a man of standing, and perfectly trustworthy, informed me that this bird was really a crow, and not a buzzard, as I had thought. And it is not merely an ornamental and thieving bird. This is what he told me: "If any man has heart disease, or is threatened with it, organic or otherwise, all he needs to do is to catch one of these crows and make a companion of him, a real intimate. He must keep him by him constantly, let him eat from the same plate at table and sleep with him at night. When this intimacy is established, all the man's heart disease and tendency to it will leave the man and pass into the crow." The testimony to this fact is abundant, and admits of no doubt. And the singular thing about the miracle is that the crow is not injured. The crow, by an entirely mental process common in all mind cures, ab-

sorbs the heart disease, and sustains no harm, and asks no pay for his work. This Christian Science crow is, to be sure, a Mexican, but I suppose that any kind of crow with us would do as well. —From the "Editor's Study," by Charles Dudley Warner, in Harper's Magazine for June.

A Glimpse of Santiago De Cuba.

The harbor itself is a magnificent bay, about four miles long by two or two and a half broad. Mountains hide it completely from the sea, which explains the difficulty encountered in ascertaining if Cervera's squadron were really inside.

It was protected by Punta Blanca battery on the eastern shore near the city and by guns mounted at prominent points in the city itself. Some distance southwest of Punta Blanca is a coaling station and across the bay another coal depot and a building used by the Spaniards as a hospital.

The city lies on the eastern shore and almost at the extreme end of the bay, and from the water presents a charming picture. Old castles, recalling Spain's age of chivalry, and more modern houses, with blue and yellow walls, are piled together in strange confusion on the hillside, while the whole is fittingly framed by the stately mountains to the north and east and south and the blue waters of the harbor to the west. But upon entering the city the magic spell dissolves. The buildings are found inferior in design and material and the streets are thick with mud and garbage, all refuse material being thrown into the streets to decay and fill the air with disease germs. In view of such sanitary conditions in a climate where the mean temperature is 88° in summer and 82° in winter, it is not to be wondered at that yellow fever prevails the year round and smallpox is often epidemic. The mountains, by shutting out the sea breezes, contribute to make the place one of the most unhealthy on the island.

Here, as in most tropical cities, the people pass much of their time out of doors. The Alameda, a boulevard extending for about half a mile along the water front and shaded by palms and other tropical trees, is one of the favorite promenades in peaceful days, and an ideal place, barring the heat, for wheelmen. Another is the Plaza de Armas, the principal city square. Here a crowd might be seen on any Sunday or Thursday evening, before the war broke out, gathered to listen to the music of the

military bands. Several important buildings front upon the Plaza, among them the old cathedral, completed in 1819. Two widely different institutions are also located here, the government house and the San Carlos club, the regular meeting place of Cuban patriots, for Santiago has many such, who aided the cause of freedom by contributions of supplies and ammunition. The city also boasts a theater, where Adeline Patti is said to have made her debut at the age of 14 and under the direction of Gottschalk, but this honor is also claimed for a theater at San Juan.—"The City and Harbor of Santiago de Cuba," by Charles A. Bell, in the Chautauquan for August.

The Races Found in the Philippines.

Of the seven million inhabitants found in the Philippines, very few of whom are Spaniards, less than one-fourth of them live in Manila and about one-seventh of the entire population are believed to be unconquered natives. Among the natives are found representatives of several distinct races. The aborigines were probably the Negritos, a diminutive, dark-hued race, with features resembling the American negro. They are still found in limited numbers, a harmless, nomadic people, very fond of the dog and of a cigar, which they frequently smoke with the lighted end in the mouth.

The aboriginal people were gradually conquered and driven into the interior by invading Malays, whose descendants now form a large proportion of the population. The Tagals and the Igolotes are the most important of the Malay tribes, the latter being law-abiding and devoted to agricultural pursuits. The Tagals, with more war-like propensities, occupy the lowlands, living near the water in picturesque, elevated huts. They are in full possession of the interior of Mindanao, where, under the sovereignty of their own Sultans, they are free to enjoy the cock-fight, dancing and music, for which they seem to have a great aptitude. They have strongly stockaded villages on the mountain sides, and while they acknowledge the suzerainty of Spain they do not pay taxes nor permit Spanish officials to reside among them.

Besides these two races there are in the Philippines Malay Indians and native Caucasians, with a large number of Chinese and Mestizoes. The laziness of the natives in time of peace is proverbial, but this is not to be wondered at when we know that nature has furnished the islands with a wealth of vegetation which may be used for food. Their indolence is probably increased by the climate, which is hot and enervating. The heat is, however, greatly moderated by alternating land and sea breezes, and a more healthful climate is unknown in tropical countries.—"The Philippine Islands," by John A. Osborne, in the Chautauquan for July.

A strong nation is made up of strong men and healthy women, and health and strength are given by Hood's Sarsaparilla, America's greatest medicine. Get only Hood's.

Hood's Pills are the only pills to take with Hood's Sarsaparilla. Easy and yet efficient.

If you would get the most of health and refreshment out of the night's rest, do not attempt to sleep in any garment worn during the day.

Mothers! Mothers!! Mothers!!!

MRS. WINSLOW'S SOOTHING SYRUP has been used for over FIFTY YEARS by MILLIONS OF MOTHERS for their CHILDREN while TEETHING, with PERFECT SUCCESS. IT SOOTHES THE CHILD, SOFTENS THE GUMS, ALLAYS ALL PAIN; CURES WIND COLIC, and is the best remedy for DIARRHEA. Sold by Druggists in every part of the world. Be sure and ask for "Mrs. Winslow's Soothing Syrup," and take no other kind. Twenty-five cents a bottle.

The Young Folks.

WHEN MALINDY SINGS.

G'way an' quit dat noise, Miss Lucy,
Put dat music book away;
What's de use to keep on tryin'?
If you practice twell you're gray,
You cain't sta't no notes a-flyin'!
Lak de one dat rants and' rings
F'om de kitchen to de big woods
When Malindy sings.

Fiddlin' man jes' stop his fiddlin',
Lay his fiddle on de she'f;
Mockin' bird quit tryin' to whistle
'Cause he's jes' so shamed hisse'f.
Folks a-playin' on de banjo
Draps dey fingahs on de string—
Bless yo' souls—fugits to move 'm,
When Malindy sings.

O, hit's sweetah dan de music
Of an edicated band;
An' hit's dearah dan de battle's
Song o' triumph in de lan',
It seems holier dan evenin',
When de solemn chuch bell rings,
Ez I sit an' ca'mly listen
When Malindy sings.
—Indianapolis Journal.

Written for Kansas Farmer.

YOUNG FOLKS IN THE OLD COUNTRY.

BY ANNA MARIE NELLIS.

NUMBER 32.

BONN.

To see the Rhine country from car windows or from the deck of a steamer is a great pleasure, indeed; but if one wants to really feel that the sights along this historic river have been fully inspected, no means of conveyance is better than the bicycle. From Cologne to Bonn, on the west side of the river, a chaussee (a shady, paved road) offers a track which makes the metallic heart of a bicycle "leap for joy." The distance is twenty-six kilometers (about seventeen miles), and we "made it" easily in ninety minutes, passing through several pretty little villages on the way. The chaussee leads to the center of the city—the public square, Münster Platz—where there are beautiful flowers, trees and fountains. In the square also is a fine monument of Beethoven, the great musician, who was born in Bonn.

Our seventeen-mile ride had wearied us but little, so we rode through several streets of the city, and then found a suitable hotel for our headquarters while we should remain.

We inspected the famous University building, which was formerly the palace of the Elector. In this University 1,500 students are educated every year. The large building itself is not very attractive, but it has a very beautiful garden in front. On the handsome avenue, called Alte Zoll, we saw the bust of Arndt, whose house now is used for a Turner hall.

After resting at our hotel for an hour, we were again in the saddle and rode out on the green, shady avenue, called Popplesdorfer Allee, to the Popplesdorfer Schloss (castle)—formerly a residence of the Electors of Bavaria, but now used for a Natural History Collection Museum. The gardens around this old palace are especially pretty, but the building itself is not.

KREUZBERG.

Passing the Schloss, we are on the road to the "Kreuzberg" (cross-mountain), crowned with a conspicuous white church, which is Catholic, of course. In this city of about 28,000 inhabitants, nearly 23,000 belong to "Mother Church," while the small balance are Protestants, Jews and Gentiles.

The Kreuzberg is only 400 feet high, but so steep that one in walking it is apt to estimate the height at as many thousand feet. We pushed our bicycles up and contemplated a fine coasting on our return. The church, on the very top of the hill, was originally a monastery, erected by Frederick, Elector of Bavaria, in 1627. It is certainly one of the most beautiful churches within, for its size, that I have ever seen.

We arrived at the church at 6 o'clock, and there were no public services being held—only a few people and a monk saying evening prayers. We quietly took seats and then gazed about, admiring the beautiful interior. The organ loft is of marble and the frescoes have just lately been retouched and naturally gave a very enchanting appearance. Besides the usual red lamp in the center of the altar, one figure of Christ on the cross at the right was very much decorated with lighted candles and flowers. Many pictures and images are on the walls and the pulpit is finished in gold. Soon the people had left the church except one old monk and ourselves in the choir loft. He continued his prayers in a rather loud voice for a while, then the sounds came fainter and fainter, until no sound was heard at all. We were actually dozing, and the old monk had fallen sound asleep; his head, shaved on the top, was hanging over the rail. He wore the reg-

ular brown gown of the Franciscan brotherhood, with cords and tassels around the waist, with many crosses and rosary. I heard footsteps approaching, and, out of sympathy for the sleeping monk, I let my guide-book fall, and the sound awakened him. He began his prayer right where he had left off, and the new-comer—another monk—did not catch him napping.

We asked the new-comer how we should proceed in order to see the "holy steps" and the vault underneath the church. He said he would send the sexton over immediately. The old sexton came; he also is a monk, and looked as though he had been there for at least 250 years. His black gown contrasted with his white hair, giving him an exceedingly ancient appearance. He had a very, very solemn face, which brightened up when he saw we were foreigners, and he looked still more pleased when he learned we were Americans.

He asked us to wait a moment while he fetched a candle, as it would be dark in the vault. He had to go behind the altar for the candle and by actual count he had to kneel and pray exactly seven times before we could start.

We were wondering where the vault entrance could be, when he opened a trap-door right at our feet, in the main aisle, and we descended a steep flight of steps. We, at first, thought these might be the "holy steps," but, as the old monk walked down on his feet, we knew they were not. He shut the trap-door again after we were all down, and we found ourselves in a vault with no window or opening, except the one through which we had just come. The dim and flickering light of the candle, held in the trembling hands of the old sexton, did not furnish encouragement sufficient to cause us a feeling of hilarity.

If any one knows what it is to have a "creepy" sensation, it will be easy to understand how we all felt at that time.

We found the vault was occupied by thirty monks; but they were like Kansas politicians on a railroad train—all "dead-heads." There were fifteen mummies on either side of the vault. These are the bodies of monks discovered here when the church was being repaired, about the year 1805. The age of each one cannot be accurately determined, but the oldest mummy has lain there 250 years, and the youngest half as long. Some of the coffins had glass lids over them, but the most had wooden covers, which the sexton seemed to delight in opening when I was near—to show that this one still had his shoes on, or hose, gown and teeth were in good repair, or this one's facial appearance was still perfect. It was very interesting but most unearthly uncanny, and that old sexton had no more respect for the poor dead and gone monks than to take the big toe of one of the mummies and move it back and forth to show its flexibility—that it was like leather. A few minutes of this kind of sight-seeing was sufficient for us all, and we felt that our dreams for several weeks would have anything but a celestial direction.

These mummies were discovered under the church very much the same as those in the Bleikeller at Bremen, described in letter No. 5.

THE HOLY STEPS.

Again ascending into the daylight, the old sexton took us behind the altar, and, after kneeling and crossing himself many times, he led us up a flight of steps, through a small chapel, to the foot of the "holy steps," which open out on the side of the hill, and from their base a shaded path descends to the level of the city. These steps are twenty-eight in number, made of Italian marble, and are in imitation of the "Scala Santa" in the church of St. John, Lateran, in Rome. You see, when our Savior was being maltreated by the Jews a crown of thorns was placed on his head, and as he went up the marble steps to Pilate's palace the blood from his head marked his way. These steps, with the blood marks, were miraculously discovered by the Empress Helene, and were transported to Rome, placed in the Lateran church, and were known as the "holy steps," upon which Christians only can proceed upon their knees. How the Empress discovered them, I can't explain just now—in fact, I don't know, and I don't believe anybody else does. Well, the original "holy steps" being in Rome, and there being not enough "to go round," an imitation was made for the Kreuzberg church. To this, as a holy shrine, many thousands of devout Christian Catholics come every year and walk up on their knees. If one feels especially sinful, he will begin at the foot of the hill and walk on his knees to the top and then in the same manner to the top of the holy steps.

Dr. Martin Luther, when he was a good Catholic, made a pilgrimage to Rome to ascend the "Scala Santa" on his knees. When half way up he seemed

to hear the words: "The just shall live by faith," and he left the steps unfinished, so far as his ascent was concerned.

These holy steps at Kreuzberg lead up to a little chapel near the top of the church—the "sanctum sanctorum" of the place. This is open only on the most sacred holidays—perhaps twice in a year, when the bishop or archbishop from the head of the steps, at the entrance to the "holy of holies," reads the service to the crowds of people which cover the hill from the street below to the top of the steps, and all on their knees.

We were there to see and experience; to go away without trying the "knee drill" would have been absurd—so we thought. We got down "on all fours," with the sexton at our side, and walked up those steps on our knees. It is terrible to say it, but the pious old sexton laughed, and we did not try to restrain our mirth, it seemed so ridiculous, but we must not and did not touch our feet to the steps. On the eleventh and twenty-eighth steps are two brass plates, in shape of a cross, with stains on the marble, in imitation of the blood stains on the genuine holy steps in Rome. I remarked to my sister something about the absurdities of superstition, and she asked: "What is superstition?" I attempted to answer, but could not; we referred the matter to a boy we met, and he said it was what the other fellow believes. I know of no better definition, so will accept this as correct.

After descending the steps, in same manner as we had gone up, we bade the sexton adieu, after giving him a fee for his kind attention. We mounted our wheels and rode around the grounds in which the church and adjoining monastery are located. We saw several of the Franciscan brothers walking in the garden and praying before the statues of saints, which were liberally scattered conveniently on every side.

From our elevated position we had a very lovely view across the Rhine, upon carefully blocked-out fields of waving grain, picturesque farm houses and a background of beautiful green forest.

In the cathedral church we had seen a bronze statue of St. Helena, who was the mother of Constantine the Great, and who found so many relics of our Savior 400 years after the crucifixion.

We had calculated on enjoying a fine ride down the hill on our wheels, but it was too steep; we walked down—on our feet—which position we would not have been apt to maintain had we tried to "coast."

We then rode out through the Sternengate to the cemetery, and saw the handsome monument of Niebuhr, by Ranch. We also visited the grave of Schumann, the famous music composer.

The city of Bonn was surrounded by a wall in the thirteenth century, and it has seven gates. We did not go through them all, but unanimously concluded that it is a very handsome city, and we felt amply repaid for our trouble in seeing all of it.

Hawaii's Godspeed to the Troops.

Just as the ancient cities gave to men whom they delighted to honor "the freedom of the city," we have given to you, the thinking bayonets of the United States, the freedom of Hawaii. We are of many races, but before you we are

one, and a composite race, which knows for the day no lines of difference.

