

KANSAS FARMER

WITH WHICH IS COMBINED
FARMERS ADVOCATE

Volume XLVII, Number 26.

TOPEKA, KANSAS, JUNE 26, 1909.

Established 1863. \$1 a Year

Commencement at Manhattan

The State Agricultural College Celebrates its Forty-sixth Anniversary

The culminating event of the college year is commencement. At this time the halls are swept and garlanded; account is taken of the work of the past twelvemonth; plans are laid for the future; friends are invited for the festivities and the graduate is launched forth to do battle with the world.

Young colleges, like young individuals, move but hesitatingly. They send forth the occasional graduate with diffidence and as an experiment. As they grow older and as their graduates give an account of themselves they move with confidence and, this once established, they gain momentum with each succeeding year.

The Kansas State Agricultural College has had a history like that. When she first opened her doors the very idea that lies at the foundation of the school was new and untried. The teachers employed had difficulty in breaking away from old and well established methods and curricula and their notions concerning the real purposes of an agricultural college were but hazy. And they were not alone. At that time there were no men trained to do the work now demanded of the agricultural college professor, and if there had been such men they would have been useless as the time was not yet ripe for such work. The Kansas State Agricultural College began a weakling and, in less than a half century has become a giant among its fellows. It has made history because it has trained strong men and women to do the work of the world and to do it well. While its great object, its greater work, has been the training of boys and girls to become men and women with a work to do and the power to do it, there has been a second great work which it has done as well. It has trained its own teachers to see and understand the objects and needs of such an institution; to be leaders in the advancement of agricultural methods and thought and to inspire its graduates with this progressive spirit which, in turn, has made of them teachers of the best in life.

The period of hesitating growth of the Kansas College is long since past. The time of confidence is augmented and the momentum gained from past work and growth is now tremendous. This is shown in many ways but a few figures will serve to illustrate. In the first 38 years of the life of the college the total amount of funds appropriated by the state for its maintenance amounted to \$559,403 while the total appropriated since 1901 amounts to \$1,229,120, or \$669,717 more than for the whole of the first period named. Ten years ago the college had 500 students, and was a big institution. Now it has 2,400 of Kansas' brightest and best. Ten years ago the college owned 323 acres of land much of which was occupied by buildings with little left for agricultural purposes. Now it owns 750 acres at Manhattan and nearly 3,000 acres at Hays. But yesterday, as it seems, it had few buildings and a pitifully meager equipment. Now it is a city set on a hill with no lack for efficient work.

The commencement of 1909 marked the end of the most prosperous year in the history of the college and the event was celebrated by sending out the largest graduating class and by having the largest crowd of visitors.

Following is the program for the week:

Sunday, June 13.—Baccalaureate Sermon, Rev. Benjamin Otto, Pastor First Baptist Church, Kansas City, Mo., College Auditorium, 4 p. m.

Monday, June 14.—Recital by Music Department, College Auditorium, 8 p. m.

Tuesday, June 15.—Examinations from 8.35 to 2.40 p. m. Senior Play to Invited Guests, College Auditorium, 8 p. m.

Wednesday, June 16.—Examinations from 8.35 a. m. to 11.50 a. m. Business Meeting Alumni Association, Assembly Hall, 2.30 ap. m. Reception to visiting alumni and invited guests, Domestic Science and Art Hall, 8 p. m.

Thursday, June 17.—Annual Address, College Auditorium, 10 a. m., Dr. Shaller Mathews, D. D., Dean of Divinity College, University of Chicago. Presentation of Diplomas. Cadet Band Concert, College Auditorium, 2 p. m. Military Drill, 3 p. m.

The address of Dr. Mathews is thought to be one of the very best that has ever been delivered at this college. It was listened to with high

approval by the great crowd of visitors who filled the auditorium to its capacity. The members of the graduating class, the Board of Regents and Governor W. R. Stubbs occupied the stage during these exercises.

CLASS-ROLL, AND THESES.

Franklin Alexander Adams, "Electricity in the Household."

M. Reuben Alleman, "Effect of Different Pasteurizing Temperatures on the Bacterial Content, Quality and Keeping Quality of Butter."

Clyde Harrison Alspaugh, "Effect of Feeds on Hogs."

Jessie Edwina Apitz, "Two Years' High School Course in Domestic Science."

Ralph Armstrong, "Strength of Welds."

Harold W. Bales, "Combining the Mallein and Agglutination Tests in Diagnosis of Glanders."

Edward E. Bealey, "Small Fruits on the Farm."

Robert E. Bergeley, "The Quantitative and Qualitative Bacteriological Analysis of the Manhattan City Water."

Casey C. Bonebrake, "Design of a

Power Plant for the City of Stockton, Kan."

Charles Joseph Boyle, "Hay and Soiling Crops."

Raymond W. Brink, "Some Recent German Fairy Tales. A Translation."

Ella V. Brooks, "The Home a Factor in Diminishing Death-rate from Tuberculosis."

Frances Langdon Brown, "The Bavaria System of Teaching."

Anna Wilhelmina Carlson, "The Transient Character of the Student Body at Kansas State Agricultural College."

Florence Carpenter, "Influence of Food upon Children of School Age with Suggested Menus for School Lunches."

Sarah Elizabeth Cassel, "Emergencies in the Home."

George Sidney Christy, "Duroc-Jersey Prepotency."

Edna E. Cockrell, "Food Sanitation."

Claude S. Conner, "The Action of Various Preservatives upon Hog Cholera Virus and Hog Cholera Vaccine."

M. Marie Coons, "The Public Library Movement in America."

Margaret Copley, "The Art of Right Living."

James Scott Daniels, "The Origin and Fundamental Doctrines of Six Protestant Churches."

Leon Milhane Davis, "Effect of Different Pasteurizing Temperatures on the Bacterial Content, Quality and Keeping Quality of Butter."

Ruby Fae Deaver, "Inquiry into the Matter of Student Failures."

Lulu Holmes Docking, "Inquiry into the Matter of Student Failures."

William L. Enfield, "A comparative Test of Transformers."

Wilma Dette Evans, "Outline of a Year's Work in Domestic Science in a High School."

Marie Fenton, "A Living Temple."

Donald Forrest Foote, "Comparative Tests of Transformers."

Minnie L. Forceman, "Domestic Art as Taught in Schools."

Ambrosio Gison, "Adaptation of Some Crops to Particular Soils."

Roy R. Graves, "A study of the Retail Milk Supply of Ottawa, Lawrence, and Kansas City, Kan."

Chester W. Grizzell, "Some Cardiac Stimulants."

Charles Meyers Haines, "Tests of Lubricants and Bearing Metals."

James William Harner, "Surgical Bacteriology and Efficiency of Disinfectants."

Fritz F. Harri, "Teaching the Boy to Save."

Annie A. Harrison, "Lectures to Accompany Domestic Science Demonstrations at Chautauquas."

Stella Hawkins, "Lectures to Accompany Domestic Science Demonstrations at Chautauquas."

Lawrence Glenn Haynes, "Design of a Power Plant for the City of Stockton, Kan."

Alice Mabel Hazen, "The Designing and Equipping of Domestic Science Laboratories."

Geneva L. Henderson, "Fireless Cookery, with Special Attention to Roasting and Baking."

Thomas Newton Hill, "Quantitative and Qualitative Bacteriological Analysis of Manhattan City Water."

Jesse T. Hirst, "Tests on a Smith Gas Producer."

Vera E. Holloway, "Outline of a Two-Years' Course in Domestic Art for High Schools."

Charles Clinton Howenstine, "Com-



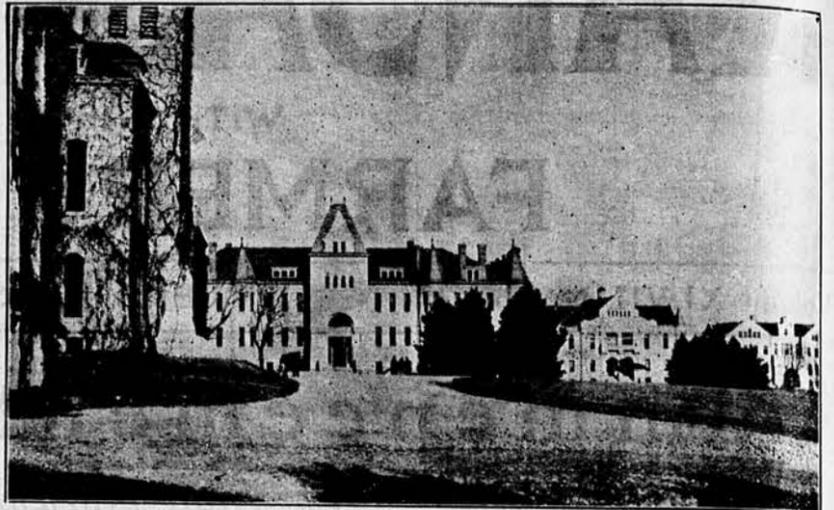
Bringing in the Sheaves.

parative Tests of Transformers."
 Grace Gertrude Hull, "Lectures in Domestic Science for the High School."
 Oliver William Hunter, "The Germicidal Action of Potassium Permanganate with Reference to Bacillus typhosus and Bacterium anthracis."
 Edith Belle Ingham—"Six Lectures for Chautauqua Demonstrations."
 William H. Irving, "Tests on Copper-Clad Wire."
 Charles R. Jacobus, "Tests of Arc Lamps."
 Edith Ellen Jones, "Dietary Studies from an Economic Standpoint."
 Elmer W. Jones, "Illumination Tests."
 Margaret M. Justin, "Agar; the Possibility of Substituting it for Gelatin in Household Cookery."
 Nobuzo Kawal, "Construction of a Modern Sanitary Barn."
 Ada Kennedy, "Growth of the Home Economics Movement."
 Harry E. Kiger, "Comparison of the Weights and Ages of Cattle."
 Loyd L. King, "Tests on Corder-Clad Wire."
 Walter J. King, "Tests with Traction Dynamometer to Determine Effect of Width of Tires."
 William Arthur King, "The Fifty-eighth Congress—Its Personnel, Organization, and Acts."
 Carl L. Kipp, "Illumination Tests."
 Albert G. Kittell, "Determining a Young Man's Vocation."
 Amanda C. Kittell, "Dietary Studies from an Economic Standpoint."
 Edison Frank Kubin, "Combining the Mallein and Agglutination Tests in Diagnosing Glanders."
 Grace E. Leuszler, "Lunch Rooms in High Schools."
 Joe Grigsby Lill, "A Study of the

Mule and Its Ancestors."
 Grace Morris, "The Plan of a Year's Work in Domestic Science for Students Above Sixth Grade."
 Effie May Morrow, "The Value of a Manual Training Education."
 Elizabeth Lovinia Morwick, "The Social and Political Reconstruction of the South Since 1861."
 Margaret Ethel Moseley, "Outline of One Year's Work in Domestic Science for High Schools of Kansas."
 Guy D. Noel, "Some Experiments in Crop Rotation."
 John W. Norlin, "Sheep Industry."
 Victor F. Obeflas, "A Comparative Study of the Methods of Rice and Tobacco Culture in the United States and the Philippines."
 Victor Emanuel Oman, "Test on 150 K. W. General Electric Alternator, Form D."
 James Oliver Parker, "Rural Electric Lighting."
 John Howard Payne, "The Relative Value of Some of the Common Anaesthetics."
 Vernon Peachey, "Tests on the Witte Gas Engine."
 Claro Pendon, "Some Experiments in Crop Rotation."
 Harold Albert Pennington, "Classification of Kansas Apples."
 Hubert L. Popenoe, "The Sheep Industry."
 Lulu Moore Porter, "A Young Woman's Preparation for Her Life Work."
 Leaffa Laura Randall, "Teaching Girls to Work."
 Harold S. Records, "A Buttermakers' Dairy Institute."
 Ernest Carl Reed, "Illumination Tests."
 John A. Richards, "Tests with Traction Dynamometer to Determine

or over the Series D. C. Motor for Railway Work."
 George Arthur Savage, "The Farm Orchard."
 Hugo Schild, "Rural Electric Lighting."
 Susanna Schnemayer, "The Development of Manual Training."
 Minnie Schorer, "The Purpose of

Tests of Fuels for Household Purposes."
 Leora Juanita Sutcliff, "The Cost of a Year's Living for a Family of Four."
 Merritt Rex Tinkham, "The Influence of the Intravenous Injection of Hog Cholera Virus upon the Histological Structure of the Blood of the Normal Horse."



The Kansas State Agricultural College—Some of the Buildings. Photo by the KANSAS FARMER man.

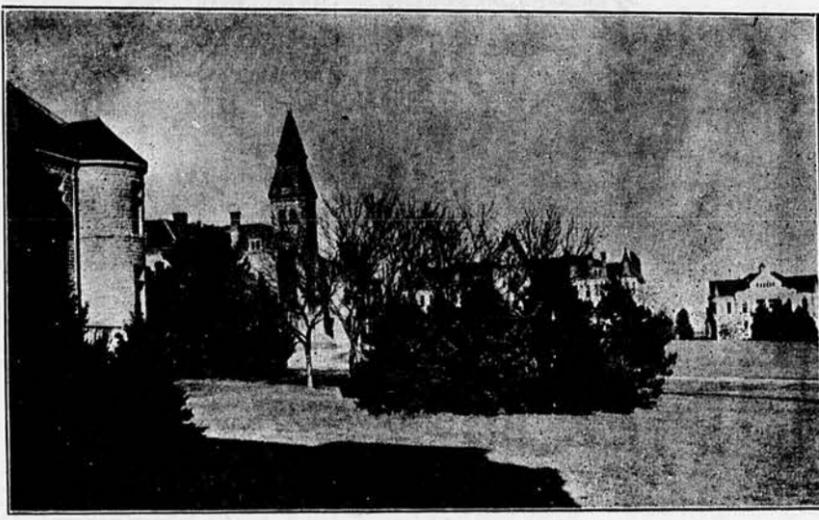


Commencement at the Kansas State Agricultural College. Watching the Military Drill. Photo by the KANSAS FARMER MAN.

Effect of a Leguminous Crop on the Soil and on the Crops Following."
 Edward A. Logan, "Some Cardiac Stimulants."
 Gertrude Muriel McCheyne, "The Preparation and Equipment Needed for Demonstration Lectures in Domestic Science, Including Six Lectures with Practical Demonstrations."
 John E. McCoy, "Relative Value of Some of the Common Anaesthetics."
 J. Myron McCray, "The Germicidal Action of Potassium Permanganate with Special Reference to Bacillus dysenteriae and Bacterium diptheriae."
 Preston Essex McNall, "Electricity in the Household."
 Eleanor March, "Influence of the Library on a Community."
 John Edward Martin, "A Comparative Study of the Existing Methods of Isolating Bacillus typhosus from Water."
 F. Herman Mayer, "Test on 150 K. W. General Electric Alternator, Form D."
 Virginia Lee Meade "Fireless Cookery, with Particular Attention to Roasting and Baking."
 Peter J. Meenen, "Mucoracea, and some of Their Effects upon Domestic Animals."
 Francis Burzley Milliken, "Stored Grain Insects."
 Claude Moorman, "Swine Industry."
 Ross Moorman, "The American

Effect of Width of Tires."
 Ida Ethel Rigney, "A Two-Year High School Course in Domestic Science."
 Eugene M. Ruede, "Conditions Effecting the Accuracy of Wattmeters."
 Alvertis Santford Salykeld, "Advantages of the Single Phase A. C. Mot-

Myrtle Simpson, "The Transient Character of the Student Body at Kansas State Agricultural College."
 Alice Skinner, "The Plan of a Year's Work in Domestic Science for Students Above Sixth Grade."
 Roy E. Spriggs, "Strength of Welds."
 Effie Eleanor Steele, "Comparative



The Kansas State Agricultural College—A Glimpse of the Grounds. Photo by the KANSAS FARMER Man.

Calorimeters."
 Kathleen Selby, "Comparative Tests of Fuels for Household Purposes."
 William Linley Shelly, "The Sanitation of Farm Barns."
 Elva Lucretia Skies, "Sanitary Plumbing for a Country Home."
 Alonzo Frederick Vass, "Insects Injurious to the Growing Wheat Plant."
 Alberta M. Wenkheimer, "The Instruction of Children in Relation to Fear."
 Francis Buckner Williams, "Classification of Kansas Apples."
 Marie Williams, "The Development of the Modern House Plan and Color Decoration."
 Marion Williams, "The Cost of a Year's Living for a Family of Four."
 Chloe May Willis, "The Cooperation of Parents with the Work of the School."
 Robert Hugh Wilson, "A Study of Some Recent Outbreaks of Hog Cholera."
 Henry B. Winter, "A College Administrative Hall."
 Roy Milton Wyatt, "Plans and Specifications for a Public Library."
 Carrie V. York, "The Cost of a Year's Living for a Family of Four."
 James Walter Zahnley, "The Problem of the Town or City Boy's Vacation Period."
 Mabelle (Howell) Zahnley, "Lunch Rooms in High Schools."
 GRADUATES OF THE CLASS OF 1908. (Completing their work by December 31, 1908.)
 John Buell Peterson, "The Development and Improvement of Corn for the Practical Farmer of Kansas."
 Genevieve Louis Riddle, "Preparing Fruit and Vegetables for Winter Use."
 Frances Odell Wilson, "Should the Young Woman Try to Earn Her Way Through College?"

GRADUATE.
 Harry V. Harlan, "Suggestions for the Rapid Improvement of Small Grains."
 Arthur H. Helder, "The Application of Landscape Principles to Some Lawn Problems."
 Adah Lewis, "The Production of Ethyl Acetate in Cider Vinegar."
 Atsushi Miyawaki, "The Characteristics of Milk with Special Reference to Its Acidity."
 CHANGES IN THE WORKING FORCE.
 In any big business enterprise there must come changes in the personnel of the working force from time to time. In the college at Manhattan such changes occur each year but it is a rare thing when a change occurs in the official head of the institution. Our readers will remember that President E. R. Nichols tendered his resignation some time ago to take effect on July 1, 1909. His reasons for retiring have not been announced but there are many among the student body and the people of Kansas who express their regret for his decision. At the close of the regular exercises of commencement day President Nichols said a few brief words of farewell when the President of the Board of Regents announced that they had conferred the degree of Doctor of Philosophy upon him and had voted to name the new \$100,000 armory and gymnasium "Nichols Hall" in his honor.
 As yet, the Board has announced no successor to President Nichols though rumor has it that the position has been tendered to Dean H. J. Waters of the College of Agriculture at
 (Continued on page 10)

LEGUMINOUS CROPS

Their Effects on the Soil and on the Crops Following.

By J. G. LILL,

Sedgwick County, Kansas.

