FORTIETH ANNUAL CATALOGUE

OF THE

Officers, Students and Graduates

OF THE

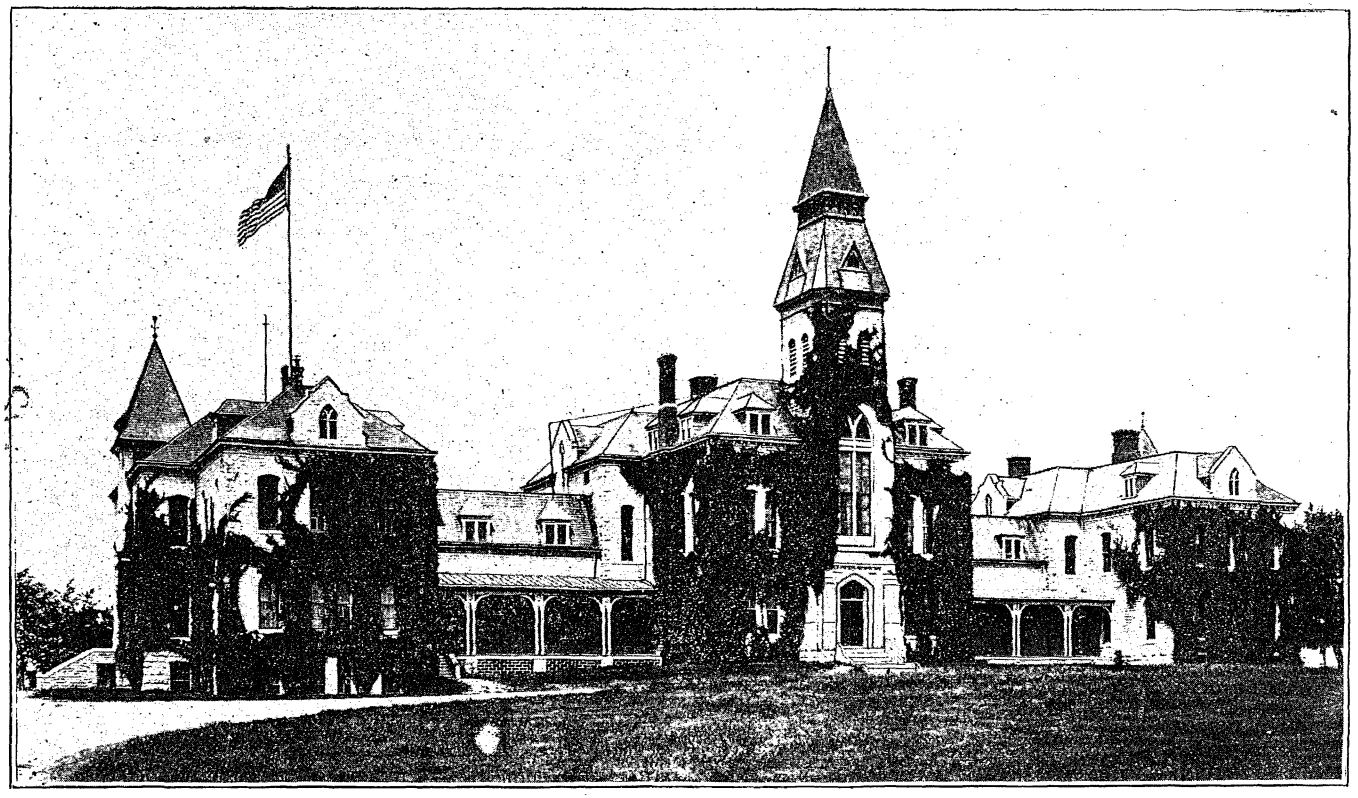
KANSAS STATE

Agricultural College

MANHATTAN,

1902-'03.

MANHATTAN, KANSAS,
1903.



ANDERSON (MAIN) HALL.

Terms and Vacations.

Fall Term, 1903, Thirteen Weeks.

WEDNESDAY, SEPTEMBER 16.—Examination for admission, at nine A. M.
THURSDAY, SEPTEMBER 17.—College year begins.
TUESDAY, SEPTEMBER 29.—Short course in domestic science begins.
SATURDAY, OCTOBER 31.—Mid-term examination.
THURSDAY, NOVEMBER 26.—Thanksgiving day vacation.
THURSDAY AND FRIDAY, DECEMBER 17, 18.—Examination at close of term.

Winter Term, 1904, Twelve Weeks.

MONDAY, JANUARY 4.—Examination for admission, at nine A. M.
TUESDAY, JANUARY 5.—Winter term begins.
TUESDAY, JANUARY 5.—Short courses in agriculture and dairying begin.
SATURDAY, JANUARY 23.—Annual inter-society oratorical contest.
SATURDAY, FEBRUARY 13.—Mid-term examination.
THURSDAY AND FRIDAY, MARCH 24, 25.—Examination at close of term.

Spring term, 1904, Eleven Weeks.

