

KANSAS FARMER

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BREEDERS' DIRECTORY.

Cards will be inserted in the Breeders' Directory as follows: Four line card one year, \$16.00; six lines, \$23.00; ten lines, \$30.00; each additional line \$3.00. A copy of the paper will be sent to the advertiser during the continuance of the card.

HORSES.

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

CATTLE.

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

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

FAIRVIEW STOCK FARM—Registered Short-horn cattle. Royal Bates 2d No. 124404 at head of herd. Young stock for sale. E. H. Littlefield, New Oklahoma.

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

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

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

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

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

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PURE-BRED POULTRY.

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

A. H. DUFF,
Larned, Kas.

ROCKS WHITE and BLUE BARRED

Empire, Lash and Conger Strains.

Eight years experience in breeding Rocks exclusively. Five pens—three Barred, two White; all high-scoring birds. They are mated to produce prize-winners. Males score from 91½ to 94; by Hewes; females from 89 to 95½. Eggs, 13 for \$1; 30 for \$2; 50 for \$3; 100 for \$5. Write for descriptive circular. Printed recipe for making and using Liquid Lice Killer, 25c. Address:

T. E. LEFTWICH, Larned, Kas.

SWINE.

M. H. ALBERTY, Breeder of Registered **CHEROKEE, KAS. Duroc-Jersey Swine.** Baby Pig Teeth Clippers, 35 cents by mail.

Mound Farm Herd of Poland-Chinas.

100 head. Foundation stock, Tecumseh. Boars in service, Tecumseh Joe 18444 S., Chief 18340 S., Butler Wilkes 17764 S., U. S. Tecumseh 17850 S. 15 fall gilts, 30 spring pigs, 30 summer pigs. Inspection and correspondence invited.

H. E. Bacheider, Fredonia, Wilson Co., Kas.

SWINE.

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

Thoroughbred Duroc-Jersey Hogs

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

"HIGHLAND POLAND-CHINAS."

Twenty-five very fancy fall pigs, some of which will do to head any herd or to go in any show ring. Sired by Knox-All Wilkes 18179 S. and Highland Chief 18334 S., by Chief Tecumseh 2d 9115. No better sires in any herd. Our prices very low if taken at once. One hundred fine spring pigs by same sires.

Plymouth Rock Eggs.

DIETRICH & SPAULDING, Richmond, Kas.

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

H. W. CHENEY, Prop., NORTH TOPEKA, KAS.

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

Wamego Herd Imp. Chester Whites and Poland-Chinas.

Mated for best results. Also Barred Plymouth Rock chickens and eggs for sale. Correspondence or inspection invited. Mention FARMER. C. J. HUGGINS, Proprietor, Wamego, Kas.

Standard Herd of Poland-Chinas

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

WM. MAGUIRE, Haven, Kas.

Large-Boned Poland-Chinas—A Bargain.

For the next thirty days we will sell fifteen extra fine boars and twelve sows, of September farrow, good enough to go in any herd, and some of them will win this fall in hot company. They go cheap while they last. 150 spring pigs representing all the fashionable families. Come and see us or write.

WAIT & EAST, Altoona, Wilson Co., Kas.

SIXTEEN TO ONE HERD

REGISTERED POLAND-CHINA SWINE.

Herd boars, Gold Standard Wilkes by Guy Wilkes 2d 17777 S. and Ideal Quality by Darknes Quality 14961 S. Brood sows, Tecumseh, Black U. S. and Wilkes. Thirty spring pigs, both sexes, ready to go. Farm two miles north of Welda.

J. M. COLLINS, Welda, Anderson Co., Kas.

PURE-BRED POLAND-CHINA SWINE.

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

J. R. WILLSON, Marion, Kas.

HIGHLAND FARM HERD PEDIGREED POLAND-CHINAS.

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

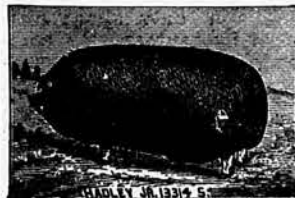
John Bollin, Kickapoo, Leavenworth Co., Kas.

PLEASANT VALLEY HERD

REGISTERED POLAND-CHINA SWINE

King Perfection 4th 18744 S. at head of herd, assisted by Tecumseh Wilkes 12894 S. and Lambing Ideal 14050 S. The sire of last named is Gov. C. by Black U. S. We have added several very finely bred sows to our herd. Write for particulars. Address either

W. E. JOHNSON, E. A. BRICKER,
Colony, Kas. Westphalia, Kas.



Kansas City
HERD

Poland-
Chinas.

W. P. GOODE,
Lenexa, Kas.

SWINE.

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

RIVERDALE HERD of 10 Chester White swine and Light Brahma poultry. J. T. LAWTON, BURTON, KAS., proprietor. All stock guaranteed. I can also ship from Topeka, my former place.

CHERRY ORCHARD HERD

Composed of the BEST POLAND-CHINA Blood Known.

The present offering consists of August, September and October pigs—10 boars and 20 sows—very choice. The stock by or bred to Kievers' Model, What's Wanted Jr., Hildestretcher, Wilkes, Waterloo Chief, etc. For further information address,

W. H. WREN, Marion, Kas.

BLUE MOUND HERD BERKSHIRE SWINE.

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

Allen Thomas, Blue Mound, Linn Co., Kas.

Nation's Poland-Chinas.

Fifty boars and gilts for this season's trade. My herd boars consist of Darknes Quality 14961, Princeton Chief 14943, Col. Hildestretcher 37247 and Standard Wilkes. My sows are splendid individuals and of the right breeding. Personal inspection and correspondence invited.

LAWRENCE NATION, Hutchinson, Kas.

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

125 head in herd, with Sir Knight 124403 at the head. Females are by such imported Cruikshank bulls as Craven Knight 96923, Thistle-top, Master of the Rolls, Earl of Gloster 74523, Viscount Richmond, Knight Templar 66658, etc. Forty very choice brood sows. Young stock for sale.

ANDREW PRINGLE, Harveyville, Kas.

RESERVOIR POLAND-CHINAS.

Guy Darknes 18292 and Best Nims 19612, herd boars. Sept. '97 boars and gilts for sale. Guy Darknes gilts will be bred to Best Nims for fall farrow.

Correspondence or inspection of herd solicited.

S. W. HILL, Hutchinson, Kas.

ROSE POLAND-CHINAS

ARE SECOND TO NONE.

FARM READ THIS SPECIAL OFFER:

Will sell February and March pigs during July for \$15 each, delivered at any railroad station in Kansas or Nebraska.

H. WOODFORD, Mgr., Chester, Neb.

Mains' Herd Poland-Chinas

Headed by the three grand breeding boars, Model Combination—his sire was J. D. Model, he by Kiever's Model 14664 out of McKelvie's Lass 42107; his dam Lady Chief 42919, she by Chief Tecumseh 2d 9115 and out of Ralph's Pet 42788; One Price Chief—his sire Chief Tecumseh 2d 9115, his dam Alpha Price 38785, she by One Price 4207; Kansas Chief 33615—she by Royal Chief's Best and out of Bell O. 74594. The sows are all selected and equal in breeding and quality to any. A few sows bred will be offered. Young males and gilts ready. Satisfaction guaranteed.

James Mains, Oskaloosa, Jefferson Co., Kas.



Breeder and shipper of thoroughbred Poland-China and Large English Berkshire swine and Silver-Laced Wyandotte chickens.

SWINE.

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.

THE SEDGWICK NURSERY CO.,

Sedgwick, Harvey Co., Kas., —Breeder of—

Short-horn Cattle and Poland-China Swine

Of the Best Strains.

Stock for sale. Correspondence and inspection invited.

CATTLE.

SILVER CREEK HERD

SHORT-HORN CATTLE.

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

J. F. STODDER, Burden, Cowley Co., Kas.

CLOVER CLIFF FARM.

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

BLACKSHERE BROS., Elmdale, Chase Co., Kas.

DEER PARK FARM.

H. E. BALL, Proprietor.

Registered Jersey cattle. Young bulls and heifers for sale.

Registered Poland-China swine. Young boars for sale.

Farm two miles east of Topeka on Sixth street road.

T. P. CRAWFORD, Mgr., Topeka, Kas.

SUNRISE STOCK FARM.

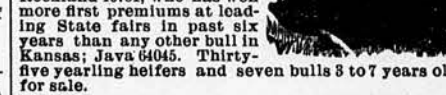
C. A. STANNARD, Prop., Hope, Kas.

Breeder of

Hereford Cattle and Large English Berkshire Hogs.

Bulls in service: Kodax of Rockland 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 8 to 7 years old for sale.

ELDER LAWN HERD SHORT-HORNS.



THE Harris bred bull, GALLANT KNIGHT

124466, a son of Gallahad, out of 8th Linwood

Golden Drop, heads herd. Females by the 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.

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.

S. A. SAWYER, FINE STOCK AUCTIONEER—

S. 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.

Agricultural Matters.

SOME KANSAS FACTS AND FICTIONS.

Address by Secretary F. D. Coburn at the dedication of the Kansas building at the Omaha exposition.

"States are not great
Except as men may make them;
Men are not great except they do and dare.
But States, like men,
Have destinies that take them—
That bear them on, not knowing why or where."

Kansas is the product of a courage and fortitude never surpassed by the founders of any commonwealth, the builders of any State, and from the beginning has been an object of controversy and an arena for the conflict of ideas, beliefs, convictions.

She has been more written about and talked about and less understood than any similar aggregation of peoples, land, sunshine and air known to modern history; more praised by those who knew her virtues best and more aspersed by those upon whom in her varying moods she frowned. There is no love like that of a Kansas lover, and no hatred like that of a suitor from whom, however great the justification, she has withheld her smiles. She has not smiled on all alike; as a rule, those who have deserved most have been most favored. Those who have demanded much for little, who have ignored the proprieties of environment, who, unless given their own way, have refused to play, are not basking in the brighter sunshine with those who have studied and striven to know her ways.

ACTS ON HER IDEAS.

Kansas is noted for having an individuality distinctly her own. Having accepted an idea, she proceeds to act upon it without waiting for the consent of any other nation. If the policies of a given political party meet with her approbation she proceeds to give that party a majority larger in proportion to population than was ever heard of elsewhere when a free ballot and a fair count were permitted. If after a reasonable trial she concludes this party is recreant to its promises and possibilities for good it is relegated to a cave of gloom with ample opportunity for meditation and prayer, for sack-cloth and ashes, for self-purification, while another is set up, on probation. This illustrates the independent bent of her people in many directions. They think for themselves upon each problem presented, and having thought, record their judgment without waiting to hear or to inquire how it may please Missouri or be accepted by Massachusetts. Such is the type of men and women who in a third of a century have redeemed from the wild buffalo, and its wilder men, the splendid and prosperous empire in whose name and in whose loving service we are here to-day.

How the true Kansan regards his State and the consummation it represents is strikingly suggested by one of her sons who is quoted as saying, "The Lord said, Let there be light—and there was Kansas." Of how strong his attachments for her are, another brilliant son has written thus:

"He who has lived in Kansas, though he roam,
Can find no other spot and call it 'home.'
As Ingalls says, a Kansas man may stray—
May leave—perchance depart or go away—
In short, may roam—but, be it anywhere,
He must return if he can raise the fare."

REMARKABLE PEOPLE.

Erratic, some say, eccentric, mysterious, unfathomable, maybe, she has, beyond question and as no other, the homage, the affection, the undying devotion of her children. While in the main her people are optimists, there are some who are pessimists, and occasionally both are combined in the same individual. This remarkable person, with the duplex, self-reversing thinking apparatus, addressing the political picnic in his neighborhood, lifts himself on his tiptoes and exclaims: "Fellow sufferers, dry weather, the chinch bug, the octopus, the railroad and the gold bug prey like vampires upon our vitals and our land. Our once fair State is plastered so thickly with mortgages we have to bore holes through them with an auger in order to plant our corn!" But when this same Kansan goes East on a visit he as earnestly assures inquirers that "Kansas is the most wonderful State in all our glorious Union and the only one worth living in." Look, he says, "at her vast prairies covered with crops so heavy they make whole counties sag in the middle. Look at her growing corn, so rank that it crowds the township lines into the rivers!"

CORRESPONDENTS OF EASTERN PRESS.

It has been left, however, to the correspondents of the Eastern newspaper to portray Kansas to the world in all the various shades and tints—from those of gloomiest midnight and deepest woe

to brightest noonday and heaven's gilding. His finest work, that which has always stamped him as possessing the true artistic temperament, has been his treatment of weather conditions, especially our impulsive zephyrs and periods of procrastinated rainfall. The lines of though always discernible in his work are that we are in a chronic condition of cyclone, drought, or blizzard, variegated by invasions and devastations of chinch bugs and grasshoppers. In dealing with the former, he describes the wind, which he says blew a cow up against the side of a barn and held her there for twelve days, or until she starved to death. The same wind, says this voracious chronicler, blew the cracks out of the fences, sucked a cistern from the ground, moved the township line and changed the day of the week, while it yanked the bungalow out of a barrel and buried it in a sand-hill eighty miles away. On another occasion, as he avers, when stopping at a farm house, a cyclone came up and he with the family went in the cellar. The house was soon blown away; presently the cellar went, too, rolling over and over like a silk hat. He was early spilled out, but with infinite labor dragged himself back in the teeth of the wind, intending to take refuge in the hole the cellar came out of, but to his great consternation he found that the hole had been blown away, too. Shortly after this a farmer was riding along the road with a jug of sorghum tied with a strap to his saddle-horn. A cyclone came up, and after it had passed the jug handle was found inside the jug and the strap was sticking out of the jug's mouth, the jug having been blown inside out without spilling a drop of the molasses. During this same blow a goat happened to get in its path and his hair was blown off until he looked as clean as a skinned banana. This made the goat look so much like a Mexican dog with horns that it was placed on exhibition at the World's Fair, attracting attention as one of the great curiosities of the century.

THEY WRITE OF WOES.

The Eastern correspondent is equally at ease in dealing with the intervals occurring between showers, which the fertility of his imagination and the extreme elasticity of his conscience permit him to describe as "droughts." Whatever portion of his vocabulary has not already been exhausted in describing the "cyclone" is at once available for writing up the "drought." Through him a wondering world learns of the alleged Kansas ferryman who has to haul water ten months in the year in order to keep his boat running; of the families who each morning are compelled to run their wells through clothes-wringers that they may obtain water for cooking purposes; of neighborhoods where it is so dry that water is wet only on one side and where fish, to allay thirst and rinse the dust from their throats, swarm out on the prairies and lap the boiling dew from the buffalo grass. He it is who says that this distressing scarcity of moisture is forced upon us by the corporations that have cornered the water supply to put into their stocks, and to such an extent that farmers have to soak their hogs over night in order to make them hold swill.

HARMFUL ADVERTISING.

No Kansan has a disposition to contradict or for a moment seriously notice such grotesque exaggerations, but nevertheless they suggest even in their absurdity a sort of harmful advertising of which the State has been the subject, or rather victim, from its settlement, and for which, too, her own people and journalists especially are not entirely blameless. There is no denying that we have suffered untold and irreparable injury through the thoughtless, flip-pant use of harmful expressions in our own journals in reference to climate and other conditions that are really no more applicable or peculiar to this State than to others. In the minds of the unthinking and unsophisticated who have read these expressions, Kansas is a land of droughts, cyclones, simoons, chinch bugs and grasshopper devastation in summer, and blizzards rampant in winter. If the rains are less frequent than we would have them, a story goes abroad of destructive "droughts." If our life-giving breezes yield themselves up to a half hour of unusual hilarity the Eastern press is more than likely to have the incident chronicled as a "Kansas cyclone." If the much-desired snow comes with a wind from the north, it is likely to be heralded as a "Kansas blizzard," when, as a matter of fact, the weather authorities and observers assert that blizzards are unknown to Kansas, and I can truthfully say that in my thirty odd years' residence I have seen no storm which I thought could, with any propriety,

whatever, be so designated. If this or that farm or locality is troubled by some of the myriad insect pests common to all mild climates, the fact is more than likely to get into the papers in black type that Kansas—not that particular neighborhood—but "Kansas," 400 miles long and 200 miles wide, is being devoured by chinch bugs or grasshoppers. As a matter of fact, the average Kansas farmer doesn't know the size, form or color of the destructive variety of grasshopper. He has never seen it.

LIKE UNTO OTHERS.

Like many other States in the Union, we sometimes have dry seasons, and at such times chinch bugs make themselves the same (no worse) aggressive, bad-smelling busybodies here that they do elsewhere under like circumstances. As to the State's healthfulness, the sun shines upon no region where mankind or brutekind enjoy greater immunity from disease, or breathe a more wholesome, invigorating atmosphere than that wafted across the 52,000,000 fertile acres known as Kansas.

STRONG MEN AND BRIGHT WOMEN.

If the enterprising, hard-working, jolly good fellows who write for foreign consumption, and who really have no particle of malice in their hearts, dwell less on Kansas' little domestic and by no means extraordinary afflictions—common everywhere, as are mumps, measles and red rash—and filled their allotted columns with stories of her strong men and bright women, their achievements in State, home, church and school buildings, the good lives they are living, the grand foundations they are laying for prosperity to build upon; her rich soils, their generous, diverse productions, and all she offers that is wholesome and inviting, and to which whosoever will may come, she would be less humiliated in the eyes of those whose smiles of approbation she can live without, yet covets, and which by right should be hers.

ALWAYS HOPEFUL.

While he is subject to vicissitudes and tribulations like those of others in less favored lands, the true Kansan is always full of courage for the future, brave in the belief that next year will be a prosperous one and cure the misfortunes of this. The season may be unkind, yet he will find it in his heart to exclaim, in better spirit than did Habbakuk of old, "Although the fig tree shall not blossom, neither shall fruit be in the vines; the labor of the olive shall fail and the fields shall yield no meat; the flock shall be cut off from the fold and there shall be no herd in the stalls, yet will I rejoice in the Lord, I will joy in the God of my salvation, and that I live in Kansas." If Providence smiles on him and his, then the rhapsodies of Israel's sweet singer suit him better, and as he casts his eyes over his fertile acres he exclaims with David, "Thou waterest the ridges thereof abundantly; thou settlest the furrows thereof. Thou crownest the year with thy goodness and thy paths drop fatness. The pastures are clothed with flocks; the valleys also are covered over with corn; they shout for joy; they also sing."

A LITTLE HISTORY.

A State which in the last ten years has been able to contribute to the general fund 361,000,000 bushels of wheat, 1,532,000,000 bushels of corn, 336,000,000 bushels of oats, \$520,000,000 worth of horticultural and live stock products; that last year paid off \$30,000,000 of borrowed money and this year has the greatest crop prospects in her history, can well afford to be represented in this great international exposition in the midst of this most fruitful region on earth.

There were no white inhabitants in Kansas in 1850; in 1856 there were less than 10,000, and in 1860 but 107,000. The eleventh census showed that the entire United States in 1890 produced about 2,125,000,000 bushels of corn; in the preceding year Kansas alone produced more than one-eighth as much. In 1892 the United States raised 516,000,000 bushels of wheat, about one-seventh of which grew in Kansas. Last year alone she raised more wheat than all New England, New York, Pennsylvania, Delaware, Maryland and Georgia combined. She has a mile of railroad for each 150 of her inhabitants, as against one mile to each 700 people in the eight North Atlantic States. The census shows that nearly 70 per cent. of her farms are owned by those who cultivate them, and only about one-third are worked by renters. As compared with hardships which the brush-clearing, tree-felling, stump-pulling, swamp-draining farmer who pioneersd in Ohio, Indiana and the Middle States experienced, the Kansas farmer's life to-day is lived on flowery beds of ease.

No More Scrofula

Not a Symptom of the Affliction Since Cured by Hood's.

"When our daughter was two years old she broke out all over her face and head with scrofula sores. Nothing that we did for her seemed to do any good. We became discouraged, but one day saw Hood's Sarsaparilla so highly recommended that we decided to try it. The first bottle helped her, and after taking six bottles her face was smooth and we have not seen any signs of scrofula returning." SILAS VERNON, West Park, New York. Get only Hood's because

Hood's Sarsaparilla

Is the best—in fact the One True Blood Purifier.

Hood's Pills cure nausea, indigestion, biliousness, constipation.

INCREASE OF WEALTH.

The wealth of New York State increased 25 per cent. from 1880 to 1890; in the same time the wealth of the whole country increased 50 per cent. The wealth of the North Atlantic division of States, from Maine to Pennsylvania, inclusive, increased 22 per cent.; while the wealth of the North Central division, from Ohio to Kansas, increased 56 per cent., and the wealth of Kansas increased 137 per cent. The total increase of the wealth of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, and New Jersey combined was \$384,000,000. In Kansas in the same period it was \$1,039,000,000 dollars. In wealth per capita the North Atlantic States increased \$23, the South Atlantic \$84, the North Central \$197, the South Central \$148, and the increase of wealth in Kansas per capita was \$498.

ADVANTAGES AFFORDED.

There is not time nor occasion here for dwelling as might be upon the thousand advantages Kansas affords to those who would establish homes in a land where so nearly every prospect pleases. Her limitless acres of rich soil, producing the grasses, grains, fruits in profusion; her climate in which the weak grow strong and the strong stronger; her exhaustless underground supplies of pure cold water for the lifting of which, night or day, her winds are ready to be harnessed; her wealth in mines of coal, lead, zinc and salt; in gas fields, in quarries of gypsum and building stone; her cattle upon ten thousand pastures; her \$11,000,000 invested in 9,400 school houses, with 11,400 teachers and a half million pupils; her forty-one colleges and 8,500 students; her churches in every valley and on every hillside.

But, all these and more pertain to the State from which we come and whose praises we sing; greater in area alone than New York and Indiana united; greater than the whole of New England combined with Delaware and Maryland, or than Maine and Ohio together. A commonwealth described as "First in corn, first in wheat, first in the hearts of her citizens! Four hundred miles long, 210 miles wide, 4,000 miles deep and reaching to the stars. Where every morning, during the corn-plowing season, the farmers go into a corn field as large as the whole State of New Jersey; every noon, during the harvest, the harvesters come to dinner from a wheat field of 200,000 acres more than all the State of Delaware; and every night Mary calls the cattle home from a pasture larger than Pennsylvania. Once called a desert, the State is now a garden. The mustang is succeeded by the Percheron. The buffalo has abandoned the prairies to the Short-horn and the Hereford. Corn tassels where the Sioux and Shawnees danced. Wheat grows over the old prairie dog village. The sun that crept over wigwam and cottonwood shines on orchard and meadow." Located in the favored parallel—a district that controls the destinies of the globe—a parallel that has been the thread upon which jewels of wealth, plenty, luxury and refinement have been hung from time immemorial; the 37th parallel is the girdle which the geni of civilization have spun around the sphere. Along it lie great cities. Kansas is right in the very path of this prosperity. With as fertile soil as lies out-doors, and with a salubrious climate, it is the fit abode for successful men." Such is Kansas. Such is the land we love and whose greetings we bring.