(Continued from last week)
In the following table is given the legume crop grown; the crops reported on for the four years; and the effects of the legume on the yield of the crop in comparison with other fields of the same crop that had not been preceded by a legume

Alfalfa—1st year, corn, 100 per cent increase; 2d year, corn, good; 3d year, corn, fair; 4th year, corn, fair.
Alfalfa—1st, corn, 30 per cent increase; 2d, corn, 30 per cent increase; 3d, corn, 30 per cent increase.
Alfalfa—1st, corn, 60 per cent increase. (Only one crop since alfalfa was broken up.)
Alfalfa—1st, corn, 20 bushels more. (Only one crop since alfalfa was broken up.)
Alfalfa—1st, corn, 90 per cent increase. (Only one crop since alfalfa was broken up.)
Alfalfa—1st, corn, better; 2d, corn better; 3d, corn, better; 4th, speltz, failure.
Alfalfa—1st, corn, better; 2d, wheat, not as good.
Alfalfa—1st, corn, same; 2d, corn, 10 per cent less; 3d, corn, 10 per cent increase.
Alfalfa—1st, corn, better.
Alfalfa—1st, wheat, 25 per cent increase; 2d, wheat, 20 per cent increase.
Alfalfa—1st, wheat, doubled.
Alfalfa—1st, corn, failure; 2d, corn, failure; 3d, corn, failure; 4th, corn, better.
Alfalfa—1st, corn, one-half crop; 2d, corn, failure; 3d, wheat, failure.
Alfalfa and clover—1st, corn, 50 per cent increase; 2d, corn, 30 per cent increase; 3d, corn, 25 per cent increase; 4th, corn, 25 per cent increase.
Alfalfa, clover and cow-peas—1st, oats, 30 per cent increase; 2d, corn, 30 per cent increase; 3d, corn, 20 per cent increase; 4th, corn, 10 per cent increase.
Clover—1st, corn, 200 per cent increase; 2d, corn, 60 per cent increase; 3d, corn, 20 per cent increase.
Clover—1st, corn, 200 per cent increase; 2d, corn, 25 per cent increase.
Clover—1st, corn, better; 2d, corn better; 3d, corn, better.
Clover—1st, corn, 100 per cent increase; 2d, corn, 100 per cent increase; 3d, wheat, better.
Cow-peas—1st, corn, 5 bushels more.
Soy-bean—1st, corn, better; 2d, corn, better.

In considering the answers to the eighteenth question I find that some of the answers seem to be influenced to a small extent by the personal factor although in the main they are fairly constant.

Out of 21 reports giving good answers to the eighteenth question, 13 reported on alfalfa, four on clover, one on alfalfa and clover, one on alfalfa, clover and cow-peas, one on cow-peas and one on soy-beans. The answers are in the main all that I could hope, although less than I wanted. Out of 13 alfalfa reports, two men reported failure of all the crops planted after the legume for the first three years, two men reported failure of one crop which was not the first year. Out of the 21 reporting only

two men grew wheat directly after the legumes.

In two cases where no bad effects were noticed on the soil, the effect on the crop following was detrimental, in four cases where the soil did not seem to be improved, the effect on the crop was beneficial and the yield increased, and in one case where the effect on the soil was detrimental the yield of the crop following the legume was increased. That this effect on the crop results from some effect on the soil is undoubted as through the soil is the only way the legume can effect the crop following.

From the answers I have received I have concluded that the beneficial and detrimental effects on the crop following the legume are caused primarily by the same effect on the soil but the results may be changed in some instances by other conditions.

The effect on the soil tilth is first noticed in working the ground but the increase in fertility is first noticed on the crop following the legume. That the yields of the crops were generally increased is shown by the table. This indicates that the soil fertility was increased by the growth of the leguminous crop.

TWO FAILURE CROPS.

In the cases of the two failures, descriptions of the crops were sent in. The following are the parts of the answers describing the crops.

"During the first year after the legume, the crop of corn on the field was rank and tender and the foliage was very easily fired. The corn on the field which had not been under legumes was not as susceptible to drouth as the corn on the legume field. During the second year, conditions in both cases were identical with that of the year before. During the third year the corn on both pieces failed because of the unfavorable season. During the fourth year, the corn on the legume ground was the best and apparently as able to stand dry weather as any on the farm."

"The first crop on each field was corn, which was listed during April, both pieces being planted on the same day. The field with which the com-

parison is made had been in cane for four successive years. The corn on the alfalfa ground came up a little the earliest and was a little the evenest but the stand on both pieces was the same. The corn on the alfalfa land grew much faster than the other while the season was favorable but when the weather turned hot and dry, it turned white and began to dry up before the other corn showed any effect of the drouth. The corn on the cane land made about twice the yield and was better in quality. The second year's crop was oats and the results were similar on the same fields. The third crop ('08) was wheat. The wheat on the legume field came up and grew ahead of the other wheat in the fall. In the spring it grew better but we had a dry spell which hurt both fields of wheat. The tops of the wheat grown on the alfalfa land killed entirely, the other wheat while hurt was not hurt as badly. When the rains came the wheat on both fields came up and headed. The wheat on the alfalfa land did not ripen as early as the wheat on the other field. When we thrashed the wheat from the alfalfa field it made nothing."

The legume in both cases of the failure was alfalfa and the crops that failed were corn, wheat and oats. The soils that these crops were grown on were clay loam and sandy loam in Jewell county and black loam near Cawker City.

The descriptions of the two failures show that the detrimental effects resulted from too much available plant food together with a probable lack of moisture for the first crop following the alfalfa. The early and quick injury from drouth indicates that there was not enough soil moisture for the crop to draw on or from some reason the crop could not draw on the deeper moisture.

In the case of alfalfa, which is the legume that preceded the crops that failed, there is some chance that the supply of water in the soil had been depleted by the legume as the crop is deep rooted and vigorous and can draw on the deeper moisture in case of drouth which another crop cannot

do as readily, and in this manner the water that usually supplies the capillary moisture which supports the crop in case of drouth, might be taken from the soil to such an extent that the succeeding crop would be cut off from the deeper soil moisture. Another way that the crop of legumes might cause the crop following to suffer from lack of moisture is by the loosening effect noticed on the tilth of light soils after the growth of a leguminous crop. If this effect is great enough to cut off to some extent the supply of capillary moisture to the crop, the crop would suffer from drouth quicker than another crop not following a legume. It is probable that the portion of failures due to the lack of moisture was due to a combination of these effects rather than to either one alone.

DEFICIENCY OF MOISTURE IN SOIL.

This deficiency of moisture in the soil or the breaking of the capillary connection would cause only a partial failure of the crop unless the season was dry.

The other effects on the crop, the rank, quick growth, indicates that there was an abundance of available plant food in the soil. Part of this available plant food was nitrogen left in the soil by the decay of the roots of the leguminous crop. This nitrogen being taken up by the crop following the legume causes the characteristic rank growth and tender foliage which results from nitrogen fertilizer. If the nitrogen is in excess the growth is so rank and tender that it is easily injured by the hot weather. This is one of the detrimental effects of a leguminous crop that may cause a partial failure of the crops following.

Although the deficiency of reserve moisture in the soil or the effects of hot weather on the rank, tender growth might cause a complete failure of the crop when both these conditions are present, the crop is pretty certain to be poorer than the average from the fact that in the hot weather when the plant needs water most to support the succulent growth, it would not be able to get the water from the soil.

This shows that the detrimental effects on the first crop when present are caused by the greater fertility with usually a deficiency of moisture during the hot weather.

As both the fields described above were broken out in the spring the soil

(Continued on page 6)

Do State Fairs Pay?

When the question, Do State Fairs Pay? is asked it always has a financial bearing. The educational and social value of a state fair, which can never be measured, are lost sight of and the

money side only is considered.

Man learns by seeing and, even though he belongs to the most highly cultured of nations, a very large part of his information comes through his powers of observation. A state fair

affords him this opportunity at the minimum expenditure of time and money. It is a place where he can see his own state and its people. It is the state in epitome. But the prominent question is always one of dollars

and cents and, in order to answer this for the benefit of Kansas people we reproduce some facts and figures prepared by Hon. J. C. Simpson, Secretary of the Iowa State Board of Agriculture than whom there is no better authority.

TABLE OF COMPARATIVE STATISTICS OF STATE FAIRS FOR 1908

	Michigan	Wisconsin	New York	Kentucky	Ohio	Minnesota	Iowa	Nebraska	Spokane Inter-State	Indiana	Illinois	South Dakota	Oklahoma
Number of acres in fair grounds.....	140 A.	141 A.	162 A.	150 A.	115 A.	247 A.	280 A.	123.71 A.	58 A.	214 A.	156 A.	80 A.	.....
Title held in name of.....	State Agricultural Society	State	State	State B'd of Agr.	State	State	State	State	Spokane Inter-State Fair	State B'd of Agr.	State Bd. of Agr.	State B'd of Agr.	.....
Distance from city.....	7-12 miles	6 miles	31-2 miles	4 miles	Adjoining Corporatn Street cars and Ry.	5 miles	3 miles	1 mile	2 miles	5 miles	2 miles	.....	.....
Transportation facilities.....	Electric	Street cars	Street cars	Street cars	Street cars	Street cars	Street cars and Ry.	Street cars and Ry.	Street cars and Ry.	Street cars and Ry.	Street cars and Ry.	.....	.....
Present value of grounds, not including improvements.....	\$75,000 00	\$250,000 00	\$32,400 00	\$80,000 00	\$200,000 00	\$250,000 00	\$150,000 00	\$75,000 00 to \$150,000 00	\$50,000 00	\$321,000 00	\$78,000 00	\$20,000 00	.....
Value of improvements.....	400,000 00	250,000 00	400,000 00	160,000 00	800,000 00	500,000 00	400,000 00	150,000 00	40,000 00	300,000 00	750,000 00	60,350 00	.....
RECEIPTS													
Admission at outside gate.....	62,648 11	45,000 00	36,750 00	33,668 00	41,313 00	125,000 00	74,563 00	48,464 00	40,517 15	59,542 00	54,608 00	12,697 75	\$27,361 60
Admission at grand stand at race track.....	18,103 00	12,000 00	17,000 00	No charge	4,135 75	50,000 00	16,769 75	9,379 25	20,078 90	6,251 60	4,216 50	3,785 75	5,521 25
Concessions.....	49,147 59	15,000 00	10,000 00	6,000 00	7,868 60	37,000 00	20,500 00	10,330 00	7,932 00	11,257 00	13,069 40	2,482 52	11,889 51
Rental of stalls in live stock and speed departments.....	1,488 55	*13,175 00	*6,700 00	2,200 00	7,664 90	.....	3,144 00	1,896 00	1,296 75	1,867 00	x25,808 01	888 50	1,362 50
Admission at evening show in stock pavillion.....	None	Grand stand	None	None	2,500 00	2,500 00	3,562 70	None	None	4,988 00	None	None	None
Total receipts.....	\$141,576 26	85,175 00	95,000 00	52,000 00	65,043 85	243,000 00	138,764 66	77,700 00	82,304 68	93,572 71	97,601 00	25,737 00	59,267 24
DISBURSEMENTS.													
Premiums other than for speed, 1908.....	21,581 00	29,537 45	36,500 00	20,000 00	20,777 00	35,000 00	29,384 56	.....	1,246 83	27,714 14	37,343 00	6,713 75	10,801 00
Special premiums.....	635 40	2,591 89	.....	x16,200 00	100,000 00	2,000 00	1,700 00	675 00	868 65	909 62	110 00	652 19	.....
Races.....	10,900 00	24,850 00	29,630.30	6,000 00	9,000 00	12,000 00	9,360 00	8,683 75	12,375 00	14,635 00	13,780 00	6,389 69	12,223 50
Music and amusements.....	11,642 55	13,400 00	1,650 00	5,500 00	3,000 00	27,928 05	15,000 00	8,175 00	14,337 01	5,656 00	3,992 75	2,755 34	3,909 25
Total disbursements, not including amount for permanent improvements.....	94,546 29	80,737 70	70,000 00	38,000 00	46,644 63	160,000 00	94,593 21	53,500 00	72,589 16	.....	90,000 00	25,203 67	44,918 00
Net profit.....	45,000 00	4,437 30	20,000 00	12,000 00	18,399 22	83,000 00	44,171 45	24,200 00	9,715 51	.....	7,600 00	533 97	14,349 50
Total attendance.....	186,000	122,000	166,000	102,000	124,473	326,743	208,000	112,500	114,866	145,000	200,000	.....	.....

* Including entry. z \$15,000 by state. x From all other sources.



KANSAS FARMER

EDITORIAL



A LARGE PROPOSITION.

When, a few years ago, a proposition was advanced to ask the Congress of the United States to set aside the proceeds of the sale of public lands in the arid and semi-arid regions to be expended in the development of irrigation projects for the reclamation of lands whose only lack was moisture, the scheme at first seemed like a vision of an impractical socialism. The fact that it was suggested and advocated by an advanced socialist seems not to have militated against its endorsement by Theodore Roosevelt and its acceptance by Congress. The feature of the plan by which the money used should be returned to the Treasury in payment for the land reclaimed, thereby becoming a revolving fund, scarcely detracted from the paternalistic character of the Government's undertaking. The fact that lands, the irrigation of which is too great an undertaking for private enterprise and which without irrigation are valueless, are becoming valuable and are being sold for as much as the cost of the improvement so that the enterprise is creating wealth where was barrenness, planting homes where was desert, and is leaving the Treasury none the poorer is a hard jolt for conservatism.

But now comes a proposition whose magnitude makes former undertakings look insignificant. Arthur Hooker, secretary of the board of control of the National Irrigation Congress, will present a resolution for approval by that organization at its seventeenth session in Spokane, August 9 to 14, memorializing Congress to issue 3 per cent gold bonds, running 100 years, to the amount of \$5,000,000,000, or as much thereof as may be necessary, for the following specific purposes:

One billion dollars for drainage of overflowed and swamp lands, thus reclaiming an area equal to 100,000 square miles.

One billion dollars for the reclamation by irrigation of 40,000,000 acres of arid and semi-arid lands, now partly or wholly waste.

One billion dollars to construct and improve deep waterways, to develop thousands of miles of territory now without adequate transportation facilities.

One billion dollars for good roads and national highways, for the lack of which the loss to the farm area of the United States is approximately \$500,000,000 annually.

One billion dollars for forest protection, reforestation and conservation of the forest resources, thus assuring timber and lumber supplies for centuries to come.

It is claimed that the returns from the improvements would pay off the bonds; that the government would simply act as a banker, as it does now for the various irrigation projects; that the bond issue would provide ample funds as required to carry out the work in the several divisions, at the same time giving the best possible collateral to those investing in these securities; that there is enough good land overflowed in Minnesota, Wisconsin, Kansas, Nebraska, Louisiana, Kentucky, Tennessee and Mississippi to make an area as large as the state of Missouri, or more than 44,000,000 acres, while in the eastern, central and western states there is more than as much more, or about 100,000,000 acres in all, which at \$25 an acre it is claimed would justify the expenditure of \$2,500,000,000, or 150 per cent more than is estimated to drain it. The pleasing prospect is presented of support for 2,000,000 to 3,000,000 population.

Possibly the present plan of reclamation by irrigation, involving as it does the use of millions of money, is too slow or deals in figures too tame for the advanced conceptions of what Uncle Sam ought to do. Whether for this or some other reason may be only conjectured but it is intimated that the conversation ought to be in billions rather than in millions as witness the following:

"Approximately 40,000,000 acres of lands in western and southwestern states are adapted to irrigation, which, if reclaimed at an average cost of \$25 an acre, would be worth not less than \$200 an acre or a total of \$8,000,000,000, and provide homes for more than 8,000,000 persons. The economic value of irrigation cannot be measured in dollars and cents, but crops of from

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\$500 to \$1,000 an acre are not rare in the irrigated districts. There are already 14,000,000 acres under irrigation and the Reclamation Service estimates it will have reclaimed 2,000,000 acres, at a cost not exceeding \$70,000,000, before the close of 1911."

Equally brilliant figures are presented to prove the necessity and the profitability of the suggested use of the billions proposed to be applied to deep waterways, good roads, and forests. It is strongly argued that the Government and all the people will be gainers.

Doubtless a good many people will ask to be shown before consenting to commit the public treasury to a program of paternalism involving so vast appropriations.

GOOD COLLATERAL.

Under this heading, the National Stockman and Farmer offers some valuable suggestions on credit and investment:

"Some time ago we referred to the statement made by an editor of an Eastern agricultural paper who said: 'It is notorious that a great many national banks will not loan money to

tisers under the following conditions: We will make good the loss of any paid up subscriber who suffers by dealing with any fraudulent advertiser in our columns, provided complaint is made to us within thirty days after the transaction. This guarantee means just what it says. It does not mean that we guarantee to settle all trifling disputes between a subscriber and an advertiser, though we offer our good offices to this end. We do, however, protect you from fraud under the above conditions. In writing to advertisers be sure always to say: 'I saw your advertisement in Kansas Farmer.'"

CONTRIBUTIONS.—Correspondence invited on all farm topics, live stock, soil cultivation, grains, grasses, vegetables, household matters, recipes, new and practical farm ideas, farm news. Good photographs of farm scenes, buildings, live stock, etc., are especially invited. Always sign your name, not for publication, unless you desire it, but as an evidence of good faith. Address all communications to

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Topeka, Kansas.

farmers, or refuse them accommodations.' The KANSAS FARMER has submitted this question to the bankers of Kansas, and they are unanimous in saying that it's news to them. They prefer farmers' notes to any other paper. It is not necessary to discuss this matter further because it is not worthy of serious consideration. Farmers can get the same treatment as anybody else at the banks if they have the same basis for credit. But neither farmers nor any other class can be accommodated by the banks as far as they or the banks desire unless the basis for credit is in such form that it can be made available quickly in case of emergency. A bank must have a certain proportion of its loans based on securities that can be turned into cash readily. This leads to the suggestion that stocks and bonds of recognized value are a valuable investment for a farmer or any other business man, not especially for the returns which they yield but because when money is needed from a bank. The man who has collateral of recognized value will find it a great convenience to him; and he will find it economical also in many cases. Instead of carry-

TEXTS FOR FARM SERMONS.

Let every farmer choose one or more of the following sentences as a text for a farm sermon. Every one of the sentences will bear rereading. Paste them in your scrap-book and do not forget them. These sentences are taken from a recent address by Dr. L. H. Bailey of Cornell University, Ithaca, N. Y., upon the subject of The College of Agriculture and the State."

The farmer is rapidly becoming a citizen of the world. Teaching on farms, I consider to be fundamental to rural progress. Within a generation, practically all the farm buildings in New York should be rebuilt.

The entire subject of farm accounting must be attacked in a new way. The ordinary bookkeeping will not apply.

It is probably more important that we now attack the home side of country life than other phases of the work.

Every good farm must, in time, have its own power; but we must first train up a race of mechanical-minded farmers.

I doubt the wisdom of separating the administration of agricultural education from that of other industrial education.

A farmer has a right to ask that his son and daughter be given facilities for country life education in his home school.

As our fundamental crop is by nature grass, so must a highly developed animal husbandry be a necessary part of our agriculture.