MONDAY, MARCH 28.—Examination for admission, at nine A. M.
TUESDAY, MARCH 29.—Spring term begins.
SATURDAY, MAY 7.—Mid-term examination.
TUESDAY AND WEDNESDAY, JUNE 14, 15.—Examination at close of year.
JUNE 12 TO 16.—Exercises of commencement week.
THURSDAY, JUNE 16, at ten A. M.—Commencement.
JUNE 17 TO SEPTEMBER 21.—Summer vacation.

Fall Term, 1904.

WEDNESDAY, SEPTEMBER 21.—Examination for admission, at nine A. M.
THURSDAY, SEPTEMBER 22.—College year begins.

Board of Regents.

HON. J. S. McDOWELL (1905),* *President*,
Smith Center, Smith county.

HON. C. E. FRIEND (1905), *Vice-president*,
Soldier, Jackson county.

HON. E. T. FAIRCHILD (1907), *Treasurer*,
Ellsworth, Ellsworth county.

HON. R. J. BROCK (1905), *Loan Commissioner*,
Manhattan, Riley county.

HON. J. W. BERRY (1907),
Jewell, Jewell county.

HON. J. O. TULLOSS (1907),
Sedan, Chautauqua county.

PRES. E. R. NICHOLS (*ex officio*), *Secretary*,
Manhattan, Riley county.

MISS LORENA E. CLEMONS, *Assistant Secretary*,
Manhattan.

* Term expires.

Board of Instruction.

FACULTY.

ERNEST R. NICHOLS, D. B. (Iowa State Normal School), A. M. (State University of Iowa),
President.

JOHN D. WALTERS, M. S. (Kansas State Agricultural College),
Professor of Industrial Art and Designing.

ALEXANDER B. BROWN, (Boston Music School), A. M. (Olivet),
Professor of Music.

JULIUS T. WILLARD, M. S. (Kansas State Agricultural College),
Professor of Chemistry.

EDWIN A. POPENOE, A. M. (Washburn),
Professor of Entomology and Zoology, Curator of the Museum.

BENJAMIN L. REMICK, Ph. M. (Cornell College),
Professor of Mathematics.

BENJAMIN F. EYER, B. S. (Armour Institute)
Professor of Physics and Electrical Engineering.

CHARLES E. GOODELL, A. M. (Franklin),
Professor of History and Economics.

HERBERT F. ROBERTS, A. B. (University of Kansas), M. S. (Kansas State Agricultural College),
Professor of Botany.

WILLIAM ARCH McKEEVER, A. M. (University of Kansas),
Professor of Philosophy.

WILFORD O. CLURE, B. O. (Drake University),
Professor of Oratory.

EDMUND S. McCORMICK, B. S. (Massachusetts Institute of Technology),
Professor of Mechanical Engineering, Superintendent of Shops.

DANIEL H. OTIS, M. S. (Kansas State Agricultural College),
Professor of Animal Husbandry.

Miss EDITH A. McINTYRE, (Teachers' College),
Professor of Domestic Science.

NELSON S. MAYO, M. S. (Michigan Agricultural College), D. V. S. (Chicago Veterinary College),
Professor of Veterinary Science.

ALBERT DICKENS, M. S. (Kansas State Agricultural College),
Professor of Horticulture, Superintendent of Orchards and Gardens.

CLARK M. BRINK, A. M. (U. of R), Ph. D. (University of City of New York),
Professor of English.

ANDREW S. ROWAN, Captain Nineteenth Infantry, U. S. A.,
Professor of Military Science.

EDWIN H. WEBSTER,[a] B. S. Ag. (Iowa State College), M. S. (Kansas State Agricultural College),
Professor of Dairying.

ALBERT M. TEN EYCK,[b] B. Agr. (Wisconsin),
Professor of Agriculture, Superintendent of Farm.

JOSHUA D. RICKMAN (I. T. U.),
Superintendent of Printing.

MISS MARIAN E. JONES, M. S. (Kansas State Agricultural College),
Superintendent of Domestic Art.

BENJAMIN S. McFARLAND, A. M. (Miami),
Principal Preparatory Department.

MRS. HENRIETTA W. CALVIN, B. S. (Kansas State Agricultural College),
Librarian.

MRS. EDITH N. CLURE, (Posse Gymnasium),
Director Physical Training.

MISS LORENA E. CLEMONS, B. S. (Kansas State Agricultural College),
SECRETARY.

Assistants.

JACOB LUND, M. S. (Kansas State Agricultural College),
Superintendent Heat and Power Department.

MISS JOSEPHINE C. HARPER, A. M. (Lindsborg),
Assistant Professor of Mathematics.

MISS ALICE RUPP (Indiana State Normal),
Assistant Professor of English.

GEORGE F. WEIDA, Ph. D. (Johns Hopkins),
Assistant Professor of Chemistry.

CLARENCE L. BARNES, D. V. M. (Cornell University),
Assistant Professor of Veterinary Science.

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a. Till April 1, 1903.

b. Since December 1, 1902.

JOHN O. HAMILTON, B. S. (University of Chicago),
Assistant Professor of Physics.

WILLIAM L. HOUSE,
Foreman of Carpenter Shop.

Miss MARGARET J. MINIS, B. S. (Kansas State Agricultural College),
Assistant Librarian.