It is a privilege beyond price to touch your hands, and hear your voices, because to many of us you are of the same flesh and blood from over the sea, and you are the apostles of our faith and hope. Are we not under the same war cloud that rests over the American continent to-day? Have we not invited it? And, therefore, do we not honor you, who now hold your lives at the service of the state, and have, at the call of the state, turned your plow-shares into swords, dressed yourselves in "the liveliness of blood," and accepted the thunder and sunshine of war?

If in breathing our air and in looking upon the beauty of our mountains and sea, which is our sweet heritage, you have found rest before breasting the wilderness of water that lies beyond us, we assure you that it is as grateful to us as it is to you.

We know that in many a home on the western boundary of the great continent, the blessings and prayers of many anxious hearts follow you to the end, in lines of light, with steadfast courage, and that divine patience in solitude that make sacrifice a pleasure and not a duty. We know that there comes the same message to you from these homes that the Spartan mothers sent to their soldier boys, "return with your shield or upon it," and the little children pray for those of you who will never return, but lie forever in inhospitable graves.

Under this lavish wealth of trees and palms and flowers, mothers' hands have tried to do for you, in these few hours, what they would have done for their own, and our white-robed girls have lovingly rendered service to you, in the name and stead of the girls you left behind you.

You need no exhortation to courage in climbing the awful heights of battle, for you come of a race that is molded in courage.

So good-bye, boys in blue. Plant Old Glory in the far east, not in hatred, or with the love of conquest, but in the name of the enlightened people of the world who cannot rest until the barriers of ignorance, cruelty and injustice have crumbled in Cuba and the Philippines.—Honolulu Commercial Advertiser.

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QUESTIONS OF PEACE.

Perhaps the government and people of the United States were not much surprised when, one day last week, Spain preferred proposals for peace. These were presented by the representative of the French government at Washington, M. Cambon. The answer of President McKinley was given after due consideration with his Cabinet. The text of this answer has not been given to the public, but it is stated that the President does not put forward any claim for pecuniary indemnity, but requires the relinquishment of all claim of sovereignty over or title to the island of Cuba as well as the immediate evacuation by Spain of the island; the cession to the United States and the immediate evacuation of Porto Rico and other islands under Spanish sovereignty in the West Indies; and the like cession of an island in the Ladrões. The United States will occupy and hold the city, bay and harbor of Manila, pending the conclusion of a treaty of peace which shall determine the control, disposition and government of the Philippines. If these terms are accepted by Spain in their entirety, it is stated that commissioners will be named by the United States to meet commissioners on the part of Spain for the purpose of concluding a treaty of peace on the basis above indicated.

Pending consideration of these proposals by our administration, M. Cambon, at President McKinley's suggestion, was given full powers as the ambassador of Spain with authority to act for that country in the negotiations. At the appointed time he called at the White House and discussed with President McKinley and Secretary of State Day the terms of peace, and, it is said, secured a slight modification of the first draft of our demands as to the Philippines. There is little doubt of Spain's acceptance of the terms suggested by the United States, especially since we have not demanded any money indemnity for the expenses of the war. It will doubtless be claimed that the omission of the demand for indemnity usually made in such cases is an act of generosity on our part. This claim cannot be disputed, but it can never be known how much the noble generosity was prompted by motives such as actuate the thrifty business man to abstain from suing a pauper.

Our course as to Porto Rico seems to be well defined in the mind of the administration. We are to annex the island. This is well understood by the Porto Ricans, who gladly welcome the advance of General Miles' army. Probably the same course will be pursued with the Isle of Pines and the small islands of the West Indian archipelago.

Congress pledged this country to give to Cuba an independent and stable government by the people of the island. Some of the Cuban insurgents have been greatly disappointed at finding that we will not give over to them the cities and country from which we have expelled the Spanish. Their ideas of the results of war seem to have been derived largely from the practices of their oppressors, and to be that "to the victors belong the spoils." When General Shafter refused to allow the insurgents to enter Santiago and when he allowed the civil officers to continue to discharge the functions of their offices, taking care only to conform their administration to

United States' ideas of right, instead of appointing insurgents to those places, there was a good deal of dissatisfaction among those whom we had relieved by conquering Spanish oppression. But our purpose to establish a Cuban republic governed by all of the Cuban people will soon become known. It may be necessary that this Cuban republic be supported by the fostering and guiding hand of the United States, represented by its military power, much as the reconstruction of the State governments in the South required military administration by the army for a few years after the Civil war. But the military features of this Cuban government will doubtless be gradually, if not rapidly, supplanted by local civil government as the country fills with Americans, English and Germans and as the present Cubans become accustomed to the ways of high civilization.

Porto Rico and the smaller islands will rapidly become Americanized.

But the gravest questions are as to the Philippines. They contain 7,000,000 to 10,000,000 people, varying from abject savages through all degrees to the highest type of European civilization. They have been inefficiently governed and efficiently plundered for many generations. There has existed for a long time a formidable insurrection against Spanish misrule and robbery. Just when this insurrection was in a critical stage Dewey's fleet destroyed the Spanish warships at the Philippines and so crippled the Spanish power that it is doubtful whether Spain will ever in future be able to protect foreign interests against possible rapacity of the natives.

Were the authority of the United States substituted for that of Spain it is probable that we should be able to organize a republican form of government in the Philippines and assure the present and future prosperity of all the people. The administration at Washington seems loth to assume the responsibilities of this great undertaking. England and Japan seem anxious that we address ourselves to the task. Germany has manifested considerable jealousy as to our operations in the Philippines, and it is understood that some sort of a concert in Europe is likely to interfere with our musical program should the notes of our song suggest Philippine annexation to the United States or a Philippine republic under American protection.

If Spanish diplomacy sought to bring out our program as to the Philippines prior to settling the future of the West Indies, hoping that we might make some demands as to the east which would be vetoed by the powers of Europe, that object has been defeated by American straightforwardness in so shaping the program as to first dispose of the questions which have been fully settled by the war, namely, those of the West Indies.

Our purpose as to the Philippines can then be discussed with the Spanish Commissioners as a separate proposition. The opinion of many prominent men of the party which elected McKinley favors making those far-away islands, with all they contain, American possessions. The consensus of opinion of the parties which opposed Mr. McKinley seems unfavorable to annexation. The President seems loth to assume for his country the responsibility of annexation. If the question could be divested of all appearance of bullying by foreign powers and of personal interests in prospective appointments, and then submitted to the judgment of the American people, it is likely that a majority would think this country better off without the incubrance of the Philippines.

But we are somewhat in the position of the hunter who had caught a bear by the tail. He needed somebody to help him to let go. In our war with Spain we have so crippled that country that, whereas she was formerly but just able to protect foreign residents and property in the Philippines, she will in future be wholly unequal to the task. Should we withdraw from the east after doing this, Spain will be obliged almost inevitably to procure assistance from some quarter and for it to pay by cessions of territory in the islands. How much anarchy and bloodshed may result from such complications it is difficult to foretell.

Should Spain have the hardihood to retain the islands and fail in the attempt to govern them, the destruction of lives and property of foreign residents might not be chargeable to America, but there would be plenty of reminders that after destroying the government we provided nothing in its stead. Again, will it be right for us to hand the islands over to renewed Spanish misrule?

Verily, the joint commission of the United States and Spain will have weighty matters to consider in settling the question of the Philippines.

VARIETIES OF WINTER WHEAT.

Prof. W. C. Latta, agriculturist of the Purdue University Experiment Station, reports as follows on tests of varieties of winter wheat:

"Eighteen varieties of wheat were grown on the Experiment Station farm this season. The results as to yield, weight per struck bushel, etc., are given in the accompanying table.

YIELDS OF VARIETIES.

No.	Name.	B—bearded. S—smooth.	Bush. meas. per acre.	Lbs. per bush.
1.	Velvet Chaff	B.	22.7	63.2
2.	Buda Pesth	B.	20.0	62.0
3.	Sterling	B.	25.3	62.0
4.	New Columbia	S.	24.7	61.5
5.	Early Ripe	S.	23.9	61.5
6.	Golden Cross	B.	19.8	60.0
7.	Hybrid Prolific	S.	22.5	62.0
8.	Diamond Grit	B.	21.3	61.8
9.	Gold Coin	S.	22.3	61.0
10.	Pedigree Giant	B.	20.0	59.8
11.	Jones Longberry	B.	19.0	60.5
12.	Harvest King	S.	26.2	62.0
13.	Improved Fultz	S.	22.3	61.0
14.	Long Amber	S.	19.2	59.0
15.	Rudy	B.	24.3	62.0
16.	Michigan Amber	S.	24.7	62.0
17.	Russian	B.	17.8	61.0
18.	Oakta Chief	S.	15.0	57.0
19.	Jones' Winter Fife	S.	24.3	61.0

"The varieties were grown on rather thin clay loam soil, and suffered considerably from winter killing. All varieties were considerably rusted. Nos. 8, 9, 10, 11, 14, 15 and 18 were badly rusted.

"A fungous disease popularly known as wheat scab was very prevalent. This disease attacks the wheat head. As a result the head, or some part of it, turns lighter in color. The grains turn an ashy color and are light, chaffy and worthless. Nos. 1, 5, 7, 12, 13 and 16 were practically free from scab. Twenty-five per cent. of the heads of Nos. 9 and 18, 40 per cent. of No. 8, 60 per cent. of No. 10 and 75 per cent. of No. 6 were affected with scab.

"Farmers will do well to select those varieties which are comparatively exempt from scab.

"Of the new varieties which have been grown at this station but one year Nos. 4 and 12 are considered the most promising. Nos. 1 and 16 have been grown at the station fifteen years in succession. The average yield of the former is 29.08 and of the latter 28.94 bushels to the acre."

IS THE PRESTIGE OF NEW ENGLAND PASSING?

Financial comment at the close of last week as to the position of industries in the United States, speaks with a sort of despairing hope of a leading interest of the northeastern section. To say, "In New England the industries, especially the textiles, are not in satisfactory shape; but the situation is improving," is to convey a note of sadness to every child of New England. To know that this statement follows a long succession of declarations that in the competition the cotton mills of the South are turning out goods at prices which leave no profits for the long-established mills of New England, gives to the clause, "but the situation is improving," much of the hollow, mocking sound of whistling in a graveyard. The fact, recently made public, that Eastern manufacturers are borrowing money from the banks of Kansas, places the seal of certainty on the suspicion that the scepter is departing from New England. By diligent industry and careful frugality New Englanders accumulated enough money to begin manufacturing. They harnessed the abundant water powers of their rivers and rapidly superseded the spinning-wheel and the hand loom, doing the spinning and weaving for the country. By the aid of heavy tariffs they developed their industries rapidly and accumulated goodly profits. They loaned their furthest savings to people in newer sections and they embarked in railroad and other joint stock investments throughout the country and enjoyed the regularly accruing usury.

But a change came when the railroad came to be recognized as but an iron highway for public use. It then began to follow the course of its predecessor, the turnpike. The public insisted on regulating its charges and knowing about its expenditures and its returns on capital invested. The railroad has almost ceased to be a profitable investment save for the holders of its mortgage bonds. Time is coming rapidly on when the amount of these for which the railroad shall be allowed to earn interest will be scrutinized by the public and the courts. Railroad stocks have almost ceased to be valuable as revenue-payers. Millions of New England investments have on this account become practically worthless. Bonds are traveling the same road of over-issue, depreciation, legal scrutiny and final destruction of value. The railroad is likely to become, like the turnpike, a public highway, owned and managed by the public; while the

railway investment, like the turnpike investment, becomes a reminiscence.

The unsatisfactory condition of New England mills is not likely to be greatly improved. The mills of the United States have long since passed their infancy. They are now capable of supplying many more goods than are called for in the home markets. If New England mills cannot stand the competition of the markets of the world, they will probably have to go out of business. Tariffs and other advantages of an artificial nature cannot be made effective against the inevitable trend of events. Much of the best blood of New England has gone to build up the West and the South. Her industries seem destined to follow to localities where artificial advantages are not deemed necessary, while many of her investment in stocks of public utilities lose their drawing power, and the West loans money to its former creditors.

ICE ON THE FARM.

The hot days of July and August furnish sufficient reason for writing about ice or some cooling subject. But the farmer is usually denied the luxury of ice and the comforts it brings into the hot weather. Possibly one reason for the much-mentioned disposition of the young man to leave the farm may be found in his appreciation of the city's fashion of using fresh instead of salted meats; his relish for butter that is able to stand up even if not strong; his taste for ice cream and other delicacies unattainable in the absence of ice. When the farmer boy becomes dissatisfied he thinks of city people as a favored race, enjoying without exception the comforts of life. It may help him some to know that all but a moderate percentage of the people who live in town are too poor to afford such luxuries as ice; that the majority of city people work for wages which, though they seem high, are reduced in the aggregate by the irregularity of employment, so that the average town family finds difficulty in meeting the daily expenses of a most ordinary scale of living.

But the question of keeping fresh meat, milk and other perishable food supplies in the country in good condition during hot weather, is an important one, which has received merited attention from a number of correspondents of the *Indiana Farmer*. The following excerpts from their letters show that in the Hoosier State only a portion of the farmers who write for the paper take care of Jack Frost's annual crop of ice:

One says: "We salt fresh meats down in a jar in the cellar and place ice around it when we have ice. But we never put the ice where it will come in contact with the meat. Butter when kept on ice or water should not be allowed to get wet, for it will keep better dry."

Another writes: "Meat should be well salted when butchered and smoked before hot weather, and put away. We usually hang the sides that have not been pickled down in a large hoghead, or any dark place, and cover. The hams and shoulders when smoked are wrapped in muslin cloths and packed down in boxes and covered with dry wood ashes. In this way they can be kept good and sweet until butchering time, which is long enough. Milk and butter are kept in a good cellar made especially for that purpose."

A third says: "I smoke my meat well before storing it, and when well browned I wrap each ham and shoulder with paper all over, and then put them in a muslin sack; and then I hang them in an upstairs room from the ceiling, where the mice and flies can't bother. My meat keeps well. For keeping our milk I have a spring house with running water in the driest seasons, and can make good butter at any time; and the milk keeps perfectly."

And another, who uses ice, writes: "Well-cured meat will keep under almost any unfavorable conditions, providing it is kept from flies. But it is much nicer if kept in a cool, airy place. The breakfast bacon we leave hanging in the smoke-house, where it quite dark and cool. The hams and shoulders are well wrapped up in newspapers, put in paper sacks and hung in the cellar stairway. The well-covered pickle pork keeps nicely in a small barrel on a cement floor in the cellar, with weight on the meat to keep it under the brine. Ice and an ice chest are almost indispensable in keeping fresh meat. But fresh meat of any kind will keep well for a few hours in buttermilk; but I never keep it that way, preferring if a roast to cook it and keep in a stone jar in its own broth in a cool place. It can be put in the oven, of course, and warmed over. In hot weather it is safer to partly cook fresh meat and keep it in a cool place. Steaks of any kind will not be quite so good by twice cooking. I always try to keep

down the waste in meat in hot weather. I venture to say there is more waste in meats during the three hot months in some families than would keep them nicely during the whole year in cool weather. A spring house is best for milk in warm weather. We have none. We give the cellar plenty of air from sundown until sunrise, this warm weather, and the milk keeps reasonably well on tables. The cement floor is washed with cold water every morning."