We ought to raise the larger part of our farm lumber and timber as we should raise our own meat and butter and fruit and silage.

The state cannot afford to expend millions of dollars for highways until the local officers are properly trained for their duties.

We think of farming as a dry land business. It is a fact, however, that an acre of water may be made to yield more food than an acre of land.

The engineer is to exert tremendous influence on the development of our rural civilization, play a part that we little realize today.

It would be possible in many cases to grow experimental crops on certain parts of the fair grounds to be standing on exhibition when the fair meets.

The agricultural college must be taken to the people. It will be exceedingly necessary to substitute demonstration and laboratory work for much of the lecturing.

The increase in value for farm property in New York state is coming largely as a result of good roads and general improvement, rather than from merely the better farming.

All effort for rural progress should recognize the fundamental principle that initiative of the people should be stimulated directly in the locality and that the people should be taught to help themselves.

ing a checking account large enough to take care of his occasional needs he can invest in such stocks or bonds as may be good collateral security. From them he will derive some revenue, and with this collateral he need ask no one to endorse for him and therefore need be under no obligation to endorse for others. The best collateral does not yield the highest returns in cash, but it does pay in the matter of securing prompt accommodation at banks."

Jay Gould once said that making a fortune depends largely on one's ability to use borrowed money profitably. But profit in the use of borrowed money, while dependant upon many things, is closely related to the interest rate. The interest is closely related to the risk. The risk depends upon several elements among which the honesty and proficiency of the borrower are of the first importance. But the lowest rates are granted when perfect collateral is given so that the lender cannot lose.

It may be asked if one have money to invest as the National Stockman and Farmer suggests, why it is not better to keep the money until wanted and then use one's own instead of borrowing. But, for short time investments such as buying feeders, carrying the expenses of the harvest, etc., it is rather expensive to hold the money in idleness during several months. Securities of the kind mentioned bear low rates of interest but they continue earning throughout the year and are gladly accepted in the money markets as collateral for short time loans at the lowest rates.

True, the banks are willing to loan to farmers at as low rates as to anybody, but the money market nearly always has a lower rate for large loans on first class collateral than for any other kind of paper.

Again, Kansas school district and other municipal bonds are not taxable in this state, while money in the bank or otherwise held is sure to appear on the tax rolls.

PRICES OF COMMODITIES.

Fluctuations in prices of commodities in universal use produce conditions of importance to all. They have much to do with the distribution of wealth and are therefore studied with the utmost care by those who seek to lay up great fortunes of this world's goods.

These fluctuations have received much attention from persons who would assist the laborer to retain a competence as well as to enjoy a liberal share of the products of industry.

A recent bulletin of the U. S. Bureau of Labor, No. 81, contains the results of official investigations on the course of prices for the years 1890—1908, inclusive. As a basis for comparison the average of prices for 1896—1899, inclusive, is assumed to be normal.

Fluctuations above and below this average are indicated in percentages. Commodities are considered under several heads, as farm products, food, etc., clothes and clothing, fuel and light, metals and implements, lumber and building materials, drugs and chemicals, house furnishing goods, miscellaneous.

It is found that the average wholesale prices of all commodities reached the lowest mark of the period 1890—1908, in 1897, when the figures were 89.7 as compared with 100 for the ten year period whose average was taken as normal. From 1897 there was an uninterrupted rise in the average for all commodities until it had reached 129.5 for 1907. The figure for 1908 is 122.8.

While every one of the groups mentioned showed advancing prices from about the year 1897 to 1907, there was considerable variation. Farm products advanced from 78.3 in 1896 to 137.1 in 1908. The advance in prices of farm products was steady until 1902 when the figure was 130.5, but it fell to 118.8 for 1903. Recovery was somewhat irregular until the maximum, 137.1 for 1907 to be followed by a slump to 133.1 for 1908.

Average prices of food etc., varied in a manner somewhat analogous to those of farm products but through a smaller range. In this group the minimum 83.8, was reached in 1896 and the maximum, 120.6, in 1908. Clothes and clothing were lowest, 91.1, in 1907.

They were highest, 126.7, in 1907, and receded to 116.9 in 1908.

Metals and implements were lowest, 86.4, in 1898. They rose to 143.4 in 1907 and went down to 125.4 in 1908.

Lumber and building materials were lowest, 90.4 in 1897. They scored a greater advance than any other group, being 146.9 in 1907, and fell to 133.1, the same as farm products, in 1908.

It is quite likely that the prices of farm products and of lumber will show larger advances than the other groups for 1909.

The analysis shows that the relative increase in the prosperity of the farmer is real. That it is to continue is a fair deduction from any broad-minded consideration of sources of supply and the inevitable demand for food and fiber.

"WHY DID YOU LEAVE THE FARM?"

The Country Life Commission asked several kinds of questions and received more kinds of answers. The answer of a man who had clerked in a store for 22 years was given out as typical. He was 50 years old, raised on a farm, and went with the rush to the city. To the Commission's question, "Why did you leave the farm? Have you done better in the city than you could have done in the country?" he answered: "I left the farm, as it looks to me now, mainly because I was a fool and had nobody to hammer some sense into me. I was tired of working 12 to 13 hours a day on the farm at \$25 a month and board, and for 28 years I've been tired of working 12 to 18 hours a day in the city at \$25 to \$45 a month and board myself. I was the social equal of the best people in the rural community. Here in the city I have been and now am a social nobody, have lived a part of the time worse than any hired farm hand ever lived, have done twice as hard work here as I would have done on a farm, have saved nearly \$500 in 28 years, and have never been situated so that I felt free to marry. If I don't have too many drawbacks, I may be able to die outside of the almshouse. If I had it to do over, I'd stay on the farm!"

There was more rational reason for leaving the farm a quarter of a century ago than there is now. Then new farm lands were going into cultivation at a rapid rate. They supplied the world's markets beyond the demands. Farmers on the new lands were plunged into debt and those in the older states found it impossible to "make ends meet." But the conditions have changed. The big new lands are occupied and the demands for food and fiber are fully up to the supplies. The present season witnesses a sweeping of the wheat bins and a clearing out of the corn cribs to provide bread for the eaters. The world's growing crop of grain will not over supply the markets for the next year, so that remunerative prices are assured.

This means that the prosperity of the farmer is to continue. It means that financially his position is still to be a strong one; that compared with his city brethren he has the best of life's bargain.

If the 50 year old clerk who fled from the farm to the city years ago, now has cause to reproach himself for leaving the farm, what will be the retrospect of him who now makes such a change when conditions are turning against the city worker and in favor of the farmer?

PRICES AND THE BREEDER.

The course of prices of staple farm products during the nineteen years beginning with 1890 and ending with 1908 shows a greater advance in oats than in any other of these commodities. Taking average prices for the ten years 1890-1899 as a basis, or 100, the 1908 average for oats was 189.5. The 1908 average for corn was 179.9; for wheat 131.8; for good to choice steers 126.7; for heavy hogs 131.4; for cotton 134.8.

For corn, hogs and cotton, the 1907 average prices were higher than those of 1908. For hogs and cotton the 1906 prices averaged higher than those of 1907.

The highest average prices for hogs and cattle during the nineteen years obtained in 1902. The relative figure for good to choice steers was 138.5, the average actual price for the year being \$6.557 per hundred pounds. The relative figure for heavy hogs for 1902 was 158, the actual average for that year being \$6.9704 per hundred pounds.

There is now an upward tendency in

prices of most farm products. The great advances are in the prices of the grains.

The effect of prolonged high prices of grain is to stimulate prices of cattle and hogs. This is necessarily so because dear grain, especially dear corn, renders the production and feeding of cattle and hogs expensive. The reaction leads to rapid marketing of animals which temporarily depresses prices. The tendency to reduce breeding operations and to market breeding stock produces eventually a scarcity resulting in prices for feeders and breeders above the normal. When these conditions are succeeded by a liberal corn crop the scarcity of animals to eat it tends to depress the price of corn while the high prices of feeders are strengthened by the great demand and liberal prices of animals for the block.

The course of recent and prospective events presages good fortune for the owner of well bred meat producing animals. They can be kept thriving on alfalfa or clover with a little grain until the corn is ready, when they will turn it into profit with marvelous rapidity.

It seems unnecessary to say that present prices of feeds render it absurd to produce any but well bred animals capable of making quick and liberal gains on full feed. The breeders of the best will do well to be prepared for an active market in the near future.

THE WORLD'S LOAF

In an address before the British Association for the Advancement of Science a few years ago, the president of that association, Sir William Crooks, used the following language:

"Practically there remains no uncultivated prairie land in the United States suitable for wheat growing. The virgin land has been rapidly absorbed, until at present there is no land left for wheat without reducing the area for maize, hay and other necessary crops. It is almost certain that within a generation the ever-increasing population of the United States will consume all the wheat grown within its borders, and will be driven to import, and, like ourselves will scramble for a lion's share of the wheat crop of the world."

It has been hard for the world to realize that the tremendous expansion of the wheat-growing areas which resulted from the rapid settlement of the country lying between longitude 96° and 102° in the United States which took place during the last third of the last century could not be continued indefinitely. This phenomenal opening of new wheat lands over stocked the world's markets and depressed prices.

Wheat is a pioneer's crop. It rapidly depletes fertility so that there comes a time when the new country must produce other crops or go out of business. Diversified farming, especially the keeping of stock and the growth of legumes, allows the soil to regain fertility so that under wise management wheat again yields good crops.

But the increase of population does not cease, and while corn may be in some measure substituted for wheat, the anxiety of thinkers concerning the world's loaf in the near future is more than fanciful.

The coming harvest will probably ease the market somewhat but the demands upon the millers on account of the necessities of the eaters militate against a low range of prices now or in the future.

FALL IN EXPORTS.

International commerce of the world for the year ending June 30, 1909, was considerably less in values than in either of the last two preceding years. In this decline the United States suffers with the other commercial nations. Our exports are in round numbers \$200,000,000 less than last year. Of this reduction about \$90,000,000 is in food stuffs, \$90,000,000 in manufactures, and \$20,000,000 in cotton. The decline in food stuffs exported results from the smaller quantities exported. Prices for food stuffs were higher than last year. The decline in the value of cotton exported results from lower prices. The quantity of cotton exported is much greater than for last year.

All exporting countries have experienced drops similar to our own. The reduction of imports to importing countries has been very great.

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has arrived at the song book stage. The Suffrage Song Book differs from the ordinary in that it is high-toned and the versification is perfect. Anything else would do violence to all ex-

pectations after reading the name of Dr. Henry W. Roby as the author. The booklet is published by Crane & Company, Topeka, and will doubtless have a large sale.

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MARKETS

Live Stock.
Kansas City Stock Yards, June 21, 1909.—The supply of cattle last week was 3,000 head, a decrease of about 4,000 head from previous week but an increase of 28,000 head over same week a year ago as at that time last year business was crippled account of the high water. In spite of the light receipts, market on medium and heavy weight steers declined 10 to 15 cents up to Thursday, when there was a re-action account of scarcity. Top steers sold at \$7 on different days. Light weights and yearling steers were in best demand. Choice heifers and cows remained steady, while those showing grass rind 10 to 15 cents lower for the week. Calves were dull and closed the week 25 cents lower than previous week, occasioned by the heavy increase in the receipts of same. The supply of cattle today is moderate at 3,000 head, choice fed cattle scarce and in good demand. Handy weight steers are in best demand, top today \$7, paid for eight head of 1,081 pound steers, bulk of steers selling at \$5 to \$7. Best cows and heifers are steady this week, others showing grass slow, cows at \$2.75 to \$5.50, heifers up to \$6.60, bulls \$2.75 to \$5, calves firm at \$4 to \$7. Demand for stockers and feeders \$4.60 to \$5.50. The supply of quarantine cattle continues liberal, 5,000 included in receipts today, market in that division strong and active. Packers claim their indifference is caused by a poor outlet for the dressed product in the east.
The hog market continued its upward turn each day last week, and is again higher to-

day. The supply of hogs at all the markets is very light for this season of the year, and prices paid today are the highest paid at this point since June, 1902. The run today is 8,000 head, market strong to 6c higher. Heavy hogs are selling at \$7.70 to \$9.75, packers and butchers \$7.70 to \$7.90, lights \$7.35 to \$7.75, pigs \$5.75 to \$7. With continued light marketing of hogs, price will pass \$8 mark.
With increased receipts of sheep and lambs last week and quality only fair, market fluctuated widely, mutton grades closing the week with a loss of 15 to 25 cents, lambs suffering a loss of 10 to 20 cents. Receipts included a good many stock sheep. The run today is 12,000 head, sheep 15 to 25 cents off, lambs 25 to 30 cents lower. Some spring lambs sold at \$8.50 today. Bulk of lambs sold at \$6.75 to \$8, wethers \$4.50 to \$5.50, ewes \$4.35 to \$5.15, goats \$3.25 to \$4.40. Depuwoth0-%-KWVWbqt etaoin shrldu

Cash Grain.

Kansas City, June 21, 1909.—Hard wheat—No. 2, choice turkey, nominally \$1.35@1.36; fair to good turkey, 1 car \$1.34; dark, nominally \$1.32@1.33; yellow and ordinary, nominally \$1.31@1.32.

No. 3 hard—Choice turkey, nominally \$1.34@1.35; fair to good turkey, nominally \$1.33@1.34; dark, 1 car \$1.28, 1 car \$1.27; yellow and ordinary, nominally \$1.25@1.29.

No. 4 hard—Turkey and dark, nominally \$1.30@1.32; ordinary, nominally \$1@1.25. 1 car \$1.14, 1 car \$1.03, 2 cars like sample \$1. Soft wheat—No. 2, choice, nominally \$1.35@1.39; fair to good, nominally \$1.31@1.33.

No. 3 soft—Choice, nominally \$1.30@1.38; fair to good, nominally \$1.27@1.28. No. 4 soft—Nominally \$1.16@1.26. Mixed wheat—No. 4, 1 car durum \$1.05. White corn—No. 2, 1 car 72c.

No. 3 white—1 car 71½c. No. 4 white—1 car 68c. Mixed corn—No. 2, 1 car 69½c, 9 cars 69c, 1 car like sample 68½c.

No. 3 mixed—3 cars 68½c. Yellow corn—No. 2, 1 car 69½c. No. 3 yellow—Nominally 69c.

Butter, Eggs and Poultry

Kansas City, June 21, 1909.—Butter—Packing stock, 18c; grease butter, 4c; extra creamery, 24c; creamery firsts, 22c; creamery seconds, 20c.

Eggs—Extras, 20c; seconds, 16c; current receipts, flat, 17½c; loss off 19c; southern eggs, loss off, 17½c. In miscellaneous cases, ½c less. All quotations are 1c less when cases are returned.

Poultry—Hens, 10½c; hens, 11c; roosters, 7c; broilers under 1½ pounds, 18c; over 2½ pounds, 20c; culls, 5c; young ducks, 7½c; turkey hens, 12c; toms, 11c. Flgin, Ill., June 21, 1909.—Creamery butter, 25c.

The shortest, safest and most satisfactory way by which to reach the Alaska-Yukon-Pacific Exposition at Seattle, Wash., is over the Union Pacific and Oregon Short Line route. This is why this route was selected for the Kansas State Agricultural College excursion which leaves Kansas City at 10 o'clock a. m. on Saturday, July 3 and this is why so many people are going over this road to attend the great Epworth League convention at Seattle in July. Ask your local ticket agent or write to H. G. Kall, A. G. P. A., 901 Walnut St., Kansas City, and mention Kansas Farmer.

Leguminous Crops.

(Continued from page 3)

had not had a very good chance to store water during the winter.

For the second and third years' crops when the soil moisture had been partially restored during the winter, the failure of the crops was probably due to the high state of fertility of the soil causing a rank, tender growth of the crop which was easily injured by hot weather. In the case that this rank, tender growth isn't injured by the hot or dry weather the effects of the over-supply of nitrogen are such that there will be very little seed formed since too much nitrogen causes an increase in the forage or straw and a corresponding decrease in the per cent of grain, also that crops mature later.

POSSIBLE FAILURE WHERE CROPS FOLLOW A LEGUME.

The instances of failures reported represent only a small portion of the replies and are not to be considered as typical of the effects of growing a legume, but these results should be considered as showing the possible failure of crops following a legume.

As the effect on the fertility and moisture have been described in discussing the causes of the two failures, it remains only to give a short discussion of the increase in the crops and the cause. As shown by the table there were only two total failures and two partial failures, all other reports gave an increase in the yield except one which stated that the yield was the same.

In considering the increase in the yields of crops grown after legumes,

EXCHANGE COLUMN.

If You Want

a quick deal, list your trading property with us. We trade while the other fellow sleeps. We have exchanges for land, merchandise, live stock, or anything of value. Try us.

NEFF REALTY CO.,
Olathe, Kansas.

Good 320 acres in Marion Co., Kan., improved. \$8,500.

Fine 320 acres close to Marion, Kan., all grass. \$10,500.

Good 160 acres of wheat land, Lane Co., Kan. \$7.50 per acre.

I have good farm to trade for hardware stock and some lands to trade for merchandise. Write for my big list of bargains.

SOUTHWESTERN LAND CO.,
Geneseo, Kansas.

Trades Wanted

direct from owners of farms, ranches, income property, merchandise and hardware stocks, hotels, livery stocks. List your property with us, giving complete description. We can get what you want. No sale, no pay. Buyers wanted for good farms.

BERSIE REAL ESTATE AGENCY,
Eldorado, Kansas.

500 TRADES.

We have the largest list of farms, ranches, income property, merchandise, hardware, hotels, livery etc., of any firm in the West. We print description of your property on our list, and will get you a good honest trade of just what you want.

GRAHAM BROTHERS,
Eldorado, Kansas.

THE STRAY LIST

JUNE 19.

Geo. Throckmorton, Co. Clk.

Taken up on the 5th day of May, 1909, by D. F. Vanness, Burlington, Kan., in Hampton tp., Coffey Co., 1 red steer, branded with the letter S; some white on head and belly; very thin in flesh. Appraised at \$20.

I find that the yields were nothing to 100 per cent better than the crop with which they were compared the first year, while the second year's crops usually showed about half the increase of the first year and the third year's crop was usually smaller than the second but still showed a profitable increase. This increase in the yield was accomplished by a quicker growth and an increase in the forage or straw. This increase in both the yield and the forage or straw was caused by nitrogen left in the soil by the decay of the legume roots as indicated by the ranker, quicker growth. In extreme cases where the soil is left too fertile by the leguminous crop as shown above, a failure of the crop is caused by the detrimental effects of an over-supply of nitrogen, but this is not the usual case as shown by the table of reports.

The effects of a leguminous crop on the soil and on the crops following as shown by this study are:

1. That the tilth and fertility are bettered although in a few cases the supply of soil moisture may be decreased.

2. That in most cases the yield of the crop following the leguminous crop, especially the forage yield is increased.

The conclusions that I have reached in the course of this study are: That the crop of legumes improves the tilth and increases the fertility of the soil and that this improvement in tilth and increase in fertility gradually decrease until the soil is about the same as it was before the growth of a leguminous crop. That the crops following the legumes are usually benefited by this improvement in tilth and increase in fertility, though injury may result from the extreme conditions, and that the yield of crop may be materially increased by the growth of a leguminous crop in rotation.