ROBERT H. BROWN, B. M. (Kansas Conservatory of Music), B. S. (Kansas State Agricultural College),
Assistant in Music.

WM. ANDERSON, B. S. (Kansas State Agricultural College),
Assistant in Mathematics.

Miss GERTRUDE BARNES,
Assistant Librarian.

WILLIAM BAXTER,
Foreman of Greenhouse.

WILL M. SAWDON,[c] B. S. (Purdue),
Assistant in Mechanics.

Miss ADA RICE, B. S. (Kansas State Agricultural College),
Assistant in English.

LOUIS WABNITZ,
Foreman Machine-shop.

ERNST C. GASSER,
Foreman Blacksmith Shop.

Miss INA E. HOLROYD, B. S. (Kansas State Agricultural College), (Kansas State Normal),
Assistant in Preparatory Department.

GEO. O. GREENE, M. S. (Kansas State Agricultural College),
Assistant in Horticulture.

Miss HETTY G. EVANS (Massachusetts Normal Art School),
Assistant in Drawing.

VERNON M. SHOESMITH, B. S. (Michigan Agricultural College),
Assistant in Agriculture.

Miss ELEANOR HARRIS, B. M. (Chicago College of Music),
Assistant in Music.

WALTER E. MATHEWSON, B. S. (Kansas State Agricultural College),
Assistant in Chemistry.

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c. Till November 1, 1902.

AMBROSE E. RIDENOUR, B. S. (Kansas State Agricultural College),
Foreman in Foundry.

GEO. A. DEAN, B. S. (Kansas State Agricultural College),
Assistant in Entomology.

LESLIE F. PAULL, A. M. (Brown),
Assistant in Botany.

MISS EMMA J. SHORT,
Assistant in Preparatory Department.

MISS INA F. COWLES, B. S. (Kansas State Agricultural College),
Assistant in Domestic Art.

MISS MAUDE M. COE, B. S. (Kansas State Agricultural College),
Assistant in Domestic Art.

ROSCOE H. SHAW, B. S. (New Hampshire College of Agriculture and Mechanic Arts),
Assistant Chemist, Experiment Station.

THEO. H. SCHEFFER,[d] A. M. (Cornell University),
Assistant in Zoology.

CHARLES E. PAUL,[e] B. S. (Massachusetts Institute of Technology),
Assistant in Mechanical Engineering.

Other Officers.

MISS C. JEANETTE PERRY, B. S. (Kansas State Agricultural College),
Executive Clerk.

MISS MINERVA BLACHLY, B. S. (Kansas State Agricultural College),
Bookkeeper.

MISS HELEN KNOSTMAN, B. S. (Kansas State Agricultural College),
Clerk.

MISS ALICE M. MELTON, B. S. (Kansas State Agricultural College),
Clerk in Director's Office.

CHARLES HUGHES,
Secretary to President.

WILLIAM R. LEWIS,
Janitor.

d. Since December 1, 1902.

e. Since January 1, 1903.

Experiment Station.

Council.

President NICHOLS, Chairman.
Professor WILLARD, Chemist and Director.
Professor POPENOE, Entomologist.
Professor ROBERTS, Botanist.
Professor OTIS, Animal Husbandman.
Professor MAYO, Veterinarian.
Professor DICKENS, Horticulturist.
Professor WEBSTER,[1] Dairyman.
Professor TEN EYCK,[2] Agriculturist.

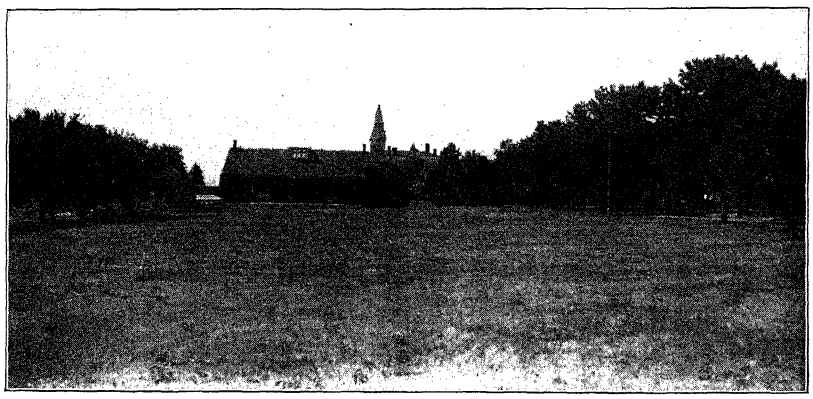
Assistants.

GEO. O. GREENE, Horticulture.
VERNON M. SHOESMITH, Agriculture.
GEO. A. DEAN, Entomology.
LESLIE F. PAULL, Botany.
CLARENCE L. BARNES, Veterinary Science.
ROSCOE H. SHAW, Chemistry.
Miss ALICE M. MELTON, Clerk in Director's Office.

[1] Until April 1, 1903.
[2] Since December 1, 1902.

Student Assistants.