Still another, who uses ice, writes: "For three summers past we have lived up to our privileges in life on the farm, by putting up our own ice in winter. This is such a simple matter, yet so satisfactory in its results, that it seems to argue great carelessness and shiftlessness on the part of those who do not take the small pains necessary to secure the benefits therefrom. A rail pen in the north shade of some convenient building, with some loads of sawdust and a board roof, is all that is necessary to save the ice that Providence rarely omits to furnish some time in the leisurely winter season. Refrigerators or patent creamers are convenient adjuncts, but any man with a little knack with tools can make a double box with a rack at one end for the ice and space for setting milk cans, butter, meats, etc., beside it. A neighbor who owns such a one claims that it is nearly as great a help in her work as a hired girl would be, as it saves the old-time endless trips up and down cellar, makes quick, satisfactory work of the churning and is all but indispensable these torrid July days. It is so economical, too, for 'left-over' meats, fruits, etc., are sound and sweet for use at the next meal instead of having to be wasted, as much is at this season of year. Of course the box, like the refrigerator, must be kept sweet and clean with frequent attention, and all strong-smelling foods should be kept covered to prevent contamination of the milk."

If a farmer concludes that putting up ice is too expensive, and that he would rather sell a calf to the butcher and take his pay in fresh meat even though a trip to town must be made every time fresh meat is had, he will be surprised at how small a portion of dressed meat he can get for the big fat calf. The difference between the labor of butchering the calf at home and that of loading it into the wagon, meeting the parley of the butcher as to price, and finally unloading that calf—this difference is generally in favor of doing the work at home. But much of the meat would spoil before it could be used, and the problem is often solved by the continued use of salted meats.

The correspondent of the Indiana Farmer whose letter is given last in these columns has, however, solved the problem for himself in a very simple way. His description of his method of putting up ice reminds the writer of a pleasure he experienced at a farm home in Rice county, some twenty years ago. This home was then fifteen miles from a railroad and ten miles from town, and no one will fail to imagine the surprise of the guests that hot summer evening when we were served with ice cream at supper. That farmer was from the best part of old Virginia, where farmers are noted as good liveries. He had an ice-house much after the plan of the one above described. That farmer is enjoying life on the same farm still. The railroad is nearer to him than it was twenty years ago. That is a convenience, but has added very little to the comforts enjoyed by the family.

Ice cannot be put up during these long days of August, but perhaps it can be realized now, better than in winter, how well the little labor and expense of providing it would pay.

Our Navy Has Been Underrated.

That the United States had a navy before this war began is a fact that has been but little appreciated both at home and abroad. On the continent of Europe it was openly declared and secretly hoped that the Spanish navy would be more than a match for ours. There were Englishmen—and Americans, too, who had not read their history—who forgot that a leopard cannot change his spots, and they shook their heads and feared that we should meet defeat at the first, until we could build more ships and get more men. When the Maine blew up in Havana harbor there were people all over this country—patriotic men and women undoubtedly—who honestly believed that the cause of the accident, if not a breach of discipline, was at least due to a faulty construction of the ship. For many years this branch of our service has been persistently underrated by those who knew nothing of what they spoke. At every grounding or leak or other mishap to our new ships many murmured and scoffed, and some of the

papers actually published jokes about the insecurity of our battleships. If any of these critics, after four years of the hardest kind of work at Annapolis, were put on the bridge of a warship and told to conduct her from port to port, they would perhaps appreciate that the successful handling of a war vessel, even in times of peace, is one of the most difficult tasks in the world and is only acquired after a lifetime of the most assiduous study and the practice of it.—From "The Battle With Cervera's Fleet Off Santiago," by Winston Churchill, in the American Monthly Review of Reviews for August.

Publishers' Paragraphs.

The Kees Corn Husker, an advertisement of which appears in this issue, is one of the best labor-saving devices of its kind. Mr. Kees is reliable, and the Kees Corn Husker is all that is claimed for it.

St. Joseph's "Old-fashioned Fair" will be held at St. Joseph, Mo., August 22 to 27, 1898. Liberal premiums are offered in all departments and are open to the world. The speed and amusement attractions are sure to please the visitors. In short, the "old-fashioned fair" at St. Joseph is one of the most popular in the West. For details look up their advertisement in this issue and write the Secretary for premium list and other information.

If you will send the N. K. Fairbank Company, Chicago, Ill., your name, address and one 2-cent stamp to pay for postage, they will mail you free of charge a copy of "Home Helps," a practical and useful book of recipes, with much valuable information on cooking and serving breakfasts, luncheons, dinners and teas, table decoration, invitations, etiquette and many other subjects of special interest and value to the housewife. "Home Helps" contains 100 pages, is handsomely gotten up and illustrated, and is edited by Mrs. Rorer, the eminent lecturer and authority on pure foods and household economy, and principal of the Philadelphia cooking school.

Short stories by Rudyard Kipling, Rowland E. Robinson, William Allen White, Cutcliffe Hyne, and several others, make McClure's Magazine for August especially a fiction number. In Mr. Kipling's story we have a new and most diverting chapter in the lives of those most ingenious and audacious English school boys—Stalky, Beetle and McTurk. In Mr. White's we have an account of the first real passion of our old friend, the King of Boyville, Winfield Hancock Pennington—famously known as "Piggy." The other stories are no less characteristic of their authors; and all are interesting, cheerful and wholesome, affording a diversion that is both nutritious and palatable. The fiction, however, is by no means all that is noteworthy in the number. It contains a religious poem by Mr. Gladstone; an account by Col. Andrew S. Rowan of a peculiarly hazardous secret journey made by him across Cuba, after the war began, in order to carry messages from our government to the insurgents; the conclusion of Charles A. Dana's reminiscences, giving new information regarding the fall of Richmond, the assassination of Lincoln, the arrest of Jefferson Davis, and other events at the close of the war; and an account by Major General Miles of his observations and experiences, as a guest of honor, last year, at special royal reviews and maneuvers in Russia, Germany and France. The illustrations of the number are remarkably fine, and so is the special cover designed by Kenyon Cox.

The wheat crop attracted a good deal of attention during the past year, and will likely be the "money crop" for our farmers in the future. A winter wheat which can always and under any circumstances be depended upon for a safe and sure crop should therefore be selected, and the Farmer Seed Co., of Faribault, Minn., offer such a variety on page 11, and will also send free to our readers a sample package of the great wheat. A winter wheat, grown in Minnesota and making a good crop in a cold climate with very cold, unfavorable winters, without winter-killing, is a safe and sure-crop variety anywhere, and the kind which is safe for winter wheat growers to tie to. But not for its hardiness only is this variety remarkable, but it is ahead of others as far as milling and yielding qualities are concerned. This Bearded Fife winter wheat is a hard wheat, equal to the well-known No. 1 Hard Saskatchewan Fife spring wheat for milling purposes, while the average yield is from thirty-five to forty-five bushels per acre. At the Indiana Experiment Station it yielded forty-three bushels per acre in 1894, and we repeat again, send for a sample of this remarkable winter wheat, as it is sent free.

This wheat is not offered by seed merchants or dealers in seeds, doing business in large cities, but by farmers, and is grown at the place from where it is sold. It is well to bear in mind that the best way to buy your seeds is to buy them direct from the farmers and seed-growers, and the Farmer Seed Co., at Faribault, Minn., are farmers as well as seed-growers.

The Middlesex Fells were so named by Mr. Sylvester Baxter, in 1879, the word "fells" being an old Saxon designation signifying a tract of wild stone hills. The Fells district is one of the most charming portions of the Metropolitan Parkway, and lies within the limits of Malden, Medford, Melrose, Stoneham and Winchester. Articles on other divisions of the park reservation have already appeared in the New England Magazine. In the August issue of the magazine Mr. William B. de las Casas describes the Fells region; and his interesting paper gives evidence that he is thoroughly familiar with his subject. He deals with the history and topography of this tract of land, tells of the spots of special interest and beauty within its limits, and notes the improvements which have been effected since it has been included in the Metropolitan Park Reservation. His article is beautifully illustrated and will prove attractive reading for the summer season. Warren F. Kellogg, 5 Park Square, Boston, Mass.

The thrilling incidents on the southern coast of Cuba, recently, will make the pages of the future histories of the Spanish war read like a romance. The blind and bloody fighting on the Santiago hills, the gallantry of Hobson and his men, Cervera's despairing dash to almost certain destruction—no more sensational or dramatic events than these could be well imagined. Among the many picturesque incidents connected with the destruction of the Spanish fleet, the heroic work performed by Lieutenant Commander Wainwright will long be remembered. Wainwright was executive



LIEUTENANT-COMMANDER WAINWRIGHT

officer of the Maine on that tragic night in the harbor of Havana, and he was recently placed in command of Mr. J. P. Morgan's yacht Corsair, converted to a fighting boat and renamed Gloucester. When Cervera's dreaded torpedo boat destroyers came in sight at Santiago, on July 3, the Gloucester made for them at full speed and whipped them both, although the little American boat was at the same time under the fire of the shore batteries and the guns of the Vizcaya. The culmination of Wainwright's astonishing fearlessness was reached when he actually engaged the big Spanish cruiser, and maintained the action until supported by our men-of-war. A portrait of Lieutenant Commander Wainwright and a picture of his ship are contained in the issue of Harper's Weekly for July 9.

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.

Among the Ozarks,

The Land of Big Red Apples, is an attractive and interesting book, with views of south Missouri scenery. It pertains to fruit raising in that great fruit belt of America, the southern slope of the Ozarks, and is of interest to fruit growers and to every farmer and homeseeker looking for a farm and a home. Mailed free. Address J. E. Lockwood, Kansas City, Mo.

Kansas Fairs in 1898.

Following is a list of fairs to be held in Kansas in 1898, their dates, locations and Secretaries, as reported to the State Board of Agriculture and compiled by Secretary F. D. Coburn:

Allen County Agricultural Society—C. H. Wheaton, Secretary, Iola; September 6-9.
Anderson County Fair Association—C. H. Rice, Secretary, Garnett; August 30-September 2.
Brown County Fair Association—John H. Meyer, Secretary, Hiawatha; September 6-9.
Clay County Fair Association—E. E. Hoopes, Secretary, Clay Center; September 14-16.
Coffey County Fair Association—J. E. Woodford, Secretary, Burlington; September 13-16.
Kaw Valley Fair Association—W. R. Stubbs, Secretary, Lawrence.
Finney County Agricultural Society—D. A. Mims, Secretary, Garden City; September 13-16.
Franklin County Agricultural Society—Chas. H. Ridgway, Secretary, Ottawa; September 20-25.
Greeley County Fair Association—I. B. Newman, Secretary, Tribune; October 12-13.
Jackson County Agricultural and Fair Association—S. B. McGrew, Secretary; Holton, August 29-September 2.
Jefferson County Agricultural and Mechanical Association—Edwin Snyder, Secretary, Oskaloosa; September 6-9.
Johnson County Co-operative Fair Association—J. M. Warren, Secretary, Edgerton; September 13-16.
Marion County Agricultural Society—F. H. Prescott, Secretary, Peabody; September 6-9.
Frankfort Fair Association—C. W. Brandenburg, Secretary, Frankfort; September 27-30.
Miami County Agricultural and Mechanical Fair Association—W. J. Carpenter, Secretary, Paola; September 27-30.
Montgomery County Agricultural Society—D. W. Kingsley, Secretary, Independence; August 30-September 2.
Southeastern Kansas District Fair Association—D. W. Kingsley, Secretary, Independence; August 9-12. (Fair to be held at Parsons.)
Morris County Exposition Company—E. J. Dill, Secretary, Council Grove; September 27-30.
Neosho County Fair Association—H. Lodge, Secretary, Erie; September 6-9.
Chanute Agricultural Fair, Park and Driving Association—Aug. Bares, Secretary, Chanute; August 16-19.
Ness County Fair Association—N. H. Stidger, Secretary, Ness City; September 1-3.
Osage County Fair Association—W. B. Davis, Secretary, Burlingame; September 6-9.
Riley County Agricultural Society—Jerome Walbridge, Secretary, Riley; September 6-9.
Rooks County Fair Association—David B. Smyth, Secretary, Stockton; September 13-16.
Wichita State Fair Association—H. G. Toler, Secretary, Wichita; September 19-24.
Fredonia Agricultural Association—J. T. Cooper, Secretary, Fredonia; August 23-26.
Osborne County Fair Association—F. P. Wells, Secretary, Osborne; September 20-23.
Saline County Agricultural, Horticultural and Mechanical Association—H. B. Wallace, Secretary, Salina; October 5-7.

Belgian Draft Dogs.

The dog generally in use varies in size and color, but in probably the majority of cases he is, when standing, about two feet high, of a dark gray or dark brown color, has short hair and the tail cut. In addition to his work as a draught animal, he is a faithful guardian of his master's home. The price naturally depends upon the size, health and age. A well-kept dog, two years old, two feet high, trained and ready for work, will sell for \$18 or \$20. The same animal at the age of 6 or 7 years will not bring more than \$8 or \$10.

In the cities and towns, when employed by butchers, bakers, laundries, etc., to draw their delivery carts, one dog is often used and is harnessed under the cart. The cart is provided with two handles, like those of a wheelbarrow, which are held by a boy, the boy thus guiding cart through the narrow streets, while the dog pulls. In case of need, the boy assists by pushing the cart, as he would a wheelbarrow. Sometimes two dogs are placed under the cart, but not more. The highest utility is attained where two, three, four or five are harnessed abreast and placed in front of the cart, which they draw just as horses. It is in this way that the peasants come to town with their vegetables and flowers in the morning, and in this way they return in the afternoon, seated in their carts, happy and smiling when they have been able to sell their loads, and in this contentment the dogs seem to join, as they move briskly along, with their steady, easy trot, toward home. A team of three or four of these dogs can draw 500 or 600 pounds for several hours. The average working life of this faithful animal is said to be about ten years.—Harvey Johnson, United States Consular Reports.

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.

Spend Your Vacation in the Mountains.

But first write the General Passenger Agent of the Colorado Midland railroad, Denver, for maps, views, and descriptive matter, so as to know where to go.

In the Dairy.

Conducted by D. H. OTIS, Assistant in Dairying, Kansas Experiment Station, Manhattan, Kas., to whom all correspondence with this department should be addressed.

ALFALFA, THE DAIRYMAN'S FRIEND.

To make dairying profitable we must have cheap feeds, and, as far as possible, these feeds should be raised on the farm. The great trouble with most of our home-grown feeds is that they do not contain a sufficient supply of digestible protein to make a "balanced ration." Now, protein is what makes milk, and if a dairy cow does not have enough of this element in her feed she will register the result at the milk pail. Fortunately, we have in alfalfa a plant that is a drought-resister, a heavy yielder, and whose composition shows a large percentage of digestible protein. No dairyman should think of conducting business without it. A patron of one of our leading creameries, whose monthly check frequently amounts to over \$100, tells us that he would not think of dairying without alfalfa, and another dairyman, who delivers his milk in town, says that whenever the price of bran gets too high he quits buying bran and feeds alfalfa, and finds that his cows do as well for him as when fed bran.

The following table shows the comparative value of alfalfa, based on digestible nutrients:

	Protein.	Carbo- hydrates.	Fat.
Alfalfa.....	10.8	37.3	1.4
Mammoth clover.....	5.7	32.0	1.0
Prairie hay.....	3.5	41.8	1.4
Corn stover.....	2	33.2	.6
Millet hay.....	4.5	51.7	1.4
Timothy.....	2.9	43.7	1.4

It will thus be seen that, as far as protein is concerned, alfalfa is worth 1.8 times as much as mammoth clover; 2.3 times as much as millet; 3 times as much as prairie hay; 3.6 times as much as timothy, and 5.3 as much as corn stover.

Now, let us compare yields. In actual experiment, it was found that four cuttings of alfalfa aggregated 12,720 pounds (6.3 tons), while under the same conditions mammoth clover yielded 2,375 pounds, timothy 2,800 pounds.