Blacklegoids
Simplest, Safest, Surest Vaccination
for the prevention of
BLACKLEG IN CATTLE
NO DOSE TO MEASURE. NO LIQUID TO SPILL. NO STRING TO ROT.
Just a little pill to be placed under the skin of the animal by a single thrust of the instrument. You cannot afford to let your cattle die of blackleg when a few dollars spent on Blacklegoids will save them. Write for circular.
PARKE, DAVIS & COMPANY
HOME OFFICES AND LABORATORIES, DETROIT, MICH.
NOTICE—For a limited time we will give to any stockman an injector free with his first purchase of 100 vaccinations.

Bargains in Farms, Ranches & City Property

SPECIAL BARGAINS—80 acres 3 miles from Clyde, second bottom, \$50 per acre, 150 acres near Green in Clay Co., 90 under plow, well improved, \$50 per acre. 160 acres pasture near town, \$3,500. Write for fine large list. **WALTER NELSON, Clyde, Kan.**

COMPLETE DESCRIPTION Texas Panhandle, covers 25 years, \$2 pp., complete birdseye view and wall map Amarillo, 15,000 population, in heart of Panhandle, sent prepaid for 35c; clubs of four, \$1. Order today—edition limited. Mirror Publishing Co., Amarillo, Texas.

320 ACRES of extra good land, house of 14 rooms, a fine barn, and other good improvements, 2 1/2 miles to town. One of Brown county's best. Enquire of **R. A. HENRY, The Real Estate Man, Hiawatha, Kansas.**

160 ACRE farm bargain, 7 miles northeast of Ness City. Small frame house 2 rooms, frame barn for 4 horses, hen house, small granary, good well and windmill, 75 acres in cultivation, 35 acres in wheat, one-fourth with place, 12 acres alfalfa. Land can be plowed, nearly level, 1 mile to school. Price \$2,500. \$2,000 must be cash. **J. C. LOHNES & SON, Ness City, Kan.**

LYON COUNTY LANDS. Choice half section, well improved, school, mail, town, 8 miles Emporia \$60. Photos sent. A choice \$0, \$5,000. 160 near town \$50. Send for list. **H. B. GILES, Kansas. Emporia,**

FARMS FOR SALE in South Missouri. I have several good farms for sale on easy payments from \$5.00 to \$10.00 an acre. Please write me for full particulars. **WILLIAM BOWEN, Houston, Missouri.**

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

A SNAP FOR SOME ONE. 640 acres of fine land 6 miles from Dodge City, Kan., 230 acres in wheat, one-fourth goes with land if sold by June 1. This is all nice level land except about 40 acres and will come in in good shape for pasture; no other improvements. Price \$17.50 per acre. Terms can be arranged on part, at 7 per cent. **C. L. WELLS, Kansas. Great Bend,**

ARKANSAS—"Don't you wish you had bought when you were here before?" That is what they all say; and then, buy before it doubles up again. What have you got that half equals it? You can't find it in America. Think of the money bags being hauled in by a single farmer. Thrashing and hauling \$1,000 a day and more—getting the cash the same day. We have other propositions that will beat your best; besides, the best climate, best roads, best water and fine people, and anything else you want. I own the cheapest land on Grand Prairie and can make you terms—won't price you out. Also, fine timber lands. **F. W. HOUSTON, Stuttgart, Ark.**

LOOK AT THIS. No. 503.—Here is a ranch of 2,960 acres, that we can recommend as good a cattle ranch as there is in the country; all under fence, plenty of water, 600 acres fine bottom land, suitable to grow alfalfa; the improvements, stone house, barn 50x35, stone shed 100 feet long, and all other necessary improvements that are required on a ranch of this kind. The survey of the new railroad running from Garden City to Stockton, runs near or through this place. Rural telephone and post office on the place. Price \$12.50 per acre, part time will be given. **TEED & ORBISON, Kansas. Jetmore,**

FREE NATURAL GAS FOR FUEL AND LIGHTS. 160 acre farm 3 miles from Mound Valley all tillable, 15 acres corn, 100 acres clover and timothy, 40 acres clover and blue grass pasture, lays just right to drain well, watered by wells and creek, good practically new ten room, two story house, summer kitchen granary and good barn 24 by 40—16 ft. studdings; free gas for fuel and lights—house already plumbed—crops go with the place if sold before harvested, orchard and small fruit, two miles to nice church, 1/2 mile to nice brick gas heated school house, fine neighborhood. This is something choice. Come and see it.—**DONAHUE & WALINGFORD, Mound Valley, Labette Co., Kansas.**

SOLOMON VALLEY LAND. We have farms for sale in Ottawa and adjoining counties, good upland improved at from \$25 to \$60 per acre. Bottom land improved at from \$60 to \$125 per acre. You have not seen the best till you see the Solomon Valley. **A. E. ROBINSON LAND CO., Winneapolls, Kansas.**

SMITH CO. KANSAS STOCK FARM. 210 acres all ready to move on to and make money. Mostly in cultivation, 25 acres alfalfa part in hog pasture, fair house, good barn, other improvements fair, good shallow water, shade and fruit trees, all fenced, land is rolling and some rough but makes good pasture; an ideal stock farm, close to school and church North of town 1 1/2. Good roads, investigate now. Price \$35 per acre. **CARL G. ANDERSON, Kansas. Athol,**

GREAT RANCH LANDS, In Comanche county, Kansas, in the corn, wheat and alfalfa belt to be divided into small farms, one of the best bodies of farm land in the county. Price from \$10 to \$20 per acre, terms to suit. **ADAMS BROS. & HAM, Kansas. Atchison,**

BARGAINS IN KANSAS LANDS. 400 acres in Morris county, 2 sets of improvements, \$50 per acre. 240 acres one mile from Herington, well improved, \$75 per acre. City property in Herington to exchange for land. Farms in Kiowa, Gove, Ford, Rush and Ness counties at various prices. **ROBT. SUTHERLAND, Kansas. Herington,**

FOR SALE—1,500 acres WASHITA BOTTOM, a bargain, will sell all or part. **FRANK P. KIBBEY, Purcell, Okla.**

WASHINGTON COUNTY LAND FOR SALE—Two hundred acres 4 miles from good town. 70 acres wheat, 5 room frame house, new barn 30x60, granaries, cribs, etc. All under fence. Price \$45 per acre. Very easy terms. **W. J. GORDON, Washington, Kan.**

490 ACRES meadow land nicely located, well fenced with 4 wires all lies in a body, and can be used for pasture. Within 40 rods of switch on Mo. Pac. R. R. Could be divided into a nice farm and is a bargain at \$30 per acre. **C. E. CANTRALL, Fredonia, Kan.**

90 ACRES OF CREEK BOTTOM and upland, 75 acres in cultivation, balance meadow, no other improvements, 3 miles from town. Price \$3,800. A snap, as 40 acres of it is fine alfalfa ground. **J. S. BOYLE, Bennington, Kansas.**

MCPHERSON COUNTY. 80 acres 3 1/2 miles Salina, all in cultivation, \$4,500. 240 acres in Saline county, 80 in cultivation, all fenced, fair improvements, 1/2 mile school and church. \$25 per acre. **WM. KINDT, Marquette, Kan.**

J. W. BRADSHAW, The Land Man, of Herington, Kansas, is offering a section of land with two sets of improvements, six miles from Herington, for \$45 per acre. 200 acres under cultivation. A snap well worth \$50 per acre.

GOOD FARM CHEAP—160 acres, 130 in cultivation, all fenced, 3 room house, barn, cow shed, poultry house and well and windmill, only 4 miles to R. R. where an elevator will be built this summer. Will take a small cash payment and give 5 years on balance. Price \$2,500. **KIRBERG & MILLER, Ness City, Ness Co., Kan.**

MARSHALL COUNTY BARGAINS. Large list of improved farms for sale at \$40 to \$100 per acre. 200 trading propositions. Can match you on anything. Write for complete list. **TROSPER & BLACKNEY, Frankfort, Kansas.**

A NESS COUNTY BARGAIN.—320 acres 12 miles from Ness City, 3 room house, frame barn, well and windmill. Some very good alfalfa land. Price \$15 per acre. Call or address, **LOHNES & OASON, Ness City, Kansas.**

IRRIGATED FARMS FOR SALE. In the famous Arkansas Valley of Colorado and the Pecos Valley of Texas, reasonable prices; good terms. If you want a money making investment or an ideal home write for further information. **J. F. CUREY, Lamar, Colo.**

960 ACRES of good farm land in Chase county, Kan., close to market, well improved, 80 acres alfalfa, 200 acres in cultivation, balance meadow and pasture. Price \$25 per acre. **HALE & ENGLISH, Dodge City, Kansas.**

SCHUTE & SHINEY, the Rush county, Kan., real estate hustlers; 30 years in the same old place. Good farmers raised from 26 to 47 1/2 bushels of wheat per acre here last season. We can sell this land at from \$20 to \$35 per acre. Good improved ranch land, 1/2 good farm land, at \$15 per acre. Good bottom land not over 5 miles from market at \$25 to \$35 per acre. Well improved and running water, plenty of timber. See us, or write us at La Crosse, Kan.

FOR SALE—320 acres of good wheat land in the famous wheat belt of Logan Co., Kan. 4 miles from Monument, and 3 miles from Page. 40 acres in cultivation. Price \$12.50 per acre. Purchaser to assume R. R. contract for about \$1,700. This is a snap. **W. H. LINVILLE, Kansas. Beloit,**

A GOOD CORN FARM. 160 acres, 40 acres pasture, 6 acres mow land, 6 acres alfalfa, 108 acres in corn; the soil is dark loam bottom land that does not overflow; located 10 miles from Wichita and 3 and 4 miles from 2 other good towns. Improved with 8 room house, fair barn, chicken house and other outbuildings, has good small orchard and plenty shade and timber, watered by 2 wells and windmill. Price \$90 per acre and a bargain. **THE NELSON REAL ESTATE & IMG. CO., 137 N. Main St., Wichita, Kan.**

ARE YOU LOOKING FOR A HOME? No farmer should think of buying a home before seeing a copy of THE FARM AND REAL ESTATE JOURNAL. It contains the largest list of farm lands, city property and stocks of goods of any paper published west of Chicago. It reaches 50,000 readers each issue, 85 per cent of whom are farmers. Every one who has any property they wish to advertise will find this journal one of the best advertising mediums published. Advertising rates, 2c per word each insertion. Send 75c and we will mail you the Journal for one year, or for 10c in silver or stamps we will send it for two months on trial and stop it at the end of the two months unless you renew your subscription. **FARM AND REAL ESTATE JOURNAL, TRAEER, IOWA.**

FARM BARGAINS NEAR TOPEKA. 100 acres, 10 mi. Topeka, 4 mi. R. R. town, 70 acres cult., bal. timber and pasture, 4-room house, barn 5 horses, good orchard, good water. Price \$50 per acre. 150 acres 11 mi. Topeka, 5 mi. good town, 80 acres bottom and second bottom, no overflow, 20 acres timber, 6 room house, good barn, orchard, etc. Price \$50 per acre. 160 acres 12 mi. from Topeka, 2 mi. of R. R. station, 100 acres cultivation, 60 acres pasture, 7 room house, bank barn 30 by 50 ft., cistern, wells and spring, orchard. \$40 per acre. 190 acres, 8 1/2 mi from Topeka, 2 mi. from station, 115 acres cult., 40 acres mow land, 7 acres timber, bal. pasture, 6 room house, barn for 6 horses, sheds, etc. Price \$38 per acre. The above are all bargains. Come and see them 104 West Fifth Street. **GILLET & GILLET, Kansas. Topeka,**



Kansas State Agricultural College

MORRIS AND NORTH LYON COUNTY farms for sale. Write for list. We have a few bargains that will not be on the market long. Property for sale and trade. **F. L. JOHNSTON & CO., Kansas. Dwight,**

HOMES AND INVESTMENTS. In reach of all in a growing locality. For information write, **WINN REALTY CO., Kansas. Jetmore,**

ROOKS COUNTY LAND One Hundred Farms for Sale. Write for Lists. **C. H. DEWEY, Stockton, Kan.**

Corn and Alfalfa Farms for Sale Dickinson Co., Kansas, 160 acres, 30 acres in alfalfa, 7-room house, large orchards, good improvements rice \$60 per acre. 320 acres, large 6-room house, 50 acres nice alfalfa, 60 acres meadow and pasture. Living water. All good corn and alfalfa land. Price \$60 per acre. 80 acres good improvements, nice orchard, large 4-room cottage. Corn and alfalfa land. Price \$6,000. This is a bargain. Write to James Sheeran, Solomon, Kan.

Reno Co. Farms. 320 acres, 12 miles from Hutchinson, Kan., all in cultivation; improved land, at \$21,000. Also 320 acres, 3 miles from Burrton, Kan., well improved; 200 acres in cultivation, balance pasture, at \$11,500.

CHARLES PETERSON, Hutchinson, Kansas.

For Quick Sale. 160 acres in Trego county, 80 acres wheat. All goes \$1,600. Be quick. **STEVENS & RUBY, Stockton, Kan.**

Missouri Farms For Sale. Everman has a farm for every man. Write for description and price list. **JOHN W. EVERMAN, Gallatin, Mo.**

Ford County, Kan. Lands. For sale. Write for price list and crop reports. Cooperation solicited. **BROWN & VERNON, Kansas. Dodge City,**

HELLO FARMERS! Have you read my list of GREENWOOD CO. FARMS? The best corn, alfalfa, clover, cattle and hog country in the west. Fine blue stem pastures. Write for list and prices to P. D. STOUGHTON, Madison, Kan.

Hodgeman County Lands. Choice wheat and ranch lands. Write for price list and county map. **F. M. PETERSON, Kansas. Jetmore,**

Ozark Fruit Farm For Sale. 120 acres, 60 acres in cultivation, balance fine timber. Good 3 room house, 3 fine springs, fine apple orchard, large thrifty trees, other fruits. 1 mile from town. Good reason for selling. Price \$1,000. Write me for full particulars. **JOHN D. BAKER, Ava, Douglas County, Missouri.**

Zimmerman Irrigated Lands The cream of the Pecos Valley. Now open. All river-front sections. The best alfalfa and fruit lands in America. Sold in 40-acre tracts, which will provide a permanent annual income of \$1,500 or more annually. Price \$40 per acre on 5 years' time, without interest or taxes including perpetual water-right, 50 cents per acre as first payment. Address **THE HEATH COMPANY, 109 West Seventh St., Topeka, Kan.**

Act Quick. A nice smooth, level, 160 acre farm, all in good grass; rich soil, excellent water; in a good neighborhood; 11 miles of the county seat. For a quick sale only \$1,100 (no trades). Send for BIG LIST. Address **STINSON & WEYAND, Kansas. Spearville,**

Buy Western Kansas Land. Should you want to buy any western Kansas land for speculation or for a home, don't fail to write me. I am selling land throughout all counties in western Kansas. I am myself farming extensively on the kind of land I offer for sale. I can sell you land that will make you money. Write me at once for prices. Address **EUGENE WILLIAMS, Kansas. Minneola,**

HOME IN MANHATTAN or Lands anywhere in Kansas. See Manhattan Realty Co., **HULL & MOORE, Manhattan, Kan.** You should buy or rent this summer. Write us now.

For Sale. 10 acres on a line between State House and Gage Park, adjoining Frank Sach's green houses; will make fine suburban home and shortly double in value. Price \$3,200 for quick sale. **FRANK J. BROWN, Topeka, Kansas. 17 Columbian Bldg.,**

A BARGAIN IN LAND. 160 acres 100 in cultivation, balance pasture all fenced and cross fenced, fair 6-room house, good barn, small orchard, can nearly all be cultivated 5 miles from a good town. Price \$8,500. **HULL & ZIEBELL, Kansas. Herington,**

Greenwood County Bargain 160 acres, 80 acres can be farmed, 2 1/2 miles from a town. Price \$12.50 per acre. Write the owner, Box 156. **Eureka, Kan.**

RICH PRAIRIE FARMS. Corn, blue-grass, clover, timothy, \$30 to \$60 acre. On Rock Island railroad, 90 miles east Kansas City, 200 west St. Louis. List and particulars free. **J. K. McCONNELL, Ionia, Mo.**

\$100 REWARD for every farm you can find where we have sold above the owner's price. Call on us or send for new list of land. \$5 an acre up. **G. N. DAVIS & CO., Kansas. Cimaron, Gray County,**

160 ACRES, 100 broke out, balance meadow and pasture, 6 room house, painted and in good condition, small barn and sheds, good well and windmill, orchard for family use, smooth upland, 4 mi. from Eskridge, 1/2 to school, phone and mail route. This is one of the best farms in the county. Offered for a short time at \$60 per acre, good terms. 80 acres, well improved, 60 under the plow, 4 mi. to town, good orchard, \$40 per acre. **F. L. McCOY, Eskridge, Kan.**

640 acres of good wheat land, 8 miles north of Dodge City, 320 acres new sod ready for wheat. Price \$17.50 per acre, terms. 320 acres 7 miles north of Dodge City, 200 acres of good wheat land. Price \$10. 160 acres 9 miles south of Dodge City. Price \$15 per acre. 640 acres well improved, 5 miles south of Dodge City. Price \$30 per acre. This is a dandy, cooperation solicited. Price list furnished upon application. **G. L. PAINTER & CO., Kansas. Dodge City,**

LARGE TRACT OF LAND—If you are looking for a snap in a big proposition it will pay you to come to Great Bend and talk to me in regard to the best of land in Ford county at the price. Consists of 8,000 acres. Practically all farm land, 2,000 acres in cultivation, 800 in wheat, all goes with land, 500 to corn, one-fourth goes, 200 acres now in alfalfa, 1,000 acres of alfalfa land, 20 miles of three wire fence, soil black loam, six room house, barn for 15 head of stock, 4,900 bu granary, only 8 miles from good market. Price \$21 per acre, terms on \$65,000. Perfect title. **C. L. WELLS, Great Bend, Kan.**

Famous Hillcrest Dairy, With its unexcelled Holstein herd, located near Kansas City and furnishing sanitary milk to the city, is offered for sale. If you want the finest dairy in Missouri, with a first class city business, write for particulars. Farm land accepted at its cash price as payment. Reason for selling owners obliged to retire from management. A few fine registered Holstein bulls for sale.

HILLCREST DAIRY. 1110 Commerce Bldg., Kansas City, Mo.