RICHARD F. BOURNE, Veterinary.
MAY BOWEN, B. S., Mathematics.
ROBERT W. DE ARMOND, Horticulture.
CHARLES S. DEARBORN, Mechanics.
LOIS DEMING, Stenographer.
HOMER DERR, B. S., Preparatory.
GUSTAVE E. EASTMAN, Dairying.
CARL G. ELLING, Agriculture.
GEORGE W. GASSER, Veterinary.
JOHN GRIFFING, Dairying.
ALANSON L. HALLSTED, Horticulture.
EDWARD H. HODGSON, Agriculture.
HENRIETTA HOFER, B. S., Library.
EVAN E. KERNOHAN, Horticulture.
WILLIAM F. KERR, Agriculture.
ANNA SMITH KINSLEY, B. S., Chemistry.
GEORGE LOGAN, B. S., Veterinary.
ABNER H. McMANIS, Dairying.
MYRTLE MATHER, B. S., Preparatory.
MARSHALL H. MATTS, Dairying.
HATTIE M. NOYES, B. S., Preparatory.
GERTRUDE STUMP, B. S., Sewing.
FLORENCE VAIL, B. S., Chemistry and Preparatory.
HARRIET VANDIVERT, B. S., English.
HARRY N. VINALL, Horticulture.
ELLA WEEKS, Drawing.
INEZ WHEELER, Library.



DRILL GROUND.

The College Battalion.

The following is the roster of the commissioned and non-commissioned officers of the Kansas State Agricultural College corps of cadets for 1902–'03:

CAPT. A. S. ROWAN, Nineteenth United States Infantry,
Commandant of Cadets.

STAFF.

A. M. NASH..... Cadet Captain and Regimental Adjutant.
A. L. HALLSTED..... Cadet Captain and Regimental Quartermaster.
T. L. PITTMAN..... Second Lieutenant and Battalion Adjutant.
P. M. BIDDISON..... Second Lieutenant and Battalion Quartermaster.
P. A. COOLEY..... Battalion Sergeant-major.
L. C. FOSTER..... Battalion Quartermaster Sergeant.
V. L. CORY..... Color Sergeant.

INFANTRY, BY COMPANIES.

RANK.	Company A.	Company B.	Company C.	Company D.
Captain.....	O. P. Drake.....	R. F. Bourne.....	A. H. Sanderson..	D. V. Corbin.
First Lieutenant...	J. H. Whipple....	W. O. Gray.....	F. C. Romig.....	T. E. Dial.
Second Lieutenant,	E. C. Gardner....	J. G. Savage	O. B. Whipple....	G. Edgerton.
First Sergeant.....	A. N. H. Beeman,	C. P. Blachly.....	M. A. Pierce.....	C. J. Axtell.
Sergeants.....	J. L. Rodgers	R. S. Thompson..	W. P. Terrel.....	R. A. Seaton.
	E. E. Adamson...	B. R. Nelson	F. C. Balmer.....	E. Wheeler.
	J. C. Cunningham.....	C. F. Johnson....	C. H. White.....	C. B. Thummel.
	B. Hoffhines.....	C. W. Allison.....	F. Van Dorp	J. B. Thompson.
Corporals.....	J. C. Morrison ...	E. F. Brant.....	E. A. Cowles	J. Nygard.
	J. J. Peckham ...	M. Farrar.....	W. R. Ballard....	W. W. Stanfield.
	J. M. Taylor	A. L. Larson.....	G. L. Shirley.....	S. V. Smith.
	L. J. Munger.....	R. Meyer.....	C. M. Riker	R. Ramage.
	C. A. Gableman..	W. H. Cook.....	A. C. Ferris.....	H. A. Burt.
	H. F. Bergman...	R. Newland.....	H. Spears	W. P. Schroeder.
	C. W. Fryhofer...	.....	.....	C. B. Kirk.
Musicians.....	C. H. Popenoe ...	D. Walters.....	H. S. Davis.....	J. R. McMillan.
	.....	.....	I. H. Harris.....	G. A. Moffatt.

The College Band.

The following is the roll of the College band for 1902–'03:

A. B. BROWN, DIRECTOR.

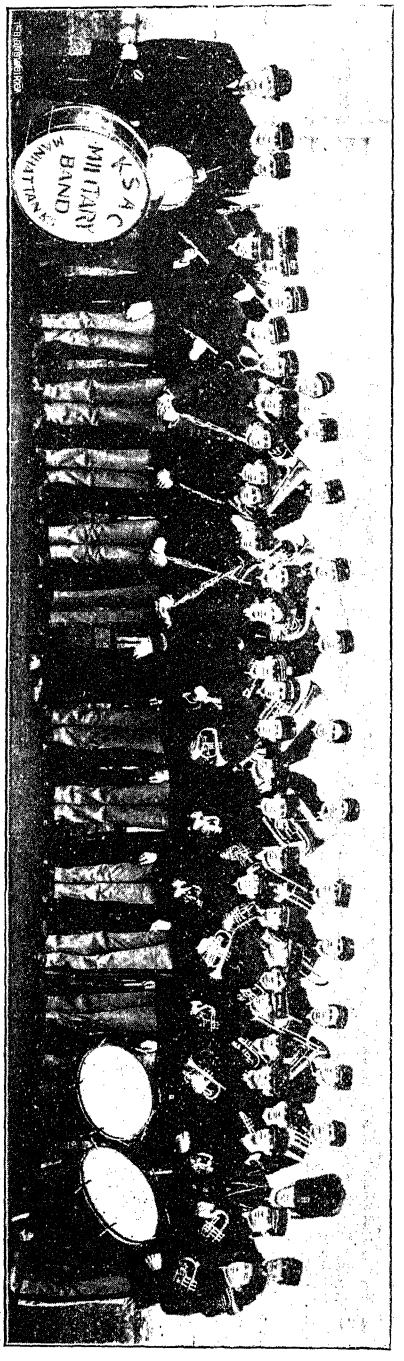
R. H. BROWN, Leader. A. H. JOHNSON, Drum Major.