"Even in thy desert, what is like to thee? Thy very weeds are beautiful, thy waste More rich than other lands' fertility."

Sheep Department.

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

FATTENING MINNESOTA LAMBS IN WINTER.

This week I print one of the most important letters that was ever printed, and every sheep man in Kansas should keep the paper on file and read and study it carefully.

Another paper giving the results of three years' feeding, by the same author, is on the hook and will appear soon. Professor Shaw is authority on all sheep matters, and I trust Secretary F. D. Coburn will engraff this letter in his report:

"This paper gives the more important facts contained in Bulletin No. 57, Section 1, recently issued by the University Experiment Station of Minnesota. It related to the fattening of home-grown lambs, that is to say, of lambs from within the State.

"As is generally known, lambs have heretofore been fattened chiefly at the stock yards, so far as the work has been engaged in, and usually on screenings and hay. The chief reliance of the feeder has been screenings. There can be no question but that screenings is the cheapest grain food that has been attainable for such a use. It has usually been bought for not more than one-fourth of a cent per pound, and in many instances for less, and it is equally true that screenings is one of the best foods that can be used in fattening this class of animals, because of the variety of the components which it contains, and because of the adaptability of the same to the needs of the sheep. It was determined, nevertheless, not to concentrate on experimentation with screenings, but rather with those other coarse grains which can be grown on any Minnesota farm. Screenings is a quantity so variable and so undeterminable that it is impossible to reach conclusions from experimenting with them that would be of much advantage to the farmer. But before leaving this phase of the question, it may be well to state that no other grain food probably furnishes so safe a food to feed to sheep lambs in a self-feeder.

The feeding period began December 23, 1895, and covered a period of eighty-four days. The experiment proper began December 30, and ended March 16, 1896, lasting seventy-seven days. The chief of the objects sought were: (1) To learn the comparative value in fattening lambs on certain combinations made up of the chief of the coarse grains grown in the State; (2) to compare feeding such food in limited and unlimited quantities; and (3) to ascertain the outcome from feeding such foods to a good type of home-grown lambs. The lambs used in the experiment were Minnesota grown. The price paid for the bulk of them was \$4 per 100 pounds when they reached the station. They were bought in August. Good finished lambs had sold the previous spring for \$6 per 100 pounds, hence the high price at which lambs were held at the time; but, owing to a drop in prices, such lambs could have been bought at from 50 cents to \$1 less per hundred when the experiment began in December. They were excellent quality and were essentially Shropshire grade in breeding, but some were the offspring of a Cotswold-top cross on high-grade Shropshire females.

"One hundred lambs were fed. They were divided into five lots of twenty each and were fed in compartments of a shed opening into small yards into which the lambs virtually had access at will; water and salt were accessible when needed. The lambs in Lot 1 were fed oil cake, corn and oats in the proportions of one, three and six parts by weight. This food was given in a self-feeder. The lambs in Lot 2 were given a similar grain portion, but limited to what they would eat clean. Those in the remaining lots were also fed on a limited ration. The lambs in Lot 3 were fed oil cake, barley and oats in proportions of one, three and six parts. Those in Lot 4 were given the same kinds of grain during the first half of the experiment, but during the last half of the same the proportion of the oil cake was doubled, and the lambs in Lot 5 were given oats and oil cake in the proportions of one and nine parts, and in this case also the oil cake was doubled at the middle of the experiment. A poor quality of native hay was fed during the first half of the experiment, but during the last half thereof good clover hay was fed.

"The food was charged at average market values in the State. These were as follows: Oil cake, \$14 per ton; corn, 18 cents per bushel; barley, 16 cents per

bushel; oats, 32 cents per bushel; native hay, per ton, \$3; and clover hay, per ton, \$3.50. The grain was not ground nor was the hay cut. The lambs consumed on an average 2.39 pounds of grain per day, and .82 pound of hay. The total daily consumption of food, therefore, was relatively small for such lambs, and exceedingly small in proportion to the gains made, as will be shown later. The cost of food per lamb was 95½ cents for the eighty-four days' feeding.

"The average weight of the lambs used in the experiment when the experiment proper began, December 30, was 98.2 pounds, and when it ended, March 16 following, it was 129.2 pounds without shrink and 122.8 pounds with shrink. The average increase in weight was 31 pounds in the seventy-seven days of the experiment, or a trifle over 12 pounds per month. The gains are the best ever attained by the writer in any experiment in feeding lambs. They were superior to any gains made in Ontario experiments, even when such foods as peas and oats, clover hay and roots were fed. The cost of making 100 pounds of increase in weight during the experiment proper was \$3.05. With the lambs in Lot 4, that is to say, the lambs given the extra portion of oil cake along with the barley, it was \$2.92. This is the cheapest production of mutton ever realized by the writer while fattening sheep and lambs. Wherever this can be done is a paradise for the feeder. During the experiment proper, the profit on the increased weight was \$36.35, although the lambs were sold at the low price of \$4.65 per 100 pounds in Chicago. Under the circumstances such a result is simply extraordinary.

"The net profit made on the lambs, excluding the one that died, was but \$22.09, or 22 cents per lamb. This profit was small, but it was not in any sense the outcome of unsuccessful feeding, but rather of fluctuating market values. It is one of those instances which the feeder must now and then face. The lambs were bought when they were dear, and they sold on one of the lowest markets that we have had for years. When the experiment began the lambs had cost the station \$4.04 per 100 pounds, and when delivered in Chicago they only netted the station \$4.22 per 100 pounds. The advance, therefore, in the selling price over the cost price was only 18 cents per 100 pounds. Had the selling price been normal for such lambs the profits would have been excellent. In every other respect the results were most gratifying with the lambs of all the lots except those in Lot 1, which were fed an unlimited grain ration. Compared with the lambs in Lot 2, which were fed the same foods in kind but limited in quantity, they made much the same gains. But in Lot 1 one lamb died toward the close of the experiment, and several were more or less off their feed occasionally. The troubles were digestive, and called for special attention on the part of the feeder.

"Although the increase made by the lambs was not far different, those in Lot 4 made the best gains, and also gave the most profit. It will be remembered that the distinctive grain ration fed to these was barley, and they were given an increased portion of oil cake. The excellence of this combination of oil cake, barley and oats in feeding lambs has been further confirmed by succeeding experiments. The gains made by feeding oil cake and oats were nearly equal to those obtained from feeding the other mixtures, but the cost is considerably greater, and so it has proved in every instance in succeeding experiments.

"The lambs were sold, as previously intimated, in Chicago. The price paid was \$4.65 per 100 pounds. The firm of Clay, Robinson & Co., who sold them, expressed the opinion that had they been thirty or forty pounds lighter, and yet of equal quality, they would have brought 25 cents per 100 pounds more. The winter of 1895 and 1896, it will be remembered, was the first season when the discrimination in favor of light lambs of good quality and finish was marked. Since that time it has become further intensified, inasmuch that the grower of lambs must need bow to the inevitable. It means that if the large types of lambs are grown they must be marketed before they reach heavy weights. In some respects this change is unfortunate, for the good well-grown lamb will be more than 100 pounds when he reaches the winter market, unless dropped later, and when he gets over that weight he must needs be sold at a disadvantage as compared with his brother who is not so heavy. The change will unquestionably have an influence on the breeds from which sires shall be chosen.

"It should also be noted that in this experiment the lambs made an aggregate gain of 1,691 pounds, or 238 pounds

more than during the first six weeks. Such a result is very uncommon, as usually the best gains are made during the first half of the period of feeding. These greater gains are doubtless to be credited to the good clover hay fed during the last half of the experiment, and they emphasize the importance of using fodder good in quality.

"THOS. SHAW."

"University of Minnesota."

The Stock Interest.

THOROUGHbred STOCK SALES.

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

AUGUST 24—Henry Comstock & Sons, Poland China, Cheney, Kas.

"MILK STRAINS" AMONG HOGS.

The most propitious time to select the brood sows for the coming season is now.

Why? Because you can tell better now than at any other time of the season which are the best ones—the best brood sow having the best formed pigs, the best mothers taking best care of their litters, the most prolific having the largest litters of good pigs, and above all, the best sucklers. The sow which had a large litter of sleek, smooth, uniform pigs, is the one to keep over and select the young sows from. She is most likely as thin as a rail now, but that does not argue that she is a poor feeder; she has simply made her food into another form of pork, i. e., her pigs, and that is precisely what the good sow should do. Just watch her. She will gain fast enough after the pigs are weaned, and long before fall she will be as sleek and smooth as the sow that only raised half as many pigs half as good.

Too little attention has been paid by breeders and farmers to the milking quality of their brood sows, and yet of all things to be taken into consideration in selecting brood sows this characteristic is the most important. Maternity is the function of a brood sow, and failing in good milking capacity, she fails to fulfill this function. Did you ever note that the sow that is the kindest, most careful mother, is always the one that gives the biggest flow of milk, and the sow that gives little or no milk is careless, forgetful and negligent of her litter. Well, it is a fact, and has a very natural explanation. The sow with the large extended udder full of milk finds it a relief to have it drawn off by the pigs frequently, and she most gladly responds to the call of the little fellows for a lunch as often as they want it. She is careful of and grateful to them for the relief they give her. The other sow finds no such comfort from her litter, since she has no need of that kind of relief; on the contrary, the frequent demands of the half-starved pigs is unpleasant to her. She becomes irritable and cross at their persistent calls for more. She would much rather be let alone, go off by herself, eat her fill and lie down undisturbed while she converts it into pork on her own back instead of her pigs. Consequently at weaning time you will find her in pretty good shape, while the pigs are all runts. But the other sow and her litter, how do they look? Just the reverse; the pigs are big, sleek and fat, and the sow is apt to be the "runt."

Right now is the time to make your selection when you have such a good chance to observe each sow's performance. The sow that is thin now will make the most rapid gains when the pigs are weaned, and by fall when they are all in nearly the same flesh you will most likely have forgotten all about it. The pigs are all wired up in the same lot, or scattered about in different lots, and while you might single out the pigs of each separate litter to determine which sow produced the best, it will be a comparatively big task; while now it is as plain as day without any room for doubt or mistake.

Besides size and flesh, you must of course not lose sight of individual quality of the pigs. It is about as easy to judge of the quality of a litter at weaning time as at any other age.

At maturity a pig will generally present the same form as he showed in embryo at weaning time. And since you can so readily select from among the brood sows at this time those that have rendered the best performance, so can you also select the young sows most easily now that give promise of same characteristics, by taking them from the litters of those sows which have proven their worth. And if this is the proper way to select sows for your herd to secure a stock of good milking capacity, what is the matter with selecting your boar the same way? That

milking capacity is an inherent quality is fully demonstrated by the big stride dairymen have made in building up "milk" and "butter" families among the different breeds noted for this by selections from cows giving the best tests of milk and butter fat. But did they confine themselves to selecting only the females from such dams? O, no! they sought even more eagerly for a bull calf from a cow with a high record and placed a value on him in proportion to the excellence of his dam's record.

Now, the same results can be accomplished in the breeding of hogs, and are being accomplished by the most progressive breeders of to-day.

It is not necessary, either, to sacrifice form and quality and individual excellence in attaining this end. It is not every good suckler that would make a desirable sow to reserve. I don't wish to be understood as saying that every good suckler is a good brood sow, but one thing I do say is, nearly every good brood sow is a good suckler, and the best brood sows are generally the best sucklers. I have seen it stated and heard it argued that in order to get a good suckler one should select sows "built after the type of our dairy cattle, with long, deep, wedge-shaped body," that as a general rule they make "far better sucklers" than the low-down, thick-set show type, and capable of producing the best litter of pigs. We must take some exception to this line of argument. We have had both types represent the two best sucklers in our herd, but the sow that was "capable of raising the best litter" was the sow that combined individual excellence with milk capacity, and it is not the "wedge-shaped sow."

Don't sacrifice form and good feeding quality to secure milk capacity, but secure both combined. It can be done by selection and is being done by the best breeders. Now is the time to do it. If you select from among your own herd lose no time in making your selection. If you desire to infuse new blood in your herd and buy from some neighboring breeder, go about it in the same way as if you were selecting from your own herd, and don't forget that the boar is an important part of the herd and should be selected with even greater care with the aim to be accomplished constantly in view.

Select from among your sows the best formed ones having proven themselves kind mothers and good sucklers.

Avoid the wedge-shape sow unless you desire to raise a lot of wedge-shape pigs. You need not get that type in order to secure good milk capacity. I grant that some sows of that type do possess great milk capacity, but as "like begets like," they produce pigs of the same form, and they are not a desirable type. They are not only unattractive in appearance and consequently hard sellers, but worst of all, they lack in just the most important feature of form, namely, in heart girth; and it is highly important that a hog, and most especially a brood sow, should be as excellent in this respect as possible. Deficient heart girth indicates imperfect respiratory developments, consequently impaired circulation, low vitality and dull temperament. Animals of this type are the first to show unthrift, they are the hardest feeders and the first to succumb to attacks of disease.

I repeat and emphasize, avoid the wedge-shape sow. You can get just as great, and I have known even greater, milk capacity from the well-formed sow. I dare say nearly every herd possesses one or more of the right type to select from, being both the best-formed animals in the herd and also the best sucklers. They may not be the ideal sow, but they are the nearest approach to her; and by always selecting from them the best, and only the best, the ideal sow can be produced. By doing this every breeder can in a short time have a "milking strain" of brood sows that also possess the merits of excellence of form which make them easy feeders, attractive to the eye, easy sellers, and profitable to all ends for which a herd of hogs is kept.—Melssner Bros., Reinbeck, Iowa, in American Swineherd.

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.

Notice to Breeders.

Every Kansas breeder of improved stock who expects to exhibit at any of the fairs or the Trans-Mississippi exposition at Omaha, is requested to send particulars at once to H. A. Heath, Secretary Kansas Improved Stock Breeders' Association, Topeka, Kas.

Rock Salt for Stock.—Use Kansas Rock Salt for stock. Best and cheapest way of salting your stock.

WEEKLY WEATHER-CROP BULLETIN.

Weekly Weather-Crop Bulletin of the Kansas Weather Service, for week ending July 4, 1898, prepared by T. B. Jennings, Section Director:

GENERAL CONDITIONS.

Heavy rains in the central eastern counties the first of the week, rains more general the last of the week, dry hot weather intervening. The rainfall was ample in the extreme northwest, from Phillips to Russell, from Edwards to Reno, in the southeastern counties, and the counties between the Kaw river and the northern tier; elsewhere the rains were light, with none in some counties.

RESULTS.

EASTERN DIVISION.

Wheat harvest about over, and in south threshing has begun; the wheat is not turning out well, Wyandotte giving the best report; rust, chinch bugs, and wet weather having damaged it. Oats are being harvested and are also proving a light crop. Corn is tasseling and silking in the southern counties, and is generally in good condition and growing well. Apples a poor crop. Hay is in progress; crop good. The heavy rains of the 26th overflowed the rivers and streams in the southeastern counties, washing away the wheat in shock on the bottoms and causing great loss to many farmers.

Allen county.—Wheat and oats cut, but not as good a crop as expected; the overflow of the Neosho carried away much of the wheat; flax ready to cut this week; late clover in bloom; prairie hay being shipped to market.

Anderson.—Heavy rains first of week flooded low lands, doing great damage, particularly to wheat, which was generally in shock; upland corn doing well; too wet for field work.

Atchison.—Dry and hot; prospect for corn improving; wheat and oats damaged by rust and going down; harvest in full progress; haying commenced; farm help scarce.

Bourbon.—Corn doing well, but bugs are hatching; wheat on Osage and Marmaton river bottoms all washed away; timothy and clover being cut, crops heavy; flax doing well; oats poor on account of rust and bugs.

Brown.—Wheat about all cut; oats harvest will begin this week; corn uneven, many fields being laid by, others being cul-

ing, some rust and some head blight, crop fair to good; oats rusting in places badly; well-worked corn is good; early potatoes good, late just planting; haying begun, clover very weedy, timothy good; pastures fair to good; apples a failure; peaches few.

Lyon.—Very favorable week for haying and harvesting; corn growing rapidly. Marshall.—Wheat harvest well advanced, but the yield will not be as good as expected, being damaged by rust; dry, windy weather this week had a bad effect on crops; corn doing finely and much of it well cleaned.

Montgomery.—Heavy rain Sunday night delayed threshing and stacking; flax harvest in progress; corn growing rapidly.

Morris.—A dry week; harvesting about done; oats very poor on account of rust; corn about laid by; too dry for berries and potatoes.

Neosho.—River and small streams very high first of week; harvesting nearly through; wheat a poor yield; oats not very good; chinch bugs bad in corn, but corn looks very well.

Osage.—Rain of 2d very timely; most of the corn is being laid by; late-planted corn is making slow progress in some localities; oats doing fairly well, some being cut; apples falling badly.

Pottawatomie.—Favorable for corn cultivation, and the corn is looking well; much wheat not harvested—rust and not worth cutting; bearded wheat appears to be the best; oats nearly ready to cut.

Shawnee.—Wheat harvest nearly over, crop disappointing, several pieces on upland will not be cut; oats ready to harvest but badly rusted; corn, not drowned, is doing well; apples not over half a crop.

Wilson.—Good week for work and corn is being cleaned; threshing in progress; wheat is not a good yield nor a good quality, in the overflowed fields it did not fill.

Woodson.—Excellent week for growing crops; oats being harvested; some corn tasseling.

Wyandotte.—Fine week for work; wheat mostly cut and being stacked, some been threshed, yield good, quality good; corn growing finely; potatoes damaged by rain; oats rusted slightly; early cherries rotted badly; apples have fallen off, what are left are very scabby.

MIDDLE DIVISION.

Wheat harvest nearing completion, being farther advanced in the eastern than in the western counties; wheat not yielding as well in quantity or quality as expected, though quality is better west than

Osborne.—Dry, windy week; wheat being cut; pasture drying up some.

Ottawa.—Wheat harvest nearly finished; chinch bugs damaging oats; corn cultivation progressing; the windy weather has caused all fruits to drop badly; early potatoes dried up.

Phillips.—Harvest progressing rapidly; the dry, hot weather ripened the oats too rapidly; oats and spring wheat hurt; fall wheat nearly all cut; but very little rust on wheat in this county; corn is in fine condition, but was needing rain.

Reno.—Warm, dry, windy week, ending with a good rain; wheat harvest nearly completed, wheat showing a good crop; oats harvest begun, better crop than expected; corn growing finely, some cultivating being done, but most farmers busy in harvest fields; second crop of alfalfa in bloom; early peaches ripening; chinch bugs in corn next to wheat fields.

Rush.—Dry, hot week, with nearly continuous strong south wind damaging to oats, barley and late-sown wheat; harvesting in progress but delayed by high winds; potatoes damaged by bugs.

Russell.—Dry week, much wind; corn not suffering for rain; gardens suffering; wheat cutting all week, about half done; yield will be less than anticipated, quality good.

Saline.—Hot, dry, windy week; wheat harvest about finished, bottom land wheat not as good as expected; corn and fodder crops needing rain.

Sedgwick.—Wheat harvesting nearly finished, but berry shrunk some, from ripening too fast, much of it badly down and a great amount will be lost; corn growing rapidly and fairly free from weeds.

Smith.—High winds all week; gardens drying up; dry weather hurting millet; oats and corn all right yet; some corn laid by; wheat harvest begun; potato tops drying up; pastures all right; stock doing well.

Sumner.—Harvest finished; wheat not as well filled as expected; oats almost a failure; corn fine and tasseling; threshers starting.

Washington.—Wheat harvest is nearly over, late-sown badly damaged; considerable wheat lost by lodging; oats rusted very badly and going down—will be light crop; corn doing fairly well; late cherries ripening; threshers commenced Friday.

WESTERN DIVISION.

Hot, dry week, prematurely ripening wheat, injurious to all small grain and browning the range grass. Harvest becoming general. Barley harvest has begun in Ness. Corn is making better progress than other crops. Grasshoppers and potato bugs are causing some damage in parts of the division. The week closed with showers and cooler weather.

Clark.—Hot, dry, windy; all crops suffering for rain.

Finney.—Fine week for haying; barley harvest begins next week; cattle in best condition; everything in fine condition.

Grant.—Crops still growing fairly well, but getting dry; grass curing on the ground.

Gray.—A hot, dry week, with high winds; light shower Saturday; wheat, especially the late, has been considerably damaged by dry weather and winds, but will be far above the average of other years.

Hamilton.—Dry and hot all the week, with strong south wind till Saturday, when it changed to north with rain; was getting dry for all crops.

Kearny.—Complaints of grasshoppers and potato bugs injuring potatoes and gardens; otherwise crops doing well.

Morton.—Hot and dry; high south wind three days, ripening the wheat rapidly and wilting corn where not well cultivated; need rain again.

Ness.—Dry, hot, windy week, injuring late wheat and barley; gardens suffering the most; feed crops need rain; corn looking the best of any of the crops; prairie grass getting brown; barley harvest begun; stock fattening on the range.

Scott.—Hard week on small grain; wheat has suffered, but is not past help should rain come soon; some barley has been cut, and some has to be mowed, as it is down so badly.

Sherman.—A growing week for corn and forage crops, but hard on wheat and other small grains; all damage repaired by the fine rains Saturday; grasshoppers damaging small grain, gardens and corn in some localities; corn and range grass doing finely.

Thomas.—Late wheat hurt considerably by the hot, dry, windy weather; barley and oats were never better; corn has done its best, but was needing rain; the showers of the 2d will greatly benefit everything.

Trego.—Wheat prematurely ripened by the hot, dry week, yield will be reduced; binders were at work this week, headers will begin on the 4th; rust has hurt wheat and the winds have broken much of it down; oats will be light in grain; corn growing; corn and sorghum hay need rain; grasshoppers are numerous and doing considerable damage.

Paint Talks—VII.

THE PROVINCE OF OIL.

Generally speaking, the durability, as well as the economy of a paint depends on the proportion of the oil it contains: the more oil on a surface, the more durable and the more economical the paint. This means that those pigments that require the most oil to transform them into paint ready for application, make the best paints.