ONE OF THE BEST LAND BARGAINS EVER OFFERED IN EASTERN KANSAS. This is a square section of land situated near the county line of Bourbon and Allen counties and 4 miles from the fine town of Bronson and 7 miles from Moran. One quarter section of this ranch is under plow and is used for growing corn and the small grains and the bal. of this tract is in pasture—bluegrass and white clover—and there is no better pasture lands in any section of any state than this. While this pasture tract is somewhat rolling there is no lands that grows more grass per acre than does this and in addition to the fine bluegrass and white clover there is a never failing supply of good clear water by a small creek which is fed by springs and along this creek there is enough young timber for shade for the stock. The fencing on this farm is of wire and is good. There is a 6 room two story residence and a very good barn with the other necessary out-buildings. A small bearing orchard. The drive from this ranch to Bronson is as fine as can be found in Eastern Kansas. This fine ranch which is the property of an estate is priced for the next ninety days for the very low sum of \$30 per acre. For additional description of this and special description of other lands in this section write **SMITH & WILSON, Agents at Moran, Kansas.**

DAIRY



Teach the boy to love live stock by giving him one of the best animals on the farm. Do not give the boy a stunted or scrub calf. If he is sensitive he will in all probability be ashamed of the inferior quality of his animal and just as like as not will learn to despise his holdings. If it is worth while to give the boy something make the gift the best you can afford.

The Mississippi Experiment Station fed 30 cows for eight weeks on a ration consisting of cottonseed-meal, wheat bran, Johnson grass hay and cottonseed hulls, and then fed the same cows for eight weeks on a ration in which the corn silage took the place of a large part of the bran and hulls, and a part of the hay. The results showed a difference in favor of the period when silage was fed of \$17.82. At this rate, if silage was fed to 30 cows for three months during the winter, there would be a saving of about \$157.21.

Tests made by the West Virginia Experiment Station prove that skim-milk is a valuable food for laying hens. The first test covered 122 days. The 22 hens fed the skim-milk laid 1,244 eggs as compared with the 996 laid by 22 hens fed a mash wet with water. In another test 60 hens fed skim-milk laid 862 eggs in 37 days, as compared with 632 eggs laid by a similar lot fed no milk. Other tests gave about comparative results. The conductors of these experiments estimate under prevailing conditions, with eggs selling at 20 to 25 cents a dozen that the skim-milk had a feeding value of 1 1/2 to two cents a quart.

The last report from the Bureau of Statistics of the United States Department of Agriculture on the condition of live stock throughout the country places the value of dairy cows at \$32 a head, or a little higher than last year, indicating that the interest in the dairy business is not waning, notwithstanding the high prices for corn and wheat. While this is the "aver-

age" price it is worth noting also that is the price for the "average" cow, but go into any dairy community to buy good cows, those showing good breeding and milking capacity, and you pay \$50, \$60 or even \$75 for what you want. That shows the cash value for good breeding.

C. E. Lane assistant chief of the Dairy Division of the U. S. Department of Agriculture has resigned his office to enter the employ of a commercial business. One of the greatest difficulties that confronts the United States Department of Agriculture is the fact that in comparison with salaries paid for competent men in business lines the low salaries paid by the government is constantly taking away its best men. Within six months both the chief and the assistant chief, both highly competent men, have been lost to the work of the Dairy Division through the inducement of a better salary. Chief Webster came to Kansas as director of the Kansas Experiment Station and dean of agriculture in the great Kansas Agricultural College.

Ayrshire Advanced Registry.
The American Ayrshire Breeders' Association has lately adopted an advanced register which shows great promise for this breed of dairy cattle. Secretary C. M. Winslow reports a 3 year old with a record of 11,181 pounds of milk and 502.99 pounds of fat in 1 year. Others in the list of champions show 437.14 pounds, 430.28 pounds; 405.27 pounds and 405.27 pounds of fat in 1 year. The Advanced Register is doing great things for the breed as well as for the dairy interests generally.

Weight of Milk per Gallon.
Subscriber L. S. Kent, Hutchinson, Kan., writes: Is there a standard weight for a gallon of milk? If there is no standard of weight has a creamery the right to make a weight of same and not buy by measure?

There is no standard weight per gallon by which milk is sold. Milk varies slightly in weight per gallon. A gallon of average normal milk weighs 8.68 pounds. In commercial transactions 8.6 pounds is regarded as weight of one gallon of milk. Milk dealers buying milk by the gallon do not measure but weigh the milk and as a rule figure 12 gallons per 100 pounds when paying for it, although 11.625 gallons is the correct amount for 100 pounds of milk.

Fly Repellant.
Henry L. Wedel, a subscriber, Canton, Kan., asks for recipe for home

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Get better value. Save money. Deal with the actual manufacturers. Our catalog tells all about the Low Down American Separator, our liberal proposition, low prices, generous terms of purchase, long time of trial and efficient guarantee. Western orders filled from Western points. Address, AMERICAN SEPARATOR CO., BOX 1119, BAINBRIDGE, N. Y.

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The dairyman who buys any other Cream Separator always hopes it will be as good as the

UNITED STATES.

It's economy to begin where you are sure to finish—with the

UNITED STATES.

Examine the New Models 14, 15, 16 and 17.

Selling agents located in nearly every town will take pleasure in giving a free trial to anyone interested. If you do not know agent, write us for Cat. No. 91

VERMONT FARM MACHINE COMPANY,
Doing business since 1873.
Bellows Falls, Vermont.

How to Get Most Money For Your Cream.

That's a proposition which should be mighty interesting to you, Mr. Dairyman Farmer, for, of course, you're not feeding and milking a lot of cows for the fun of the thing. If there is any way of getting more money out of your cream, you'll be glad to know all about it.

OUR WAY MEANS MORE MONEY IN CREAM FOR YOU.

We will buy all cream you can produce—and pay you the very highest price, mailing you a check for the full amount of each shipment of cream the same day we receive it. Cream should be rich in butter-fats—of such quality that it will maintain the superiority of Blue Valley butter.

24c is what we will pay for butter-fat this week.

You can make the shipping of cream a matter of big profit—write us today for our free booklet, "The Secrets of Successful Dairying." It tells how to get all the profit out of your dairy herd—tells how to produce cream with the greatest amount of butter-fat—why our "Individual Shipper's System" means more money for you. You are milking cows unprofitably until you have read and followed what we say about "The Secrets of Successful Dairying." Address Desk E.

Blue Valley Creamery Co.,

St Joseph, Missouri.

made fly repellant. The following has been used with good results: Resin, 1 1/2 pounds; laundry soap, 2 cakes; fish oil, one-half pint; enough water to make three gallons. Dissolve the resin in a solution of soap and water by heating, add the fish oil and the rest of the water. Apply with small whitewash brush. If to be used as a spray, add one-half pint of kerosene. This mixture will cost from seven to eight cents per gallon and may be used on cows or calves. One-half pint of this mixture is considered enough for one application for a cow. A calf, of course, would require considerably less. It will be more economical to apply this only to the parts of the animal not reached by the tail. At first it will be necessary to give two or three applications per week, until the outer ends of the hair become coated with resin. After that, retouch those parts where the resin is rubbed off.

If the dairy cows are running in pasture with other stock not treated with repellant the cows will need treatment often on account of the rubbing of other animals against them. If the herd is not too large it will pay to treat all animals.

The work horses will appreciate an application of this mixture to their legs. However, the dirt and dust of the fields will cling to the hair so treated and the sight will not be to the liking of many farmers who are particular about the appearance of their horses.

\$33⁵⁰ AND UP Galloway

"BATH IN OIL"
High Grade Separator—Direct Save \$25 to \$50 direct at my factory price—freight prepaid. Get the only Separator that runs in "Bath of Oil," like a \$5,000 automobile. This alone is worth \$50 extra, but take no extra costs you nothing extra.

90 Days' Farm Test—Freight Prepaid
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and is the most easily and quickly cleaned Cream Separator on the market. No other manufacturer can offer such a simple, sanitary and satisfactory cream separator as a machine with a genuine aluminum skimming device that opens in every part just like the leaves of a book, and admits of thorough cleaning instantly—because

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is patented in all the leading Dairy Countries of the world, and has 8 times the skimming efficiency of other separators that sell at double the very reasonable price we ask. Shipped on our liberal

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to 90 to 100 degrees F. in about 30 minutes. After reaching the desired temperature remove the vessel from the source of heat and leave the curd in the hot whey for about 15 minutes. Remove then the whey by pouring the heated clabber into a cheesecloth bag and allow to drain until no more whey appears. The higher the temperature

to which the clabber is heated, or at a like temperature, the longer the time of heating and the longer the curd remains in the hot whey, the harder and dryer the cheese will be. By regulating the time and temperature we can always produce cheese of the desired consistency.

Before using, the curd must be worked thoroughly and some salt and cream added. The amount of salt added depends upon the taste of the consumers, two ounces to each 10 pounds of cheese is a medium amount. Adding cream greatly improves the flavor. One pound of cream to 10 pounds of cheese is a fair ratio. In a cool place cottage cheese may be kept for several days. The softer the cheese the sooner it will spoil and sour. Always use good, clean skim-milk; do not let it become too sour.

Increased Dairy Interest Booms Holsteins.

The annual meeting of the Holstein-Friesian Association of America, at Syracuse, New York, was held June 3. This association has become the largest and most prosperous breeders' association in the world. Some idea of the magnitude of its business transacted is indicated by the fact that the cash receipts for the current year aggregate in round numbers \$60,000, this being the sum received for membership and recording certificates of registry and transfer.

The secretary's reports reveal that the past year the Holsteins have broken the world's records in nearly all classes. Thirty-three Holstein cows have made official records of over 24 pounds of fat, or 30 pounds of butter 80 per cent fat in seven days; 12 within the last year; four in one herd, three in another and two each in two different herds.

President Kellogg in his address said: "The demand for pure bred and grade cattle has exceeded the supply. Many have been exported to foreign countries, prices have correspondingly increased; at public and private sale, grade cows have sold for \$100 and over, while pure bred cattle have commanded prices that have been satisfactory to the breeder.

"What has produced this unexampled progress and prosperity? What is the cause of this increased demand for our cattle?

"Various causes have contributed to produce these most satisfactory and encouraging conditions. Chief among them is the superiority of the Holstein cow, the skillful and scientific development of her inherent qualities, through our system of official tests; the publication of the wonderful seven

day, thirty day, the yearly and semi-official records that she has made, and the natural improvement of the breed resulting from the now almost universal custom pursued by all successful breeders of using only sires from highly developed advanced registry dams.

"The nation and the various states have given more attention to the promotion of the agricultural and dairy interests of this country. The importance of these great interests, and their intimate connection with, and their influence upon the financial and industrious interests of the world, has forced its attention upon business men, scientists, scholars and statesmen, and as a result, an increased interest has been manifested in the possibilities of the dairy business. This has led to an investigation of the merits of dairy breeds to determine which is the largest and most economical producer."

A Cow To the Acre.

• How the small farm can be made to produce a living is becoming each year a matter of increasing interest and importance. E. K. Slater of the Minnesota Experiment Station is the author of a bulletin dealing with this question which is worthy of study. The tendency in the West is toward smaller farms. This it naturally so. We cannot get away from the small farm. We must learn how to make it yield a good living and some besides. Mr. Slater says:

"The man who is carrying on diversified farming can not keep one cow for each acre of land he tills, but the dairyman can, and many do. They do not raise all the grain used but are content to let their neighbor farmer raise the grain. They know that they can purchase grain for 100 cents on the dollar and that their good dairy cows will return two dollars in product for every dollar's worth of feed. They can better afford to spend their time in caring for the cows than in raising grain.

"The man with 40 good dairy cows on 40 acres of land can furnish all the roughage required the year round. With good land he can do more than this, but we choose to keep on the safe side. He can not afford to give his cows pasturage, but pasturage is the most expensive feed anyway, so we can well eliminate this. We will assume that five acres of a good 40 are used for the buildings, yards, roads, line fences, etc. This leaves 35 acres of land for actual tillage.

"Let us consider feed for the winter months first. Allowing on the average 30 pounds of ensilage daily for each cow, the herd will need 1,200 pounds daily or 120 tons for 200 days. Twelve acres of fodder corn will furnish the ensilage needed, 10 tons per acre being a very conservative estimate. We will allow four additional acres of corn for cured corn fodder, to use as a dry feed at any time that it is necessary to 'fill the gap.' Some of this may be used in the late fall before opening the silo.

"We have thus allowed 16 acres for corn. In August this land can be seeded down with rye so that the cows can have some green feed late in the fall and in the spring before the ground must be prepared for the year's crop.

"Then let us devote five acres to alfalfa if it is possible for us to grow it, and it is possible generally. Fifty tons will not be an excessive yield. If the alfalfa winter kills we will still have time in the spring to plant the ground to fodder corn or sow millet. If any of our crops fail we can still sow millet as late as July 15 and still get a crop.

"For a soiling crop to take the place of pasturage let us use peas and oats and sweet corn. Four acres of peas and oats sown in the early spring, two acres at one time and two acres two weeks later, will furnish feed for the month of July and part of August. We will also plant four acres of Evergreen sweet corn to furnish feed from the time the crop of oats and peas is exhausted. After that the field corn will be coming on.

"Let us grow two acres of roots. These are very valuable for late fall feeding and in case a cow needs a tonic during the winter months. So far we have used 31 acres of the 35. The other four acres may be used to increase the amounts devoted to the different crops as experience teaches.

"These 40 good dairy cows will produce over 12,000 pounds of butter in a year. If they do not, then we can't afford to keep them."

The Coming Universal Use of DE LAVAL CREAM SEPARATORS

The same economical considerations which have already brought about the practically universal use of creamery and factory sizes of DE LAVAL Cream Separators are absolutely certain to accomplish the same result in the use of farm and dairy sizes of such machines within the next five years. This is no mere advertising claim but the simple statement of a conclusion based on the logic of facts as positive as to outcome as the solution of a mathematical problem.

The same considerations of greater capacity; closer separation, particularly under hard conditions; better quality of cream and butter; more economical operation, and greater durability are bound to ultimately accomplish the same result in the use of small as of large sizes of cream separators.

But naturally it requires longer and is vastly more of an undertaking to educate the 2,500,000 present and prospective American users of farm sizes of separators as to the importance of separator differences than the 12,000 users of creamery separators. Naturally it is more difficult to make a user appreciate a difference of \$50 a year in results than a difference of \$1,500—even though the difference of \$50 may relatively mean more to the user than the difference of \$1,500.

Again, the users of factory or creamery sizes of separators have so much better sources of information. The use of the separator is a business with them. The results are known from day to day and year to year, and what one user accomplishes is readily comparable with the results of another. On the other hand, the great majority of users of farm and dairy sizes of separators know little of separators and cannot easily determine whether their results are as good as they should be or might be better under other circumstances. But the problem is bound to finally work out in the same way.

The DE LAVAL factory separator was invented 31 years ago and commenced to come into creamery use 28 years ago. Within a few years the original patents began to expire. 15 years ago there were a dozen makes of power cream separators on the market. Today the use of DE LAVAL factory machines exceeds 98 per cent and is almost literally universal. It has been so for five years. No effort is longer made to sell any other make of power separator.

The DE LAVAL hand separator was invented 23 years ago and commenced to come into farm use about 20 years ago. As the earlier patents expired there were more than 30 makes of such machines on the market five years ago. Today there are less than a dozen and not more than five which have a sale worth counting at all. Each year the number decreases and their sales become fewer and more difficult.

What is true in America in this way is true in even greater degree elsewhere throughout the world. In many countries the sale of DE LAVAL machines is now almost universal. Dollars-and-cents differences in product mean more there than to American farmers. The sale of cheap "mail order" separators has not been attempted elsewhere, and would-be competing manufacturers and dealers have never been so unscrupulous in making the unjustified "claims" that so many American buyers have accepted as facts.

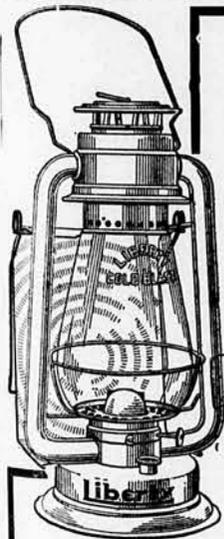
It makes an AVERAGE DIFFERENCE OF FIFTY DOLLARS A YEAR whether the farm user of a separator uses the DE LAVAL or some other kind. It will make that difference this year and go on making it until a DE LAVAL is used. A DE LAVAL catalogue helps to explain this and is to be had for the asking, as well as an Improved DE LAVAL machine for practical demonstration of it to any intending separator buyer.

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A special wick-regulating device prevents a flame with "horns" on the sides, it can be turned up higher than others. Air supplied in just the right proportion, it gives a brighter, whiter, stronger light. Burns longer with less oil than others.

Prices from 60c. to \$3.50.

Don't be persuaded to buy the "just as good" kinds. Buy the best—LIBERTY LANTERNS.

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LIVE STOCK



The State Wide Fair at Topeka offers premiums on farmers' horses. These animals do not have to be pure bred or registered but should show considerable draft blood in order to fill the requirements. Premiums are offered for teams or for single animals, either mares or geldings.

A prominent live stock commission house in Chicago says: "Fat heavy hogs are still very popular and bring outside prices. Some years during the hot weather heavy hogs are at a disadvantage, but the trade this season promises to take care of the mature hogs at the proper ratio according to cost of production.

What a lot of satisfaction would come to you if you would pave your barnyard. There are few localities in this state where materials for this purpose could not be obtained both easily and cheaply. If this job were done, some cement walks laid about the house and well and a good pavement laid about the water troughs, the city would have very much fewer attractions for the boys. Think about this.

According to government figures there has been more corn planted this year than ever before in the history of this country. More corn will be needed, however, as the stock raising operations and the population of the country increases. The price of corn is the principal factor in feeding operations and, if there is a big yield this year, as seems to be promised by the increased acreage, corn will be cheaper and more cattle and hog feeding will be done.

According to figures furnished by the United States Department of Agriculture the number of horses in the United States in 1900 was 13,500,000 and their value \$603,000,000 while in 1908 the number had increased to nearly 20,000,000 with a value of \$1,800,000,000. In other words, in the last 8 years the number of horses in the United States has increased by 50 per cent and their value by 300 per cent. Really, this does not look like the "benzine buggy" had put the horse out of business, as was so freely predicted a short while ago.

As to the amount of pasturage or the number of hogs alfalfa will carry per acre without injury to the crop, the estimates given by farmers vary considerably, depending on the kind of soil, the fertility of the land, and the size of the hogs pastured. The following, however, is a safe estimate as

given by conservative men who have had much experience. River valley and creek bottom land well set in alfalfa will carry from 15 to 20 head per acre of 50 to 125-pound hogs. Upland of fair average fertility will support from eight to ten head of the same kind of hogs. There are fields that have supported 25 head per acre through the season for a number of years and are still in good condition, and there are other fields that will not furnish pasture for more than five head per acre; but these are extremes. When a field is only used for pasture it is better to divide it into several lots and move the hogs from one to the other as occasion requires.—From Coburn's "Swine in America."

Hogs at the International.