Sergeants: A. C. WHITE, V. MATTHEWS, G. E. YERKES.

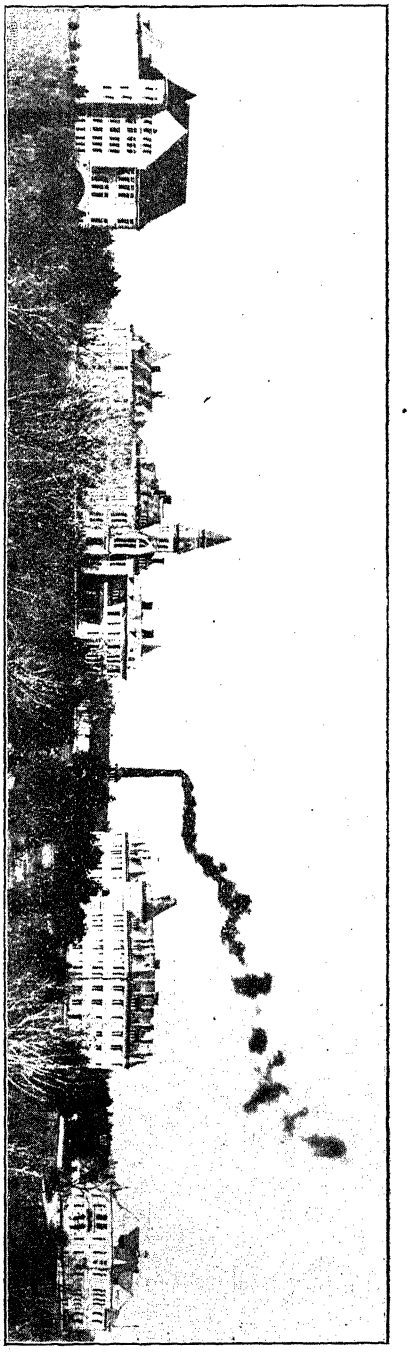
Corporals: G. A. GILKISON, A. J. RHODES, R. A. CARLE, H. MATTHEWS, W. B. NEAL.

NAME.	Instrument.	NAME.	Instrument.
Rhinehart, M.	Tuba.	Carle, R. A.	Cornet.
Shank, Geo.	"	Bixby, H. E.	"
Spuhler, H. A.	"	Copping, M. J.	"
Bender, L. B.	"	Collier, R. A.	"
Posey, W. M.	Tenor.	Elsas, M.	"
Paddock, J. D.	"	Kramer, W.	"
Joy, C. G.	"	Perry, C. F.	"
Skow, G. W.	"	Spohr, G. A.	"
Wolcott, H.	"	Wright, G. L.	"
Judd, H.	"	Brown, R. H.	"
Hancock, A. V.	"	Christensen, F. W.	"
Walters, F. H.	"	Hutchinson, G.	"
Wolfe, Geo.	Trombone.	Mitchell, B. L.	"
Rhodes, A. J.	"	Brown, A. D.	Clarinet.
Baird, R. O.	"	Bender, L. B.	"
Swift, C. B	Baritone.	Fielding, L.	"
Legere, C.	"	Hubbard, H. B.	"
Reasoner, J. C.	Euphonium.	Ulrich, H.	"
Souders, Guy.	French horn.	Woodruff, F.	"
Conkey, R. W.	"	Sturgeon, W. J.	"
Neal, W. B.	Alto.	Foster, J. J.	"
McLaughlin, C. E.	"	Cudney, F. M.	"
Spencer, H.	"	Derr, H.	Piccolo.
Cudney, E. W.	"	Strong, H. W.	"
McCampbell, C. W.	"	Roberts, P. M.	"
Samson, E. D.	"	Miller, C. M.	"
White, A. C.	Cornet.	Merritt, J. E.	Tympani.
Matthews, V.	"	Paine, R. R.	"
Matthews, H.	"	Davis, W. D.	Drums.
Yerkes, G. E.	"	Briggs, Jno.	"
Gilkison, G. A.	"	Groome, H.	Cymbals.

Total, 62.



THE COLLEGE CADET BAND.



PARTIAL VIEW OF BUILDINGS.

History and Resources.