Figuring the digestible protein, we have the following: Alfalfa 1,348 pounds, clover 135 pounds, timothy 81 pounds per acre. Another experiment shows that when alfalfa is compared with corn, under the same conditions, alfalfa yielded 1,198 pounds, and corn 296 pounds digestible protein; the alfalfa outranking the corn by over 400 per cent. With millet and prairie hay we are doing well if we get two tons of the former and one and one-fourth tons of the latter per acre. These would give 180 pounds and 88 pounds, respectively, of digestible protein.

Furthermore, 20 pounds of alfalfa and 8 pounds of corn or Kaffir corn meal makes practically a "balanced ration" for a dairy cow of 1,000 pounds live weight. True, the cow would not like to live on this alone, even though it be a balanced ration. The cow needs her vegetables, her pies, cakes, cookies and salads the same as man, and this succulence and variety should be well provided for, but the alfalfa and corn or Kaffir corn could be made the basis of the ration with excellent results.

The Kansas dairyman thus has within his reach two drought-resisting plants that are good yielders and will cause his cows to chew their cud with a satisfaction that pervades her whole system, even to the swelling of the udder and the milk veins.

We find alfalfa hay an excellent article to give dairy cows when first turned to pasture. It helps to overcome the tendency to slushy butter that dealers complain of at that time of the year.

With these facts before us, and with the experience of practical farmers and dairymen to back them, it is difficult to see why any one will attempt to produce milk without alfalfa. The merchant who would ignore such an opportunity would expect sooner or later to fail, and yet there are feeders in Kansas who still continue in the old rut, feeding their cows corn and corn stover and making no attempt to increase their profits by such a valuable crop as alfalfa.

Now is the time to begin to plan for next year. Alfalfa can be seeded either in late summer or early spring. One of the best stands the college ever had was seeded August 10, with an ordinary grain drill. Twenty pounds of seed per acre, mixed with an equal weight of bran to prevent too rapid seeding, drilled both ways of the field, will generally insure a good stand if the soil has been well prepared. Be sure to select land that has a porous subsoil, not less than six feet to water, as alfalfa roots readily penetrate ten to fifteen feet. Procrastination is the thief of time. If you can't get in

a small patch of alfalfa this summer, plan to put in a larger one next spring; the health of your pocketbook demands it.

D. H. O.

August Care of Cows.

The price of butter is rising, and the prospects are that butter will be higher than usual for several months, because there is a shortage of milk and butter throughout the United States. The high price now and the higher prices likely to follow make it desirable to keep the flow of milk up to as high a point as possible. Another reason for keeping the cows in good flow during August is that a drop now means less milk for each succeeding month until the cows calve again, no matter how good the care and feed may be later on. The cows will need to have the pasture supplemented by some other feed. Green millet, sorghum and corn are good feeds when freshly cut. Give in light feeds at first and gradually increase the amount until at the end of ten days the cows may be given all they will eat without waste. Do not wait until the cows begin to drop in their milk yield before you begin to feed. Watch the pasture, and as soon as the first signs of shortage come start feeding. It is easier and takes less feed to keep a cow giving a good flow of milk than it does to wait until the milk yield has dropped and then undertake to increase it.

If your fields are not arranged so that you can give green feeds to the cows without costing too much in labor, fill the racks with dry feed. If the cows are given what alfalfa they will eat you may be sure that, so far as feed is concerned, the milk yield will be all right. At the college farm we have fed our cows alfalfa hay all summer while they have been on pasture. We feed in racks in the barnyard, putting in each day about what the cows will eat, so that the hay is always fresh and palatable. While the grass was rank and watery the cows ate the hay greedily. As the grass became better in quality the cows ate less alfalfa. Now our pastures are beginning to get dry and our cows are eating more of the alfalfa hay—thirty cows eating about 100 pounds a day. Corn or Kaffir corn is the best grain to feed with alfalfa hay or green feeds. We have had good results with the college cows this summer in feeding a mixture of 400 pounds of corn meal and 100 pounds bran. Each cow has had one and one-half pounds of this mixture after each milking. As the pasture dries up we will increase the amount of grain fed. If other dry feed than alfalfa hay is used to help out the pastures, such as prairie or timothy hays, bran and linseed or cottonseed meals should be used and not corn. We would mix 100 pounds of bran and fifty to seventy-five pounds of linseed or cottonseed meal and feed one to four pounds of the mixture after each milking, varying the amount according to the ability of the cow to make returns for the feed. Several years ago, the college herd pastures became very dry and we lost several cows in mid-summer from impaction of the stomach. Further trouble was avoided by feeding loosening feeds—bran and linseed meal.

The cheapest and best feed to tide over the summer drought is ensilage, and it will pay every Kansas farmer who expects to make dairying a business to have a silo for summer feeding. The writer has fed ensilage to dairy cows for seven summers and each season emphasizes its value.

Water is as essential in milk production as feed, and it is especially necessary in the hot month of August. If possible, the cows should have free access to water, so that they can drink whenever necessary. Some of our dairymen water from ponds. The ponds should be fenced and the water piped into a trough with a float valve on the end of the pipe, so that the trough will always be full. A good float valve needs little attention, and when used in the way indicated will keep a full supply of water always ready for the cows. No good dairyman will let his cows stand in a pond from which they drink. When this is done the water becomes indescribably filthy and unpalatable and the cows will not drink a sufficient quantity to keep up a good flow of milk. The filth and mud gather on the udder and under side of the cow, drops into the pail and milk, and infects the milk with germs producing bad flavor that no skill of the butter-maker can overcome.

A dairy cow should never be driven faster than a slow walk, and this is especially important during the hot months. Fast driving, chasing with a dog and unkind treatment cuts down the flow of milk and decreases the per cent. of butter fat. The excitement of shipping our college cows 100 miles by rail cut down the butter fat in the milk of some of them to .9 of 1 per cent. Hard

driving in hot weather will produce a similar effect.

Cows need shade, and if there are no trees in the pasture it will often pay to set a few tall posts on the highest ground, put on some poles and cover with old hay, straw or weeds.

H. M. C.

Belle Springs Creamery Company.

The main office and factory of the Belle Springs Creamery Company are at Abilene, with either factories or skimming stations at Alida, Bennington, Beverly, Brookville, Chapman, Dayton, Donegal, Ellsworth, Fragrant Hill, Glasco, Gypsum City, Holland, Junction City, Langford, Lorraine, Moonlight, New Cambria, Niles, Salina, Talmage and Tescott. The officers of the company are H. W. Dayhoff, President, Eli Hoffman, Vice President; E. H. Forney, Secretary, and J. K. Forney, Treasurer and Manager. This is its thirteenth year, and each year's business has been larger than the preceding one, as the following table will show, in pounds of butter made:

	Pounds.
1886.....	3,070
1887.....	167,450
1888.....	104,247
1889.....	225,703
1890.....	340,450
1891.....	403,796
1892.....	491,882
1893.....	604,337
1894.....	715,650
1895.....	841,896
1896.....	1,037,098
1897.....	1,200,000

A few comparisons will aid us in comprehending the extent of the operations of this company. If the 1,200,000 pounds of butter made by it in 1897 were put in one-pound prints of the usual size and these prints were placed end to end they would make a line of golden butter extending 100 miles in length. If this butter had been packed in the regular sixty-pound tubs and these tubs placed in single rows on top of each other, the pile would be four and three-fourths miles high, and loaded on refrigerator cars, a train of sixty cars would be required to take it. A housekeeper informs us that this amount of butter would spread 34,000,000 slices of bread, about twenty-three slices for each man, woman and child in Kansas. The Belle Springs Company will make over 1,500,000 pounds of butter this year.

Seventeen hundred farmers deliver their milk to the Belle Springs Company, and this milk from so many sources is separated and the butter sent out as a uniform production, alike in flavor, coloring and salting throughout the season. This is the point where the creamery butter-maker has an envious advantage over private butter-making. To secure top prices on the market, butter must be offered in large lots, of good quality and uniform character. If each of the 1,700 farmers who sell their milk to the Belle Springs Company's creamery should make his own butter, there would be for sale 1,700 small lots of butter, having 1,700 different flavors, with 1,700 different degrees of saltiness and 1,700 different shades of color. Some of the butter would be good, much indifferent and more poor, on account of lack of skill and proper facilities, and the price for the whole would be much lower than that paid by the creamery for the milk.

Mr. J. K. Forney, manager of the company, has sent us the records of two of his patrons: Mrs. S. G. Walker, of Ellsworth, delivered to the Belle Springs Creamery Company, for the year ending April 15, 1898, from ten cows, 48,025 pounds of milk, which contained 1,932.96 pounds butter fat, for which the creamery paid her \$309.10. She sold \$50 worth of milk to restaurants and families, and nine calves, the increase of her herd, for \$122, making a total of \$481.10 as the proceeds for one year from ten cows. Mr. G. W. Stewart delivered in 1897 to the Belle Springs Creamery plant at Talmage, from nine cows, 59,239 pounds of milk, containing 2,433.79 pounds butter fat, for which he received \$413.11. The value of his calves was not given. These figures speak well for the opportunities offered Kansas in dairy lines.

H. M. C.

"Utilization of By-Products of the Dairy," by Maj. Henry Alvord, Chief of

"ALPHA-DE LAVAL" CREAM SEPARATORS.



De Laval Alpha "Baby" Cream Separators were first kept best and cheapest. They are guaranteed superior to all imitations and infringe-ments. 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.

the Dairy Division, United States Department of Agriculture. A twenty-page pamphlet reprinted from the Year-Book of the Department for 1897, giving methods of utilizing to best advantage skim-milk, butter-milk and whey. Among other things it gives eighteen different ways in which skim-milk is used, in which it nets the producer 20 cents to \$1.50 per hundred pounds. The sections of particular value to the Kansas farmer are those giving best methods of feeding skim-milk to calves and pigs. You can obtain this pamphlet free from your Congressman. Write him to-day.

H. M. C.

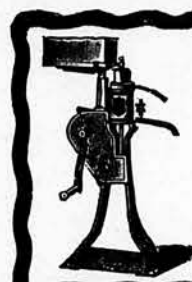
Individuality and Profit.

One who has not actually studied the variations of individuals in the dairy herd will little realize what is meant by individuality. Two cows under exactly the same conditions will vary widely in their ability to convert raw food material into milk. One cow may be more hardy than another and may have strong organs of digestion. Take, for example, our common scrub cow, that yields not more than 125 to 150 pounds of butter per year, and one of our high-bred dairy cows, that yields between 400 and 500 pounds of butter per year. Under exactly the same conditions and with exactly the same kinds of feeds the latter will make from three to four times as much butter as the former. Now, what is the difference? Simply that one has the power and the other has not the power to convert a large amount of feed into milk. In a test of seven weeks with the college herd of common cows, we found that the feed cost of producing 100 pounds of milk varied from 30½ cents to 75½ cents, and the cost of producing a pound of butter varied from 7.2 cents to 15.1 cents.

Individuality cannot be measured by quantity alone. We have before us two records of two cows, one giving 5,124 pounds of milk and the other 5,681 pounds, and yet the annual butter yield of the first was 390 pounds, while that of the latter was only 274 pounds, or 42 per cent. less. Nor can individuality be determined by the Babcock test alone. We have the record of two cows, one testing 4.6 and producing 500 pounds of butter per year and the other testing 5.7 per cent. of butter fat and producing only 197 pounds of butter in the same length of time.

From the above it will be seen that individuality must be studied from two standards—that of the yield of milk, and the Babcock test. The two go hand in hand, and the dairyman that will keep abreast of the times must keep a record of both. A man may think he knows what his cows are doing without testing them, but the experience of those who have tried both ways goes to show that he does not. It often happens that the cow the owner thinks is doing the best is in reality doing the poorest, and doubtless there are many cows in the country that are actually running their owners into debt.

With a knowledge of the milk yield and the butter fat test, the dairyman is in a position to weed out his poor and



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.

unprofitable cows, and thus raise the standard of his herd. In these days of fierce competition it is not enough to know what the herd averages, but we must be able to pick out those animals that are bringing the average down. He is then in position to tell how much he can profitably feed his cows, and thus increase or decrease this feed in accordance with the element of profit.

Any man with ten cows can well afford to have a Babcock test of his own. If he cannot do this, then he should make arrangements with his creameryman to have his cows tested individually; but test he must or take a back step among the intelligent, progressive and prosperous dairymen of the day. D. H. O.

Horticulture.

OUR NATIVE PLUMS.

Prof. E. S. Goff, Horticulturist at the University of Wisconsin, is making a praiseworthy endeavor to secure a wider use and consequently a more general cultivation of the "native plum," by which he means those cultivated plums which have been derived from the wild plums of this country. Most of the blue and yellow plums of the markets, he says, belong to one or more foreign species. The best native plums are considered by many to be superior to the foreign sorts for culinary use. To enable those unfamiliar with the qualities of the native plums to make the best use of them, Professor Goff submits recipes for the various preparations to which they are adapted. These recipes have been contributed by several ladies who have had long experience in using the native plums. The native plums, especially those with firm pulp, after being treated by any of the methods mentioned below are well adapted to all the purposes for which the foreign plums are used. As a rule, more sugar is required for the native plums, but the preparations are richer in proportion. The harshness in the skin and stone of some native plums is readily removed by steaming them in an ordinary cooking steamer until the skin cracks; or pour over them boiling water to which has been added common baking soda in the proportion of half a teaspoonful to a quart. The thicker-skinned varieties may be readily peeled by placing them in boiling water two or three minutes. The receipts follow:

Stewing.—Use ripe fruit and stew in just water enough to keep them from burning, until nearly soft, then add sugar to suit the taste.

Canning.—Pick the fruit when well colored but a little hard, steam or cook in a porcelain-lined kettle until tender, put in cans that have first been treated to boiling water, and cover with boiling sirup made of equal parts granulated sugar and water, filling the can to the top; then run a silver knife around the can inside to let out the air, and seal at once. Plums cooked in the sirup are likely to be tough. Canned plums may be used for pies and for mixing with or flavoring other fruits. Plums are often canned without sugar, to be used in winter for making fresh plum butter. The juice of canned plums makes excellent jelly.

Drying.—De Soto, Wyant and doubtless other varieties may be pared, pitted, spread on plates, lightly sprinkled with sugar and dried, first in the oven and later in the sun. Cook like dried peaches.

Plum Jelly.—The fruit should be gathered when only part ripe—about half colored. This point is very essential. Put plums in a large granite or porcelain kettle—the latter is best—with barely enough water to cover them. Cook until tender but not until they are in a pulpy mass. Having previously covered a large jar with a cloth, strain the fruit in and let the juice drip through, but do not squeeze. When all has been drained through, strain once or twice more, through another cloth, until the juice is perfectly clear. To one measure of juice provide one measure of granulated sugar, but do not put together at once. A very important point in the making of all jelly is that only a small quantity should be cooked at one time. Into a medium-sized kettle put, say, four tumblers of juice; let it boil briskly fifteen or twenty minutes, then add the four tumblers of sugar, and in a very short time—usually from three to ten minutes—the jelly will be finished, light, clear and delicious. To test the jelly, dip a spoon into the boiling juice and sugar and hold it up; when the jelly clings to the spoon in thick drops, take it off quickly and put into jelly glasses. The plum pulp which is left can be put through a colander and used for plum butter. . . . The following point is regarded as important by one contributor: The earlier in the morning and the clearer the day, the better will be your jelly. A cloudy day makes

dark jelly, and if not made early in the day the juice requires boiling so much longer that the jelly is dark, and sometimes it is almost impossible to get it to jelly. . . . Another correspondent writes: "It is well to begin to test it after (boiling) fifteen minutes, taking a teaspoonful at a time onto a saucer and standing in a cool place for a moment; scrape it to one side with a spoon, and if it is done the surface will be partly solid; then roll the tumblers in boiling water quickly and fill them with the jelly. On the top of each, while it is still hot, drop a lump of clean paraffine, which will melt and cover the top tightly, preventing all molding. If prepared in this way it will not need to be tied with brandied paper or other special care taken."