Efforts are being made to make arrangements for the exhibition of breeding hogs at the next International. A committee has been appointed by the directors to make a classification. It is believed that the cholera bogy can be chased away long enough to permit of a good hog show which would certainly be a good feature of the exposition.

Pure Bred Stock.

Few things indicate the ever increasing prosperity of the farmer in the last decade so well as does the higher quality of live stock with which he now surrounds himself. Pure bred stock is now common where once it was rare and the farmer who raises stock for the market appreciates the value of pure bred males.

On the other hand, the ownership of pure bred live stock contributes in no small degree to the direct prosperity of the farmer and through him to the general prosperity of the country. Long continued agricultural prosperity is impossible without live stock. Even now the farmers of the Kansas wheat belt have found that their land has become "wheat sick" and have abandoned their former practices for crop rotation in an effort to restore the fertility of which they have robbed it. Thousands of farms in the eastern states have been abandoned because of continuous cropping without live stock to replenish its fertility. Live stock is a necessary part of the farm machinery and if it is pure bred it pays big money.

Commencement at Manhattan.

(Continued from page 2)
Columbia, Mo. Should this prove to be the case and should Dean Waters accept the work, both the Board of Regents and the State of Kansas are to be congratulated. Dean Waters is unquestionably one of the strongest and ablest men in the United States and his election to the presidency would be a most fortunate one.

Other changes are announced as follows: Miss Lorena Clemons, secretary, will be succeeded by Miss Margaret Butterfield. Instructor Beall will become assistant professor of English in place of Prof. Ward, resigned. Miss Ada Baum of Purdue University succeeds Miss Latimer as

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KRESO DIP NO. 1
KILLS LICE MITES TICKS KILLS

ERADICATES MANGE ON ALL ANIMALS.
HEALS LEG AND LIP ULCERATION.
KILLS DISEASE GERMS.

FOR SALE BY DRUGGISTS EVERYWHERE. SEND FOR FREE DESCRIPTIVE BOOKLETS.

PARKE, DAVIS & CO.
Department of Animal Industry, DETROIT, MICH., U. S. A.

CORRUATED INGOT IRON CULVERTS.

The Sulphuric Acid tests adopted by the American Society for Testing Materials shows the quality Ingot Iron 99.94 per cent pure, and when put to the acid in comparison with any galvanized metal on the market will show to be 90 per cent better. Ask for descriptive literature and prices. We pay the freight.

Topoka, THE ROAD SUPPLY & METAL CO., Kansas.

instructor in music, and Prof. Rudolph's position of director of the band has been given to James A. Harris of Beethoven Conservatory, St. Louis.

Other resignations not formally accepted and places not filled are: O. A. Stevens, assistant in botany, and Geo. F. Freeman, assistant professor of botany, who goes to Arizona to become professor of plant industry at the College of Agriculture.

The following new positions were created and filled by the committee on vacancies: Assistant professor of mechanical engineering, G. E. Bray (N. of Minn.); assistant civil engineering, Don A. Stone (Cornell); assistant dairy commissioner, M. A. Allman (K. S. A. C.); assistant in botany, Dean H. Rose (K. U. and Chicago University); veterinary science, E. F. Kubin (K. S. A. C.); English department, A. C. Klinger (Ohio Wesleyan), Miss Estelle M. Boöt (South Dakota); oratory, E. P. Johnson (Oberlin); bacteriology, R. H. Wilson (K. S. A. C.); agronomy, Chas. Doryland (K. S. A. C.); physics, J. R. Jenness (Denison); domestic science, Miss Helen Huse (K. S. A. C.).

PLANS FOR THE FUTURE GROWTH.
Of the many plans for the future good of the college none is more important or far-reaching than those of Superintendent J. H. Miller of the Farmers' Institute Department. These include the division of the state into regional districts each to be organized and cared for by a capable assistant and the appointment of a number of experts who shall devote their entire time to institute work and private instruction of farmers in their home communities. Five appointments for this work were made and the others will be announced later. Those named were as follows: Horticulture, C. V. Holsinger (K. S. A. C.); dairying, C. H. Hinsman (Nebraska); domestic science, Miss Frances Brown (K. S. A. C.); education, S. W. Black, and road making, W. S. Gearhart.

COMMENCEMENT NOTES.
Superintendent J. H. Miller will have charge of all matters pertaining to college publicity hereafter.

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On a Manure Spreader
If You'll Let Me

This is just a little ad—but a postal will bring my Big Book—and give you my \$50.00 Saving Price and Special Proposition. You can save as much answering this little advertisement as if it covered a page.

My Spreader positively will do better work and last longer than any Spreader made—no matter what the price—so why pay \$50 more? 20,000 farmers have stamped their O. K. on my spreader and money saving price. My Special Proposition will interest you. Just a postal addressed to Galloway of Waterloo, Iowa, will bring you everything postpaid.

Will You Pay a Penny For The Postal and Save \$50.00? Address Wm. Galloway, Pres. WM. GALLOWAY CO. 389 Galloway St., Waterloo, Ia.

ABSORBINE

Cures Strained Puffy Ankles, Lymphangitis, Pail Evil, Fistula, Sores, Wire Cuts, Bruises and Swellings, Lameness, and Allays Pain Quickly without Blistering, removing the hair, or laying the horse up. Pleasant to use. \$2.00 per bottle at dealers or delivered. Horse Book 5 D free.

ABSORBINE, JR., (ranked \$1.00 bottle) For Strains, Gout, Varicose Veins, Venecole, Hydrocele, Prostatitis, kills pain.

W. F. YOUNG, P. D. F., 211 Temple St., Springfield, Mass.

This by special action of the Board of Regents.
It is worth a trip to Manhattan just to see Prof. R. J. Kinzer and learn about his methods and his plans. Friends of the college and all who have the good of the state at heart will regret that the legislature did not give Professor Kinzer the much needed stock judging pavilion for which he asked.

Dr. F. S. Schoenleber is doing some very important work in the investigation of tuberculosis, the results of which we hope to announce later.
Harry Rushmore '79 is always at home at the college and none are more welcome. He is very busy arranging for the K. S. A. C. excursion to Seattle which is scheduled to leave Kansas City on July 3 and pick up members of the faculty and alumni en route as they pass over the Union Pacific and Oregon Short Line.

About 6,000 people attended the exercises of Commencement day. This is the largest crowd ever in attendance here and their coming and going were greatly facilitated by the new street railway of which Manhattan people are inordinately proud.

The college cadet band gave a concert in the auditorium on the afternoon of Commencement day. This was highly appreciated by the big crowd who filled the auditorium full in spite of the pleasanter temperature outside.

Prof. J. D. Walters of the department of architecture, after a continuous service in the college of more than a third of a century, took the boat last week for a visit to his old home in Switzerland. Prof. Walters has earned a vacation and no one can enjoy his beloved Alps so well as he. Although delayed by the failure of the contractor the new engineering building is now growing rapidly. The new contractor has a full force at work and is pushing things so that the building may be occupied this fall.

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CAUSTIC BALSAM.

A safe, speedy and positive cure. The safest, most BLISTER ever used. Removes all bunches from Hooves. Impossible to produce scar or blemish. Send for descriptive circulars.

THE LAWRENCE-WILLIAMS CO., Cleveland, O.

POLAND CHINAS and DUROCS

To successfully raise and put on the market, Poland Chinas, Durocs and swine in general, you must look after their health at all times. On account of their manner of living they are susceptible to various diseases, caused directly or indirectly from worms and parasites, later resulting in fevers, and other diseases.

Protect your interests by protecting your stock. Use a good preventive and worm destroyer. Our remedies will give you this protection. A trial will convince you.

With pork at 7 cents, and corn at 72 cents, can you afford to feed worms and take the chances of not getting your hogs on the market? Certainly not. Then begin at the foundation, eliminate the worms, fever and congestion, by using our remedies, thereby reducing the cost of producing fat, from ten to twenty per cent, in addition to protecting yourself against possible losses.

Seeing is believing. Convince yourself by a test on your own place, and send us a trial order.

Our remedies will save you more than they cost, in your feed. Grass is a parasite breeder, so get your stock in condition while they are on grass, by using a worm expeller so when you bring them in you have not a hog more or less wormy to consume a large per cent of the nutriment your grain should give.

We can help you to larger profits on your stock, if you will give us the opportunity. Write for free booklet, or send in a trial order.

THE STANDARD REMEDY COMPANY, Topeka, Kansas.

POULTRY



Poultry Notes.

Now that the chickens can get bugs and insects it is well to drop the meat rations. Save that for winter time when grasshoppers are all dead.

See that the growing chicks are free from lice so that they may be thriving each day. If the lice gets a good hold of them their growth will soon be checked.

All the hens that you do not need for breeders next year should now be sold, either to the butcher or some breeder that needs pure bred stock.

Remember that your chicks are growing larger every day and the coop or house that was large enough for a good sized flock a few weeks ago is much too small now. Chicks will not thrive in crowded quarters; see that they have plenty of room to expand and grow.

If your growing stock of all ages run together, it will be found that the larger chicks impose on the smaller ones and eat most of the feed before the little fellows can get a chance at it. Contrivances should be made where you can feed the little chicks apart from the big ones, by fencing the latter out.

Charcoal and grit should be kept where the fowls can have access to them at all times. They are a preventive as well as a cure for indigestion and more fowls die each year from this disease than most persons are aware of. You must keep your fowls' digestive organs in good running order if you wish healthy, active and productive chickens.

A pigeon loft that accommodates 125,000 pigeons is somewhat of a business. There is just such an industry out of Los Angeles a short distance and when the birds are fed the wheat is hauled in with a two-horse and a four-horse team. It requires three tons of wheat to feed this lot of birds one day. The squabs are sold to the fancy trade of Los Angeles at a very satisfactory price. This is pigeon farming on an extensive scale and this is only one of many like industries that has grown up out of a small start as a side line.

When a Chicken Is Sick.

If the comb is pale in color there is something the matter with the fowl. Search for the cause. Maybe the ration has been too narrow or too wide. Perhaps a tonic is necessary, or it may be charcoal and grit are lacking. See if lice and mites are sucking the life's blood of the bird.

If the excrement becomes yellow look out for bowel trouble, for it exists among your birds. If there is a stain of blood in it begin to treat for cholera.

If you notice a hen leave the nest without laying see if her back droops. If it does she has some trouble with her oviduct, which is caused by some obstruction. Or she is too fat. Kill her, and if all other organs are healthy eat her.

If a bird loses weight it does not digest its food, it has one or the other forms of tuberculosis. Kill the bird and burn its body.

If you hear a rattling in the throat of a chicken that often jerks its head kill it; it has croupy catarrh.

Ulcerated ear lobes indicate scrofulous troubles. It is usually caused by improper feeding.—Farm and Range.

Chicks Die in the Shell.

I would like to know if you could tell me why there is so many dead chicks in the eggs? It seems to me as though they die the last few days before the hatch comes off. The incubator seems to be running all right as to the heat, etc.—A Reader, Seneca, Kan.

Ans.—There are several causes why chicks die in the shell. One is that there may be lack of vitality in the parent stock and therefore weakness in the offspring, too weak in fact, to

break the shell when hatching time comes. Another cause may be too much moisture in the incubator. This causes the chick to grow too large for the shell, leaving no room for it to peck its way out. Too low a temperature as well as too high a temperature are other causes for chicks dying in the shell but we believe one of the main causes is that the temperature is not high enough just at hatching time. It is very essential that the heat should be kept up the last day or night of the hatch. The door of the incubator should be kept closed from the time the eggs begin to pip till the hatch is about over. Frequent opening of the door of the incubator causes the moist air of the machine to escape and the membrane of the egg dries up and becomes so tough as to be unbreakable by the chick, therefore causing its death. These are some of the causes for chicks dying in the shell and there may be many others. To decide the particular cause of any hatch not doing well is hard to tell and can only be learned by experience.

The American Hen.

According to those who compiled the last census, there are 233,598,005 hens in the United States. These are valued at \$70,000,000, and the eggs they lay would, if divided, allow 203 eggs annually to every person—man, woman and child—in the United States. The value of all the fowls is \$85,890,000. The Penelope of the Barnyard is entitled to consideration.

A writer in The Technical World gives some interesting figures concerning the American hen and the egg industry, figures that are so alluring that the city dweller is inspired forsooth to move into the country and begin raising chickens. When one reads that more eggs are laid in Iowa than in any other state of the Union, and that the hens in that state supply 100,000,000 dozen eggs every year, one is tempted to toss aside the pen and study the idiosyncrasies of poultry. When one reads that Chicago is the greatest egg center in the country, that 720,000,000 eggs are stored in that city each year, that on an average 2,000,000 cases of eggs are shipped into Chicago every year, one is tempted to invest his earnings in American Hen, Unlimited. Assuredly the figures furnished by the government are more alluring than mining prospectuses or the advertisements of Thomas W. Lawson. There is magic in the statistics of the Agricultural Department. For instance, the eggs produced in one year are valued at \$145,000,000. The mere statement of fact does not provoke more than passing interest; but when the figures are compared with other products, one begins to think that the tales of the Arabian Nights are commonplace after all. Wool amounts to \$45,750,000 annually. The poultry sold in a year goes ahead of that amount by \$91,000,000 and the eggs by \$98,500,000. In view of these amazing figures it is not surprising that nine city men out of ten dream of some day being able to own a bungalow in the country and raise poultry for a profit.

But the experience of the amateur fancier never equals the expectations aroused by the government statistics. He eventually discovers that each egg his hens lay costs him two or three times as much as the egg would cost in the city, and that the price he pays for his chicken dinner would be considered prohibitive by the man who could not boast of more than a million dollar bank account. Of course, there is money in poultry.

Why Chicks Die in the Shell.

The question has been put before me so many times, "Why do so many incubator chicks die in the shell?" It has only been with my last two hatches that I think I have proven the mystery.

Most all incubator instruction books say quit turning and airing the eggs on the eighteenth or some the nineteenth day of incubation, but getting so much business on my hands that, I was thinking, I was neglecting my

incubator I failed to turn the eggs after the evening of the seventeenth day. On the eighteenth evening I dampened the eggs well and to my astonishment almost one-half of the chicks had hatched by the evening of the nineteenth day and by the evening of the twentieth day the hatch was complete. Now had I turned the eggs twice the eighteenth day I would undoubtedly have killed most of those chicks that hatched on the nineteenth day and as a result there was a very few, which in some way got rolled over by the little chicks floundering around, died in the shell. I never saw a flock of stronger chicks and they grew so strong and fast. I was not satisfied with this experiment or happen so, as it really was. I was afraid to put this before the public but I must try it again and as a result I am taking off one of the finest hatches I have ever had. I must say again, quit turning the eggs also airing them on the seventeenth day in the evening. I always cool my eggs twice a day and turn them two or three times as my time will permit, but after this I will do no turning or cooling after the evening of the seventeenth day. I always take out the trays and sprinkle the eggs well with warm water two or three times while they are hatching. I also remove all chicks into boxes lined with cloth, which I cover. I remove the chicks about every four to six hours, as they in moving around turn the eggs which are fatal to those unhatched.

I always mark the eggs on one side and then on the evening of the seventeenth day see that the mark is up on every egg. I always see that every one is turned with the mark up every time. I remove the chicks and if these rules are carefully adhered to I think we will get better hatches and stronger chicks.

I do not find it at all profitable to leave the chicks in the machine as some say for it seems as soon as the chick hatches it needs more and cooler air than the machine with the heat 103 to 105° affords. I find that those that are left in the machine with the air so warm are easily chilled and are more liable to have bowel trouble.—Mrs. Lizzie B. Griffith, Emporia, Kan.

Experience With Lime in Seeding Alfalfa.

I have been trying to grow alfalfa for the last three years but did not succeed in getting a good seeding until last year. I selected a piece of rich creek-bottom land of a little over half an acre. The first two years I plowed the piece about the middle of May, and prepared the ground in good condition and sowed about ten pounds of seed. All the seed seemed to grow and there was a good stand. The first year it grew to be about six inches high and then turned yellow. I clipped it off and left the clippings on the ground. It came on again in good condition, but by the next spring it had disappeared. I plowed up the ground and sowed it again in about the same way as before but two weeks later. It came on well and I did not clip it in the fall, but despite its appearance when winter set in, it had disappeared by spring.

I still had faith and tried it the third time. I plowed it again, and before harrowing it I spread on about two barrels of air-slaked lime. We then put in a crop of early potatoes. The potatoes blighted about the middle of July and were dug. We plowed the ground again and harrowed it every four or five days until the middle of August, and then sowed the alfalfa again. It came on nicely and went into the winter about six inches tall. We did not clip it in the fall and it came through the winter in good condition. Last year we cut three cuttings from it in one of the driest seasons we have had in years. We procured from three to four tons of hay from the plot.—C. L. G., Zanesville, O., in Breeder's Gazette.

HARDY SEED.
Imported Directly from Russia.
We deliver in any desired quantities first grade seed of alfalfa, hairy vetch, of the best varieties of wheat, oats, barley, rye, emmer, and proso grown in the semi-arid regions of Southern Russia. Address **AGRICULTURAL BUREAU OF THE GOVERNMENTAL ZEMSTVO OF EKATERINOSLAV, RUSSIA,** 428 Andrus Bldg. Minneapolis, Minn.

Kansas State Fair HUTCHINSON, SEPTEMBER 11-12-13-14-15-16-17, '09

"I desire to announce to the stockmen that the live stock classification and premiums will be practically the same as last year, with the exception of about \$750 added to the premiums on Shorthorns mostly for state exhibitors which is to encourage the Shorthorn breeders of Kansas, and a better classification and more money will be given Polled Durhams. In the swine division a full classification will be given this year to Hampshire hogs, also Chester Whites."

\$35,000 in purses and premiums. Seventeen grand divisions. Unrivaled attractions. The fair for the people, by the people. For catalog or detail information address **A. L. SPONSLER,** Hutchinson, Kansas.

RHODE ISLAND REDS.

R. C. R. I. REDS exclusively, fine layers; eggs from selected pens \$1.50 for 15 eggs; from utility flock \$4.50 per 100. **J. H. CANNON,** Preston, Kan.

ROSE AND SINGLE COMB RHODE ISLAND REDS.

Eggs from any mating half price remainder of season. Mixed eggs Rose or Single Comb from several matings, \$1 per setting. Red pullets hatched in midsummer will make winter layers. Write for descriptive mating list. It is free.

H. A. SIBLEY, Lawrence, Kansas.

BUFF ORPINGTONS.

BUFF ORPINGTONS—Chicks, pens, baby chicks, eggs. More first prizes State Fairs and State Shows than all other breeders. My **POULTRY BOOK**, containing information worth hundreds of dollars to farmers sent for 10 cents. **W. H. MAXWELL,** R. 95, Topeka, Kan.

LEGHORNS.

SINGLE COMB BROWN LEGHORN eggs 15 for \$1, 100 for \$4. **H. N. HOLDEMAN,** Meade, Kan.