THE income of the College is derived from two sources—national and state. The original land-grant act was signed by President Lincoln July 2, 1862. This act appropriated 30,000 acres of land for each senator and representative in Congress. Under the provisions of this act this state was to receive 90,000 acres. The amount actually received was 82,313.52. This land was to be sold and the proceeds to be a permanent endowment, to be invested in bonds bearing not less than five per cent. interest, the income from these bonds to be used for the support of at least one college in each state. The second provision of section 5 reads as follows: "No portion of said fund, nor interest thereon shall be applied, directly or indirectly, under any pretense whatever to the purchase, erection, preservation or repair of any building or buildings." The amount of this endowment is $491,-181. This has been increasing until recently, on account of buying bonds below par. The income derived from this endowment since 1880 is given in the column headed "Income Fund," page 15.

Under this act, the state of Kansas, in 1863, established the State Agricultural College, by endowing Bluemont College, which had been erected two miles from Manhattan, under the auspices of the Methodist Episcopal church, but was presented to the state for the purpose named in the act of Congress.

In 1873 the College was reorganized upon a thoroughly industrial basis, with prominence given to agriculture and sciences related thereto; and in 1875 the furniture and apparatus of the College were moved to the farm of 223 acres, one mile from the city of Manhattan.

In March, 1887, Congress passsed the so-called "Hatch bill," which provided for the organization in each state of a station for agricultural experiments, and gave to each an annual appropriation of $15,000 for this purpose. See "Experiment Station," page 21.

On August 30, 1890, another act was passed by Congress, known as the "college-aid bill," or "Morrill bill." It provided for an annual appropriation, beginning with $15,000 for year ending June 30, 1890, with an annual increase for ten years of $1000 over the preceding year, the annual amount thereafter to each state to be $25,000. This money is "to be applied only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural and economic sciences, with especial reference to their applications in the industries of life, and to the facilities for such instruction."

TABULATED FINANCIAL EXHIBIT.

Fiscal Year.	State Appropriations.									Inventory increase	Expense	National Appropriations.			Enrolment	Graduate
	Miscellaneous	Current expense	Water and coal	Regents, etc.	Repairs	Library	Equipment	Buildings	Total			Income fund	Morrill fund	Hatch fund		
1863-80								$45,645	$155,302	$36,009						56
1880-81	$17,979[1]			$1,251	$800		$1,950		4,001	3,316	$19,502	$24,766			267	8
1881-82				1,398		$1,000		15,000	17,398	19,784	27,914	17,622			312	9
1882-83				1,864		1,000		15,000	17,864	24,448	29,660	31,551			347	12
1883-84				1,415	500	500	500	7,500	10,415	12,295	34,844	32,638			395	17
1884-85	4,613[1]			1,637	500	500	500	15,000	18,137	37,105	42,646	32,213			402	14
1885-86				1,798	700		600	10,000	12,098	34,721	45,827	38,595			428	21
1886-87				1,733	1,400			4,100	7,233	12,910	38,788	32,253			481	21
1887-88	2,264[1]			2,047	1,000	1,000	4,700	8,817	17,564	16,597	35,768	32,331		$15,000	472	22
1888-89	3,000[2]			1,815	1,000	1,000	2,500		9,315	10,334	32,027	31,686		15,000	445	25
1889-90			$1,425	300	1,900	1,000	2,900	1,000	8,525	8,732	29,892	34,131		15,000	514	27
1890-91			1,649	3,410	1,200	1,000	2,950		10,209	6,857	43,330	28,765	$31,000	15,000	593	52
1891-92	3,000[2]		325	1,698	3,050	250		4,000	12,323	15,219	50,722	29,654	17,000	15,000	584	35
1892-93			500	456	1,500	250			2,706	18,381	57,012	30,187	18,000	15,000	587	39
1893-94			484	37	1,000			74,000	75,521	7,846	54,989	29,761	19,000	15,000	555	39
1894-95			190	116				2,000	2,295	79,736	51,156	29,390	20,600	15,000	572	57
1895-96	1,625[3]		1,995	1,927	4,300	999	5,057	3,480	17,453	13,933	51,928	26,988	21,000	15,000	647	66
1896-97		$10,000	2,084	1,907	1,300	1,000	550	1,300	18,141	157	51,500	28,669	22,000	15,000	734	55
1897-98	629[4]	5,000	2,000	1,656	1,700	1,000	3,200	16,599	31,584	16,171	56,516	27,677	23,000	15,000	803	69
1898-99		5,000	2,000	1,700	1,000		1,050		10,750	2,993	63,704	29,549	24,000	15,000	870	53
1899-1900	7,360[5]	10,000	2,250	1,850	3,000	1,500	22,240	43,500	91,700	45,582	56,956	25,160	25,000	15,000	1,094	58
1900-01	18,993[6]	10,000	2,250	1,850	3,000	1,500			37,593	3,380	65,822	30,910	25,000	15,000	1,321	60
1901-02	4,130[7]	25,000	2,800	1,850	3,000	1,500	9,100	75,000	122,380	79,917	73,467	25,371	25,000	15,000	1,396	52
1902-03	4,130[7]	30,000	2,800	1,850	3,000	1,500	8,500	10,000	61,780				25,000	15,000	1,574	....
1903-04	15,830[8]	40,000	5,000	2,050	5,000	1,500	18,500	55,000	142,880				25,000	15,000		....
1904-05	5,330[9]	50,000	3,500	2,050	5,000	1,500	18,500	5,000	90,880				25,000	15,000		....
Totals									$1,026,047							