Of the several materials used as bases for house paints, zinc white carries more than twice as much oil as any other; and when added, in combinations, to other materials, greatly increases their oil-carrying capacity. Thus a mixture of half lead and half zinc will carry about twice as much oil as a pure lead paint, and other combinations in proportion.

This fact explains why combination paints last longer than "straight" paints. It also explains why combination paints will cover, pound for pound, a much greater surface than the straight paints. The best paint is really nothing more than a preservative coating of pure linseed oil, the pigment being added to make the layer of oil thicker,



There are many thousands of wise women in this country who, when they found that they were suffering from weakness or disease of their distinctly womanly organisms, promptly wrote to an eminent and skillful physician, with a world-wide reputation, instead of trusting their cases to some obscure physician with but limited practice and experience. There

are many reasons why a wise woman follows this course. The chances are that an obscure physician of small practice will not diagnose troubles of this nature properly. If he does, he will insist on the obnoxious examinations and local treatment from which every sensitive, modest woman shrinks.

The specialist referred to is Dr. R. V. Pierce, for thirty years chief consulting physician to the Invalids' Hotel and Surgical Institute, at Buffalo, N. Y. Thirty years ago he discovered a wonderful medicine for diseases peculiar to women, that may be used effectively in the privacy of the home, and does away with all necessity for examinations and local treatment. This medicine is known as Dr. Pierce's Favorite Prescription. It acts directly on the delicate and important organs concerned in wifehood and motherhood. It makes them strong, healthy and vigorous. It allays inflammation, heals ulceration, soothes pain and tones and builds up the nerves. Taken during the period of prospective maternity, it banishes the usual discomforts and makes baby's coming easy and almost painless. It insures the little new-comer's health and an ample supply of nourishment. Over ninety thousand women have testified to its marvelous merits. Medicine dealers sell it.

It is a druggist's business to give you, not to tell you, what you want.

Any ailing woman may write to Dr. R. V. Pierce, Buffalo, N. Y., and get free advice. By enclosing 21 one-cent stamps in her letter, to cover cost of mailing only, she may secure a paper-covered copy of the "People's Common Sense Medical Adviser." Cloth bound, 31 stamps.

and to hide the surface covered. In oil varnishes the pigment is replaced by hard transparent gums, but the purpose is practically the same—to protect surface with oil.

Linseed oil has the valuable property of absorbing oxygen and hardening into a tough, elastic layer, and this tough substance is the chief element of protective value in paint and varnish.

Now anything that has an injurious effect on linseed oil naturally injures the paint in which it is used. Some of the most popular paint materials form a metallic soap with a portion of the oil in which they are mixed; others oxidize or burn it, and the paint made with such pigments gradually crumbles and washes away.

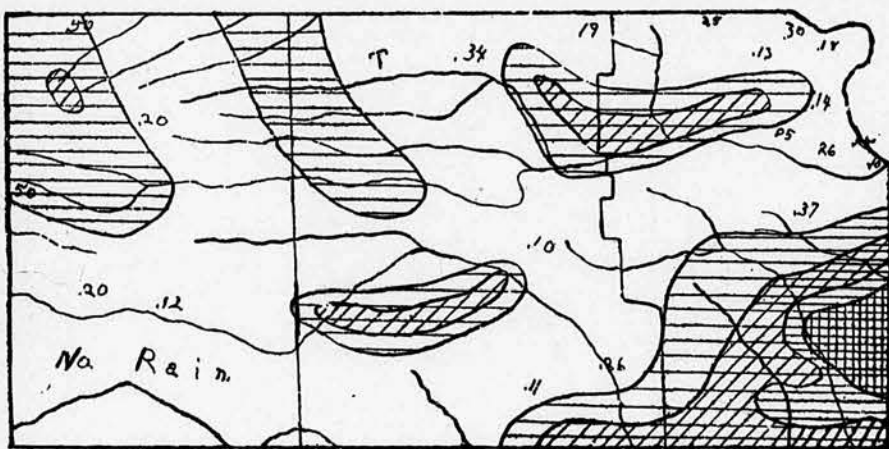
Of the white base materials, properly so-called, used for house paints, zinc white is the only one that has absolutely no effect on linseed oil, neither saponifying nor oxidizing it.

It follows, that of all pigments, zinc is the one of most value in paint. Other materials may be used because of their opacity or their ease of working; but durability, spreading capacity, economy, brightness and permanence of color are obtained only by the use of zinc.

The consumer, whose chief concern is that he shall have the best effect and the greatest wear at the cheapest cost, will find it of interest, when ordering paint, to insist on having a combination paint with a zinc base. When he gets that he will get a satisfactory paint no matter what it may be called on the label. STANTON DUDLEY.

Gladstone Floored.

An anecdote of Gladstone at the time of his greatest rivalry with Disraeli is told. At a dinner party the subject of Judaism cropped up. "Admitted," said Gladstone, "that the Hebrews have given the world a philosopher in Spinoza, musicians in Mendelssohn and Meyerbeer, a poet in Heine, the fact remains that they have not produced a single statesman." There was silence for a moment. Every one knew, of course, that this was a direct allusion to Disraeli. Then one of the company stepped into the breach. "Mr. Gladstone," he said, "as a matter of fact the Hebrews have produced a statesman, and one of the greatest the world has seen." The fighting instinct of Mr. Gladstone surged up at once. "May I ask, sir," he said, pointedly, "who was this Hebrew statesman?" Every one, anticipating a more than lively scene, waited in tense expectation for the answer. It came in the quietest tones: "Moses, sir." Every one smiled, and Mr. Gladstone joined in the laugh.—Vienna Welt.



ACTUAL RAINFALL FOR WEEK ENDING JULY 2, 1898.

tivated the first time; a good week for farm work.

Chase.—Warm and dry; wheat mostly in shock, threshing will begin at once, outlook not so promising, much wheat had fallen and oats had to be cut prematurely to save them; apples are doing well; corn needs rain and more work.

Chautauqua.—Threshers busy; bottoms in eastern part of county still too wet for machines and much of that wheat will not be cut.

Coffey.—The washout first of week carried away most of the shock wheat on the bottoms; corn growing rapidly but getting weedy, beginning to tassle in the southern part; apple crop light; flax nearly ready to cut.

Crawford.—Wheat harvest finished, yield will be less than anticipated owing to excessive rains; oats, also light, are about all cut; flax promises a good yield; corn doing well; fine stand of young grass and clover; pastures fine.

Doniphan.—Wheat harvest progressing rapidly, about two-thirds of the wheat now in shock, yield shortened by unfavorable weather conditions, some fields good, others poor; early corn being laid by, late corn small and weedy; oats thin on ground and will be light; good week for haying, and most of the hay cut; peaches and blackberries abundant.

Douglas.—Wheat all cut and threshing begun in eastern part, wheat and oats badly injured by chinch bugs and rust in western part; the baked ground is injuring corn and potatoes.

Franklin.—Wheat harvest nearly completed, crop poor in the northeastern part, better in central and western; haying has begun, crop good; oats and flax damaged some by wet weather.

Greenwood.—Corn growing well; wheat in stack, some being threshed; gardens doing well.

Jackson.—Wheat about all harvested, some pieces not cut, others cut a portion; oats also very spotted; corn being cultivated, some fields clean, others very weedy.

Jefferson.—Fine week for farm work and much corn was cultivated; oats harvest in progress, crop injured by rust; wheat damaged by rust; hay fine; pastures good.

Johnson.—Wheat harvest about completed; wheat injured by rust; oats harvest progressing, oats badly rusted; corn being cleaned and growing rapidly; potatoes a light crop; but few apples on the trees; blue grass being cut.

Labette.—A fine week for work; wheat stacking and threshing in progress; oats cut; corn that was well worked is doing well, corn is tasseling and silking.

Leavenworth.—Wheat harvest progress-

ing; threshers are at work. Corn is improving; is generally in good condition; much of it has been laid by; in Sumner it is tasseling and in Cowley some is in the roasting-ear. Oats are much damaged by rust. Late cherries are ripening in Washington.

Barber.—Dry, hot week; wheat and rye being harvested; fine week for working corn and forage crops; prairie grass very fine; cattle doing well.

Barton.—Hot, windy week; harvest in full progress; wheat not as heavy as expected, but has a good berry; corn and forage plants need rain.

Butler.—Much corn laid by, growing finely but weedy; oats not a half crop; young alfalfa badly crippled by crab grass, much will be plowed up.

Cloud.—Wheat harvest will be finished about July 7; continued hot and dry weather has damaged oats materially; rain of 2d greatly helped the condition of corn.

Cowley.—Very favorable week for farming; corn is in a very satisfactory condition, some now in the roasting-ear; wheat and oats cut, wheat better in south part of county than in north part; threshing begun.

Dickinson.—Most of the wheat is cut; heat of last week ripened the berry before it had well filled, resulting in much low-grade wheat; oats in same condition; rain of 2d much needed by the corn.

Edwards.—Harvesting of wheat and oats being pushed; wheat badly shrunk; corn and millet growing rapidly; the high winds this week blew off much fruit; pastures good; stock doing well.

Harper.—Wheat harvest about completed, much complaint of heads being poorly filled, and damaged by rust; weather favorable for work; corn doing well.

Harvey.—Wheat harvest progressed rapidly during the week, about finished in the eastern part, much yet to cut in the western; in the eastern part much of the wheat was badly shriveled; some oats cut, fair quality except where lodged; corn doing finely.

Kingman.—Dry and windy; harvest progressing rapidly; corn fields black with chinch bugs which have come out of the wheat.

McPherson.—Hot and dry; harvest well under way; oats ripening rapidly, some being cut, will not amount to much—too light; corn beginning to suffer for want of rain; potatoes dried up; fruit prospects poor.

Marion.—Wheat harvest about half done, grain badly damaged by rust; oats not damaged so badly as wheat; corn doing finely, but needs rain soon; pasture and grass in fine condition.

The Apiary.

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

BEE-KEEPING IN AUSTRALIA.

Following is a portion of the paper prepared by R. L. Pender, of Hunter River, New South Wales, and read before the twenty-fifth annual meeting of the North American Bee-Keepers' Association:

The honey bee was first introduced into Tasmania. The late Dr. Wilson, according to the Australian Bee Bulletin, is credited with being the first person to successfully import a colony of black bees into that colony and have them fully established. Swarms from these bees were sold at £5 (\$24) each, a number finding their way to various parts of the Australian continent. Some further importations were made, of which we have no definite record. The black bee is now to be found wild all over Australia. During seasons of plenty swarms are very numerous, and if an excursion be made through the bush (forests) several may be often seen hanging on the limbs of trees, a fence, or other conspicuous place. Swarms often fly across towns, and it is not an unusual occurrence for them to settle somewhere in a public thoroughfare. The most noteworthy instance that I have seen was last season, when a passing swarm decided that the back seat of a buggy standing in the principal street of West Maitland, New South Wales, was the most suitable place to settle on, from which place they were successfully hived in a box by a passerby without removing the horse from the vehicle. Now and then a swarm will build comb and commence brood rearing on the place where it settles, as the branch of a tree, and there thrive for a while.

In some seasons large quantities of honey are obtained by felling trees containing a nest, the hollow part being from six to fifteen inches in diameter, the combs often extending a distance of six feet along the hollow. It is not unusual for 100 pounds or more of strained honey to be obtained from tree nests.

The black bees of this country have proved to be excessive swarmers during seasons when they could get just sufficient nectar to keep up brood rearing, when honey was being rapidly stored they seem to forget about increase and set to work to store. Swarming may commence in August and continue to early in the following March. Swarms can be purchased for 2s. 6d. (60 cents) each.

Bees are mostly kept in any convenient box that can be found. In some places the joints are so open, through warping and splitting, that the bees and combs can be seen from quite a distance. Sometimes the hives are sheltered with sheets of bark, rough boards, etc.; at other times under a shed. After a swarm is placed in a hive no further care is taken of them until the end of autumn, generally the end of February, when they are driven to another box and allowed to do the best they can for the winter. In many localities in a favorable season these driven bees will build complete combs, rear brood and store sufficient honey before winter, which they will come through in a very strong condition.

Since the introduction of the frame hive and Italian bees many have adopted the more modern methods of keeping, which is carried on similarly to the American bee-keepers. In fact, American bee literature is what is mostly in circulation, and the methods there described seem to suit this country very well when modified to suit our honey flows. Our climate is such that very little attention is given to wintering bees beyond seeing they have about ten pounds of stores, a good queen, and a water-tight cover. In the warmer parts the amount of stores for winter gives no concern, as there is generally sufficient food to be obtained from something, as grasses, weeds, under-scrub, etc., if there should not be a winter honey flow. To give an idea of what a winter flow is sometimes like, I will cite the following: During the season of 1892 Mr. M. Scobie, of West Maitland, New South Wales, started in the spring with seventeen hives of black and hybrid bees, anticipating favorable weather for the following winter, and noticing the spotted gum trees were heavy in bud (the buds of this tree are from fifteen to eighteen months from time of forming to bursting) he allowed—or rather encouraged—his bees to swarm, hived all first and after swarms on comb foundation, and by April had ninety colonies when the trees burst into bloom, and before the end of June 7,000 pounds of honey were extracted. This is very encouraging, is it not? Now for reverses. The past sea-

son has been very wet. That same bee-keeper started with 172 colonies, from which he did not get one pound of honey, and then had to feed some of his stocks for winter.

In some seasons the trees seem to arrange their time of blooming to make one continuous flow from August to the following June, with very little break between, and during such a season with proper management I believe it is quite possible to average 500 pounds of extracted honey per hive. These seasons are scarce, but taking one season with another, an average of 150 pounds per colony in bushy (forest) country and forty pounds when bees have to depend entirely on cultivation, is obtained. The statistics do not paint things so brightly, but it must be remembered that at least 80 per cent. of the hives are boxes, in which a swarm is placed to take its chances.

The hive most generally in use is the Langstroth. With simplicity, size of frame, with all its modifications, a large number consider this size of frame too large, and they have adopted the three-fourths size, to take six sections instead of eight. The eight-frame hives, with Kot-Hoffman frames, is now being very much used. A small number of bee-keepers use the Berlepsch hives. The honey produced is mostly extracted, comb honey having very little sale. It is varied in quality. The color varies from water white to the dark color of golden sirup. Flavor may be very mild or very strong. Some of the finest looking honey is so rank in flavor when first extracted as to be almost unpalatable, but this rankness disappears after a time. The quantity of this rank honey produced is small. Most of the honey produced is of excellent quality. The

practicable here. There are a number who follow the pursuit wholly as a business, and others are going into it.

What Marines Are.

Dear Mr. Landlubber:—Marines are not sailors. When I heard you chatting so glibly about "barbettes," "port battery," "protective decks," "splinter nettings," "hawse pipes," "six pounders," etc., I said to myself what a nation of naval experts we're getting these days, and so you can imagine what a shock you gave me by saying, "Those sailors always were dare-devils," when you talked about the desperate fighting of the marines at Guantanamo bay.

The marines are the warship's police. When a battleship or cruiser has a complement of say 500 men aboard, there is probably amongst this total a marine guard of from fifty to seventy-five men, uniformed and trained as soldiers, having many of the qualities of the infantryman and artilleryman, and by his sea service something of a seaman. The service they perform on a ship is excellently described by Mr. R. G. Skerrett, as follows:

"The marine, unlike the enlisted landsman on shipboard, comes on board a finished factor, a fighting unit, and a thoroughly disciplined element of the vessel's complement. He has been carefully trained on shore and in barracks, and, as far as possible, prepared for the exigencies of sea service. Of recent years he has been instructed in the principles and general practice of torpedo warfare and the art of countermining; is made familiar with both infantry and artillery tactics, and, in Washington, a class is carefully instructed in gun construction and the in-

A Cheap Separator



We'll give you one without cost if you will give us the extra butter gained by its use on 15 cows for one year. Or if you sell the butter and give us three-quarters of the money the extra butter brings we'll call it square.

SHARPLES HAND SEPARATORS are the best that can

be made at any price.

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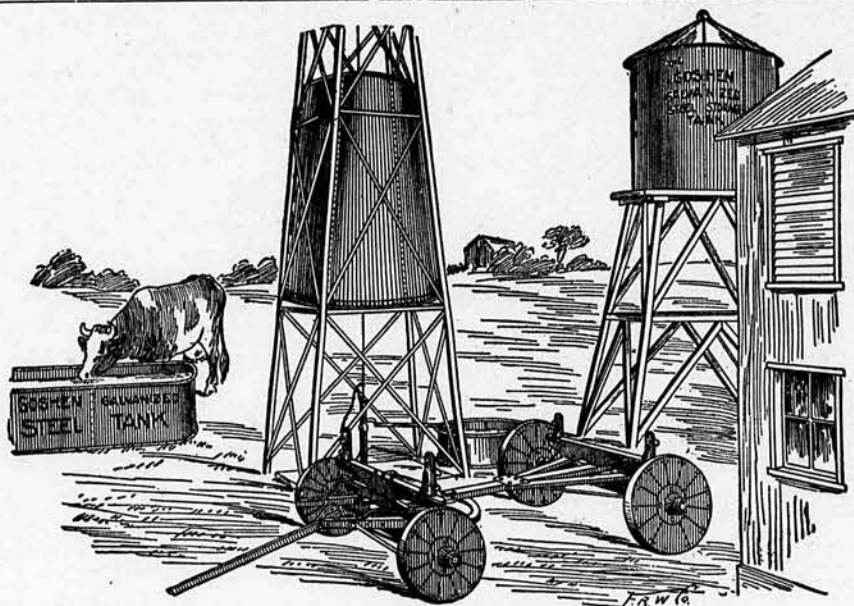
P. M. SHARPLES,
West Chester, Pa.

title of this branch of the naval service, an organization dating from the time of the Revolution, and having a special history so full of hot scraps and courageous exploits that historical volumes are devoted to its doings for more than 100 years.

The large detachment of marines fighting so splendidly at Caimanera, in Guantanamo bay, near Santiago, were not sent ashore from the fleet in this case, but embarked from the Brooklyn navy yard on the transport Panther some time ago as a reserve force for any landing parties that would be likely to be sent out by Admiral Sampson. Instead of being a reserve, however, they became the front of the whole business, and have covered themselves with glory in the most desperate land attack of the war.—Cincinnati Commercial.

The Steel Tank on the Farm.

This is the age of steel. The wooden age has gone with our immense forests, never to return. In former years wood was plenty, workmen were plenty, and there was always money to pay them. People were satisfied with wooden tanks, simply because they knew of nothing better. When the old trough rotted out, when it froze and burst, or when it sprung a leak, they made another. But the world is in a hurry today. It has not time "to make another." What it wants is a tank that will practically last permanently, that is not subject to accidents, and that is just the right size. The Kelly Foundry and Machine Co., of Goshen, Ind., is manufacturing and selling a steel tank that is guaranteed as practically accident proof and wear proof. It is galvanized and does not rust easily, and can be ordered of almost any size that is needed. It is lighter than wood and more economical of space. The Kelly tank is sold under the name of the "Goshen," and is a first-class investment for a farmer needing anything of the kind.



"GOSHEN" STEEL TANKS.
Made by the Kelly Foundry and Machinery Co., Goshen, Ind.

largest quantity and the best qualities are produced during fairly dry seasons. Very little regard is paid by consumers to the color of honey, and when it is put on open market a dark kind of honey will generally realize as much as a lighter-colored kind. The price varies with the locality and the state of the market, varying from 2½d. to 4d. (5 to 8 cents) per pound. It is mostly sold in sixty-pound tins.

At present fully as much honey is produced as a market can be found for, but as foreign markets are being opened up our home markets will be much relieved.

The wax produced is of the very finest quality, and is varied in color from a pure white to every shade of dark and canary yellow, and some even has a pinkish color. The white wax direct from the combs is very tough and quite different from that made white by bleaching. What is it that gives wax its color? I frequently find my bees build and seal their stores with a wax quite a canary yellow in color. Now, seeing that our honey is so varied in color, and that wax is a secretory production, is it not most reasonable to expect that the difference in color is due to the difference in the food rather than impurities?

Propolis the bees must have more or less of, and varies in color and appearance from a dark red to a dirty brown, sometimes granular, hard and brittle, other times soft and sticky, and will draw out in threads several inches long before breaking. I find that only certain colonies do much propolis, and these will gather more propolis than all the rest in the apiary, bridging over all spaces between frames, etc. Where mats are not used I find propolis reduced to a minimum.

Bee-keeping as an occupation is quite

tracials of modern ordnance of all sorts. Every effort to self-betterment is encouraged, with the result that the marine is by long odds the most competent of the fighting force on shipboard wherever he is allowed to compete on equal terms with his sailor shipmate, and in target practice is without a rival.

"On shipboard during the times of ordinary routine the particular duties of the marines are to act as sentinels to watch over the magazines, store-rooms, gangways, galleys—the places where the food is cooked—boats alongside, approaching or passing, and all lights or fires required for the use of the ship, and to give the alarm in case of conflagration, to preserve order and to enforce all regulations pertaining to the proper policing of the ship and her internal safety, to guard prisoners of war or otherwise, and at all times to sustain discipline by their organization, distinctive character and peculiar training. In port they constitute the deck guard to render honors and such other immediate service, and at all times they have their share of tidying to do on the berth deck and about their own belongings and assignments.

"In action they have their positions in the tops and at some of the rapid-fire guns, and the record of our present trouble will surely show what potent and reliable factors they are wherever placed, and more than one Spaniard will have reason to regret their cunning marksmanship.

"Accustomed as they are to the sea, they soon acquire that nimbleness and shifty usefulness characteristic of all seafaring men, and to the impetuous bravery of the sailor they add that stability and courage that make them so much more dreaded as infantrymen ashore."

The United States Marine Corps is the

The weekly record of failures in business is not as long as that to which the public became distressingly accustomed during the years of financial depression. Only the best managed business institutions weathered the financial storms of those times, unshaken. It is found even in the worst times that failures result from injudicious methods, often bordering on dishonesty, generally touched with extravagance, and frequently contaminated with inattention and carelessness on the part of those in charge. While such have gone down even in the best times and are almost sure to suffer in times of panic, the business which is managed within its means, with due regard to economy, and is pushed with energy gets into condition to take advantage of returning good times while efficiently serving its patrons at all times. A conspicuous example is the Kansas Mutual Life Association, of Topeka, which commenced in a modest way and always did a safe business which kept growing steadily during, as well as since, the late depression. It always considered itself the custodian of trust funds placed with it by the insured. Its plans of investment have been based on this idea, and its business has been conducted in such a way as to make its policies first, safe, and second, profitable.