Plum Butter, Jam or Marmalade.—Boil the fruit in clear water until nearly done. Remove from the stove and put through a colander to remove the pits. Then rub through a sieve to make the pulp fine. Place pulp in kettle with about half as much sugar as pulp, or if you wish to have it very rich, nearly as much sugar as pulp, and boil down to the desired thickness. Stir almost constantly to prevent sticking to the kettle. . . . Another recipe.—To make very nice plum butter out of De Soto, Wyant or any other free-stone plum, pare and take out the pits, put in granite kettle or pan and sprinkle heavily with sugar, and let stand over night. In the morning there will be juice enough to cook them. Stir constantly while cooking and add more sugar if not sweet enough. This way preserves the grain of the fruit, and with the De Soto plum makes a butter equal or superior to peach butter. If put in glass and canned, less cooking is required than if kept in open jars. . . . A third correspondent would add: Do not attempt to make a fine quality of either (plum butter, jam or marmalade) without first steaming the fruit.

Plum Preserves.—Use plums that will peel, like Wild Goose or Pottawatomie. No water is required if the sugar is allowed to remain on them long enough to draw out the juice. Boil until the sirup is clear and as thick as honey. . . . Another recipe.—Take equal weights of fruit and sugar, place in stone jar—a layer of fruit then a layer of sugar—alternating thus until quantity desired is reached. Let stand over night; in morning drain off the sirup that will have formed into porcelain-lined kettle, place same over the fire and let sirup come to a boil, then pour it over the fruit in jar again; repeat this every other day until the fourth heating, when fruit and sirup are both put in kettle and boiled for a few minutes. Place same in glass jars while hot, seal and put away in some cool and preferably dark place. . . . Still another recipe.—To each pound of plums add a pound of sugar; put the fruit into boiling water until the skins will slip; peel and sprinkle sugar upon each layer of fruit in a bowl, allowing them to stand over night; then pour off the juice, bring quickly to a boil, skim and add the plums; cook very slowly until tender and clear, which will take about half an hour; take them out carefully and put into a pan; boil the sirup a few minutes longer, till it thickens; pour it over the fruit; seal or tie them up.

Spiced Plums.—Make a sirup, allowing a pound of sugar and one pint of vinegar to each seven pounds of plums; to this add a teaspoonful of allspice, one of cloves, two of cinnamon and half an ounce of ginger root, tying these spices into muslin, and cooking them in the sirup. When it boils, add the plums, bringing all to the boiling point, then simmer slowly for fifteen minutes, and stand in a cool place over night. Next drain the sirup from the plums, put the plums into stone or glass jars, and boil the sirup till quite thick, pour it over the fruit, and set away. . . . Another correspondent recommends pouring the boiling spiced sirup over the plums in a stone jar, drawing it off and bringing it to a boil every other day and pouring over the plums again until it has been heated five times, after which the fruit and sirup are placed in a kettle and boiled slowly for five minutes, and sealed hot in glass jars. This is said to preserve the plums whole.

Other Ways of Using Native Plums.—The choicest varieties, peeled and served fresh, are equal to the finest peaches. By simply covering the fresh plums with cold well water they may be kept for three weeks or longer, and the water removes all harshness from the skin and pit. They may be kept in good condition for use until winter or the following spring by placing in a barrel or jar and pouring boiling water over them.

Leaves Turn Yellow.

Editor Kansas Farmer:—What is the matter with my cherry trees? I inclose some leaves. They seem diseased or in-

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fectured with some insect that causes them to turn yellow and drop off. The trees so attacked are common Morello, Empress Eugenie and Richmond. What is the remedy, and if not attended to will this trouble finally kill the tree?
Pratt, Kas. I. H. DIX.

In the absence of Professor Faville I submit the following reply to the questions asked by Mr. Dix:

The yellow color of the leaves upon fruit trees, such as the cherry, peach and plum, has been noticed this season in many localities. The cause is probably to be traced to the abundant rains in the early season, causing an excess of water in the plant, which prevented the normal formation of green coloring matter in the leaves. While it will work some injury to the tree it is not likely to prove fatal. Drainage and thorough cultivation are the best preventives.

W. L. HALL,
Assistant in Horticulture, Kansas State Agricultural College.

Russian and American Colonization.

Within the last few years the Russians have established on the boundary of eastern Siberia a vast colony of restless emigrants, whose busy, energetic life is strangely out of keeping with the sluggish inactivity of sleeping Asia. Along the banks of the Amur and Sungaru and in the various districts which radiate from Vladivostok come thousands of hardy pioneers, subjugating the soil to cultivation, building roads, making homes, and driving an entering wedge of bustling civilization into the lethargic East. These men and women are not transient settlers; they will never go back to Russia, but they will draw Russia to them in closer union, and add a race of men to the people of the Far East who will control this part of the continent of Asia as far south as it is habitable. A wonderfully effective system of civil and military administration guarantees governmental assistance and protection to settlers, and it is claimed that by the aid of the great imperial railroads an army of 200,000 men can be mobilized within two weeks upon any point of the frontier of China and Korea. Russia is now the virtual suzerain over northern China, and, moreover, there is no nation in the world able to place on the east coast of Asia an army that could cope with her; but she is far-seeing enough to add to her military power the tenacious strength of an industrial and vigorous occupation of the lands already under her control.

In the picturesque activity and toil of these Russian colonists there is something which appeals strongly to our American instincts of energy and advancement. No one can read the description of their life and work which Stephen Bonsal contributes to the July Harper's without being reminded of that determination which made productive the broad lands of our Western prairies, pierced the forbidding Rockies in search of national wealth, and established the great commercial prosperity of the Pacific coast. Mr. Bonsal traveled through eastern Siberia with both eyes open, and his long training as a correspondent has enabled him to recount graphically the significant and salient features of this invasion of the Slavs into the East—an invasion peaceful enough now, but with all the portentous possibilities within it of a mighty conflict, and of a forcible solution of the Eastern question.

It will be of not a little interest to note the economical history of this new section of the Russian empire, and to compare it with the corresponding growth

of new lands under a settlement by Anglo-Saxons. The course of the development of the States of our Mississippi valley, for instance, may be briefly described by a division into three periods—settlement, extravagance and depression. Upon a fourth era they are now entering, and the many signs of prosperity and revival are sufficiently emphatic and encouraging. The Anglo-Saxon theory of democracy leaves the settlers of a new country to work out their own salvation; they must find out for themselves the natural advantages and disadvantages of the new land, and often without assistance must come to an understanding of its capabilities through many vicissitudes and discouraging experiences. Directly opposed to this idea, the paternalism of a strong imperial government has a tendency to belittle such self-reliance.

Many suggestions of a comparison between the two systems are afforded by reading, in connection with Mr. Bonsal's article, a contribution to the July number of Harper's Magazine from the pen of Charles Moreau Harger. The latter paper is entitled "The Middle West's New Era." It comprehensively sketches the business history of this portion of our country, arrays the many tendencies which now point to permanent prosperity, and concludes as follows: "The West is settling down to make the most of the resources which it possesses, and has ceased worrying about those which it possesses not. In that lies the secret of its future."

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ON THE GRAND CANAL.

Read before Kansas State Homeopathic Medical Society, by Henry W. Roby, M. D., Chairman Surgical Bureau.

Recently a half dozen gentlemen agreed to join me in an excursion on the Grand canal. Now I know that when I speak of the Grand canal some of you will recall those quaint and terse lines of Rogers:

"There is a glorious city in the sea,
The sea is in the broad and narrow streets
Ebbing and flowing; and salt seaweed
Clings to the marble of her palaces.
No track of men, not footsteps to and fro
Lead to her gates; the path lies o'er the
sea.
Invisible; and from the land we go
As to a floating city."

And when you have repeated the lines, you say, "Venice," and with the mind's eye you behold the Campanile, and the square and lion of St. Marks, and the Doge's palace, the house where Desdemona lived, and the Rialto bridge and Shylock's counting house, and later, the houses where Byron and Browning and Ruskin lived, on her Grand canal.

But that is not the canal in question. It is a far grander one.

Those of you who are familiar with history and fiction, may recall many other famous canals. When you hear any one speak of the Erie canal, you at once think of commerce 'twixt lakes and seas. When you hear of the Suez canal, you think of crossing continents and seas to distant Ind, and the far Orient. When the Panama and Nicaragua canals are mentioned, you think of ships cross-cutting a mountain range, and dropping out 7,000 miles between East and West. And if one mentions the Illinois canal, or the Mexican canal, or the Cloaca Maxima, you think of immense drainage-ways leading from great cities to great seas.

But none of these, nor yet the great canals of the planet Mars, are in question here. My thought is of a more ancient and marvelous canal than any of them. Not so long as the shortest of them, and not so broad as the narrowest of them. And yet, this canal is more important to the human race than all of them combined.

We talk of some very old canals in Egypt, Rome, China, India and Ceylon, but none of them have so ancient an origin as the Grand canal which is my theme on this occasion.

According to the authentic records among men, this canal is co-equal in its ancient origin with man himself. It was known in the Garden of Eden, and is now known all over the world, except at the north and south poles. It is associated with all habitable places; it communicates with all seas, all lakes, all rivers. It is in the midst of all plains; in the confines of all kingdoms and principalities. Every member of the human family has his dwelling by this canal, and no man can dwell apart from it.

The six gentlemen who made the excursion with me each agreed to inspect a portion of the canal and report as mechanical engineers on such repairs of the canal as are known to their craft to be needed from time to time.

Our journey was not a lengthy one, but it made us all think more seriously about the Grand canal than ever before. While these gentlemen were inspecting the separate sections of the canal I, having a more general object, made observations that have little or no relevancy to their work. They went as the servants of science, and I as a free lance.

We first encountered the Grand canal at the great city of Lablorm, the most populous, quaint and ancient city known to men. And while the gentleman assigned to the first section was making surveys and charts of the entrance to the Grand canal, I busied myself with looking up the commerce and other phases of that great entrepot. I call it a great entrepot, for I found it immensely vast and unparalleled in its commercial relations to the rest of the world. It has the greatest of all clearing houses. And the chief officer of its custom house told me that more than 50 per cent. of all the commerce of the world had to do in some way with the Grand canal. And having dropped some hints about disbelief in his statement, he said, "You will not be so incredulous when you look over the way-bills of the world. That which goes down the Grand canal goes to immediate consumption, and must be repeated and repeated every day of the year, while other commodities have a much longer span of duration before the necessity comes for repeating the cargo. Then," he continued, "this canal is found on every continent and every island of the sea and all places where human footfall ever broke the seal of primal silence. It is also found within the bounds of the ocean. Hail any ship afloat, in any waters of the globe, and ask its lading, and the answer will come back that at least a portion, if not all, of its cargo is billed for the Grand canal. No ship ever sets

sail without something in its lading destined for the Grand canal. And no railway train ever crosses a continent or pulls from station to station without carrying something to be transhipped to the Grand canal. Every wagon train, every mule and camel train that ever crosses deserts and plains, carries something to be handed over to the Grand canal. All the food products of the world go by that route to their ultimate destination. All the wheat of the vast plains of Russia, Europe, Asia, Africa, and North and South America, over 3,000,000,000 of bushels, reaches its destination through the Grand canal. Almost countless bushels of corn go the same way. All the cattle, sheep and hogs of the world are billed by that canal. All the fishes taken from seas and rivers, go the same way; 1,170,379,448 gallons of distilled and malted liquor and wine go yearly the same way; 8,500,000 tons of sugar and 450,000,000 pounds of tea and 1,249,000,000 pounds of coffee go annually to that destination. Then think of all the other things edible and potable on the planet, all destined to the same delta, at the terminus of the Grand canal."

When the officer ceased speaking, I was simply dumb with amazement. I had never thought out the full significance of this greatest and strangest canal known to man.

We talk of the Nile with its hundred mouths, but do we think of the Grand canal with 1,440,650,000 mouths?

While going about Lablorm, and observing its enormous commercial relations, I was forcibly reminded of the story of the Symplegides, told in Greek and Roman mythology. According to that myth, there was at one time a pair of great movable rocks set up at the mouth of the Bosphorus, where it enters the Black sea, and those rocks being made guardians of the canal, continually clashed and crashed together, so that nothing could pass without being crushed. That story is admittedly a myth, but I actually found a symplegides at the entrance of the Grand canal. Here I found real, odontoid rocks, that have been crashing together for more than 6,000 years, and their crushing power is enormous.

We often read about some new crusher being set up at some gold or silver mine, and grinding the flinty ore of the everlasting hills. But these anthropoid mandibles set up at the entrance of the Grand canal crush and crumble into a shapeless mass more tons of matter in a single day than all the ore crushers in the world ever did. In the Greek Symplegides there was but a single rock on each side of the Narrows, but at Lablorm there are sixteen of these odontoid rocks on either side, set in a semi-circle, and nothing ever escapes them.

Beyond the Symplegides a variety of small streams come trickling into the canal from different sources and of a variety of chemical and physical properties. These little streams all have their peculiar names. One is called Salivary creek; one Lingual and one Sub-Lingual branch. Another is called the Hepatic canal; another the Gastric basin; while others are called the Pancreatic and Splenic canals—all of them pouring their contents into the Grand canal. There I found a system of irrigating canals, leading off in various directions, somewhat like the water-works channels in a great

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city. By means of these outward canals all the inhabitants along the Grand canal derive their food and drink supplies. For by a perfect system of socialism every city along this great highway owns and collectively draws upon the food resources of the particular region. For instance, I was told at Lablorm that 3,750,000 tons of water passed down the Grand canal every twenty-four hours and that there were certain water factories in operation along the line in which pure water was constantly manufactured in sufficient quantity to make up any possible shortage in time of drought or disturbance of the general supply.

Like the great ship canals in the country, this canal is supplied with a series of locks and flood-gates and bulk-heads, by which the general stream in the canal is easily regulated in its onward flow.

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The Veterinarian.

We cordially invite our readers to consult us whenever they desire any information in regard to sick or lame animals, and thus assist us in making this department one of the interesting features of the Kansas Farmer. Give age, color and sex of animal, stating symptoms accurately, of how long standing, and what treatment, if any, has been resorted to. All replies through this column are free. In order to receive a prompt reply, all letters for this department should give the inquirer's postoffice, should be signed with his full name, and should be addressed direct to our Veterinary Editor, Dr. Paul Fischer, Professor of Veterinary Science, Kansas State Agricultural College, Manhattan, Kas.

SWINE PLAGUE.—My hogs are sick. Quit eating and hang their heads down and immediately commence to stagger, their hind quarters seeming to travel rather sidewise. Have very light cough. Some of them scour and some are constipated. Have an offensive smell. Held post-mortem on one old sow and found the heart, kidneys and intestines covered with red spots, from the size of a pin-head to your finger-nail. Spots seemed to be blood just under the surface. Live probably a week or ten days. Would like to know, through the Kansas Farmer, what you call it, and give a remedy, if possible. (2) What would you give shoats for those long worms that clog up the intestines and kill the hogs? W. J. Topeka, Kas.