[1] To restore endowment (not included in totals). [2] Water mains and sewer.
[3] $1500 cadet uniforms, $125 sewers. [4] Rent, President's house.
[5] $2000 Farmers' Institutes, $1800 salary State Veterinarian, $3000 sewer, $500 rent President's house.
[6] $2000 Farmers' Institutes, $1800 salary State Veterinarian, $300 rent President's house, $14,893 deficiency June 30, 1899.
[7] $2000 Farmers' Institutes, $1800 salary State Veterinarian, $330 rent President's house.
[8] $2000 Farmers' Institutes, $2000 salary State Veterinarian, $330 rent President's house, $10,500 purchase of land, $1000 contingent fund.
[9] $2000 Farmers' Institutes, $2000 salary State Veterinarian, $330 rent President's house, $1000 contingent fund.

Grounds and Buildings.

THE College grounds and buildings, occupying an elevation at the western limits of the city of Manhattan, and facing toward the city, are beautiful in location. The grounds include an irregular plat in the midst of a fine farm, with orchard, vineyard and sample gardens attached, the whole being surrounded by durable stone walls. The grounds are tastefully laid out and extensively planted, according to the design of a professional landscape-gardener, while well-graveled drives and good walks lead to the various buildings. All these are of the famed Manhattan limestone, of simple but neat styles of architecture, and admirably suited to their use. All recitation rooms are excellently lighted and ventilated, and are heated by steam or hot water. A complete system of sewerage has been provided. The College owns 430 acres of land, valued at $50,000, and leases 110 acres additional. The greater portion of these 540 acres is devoted to experiments.

ANDERSON (Main) HALL is 152x250 feet in extreme dimensions, arranged in three distinct structures, with connecting corridors. This building contains, in its two stories and basement, offices of the President and Secretary, cloak-rooms, studies, chapel, post-office, and offices and classrooms of the departments of drawing, music, mathematics, oratory, English, philosophy, preparatory, and printing. Cost, $79,000. The value of the equipment and apparatus in this building is as follows: Executive, $5323; drawing, $2395; music, $2039; mathematics, $1598; oratory, $45; English, $60; preparatory, $45; printing, $4717.

MECHANICS HALL contains the following rooms, forming a connected structure: Wood shop, two stories, 40x103 feet. The upper floor contains office and drafting-room for the department of mechanical engineering. The lower floor contains benches for 220 students, and complete set of wood-working machinery and tools. Machine-shop, 40x80 feet; blacksmith shop, 40x50 feet; iron foundry, 40x50 feet; brass foundry, 16x30 feet; pipe-fitting room, 18x50 feet; engineering laboratory, 35x40 feet; power room, 35x40 feet; boiler room, 40x75 feet. Cost of buildings, $23,125; value of equipment, $27,828.

GYMNASIUM, one story, 35x110 and 46x75 feet of floor space, is in form of a cross. It contains a drill-room 43x71 feet, a large class-

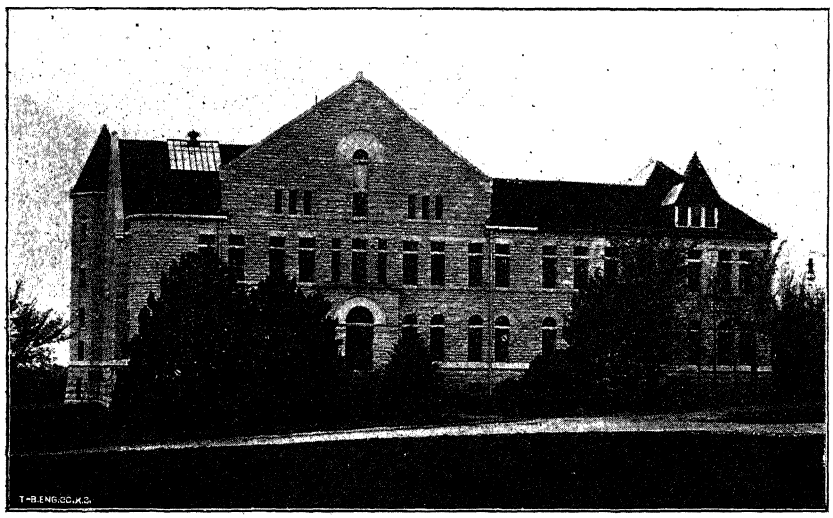
room, cloak-room, dressing-room, toilet-room, ten bath-rooms, and two offices, Cost, $10,000. Value of equipment, $515.

HORTICULTURAL HALL, 32x80 feet, is a one-story building with cellar, having museum, classroom, and storage, with greenhouses attached. Cost of building was $4200; value of equipment and apparatus is $19,046.

HORTICULTURAL LABORATORY contains offices, workroom, five propagating houses, and insectary. Cost, $5000.