Electric fans to keep you cool are new and timely features of Santa Fe Route dining cars.

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.

The Home Circle.

THE PEACE OF GOD.

O loftiest peak of all the noble range
Towering majestic, massive height on
height,
Far as the eye can reach, in endless change
Of line and tint and curve, and dark and
light—
Nearest the midnight stars, O proudest
hill,
How quiet are thy paths! how still, how
still!
In what unbroken silence dost thou lie,
Beneath a sunlit or storm-filled sky.
Rain, wind or trailing cloud, or whirling
snow,
'Neath the first golden touch of rising day,
Or mellow evening's last empurpled ray,
Untouched, unmoved from granite top to
base,
When fiercest thunderbolts about thee
play,
As by the shadow of a bird below,
That drifts some summer morn across thy
face!
Unshaken since that hour when long ago,
Eons on hoary cons far away,
When mayhap 'mid the fiery pangs and
throes
Of earth and sea, fused in one molten glow
Of liquid flame, thy swelling grandeur rose!

This of thy garnered secrets didst thou
yield
As through slow ages our dim eyes, un-
sealed,
With halting wisdom learned to read at
last
Thy own brief story from the lips locked
fast
In stony silence. Yet we could not wrest
One hint, one whisper from thy rock-
ribbed breast,
Solving the primal, awful mystery
Of life and death, which has unceasingly,
Since earth and time and consciousness
began,
Haunted and mocked the searching soul of
man.

Man in his greatness, yet how infinitely
small!
Thou shalt behold his empires rise and
fall.
His marble cities crumble to decay,
And of himself, for all his boasting, see
Unnumbered generations pass away.
And leave no lasting sign beneath the sky
More than the chaff the chilly wind sweeps
by.
While thou endurest in changeless majesty,
And still while furthest oceans ebb and
flow,
All day and night their light and shadow
trace,
And countless rolling seasons come and go,
Through russet autumn or the summer's
green,
The winter's white or springtide's tender
sheen—
On thee there dwells from granite top to
base,
Through all thy trackless wastes and paths
untrod,
The deathless, everlasting peace of God.
—Stuart Sterne, in the Atlantic Monthly.

THE MYSTERY OF THE SHAD.

Delaware shad have always been
looked upon, by Philadelphians particu-
larly, as the finest-flavored fish of the
kind taken from any river in the Union.
Therefore epicures will welcome the
announcement that the shad is now
beginning its annual entry into the Del-
aware and that a few made their ap-
pearance last week in the city market.
The movements of the shad are of much
interest and more mystery to ichthy-
ologists and fish culturists. Beyond the
period when the fish is in the river,
almost absolutely nothing is known of
its habits. It belongs to a class known
as anadromous fishes, that is, those
whose home is in the sea, but who come
into fresh water to spawn. From the
time the egg is deposited to the time the
fish reaches maturity and becomes a
spawner there is a period of three years,
and the first five or six months of this
only are spent in fresh water.

When the water in the Delaware in
the spring reaches a temperature of 60°
or over, the shad enter from the sea in
great shoals, the males first and the fe-
males about two weeks later. It was
supposed for some years that the males
entered first in order to find suitable
nesting places, but this assumption is
now known to be false from the dis-
covery that the shad does not make a
nest, as many other species of fish do,
and the real reason for their appearing
first must remain, for the present, at
least, as one of the mysteries which
surround the movements of this fine
food fish.

The spawning grounds of the shad are
the large pools in the Delaware above
Trenton to the headwaters, and it is for
this reason that the erection of dams in
the river would destroy the fisheries in
a very few years. It is true that there
are also spawning grounds at the head
of Timber creek and a few other streams
below Trenton tributary to the Dela-
ware, but they are of very small ex-
tent and could not begin to accommo-
date the number of fish which come in
from the sea every year. The average
female shad deposits about 30,000 eggs,
although a very large one may deposit
anywhere from 60,000 to 90,000 eggs.
Of these it is estimated that not more
than 10 per cent. are hatched, the re-
mainder either not being fertilized or
else are destroyed by the many other

fish in the river. Of those left it is es-
timated that 90 per cent. are devoured.
Thus out of 30,000 eggs laid only about
twenty-five or thirty young fish reach
the sea in safety. It is in the hatching
of shad that man outdoes nature, for
out of every 30,000 eggs man, by arti-
ficial methods, can cause 90 per cent. to
be hatched, against the 10 per cent. of
nature. The young artificially hatched
must be placed almost immediately in
the natural breeding grounds, and as-
suming that 90 per cent. of these little
creatures will be devoured by larger
fish, there will still remain 2,700 to
reach the sea against twenty-five or
thirty by natural hatching. It may be
stated here that in consequence of the
greatly increased demand within the
last few years, if it were not for the
artificial hatching the shad would by
this time have almost disappeared from
the Delaware, and from all other
streams, for that matter.

After hatching the young shad grow
very rapidly, feeding on small flies and
water animalculae. By September they
are from three to four inches long, and
then as the water grows colder they be-
gin making their way in vast shoals to
the sea. As soon as they reach deep
water all trace of them is lost.—Phila-
delphia Ledger.

American Journalism.

Among the many cheerful and memor-
able remarks made about America by
Mr. Matthew Arnold were some pleasant
observations on our newspapers, written
in a letter to his daughter when he was
sailing for home. He said: "The great-
est relief will be to cease seeing Ameri-
can newspapers. * * * Their badness
and ignorance are beyond belief. They
are the worst feature of life in the
United States." It is somewhat com-
forting to believe that Mr. Arnold's
sweeping and startling opinions were
warped occasionally by violent attacks
of insular prejudice, but his views de-
serve consideration, at least, and any
comments of such an eminent critic of
life and letters can hardly fail to be of
some suggestive value. The sentences
above quoted were written ten years ago.
What should we say if asked whether,
since then, American newspapers had
grown better or worse? Has the influ-
ence of the American press increased
or decreased during a period when so
many papers have joined the class which
we may justly call sensational? Does
their influence make for public good,



JULIAN RALPH

and is it effective in strengthening and
unifying our complex national life? Such
questions must suggest themselves to
every thoughtful citizen with especial
force at times like these, when the
nerves of the country are keyed to con-
cent pitch by the existence of a national
conflict.

Any discussion of the matter is futile
without a correct understanding of the
conditions and problems of modern
journalism, its practical as well as its
theoretical side, and no one can be bet-
ter equipped in the subject than an old
and trained journalist, who has experi-
enced all the phases of his profession,
and finally attained prominence as a
critic and man of letters. For this rea-
son it is worth while calling attention
to an article by Mr. George W. Smalley
in the July number of Harper's Maga-
zine, modestly entitled "Notes on Jour-
nalism." The fairness of Mr. Smalley's
discussion of the many sides of his sub-
ject is no less attractive than the read-
able, intimate style of the paper, which
is pointed by a number of interesting
and unhackneyed anecdotes.

Mr. Smalley has much of value to say
concerning the utility of newspaper
work as a preparatory school to the

higher literary professions, and it will
seem to many a curious coincidence that
the same number of the magazine which
contains "Notes on Journalism" affords
several striking examples of the devel-
opment and work of the best modern
journalists. Julian Ralph, for instance,
has risen from the reportorial ranks to
a high position as an author of fasci-
nating books of travel, and a story from
his pen, which intermingles fact and
fancy delightfully, called "A Prince of
Georgia," is the opening article of the
July Harper's. It is, of course, idle to
conjecture how effective Mr. Ralph's
early newspaper training has been as a
factor in his literary success. Mr.
Smalley, it seems, is inclined to find
some truth in the historic remark of M.
Thiers, who once observed that journal-
ism is a very good profession if you get
out of it soon enough. It would be in-
teresting to have Mr. Ralph's own
views; in the meantime, however, his
work must speak for itself, and it is
sufficient here to note how forcibly some
of Mr. Smalley's thoughts on modern
journalism are illustrated by the pecu-
liarly human and realistic qualities of
Mr. Ralph's story. The sharp and quick
insight of character, the keenness of
wide-awake observation, and the tend-
ency to write naturally and concisely—
merits which Mr. Ralph undoubtedly
possesses—can reasonably be set down
as products of habits necessarily culti-
vated by thoughtful workers in the
newspaper profession.

Strong Legs.

It is true that the Greek soldier who
ran all the way from Marathon to Ath-
ens to bear the news of the victory and
dropped dead when he had delivered
the message had covered only twenty-
six miles; yet he may have been worn
with fighting when he started. On the
other hand, Deerfoot, the Indian runner
of the Cattaraugus reservation, who once
held the record in England and Amer-
ica, ran twelve miles in fifty-six min-
utes in London in 1861, and extraordi-
nary stories of his long distance run-
ning are told. Captain Barclay, of Eng-
land, walked a thousand miles in a thou-
sand hours, and W. S. George, the
world's greatest amateur distance run-
ner, followed the hounds on foot. Henry
Schmel, in June, 1894, walked from
Springfield, Ill., to Chicago, 188 miles,
in sixty-nine hours and fifty minutes.
In 1892 Schneidert, an Austrian printer,
finding himself in Calcutta without
means, walked all the way home to his
native town, Rathenow, traveling on
foot for two years across India, Afghan-
istan, Persia, Turkey, southern Russia,
Bulgaria, Roumania and Hungary, and
thence into Austria.

But these instances, which might be
multiplied, are for the most part feats
accomplished under special conditions
or stress of circumstances, or by picked
men. In Apache land every Indian is a
runner, asking no odds of earth or
weather; and whether it be the peaceful
Pueblo, trudging to his irrigated lands,
forty miles and back, or the venomous
Chiracahua, tamed to do service for Uncle
Sam, the man on horseback may well
regard him with amazement.

General Crook is quoted by Mr. Ed-
ward S. Ellis as having seen an Apache
lope for fifteen hundred feet up the side
of a mountain without showing the first
sign of fatigue, there being no percepti-
ble increase of respiration. Capt. H.
L. Scott, of the Seventh cavalry, has re-
lated some astounding feats performed
by the Chiracahua Apaches forming
Troop L of his regiment. He tells how
nine of these Indians, after a hard day's
work, by way of recreation pursued a
coyote for two hours, captured the nim-
ble brute and brought it into camp;

how, on another occasion, the scouts
gave chase to a deer, ran it down some
nine miles from camp, and fetched it in
alive. Hence I see no good reason for
doubting the word of an old-timer I
met in the Rocky mountains, who told
me that, in the days before the Atlantic
& Pacific railroad was built, the Pima
Indians of Arizona would recover set-
tlers' stray horses along the overland
trail by walking them down in the
course of two or three days.

After this one may begin to believe
that "Lying Jim" Beckwith, whose re-
markable adventures early in this cen-
tury are preserved in book form, was a
much maligned man, and that he spoke
no more than the truth when he said
that he had known instances of Indian
runners accomplishing upward of 110
miles in one day.—William T. Larned, in
May Lippincott's.

Fruit as Medicine.

While the general reader has been
told many times of the advantages and
desirability of a fruit diet, it may be
that the traits and characteristics of
the several fruits have not been as fully
explained, in a concise form, as would
be desired. Here are some useful
gestions, taken from a special article
the subject:

Fresh, ripe fruits are excellent for
purifying the blood and toning up the
system.

As specific remedies, oranges are aper-
ient. Sour oranges are highly recom-
mended for rheumatism.

Watermelons for epilepsy and for yel-
low fever.

Cranberries for erysipelas are used
externally as well as internally.

Lemons for feverish thirst in sick-
ness, for biliousness, low fevers, rheu-
matism, colds, coughs, liver complaints,
etc.

Blackberries as a tonic; useful in all
forms of diarrhea.

Tomatoes are a powerful aperient for
the liver, a sovereign remedy for dys-
pepsia, and for indigestion; they are in-
valuable in all conditions of the sys-
tem in which the use of calomel is in-
dicated.

Figs are aperient and wholesome;
they are said to be valuable as a food
for those suffering from cancer; they
are used externally as well as inter-
nally.

Apples are useful in nervous dyspep-
sia; they are nutritious and vitalizing,
they aid digestion, clear the voice, cor-
rect the acidity of the stomach, are val-
uable in rheumatism, insomnia, and
liver troubles. An apple contains as
much nutriment as a potato, in a pleas-
anter and more wholesome form.

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

Dogs often suffer for drinking water,
for they are free and frequent drinkers.

The Young Folks.

A CHARACTER.

I'm kind o' sorry fur 'im, 'cause I know he means it well; But I wish he didn't have so many useful facts ter tell. He's got so educated that his knowledge has become A second nature to 'im, which he can't git loosened from. He keeps us feller sittin' still; we da'sn't laugh or cough. He never gives us any chance at all fur showin' off. An' the folks all gits to yawnin' when he starts to have his say. The man who knows so much it's allus gittin' in the way.

Ef some one tells a story, he won't even stop ter grin. He'll talk about who wrote it, an' what year 'twas written in. An' if Hannah plays the organ, jes' as soon as she gits throug He'll lecture on the music like somebody paid him to. Ef some one has a bunch of flowers, he'll pick 'em all apart. An' go ter botanizin'. He knows everythin' by heart. He can't be satisfied ter go on carelessly like an' gay. The man who knows so much it's allus gittin' in the way.

He ain't content to know 'bout what this world is doin' now; He goes clean back through centuries an' tells the neighbors how Folks useter do housekeepin' way back yon in Greece an' Rome. Such things is most improvin', but they don't cheer up yer home. Like good ol'-fashioned games where you kin jine the gals an' boys A-guessin' an' a-laughin' an' a-makin' lots o' noise. He's learnt 'bout everythin', exceptin' how ter romp an' play. The man who knows so much it's allus gittin' in the way.

—Washington Star.

Written for Kansas Farmer.

YOUNG FOLKS IN THE OLD COUNTRY.

BY ANNA MARIE NELLIS.

NUMBER 28.

DAS GRUENE GEWOELBE.

After enjoying a delightful walk along the Bruehl terrace, we came to the Schloss, or royal palace. This building is an irregular but extensive structure, and was begun in 1534 by "Duke George the Rich," but has been repaired, re-banded and enlarged at different times by that gentleman's successors. It has over 370 feet high.

Our Denver lady guide knew where to show us the most interesting things, and at once led us to the green vault (das gruene gewoelbe) which is on the ground floor of the palace. My guide book remarks about the contents of this vault as follows: "A curious exhibition of wealth stored up by Saxon princes of former times. Probably there is no other such collection of treasure in Europe brought into one view. Its value is said to amount to millions; and the variety is absolutely dazzling."

Well, the gentleman who originally wrote the above paragraph was correct. We were dazzled; we were charmed; we broke into small pieces the commandment which prohibits coveting; we wanted lots of the beautiful things there deposited, but I am obliged to say they didn't give us one.

There are eight rooms in the green vault—not large, but each one contains in value "a prince's ransom." In the first room we saw the most beautiful of bronzes, all of exquisite finish. The second is the ivory room; every shape imaginable (almost) is carved in ivory and here deposited. One group represents the "Fall of the Angels," which has 142 distinct figures (though I suppose there were more angels than that) carved from one piece of ivory, not over one foot high. In other rooms we saw beautiful mother-of-pearl work boxes which belonged to various Queens of Saxony; drinking goblets of ostrich eggs, ornamented with silver, gold and jewels; many vessels of gold, silver and crystal; precious stones carved in the most various and fantastic shapes; jeweled watches, jeweled portraits, groups, figures, statuettes wrought in fine gold studded with gems; emeralds, sapphires, rubies, pearls, and diamonds, set in chains and collars, wrought into sword hilts and artistically combined in a royal crown.

In the fifth room we visited we saw the "perpetual clock," and it diverted our attention even longer than the wealth above mentioned. It is made of gold and represents the "Tower of Babel." It is about two feet in height and is enclosed in a glass case. A little glass ball comes out of the top every sixty seconds and rolls down the terrace and around the tower and then returns to the top and repeats its journey every single minute. Like all childish amusements, it held my attention until I became provoked to think I had used so much time looking at it when there

were thousands of other curiosities to be examined.

It was the eighth and last room that was the most interesting to us. It has very beautiful and fantastic mural decorations and contains millions in value. Here are the crown jewels and royal ornaments of Saxony. I made a memorandum of a few; among them a hat clasp with a green colored diamond weighing 42½ carats, shoulder knot with a brilliant of 59 carats, most valuable chains of different orders, clasps, bucklers, studs, ladies' trinkets, including a bow with 622 diamonds. I saw two rings which were labeled as having belonged to Martin Luther. My brother Luther was inclined to claim them, but his claim was not allowed.

There were weapons with jeweled hilts of wonderful workmanship, which had required years of labor to make and had cost millions of marks, so we were told. There was also a jeweled group which occupied twelve men eight years to make; it is named "The Court of the Grand Mogul Aurungzebe at Delhi." It represents the reception by that court of the embassies from the different provinces of the kingdom. It has 132 movable figures, about one inch in height and every one in a different costume and all finished in gold and jewels. Two o'clock came—the time for closing the green vault—and we reluctantly were obliged to leave all that wealth unmolested, and this was our second day for sight-seeing in Dresden.

But there are many other charming sights in Dresden. To the northwest of the palace is the Theater Platz and its promenades. The center of the square is occupied by the fine equestrian statue of King John, by Schilling. To the south is the opera house, which will comfortably seat 2,000 people, and we were told that at every performance at least 1,900 of the seats are occupied.

Beyond the Bruehl terrace is seen the dome of the "Frauenkirche" (Our Lady's church), where the national or Lutheran form of worship is celebrated. Religious Saxony is somewhat peculiar in the fact that while the royal family is Roman Catholic, the people are Protestant.

THE ZWINGER.

To the left is that peculiar but most beautiful and interesting edifice called the "Zwinger," or great court erected by the architect of Augustus II., in 1711, but left unfinished for more than a century. This immense structure is built (so my guide book says) in the most elaborate rococo style of architecture. It consists of seven pavilions connected by a gallery one story in height, which is shown in the picture printed with letter No. 27 in last week's Farmer. This encloses three sides of an oblong court 128 yards long and 117 yards wide, which is "laid out" with the most beautiful and exquisite flower beds and fountains.

According to the original plans the Zwinger was to have been built around the four sides of the square or platz and was intended to be four times as large as at present, but it has remained unfinished. There is a fine promenade on the roof of the galleries connecting the pavilions and an exceedingly fine view of the city is presented and the beautiful river can be traced by sight a long distance both above and below the city. Upon the elevated promenade are many large trees growing, as though on the level of the city. It gives one the thought of the hanging gardens of Babylon, which we often read about. The Zwinger contains the famous Dresden picture gallery, also the museums, ethnological and mineralogical collections; but of course the picture gallery attracts the greatest amount of attention from all visitors, for it is one of the finest and most noted in the world.

The pictures are arranged in a long series of rooms lighted from above, with wide side courts; the effect being not to bewilder by a multiplicity of beautiful objects crowded upon the sight at once, but rather to carry the spectator on from one part of the collection to the other with ever increasing wonder and delight.

We went first, as possibly does every visitor, to the cabinet where hangs, alone, the masterpiece of Raphael, the Madonna di San Sisto, commonly called the Sistine Madonna, in which the most tender beauty is coupled with the charm of the mysterious vision which will forcibly strike every susceptible beholder, and the longer one gazes the more enthusiastic will be the delight experienced.

Although this was painted in the very earliest of the sixteenth century it still retains its most beautiful and exquisite coloring given by the artist, and from the large window beside the picture one can look up to the real sky above, which so blends with the clouds Raphael has given us that one can easily imagine

when the green curtains represented in the picture are pushed aside that it is the real sky the beautiful Madonna has stepped from, holding the Christ child, and the dear little cherubs below looking up at the Virgin in such childish adoration. The "Madonna" has the entire room—no other picture to mar the grand effect of the masterpiece. It is carefully guarded and is considered exceedingly valuable from a financial standpoint; \$5,000,000 being the commercial value placed on it. It is indeed beautiful—beautiful beyond description; but really, I would not give over half that sum for it.

There are other world-famous pictures in the Zwinger before which one would like to linger a long time. There is the "Notte di Correggio," where in wondrous arrangement of light and shade the manger of Bethlehem is illuminated as by the glory of the Divine Child, while the dawn breaks over the eastern hills.

There are masterpieces of Paul Veronese, the "Adoration of the Magi," the "Marriage at Cana" and the "Supper at Emmaus."

"Titian's Tribute Money" is also in one of the rooms, which is considered one of the noblest representations of the Savior to which art has ever attained.

Van Dyck, Ruysdael, Teniers, Holbein, Albert Duerer, Gerard Dow, Rembrandt, the great German and Dutch painters, are represented by their greatest works; the Italians are represented by Carlo Dolce's "St. Cecilia," Guido Vinci's "Holy Family."

It was with great reluctance that we left the gallery to which we would gladly have returned, but the many other attractions of the city we were fain to behold; besides, Meissen and Pillnitz must be visited and a ride on the river Elbe enjoyed, all of which I must reserve for my next number.

Lieutenant Hobson as a Naval Engineer.

Young Hobson stood at the head of his class, and he went into the staff and into the bureau of naval constructors, who design and attend to the repairs of the ship's steel hulls. Now he was a specialist. He graduated only ten years ago, in 1889, at the age of 17, so young and yet at the top of his class. He was then sent abroad for several years of study in the ship yards of England and France. He was to be a naval architect. It must be kept in mind that there are several corps in the naval staff, and the construction corps is something different from the engineer corps. Its work is highly specialized and of a late development.

There are hundreds of men in the line and scores of men in the staff whose lives run along comfortably in the easy routine of ordinary faithfulness. Young Hobson had in him that restless genius which would not allow him to be satisfied with doing his required duty, but also imposed on him the obligation of improving things. He had that dangerous and most valuable of all gifts, that of initiative. One stung by this gadfly can never be satisfied with what is, what has been laid out for him by others, but wants to make things better. Hobson had entered into a corps whose duty it is to see to it that the United States has the best ships that can be constructed. But ship construction was not then taught at Annapolis. He urged that there should be a school of naval construction at the academy for post-graduates, and when it was established he was sent there as its first professor.—From "Lieutenant Hobson," by William Hayes Ward, in the American Monthly Review of Reviews.

The Coldest Country in the World.