S. C. BUFF LEGHOENS—No stock. Eggs from prize winners. Pen. No. 1, \$2 per 15; No. 2, \$1.50 per 15. Incubator lots, \$5 per 100. **MIKE KLEIN,** Clay Center, Kan.

BUFF COCHINS.

BEST BUFF COCHINS IN KANSAS. This variety exclusively. Can furnish eggs from prize winning stock at \$1.50 and \$2 per setting. **J. C. BAUGHMAN** Topeka Kan.

LIGHT BRAHMAS.

LIGHT BRAHMA EGGS from birds scoring 93 to 94 by Judge Rhodes, \$1.50 per 15, large flock \$1 per 15, \$4 per 100. Baby chicks each month \$2 per dozen. **MRS. A. F. WOOLVERTON,** R. 8, Topeka, Kansas.

PLYMOUTH ROCKS.

BREEDERS.

Our White Rock breeders are for sale at right prices.

SMITH & KNOPP,

Route 2, Mayetta, Kan.

BARRED ROCK BARGAINS.

After May 1 eggs from my high scoring pens only \$1.50 per 15. Four settings for \$5. Range eggs 75c per 15.

MRS. CHAS. OSBORN,

Member A. P. A. Eureka, Kansas.

PURE BRED POULTRY.

SUNNY CREST.

Stock, fruit and poultry farm. Eggs to sell from M. B. turkeys, R. I. Reds and Leghorns. Registered Jersey calves and Poland China hogs for sale. Write me. **MRS. WM. ITRITE,** Pierce City, Mo.

For Sale

S. C. Buff Orpington and R. C. R. I. Red cockerels, \$1 to \$5 each.

White Plymouth Rocks, pullets and cockerels, for \$1 to \$2.50 each.

Also some of my breeding stock of Reds, White Rocks and Buff and White Orpingtons \$1 to \$5 each. Extra fine White Plymouth Rock 2 year old male bird \$2.50.

Mrs. Lizzie B. Griffith,

Route 3. Emporia, Kan.

BREEDING STOCK FOR SALE

In order to make room for growing stock I will sell a few dozen W. P. Rock hens at \$10 per dozen or less quantities at \$1 each. Such breeders would be worth from \$2 to \$5 each at breeding season. Some late chicks might yet be gotten out of them.

THOMAS OWEN, Station B, Topeka, Kansas.

HOME CIRCLE



Making Plans for the New Home.
C. E. SCHERMERHORN IN BEAUTIFUL HOMES.

In planning the construction of a new house, start by formulating the arrangement, proportions and general "livability" of each room, not only as to the room itself but also as to its relation to each and all of the other rooms in the house. By this slow process, and by sifting the various schemes of arrangement, the owner will become so intimately acquainted with the plans of his house, and will gradually get to so understand them, as well as to imagine the appearance and relation of the rooms, one to the other, that unconsciously he will be preparing himself for the successful solution of the decoration and finish of the house interior; meanwhile, the architect will have had abundant opportunity to give all the study he may desire to the exterior of the house, as well as to the treatment of each room. The result will be that the house, when it finally exists, will largely escape the many small drawbacks of crude and unstudied proportions that are almost inseparable from the quickly designed and constructed dwelling. The "cheap" house, with its tawdry exterior, its poor construction, its lack of permanency, its coldness, dampness and perhaps unsanitary conditions, is a poor place to live in, a poor investment for money, and a wretched incumbrance to land. People of modest means greatly outnumber those of ample wealth, and they must be housed in buildings adapted to their means. This does not mean that you shall select a house that costs more money than you care to spend, but it means that you shall select one which has had thought applied in its building, and is therefore capable of becoming a financial success to its owner, purchaser or renter.

Much real estate is now both undesirable and unsalable owing to the inartistic and old-fashioned nature of the buildings with which it is incumbered; and the conservative prospective builder or buyer must keep in mind the possible value of his investment in case he should at any time desire to dispose of it. A building designed to suit the spot where it is placed, and one that is in artistic keeping with it, will always have an added value that may be readily computed in dollars and cents. An artistic exterior need not cost a penny more than an inartistic one. Indeed, today the most pleasing effects are obtained by simplicity in composition, and an actual saving in expense is effected by omitting the over elaborate exterior "ginger-bread" ornaments that cannot hide the bad proportions and outlines of the building. In selecting a color combination for a house due consideration should be given to the surroundings. Avoid strong color effects in a community where the houses are all painted in quiet tones. If there are trees and heavy foliage about a house, the painting should always be done in light shades. Where there are no trees, or the house stands alone or on an eminence, darker paints should be used. There is a "bareness" about the unshaded house that the light shades intensify, but which the dark shades relieve or modify.

One of the most important adjuncts of any house is the porch, but in its relation to the exterior of the house it is impossible to specify any general principle, except, perhaps that its size be as generous as the conditions will afford, for the reason that the porch is in reality an outside room in which a large part of the life of the house takes place. A porch carried entirely around the sides of a house frequently proves objectionable on account of darkening the first floor rooms. In order properly and effectively to protect the porch from the burning rays of the midsummer sun, and to produce real comfort and enjoyment, use specially made dark-stained wood porch shades of a pattern permitting the breezes to enter. The sun parlor (though usually a porch inclosed with glass) is a feature of modern house building, the comforts of which are worth consider-

ing. To make sure of having dry steps which will not warp, use yellow pine strips three inches wide, set one-eighth inch apart. When turned porch columns are required, a lock joint staved pattern should be used; such columns require no block or inside form to support the superimposed load and combine appearance with durability and strength.

Take time to think things out, as the true measure of the success of a house is the success of its plans. No house can by any possibility be good if it has a bad plan. The home seeker may have quite definite ideas as to the general disposition of the rooms, but the trained and experienced architect is alone capable of giving these ideas concrete expression in the plan. A plan, to be good, must be economical of space; the utmost interior area must be obtained within the boundary walls. This economy, however, has no relationship with smallness of area. Economy in planning means the best utilization of the interior area, besides convenience and directness of communication. One must get about a house as well as stay within it, and the plan that affords the easiest way of doing this, which brings all the rooms into easy communication with each other, which differentiates the various parts of the house, and puts each part into the best relationship to the other parts, makes the nearest approach to that excellence which may be termed ideal. Endeavor to provide direct independent communication between the kitchen and the front door and don't compel the going through a retired room to find a more public one. Good planning requires careful study and wide familiarity with the subject; the wants and needs of the inmates must be understood and expressed in the plan. The location and size of the rooms must, of course, depend on the uses to which the house will be put and the characteristics of the people who expect to live in it. A home which embodies simplicity, order, comfort, harmony and individuality cannot be a failure.

As comfort and convenience are the essentials of a well-furnished house, both being of far greater importance than expense and luxury, every room in the house ought to possess character and originality. Give thought to the question of what the character of a room really should be, what it is to be used for, and whether the decorations and furnishings carry out the idea of what we are to do in it. The shape of a room has a very important bearing upon its effects when finally furnished. Long, square or oval rooms each have a distinct quality of their own. It would be going too far to assert that one shape is better than another, but it is at least certain that each shape calls for a different treatment. The effect of the furnished room will also be largely dependent upon its dimensions. The kind of windows to be used and their location form other notable features that must be taken into account in household furnishings. A room needs plenty of light, but the position of the windows and their elevation above the floor, considering the sort of windows used, whether a bay, a group of lights, or a single opening, will help, amazingly, if properly determined. Consider carefully the shape of each room in relation to the wall space available for the location of the bed, bureau, etc., as there are countless existing examples of rooms which have been planned without any thought given to their probable furnishing.

A distinguishing feature of the modern house is the hall, which has become broad and ample, forming the rendezvous and seat of the home life, causing the house to grow up around it. This room is no longer a mere dark, dull passage, from which the stairs lead to the upper floors, but should be a brilliant, sunny apartment, amply lighted and furnished, without giving evidence of crowding. It still contains the stairs, but these are no longer constructive only, being treated as valuable features in the decoration scheme. Nothing is more appropriate for a hall or wide stair landing than a hall clock.

More About the "Greatest Shortcoming of the Farmer."

I have just read the letter of M. L. Dickson and the comments thereon of Ruth Cowgill as to "the greatest shortcoming of the farmer," and know that there is much truth in what they both say. Miss Ruth asks for some suggestions as to how to improve the farmer's home to make life pleasanter for the women and I feel constrained to offer one or two.

The kitchen or cook room is the place where the women do most of their work, and should be as handy and convenient as it can be made. Not many men realize this, but I having had occasion to do the work there frequently, think I am qualified to speak.

Our kitchen is 8 by 12 and has a range, a sink and kitchen cabinet. There is a cupboard across one entire end with two pairs double doors reaching from floor to ceiling. There are short doors below and longer ones above, but no drawers between as in china closet. We also have a china closet with doors opening to kitchen and dining room, and drawers that pull both ways. The kitchen cabinet holds flour, meal, a dough board, meat board, drawers for coffee, tea, spices, knives, spoons, dish towels, etc. There should be a fuel bin that could be filled from outside so there is no carrying fuel, as it can just as well be unloaded into a bin connected with the kitchen as in a coal house forty rods away to be carried in by the women.

There is a pump at the sink, but an elevated tank or a pressure system in basement would be much better. We use cistern water, with brick filter in cistern, laid with cement so water has to filter through the brick. There should be plenty of light. We have three windows and also glass in the outside door. The door to the dining room swings both ways.

A refrigerator should be in the dining room, and where ice cannot be had a good one can be made by hav-

ing long, shallow pans placed on shelves in a cupboard, and having water pumped in by windmill, with waste pipe to run to stock tank, piping water to top shelf of cupboard and letting it run from top to lower shelves and out at bottom.

This kitchen is too small to do the family washing in, but there should be a wash and bath room for that, containing bath and laundry tubs, closets for clean clothes and dirty clothes.—T. B. Johnson, Aurora, Neb.

The above letter is particularly valuable because it tells the facts of actual experience. The writer himself has seen the need of improvement in home building and has actually made the changes which seemed to him necessary. The arrangement of the kitchen seems to me very good. I have only one suggestion, and not an especially important one, that if there is a refrigerator in the dining-room it should be as close as possible to the kitchen-sink, so that one drainage-pipe could be used for both. I have never seen water used in the house for the purpose of keeping things cool, but it appeals to me as a very good idea, especially since the water would not be wasted, but could be used for the stock.

My one criticism upon Mr. Johnson's letter is that it stops too soon. I should like to know more of his labor-saving arrangements. And I shall be very glad to receive suggestions from others, also, whether they be intended to prove that these things can not be done, or to relate how they have been done. If any one sees difficulties in the way of installing the modern conveniences, if any one has particular problems of his own, I shall be glad to learn of them. For together we may be able to study out a solution.—Ruth Cowgill.

The Rhode Island State Grange demands a law which will recompense farmers for losses sustained by the enforcement of the state laws regarding tuberculosis and other animal diseases.

Shorthand Department

Back lessons will be furnished by the Shorthand editor upon request.

UPWARD STROKES

K um N an t R Th lne Period D J Ch W ö Wh H S

DOWNWARD STROKES

EX P L Y Ö in en O M B I ũ ē v ā ä ö aw ō ũ

Each sign has a certain shape, and a certain size in proportion to the other signs—just as longhand letters have. Note that up strokes slant more than similar down strokes; they are naturally so written—in longhand.

In reading the Shorthand exercises, note that each dot and hook and each stroke and circle of a different shape or of a different size stands for a different sound—always the same sound; and that only actual sounds are represented—no "silent letters."

Thus the Shorthand word "dog" is made up of two different signs; the hook is one and the down stroke another: (a-ee). This is just the same except that it has one additional sign: (B), making "a-ee-d". The first sign of "dog" is the same as the last sign of "dog" and is therefore D; the second is short "o"; and the third is O: making the word "dog". (d-ö-t), exactly the same as "dog" except the last sign. (is) is (b-aw-t (bought)). (is) is (p-an). (is) is (l-en-d). (is) is (o-ö-ä-b-s). (is) is (m-e-d (long a), "made", not "mad"

Most of these signs are also used, standing alone, for certain complete words. Read the sound "er" or "R" after a shaded sign. Thus, "B" shaded is "Ber," as in "Bert," "bird," "burn," "labor," "break."

Read "T" or "L" after a lengthened stroke, the "L" length being longer than the "T" length. Thus, "FT" is the same shape as "F," but longer; "FL" is also the same shape but still longer than "FT."

A dot under the end of a sign indicates "ing" or "thing."
Longhand methods of abbreviation are used also in shorthand.

LESSON XI

1. I see a bird on the top of the high tower.
2. What is the power of that engine?
3. Bert is a very poor writer.

Now write out the others in longhand and send them in for correction and suggestions, in accordance with the arrangement mentioned at the top of this department.

RICH MEN'S CHILDREN

By Geraldine Bonner

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(Continued from last week.)

The thought seized upon his mind like a... and he stood in a tranced stillness of... acinated imagination, his eye on the ship, his inner vision seeing himself and Rose standing on the deck. He was so held under the spell of his exquisite, enthralling dream, that he did not see a figure round the corner of the rough path, nor notice its slow approach. But he felt it, when its casual, glancing glance fell on him. As if called, he turned sharply and saw Rose standing a few yards away from him, looking at him with an expression of affrighted indecision. As his glance met hers, the dream broke and shattered, and he seemed to emerge out of the darkness that had in it something beautiful and beautiful, into the neathly, pure daylight.

The alarm in Rose's face died away, too. For a moment she was motionless, then moved toward him slowly, with something of reluctance about her approach. She seemed to be coming against her will, as if obeying a summons in his eyes.

"I wasn't sure it was you," she said. And then when I saw it was, I was going to steal away before you saw me. But you turned suddenly as if you heard me."

"I felt you were there," he answered. "It was natural that with Rose he should understand as she would always understand everything that was closely associated with her. He would never have to explain things to her, as he never, from their first meeting, that he need to talk small talk or make conversation.

She came to a stop beside him, and they stood for a silent moment, looking down the wall of the quarry, a raw wound in the hill's flank, to the docks below where the masts of ships rose in a forest, and their bowsprits were thrust over the wharves.

"You came just in time," he said. "I talked up here this morning to have a talk. I don't know where the think was going to take me when you came round that corner and stopped it. What brought you here?"

"Nothing in particular. It was such a fine morning I thought I'd just ramble about, and I came this way without thinking. My get brought me without my knowledge."

"My think brought you," he said. "That's the second time it's happened. It was a revolutionary sort of think, and there was a lot about you in it."

He looked down at her, standing by his shoulder, and met her eyes. They were singularly pellucid, the clearest, quietest eyes he thought he had ever looked into. His own dropped before them to the bay below, and then quickly left those schooner which was beating its way toward them on its return tack.

"If you could only always come this way when I want you, everything would be so different, so much easier," he said in a low voice. "I was surrounded by devils and they were getting tight hold of me when you came round that corner."

He glanced at her sidewise with a slight misical smile.

"This time she did not answer his look, but with her eyes on the bay, her brows drawn together, asked,

"New devils or old ones?"

"The old ones, but they've grown bigger and twice as hard to manage lately. They he broke off, his voice suddenly roughened, and said, "I don't seem to know how to live my life."

He turned his face away from her. The demons she had exorcised had left him weakened. In the bright sunshine, with the women he loved beside him, he felt broken and beaten down by the nardships of his life.

"Sit down and talk to me," she said quietly. "No one can hear you. It's like being all alone in the world up here on the bltop. We can sit on this stone."

There was a broken boulder behind them, close to the narrow foot-way, and she sat on it, motioning him to a flat piece of rock beside her. Her hands were thrust deep in the pockets of her loose gray coat, the wisps of fair hair that escaped below the rim of her hat fanning up and down in faint breaths of air, like delicate threads of seaweed in ocean currents.

"Tell me the whole thing," she said. "You and I have never talked much about your affairs. And what concerns you concerns me."

He pricked at the earth with the tip of his cane, ashamed of his moment of weakness, and yet fearing if he told her of his cares it might return.

"It's just what you know," he began slowly. "Only as every day goes by it seems to get worse. I've never told you much about my marriage. I've never told anybody. Many men make mistakes in choosing a wife and find out, and say to themselves early in the game, that they have made a mistake and must abide by it. I don't think I am weaker than they are, but somehow—"

He stopped and looked at the mixing tip of his cane. She said nothing, and after taking a deep breath he went on.

"I knew all about her when I married her. I was young, but I wasn't a green fool. Only I didn't seem to realize, I didn't guess, I didn't dream, that she was going to stay the way she was. I seemed to be at the beginning of a sort of experiment that I was sure was going to turn out well. I didn't love her, but I liked her well enough, and I was going to try my best to have things go smoothly and make her happy. When she was my wife, when I'd try to make everything as comfortable and pleasant as I could, then I expected she'd—she'd—be more like the women men love, and even if they don't love, manage to get on with. But it didn't seem to go well even in the beginning, and now it's got worse and worse. Perhaps it's my fault. I'm not one of those fellows who can read a woman like a book. When a person tells me a thing, I think they mean it; I'm not looking into them to see if they mean just the opposite."

He stopped again and struck lightly at a lump of earth with his cane. He had pushed his hat back from his forehead and his face bore an expression of affected, boyish nonchalance which was extremely pathetic to Rose.

"Maybe there are men who could stand it all right. She's very nice part of the time. She's a first class housekeeper. I give her two hundred dollars a month, and on that little bit she runs the flat beautifully. And she's quiet. She doesn't want to be out all the time, the way some women do. She's as domestic as possible, and she's been very decent and pleasant since I came back. The way she was treated over the ball would have riled any woman. I didn't tell you about that—it's a mean story—but she got no invitation and was angry and flared up. We had a sort of an uncomfortable interview, and—and—that was the reason I went to Antelope. I didn't think I'd ever go back to her then. I was pretty sore over it. But—" he paused, knocking the lump of clay into dust, "I thought afterward it was the right thing to do. I'd married her, you see."

Rose did not speak, and after a moment he said in a low voice,

"But it's—it's—awfully hard to live with a person you don't get on with. And it's the sort of thing that goes on and on and on. There isn't any end; there isn't any way out."

Once more he stopped, this time clearing his throat. He cleared it twice, and then said,

"I oughtn't to say this. I oughtn't to complain. I know I'm a chump and a coward to talk this way to you, but—" he dropped his voice to a note of low, inward comming, and said, "it's so hopeless. I can't see what to do."

He leaned forward and rested his forehead on the head of his cane, hiding his face from her. The silence between them vibrated with the huskiness of his voice, the man's voice, the voice of power and protection, roughened with the pain he was unused to and did not know how to bear.

Rose sat looking at him, her soul wrung with sympathy. Her instinct was to take the bowed head in her arms and clasp it to her bosom, not as a woman in love, but as a woman torn by pity for a suffering she could not alleviate. She made no movement, however, but kept both hands deep in her pockets, as she said,

"I don't see why you shouldn't talk this way to me. I think I'm the one person in the world that you ought to speak to about it."