Answer.—Your hogs have swine plague or hog cholera. Your description is good. Separate the healthy from the diseased ones and place both lots in new and roomy quarters—a large, high and dry field will be most suitable. See to it that neither the diseased pigs, nor the excrements of these, nor the carcasses of dead ones can in any way, directly or indirectly, come in contact with the healthy ones. Even have separate attendants if your herds are large. If you have the same attendant for both lots, care for the healthy ones first, and then for the diseased ones. You thus avoid one danger of carrying and spreading the contagion. Thoroughly disinfect the old pens by using corrosive sublimate in one-fifth per cent. solutions, or 5 per cent. solutions of crude carbolic acid as a wash for floors, walls, posts, feeding troughs, etc. Scald the feeding troughs of healthy and diseased lots with boiling water before every feeding time. Feed a mixed diet; corn, oats, shorts, middlings, clover or alfalfa, etc. Don't feed corn alone; although it cannot produce the disease, it does not nourish the body sufficiently to enable it to withstand ordinarily harmless influences. If you feed milk, boil it thoroughly before doing so. Observe every precaution in the way of cleanliness, giving pure food and water, and in introducing newly-purchased pigs with uncertain health certificates. All dead pigs and the droppings of the diseased ones should be destroyed by fire. By following these directions carefully, which means absolutely as here given, you can check the disease and perhaps save some of the diseased animals. Medicinal treatment is of little value in this disease, but, if you wish, you may use the following, which is recommended by the United States Bureau of Animal Industry:

Pounds.
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Sulphur 1
Sodium chloride 2
Sodium bicarbonate 2
Sodium hyposulphite 2
Sodium sulphate 1
Antimony sulphide (black antimony) 1

These ingredients should be completely pulverized and thoroughly mixed. The dose of this mixture is a large tablespoonful for each 200 pounds weight of hog to be treated, and it should be given only once a day.

(2) See Kansas Farmer of April 28, 1898.

SORE EYES.—INFECTIOUS CONJUNCTIVITIS.—I write you in regard to a disease among our cattle, and ask your advice. The disease is of the eyes and seems to be contagious or epidemic. We first noticed it among our calves last winter, but attributed it to articles in the eyes and paid little attention to it. But now the cattle in the pastures are affected with it and it seems to be spreading to neighboring herds. The symptoms are as follows: The eye becomes inflamed and water runs from it; usually only one eye is affected. In a day or two the eye becomes swollen, turns yellowish white and very painful. As the disease progresses, the eye seems to bulge out at center—sometimes bursts, but not often. After about two weeks the inflammation seems to leave, the eye clears, leaving a small bluish white dot, just below the sight, which gradually disappears. It does not seem to make the cattle much sick or out of condition after a few days, and after a while they nearly all regain their

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sight. We have about thirty affected now. P. L. L. Linn, Washington Co., Kas.

Answer.—The affection you describe is an inflammatory condition of that membrane of the eye known as the conjunctiva. In severe cases this inflammation may extend to other parts of the eye, and sometimes produces total blindness. This disease is common in cattle, and is most frequently met with during dry and dusty weather, usually disappearing with the unfavorable weather. If treated carefully and in time, all cases will end in recovery. Even in neglected cases most patients will suffer little permanent harm, but as your observations show, this is not an invariable rule. The disease is confined to cattle. Treatment.—This consists in the daily application to the eye, between the eyeball and the lids, of a few drops of a one-tenth per cent. solution of corrosive sublimate in distilled water. Have this solution prepared by a druggist. Use a dropper in applying it, and keep up the treatment until perfect recovery sets in. This will answer numerous other inquiries relating to the same trouble.

MARKET REPORTS.

Kansas City Live Stock.

Kansas City, Aug. 1.—Cattle—Receipts since Saturday, 7,139; calves, 231; shipped Saturday, 1,044 cattle; 70 calves. The market was slow and steady to 10c lower. The following are representative sales:

SHIPPING AND DRESSED BEEF STEERS.
No. Ave. Price No. Ave. Price.
40.....1,387 \$5.10 10 s. & h. 883 \$5.00
24 s. & h. 918 5.05 46.....1,243 5.00

WESTERN STEERS.
76 fdr.....1,191 \$4.55 63 Tex.....1,237 \$4.50
40.....1,058 4.10 27 fdr.....937 3.90
46 Tex.....1,035 3.85 14.....568 3.50
2.....1,005 3.45 34 stk.....635 3.40

NATIVE HEIFERS.
2.....730 \$4.25 2.....485 \$4.05
2.....680 4.00 1.....730 3.50

NATIVE COWS.
10 c. & h. 934 \$3.75 3.....1,033 \$3.40
5.....890 3.35 5.....914 3.09
2.....930 2.80 2.....830 2.75
4.....887 2.65 1.....940 2.50

NATIVE FEEDERS.
1.....1,140 \$4.40 4.....937 \$4.25
2.....905 4.15 8.....1,181 3.95

NATIVE STOCKERS.
7.....440 \$5.10 2.....600 \$4.40
3.....706 4.35 16.....601 4.00
11.....775 4.00

Hogs—Receipts since Saturday, 5,269; shipped Saturday, 440. The market was strong to 5c higher. The following are representative sales:

58.....286 \$3.92 73.....273 \$3.92 58.....314 \$3.90
62.....274 3.90 63.....256 3.90 57.....278 3.87 1/2
63.....252 3.87 72.....255 3.87 76.....257 3.85
80.....265 3.85 58.....250 3.85 50.....279 3.85
57.....264 3.82 66.....241 3.82 63.....267 3.82 1/2
65.....249 3.82 63.....239 3.82 92.....218 3.82 1/2
51.....282 3.80 79.....208 3.80 73.....260 3.80
68.....236 3.77 68.....206 3.77 28.....268 3.77 1/2
6.....166 3.75 54.....231 3.75 45.....221 3.75
72.....213 3.72 61.....214 3.72 84.....209 3.72 1/2
67.....187 3.70 56.....209 3.70 20.....390 3.70
8.....146 3.67 22.....155 3.67 93.....167 3.67 1/2
37.....146 3.65 15.....133 3.60 99.....168 3.60
15.....146 3.55 16.....135 3.55 9.....130 3.55
7.....122 3.45 30.....126 3.45 15.....123 3.45
17.....108 3.30 25.....124 3.25 2.....125 3.25
8.....112 3.15 4.....135 3.10 1.....200 3.00
4.....130 3.00 2.....200 3.00 3.....180 2.50

Sheep—Receipts since Saturday, 4,773; shipped Saturday, 1,551. The market was active and steady. The following are representative sales:
8 spg. lms. 92 \$5.85 4 sw. lms. 90 \$5.50
47 spg. lms. 65 5.30 479 U. weth. 108 4.20
32 stk. lms. 50 4.00 43 sheep. 88 4.00
141 sw. stk. 71 3.65 7 sw. sheep. 98 3.75

Horses and Mules—The arrivals of horses and mules were fair. There were several new buyers looking around. Most of the offerings are big and heavy. The local trade in heavy mules and good draft horses has been unusually strong for this season of the year.

St. Louis Live Stock.

St. Louis, Aug. 1.—Cattle—Receipts, 3,000; market steady to easy; native shipping and export steers, \$4.60@5.50; light and dressed beef and butcher steers, \$4.00@5.35; stockers and feeders, \$2.80@4.30; cows and heifers, \$2.00@4.75; Texas and Indian steers, \$3.25@4.30; cows and heifers, \$2.75@3.45.

Hogs—Receipts, 2,500; market 5c higher; yorkers, \$3.85@3.95; packers, \$3.75@3.95; butchers, \$3.95@4.05.

Sheep—Receipts, 800; market steady; native muttons, \$3.50@4.50; lambs, \$4.00@6.00.

Chicago Live Stock.

Chicago, Aug. 1.—Cattle—Receipts, 16,000; market steady; beefs, \$4.15@5.50; cows and

heifers, \$2.15@4.75; Texas steers, \$3.60@4.65; stockers and feeders, \$3.10@4.65.
Hogs—Receipts, 35,000; market opened strong to shade higher; later weakened at Saturday's prices; light, \$3.70@3.95; mixed, \$3.75@4.00; heavy, \$3.75@4.05; rough, \$3.75@3.80.
Sheep—Receipts, 17,000; market steady; native, \$3.00@4.85; westerns, \$3.80@4.60; lambs, \$3.75@6.30.

Chicago Grain and Provisions.

	Aug. 1.	Opened	High'st	Low'st	Closing
Wht.—Aug....	65 1/4	65 1/4	64 1/4	65 1/4	65 1/4
Sept....	64 1/4	64 1/4	63 1/4	64 1/4	64 1/4
Dec....	64 1/4	64 1/4	63 1/4	64 1/4	64 1/4
Corn—Aug....	33 1/4	33 1/4	32 1/4	33 1/4	33 1/4
Sept....	33 1/4	33 1/4	32 1/4	33 1/4	33 1/4
Dec....	33 1/4	33 1/4	32 1/4	33 1/4	33 1/4
Oats—Sept....	20 1/4	21	20 1/4	20 1/4	20 1/4
May....	23 1/4	24	23 1/4	23 1/4	23 1/4
Pork—Aug....	9 35	9 47 1/2	9 35	9 40	9 40
Sept....	9 35	9 47 1/2	9 35	9 40	9 40
Lard—Aug....	5 45	5 50	5 40	5 47 1/2	5 40
Sept....	5 45	5 50	5 40	5 47 1/2	5 40
Oct....	5 47 1/2	5 50	5 40	5 52 1/2	5 40
Ribs—Aug....	5 47 1/2	5 47 1/2	5 40	5 45	5 40
Sept....	5 47 1/2	5 47 1/2	5 40	5 45	5 40
Oct....	5 45	5 47 1/2	5 45	5 50	5 50

Kansas City Grain.

Kansas City, Aug. 1.—Wheat—Receipts here to-day were 419 cars; a week ago, 498 cars; a year ago, 823 cars. Sales by sample on track: Hard, No. 1, 59 1/4@62 1/4; No. 2 hard, 58 1/4@61 1/4; No. 3 hard, 53 1/4@60; rejected hard, 51@54c. Soft, No. 2 red, 68 1/4@72; No. 3 red, nominally 60@68c; No. 4 red, 59c; rejected red, 53c. Spring, No. 2, nominally 58@59c; No. 3 spring, 55c; rejected spring, nominally 53@56c.

Corn—Receipts here to-day were 18 cars; a week ago, 89 cars; a year ago, 77 cars. Sales by sample on track: Mixed, No. 2, 31 1/4@31 1/4; No. 3 mixed, nominally 31c; No. 4 mixed, nominally 29@30c; no grade, nominally 27@28c. White, No. 2, 31 1/4@31 1/4; No. 3 white, 30@30 1/4; No. 4 white, nominally 29@30c.

Oats—Receipts here to-day were 14 cars; a week ago, 26 cars; a year ago, 15 cars. Sales by sample on track: Mixed, No. 2, 24c; No. 3 mixed, old nominally 23c, new 21 1/4; No. 4 mixed, nominally 18@22c. White, No. 2, old nominally 27@27 1/4, poor 25c; No. 3 white, old 26 1/4, new 24 1/4@25 1/4; No. 4 white, nominally 23@25c.

Rye—No. 2, 45 1/4@46c; No. 3, nominally 44c; No. 4, nominally 42c.

Hay—Receipts here to-day were 41 cars; a week ago, 28 cars; a year ago, 64 cars. Quotations are: Choice prairie, \$5.25; No. 1, \$5.00; No. 2, \$4.25@4.75; No. 3, \$3.50; choice timothy, \$7.00@7.25; No. 1, \$6.00@6.50; No. 2, \$5.50@5.75; clover and timothy, No. 1, \$6.50; No. 2, \$4.50@5.00; pure clover, \$5.00@5.50; packing, \$2.50@3.00.

Kansas City Produce.

Kansas City, Aug. 1.—Eggs—Strictly fresh, 8 1/2c per doz.
Butter—Extra fancy separator, 16 1/4c; firsts, 15c; dairy, 14c; store packed, 12c; packing stock, 10c.

Poultry—Hens, 6 1/4c; broilers, 9 1/4c per lb.; roosters, 15c each; ducks, 5c; young ducks, 6c; geese, 4c; goslings, 7c; hen turkeys, 7c; young toms, 6c; old toms, 6c; pigeons, 50c per doz.

Vegetables—Roasting ears, home grown, 6@7c per doz. Tomatoes, Texas, 40c per 4-basket crate; home grown, \$1.00 per bu. Cucumbers, 15@20c per doz. Peas, home grown, marrowfat, \$2.00 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—Home grown, 25@30c per bu. in cal lots. Sweet potatoes, home grown, \$2.50@3.00 per bu.

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	Cattle and Calves.	Hogs.	Sheep.
Official Receipts for 1897	1,921,962	3,350,796	1,134,236
Sold in Kansas City 1897	1,847,673	3,348,556	1,048,233

C. F. MORSE, E. E. RICHARDSON, H. P. CHILD, EUGENE RUST,
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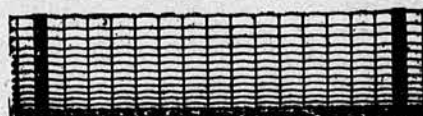
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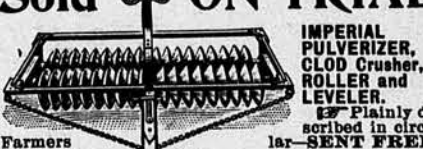


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The Poultry Yard

Conducted by C. B. TUTTLE, Excelsior Farm, Topeka, Kas., to whom all inquiries should be addressed. We cordially invite our readers to consult us on any point pertaining to the poultry industry on which they may desire fuller information, especially as to the diseases and their symptoms which poultry is heir to, and thus assist in making this one of the most interesting and beneficial departments of the Kansas Farmer. All replies through this column are free. In writing be as explicit as possible, and if in regard to diseases, give symptoms in full, treatment, if any, to date, manner of caring for the flock, etc. Full name and postoffice address must be given in each instance to secure recognition.

KANSAS STATE POULTRY ASSOCIATION.

President, A. M. Story, Manhattan.
Secretary, J. W. F. Hughes, Topeka.

Coming Poultry Shows.

Garden City Poultry and Pet Stock Association.—A. S. Parson, Secretary, Garden City, Kas. Show September 13-16, 1898. C. H. Rhodes, Judge.
Abilene Poultry and Pet Stock Association.—Roy O. Shadinger, Secretary, Abilene, Kas. Second annual exhibit, at Abilene, January 25-28, 1899. Theo. Sternberg, Judge.
Butler County Poultry and Pet Stock Association.—C. H. Patterson, Secretary and Treasurer, El Dorado, Kas. Second annual exhibit at El Dorado, Kas., December 20-23, 1898. C. H. Rhodes, Judge.
Topeka Fanciers' Association.—L. V. Marks, Secretary, Topeka. Exhibit January 9-14, 1899, in connection with State show.

CHICKS IN SUMMER—III.