Symon's Monthly Meteorological Magazine gives an interesting account of "Life in the Coldest Country in the World," which has been taken from the bulletin of the Royal Geographical Society of Irkutsk. The name of the place is Werchojansk, in Siberia, longitude 133-5 E., latitude 67-34 N., where the lowest temperature of minus 90° Fahr. has been observed, and the mean of January is minus 48° Fahr. It is inhabited by about 105,000 persons of the Jakut and Lamat races.

In a large part of the region, according to Professor Kovalik, the air is so dry and the winds are so rare that the intensity of the cold cannot be fully realized. In the most distant part of the east there are sometimes terrible storms, which are most fatal to life in their consequences. During the summer time the temperature occasionally rises to 86° Fahr. in the shade, while it freezes at night. The latter part of the season is often marked by copious rains and extensive inundations, which invariably lay waste a vast acreage of land

and prove to be a serious obstacle to the cultivation of the soil. Vegetation is very scanty. There are practically no trees, only wide, open meadows. The people hunt fur-bearing animals, fish and raise cattle and reindeer. It requires about eight cows to support a family, four being milked in summer and two in the winter. The cattle are very small in size and are fed with hay in winter. Occasionally they are allowed to go out when there is the slightest break in the weather, but their teats are always carefully covered up with felt. Milk is the principal food. This is sometimes supplemented with hares, which are quite abundant, but not very relishable.

The houses are constructed of wood covered with clay, and, as a rule, consist of only one room, in which the people and animals live together. The upper and wealthier classes are better provided with lodging and food. As a race they are exceedingly courteous and hospitable, and they are excessively punctilious concerning points of honor, such as the proper place at table and at festivals.—Pittsburg Dispatch.

A True Fish Story.

"Say, Judge, draw up an affidavit there," demanded a well-known citizen as he called upon a local justice of the peace the other day. "Make her watertight, copper-riveted and fire-proof. And, say, just add to the 'blinditiveness' of it by putting in a forfeit of a couple of hundred."

"Want to sign a pledge?"

"No, I don't want to sign a pledge. I don't need to. I can tell you how it is and then you can fix the thing up ship shape. Last week a friend of mine asked me to take a couple of days fishing with him. I was keener than a razor for it, and bought a sweater, a new cap, a lot of cigars, some snake bite antidote and a pair of shoes that a fellow told me were the best on earth to fish in. We went up near the mouth of the Clinton river and fished as though there was nothing in the house to eat. The guide caught about a barrel. I went out before sun-up, fished as long as we could see at night and caught minnows at midnight. I helped pay for boats and tackle that I broke, helped pay the guide, paid Delmonico rates for grub and lost three silver dollars through a defective pocket. I came home with my eyes inflamed, the skin burned from my face, my hair faded, my feet swollen and a sort of neuralgic ache all over. I spent enough money to buy an elegant suit of clothes, and everything I caught was a little two-pound bass, and a big-mouth bass at that.

"Just make that affidavit obligate me never to go fishing again unless I'm off on a regular vacation. I'll sign her and seal her and swear to her."—Detroit Free Press.

A Good Work.

Admire, Kas., June 28, 1898.—Mrs. Ann Bennett, P. O. Box 94. She had a severe attack of rheumatism and could not get out of bed without help. Hood's Sarsaparilla cured her and enabled her to do her work. It has also cured her of eczema.

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.

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.

1898 High Grade BICYCLES
for Men, Women, Girls & Boys. Complete line. All brand new models.
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\$80 "Arlington" for \$24.50
Others at \$15, \$17 and \$20
No Money in Advance.
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Shipped anywhere C.O.D. with privilege to examine. Buy direct from manufacturers, save agents' & dealers' profits.
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KANSAS FARMER

ESTABLISHED IN 1863.

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Display advertising, 15 cents per line, agate (fourteen lines to the inch).
Special reading notices, 25 cents per line.
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Objectable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.

To insure prompt publication of an advertisement, send cash with the order; however, monthly or quarterly payments may be arranged by parties who are well known to the publishers, or when acceptable references are given.

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

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

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

The July dividend payments on corporation stocks and bonds are said to have been the largest on record.

A good deal of apprehension is expressed lest Germany means mischief by the concentration of a powerful fleet at Manila, under command of the Emperor's brother.

The thousand editors who had their pencils sharpened on Sunday evening to write out on Monday morning the course that ought to have been pursued at Santiago had the pleasure of wearing them down to the wood in adulations of the excellence of our war management.

Of the \$200,000,000 government loan now in course of negotiation it is thought \$125,000,000 will be taken in amounts of \$500 or less. The fact that only \$75,000,000 will be left for the big investors is a great disappointment to financial circles. Of what use is war to a financier if he cannot get bonds as a result of it?

The regular meeting of the Shawnee County Horticultural Society will be held at the residence of L. B. Garlinghouse, two miles southeast of Highland park, to-day, July 7. The following is the program for the day: "Fruit and Vegetable Diet," W. S. Charles; "Horticulture on our Tables," Mrs. A. J. Kleinhans; "Success in Horticulture," A. B. Smith; "Wife's Help in Horticulture," Mrs. J. F. Cecil.

The Agricultural Cable, of London, England, in its issue of June 18, says: "It was reported in the London Corn Exchange last week that the stock of wheat and flour in granary in Great Britain is under 900,000 quarters. This is not equivalent to eleven days' supply. As it is not likely that the stocks in millers' and bakers' hands is large just now, speculation on what would happen if we went to war to-morrow is scarcely to be recommended for its soothing effect on the nerves."

The Kansas State Live Stock Sanitary Commission has sent for Dr. Victor Norgard, chief field veterinarian of the United States Bureau of Animal Industry, to diagnose the disease existing among the cattle near Fall River, in Elk county. Dr. Paul Fischer, the State Veterinarian, has pronounced the disease acute indigestion, and over fifty head have died. A quarantine of the infected district has been established by the commission. Dr. Norgard will meet the commission at Fall River this week.

Ochery Clay.

Editor Kansas Farmer:—Enclosed you will find a little package of material that I would like to know what it is, but don't know just who to send it to. It crops out just under a bed of gray sand and over a blue limestone.

Edgerton, Kas. E. S. AYRES.

This sample was referred to Prof. J. T. Willard, of Kansas State Agricultural College, who reports as follows:

"The substance referred to is an ochery clay containing a small amount of limestone. It seems to be of very fair quality, but would require a practical test to show its value for paint-making. It would require grinding and bolting and possibly a preliminary separation from grit by washing, in order to prepare it for use."

MOISTURE, FORAGE AND FERTILITY.

Experience has taught successful wheat-growers in many parts of Kansas that the sooner the plows can be started after harvest and the more persistently they can be kept going, the better, especially where wheat is to follow wheat. Not infrequently the land is in condition to be easily plowed just after harvest, while the rapid evaporation after the removal of the crop sometimes makes plowing nearly impossible only a few weeks—sometimes only a few days—later. In thus taking away the soil moisture evaporation lessens the chance for a good fall start for the next crop.

That plowing assists in retaining the moisture in the soil has been conclusively demonstrated, and the amount of the assistance has been measured by Prof. F. H. King, of the Wisconsin Experiment Station, who reports that plowing so thoroughly checks the loss of water from the soil beneath the stirred portion, that in one case seven very drying days failed to appreciably decrease the mean amount of water in the upper four feet of a field soil, while an immediately adjacent and entirely similar tract of land, not plowed, lost, during the same time, the full equivalent of 1.75 inches of rain, or more than 9.13 pounds per square foot. So, too, in the case of fine sand, while it was losing water at the rate of 1.38 pounds per day as a mean of ten days' trial, when two inches of the surface was removed and then laid directly back again, but in the loose, unfirmed condition, this treatment had the effect of reducing the loss of water at the surface, during the ten days immediately following, to a little less than .5 pound per square foot daily, an amount so small that the other rate exceeded it by more than 2.7 times.

The soils and subsoils of Kansas fields are this year unusually well supplied with water. There is still in the top four feet enough moisture to give the fall sowings an admirable start. This water is wealth. Evaporation is stealing it. Prompt plowing shuts a door between the thief and the moisture. A thorough harrowing immediately after plowing and directly after every rain will keep this door locked and protect the wealth of moisture from serious loss.

The question has been raised whether wheat stubble on which it is proposed to plant corn or some other spring crop should be plowed immediately after harvest. That such plowing and frequent subsequent harrowings destroy many weeds, and greatly reduce the amount of weed seed produced, consequently lessening the labor of next season, is unquestioned. Experience is not, however, uniformly in favor of such early plowing for corn. The "burning" effect of the sun and wind upon land is sometimes seem to damage it for several seasons after such treatment. Some of the elements of fertility in the soil are not affected by exposure. Potash, lime and phosphates are in most Kansas soils in great abundance and are not easily wasted. Equally important—absolutely essential—to plant growth is nitrogen. This element is available only in certain combinations. Most nitrogen compounds decompose easily, changing to volatile forms. This characteristic of nitrogen compounds gives some of them their great value as ingredients of gunpowder and other explosives. If nitrogen exists in the soil in the valuable form of ammonia, exposure to sunshine and air dissipates it. A crop of weeds is grown at the expense of much moisture and a good deal of nitrogen, but if a corn crop is contemplated it may be found more profitable to suffer these losses, trusting to the season to replace the moisture, than to allow the sun and air to deplete the nitrogen. If the weeds are turned under while green much of the nitrogen contributed to their growth will be returned to the soil and but little fertility lost.

A catch crop sown as soon as possible after harvest has much to commend it. Some sow rye and profit by the fall and winter pasture. An objection to rye is found in the broods of chinch bugs which will thrive and live over winter in it and have their progeny ready to take the corn early in the season next year. If late summer feed or forage are wanted sorghum sown broadcast is valuable. If forage and at the same time increase of fertility be desired, both purposes may be accomplished by making the ground into a good seed-bed immediately and sowing cow peas or soy beans. These are both nitrogen gatherers, and while the most rapid increase of fertility requires that the vines be plowed under while green, yet, if the crop be taken off, the nitrogen locked up in the roots con-

stitutes a valuable addition to the fertility of the soil.

It has been recommended that even if the land is to be again seeded to wheat it will pay to use the cow pea or soy bean crop, leaving the wheat sowing until as late as possible to give the legumes time for the fullest possible development.

The treatment with leguminous catch crops has the advantages of preventing theft of moisture and decomposition of nitrates and of adding to fertility while furnishing a feed which is excellent as a milk producer. But if the catch crop plan is too much of a refinement of agriculture for the average Western farmer, it will be well to at least study carefully the question of retaining the moisture now in the soil for use of the wheat in its fall growth.

GREAT NEWS ON THE FOURTH OF JULY.

Americans who had access to telegraphic news last Sunday evening went to bed with heavy hearts at the practical reverses of our arms reported from Santiago de Cuba. It was cabled that General Shafter could not take the city until reinforcements should arrive and had retired to the hills to await help. The Spanish fleet lying in Santiago harbor had added its deadly fire to that of the land forces. General Miles had braced up the spirits of the War department with the opinion that it was only a drawn battle. The casualties on our side were reported at 1,200.

It was with feelings of apprehension that citizens sought the news on Fourth of July morning. There was a sudden reversal when the dispatches were read that Admiral Sampson had destroyed the enemy's entire fleet, and had but one man killed and two wounded; that General Shafter had held all the ground for which his men had so bravely fought, had demanded the surrender of Santiago, and had only postponed the final bombardment of the city on account of the dire distress of the inhabitants; that the Spanish general, Linares, and two of his prominent officers were dead; that Admiral Cervera and 1,300 other officers and men of the Spanish fleet were prisoners of war; and when the news from the Philippines told of the surrender of another Spanish vessel to Admiral Dewey, that the reinforcements sent to Dewey made a call at the Ladrone islands en route, destroyed the Spanish fortifications, captured the Spanish governor and garrison and took them prisoners to the Philippines, where the reinforcements arrived safely and disembarked.

If the American eagle is not satisfied with all this for an Independence day feast, it will be difficult to estimate his appetite for success.

THE WORLD'S BREAD.

Exports of wheat from the United States for the year ending June 30 were 217,871,960 bushels, with a few ports still to hear from. Six years ago these figures were surpassed. Yearly exports (in bushels) have been as follows:

1898	.....	217,871,960
1897	.....	145,125,000
1896	.....	126,444,000
1895	.....	144,813,000
1894	.....	164,283,000
1893	.....	191,832,000
1892	.....	225,666,000

The visible supply of wheat in this country (in bushels) has been as follows on the first of July:

1898	..... (?)	16,000,000
1897	.....	18,794,000
1896	.....	47,860,000
1895	.....	44,561,000
1894	.....	54,657,000
1893	.....	62,316,000
1892	.....	24,262,000
1891	.....	13,590,000
1890	.....	20,174,000
1889	.....	15,301,000

Visible supplies have not usually reached their lowest limit on July 1. In 1897 the lowest figure at the beginning of any month was reached September 1, when the visible had declined to 15,473,000 bushels. So also the visible reached a minimum September 1, in 1896, 1895.

Exports continue very heavy and greatly exceed receipts, so that the visible is still declining rapidly. The world's visible supply is declining far more rapidly than our own, having decreased 13,000,000 in two weeks ending July 1. It is expected in commercial circles that the world's supplies by August 1 will be at least as low as last year, when they were exceptionally small.

The demands of foreign countries for American breadstuffs is not confined to wheat and wheat flour. The demand for corn has shown an increase greater, though more erratic, than that for wheat.

Taking these two grains together, the exports of the year just closed have been the greatest on record. For the year ending June 30, 1892, our exports of wheat were 225,666,000 bushels, of corn 75,452,000 bushels, making a total of 301,118,000 bushels. For the year just ended our exports have been of wheat 217,871,960 bushels, of corn 211,452,253 bushels, making a total of 429,324,213 bushels, an increase of 127,206,213 bushels in the foreign demand for the two grains over the record-breaking demand of 1891-2. It is evident from consideration of this country's exports of breadstuffs that when wheat is scarce and high corn is largely substituted. While the first of July, 1897, found supplies of wheat low, this country had on hand immense supplies of corn from the crops of 1895 and 1896. The crop harvested last fall was far smaller. The immense exports and the heavy feeding demand have greatly reduced the corn supply. Should the foreign demand call for such an amount of corn as was shipped last year it will be met, if met at all, at considerably higher prices than have prevailed recently.

While the world seems likely to have sufficient bread for the next year, there appears to be a prospect for a very close use of reserves before the next crop can be made available.

The question of prices is so much subject to speculative manipulation that we may expect very wide variations during the year. The attempt at the opening will likely be, as heretofore, to keep prices down while the bulk of the crop is leaving producers' hands. Possibly the disastrous experience of young Leiter—whose father is said to be borrowing \$5,000,000 to \$8,000,000 with which to pay the young speculator's debts—possibly Leiter's experience will make other plungers on the side of higher prices timid about contesting the power of the combined bears to depress the market. Possibly some other speculator may profit by Leiter's mistakes, give the bears a contest, make liberal prices for farmers, win for himself a fortune and keep it by omitting the purely gambling operations into which Leiter plunged during the latter part of his career.

It is impossible, in view of all the circumstances surrounding the market, to give a definite answer to the question, which many Kansas farmers are now asking, as to the best time to sell. Each knows his own circumstance and by studying the conditions can decide for himself better than any writer can decide for him. The advice of the Kansas Farmer is to make a close study of the situation throughout the world, to remember that the crop of a county or a State can have but little influence on the world's markets, and that the world requires more bread each year than it consumed the year before.

KANSAS CREAMERIES.

Reports made by twenty-four creameries in twenty-three counties to the Labor Bureau show that the average cost for labor per creamery in 1897 was \$4,111. The average pay of male employees was \$448 for the year. There were six women all told in the twenty-four creameries, and their wages averaged \$271 for the year.

The plants were in operation an average of 10.8 months and the cost of labor shows that a pound of butter, after the milk has reached the creamery, can be made for eight-tenths of a cent. An interesting feature of the creamery business is that while only 8 2-5 per cent. of the product is sold in Kansas, 15 1-5 (almost twice as much) is exported to Europe. The remainder is sold to other States or goes elsewhere on the American continent.

The creamerymen say it would be impracticable to enforce the eight-hour law in their business. They attack oleomargarine almost unanimously.

The twenty-four plants reporting were built at a cost of \$259,442. The owners say now that they are worth \$276,442, an increase of 6 per cent. since the plants were built.

American travel in foreign countries is this season only about half its usual volume. The estimate is made that this results in keeping at home \$50,000,000 which would have been spent abroad but for the war.

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.

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

THE FOURTH OF JULY.

Enthusiastic commemoration of the immortal declaration which produced the nation which now fills the eyes of all the world has been a good deal left to the small boy, with his toy drums and his firecrackers. He has attended to the matter to the best of his limited ability, and according to the extent of his financial resources. He has rung bells, and tooted horns, and beat drums, and blown off his fingers with toy cannon, and killed his young companions with toy pistols; and, in short, he has done his best for his country, and has gone home at night after the fireworks, tired as though he had had a run of typhoid fever, and slept the sleep of the just until noon the next day.

All honor to the small boy with his unbounded patriotism, and his flag raisings, and his procession of "horribles," and his ceaseless shouting and cheering—and we will give him what pennies we can afford, and keep as far out of his track as possible until he gets through with his celebrating.

But the older people of this country do not want to forget the Fourth of July. Once, not so long ago, either, that was the day of all days to the people of these United States. Everybody hoped it would not be too hot, and that it would not rain, and that there would be no thunder showers to spoil the fireworks.

New dresses were made for the Fourth. Hats and bonnets made their first appearance before the public on the Fourth. Children were early in the year promised that if they would be good they should go to the celebration in the grove, or in the city, as the case might be.

Marriages were solemnized on the Fourth of July. The bashful suitor screwed his courage to the sticking point, and, remembering what the day represented to the American people, walked boldly up to the object of his adoration, and, sweltering beneath the unwonted pressure of his new tight boots and his broadcloth suit, and his high collar, with the mercury at 100 in shade, and his blood all in his face, asked her if he could have the pleasure of her company to the celebration over at Cottonwood grove or Silver lake. And if she said yes, then he hired the best top-buggy in the land, and they went to that celebration, and ate fried chicken, and some roast pig and some ice cream, and drank pink lemonade out of the same thick-bottomed tumbler to show that their two souls had but a single thought, and that their two hearts beat as one; and in the evening, they sat out in the grove and let the mosquitoes nibble them while they looked at the fireworks and held each other's hands beneath the shelter of the "long" shawl she had brought along as a protection from the dews of the evening. And all day the old flag was cheered, and patriotism walked abroad upon the land in red, white and blue, and spoke in tones thick with gunpowder and resonant with the clangor of church bells.

This year gave ample justification, even in the minds of the gouty old fellow who abominates a noise, for joyful and noisy demonstration. News of the great success of our armies at Santiago had during the night traveled on the wings of the lightning and had turned the gloom of Sunday's tidings of a drawn battle into exultation over victory in sight.

Let us have more of the good old-fashioned celebrations. We are wont to laugh at the spread-eagle style of oratory which once prevailed on these Fourth of July occasions. But we cannot have too much display of enthusiasm where our country is concerned.

It is the best country in the world, and we know it; and all the rest of creation knows it. It is the nearest approach to paradise (before the fall) that can be found upon this earth.

It is the country where every man's conscience is free! The country where education is for all—the poor as well as the rich; the country where the son of a beggar may be a monarch if he has it in him to be a leader. The country where woman takes, unquestioned, her rightful place by the side of man, and is at liberty to follow her inclinations toward advancement in any direction she pleases. It is the country where no oppression is tolerated. The country where right and justice prevail.

God bless America! Even as he has blessed it for a hundred years or more! May she be not only the refuge for the oppressed which she has always been, but also the terror to the oppressor which a few more victories will make her.

Dividends and interest paid by corporations and individuals in this country on foreign capital is estimated at \$40,000,000. The luxury of having for-

eign owners for so much of what we use in this country comes rather high at \$80,000,000 per year, but like other luxuries, must be paid for.

Kansas Dairymen Will Meet in Topeka, November 16, 17 and 18.

The Executive committee of the Kansas State Dairy Association held a meeting at the Throop hotel last week, with the following members present:

President C. F. Armstrong, Clyde; George W. Hanna, Clay Center; Ed F. Davis, Concordia; W. F. Jensen, Beloit; George Morgan, Miltonvale; J. E. Nissley, Topeka; F. H. Teeter, Wellsville; Prof. H. M. Cottrell, Manhattan; J. K. Forney, Abilene, and Secretary F. S. Hurd, Meriden.

The committee arranged to hold its next annual meeting November 16, 17 and 18, at Topeka.

After discussing the various features in connection with the arranging of a program for the next meeting, and adopting the following resolutions, the committee adjourned:

"Resolved, That inasmuch as Kansas is being prominently recognized as a great and growing dairy State, with natural resources for a still greater development of this important industry, that we, as those directly identified with this department of our agricultural resource, do hereby deplore and criticize the action of our State and nation in furnishing to its charitable institutions oleomargarine, thus depriving the dairymen of the State of a market to which they are justly entitled.

"Resolved, That we request our representatives in Congress to use their influence in getting the national government to include in the list of army and navy rations pure American butter and cheese.

"Resolved, That the Executive committee of this association, this day assembled, after due and mature discussion and consideration of the value and importance of a liberal, extensive exhibit of our dairy products at the Trans-Mississippi and International exposition at Omaha, do hereby recommend and urge an exhibit from each creamery and cheese factory of the State, believing that in this way we can advertise the dairy and creamery industry better than by any other medium at our command at this time.

"Resolved, That we appreciate the efforts of the Kansas commissioners for the Omaha exposition by virtue of their unstinting assistance that they have given us, as well as their expressed desire to continue the same, and desire to thank them for recognizing this branch of the State's resources.

"Resolved, That we pledge our united efforts in securing for them contributions from the various counties in which our association is represented.

"Whereas, It has pleased an all wise Providence to take from the membership of this association our esteemed and lamented member and ex-President, J. L. Hoffman, who has been a very active member of our association for the past eight years, and in whom we always had one who was ever ready to respond to a call of duty or any material assistance; therefore be it

"Resolved, That in the death of our fellow member, J. L. Hoffman, which occurred at his home in Newton, April 8, 1898, the Kansas State Dairy Association loses one of its most influential and respected members.

"Resolved, That we extend our sincere sympathy to the family of the late J. L. Hoffman in this their sad ordeal, reminding them that this is the way of all life, and that sooner or later we, too, must answer the inevitable summons.

"Resolved, That a copy of these resolutions be sent to his family and be spread upon the permanent records of our association."