"I can't talk to anybody else, not to a friend, not to my own mother. It's my affair. No one else had any responsibility in it. I brought it on myself and I've got to stand it by myself. But you—you're different."

He drew himself up, and, staring out into the great wash of sun and air before him, went on in a louder voice, as if taking a new start.

"I was thinking last night about it, looking in the face. The dark's the best time for that, you seem to see things clearer, more truthfully. And I came to the conclusion it would be better if I ended it. I didn't see that I had any obligation to go on martyrizing myself for ever. I didn't see that anybody was benefiting by it. I thought we'd be happier and make something better of our lives if we were apart, in different houses, in different towns."

"Does she want to leave you?"

The question seemed to touch a nerve that startled and then stiffened him. He answered it with his head turned half toward her, the eyebrows lifted, a combative note in his voice.

"I don't know whether she does or not." He stopped and then said, with his face flushing, "No, I don't think she does."

"How can you leave her then?"

"Well, I can—" he turned on her almost angrily and met her clear eyes. "Oh, I can't go into particulars," he said sharply, looking away again. "It's not a thing for you and me to discuss. Incomtability is recognized ground of separation."

He fell to striking the lump of clay again, and Rose said, as if offering the remark with a sort of tentative timidity,

"You said just now you had nothing to complain of against her. It doesn't seem fair to leave a woman—a wife—just because she's hard to live with and you no longer like her."

(To be continued next week.)

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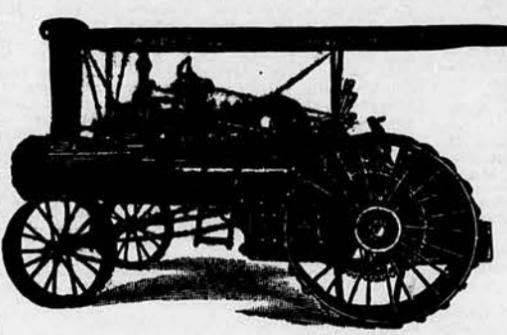


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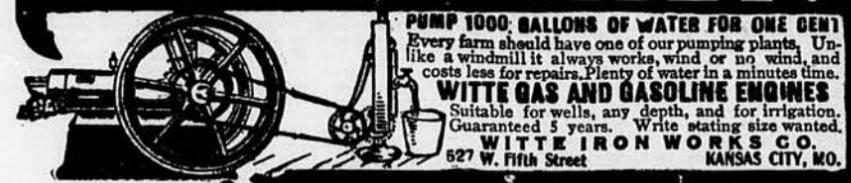


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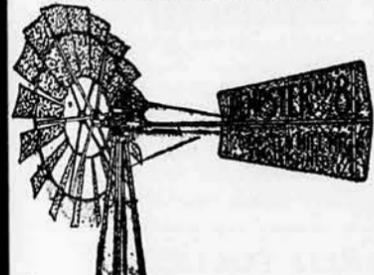
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PURE BRED STOCK SALES.

Nov. 9—J. C. Robison, Towanda, Kan.
Nov. 11—Percheron Breeders, Sale at Manhattan, Kan. Will H. Rhodes, Manager.

Jersey Cattle.

Sept. 30—Mrs. Wm. Britte, Pierce City, Mo.

Herefords.

Sept. 29—Miss Lou Goodwin, Blue Rapids, Kan., dispersion.

Poland Chinas.

Aug. 3—J. A. Jenkins and W. L. Clark, Conway Springs, Kan.
Aug. 26—A. W. Shriver, Cleveland, Kan.
Sept. 23—J. R. Sparks, Hunter, Okla.
Oct. 5—J. D. Spangler, Sharon, Kan.
Oct. 20—Roy Johnson, South Mound, Kan.
Oct. 21—Herman Groninger & Sons, Bendona, Kan.
Oct. 27—Geo. W. Smith, Pawnee City, Neb.
Oct. 27—G. M. Hull, Garnett, Kan.
Oct. 29—J. H. Harter, Westmoreland, Kan.
Nov. 3—J. W. Pelphry & Sons, Humboldt, Kan.
Feb. 12—D. A. Welersperger, Lindsey, Kan.
Feb. 15—C. H. Pilcher, Glasco, Kan., at Concordia, Kan.
Feb. 16—J. H. Harter, Westmoreland, Kan.

Durocs.

Sept. 3—H. J. Coppins, Potwin, Kan.
Oct. 27—Pearl H. Pagett, Beloit, Kan.
Nov. 5—Minor & Cross, Guide Rock, Neb.
Nov. 8—C. L. Carter, Cabool, Mo.
Nov. 9—A. L. Aitkin and W. W. West, Parsons, Kan.
Nov. 12—S. W. Alfred & Son, Sharon, Kan.
Jan. 31—J. E. Joines, Clyde, Kan.
Feb. 1—Pearl H. Pagett, Beloit, Kan., and R. G. Sollenbarger, Woodston, Kan. Combination sale at Concordia, Kan.
Feb. 2—E. M. Myers, Burr Oak, Kan.
Feb. 3—Rinehart & Slagle, Smith Center, Kan.
Feb. 4—W. C. Whitney, Agra, Kan.
Feb. 7—Frank Elder, Green, Kan. Sale at Clay Center, Kan.
Feb. 8—Samuelson Bros., Manhattan, Kan.
Feb. 9—Samuelson Bros., Cleburne, Kan.
Feb. 10—Samuelson Bros., Blaine, Kan.
Feb. 17—Thompson Bros., Garrison, Kan.
Feb. 18—T. E. Goethe, Leonardville, Kan.
Feb. 21—W. T. Fitch, Minneapolis, Kan.
Feb. 22—Pearl H. Pagett, Beloit, Kan.
Feb. 23—F. G. McDowell, Corning, Kan.
Feb. 23—R. G. Sollenbarger, Woodston, Kan.

Sept. 29—Miss Lou Goodwin's dispersion at Blue Rapids. Chas. R. Thomas, manager, Williamson Building, Kansas City, Mo.

The F. L. Johnson Co., real estate dealers of Dwight start their advertising in Kansas Farmer this week. This firm have a lot of good things situated in one of the best sections of Kansas. Investigate their offers by writing for list.

Robert Sutherland of Herington, Kan., starts an advertisement in our real estate department this week. He has a fine list of very desirable lands, some of them near Herington, others in different parts of Kansas. Write him and mention Kansas Farmer.

Hull & Ziebell, prominent real estate dealers, of Herington, Kan., will be advertisers in this paper regularly. This week they direct attention to a very desirable quarter five miles from good town crossed and fenced. 10 acres under plow and well improved. Priced low for a short time. Write them and mention this paper.

W. J. Tod of Maple Hill, Kan., who was appointed Regent of the State Agricultural College by Governor Stubbs but who found it impossible to serve, has recently sold four car loads of medium weight cattle at Kansas City for \$7.00 and was the first to reach that figure. These cattle were bred in New Mexico and fed on the big Tod ranch.

Frank A. Dawley, the big Poland China breeder at Waldo, Kan., took a car load of hogs to Kansas City last week with which he topped the market at \$7.85. Mr. Dawley has a kind of habit of topping the market on breeding stock and this recent shipment

23 TONS IN 5 HOURS. BALED BY THE ANN ARBOR JR. 'That's the Press' for South and West. Engine and Press Combined. Traction or Portable. Cuts Baling Cost in Two. Get Free Catalog Now. Ann Arbor Machine Co., Box 132, Ann Arbor, Mich.

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shows that his culis have enough quality to top the market on fat hogs of whatever breed.

J. E. Joines, Clyde, Kan., starts his advertisement in this issue. Mr. Joines has a couple of herd boars for sale because he is through with them and cannot use them longer. His crop of spring pigs numbers around 100 head and is going to be a good place to buy a well bred boar or a few gilts. Remember he will sell you a mature herd boar that he can guarantee all right in every way and can show you about his breeding and the price will likely suit you.

This week we start the advertisement of O. G. Pirtle, real estate dealer of Wilsey, Kan. Wilsey is located in Morris county on the Missouri Pacific railroad. Mr. Pirtle has lived in this county since 1872 and knows what he is talking about when he describes this part of Kansas. He has a large list of very desirable farms and ranches listed some of them near the fine little town of Wilsey where natural gas has just been discovered. He also has some nice residence places in Wilsey.

C. F. Dietrich of Dietrich & Spaulding, Ottawa, Kan., than whom there is probably no better known breeder of good Poland Chinas, writes as follows: "Our Poland China business is certainly looking up. We are offering, this time, two fall boars by Parnell out of Fall Leaf by Top Chief and one litter sister which has just been bred to Sportsman. This is the first time we have ever offered a gilt by our great herd boar Parnell and we only do this because several breeders have asked us to price this litter when they have visited our herd. We expected to show this litter and shall show one of these boars if we do not sell. Our spring pigs are by Parnell, Band Master, Voter, Cyclone and Insurance and out of as well bred sows as ever walked. We have bred Poland Chinas for over 20 years and have probably seen as many of the best as any breeder in the United States and we feel that we can satisfy any reasonable man that we breed in our herd the quality that will go on and make money for our customers."

A. P. Wright, the famous Poland China breeder of Valley Center, Kan., writes as follows: "I have about 75 of as fine spring pigs as I ever raised, all by On the Plumb and Sir Bredwell and out of sows such as Annabelle (by Perfect I Know) dam of first prize junior yearling sow at Kansas state fair; Bessie Bianch Keep On by Old Corrector; Miss Jim by Keep On; Specialty by Cute Special; Nobby E. L. by Perfection E. L., a half sister to the \$800 Nobby Keep Lady by Keep On and a few others. Among these are some fine show prospects. My show herd is coming along fine. I have for the under a year class three sows and one boar by Corrector 2d 87699, farrowed November 12, that are fine prospects. One of the sows is the best sow I ever started to feed. In the junior yearling class I have two sisters by On the lumb and out of Bleeding Heart by Chief Perfection 2d. One of them I consider the equal of Plumb's Opal, the little champion sow two years ago in her pig form. For the senior yearling class I have a fine sow by Corrector 2d and out of Annabelle, the Perfect I Know sow. And in the aged class two sows, one by Maddler 2d out of Maybird and one by H's Keep On out of Darkness U. S., a half sister to Old Keep On. I am fitting Sir Bredwell for the aged class. And one good boar for th junior yearling class as well as a good herd of pigs.

Moormann the Auctioneer. This week we start the advertisement of Col. J. H. Moormann the hustling live stock auctioneer of Solomon, Kan. Mr. Moormann is a man of good ability. He is a graduate of the auction school located at Trenton, Mo., and has had lots of actual experience since leaving school. Last season he made a lot of very successful sales selling the highest priced span of mules that was sold at auction in his part of the state. He also sold some real estate at auction getting good prices and in every instance demonstrating his excellent ability as a high class salesman. Col. Moormann doesn't expect to make all of the sales but solicits a share of the breeders' business and guarantees to make good.

The Pearl Herd of Shorthorns. C. W. Taylor, owner of the Pearl herd of Shorthorns, Route 2, Enterprise, Kan., is one of the oldest and largest breeders of the red, white and roans in the state. Having several hundred head in his herd he offers the buyer an unusual chance for selection. With so large a herd he is prepared to supply animals of all ages at almost any time. Mr. Taylor has won a well deserved reputation for the quality of his Shorthorns and prospective buyers will undoubtedly find both quality and numbers to suit. His prices are very reasonable. Write him about the get of Scottish Ruler 265500, Royal Hero 246747 or Herdlight 2d 243305.

The Center Grove Poland Chinas. J. W. Pelphry & Sons, owners of the Center Grove herd of pure bred Poland Chinas at Route 6, Chanute, Kan., announce an important change in their advertising card this week. They report that they have, in addition to the fine fall gilts which they offer for sale at private treaty, as fine a lot of spring pigs as they have ever raised. They think, with good reason, that if nothing serious happens to these pigs, they will put into their public sale on November 3 as good a bunch of Polands as ever went through the sale ring in their "neck of the woods." Their herd boars, Erie Ex and Grand Perfection are making good and they will be well represented in the 5 head preparing for the fall sale. They have changed their postoffice address from Humboldt to Route 6, Chanute, Kan., and will be glad to hear from Kansas Farmer readers who want good hogs.

Herefords for the American Royal Sale. Secretary C. R. Thomas of the American Hereford Breeders Association reports that the inspectors appointed for the purpose of selecting animals for the American Royal sales have finished their work and the following named breeders have had their consignments accepted: W. A. Dallmeyer, Jefferson City, Mo.; Robt. H. Hazlett, Eldorado, Kan.; Funkhouser Estate, Plattsburg, Mo.; Jas. A. Gibson, Odessa, Mo.; J. H. & J. L. Van Natta, LaFayette, Ind.; C. A. Stannard, Emporia, Kan.; Klaus Bros., Bendona, Kan.; J. O. Bryant, Savannah, Mo.; J. W. Lenox, Lake City, Mo.; C. L. Browning, Laredo, Mo.; T. W. Carmichael, Odessa, Mo.; O. S. Gibbons, Earlham, Ia.; Jones Bros., Council Grove, Kan.; Makin Bros., Grandview, Mo.; Cargill & Price, LaCrosse, Wis.; J. J. Early, Baring, Mo.; J. C. Robinson & Son, Evansville, Ind.; J. P. Cudahy, Kansas City, Mo.; Giltner Bros., Eminence, Ky. The next applicants, in order, whose entries would have been accepted in case the entries of any of the foregoing had been rejected, were Dr. J. E. Logan of Kansas City; J. C.

Adams, Moweaqua, Ill., and S. J. Gabbert, Dearborn, Mo. This will make a total of 50 head with not more than three animals consigned by any one breeder.

Pilcher's Poland China Hogs. C. H. Pilcher, Glasco, Kan., is well known as a breeder of Poland China hogs. The reputation he has established as a showman and the success he has attained in the show ring has gone far to make his herd one of the noted herds of the Northwest. His Blue Ribbon type is the big smooth kind that everybody is interested in. Mr. Pilcher has been breeding just this kind for a number of years. Old Glasco Chief 46943 (s) 64947 (n) by old High Roller, dam Queen Lightfoot, is a Chief Perfection 2d bred boar that is known from one end of the Solomon Valley to the other and then some. He has done more to make this herd famous than any other one thing. His son, Conqueror, out of a dam tracing to Chief Perfection 2d, won first and sweepstakes at the Cloud County fair two years ago as a pig showing against one of the most popular show boars ever owned in Northern Kansas. Conqueror is still in the herd and is a great sire. Winning Grantier by Grantier, he by old Expansion, is another herd boar in this herd that is decidedly worthy of mention and a show boar all the way through. He is out of a line bred Expansion dam and has the quality combined with size that is now very popular. Top Chiefless 105386 by Top Chief 28168 and out of a great sow by Chief Perfection 2d is a great sow farrowed May 22, 1905. She was bought in Link Lukin's sale and at an extremely long price. She has a litter of eight of this spring farrow by old Glasco Chief that are mighty good to look at. February 15 has been claimed as the date of Mr. Pilcher's bred sow sale which will be held at Concordia, Kan. This change will be made because of the better railroad facilities. Mr. Pilcher will have a fine lot of young boars for sale this season and if you are interested you had better write him at once, mentioning this field note in Kansas Farmer. We gladly recommend Mr. Pilcher and his Blue Ribbon Polands to all. You will never regret giving him your order.

"The Secrets of Successful Dairying" is the name of a little booklet that has lately been published by the Blue Valley Creamery Co. of St. Joseph, Mo., and you can have a copy of it for the asking. It is surely worth a postal card and will probably be worth many dollars to you if you read it and follow its directions. At any rate, you will be interested in what this great company pays for butter-fat and in the fact that they send you a check promptly. Read their ad and mention Kansas Farmer and you will get the best of treatment.

The Simmons Hardware Co., St. Louis, Mo., have won a great reputation on their Keen Kutter tools and now they are announcing their Liberty lanterns with special wick regulating device which prevents the flame from having "horns" at the sides and which gives a bigger, brighter, stronger and longer light with less oil than other lanterns. If your dealer don't have the Liberty lantern the Simmons Hardware Co. will supply you. At least they will tell you all about them if you will ask.

A good hay press is a money maker and the Lightning hay press made by the Kansas City Hay Press Co., 129 Mill St., Kansas City, Mo., ought to be among the best as it has been made and sold to satisfied customers for 25 years. These machines are made in different styles and with self feed attachment. They have either horse or belt power and the manufacturers would like to send their catalog to all readers of Kansas Farmer. It costs only a postal card and a few minutes time.

How would you like to be able to pump 1,000 gallons of water for one cent? You can do it with a Witte gasoline engine made by the Witte Gas and Gasoline Engine Co., 527 West 5th St., Kansas City, Mo. It is better than a windmill because it always works and it will pump water from any depth of well. It is guaranteed for five years and you can grind feed, cut ensilage, saw wood, run the washing machine or the grindstone or operate a workshop with it. Ask them to tell you about this engine.

Superintendent T. W. Roach of Kansas Wesleyan Business College, Salina, Kan., has a very tempting proposition for young men and women who want to prepare themselves for active business life and feed sure that the money paid for school expenses will prove a good investment. If you will mention Kansas Farmer Supt. Roach will send you one of his catalogs free.

This is the Cement age. More and more will this wonderful material come into our daily lives as the cost of timber increases and as we desire more permanent construction. We all want to know about it and one of the best ways to learn is to write the Atlas Portland Cement Co., Dept. 107, No. 30 Bond St., New York, for their book on "oncrete Construction About the Home and Farm." If you mention Kansas Farmer when you write they will send the book free.

GALLOWAY CATTLE

SMOKY HILL RANCH. Galloway herd, headed by Pat Ryan of Red Cloud 20038, Starlight 2d of Tarbreoch 24478 and Valarius 29088. Bulls and heifers for sale from my herd of 180 registered Galloways. E. J. GUILBERT, Gil, Kansas.

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N. S. LEUZLER, Breeder of the best in Shorthorns. Almema (Norton Co.) Kan. GREENDALE STOCK FARM. 25 YOUNG BULLS by Imp. Ardath Mystery and Best of All for sale at rock prices. Can also offer some good Berkshire swine and Shropshire rams. Correspondence solicited. COL. ED GREEN, Prop., Florence, Kansas.

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Bulls in service, Forest Knight 226084 and Victor Archer 264156. Breeding stock for sale. Stewart & Downs, Hutchinson, Kan.

FOR SALE.

10 choice young bulls from 8 to 13 months old, part straight Scotch. Choice yearling and short two-year-old heifers. Good colors, bred right, priced right. C. W. TAYLOR, Pearl, Kan. Address mail R. F. D. 2, Enterprise, Kan.

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The oldest Shorthorn breeders in Kansas. The largest herd of Cruickshanks in Kansas. Herd headed by Violet Prince 115647 and Orange Commander 220590. Young stock of both sexes and some cows for sale. Quality and prices right. H. W. McAFEE, Topeka, Kansas. Bell Phone 59-2.

JEWEL SHORTHORNS

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