Having dwelt as fully as space would permit, on the hatching, brooding and feeding of the chick, we come now to a point where we have some delicacy in laying down rules for the guidance of others, for the reason that no matter how careful we may be, how closely we may seem to watch every step and guard as much as seems possible, yet we still lose our share of chicks by some of the various

DISEASES

to which they are liable; still, this season our losses have been mostly from accidents. However, we may be able to offer some suggestions that may perhaps be of benefit to some; and if so, our task will be accomplished. First of all, however, let us suggest that in this particular pre-eminently the proverbial "ounce of prevention" is what counts. The chicks, by good care and attention, proper and regular feeding, fresh, pure water in abundance, and shade from the hot summer sun, should be pushed along so fast that disease will get no foothold, and their little systems so vigorous and healthy that they will throw off, to a great extent at least, the germs of disease lurking in their pathways. We will mention only a few of the more common and frequently met diseases, and give the cause, symptoms and the generally accepted remedies, with any suggestions that may occur to us as we proceed. First, let us say, and emphatically, too, that the best and surest step toward warding off disease is to have absolutely clean quarters, as we have suggested and insisted on previously. Leave no stone unturned, "make assurance doubly sure," and see that all filth is removed regularly, and that the coops are free from all kinds of vermin. If this is done persistently the chick will start off in life with an equal chance, in fact with the odds in their favor. This point neglected, and all remedies will fail of their desired effect, and at the end of the season you will have more experience than fowls.

DIARRHEA, OR BOWEL TROUBLE.

We will speak of this first, as it is, perhaps, the most common and generally the most fatal disease by which young chicks are troubled. The causes are varied and many. Improper food; neither of the right kind nor mixed properly—too soft and sloppy, for instance. Indigestion, which in itself is caused by over-feeding and lack of grit or sharp hard substances to grind up the food; impure and stale water to drink; getting chilled in damp, cool weather; exposure to broiling hot sun in summer; and last, but not least by any means, lice—just common, every-day lice. Don't say they haven't any, for we guarantee they have if hatched by hens, unless a constant fight against them has been kept up; and even then it is questionable if they are entirely free from them.

Symptoms.—Every one knows probably what they are. A looseness of the bowels, soiling the feathers and clogging up the vent; a tired, sleepy appearance; body all drawn up into a little round ball and a seeming impossibility to keep awake; patient has no regard for what is going on around it, and can usually be picked up anywhere, without an effort to escape; pays no attention, or very little, to the call of the mother hen, and when with her wants to be hovered all the time.

Remedies.—First, remove all the causes likely to produce it; see that coops are clean and sweet and free from vermin, as directed previously; be sure they are free of lice; mix a little, say a dessert spoonful, of sharp grit in the food for a dozen or fifteen chicks, once a day, and have a box of grit in or near

the coop, where they can go to it at will; feed such foods as we have indicated and as dry as possible. If a mash is fed in the morning, mix the grit with it and wet it with sweet milk or water, only enough to make it damp—so it will fall to pieces after being squeezed in the hand; and if the weather is damp and chilly, keep them cooped up mornings and evenings. If a chick is chilled once, it might about as well be killed at once; as, if it recovers, it will be stunted and never catch up with those that have been kept warm. See that they have pure, clean water to drink, changing it several times a day; and in hot weather give them plenty of shade—natural preferred, but in its absence, artificial, for shade they must have to grow and thrive well. If these points are carefully looked after we do not think there will be much trouble from this complaint. As a preventive, a few drops of paregoric in their drinking water, say five to ten drops to a quart of water, is a good thing to use and simple. Boiled milk—fresh, of course—with a few drops of paregoric and a pinch of Cayenne or black pepper in it, will often cure without the use of harsher and stronger remedies. In stubborn cases the following formula has been tried and found excellent, but care must be used to not give too much, as one extreme is nearly as bad as the other: Sweet tincture rhubarb, 2 ounces; paregoric, 4 ounces; bicarbonate of soda, ½ ounce; essence of peppermint, 1 dram; water, 2 ounces; mix. Dose for chicks, one teaspoonful to one-half pint of scalded milk, giving it as a drink, and withholding water until the medicine has been taken. The homeopathic treatment, as given by Boericke & Tafel in their work, "The Poultry Doctor," is ipecac, a dozen or more pellets, owing to the number to be treated, in water, or mixed, after being dissolved, with the food. Chamomilla is also recommended.

Feeding in Summer.

When given the range of the farm, all kinds of poultry will need very little feeding during the next three months, as there is such a good opportunity for picking up grains, insects, bugs, fallen fruit and other things that help to satisfy their appetites. But it will not answer to entirely neglect them. It will be but good economy to feed at least once, and often twice daily; in the morning as soon as they fly down from the roosts, and again at night just before going to roost.

It is not necessary that these feedings should be heavy ones; a small quantity of feed given in this way will assist materially in keeping the fowls gentle, while they will also keep in a better condition. With ducks and turkeys it is quite an item to feed regularly at night, in order to keep them in the habit of coming home at this time. Both of these classes of fowls are inclined to start away in the morning and keep going all day unless there is some inducement for them to come home. By feeding grain regularly at night they can be kept in the habit of coming home, and many times much trouble will be avoided.

Fowls intended for market must, of course, be fed regularly several times a day in order to get them in the best condition. For the next two months, however, chickens and the early-hatched ducks are about the only fowls sent to market. Young ducks, ten or twelve weeks old, that have been kept in good growing condition from the start, are marketable at good prices; and all that are in a marketable condition should be sold. Then as long as good prices can be realized for the young chickens, the better plan is to sell, selecting out the best of the early pullets for winter layers.

Then the old roosters and such of the old hens as it is not considered desirable to keep through the winter should always be sold whenever a fair price can be realized, as with poultry as with everything else raised or grown on the farm to be sold, it is a safe rule to sell whenever a good price can be realized. Even in summer, when but little feeding is found necessary, the cost is gradually adding up, and, unless prices are low with a fair prospect of an advance, there is no advantage in keeping poultry after it is ready for market.

The feeding can be light during the next two months; as the weather begins to get cool, the ration must be gradually increased. For the laying hens, wheat is one of the best grains that can be given, and with what other grains they can pick up, will usually be all that is necessary. Corn is a good enough food for those intended to be marketed as soon as prices and condition will admit. If confined in a yard, more of a variety will be found necessary; but with a good range, they will be able to secure a sufficient variety without any special pains

in this respect. But at all times, and in all seasons, the condition of the fowls must determine the amount to be fed.
Eldon, Mo. N. J. SHEPHERD.

Inquiry Corner.

Under this head we will answer free, each week, such inquiries as are received pertaining to any point in poultry culture. We invite inquiries and answers from all our readers.

J. H. C., Kansas City, Mo., asks the following questions regarding sunflowers, which are timely and in line with our suggestion a few weeks since, to plant them for shade and poultry food. He asks:

1. Can you inform me how those who raise sunflowers protect them from the birds? Answer.—If the Mammoth Russian variety is planted, we have never found it necessary to protect them artificially, as they are naturally quite well protected.

2. Do they cut and stack them, and when? Answer.—If the seed only is to be utilized, the heads can be cut as soon as seed is ripe and stored in barn or shed. The stalks can afterward be cut and used for fuel, as they make an elegant kindling material, and the larger stalks can be cut as wood, being equal if not superior to cobs as a summer fuel, making a quick and hot fire and soon out.

3. When do they thresh them? Answer.—If intended for poultry food, which we suppose is the case, threshing is needless, as the fowls will do that and be the better for the exercise obtained thereby. Simply throw a head, more or less, as to quantity required to be fed, in

the yards—the fowls "will do the rest." If seed is wanted for planting, they can be flailed or tramped out at any time after the heads become thoroughly dry.

4. Do they leave them to mature without cutting? Answer.—I am not sure that I understand fully this question. If left standing too long in the field—that is, till heads are thoroughly dried out—there would be more or less danger of seed shattering and wasting.

5. Do they clean the seed by winnowing? Answer.—This plan may be followed, choosing a time when there is quite a stiff breeze, or it may be run through any good fanning-mill.

C. W. Cramer, Topeka, Kas., says some of his White Plymouth Rock hens show signs of diarrhea or some similar ailment; not very serious, but sufficient to soil feathers quite badly. Have been fed on an almost exclusive grain diet; some do not eat very well, as though they did not care whether they did or not. Don't think they are troubled with lice, having taken necessary precautions. Have had no grit except what they could find in ordinary river sand, a load of which was hauled and dumped in the yard. He wants to know what is the matter and what remedy to use.

We are glad this query was propounded, as it covers a point wherein at least 90 per cent. of city and village poultrymen fail. In our estimation, the whole trouble lies in the exclusive grain diet and lack of grit. The trouble is undoubtedly indigestion. The remedy we would suggest is to cut down the grain and feed more green stuff, such as clip-

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We buy our cloth direct from the largest European and American Mills. We control the product of several woolen mills. We operate the most extensive and economical custom tailoring plants in existence, thus reducing the price of Suits and Overcoats made-to-order to \$5.00 and up; Pants from \$1.50 to \$5.00. Prices so low that nearly every one in your county will be glad to have their Suits and Overcoats made to order.

WE FURNISH YOU A large, handsome leather bound book containing large cloth samples of our entire line of Suits, Overcoats and Pants, also a book which costs us several dollars to get up, also Fine Colored Fashion Plates, Instruction Book, Tape Measure, Business Cards, Stationery, Advertising Matter, your name on rubber stamp with pad complete. We also furnish you a Salesman's Net Confidential Price List. The prices are set blank under each description so you can fill in your own selling prices, arranging your profit to suit yourself. As soon as you have received your sample book and general outfit and have read our book of instructions carefully, which teaches you how to take orders, and marked in your selling price you are ready for business and can begin taking orders from every one. At your low prices business men, farmers, and in fact every one will order their suits made. You can take several orders every day at \$1.00 to \$5.00 profit on each order, for every one will be astonished at your low prices.

YOU REQUIRE NO MONEY Just take the orders and send them to us and we will make the garments to examination and approval at your selling price, and collect your full selling price, and every week we will send you a check for all your profit. You need collect no money, deliver no goods, simply go on taking orders, adding a liberal profit, and we deliver the goods, collect all the money and every week promptly send you in one round check your full profit for the week. Nearly all our good men get a check from us of at least \$40.00 every week in the year.

THE OUTFIT IS FREE

We make no charge for the book and complete outfit, but as EACH OUTFIT COSTS US SEVERAL DOLLARS, to protect ourselves against many who would impose on us by sending for the outfit with no intention of working, but merely out of idle curiosity, AS A GUARANTEE OF GOOD FAITH ON THE PART OF EVERY APPLICANT, we require you to fill out the blank lines below, giving the names of two parties as reference, and further agreeing to pay ONE DOLLAR and express charges for the outfit when received, if found as represented and really a sure way of making big wages. The \$1.00 you agree to pay when outfit is received does not begin to pay the cost to us but insures us you mean business. WE WILL REFUND YOUR \$1.00 AS SOON AS YOUR ORDERS HAVE AMOUNTED TO \$25.00, which amount you can take the first day you work.

Fill out the following lines carefully, sign your name, cut out and send to us, and the outfit will be sent you at once

AMERICAN WOOLEN MILLS CO., Enterprise Bldg., CHICAGO, ILL.

GENTLEMEN:—Please send me by express C.O.D., subject to examination, your Sample Book and Complete Salesman's Outfit, as described above. I agree to examine it at the express office and if found exactly as represented and I feel I can make good big wages taking orders for you, I agree to pay the express cost, a guarantee of good faith, and to show I mean business. One dollar and express charges, with the understanding that One Dollar is to be refunded to me as soon as my sales have amounted to \$25.00. If not found as represented and I am not perfectly satisfied I shall not take the outfit or pay one cent.

Sign your name on above line.

Name of Postoffice, County and State on above line.

Your age.....

Married or single.....

Address your letters plainly to

AMERICAN WOOLEN MILLS CO., Enterprise Building, CHICAGO, ILL.

To our Readers:—This firm is thoroughly reliable, this offer is bona fide, honorable and liberal and a great opportunity for industrious men to get steady and profitable employment.—Editor.

On above two lines give as reference the names of two men over 21 years of age who have known you one year or longer.

On above line give name of your nearest express office. Kan. Far. Top.

pings from the lawn, cabbage, beets, turnips, etc., in fact, anything in the way of greens or fresh vegetables that they will eat. Try hanging a cabbage head by a string, just high enough to make them jump to get any. Thus they get exercise as well as food. And don't forget that fowls need some sharp substance in their gizzards to grind up the food. Feed some grit. Any poultry supply house can furnish it ready for use. Or, pound up some broken window glass or white crockeryware about the size of peas, and place a box of it in the yard or house where they can go to it at will. To be sure that they get it, mix a small handful in the morning mash, if such is fed, to say a dozen fowls. Some broken charcoal or charred corn or oats kept where the fowls can have free access to it will also be a benefit. Try this prescription, and report results to this department in a week or ten days.

Garden City Poultry and Pet Stock Association.

The Garden City Poultry and Pet Stock Association will make a grand display of poultry and pet stock at the coming Finney county fair, to be held September 13, 14, 15 and 16, 1898. C. H. Rhodes, of Topeka, judge. A. S. Parson, Secretary, Garden City, Kas.

We would suggest that the different poultry associations throughout the State notify this office as to date of holding exhibitions the coming fall and winter, giving name and address of the Secretary. We desire this for our own information, as we want to be in touch with all the different organizations, and also to place announcements of same at head of column for the benefit of intending exhibitors.

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, bedbugs, ants and all vermin; cures scab, mange, foot rot, cuts, sores, galls, bites and stings; keeps off flies, gnats, mosquitoes. It is non-poisonous. Cheapest and best on earth. One bottle makes twenty or more ready for use. Twenty-five or 50 cents per bottle, or in gallon lots, by all dealers. Or send 6 cents in stamps to Cannon Chemical Co., St. Louis, for sample, to make a pint.

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.

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

THE IMPROVED VICTOR Incubator
Hatches Chickens by Steam. Absolutely self-regulating. The simplest, most reliable, and cheapest first-class Hatcher in the market. Circulars FREE.
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Bred from queens imported from Italy. Full colonies; two, three and four frame nucleus shipped any where and safe arrival guaranteed. We ship Bee any time from March to November. Queens, hive and supplies generally.
A. H. DUFF, Larned, Kas.

LIGHTNING WELL MACHY
IS THE STANDARD
STEAM PUMPS, AIR LIFTS,
GASOLINE ENGINES
WRITE FOR CIRCULAR 49
THE AMERICAN WELL WORKS
AURORA, ILL. - CHICAGO - DALLAS, TEX.

Pressure between burrs in grinding is carried on chilled roller bearings.
Large inside burr revolves twice to sweep's one. Ordinary length sweep.
DAIN DOUBLE MILL
Sold under an absolute guarantee to do double the amount of work of any other mill of same size or money refunded. Write for circulars and prices.
DAIN MFG. CO., Carrollton, Mo.

MICA AXLE GREASE
It's easy to haul a big load up a big hill if you grease the wagon wheels with
MICA Axle Grease
Get a box and learn why it's the best grease ever put on an axle. Sold everywhere.

We make Steel Windmills, Steel Towers and Feed Grinders and are selling them cheaper than the cheapest. Our productions are standards; are first-class in every respect and are sold on trial. Send us a postal and we will tell you all about them.
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AGENTS WANTED. Manhattan, Kas.

PORTABLE WELL DRILLING MACHINERY.
Established 1867. Covered by patents. Machines drill any depth both by steam and horse power. Twenty different styles.
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Wind Mills and Towers, Complete, Set Up
THE SHURTLEFF CO.
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THE SHOWER WIND MILL
For farmers who cannot afford one of the high-priced steel mills.
Pumps, Pipes, Cylinders and Screens.
Send for illustrated circulars and price list before buying.
THE SHURTLEFF CO., Marengo, Ill.

Port Arthur's Prosperity Is Based on Business

Over 12,000 tons of export and import freight now being handled over its docks per month.

Three steamship lines now running to British, Continental and Mexican ports.

Over one-half the canal completed to a depth of sixteen feet.

One hundred thousand dollars' worth of property sold in March.

Go to Port Arthur and see what the backing of a 1,227 mile trunk line means.