Importance of Good Seed Corn.

Written for the Kansas Farmer by George L. Clothier, Assistant Botanist, Kansas Experiment Station.

I suppose every farmer in Kansas has, at some time, learned the importance of good seed corn, in the dear school of experience. The failure to get a good stand, beside causing much extra work in replanting, usually results in a light crop because of late replanting or irregularity in the distribution of the plants over the land. If farmers could only grow corn that would with certainty germinate 99 to 100 per cent., many millions of dollars would be saved annually. I believe that eventually such corn will be grown. It only means that the vitality of the plant will be increased. In my opinion much can be done in this direction by breeding and selection.

To show how much risk the farmer is compelled to assume under present con-

ditions of corn culture, I will give the results of some germination experiments that came under my notice at the Agricultural College the past spring. Thirty-three varieties of corn grown by ordinary farmers in various parts of the State were tested as follows: One series was put into the greenhouse under the very best possible conditions for germination. The average germinability of all the grain planted was 94½ per cent. The lowest variety fell to 62½ per cent., while twenty-two showed a germinability of 100 per cent. A parallel experiment with the same thirty-three varieties was made out in a field where the conditions were not so good as in the greenhouse. Even here the conditions were better than usually obtain in practice upon the farm. In the field the total number of grains planted only showed a germinability of 76 per cent., while the lowest was but 25 per cent. Five of the thirty-three varieties germinated 100 per cent., and only eight germinated above 90 per cent.

Suppose a farmer had planted his field to the variety showing a germinability of 25 per cent. He would have had but one-fourth of a stand, under the best of conditions. But germination is only one step toward the production of a crop. It is probable that not more than 90 per cent. of the stalks first appearing ever reach maturity, and of these not all bear ears. We can see how the many elements of uncertainty seem to conspire to reduce the corn crop, while not one of these ever tends to raise the yield.

The character of barrenness probably does more to reduce the possible yield than all other causes together. Every barren stalk in a field contaminates the product of the field, more or less, by helping to fix hereditary tendencies toward unproductiveness. The stalk having no ear of its own may pollinate the ears of a hundred other stalks.

Farmers should set apart a portion of their land for the production of seed corn. As soon as the tassels and silks are out enough to tell whether or not the stalks are likely to produce ears, every barren looking stalk should be cut out. This practice should be kept up for years, and gradually a variety of corn will be fixed with tendencies toward great fruitfulness.

An acre of corn with a perfect stand in rows three and one-half feet apart and stalks sixteen inches apart in the row will produce ninety-nine bushels of corn, providing that each stalk produces one ear weighing three-fourths of a pound. Now this ought to be the average crop, since I have taken but an average-sized ear and an average number of stalks upon the ground. And yet the crop of our State averages less than thirty bushels per acre. To recapitulate, I am satisfied that our low yields are due to two principal causes, both the result of poor seed. The first cause is uneven distribution due to poor germination, and the second is the hereditary tendency toward barrenness.

When farmers learn to breed their corn and pedigree seed corn can be bought upon the market, the glad earth will pour out her blessings to the husbandman in greater abundance than man has ever yet dreamed.

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

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

The Continental Limited

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

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

Twenty-third Street Station, New York City,

Is where all trains from Chicago over Pennsylvania Short Lines arrive in the metropolis. This station is the inlet to hotels, clubs, retail shopping district and residential portion of New York city. For special information apply to H. R. Dering, A. G. P. Agt., 248 South Clark St., Chicago.

Crop Conditions in Other Countries.

Since all the world has become one market as related to staple bread-making grains, the crop conditions of other countries become almost as important to the American farmer as the outlook in the next county.

Dornbusch's London List of June 17 says: "Weather in this country is steadily improving, and crop prospects with it. In the earlier counties wheat is coming into ear, but as it is now the middle of June, the crop cannot be regarded as early. A warm settled period for the next few weeks would favor pollination, and the crop is now competent to pursue the remainder of its course without another drop of rain. The barley crop has regained its healthy hue, and oats appear to be everywhere strong and vigorous. Before the end of last week hay carting was in progress; the cut is a heavy one, especially in the case of low-lying meadows and clover layers.

"France—According to the Fermier the Nord seems to have been particularly tried, and as a considerable quantity of wheat is grown in that region it is certain there must be considerable reduction in this year's wheat yield, as lodging has occurred in most of the departments, and in some localities one-fourth and even one-third of the fields are laid. Some cases of rust are reported in the central provinces, which a series of fine days might, however, eradicate. In the south appearances are unsatisfactory, and it is thought that the outturn cannot be larger than last year's.

"Spain—Recent rain has benefited the crops, and as the heat is not excessive wheat is granulating well. Harvest in general promises to be more satisfactory throughout the country. Wheat cutting has begun in Andalusia and Cordoba and the yield is good.

"Belgium and the Netherlands—The appearance of the growing crops is excellent, but dry and warm weather is much desired.

"Germany—Although complaints are heard from some provinces the outlook for wheat and rye crops is mainly satisfactory, and the last few days of fine weather should have done something towards bringing the grain fields into seasonable condition.

"Italy—Wheat promises well in most parts of the peninsula, and the crop in many localities will exceed that of last year.

"Roumania—The weather has recently been remarkable. In some parts of the country heavy rains have fallen, accompanied in several localities by severe hail storms; while in the districts of Braila and Jalomitza so much drought has prevailed that the grain crops appear compromised; nevertheless, in many parts of the country the crops still give promise of abundance.

"Russia—In general the aspect of azima wheat and rye crops produce a favorable impression. The re-sowings of the winter fields to the spring crops were very small, and mostly evident in Bessarabia, in the northern portion of the Taurida and in many localities of the Kherson and Poltava governments. Around Odessa, azima and winter rye are expected to turn out average crops, while ghirka, barley and other spring grains present a splendid appearance.

"Hungary—Complaints are heard here and there of rust in the wheat and lodging of the fields, but in general harvest prospects are considered favorable.

"Algeria—Harvest was in full pursuit early this month and new barley and wheat are beginning to arrive. The quality is good and yield abundant.

"Tunis—Postal advices speak of the prosecution of the barley harvest throughout the regency, and the cutting of wheat will soon begin in the northern districts, where the crop is very fine and abundant.

"Asia Minor—Our Constantinople correspondent says: Reports from the Konia and Augora districts of growing crops are favorable. Complaints are heard from Eskecheir district of want of rain. Panderma beans promise well, and if rain does not spot them, will be superior to last season's."

The Nickle Plate Road

Is the short route between Chicago and Buffalo, and no better service will be tendered the Baptist Young People's Union via any other line. By depositing ticket with joint agent, extension of return limit from Buffalo to and including September 1 may be secured, and also stop-over at Chautauqua lake within final limit of ticket. Passengers may have choice of water or rail route between Cleveland and Buffalo, within final limit of ticket. Rate \$12 for the round trip. Van Buren street passenger station, Chicago, on the Loop. Telephone main 3389.

No. 51.

Horticulture.

BLACKBERRIES.

The discussion of this subject by the summer meeting of the Missouri State Horticultural Society brought out the valuable experiences of veteran growers.

A paper entitled "Planting and Care," by S. Hyde, of Carthage, opened the discussion. Mr. Hyde prefers moist soil, clay with plenty of humus. He plows ground deep, getting it free from clods. He prefers root cuttings to plants, which he digs in the fall and covers over with soil. Sometimes puts into nursery rows in the spring, but prefers to put into rows where they are to stand, planting in the spring. Suckers can be set in the fall. Set in furrows five or six inches deep. Plant cuttings only three inches deep in rows eight feet apart, four feet apart in the row. If a large planting, leave roadways. The first year would put in potatoes, peas or beans; has used cow peas with benefit. Let three or four canes grow the first year. Pinch off to two feet high, going over them two or three times. Leave laterals until spring, when cut off to twelve to fifteen inches. If any rust comes, dig up at once and burn. If rust is left too long it will spread. Blackberries require plenty of moisture. After picking one cultivation is enough.

Colonel Evans indorsed every word of the paper, saying it told the truth, the whole truth and nothing but the truth. He prefers Snyder, cut back very short; never saw it cut too short; six inches not too much. That is, laterals cut to six inches and top pinched out when the time comes. Should not let the center grow more than two feet high. Bud should be taken out when the plant is high enough. There is a difference in varieties. Kittatinny will bear laterals twelve inches long. Early Harvest may be left a little longer than Snyder. It is very important to pinch them when just ready, not leaving them to pinch all at a time, but going over the patch several times.

Major Holsinger said if Colonel Evans was right he was all wrong, for he cut off when all were grown. The Major doesn't cut out many branches; thinks it a waste of time. As the season advances the old canes break down and fall. Neither does he nose around looking for rust. He has had it in Snyder for fifteen years; still has it and also a good crop of blackberries in prospect. As he raises full crops, he can't see the necessity of all that work, or what we gain by doing it. He never saw any rust on the Taylor, but nearly all kinds have it. His experience is that it does not spread.

Professor Whitten being called on to decide which view was right, said, Major Holsinger was right in that it cannot inoculate from leaf or plant, but from roots. Spores fall off and become worked into the ground, and coming in contact with the roots will inoculate them and the disease will grow up with the plant, and in this way it does spread. If conditions are right rust will spread to any kind of blackberry plants. Some varieties are more susceptible than others, Early Harvest being one. In cutting out it should be before the spores develop. Disease can be told by the sickly, yellow appearance of the plants. In fact, you must kill the disease before it really develops. He never saw it entirely eradicated when a planting was badly infected, but where carefully cut out very little rust was left. Wheat rust cannot produce blackberry rust, and vice versa. Blackberry and raspberry rust are not very closely allied, but belong to the same family. Did not think the practical grower could kill germs after spores had formed. First disease was on native plants; spores easily carried by air, etc. His experience has been altogether in heavy soil, and cannot say whether it spreads more rapidly in sandy soil or not.

Mr. Tippen said the best two varieties in his section were Early Harvest and Snyder. Thinks there is a good deal of theory in the rust question. "Conditions that produce rust in wheat do the same in blackberries," said Mr. Tippen. "When we have it one season we may not have it again for two or three seasons. We may be able to fight it to some extent, but in my judgment we will have it some seasons anyway. Some varieties are less subject than others and in planting should bear this in mind when selecting varieties."

Secretary Goodman has discarded all but Snyder and Taylor's Prolific. He said: "I never saw a season when rust would take a field of either of the above named. I prune Snyder very close to get a good-sized berry. Taylor is large and luscious and fairly melts in your mouth. Some seasons they will last six weeks, and the last fruit is just as good

as the first. It is as hardy as the Snyder and does well all over the State."

Another reports a patch of Kittatinny and Snyder. Kittatinny is all rusted out and now the Snyder has the ground and is doing well. The Taylor ripens just after the Snyder. It is a bad berry to pick, on account of the thorns; pickers do not like it at all.

President Murray: "For fear some might think the Taylor entirely exempt from rust, I would say the worst rust I ever heard of in my home town of Oregon was a patch of Taylors."

Mr. Wade gave his ideas of canning. He thinks it is a most profitable way to let us out on small fruit. A twenty-four quart crate will put up twenty-four cans, and sometimes a little more.

Early Harvest is the only kind Mr. Snodgrass can handle to advantage. Others did nothing for him.

The Secretary said western New York grows hundreds of acres for evaporation, paying 60 to 75 cents for raspberries and 50 cents for blackberries. There is a great difference in the bulk if worked up as soon as picked and can them at once. Found a great difference in our own experience at Olden. Those canned at once made five two-quart cans more than those left over night. He would rather sell raspberries at 75 cents per case to canners than take chances on shipping them.

Mr. Holsinger said he would like for some one to offer 75 cents per crate for his crop. He sold for much less in Kansas City last year. Sold as long as he could clear 8 cents per case.

The question of difference in size of crates was answered that "Western goods" means six-gallon crates. New York men are willing to pay 4 cents per quart for blackberries. Three quarts make a pound of evaporated blackberries. Western New York pays 50 cents a case, 2 cents per box. In picking for evaporating they let berries get much riper.

One gentleman had planted dewberries, but saw no advantage. Had some fruit always, but it was not half what a good blackberry would do. They grew on the ground, spreading over it, and are hard to pick and thorny.

Mr. Speakman, of Neosho, has tried the Lucretia dewberry and finds it makes fine fruit. He put out 1,000 plants and last year had a nice crop of berries that sold readily and did much better than Early Harvest blackberries. He thinks it went far ahead of any blackberry in shipping. He sent it by local express to distant markets and it brought a good price. No disease has shown that affects it seriously, as yet.

Asparagus Culture in Missouri.

Bulletin No. 43 of the Missouri Experiment Station, by Prof. J. C. Whitten, horticulturist, describes in detail the best methods of growing asparagus, which, briefly summarized, are as follows:

This plant succeeds well in any rich soil, a loose and somewhat sandy soil being preferred. The best varieties are the Palmetto and Colossal. For the best results the seed should be sown in the greenhouse or hot-bed in February. When the plants are two or three inches high put the best of them in two and one-half inch pots. The selection of plants is of great importance. Many of them will have stems that are flat and twisted, or that send out branches near the ground, are tough and woody and should be discarded. Select only such as are cylindrical, smooth, and make at least two inches of growth before putting out leaves. These will make crisp and tender plants. Repot these young plants frequently until about the first of May, when they should be planted out of doors. In the absence of greenhouse or hot-bed facilities for growing these plants, it would be best to buy from some first-class nursery good one-year-old plants.

For the asparagus bed the soil should be pulverized thoroughly to a good depth, and the plants set twelve to eighteen inches apart in straight rows four feet apart. Vary the depth of setting plants in the ground from four inches at one end of the bed to eight inches at the other; the shallow set plants will come up earlier in the spring, thus giving a longer producing season. Give clean cultivation during the summer, and in the early winter mulch heavily with old fine manure. In early spring ridge up the rows by turning the soil between the rows over the sprouting plants. The sprouts coming through this depth of soil will be long, well bleached and tender. This ridging also facilitates subsequent cultivation, as after the asparagus is cut these ridges may be raked or lightly harrowed to kill all weeds without injuring the crowns below. No asparagus should be cut until the plants are two or three years

old, but after they have become thoroughly established, cutting may continue daily for six or eight weeks in the spring. Allow no stems to make leaves until cutting ceases, about the first of June. After that time the best cultivation should be given until autumn. Under no circumstances should the tops be cut after harvesting ceases until they have died in the fall. This summer growth makes the plants strong and ready for the next spring's crop. A bed treated this way every year should produce well for forty years.

Summer Pruning of Grapes.

Prof. F. T. Bioletti, in Oregon University Bulletin No. 118.

Some form of summer or green pruning is practiced in most California vineyards, if in the term we include all the operations to which the green shoots are subjected. There seems, however, to be little system used, and very little understanding of its true nature and object. In general, it may be said that green pruning of the vine is least needed and often harmful in warm, dry locations and seasons, and of most use under cool and damp conditions. The principal kinds of green pruning are: Pinching, suckering and sprouting, topping and the removal of leaves.

Pinching consists in removing the extreme growing tip of a young shoot. It is necessary to remove only about half an inch to accomplish the purpose of preventing further elongation of the shoot, as all growth in length takes place at the extreme tip. The immediate result of pinching is to concentrate the sap in the leaves and blossoms of the shoot, and finally to force out the dormant buds in the axils of the leaves. It has been found useful in some cases to combat coulure or dropping with heavy growing varieties, such as Clairette Blanche. It is also of use in preventing unsupported shoots from becoming too long while still tender, and being broken off by the wind. It can, of course, be used only on fruiting shoots and not on shoots intended for wood for the following year.

Suckering is the removal of shoots that have their origin below or near the surface of the ground. The shoots should be removed as thoroughly as possible, the enlargement at the base being cut off in order to destroy the dormant basal buds. An abundant growth of suckers indicates either careless suckering of former years, which has allowed a mass of buds below the ground, a kind of subterranean arm to develop, or too limited an outlet for the sap. The latter may be due to frost or other injuries to the upper part of the vine, but is commonly caused by too close pruning.

Sprouting is the removal of sterile shoots or water sprouts from the upper part of the vine. Under nearly all circumstances this is an unnecessary and often a harmful operation, especially in warm, dry locations. An exception may perhaps be made under some conditions of varieties like the Muscat of Alexandria, which has a strong tendency to produce water sprouts, which growing through the bunches injure them for table and drying purposes.

Water sprouts are produced from dormant buds in the old wood, and as these buds require higher sap pressure to cause them to start than do the fruitful buds, the occurrence of many water sprouts indicates that too limited a number of fruitful buds has been left upon the vine to utilize all the sap pumped up by the roots. To remove these water sprouts, therefore, while they are young is simply to shut off an outlet for the superabundant sap and thus to injure the vine by interfering with the water equilibrium, or to cause it to force out new water sprouts in other places. Any vigorous vine will produce a certain number of water sprouts, but they should be looked upon as utterly useless and harmful because they produce no grapes. On the contrary, if not too numerous, they are of positive advantage to the vine, being so much increase to the feeding surface of the green leaves. Water sprouts should be removed completely during the winter pruning, and the production of too many next year prevented by a more liberal allowance of bearing wood.

Topping, or cutting off the ends of shoots, is done by means of a sickle or long knife. At least two or three leaves should be left beyond the last bunch of grapes. The time at which the topping is done is very important. When the object is simply to prevent the breaking of the heavy, succulent canes of some varieties by the wind, or to facilitate cultivation, it must, of course, be done early, and is well replaced by early pinching. These objects are, however, better attained by appropriate methods of planting and training. Early topping is inadvisable because it in-

duces a vigorous growth of laterals which makes too dense a shade, and it may even force the main eyes to sprout, and thus injure the wood for the next year.

The legitimate function of topping is to direct the flow of food material in the vine first into the fruit, and second into the buds for the growth of the following year. If the topping is done while the vine is in active growth, this object is not attained; one growing tip is simply replaced by several. In this way, in rich moist soils vines are often, by repeated toppings, kept in a continual state of production of new shoots, and these new shoots consume more food than they produce, and the crop suffers. Not only does the crop of the current year suffer, but still more the crop of the following year, for the vine devotes its energy to producing new shoots in the autumn instead of storing up reserve food material for the next spring growth. If, on the other hand, the topping is done after all the leaf growth is over for the season, the only effect is to deprive the vine of so much food absorbing surface.

The topping, then, should be so timed that, while a further lengthening of the main shoot is prevented, no excessive sprouting of new laterals is produced. The exact time differs for locality, season and variety, and must be left to the experience and judgment of the individual grower.

Weeds.

Editor Kansas Farmer:—I was much interested by the article of N. on "Weeds and Bugs," page 418, and wish to call attention to one point. I am not a botanist, but I know there is much confusion in the names of weeds as well as in many other things, and the effort should be toward a correct nomenclature.

He gives bull nettle as the common name of *Solanum rostratum*, the very common yellow-flowered prickly annual, while all the authorities I have give buffalo bur as the common name. The Solanoceae order, or nightshade family, are well represented in Oklahoma. Of the *Solanum* genus, in addition to the buffalo bur (*Solanum rostratum*) we have the horse nettle, or, as some call it, bull nettle or brier, with a purple flower and leaves an oak, known as *Solanum Carolinense*, and the wild potato, with purple flowers but an ash-green leaf, known as *Solanum Torreyi*. Then of the *Physalis* genus we have a ground cherry of which I have not yet studied out the variety. It may not be known to all that to this order belong the common potato, egg plant, ground cherry, tobacco and many other plants, while the tomato is closely allied. The perennial rag weed, lambs quarter, and other annual weed of which at present I do not know either common or botanical name, are our worst weeds, and with these an annual grass that is very persistent and almost everywhere, while pig weed and some others are quite common but much more easily kept in check.

Winview, Okla. J. M. RICE.

Cancer of the Breast.

The letter of Sister Billings should be read by all suffering ones. So many women are dying of this terrible disease. Reader, cut this out and send it to any similarly afflicted. For free book, giving price of the Oil and particulars, address Dr. D. M. Bye, Box 25, Indianapolis, Ind.

West Bridgewater, Mass., Dec. 28, 1895. Dr. D. M. Bye, Indianapolis, Ind.:

Dear Doctor—It is with a heart of gratitude to you and the dear Father above that I have the pleasure of informing you of the entire removal of that cancerous growth which had for six years been preying on my system. When I commenced your treatment on June 6th, the hard bunch on my left breast could scarcely be covered by a pint bowl; my body was much bloated, and I could only take liquid or the softest of solid food. On December 6th the last of the fungus growth came out, my body has resumed its normal condition and I can eat anything I wish with relish and pleasure. Our physician says, "It is wonderful!" My neighbors say, "It seems a miracle!" Words can not express my gratitude, but I will, whenever and wherever I may, proclaim the good news. Truly and gratefully yours, MRS. NANCY F. BILLINGS.

1898 Bicycles Down to \$5.00.

New 1898 Model Ladies' and Gents' Bicycles are now being sold on easy conditions as low as \$5.00; others outright at \$15.95, and high-grade at \$19.95 and \$22.50, to be paid for after received. If you will cut this notice out and send to SEARS, ROEBUCK & CO., Chicago, they will send you their 1898 Bicycle catalogue and full particulars.

In the Dairy.

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

The Rights of Oleo.

The Chicago Produce cums up the recent decisions in the Supreme court of the United States regarding oleo, as follows:

"State laws prohibiting the coloring of oleomargarine to resemble butter are valid.

"State laws requiring oleomargarine to be colored any particular color are not valid, as they are held to be practically prohibitory.

"State laws absolutely prohibiting the sale of oleomargarine inside of a State, from one citizen to another, are valid, provided the seller is not the importer.

"State laws forbidding oleomargarine in its pure, uncolored state being brought in are not valid, as they are held to conflict with the national interstate commerce laws, oleomargarine being recognized to be a legitimate article of commerce.

"State laws prohibiting the manufacture, sale, or importation into a State of oleomargarine made in semblance of butter, are valid, because they only seek to promote fair dealing and prevent deception and fraud, and can not be called prohibitory.

"The smallest package oleomargarine can be put in originally is ten pounds. This package ceases to be original the minute the government seal is broken.

"No dealer is allowed to sell a package of oleomargarine in excess of ten pounds unless he holds a wholesaler's license.

"In Pennsylvania at present a dealer may import oleomargarine and sell in packages of ten pounds or more, to any person or through agents, but the party buying the package is liable to prosecution and conviction under that part of the State law remaining constitutional if he resells."