For information write to
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Port Arthur Townsite Co.,
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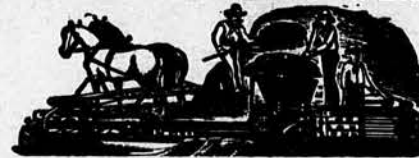


crucible cast steel, and are FULLY WARRANTED. Send for PAMPHLET OR SAW BOOK, mailed free.

HENRY DISSTON & SONS, Philadelphia, Pa.

It will pay you to buy a new saw with "DISSTON" on it. It will hold the set longer, and do more work without filing than other saws, thereby saving in labor and cost of files. They are made of the best quality. For sale by all dealers.

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VICTORIOUS IN EVERY CONTEST.

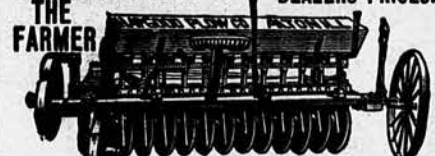
The largest and most complete line of Balers in America. Highest award at World's Fair, Chicago; Paris Exposition, and every other contest. Not the cheapest, but guaranteed THE BEST. See our "New Model Steel Beauty" and "Universal" Presses for this season. Also manufacture large line of strictly first-class Farm Machinery. Send for Catalogue and prices.
WHITMAN AGRICULTURAL CO., St. Louis, Mo.

Brass, Aluminum, Grey Iron Castings

Patterns, Models, Machine Work.

TOPEKA FOUNDRY,
TOPEKA, KAS.

WE SELL DIRECT TO THE FARMER AT ONE-HALF DEALERS' PRICES.



New Disc Harrow, Grain Drill and Broadcast Seeder. Throwing the earth all one way. Revolutionizes the method of seeding, as the twine binder did the harvest. Discs 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100. Discs 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100.
DEATH TO HIGH PRICES.
16-in. Buggy Plows, \$25. 10-in. S. B. Plows, \$9. Rolling Cultivator, Extra \$1.50. 64-T. Lever Harrow, \$7.50. Mowers, \$22.50. Riding Gang Plows, \$35. 12-16 Disc Harrow, \$18. Hay Rakes, \$11.50. Wagons, Buggies, Harness, Sewing Machines, Cane and Older Mills, Hay Tools and 1000 other things at one-half dealers' prices. Catalogue free. Hopedale Plow Co., Box 2, Alton, Ill.
NOTICE—This ad. will appear until Aug. 18, '98.

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For three years we have been experimenting with, developing and perfecting

Columbia

Bevel-Gear Chainless Bicycles.

Price \$125 to all alike.

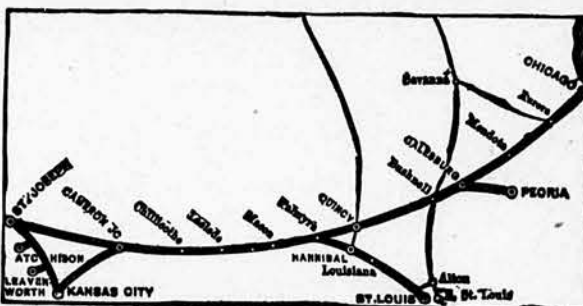
This work has been in the hands of the most expert cycle engineers in the profession and we have succeeded in building a bicycle that everyone who has ridden admits is a better hill climber than any chain wheel yet made.

Columbia Chain Wheels \$75, Hartfords \$50, Vedettes \$40, \$35

POPE MFG. CO., Hartford, Conn.

Catalogue free from any Columbia dealer, or by mail for one 2-cent stamp.

Culver & Bailey, Columbia Dealers, Topeka, Kas.



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BEST TRAINS

VESTIBULED "ELI" TO CHICAGO. VESTIBULED LIMITED TO ST. LOUIS.

FREE CHAIR CARS, LATEST PATTERNS OF SLEEPERS.
W. WAKELEY, G. P. A., St. Louis, Mo. J. O. BRAMHALL, T. P. A., St. Joseph, Mo.

THE BEST CREAMERY BUTTER SALT

In the world is manufactured in Kansas. INSIST on having RIVERSIDE brand.
A free sample will be gladly furnished on application by... **Kansas Salt Co., Hutchinson, Kas.**

Special Want Column.

"Wanted," "For Sale," "For Exchange," and small or special advertisements for short time, will be inserted in this column, without display, for 10 cents per line, of seven words or less, per week. Initials or a number counted as one word. Cash with the order. It will pay. Try it!

SPECIAL.—Until further notice, orders from our subscribers will be received at 1 cent a word or 7 cents a line, cash with order. Stamps taken.

\$10 REWARD.—To recover horse stolen July 4—a large bay mare, dark mane and tail, both hind feet white, white spot in face. Mrs. C. Cooley, 421 Jefferson St., Topeka.

FOR SALE OR TRADE.—Three Shetland ponies. Call or address H. W. McAfee, Topeka, Kas. (Prospect Farm, three miles west of Kansas avenue.)

TWO YOUNG BULLS.—By Duke of Kansas 123126, fit for fall service, for sale; one a roan, a Constance, and one red, an Imp. Golden Galaxy. C. E. Chambers, Mont Ida, Kas.

HIGH-GRADE Shropshire rams, lambs and yearlings. E. W. Melville, Eudora, Kas.

WANTED.—Ladies and gentlemen to procure subscriptions for the best fifty-cent woman's monthly magazine in the United States. The most beautiful and popular woman's magazine on very liberal commissions. Terms, sample copies, special helps and premiums furnished free. Address THE AMERICAN QUEEN, 78-80 Walker St., New York.

WANTED.—Position by experienced herdsman with any of the beef breeds, or as manager of profitable stock farm on shares; married, thoroughly experienced, qualified; satisfactory references given. A. T. Ellison, Buncheon, Mo.

FOR SALE.—A second-hand Sunflower State brooder, 200 chick size, combination top and bottom heat—or will exchange same for March or April hatched White Wyandotte, R.C.B. Leghorn, White or Barred Rock chicks or breeding fowls. Will also exchange a new incubator, of same make, for stock of above varieties. Brooder used two seasons; in good order; price \$12.50 f.o.b. Topeka. C. B. Tuttle, Excelsior Farm, Topeka, Kas.

SCOTCH COLLIES.—Two male pups left; will sell at \$4.50. Also a male dog, six months old, for \$9. A. P. Chacey, Elmont, Shawnee Co., Kas.

SHORT-HORNS FOR SALE.—Forty-six cows and heifers, Cruickshank, Young Marys, Rose of Sharon and others; an extra lot. Nearly all were sired by that grand Cruickshank, Royal Prince 100646. Six bulls ready for service, sired by Young Mary bull, Glendon 11871. Parties met by appointment. Theodore Saxon, St. Marys, Pottawatomie Co., Kas.

SOVS FOR SALE.—By all the great boars. Write for what you want. I will price right; going to sell. F. W. Baker, Council Grove, Kas.

CELERY PLANTS.—White Plume. 25 cents per 100. \$2 per 1,000. J. H. Shaw, market gardener, Florence, Kas.

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

BERKSHIRES.—Choice bred sows by Imported Lord Comely, and boars ready for service. Wm. B. Sutton & Son, Russell, Kas.

ABERDEEN-ANGUS BULLS.—Three individuals of serviceable ages; registered. Wm. B. Sutton & Son, Russell, Kas.

FOR SALE.—Five first-class registered Clydesdale stallions. H. W. McAfee, Topeka, Kas.

MACLEAN FARMERS' SUPPLY CO., Kansas City, Mo. (Between Union Depot and Stock Yards.) Sell machinery and other supplies to farmers direct, saving the consumer middlemen's profits. Send now for 1898 Spring Price List.

DAIRY WAGON FOR SALE.—Good two-horse covered dairy wagon, custom made. A. E. Jones, Topeka, Kas.

PIGS.—Out of a Hadley Jr. sow and sired by Kievers First Model 18245 at \$20. F. W. Baker, Council Grove, Kas.

WE MAKE A GOOD FARMER'S SPRING WAGON.—Two lazy-backs and let-down end-gate, for \$55. Warranted. We will ship on approval to responsible parties. Kinley & Lannan, 424-426 Jackson street, Topeka, Kas.

YEARLING SHORT-HORN AND GALLOWAY BULLS.—Registered and high grades, of Bates and Cruickshank stock, at bedrock prices, either by carload or singly, time or cash. J. W. Troutman, Comiskey, Kas. (Northern Lyon county, Mo. Pacific R.R.)

FOR SALE.—A few October pigs of 1897 farrow, and some bred sows to Kansas Boy and Success I Know. Also B. P. Rock eggs, \$1 per setting. H. Davison & Son, Waverly, Kas.

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.—Hollywood, 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 Co., Kas.

FANCY BREED PIGS.—Six by Hadley Jr. 13314, dam Kievers Model Tecumseh 42444. Price \$15. F. W. Baker, Council Grove, Kas.

THE STRAY LIST.

FOR WEEK ENDING JULY 21, 1898.

Douglas County—Harry Diek, 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.

FOR WEEK ENDING JULY 28, 1898.

Dickinson County—R. B. Jacobs, Clerk.

COW.—Taken up by P. J. Devane (P. O. Chapman), June 25, 1898, one red cow, about 4 years old, branded S. L. on left side.

FOR WEEK ENDING AUGUST 4, 1898.

Cherokee County—S. W. Swinney, Clerk.

HORSE.—Taken up by John W. Carman, in Garden township, Cherokee county, July 12, 1898, one bay horse, 8 years old, left hind foot white, saddle marks, small scars on both front feet under fetlock, few white hairs in forehead, roached mane; valued at \$12.

MARE.—Taken up by L. Mishler, in Spring Valley township, Cherokee county, July 15, 1898, one brown mare, 7 years old, 15½ hands high, shod all around, scar on right front foot, black mane and tail; valued at \$40.

ST. JOSEPH, MO.

OLD FASHIONED FAIR.

August 22, 23, 24, 25, 26, 27.

THE GREATEST OF THE YEAR.

Send for Premium List Now Ready.

Liberal Premiums in All Departments.

Best Mile Track. Ample Accommodations. Fair Treatment.

PALMER L. CLARK, Secretary.

MEADOWBROOK HERD.

J. R. KILLOUGH & SONS, Ottawa, Kansas.

We have for sale 25 pigs by J. R.'s Tecumseh of March and April farrow. Also a few females of choice quality not registered.

LIVE STOCK AUCTIONEERS.

J. N. HARSHBERGER,

LIVE STOCK AUCTIONEER, LAWRENCE, KAS. Years of experience. Sales made anywhere in the United States. Terms the lowest. Write before claiming date.

HUNGATE & MORAND, City and Country Auctioneers. Sell everything; make a specialty of live stock and horses; large acquaintance in Kansas and adjoining States. Sell anywhere in the United States. Terms favorable. Write before billing; correspondence attended to. Office with Seery & Morton, Topeka, Kas.

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

Live Stock Artist.

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

HARNESS Write for illustrated catalogue. Largest Harness and Carriage house in the Northwest. **NORTHWESTERN HARNESS & CARRIAGE CO.,** 172 6th St., St. Paul, Minn.

20 BUSHELS MORE PER DAY is what you can husk and save your hands by using **Kees Improved Corn Husker.** See your dealer or sent postpaid on receipt of 50c. (No stamps.) **F. D. KEES,** Beatrice, Neb.

HARNESS BEST QUALITY FOR LESS MONEY THAN ANY OTHER CONCERN ON EARTH—BAR NONE. **LARGE ILLUSTRATED CATALOGUE, NO. 24, FREE** **TILLOTSON BROS., CHICAGO.**

The American Steel Tank Co. is making the same high grade Tanks, all shapes and sizes. If you are interested, write for prices and catalogue "A."

Farmers' Stockmen, Creamery, TANKS Dairy and Sheep-Dipping

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"ELI" Baling Press makes compact, even-sized bales that fit nicely in a car, admitting of heavy loading thus saving freight. Has 58x30 in. Feed Opening. Patent automatic block placer—no more crushed hands or arms. All Steel, Strong, Fast, Easy Power. Illustrated catalog free. **Collins PLOW CO.,** 1120 Hampshire St., QUINCY, ILL.

J. G. Peppard

1400-2 Union Avenue,
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CANE
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SEEDS

.. FOR SALE ..



The Well Known Stallion, Maxey Wood, at a Bargain.

Call at Livery Barn of George O. King,
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VERNON COUNTY HERD OF REGISTERED POLAND-CHINAS.

125 head in herd. Herd boars, King Hadley 167668, 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,** Statesbury, Vernon Co., Mo.

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BREEDER OF The Prize-winning Herd of the Great West. Seven prizes at the World's Fair; eleven firsts at the Kansas District fair, 1893; twelve firsts at Kansas State fair, 1894; ten first and seven second at Kansas State fair, 1895. The home of the greatest breeding and prize-winning boars in the West, such as Banner Boy 23441, Black Joe 23803, World Beater and King Hadley. For Sale, an extra choice lot of richly-bred, well-marked pigs by these noted sires and out of thirty-five extra large richly-bred sows. Inspection or correspondence invited.

Sir Charles Corwin 14520 and Harry Faultless, Jr.

HEADS OF HERD.

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.

ELM BEACH FARM, Wichita, Kas.,
C. M. IRWIN. **S. C. DUNCAN, Supt**

VALLEY GROVE SHORT-HORNS.

THE SCOTCH BRED BULLS

Lord Mayor 112727 and

Laird of Linwood 127149

HEAD OF THE HERD.

LORD MAYOR was by the Baron Victor bull Baron Lavender 2d, out of Imp. Lady of the Meadow and is one of the greatest breeding bulls of the age. Laird of Linwood was by Galahad out of 11th Linwood Golden Drop. **Lord Mayor** heifers bred to Laird of Linwood for sale. Also breed Shetland ponies. Inspection invited. Correspondence solicited. A few young bulls sired by Lord Mayor for sale.

Address **T. P. BABST, PROP., DOVER, SHAWNEE CO., KAS.**

SUNNY SLOPE

EMPORIA, KAS.

REGISTERED

HEREFORD

CATTLE.

ADDRESS ALL CORRESPONDENCE TO.....

C. S. CROSS, Emporia, Kansas.

Grand Combination Sale

AT KANSAS CITY, MO., AT THE STOCK YARDS
HORSE AND MULE BARN, ON

Tuesday, Aug. 16, 1898.

Over sixty head of the best individuals as well as the best bred hogs we own, every one of them choice and selected for their future usefulness.

Sows sired by such boars as Chief Tecumseh 2d, U. S. Chief, Hands Off, Missouri Chief, Look Me Over, Dandy Wilkes, Chief I Know, Model Boy, Western Wilkes, Comet Medium, Broadgauge, Moore's Chief I Know, World Beater Gem, Best U. S., The Col., Chief They Know, Hadley Jr., Priceless, Prince Hadley, Heyl's B. U. S. and others.

Most of them bred to our herd boars, Chief I Know, Model Boy, Sydnor's Tecumseh, Cheney's Chief I Know, U. S. & A.'s Chief.

Also three or four fine boars by Chief I Know, Model Boy, and a line-bred Wilkes.

Terms: Cash or a bankable note. Write to Clifton George for a handsome catalogue containing more than a dozen fine cuts, three artists being represented.

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Auctioneers.

SHROPSHIRE RAMS.

Single or car lots. First-class, all ages, at prices that will sell them. Will spare 50 breeding ewes—grand, useful, high-class ewes. Write your wants.

KIRKPATRICK & SON, Connor, Wyandotte County, Kansas.

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