It will be seen from the above summary, which we assume to be correct, that while oleo has its rights, the right to prevent fraud and deception still remains with the people. The States may not prohibit the traffic in an article of commerce recognized as such by the laws of the United States, but can prevent its imposition on the public in the guise of butter. That, after all, is the main point in the controversy. The Supreme court will never recognize or tolerate an assumed right to do wrong by deceiving the consuming public. The right to prevent fraud and depression inheres in the people of any State or Territory. If laws can be so framed as to prevent the consuming public being imposed upon, the dairy interests need fear little from oleomargarine or anything else in the semblance of dairy products.

Criticism of Butter.

Mr. F. A. Leighton, whose duty it was to accompany the judges while they scored the butter entered in the contest which the Genesee Salt Company have in progress in Chicago and who is to write to each contestant pointing out where improvements can be made in the quality of the butter, found that one buttermaker who entered butter in May used a buttermilk starter, and as he was marked off twelve points on flavor, Mr. Leighton advised the discontinuance of buttermilk starter.

Another was criticised for not using any color and not using enough water in washing; the butter showed up milky. A Minnesota man who ripened at 70°, churned at 52° and used no starter only scored 84½. In commenting on this tub Mr. Leighton said: "I have to report that this was not a very good tub of butter. There are a number of improvements which can be made. To start with, the general appearance the judges have marked off 1½ points. It was cut down too deep—almost an inch below the top. It was also a very poor package. It was badly mottled and was slightly overworked. All these things would go towards affecting the flavor, which undoubtedly, is the case.

"Now, the suggestions which I wish to offer are these: First, a good skim-milk starter would help the flavor; second, in hot weather 70° is too high temperature to ripen at. It does not make any difference what someone else may tell you, but experience shows that a lower temperature is better. You use live steam for heating. This will not improve the flavor or the body."

An Illinois buttermaker who scored 97½, being only two points off on flavor and ½ point on body, used no starter and ripened his cream 32 hours at a temperature of 56°, churned at 48°, and washed with water at from 44° to 48°.

Salt was wet before using, butter worked in Disbrow combined churn and worker three minutes, left one hour and worked three minutes longer. Of this tub Mr. Leighton said: "I can make no further comment than that as the butter showed a little salty on the trier it was overworked. If it had not been for the tub being a little overworked you would have scored very high."

During hot weather Mr. Leighton says buttermakers will have to watch their work closely or else their butter is apt to show up a little milky on the trier.

Persons and Cows to the Square Mile in the United States.

By the census of 1890 there were 21.08 persons and 5.56 cows per square mile in the whole United States. In the several States the proportion is as follows:

	Persons.	Cows.
Alabama	29.36	5.62
Arizona	.53	.04
Arkansas	21.27	6.23
California	7.75	2.03
Colorado	3.98	.74
Connecticut	154.03	26.40
Delaware	85.97	16.62
Florida	7.22	2.10
Georgia	31.15	4.88
Idaho	1.	.32
Illinois	68.33	19.43
Indiana	61.05	16.09
Iowa	34.46	27.25
Kansas	19.47	9.04
Kentucky	46.47	9.11
Louisiana	24.63	3.72
Maine	22.11	5.26
Maryland	105.72	14.42
Massachusetts	278.48	21.40
Michigan	36.46	8.73
Minnesota	16.44	7.52
Mississippi	27.83	6.74
Missouri	38.98	12.38
Montana	.91	.17
Nebraska	13.78	6.57
Nevada	.42	.08
New Hampshire	41.81	12.16
New Jersey	193.82	21.67
New Mexico	1.25	.15
New York	125.95	30.24
North Carolina	33.30	4.60
North Dakota	2.60	1.26
Ohio	90.10	19.50
Oklahoma	1.59	.43
Oregon	3.32	1.20
Pennsylvania	116.88	20.61
Rhode Island	318.44	22.06
South Carolina	38.16	3.55
South Dakota	4.28	2.73
Tennessee	42.34	8.27
Texas	8.52	3.83
Utah	2.53	.56
Vermont	36.39	25.33
Washington	5.22	1.06
West Virginia	30.95	7.65
Wisconsin	30.98	14.56
Wyoming	.62	.12

Ripening the Cream.

H. Hayward, of the Pennsylvania Dairy School, says that for best results a cream containing from 30 to 35 per cent. fat is taken. A cream rich in fat is easier to handle and it is easier to control the condition when handling a rich cream. The amount of acid developed in the cream will depend slightly upon the disposition that is to be made of the butter. If the butter is to be consumed within two or three days after it is made, the cream should contain about .65 per cent. of acid. If, on the other hand, the butter is to be kept for some time, the cream needs to contain but .5 per cent. of acid. The riper the cream, or the more acid it contains up to the limit of .7 per cent., the more highly flavored will be the butter if examined soon after it is made. Such butter, however, becomes strong sooner than that made from less acid cream.

If cream is allowed to develop acid until it wheys it is altogether too ripe and the butter has a "frowey" taste and is likely, unless great care is exercised, to contain specks of curd. On the other hand, if sweet cream is churned the butter has a flat, insipid flavor which is desired by almost no market. Butter made from cream indifferently ripened is dead in flavor, has no character, and is therefore undesirable everywhere.

The ripening temperature will depend very largely upon the season of year, varying from 55° to 60° F. in summer and 60° to 65° in winter. A higher temperature, if carefully watched and the cream frequently stirred to secure a uniform ripeness, is better than a low temperature, since the latter allows the growth of undesirable ferments which may choke out or smother the desirable ferments.

Suggests a Remedy.

How to prevent milk from foaming is a question that bothers quite a few creamerymen who have been Pasteurizing skim-milk as it leaves the separator. We have had several inquiries on this point lately, says the Creamery Gazette. Where the milk is Pasteurized by a jet of steam as it leaves the separator, it is not uncommon for the skim-milk to completely overflow the tank in a few minutes, and where the skim-milk is drawn directly into the cans on the wagon the same difficulty is experienced there. Some years ago we experienced the same difficulty. The only way we know of to remedy the

difficulty, or rather to prevent it, is to cool the milk down immediately as it comes from the Pasteurizing apparatus. We think this can be done easily and at little expense by conducting the milk through a coil of pipes submerged in cold water and kept in motion.

Creamery in a Spring.

An interesting description of a creamery on Ingleside farm, near Athens, Tenn., is given in a letter to Hoard's Dairyman by "Buff Jersey," who says: "I found a two-story building, of good proportions, with the generous adjunct of porches so common in the South. The building is situated in a glen, so narrow and deep that one steps from the general level of surroundings into the second story, where a De Laval No. 3 separator is operated by water power. The water is furnished by a spring so large that the creamery is in the spring, instead of spring in creamery, as usually found. The water is so cold (being 58°) that no ice is required, the refrigerator being a galvanized iron box that is allowed to float in spring water. The churn is run by water power, and has always set on the lower porch, summer and winter. Pines, evergreens and Southern vines are in great profusion, and the huge rocks and grassy banks must awake the poetic nature of the butter-maker who is so fortunate as to be employed in so ideal a spot."

Dairy Notes.

The outside of the butter package should always present a clean, tasty and inviting appearance, that the attention of the buyers may be drawn to them.

There really is not care enough or pains enough taken by the average patrons of the creameries in handling the milk. All milk should be strained and aerated, no matter whether it is for the factory or for home consumption.

Washing the butter is an important part of the process of butter making. There should not be much washing if the butter is for immediate use. One water will usually be sufficient. Too much cold water will destroy the fine flavor, because the flavoring oils are largely soluble in water. If the butter is to be kept for some time it is better to wash until the water comes away quite clear.

The albuminoids, fats and carbohydrates of from four elements or sources. Albuminoids only of the three contain nitrogen. Four-fifths of the atmosphere everywhere may be termed nitrogen. The albuminoids contain 16 per cent. of it, and if we can grow any sort of plant that will glean it from the atmosphere, and make it palatable for live stock, then we may use the nitrogen from the atmosphere; through the plant first, and the domestic animal afterwards, for the use of man.

There are various treatments for milk fever, that most troublesome annoyance in the dairy herd at certain times of the year. One of the remedies is given by a man who speaks from experience. Make a brine of the strength used for curing meat and with a soft cloth or sponge swab internally. Then take a sheet or hemp carpet, dip in a tub of strong brine well and fold several thicknesses so that the brine will be retained as long as four or five hours, and place over the loins. The water used for both

"ALPHA-DE LAVAL" CREAM SEPARATORS.



De Laval Alpha "Baby" Cream Separators were first and have ever been kept best and cheapest. They are guaranteed superior to all imitations and infringements. 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.

internal and external treatment should be fresh from the well. If the swabbing is done in a proper manner and promptly and the pack kept in place for a few hours the cow gets well every time. We would suggest, however, as fat cows are more liable to an attack of this fever, that corn should not be fed in any form for three or four weeks before and a week or ten days after calving.

To know how to make good hay is one thing, but to have the opportunity to make it is another. Whether there is good weather counts for a whole lot.

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

F. A. HORNBECK,
General Manager
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CREAM SEPARATOR

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The Improved U. S. Cream Separators

In thoroughness of separation take the lead. In completeness of design and ease of operation excel all others.

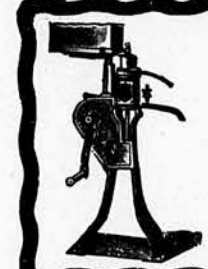
Are more substantially made and are superior in all points to all others.

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.



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.

MAKE DESCRIPTIONS SPECIFIC.—I have a three-year-old colt which we put to work in spring. A lump size of a man's fist. Lanced each, deep, from lower edge. One lump disappeared. Other has not. What must I do to get rid of other lump? J. J. J.

Answer.—I have no idea what may all this horse. There are so many kinds of lumps and so many different places on a horse where such a lump may be that it would be worse than guessing to prescribe here.

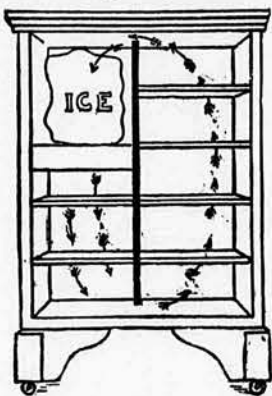
HORN FLIES.—Is there any practical method of preventing horn flies from annoying cattle? They are more numerous in southeast Kansas than they have ever been and I am afraid if they continue as bad as they now are that the results may be more serious than heretofore. Each animal is literally covered by these pests night and day and is so annoyed by them that the cattle find but little time to eat. By "practical method" I mean something applicable to a herd of wild cattle. Z. T. P.

Answer.—A much recommended remedy for the horn fly of cattle is the application of a 3 per cent. solution of crude carbolic acid in fish oil. This is applied rather lightly over the whole body by means of a wide brush or a piece of cloth. The operation must be repeated as often as necessary—every four or five days. Spraying cattle with kerosene emulsion is also effective, but not as permanent as the use of carbolic acid in fish oil. Whether or not this remedy is applicable to wild cattle depends altogether on how wild they are.

A Model Refrigerator.

Now that the warm weather is upon us we are forcibly reminded of the importance of having a reliable refrigerator for the dairy as well as for family use.

One of the best modern, healthful and convenient refrigerators now made is



the McCray Patent System, made by the Herrick Refrigerator Co., Waterloo, Iowa, with store room and warehouse for the Southwestern trade at No. 4 South James street, Kansas City, Kas.; D. R. Towne, agent, 206 New York Life building, Kansas City, Mo. The Farmer representative has been familiar with



this make for a year or so and finds that those who are using it are unusually well pleased.

The foregoing pictures well represent both the modern and the old style of family refrigerators. The first shows the modern idea, or the McCray patent, while the second picture portrays the old-style, rapidly becoming obsolete. In regard to the old-style, or zinc-lined refrigerator, Dr. Cyrus Edson, of the New York Board of Health, de-

Horse Owners! Use



Caustic Balsam

A Safe Speedy and Positive Cure
The Safest, Best BLISTER ever used. Takes the place of all liniments for man or horse. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.

scribes it as "the skeleton in the closet" as follows:

"Her ice box became the most dangerous thing in the house. This is particularly true with such delicate foods as milk. There is a marked increase in the number of deaths from diarrheal diseases, especially among children, as soon as the hot weather, during which it is necessary to place the milk in the refrigerator sets in. Children form the most delicate thermometer of health. Being more delicate, having less strength, being almost wholly without that reserve force of life we call stamina, they show quickly the evil effects of any cause. On the other hand, milk being a food in which the food elements are adjusted for digestion more perfectly than in any other, it will putrefy more quickly than any other. In the part where the food is kept, little particles of this are apt to adhere to the zinc. Unless these are removed they will putrefy and produce a germ which will attack at once all fresh food put in and cause it to become bad in a very short time. Almost every one is familiar with the stale smell in refrigerators, which is indicative of putrefying matter."

For a general description of this new and popular refrigerator it is only necessary to mention a few points in order to show the superiority over the old style, which it outclasses. They are made of kiln-dried oak, nicely paneled on front and end. The boxes are filled with rubber filler and varnished with a fine coat of varnish. The refrigerators are all packed with mineral wool, the best non-conductor of heat or cold known. The shelves and racks are all made of wood, and made adjustable and are easily removed. Only about one-fourth the space for ice is required, while other makes occupy about one-half, thereby giving this refrigerator increased cooling space. It is lined with sanitary wood, instead of zinc. This refrigerator has a continuous, dry, cold, pure air circulation; the partition reaching nearly to the bottom, forces the circulation clear to the bottom of the refrigerator. This makes it always dry and pure. This refrigerator requires no scrubbing, never sweats nor contains stale odors; in short, it is an ideal refrigerator, pure, sweet and healthful.

Lake Superior Tides.

Lake Superior is the largest body of fresh water in the world. It is a water of wonderful purity, which it holds, too; and some time, and in the not very distant future, either, the people who live in the large cities of the West and South will come to this lake to get water for their homes. It will not be so remarkable an engineering feat to pipe the water from this lake, pure and sparkling and fresh, from its cold depths to these cities, which are now struggling with the question of their water supply and meeting all sorts of difficulties in their efforts to get water fit to drink.

At the very best the temperature varies through the winter and summer not more than 6°. Winter and summer this great lake never changes to any appreciable extent, so that if you dip your finger tips in the blue surface on a day in July, or if you test it some day in early winter, when you have been out on some belated, ice-mailed fishing smack, or when you have gone out to watch the fishermen spearing their supplies through the thick ice in mid-January, you will find but a trifling difference in the temperature. Away down at the bottom, too, there is but little variation in the temperature, for it stands at nearly 40° Fahrenheit at the bottom, and varies from 40° to 46° in winter and summer at the surface. The other lakes, though cold, are not in this respect like Superior.

The whole bottom of the lake is believed to be a strong rock basin, though it would seem that there must be great springs at the bottom to help keep up the enormous volume of water. From the north there is a large volume of water pouring into the lake year in and year out, the swift-rushing, narrow-

banked Nipigon and other streams furnishing no small part of the supply. These streams in a large measure make up for the large loss on the surface. One of the old lake captains, a bronzed, kindly-faced man, who had been thirty-five years on the lakes and had faced death many a time in the frightful storms which sometimes sweep across these beautiful bodies of water, told me as we were passing along near the north coast of Superior, with the headlands and inlets and glossy green bluffs of that most picturesque shore in full view, that the theory that the lake is slowly going down in size is true. He maintained that he could tell from certain landmarks along the shore, with which he is as familiar as he would be with the streets of his old Scottish birthplace, that the lake was slowly—very slowly—but surely receding. However, it will be some centuries yet before there will be any appreciable lessening of the great lakes, so that we need not be concerned. Strange as it may seem, the lake has tides, too—well-defined tides, discovered in 1860. It is what is called a self-registering tide, with a regular flux and reflux wave, caused, so the scientific men say, by the sun and moon. The average rise and fall every twenty-four hours is 1.14 feet; the maximum at new and full moon is 1.28 feet.—San Francisco Call.

Ticks! Lice! Fleas! Screw Worm!

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

The isolation of farm life is often spoken of unfavorably, yet this very isolation is an immense advantage in many ways. The business man, in city or town, is subject to constant interruptions in his work, because of the proximity of numerous neighbors. The city housekeeper works under the same disadvantages; seldom an hour but is liable to be broken into by callers or gossiping neighbors. Even the night brings no certainty of cessation. No one who hasn't suffered from these afflictions can appreciate the blessings of isolation. Of course, there's such a thing

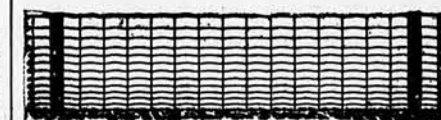
as having too much of a good thing, and some farmers do suffer from too much seclusion. This isolation gives opportunities for reading and study, too, that would be envied by many who haven't the time for such things. An intelligent, progressive family, with a good supply of books and papers, and other things that go to make life enjoyable, can afford to endure a certain degree of isolation, without repining.

Just take 100 pounds of lime, and mix it up with water, and you will find before you're done the weight has not grown shorter. It weighs thirty-two pounds more than it did at first, so "slaking" means that Mr. Lime proceeds to slake his thirst.

Debt is a terrible master, and a mortgage is a leech that saps the very life-blood of many a man—never satiated, but keeping up its drafts in sickness as well as health, in storm and sunshine, never sleeping, never resting! Beware of it!

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

LOST—A small dun mare, 8 years old, four white feet and white face. Return to 627 Fillmore street and receive reward.



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MARKET REPORTS.

Kansas City Live Stock.

KANSAS CITY, July 2.—Cattle—Receipts, 232; calves, 3. The market was nominally steady. The following are representative sales:

TEXAS AND INDIAN COWS.
No. Ave. Price. No. Ave. Price.
25 1..... 783 \$2.90

NATIVE COWS.

2..... 1,090 \$3.50 1..... 1,100 \$3.50
1..... 1,180 2.25 2..... 1,045 2.85
1..... 890 1.75

Hogs—Receipts, 4,342; shipped yesterday, none. The market was active and steady. The following are representative sales:

60...294 \$3.80	69...294 \$3.75	74...290 \$3.75
71...289 3.70	69...299 3.70	70...259 3.70
63...232 3.67½	66...238 3.67½	74...253 3.67½
42...227 3.67½	72...238 3.65	70...223 3.65
69...274 3.65	70...243 3.65	69...234 3.65
79...235 3.62½	88...240 3.62½	84...235 3.62½
70...224 3.60	59...254 3.60	73...207 3.60
69...219 3.57½	68...281 3.57½	65...207 3.57½
1...190 3.57½	82...212 3.57½	58...194 3.57½
87...185 3.55	72...205 3.55	75...196 3.55
74...214 3.55	95...193 3.55	88...210 3.55
106...161 3.52½	62...213 3.52½	54...181 3.50
96...219 3.50	92...184 3.50	19...159 3.45
46...144 3.45	93...172 3.40	92...184 3.40
57...197 3.40	20...73 3.40	9...134 3.35
19...133 3.35	6...180 3.30	19...127 3.30
15...132 3.25	17...124 3.25	1...450 3.25
28...125 3.20	6...136 3.10	6...130 3.00

Sheep—Receipts, 24; shipped yesterday, none. The market was nominally steady. The following are representative sales:

14 spg. lms. 56 \$5.75 3 N. ewe... 93 \$4.50
1 ewe... 110 4.50 1 sh... 80 3.50

Horses and mules—Receipts unusually light. Prices nominally steady on all classes. Dealers look for little improvement during the coming week. The mule market is quiet. Very little stock is coming in.

St. Louis Live Stock.

ST. LOUIS, July 2.—Cattle—Receipts, 100; market steady; native shipping steers, \$4.50@5.00; light and dressed beef and butcher steers, \$3.60@4.00; stockers and feeders, \$3.35@4.10; cows and heifers, \$2.00@4.75; Texas and Indian steers, \$3.25@4.20; cows and heifers, \$2.50@3.45.

Hogs—Receipts, 15,000; market 5c higher; yorkers, \$3.60@3.70; packers, \$3.65@3.75; butchers, \$3.70@3.85.

Sheep—Receipts, 100; market steady; native muttons, \$3.25@4.75; lambs, \$5.00@5.00.

Chicago Live Stock.

CHICAGO, July 2.—Cattle—Receipts, 400; market steady; beefs, \$4.10@5.30; cows and heifers, \$3.25@4.65; Texas steers, \$3.50@4.40; stockers and feeders, \$3.25@4.70.

Hogs—Receipts, 15,000; market steady to 5c lower; light, \$3.65@3.75; mixed, \$3.65@3.80; heavy, \$3.60@3.80; rough, \$3.60@3.70.

Sheep—Receipts, 4,000; market dull and weak; native, \$3.25@4.90; western, \$4.00@4.85; lambs, \$4.00@4.75.

Kansas City Produce.

KANSAS CITY, July 2.—Eggs—Strictly fresh, - doz.

W—Extra fancy separator, 14½c; firsts, 12c; dairy, 12c; store packed, 9c.

Poultry—Hens, 6c; broilers, 11½c per lb.; roosters, 12½c each; ducks, 5c; young ducks, 8c; geese, 4c; goslings, 8c; hen turkeys, 7c; young toms, 6c; old toms, 6c; pigeons, 75c per dozen.

Small fruits—Strawberries, Colorado, \$1.00@2.00. Blackberries, fancy, \$1.25@1.50 per 24-box crate. Gooseberries, home grown, \$1.00@1.25 per crate. Raspberries, red, home grown, \$2.50@3.00 per 24-quart crate; black, shipped, 85c@1.10; home grown, \$1.00@1.25. Currants, home grown, \$1.75 per crate. Cherries, home grown, \$1.50@2.00 per crate.

Vegetables—Cauliflower, home grown, \$1.00@1.25 per doz. Tomatoes, 45c@60c per 4-basket crate. Cucumbers, 40c per 1-3 bu. box. Home grown peas, \$1.00 per bu. Green and wax beans, 50c per bu. Lettuce, home grown, 15c per bu. Onions, new, 75c per bu. Beets, 25c per 3 doz bunches. Cabbage, home grown, 90c@1.10 per 100-lb. crate. Celery, 20c@25c per doz.

Potatoes—New, fancy, 50c@60c per bu.; old northern stock, fancy, sacked, Burbanks, 70c@80c; choice to fancy mixed, bulk, 50c@60c; Minnesota and Dakota, bulk, 60c.

Gossip About Stock.

W. H. Wren, Marion, Kas., announces that his next public sale of Poland-Chinas will occur on September 8.

A fortnight ago several pairs of half-bred French coach geldings were sold in the East Buffalo market for from \$400 to \$500 each.

Quite a number of half and three-quarter-bred French Coach geldings and mares were sold by W. C. Bryant, Marion, Iowa, to rich men in Minneapolis, a short time ago. The prices obtained ranged as high as \$2,000.

Miller & Sibley, of Franklin, Pa., owners of St. Bel, full brother to Bell Boy, Hinda Rose, Chimes and Palo Alto Belle, write: "We have used Quinn's Ointment with great success and believe it fulfills all claimed for it. We cheerfully recommend it to our friends."

W. G. Preuitt, Secretary of the Montana Stock Growers' Association, says that cattle in all sections of Montana are in fine condition. The range is unusually good. Cattle are rolling fat, and to the eye look to be in beef condition now. He thinks the calf crop is above the average.

The get of Fuschia are winning in the French trotting races, just as they have won for the past five years, and, at this writing, bid fair to pile up as great a total of money won as they did last season. This sire's get has won upward of \$263,000 during the period named, and if his three- and four-year-olds keep up the clip they have set so far this year they should add quite \$60,000

to the grand aggregate before next December.

On August 16, 1898, there will be held at Tough's Sons' sale barn, Kansas City stock yards, a combination sale of sixty-five Poland-China hogs, mostly bred sows, and a few boars, by the following breeders: E. E. Axline, Oak Grove, Mo.; Clifton George, Lathrop, Mo.; H. W. Cheney, North Topeka, Kas., and H. C. Sydnor, Corder, Mo.

J. N. Harshberger, Lawrence, Kas., the live stock auctioneer, announces that he expects to do a splendid business this fall and he will be glad to correspond with others who contemplate making sales, believing that after fifteen years successful experience in selling improved stock west of the Mississippi he can guarantee satisfaction in every case.

St. Louis Reporter: Mule prices declined a couple of weeks ago and are still on the low basis. On account of the high scale of prices that prevailed previous to the recent break the decline looked to be larger than it really is and some people believe that mule prices were at the lowest notch in years. As a matter of fact, sales on the decline basis are about \$10 per head higher than they were at this time last year.

Advices from France are to the effect that since the \$40 per head duty was imposed on horses, prices have risen materially and the French breeders are correspondingly happy. Five American importers are now visiting the breeding districts of France in search of French Coach and Percheron stallions and mares. One small lot of stallions was shipped at Havre a week ago, we learn, consigned to a gentleman who has not previously been identified with the French Coach breed.

Col. W. S. Barnes has sold to John W. Schorr & Son ten yearlings, which are said to be the pick of the Melbourne stud at Lexington, Ky. The entire collection is entered for the National stallion stakes for 1899. The event is usually worth \$25,000 to the winner, and the Schorrs feel certain that the rich prize will be landed next year by one of their new acquisitions. It is said that the average price of \$1,200 was paid and that the lot cost the new owner in the neighborhood of \$15,000. John Schorr says that the highest sum paid for a single horse was \$1,500. There are nine colts and one filly.

It seems as though the owners of range mares could not do much better than breed them to French Coach stallions of the right stamp, size and style. A five-year-old gelding bred this way was recently sold at the Oaklawn farm, Wayne, Ill., for \$200, and a pair of neat little cobs, foaled by mares that did not weigh over 650 pounds each, were bought from the same farm by Louis Newgass for \$100 each. A hundred dollars may not sound like a very high price for any sort of a horse, but it is a very large figure indeed to be brought by the produce of a Texas range mare. If any man will spend a few moments figuring the difference between the value of a year's crop at that price and a year's crop at the price usually brought by the foals of such mares, he will very soon see that it will pay him to improve such stock in this way. The difference in value above referred to would make a ranchman rich in a few years.

According to circular No. 12 of the American Short-horn Breeders' Association, just issued, Kansas has twenty-nine stockholders, as follows: T. F. Bayne, Williamstown; T. C. Brown, Ottawa; C. J. Buckingham, Lawrence; Clay County Short-horn Breeders' Association, Clay Center; D. B. Day, Lincoln; J. W. Fitzgerald, St. Marys; C. M. Gifford, Milford; G. W. Glick & Son, Atchison; J. F. Goepfert, Perry; W. A. Harris, Linwood; W. B. & M. Hawk, Beattie; J. M. Huber, Meriden; Thos. Hughes' estate, Lawrence; G. Y. Johnson, Lawrence; Kansas State Board of Agriculture, Topeka; Chas. Lotholz, Eudora; J. B. McAfee, Topeka; McCoy & Strawn, Valley Falls; E. B. Millett, Pomona; D. P. Norton, Council Grove; Pawnee Stock Breeders' Association, Topeka; Frank Playter, Pittsburg; Andrew Pringle, Harveyville; Col. S. A. Sawyer, Manhattan; J. C. Stone, Jr., Leavenworth; C. W. Taylor, Pearl; C. B. Thummel, Axtell; T. K. Tomson & Son, Dover; J. H. Trout, Axtell; Jos. Whitaker, Leavenworth; and F. E. Wolf & Son, Ottawa.

When at war we "mustn't count the cost," but it has to be paid, just the same.

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

"Vegetation is growing rapidly," yes, but, unfortunately, weeds are vegetables.

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Our whole institution, which by the way is the largest wool commission house in the entire west, makes for the advantage of the man who has wool to sell. You may know how others appreciate these advantages when we tell you that we handled last year

15,000,000 POUNDS OF WOOL.

WE DON'T PEDDLE OUT WOOL,

the largest buyers in the country come to us; they know we have anything they may want in any quantity. That's another advantage to you. **Liberal advances made on consignments at 5 per cent. interest per annum.** Sacks furnished free. **Send for a free copy of our Market Letter.**

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National Educational Association Meeting.

This year our educational friends meet in Washington, D. C., July 7 to 12, and members of the association and others from points west of the Missouri river should by all means take the Union Pacific.

The service of the Union Pacific via Omaha or Kansas City is the very best. The equipment consists of handsome day coaches, chair cars, Pullman drawing-room sleepers, dining cars and buffet smoking and library cars. Fewer changes than via any other line. One fare, plus \$4, for the round trip will be the rate from all points west of the Missouri river for this meeting.

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.

If Your Tickets to Buffalo

For the B. Y. P. U. meeting read via Nickel Plate road you have privilege of a boat ride between Cleveland and Buffalo, or stop-over at Chautauqua lake within final limit of ticket. Also return limit to leave Buffalo to and including September 1, by depositing tickets with joint agent. Rate \$12 for round trip. City ticket office, 111 Adams St. Van Buren street passenger station, Chicago, on the Loop.

No. 52.

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The Poultry Yard

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

SEASONABLE HINTS.

Editor Kansas Farmer:—I herewith present some of my ideas, gained both by quite extensive reading and, better still, by several years of practical experience as a breeder of thorough or standard-bred poultry, as to the best methods of caring for fowls in hot weather. There is no question as to the necessity and desirability of having them comfortable in order to have them do their best for you. So much has been written about making fowls comfortable in winter that it has become a recognized fact that it is necessary. In the judgment of all practical poultrymen who aim to secure the best results, it is just as necessary to provide for their comfort in summer as in the winter. The question, then, arises in the minds of the many who are not yet experts, How shall this be accomplished? One of the first requisites, and among the most essential, is

SHADE.

Where fowls have the run of an orchard they can make themselves pretty comfortable, beside gathering up much of their food during the hottest kind of weather. There is no shade to compare with that made by trees. The least bit of wind fans the branches and the latter in turn send refreshing currents of air all around them. Houses built right in these orchards are cool at night, and the trees likewise prevent severe storms from reaching the inmates of the houses, as is so often the case where houses are more or less exposed.

But not every one has an orchard to furnish his poultry, so the next best step—especially where fowls are confined to runs or pens—is to have the runs of liberal dimensions, and set in trees as closely as they will admit to secure good crops of fruit. I say fruit because the shade from a fruit tree is just as refreshing to the fowls as that from a forest tree; and, if you can raise two crops from the same ground at the same time, is it not economy to do so? As regards varieties of fruit trees to set, there are none better for this purpose than the plum and cherry. Both come into bearing early, and both thrive here as nowhere else—the droppings of the fowls enriching the soil, and very little wormy fruit is found on trees so situated. This is the ideal way in which to raise plums, at least as regards curculio. That question is everlastingly settled where fowls have the opportunity to destroy all fallen fruit, which they will do, and relish the job.

But, some who raise poultry are renters and cannot afford to set trees, some will say. This is true; but where a term lease of three to five years, or even longer, can be obtained, it will pay. One crop of fruit will cover the cost of the trees, and often more, besides the comfort you afford your fowls and the increased profit derived from them; for you must make your fowls comfortable if you would have them profitable. Many times, however, if the matter were presented in a proper light, the landlord would be both willing and anxious to furnish the trees, and perhaps pay the tenant for setting them, well knowing that such work as that only makes his farm the more valuable.

However, if you cannot have trees, plant something else. Erect a light frame, arbor-like, and plant vines. Morning-glories soon make a good shade in this way. Or plant Russian sunflowers, which grow very rapidly and make not only a shade where needed, but also furnish one of the best poultry foods known to make hens lay and give them a rich, glossy plumage. So, you see, it is not so impossible after all. For it is like everything else, "Where there's a will, there's a way."

WATER.

This is as important as shade. Unless there is a stream of clear, cool, running water where the fowls can have access to it at all times, a fresh supply should be given them in the drinking vessels, three or four times a day. Keep the water in the shade, and keep your drinking vessels absolutely clean. Scald, scrub, scour them out every few days, and rinse all dirt and sediment out every time you fill them up. In fact, keep them so clean that the water in them will be as pure and sweet as that you drink yourself.

A third very essential feature, and one not to be overlooked or sneered at, is

FOOD.

Of course, if the fowls have unlimited range, or free access to the farm,

very little if any food will be necessary in summer beside what they will forage for themselves. Green grass, seeds, bugs, worms, grasshoppers, etc., they will find in abundance. These make up a well balanced, an ideal ration, one which could not be improved upon. But with those not thus favorably situated, where the poultryman lives in a town or village, for instance, and is obliged to keep his fowls yarded all the time, or most of it, the food problem requires most serious attention. Give them a taste, when possible, of some green food, clippings from the lawn mower, a cabbage head occasionally, or the outside leaves, lettuce leaves or anything else green that they will eat, for variety. Apple parings are eagerly devoured. A little thought will help to many tidbits for the fowls. If a morning mash is fed, and once a day for soft feed is enough, one-half of it should be bran, the other half of say equal parts of corn meal, ground oats and middlings, with about 10 per cent. of beef scraps or dried blood added to take the place of the animal food and insects the unconfined fowls will secure. Feed no corn in hot weather. Let the evening meal be of wheat, oats, barley or cracked rice, alternated, so as to make up a variety. Do not feed so much of the mash in the morning as to fully satisfy them and make them lazy and stand around the rest of the day, but just enough to take off the sharp edge of their appetites—say what they will eat up clean in eight or ten minutes and still want more. Make a pen of boards if you have no scratching shed, fill it with chaff, or cut straw, five or six inches deep. Scatter a little grain of some kind—millet seed is good for this purpose—and make them earn the rest of their food for that day by scratching for it. Make them scratch or go hungry; this is particularly necessary with the Asiatics, Cochins, Brahmas, etc. Allow no food to stand over from one feeding time to another to sour. Mix at one time only what you will need for that time. Soured food is one prolific cause of disease in summer, perhaps the most prolific. Keep plenty of good sharp grit and broken charcoal where the fowls can get them at all times. You will be surprised at the amount they will consume.

Lastly, for this time, but not least by any means, comes the question of

LICE AND MITES.

This you will say, doubtless, is the "old, old story." True, indeed, but an ever-present question, nevertheless, with the one who undertakes to raise or keep poultry—a question, too, which must be settled definitely at the outset as to whether you will have them or not, if profit is to be a consideration, which of course it is with all of us. Here, however, is a place where "prevention is better than cure," and where "eternal vigilance is the price" of, if not liberty, at least exemption from these pests which not only prey upon the vitality of the flock, but cause so much annoyance to the fowls that they cannot do their best for you, even if all things else are in first-class condition. Hence I say, don't permit them to obtain a foothold. Watch night and day (literally) for their presence, and if found, redouble former efforts until the last one is exterminated. A hopeless task, it may be said. Not so, by any means, if proper precautions are taken. I say, without fear of successful contradiction, that there is no more necessity of having lousy fowls than of having rousy fowls, or any other disease.

The first requisite in this direction is absolute cleanliness. Any one who permits the droppings and filth to accumulate for weeks and even months, especially in hot weather, deserves to fail to secure profitable results, as fail they must of the highest measure of success. I trust all who have been neglecting this most important matter will, upon reading this paper, take fresh courage and renew the fight, even if they have become discouraged even to the point of surrendering to the enemy.

Remove the fowls from the house to some other place, or drive them out in the yards, shut up the house, closing every crack and crevice, and burn two or three pounds of sulphur on a bed of coals in an iron vessel of some kind; the amount depending on the size of the house, but there is no danger of using too much. Do this in the morning, and leave the house closed tightly till toward evening, or till noon at any rate—a period of several hours. Throw open doors and windows and white-wash thoroughly with any good white-wash made from freshly slacked lime with a few ounces of crude carbolic acid stirred in, after having removed perches, nests and everything loose. Now empty nest boxes and burn old straw or other material, and paint the perches and inside of nest boxes thor-

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oughly with kerosene. Refill and replace nests and perches. Repeat this operation in a week or ten days, and the house will be clear of lice and mites, for the time being. Then keep it so by repeating, say once a month during hot weather, and once or twice during the winter.

So much for the house; now for the fowls themselves. There is no one thing more abhorrent to vermin of this character than finely-powdered dust. Road-dust—sweepings from a much-traveled roadway—mixed with wood ashes or even coal ashes is excellent for the fowls to wallow in. And, by the way, now is a good time to secure a bountiful supply for the winter. If placed in barrels or boxes and kept dry, it will be of great benefit to the fowls during wet and stormy weather when they cannot find it for themselves. A little insect powder mixed with the dust and ashes is an improvement. Giving the fowls plenty of this material to dust and roll themselves in, it will not be very long till they free themselves entirely from the pests.

A quicker and surer method is to dust the fowls thoroughly with insect powder, holding them by the feet, head down, and with the hand, or, still better, a powder gun, shake the powder thoroughly among the feathers, seeing that it reaches every part clear to the skin. There is now a machine on the market for doing this work, which, where there are many fowls, is much more expeditious; three to ten fowls, according to size being placed in it, with some insect powder, the crank is given a few quick turns and the work is done as far as this batch is concerned.

Some time since I saw an article from the pen of Nellie Hawks, I think, telling of some one who invented a machine of his own to do this work, and it did it effectually, too. As there is no patent granted as yet, I will give Kansas Farmer readers the benefit of it. It seems that the party's fowls were like many others—infested with lice. As "life was too short" for him to treat each one individually, he conceived the idea of using one of the caddies or straight barrels that roasted coffee comes to grocers in. He obtained one with the cover or head entire; he placed about a pound or so of insect powder in it, then four to six fowls, placed the cover on tight so it would not come off easily, and rolled it, fowls and all, a few times over, and the work was done, and well done. Surely every one who has poultry can afford a machine of this description, and it would seem that hereafter there would be no excuse for the discomfort and annoyance many fowls are subjected to. Who of your readers will be first to try it and report results?

A second method of treating the fowls is by the use of one of the many liquid lice killers now on the market and which can be bought at reasonable

prices, ready prepared. The process is to take a box large enough to hold one or more fowls, and with a common paint brush paint the inside and bottom thoroughly with the liquid; then place the fowl or fowls in the box and immediately cover up with an old blanket or even a gunny-sack, to keep the fumes of the liquid in and let them permeate the feathers. The fowls are left in the box from fifteen to thirty minutes, when they are liberated and the process applied to the next lot. Be careful to watch the effects of the liquid, as some fowls will stand a longer time than others. If any are overcome they will soon revive when turned out in the fresh air. Most of these liquids are about the same as coal oil, and must not be used near a fire. These liquids are also excellent for painting the roosts occasionally to kill the red spider or mite.

Others use bisulphide of carbon in bottles suspended from the perches where the fumes will penetrate the

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feathers and thus reach and kill the lice. Again, shallow holes are bored in the top of the perches and filled with the bisulphide of carbon mixed with vaseline or grease of some kind, where the fowls will roost over it, thus getting the benefit of the evaporation.

From this it will be seen that there are many ways of combating effectually these voracious little pests, and there is no possible excuse for any one having lousy fowls or permitting so much discomfort to their best friend, the hen. If you want your fowls to do their full duty treat them right, make them comfortable, and see if they do not return the compliment by filling the egg basket for you.

But some may say, "All this is too much trouble and takes too much time." True, it is some trouble and does take some time. So, also, is it trouble and it also takes much time to feed, water and milk the cows, take care of the milk and cream, make and pack the butter; but who would neglect the cows or discard the dairy because it is some trouble and takes some time? Give the hen a decent chance, and she will pay you a better profit than the cows or ordinary farm crops.

In conclusion let me quote the words of a writer who says:

"To recapitulate, the precautions to be taken during hot weather are:

"Shade,
"Pure food,
"Cool houses,
"Fresh water,
"Clean nests,
"Clean houses,
"Disinfection,
"Freedom from lice,
"Avoidance of heating food."

C. B. TUTTLE,

Excelsior Fruit and Poultry Farm, Topeka, Kas.

Calling the Children In.

Three hundred towns and cities of the United States, moved by more than 300 tragedies of juvenile crime, have recently ordained that children shall come home at night at the signal of a so-called curfew bell, at 8 o'clock in the winter; at 9 in summer. The ancient curfew applied to old and young alike; the modern curfew has only the poetic resemblance of being an even bell. Government is the co-operative act of parents, who act together in cities and villages. Nowhere can curfew be established except at the request of parents expressed in ballots. The law no more interferes with parental rights and personal liberty than laws on compulsory education and child labor. The school and the curfew bell are equally justifiable as safeguards of public morals. Laws forbidding the sale of liquors and tobacco and corrupt literature to minors have long since illustrated the duty of the state to immature youth. Gladstone says that it is the purpose of law to make it as hard as possible to do wrong, and as easy as possible to do right. No intelligent view of personal liberty justifies turning infants loose to play with poisons and razors. The most inspiring watchword of reform is, "Give the boys a chance!"

The testimony of cities which have tried the curfew is uniformly favorable. The law has not destroyed civil liberty nor promoted communism; it has not proved difficult of enforcement, and has been well observed. It has checked hoodlumism. A chief of police who opposed the ordinance at first repented as he heard the patter of little feet, homeward bound, passing his office at each ringing of the bell.—Woman's Journal.

One Fare for Round Trip—Santa Fe Route—to Portland, Ore.

The Tenth Triennial National Council of Congregational churches will be held in Portland, Ore., July 7-12, 1898. The rate for ticket from Topeka to Portland and return is \$60. Tickets will be on sale June 30 and July 1, 1898, and will be limited to August 31, 1898.

These tickets admit of stop-over in certain places, and furnish the means of cheap traveling to California and other Pacific coast points.

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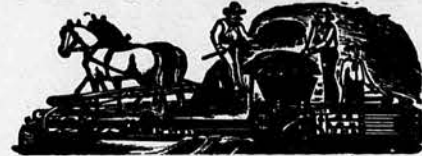


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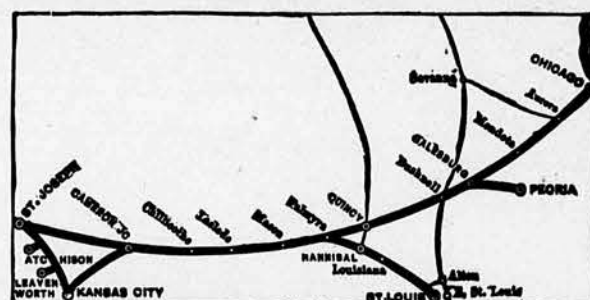
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THE STRAY LIST.

FOR WEEK ENDING JUNE 23, 1898.

Labette County—E. H. Hughes, Clerk.

MARE.—Taken up by James Kinnaman, in Mound Valley tp. (P. O. Mound Valley), May 16, 1898, one dark bay mare, 2 years old, with slight scar on left thigh; valued at \$15.

HEIFER.—Taken up by W. J. Kabrey, in Oswego tp. (P. O. Oswego), June 2, 1898, one small black 2-year-old heifer, white spot back of legs and some white in bush of tale, no marks or brands; valued at \$12.

Neosho County—B. W. Garvin, Clerk.

FILLEY.—Taken up by E. W. Wheeler, in Big Creek tp. (P. O. Odense), May 27, 1898, one dark bay filley, about 2 years old, white spot in forehead and one white hind foot.

FILLEY.—By same, one bright bay filley about 2 years old, forefoot clipped, no marks or blemishes on either; both are valued at \$27.50.

Sumner County—W. E. Wood, Clerk.

MARE.—Taken up by James Craig, in Falls tp. (P. O. Corbin), June 4, 1898, one bay mare, 15 hands high, weight 900 pounds, brand L on right shoulder, white on top of shoulder and mane; valued at \$25.

McPherson County—C. M. Gray, Clerk.

HORSE.—Taken up by E. E. Blake, P. O. Galva, May 12, 1898, one bay horse, 4 years old, weight about 800 pounds, white hind feet, star in forehead; valued at \$20.

FOR WEEK ENDING JUNE 30, 1898.

Linn County—C. O. Hoag, Clerk.

HORSE.—Taken up by Hiram Speaks, in Potosi tp., May 28, 1898, one light gray horse, 17 hands high, no brands, lump on breast size of hen's egg; valued at \$15.

Cherokee County—S. W. Swinney, Clerk.

MARE.—Taken up by John W. Newton, in Cherokee tp. (P. O. Weir City), June 13, 1898, one bay mare, 15 hands high, dapple spotted in front; valued at \$30.

FOR WEEK ENDING JULY 7, 1898.

Clay County—J. G. Cowell, Clerk.

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

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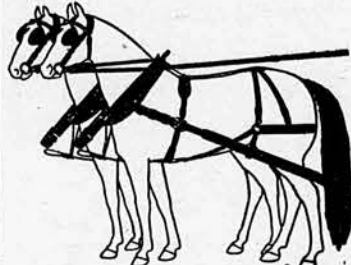
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Official Receipts for 1897	1,921,962	3,350,796	1,134,236
Sold in Kansas City 1897	1,847,673	3,348,556	1,048,233

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