ARMORY, 46x95 feet, is a two-story building. This building which has served many purposes, is now fitted below for an armory and drill-room and office of military department; also dressing-room and bath-room for the various athletic teams; and above are classrooms, laboratories, offices and museum of the veterinary department. Cost of building, $11,250. Value of equipment and apparatus: Military, $1697; veterinary, $5638.

FAIRCHILD (LIBRARY) HALL is 100x140 feet, three and four stories high. This building provides permanent quarters for the library, with ample reading-rooms and offices, classrooms and laboratories for the departments of botany, entomology and zoölogy, and bacteriology, a classroom and office for the department of history and economics, general museum, and rooms for the various literary societies. Cost of building $67,750. Value of equipment and apparatus: Botany, $14,169; history and economics, $157; entomology and zoology, $8519.



FAIRCHILD (LIBRARY) HALL.

KEDZIE (DOMESTIC SCIENCE) HALL is 84x70 feet, two stories and basement. The first floor contains office, lecture-rooms and laboratories for the department of domestic science. The second floor is occupied by the department of domestic art. Cost of building, $15,000. Value of apparatus: Domestic science, $1318; domestic art, $572.

AGRICULTURAL HALL, 90x95 feet, with its two stories and basement, contains offices, classrooms and laboratories for the departments of agriculture, animal husbandry, and dairying. It is well equipped with modern improved machinery for butter- and cheese-making, milk-testing, etc. All the workrooms are lined with opalite tiling. Cost, $25,000; equipment and apparatus, $33,051.

PHYSICAL SCIENCE HALL is 96x166 feet, and its two stories and basement contain offices, classrooms and laboratories for the departments of chemistry, and physics and electrical engineering. It is heated both by direct and indirect radiation, thus insuring perfect ventilation. Cost of building, $70,000. Value of equipment: Chemistry, $8232; physics and electrical engineering, $8177.

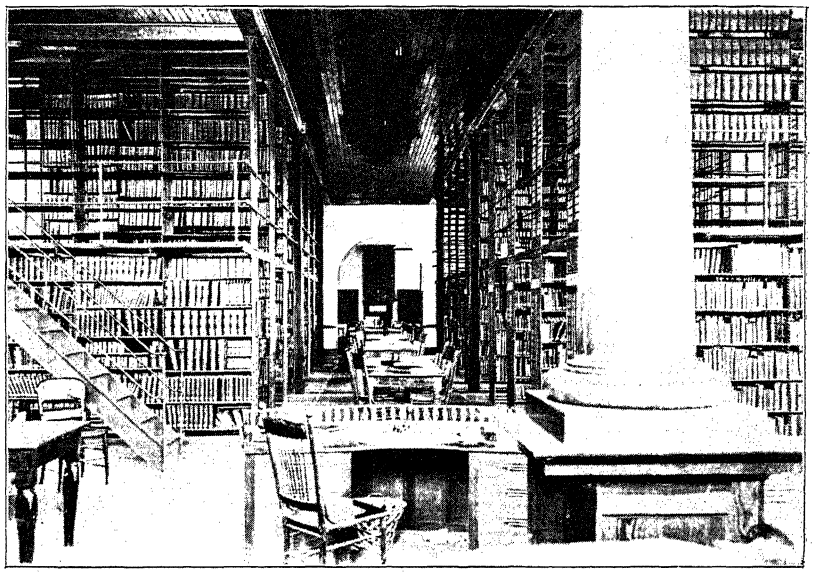
THE FARM BARN is a double but connected stone structure, 50x75 feet and 48x96 feet, with an addition of sheds and experimental pens 40x50 feet. The south wing, 48x96 feet, is the stock-judging room, having a seating capacity of 350. A basement, underlies the entire structure. Cost, $10,831.

THE DAIRY BARN, 40x175 feet, is fitted up with modern swinging stalls for eighty head of cows, arranged in two rows, with driveway between. Cost of building and equipment, $4000.

THE HORTICUTURAL BARN is a stone building, containing storeroom, granary, and stables for several horses. Cost, $1000.

THE COLLEGE LIBRARY is one of the most important supplements to classroom instruction. It consists of 25,700 bound volumes and about 18,000 pamphlets. These books are mainly kept in a general library, but many volumes of technical character are withdrawn and held in departmental libraries. All of the books are indexed in card catalogues, which show their author, title, and to a large degree the details of their contents; also their location. Students are allowed free access to the shelves, a privilege and a source of culture that are given in perhaps no other library of its size in the country. Students may draw books for home use under simple and liberal regulations The library is open daily, except on legal holidays, from seven A. M. to six P. M., and the librarian or an assistant is in constant attendance during this period to assist those who use the books. By all these means the library is utilized to the fullest extent and is of inestimable value.

The College subscribes for the leading literary, scientific and agricultural journals, while the principal daily and weekly papers of Kansas, and many from other states, are received in exchange for the College publications. All these are kept on file for the use of students and Faculty. The College has been designated as the depository of United States public documents for the fifth congressional district of Kansas, and 3000 volumes have already been received on this account. Value of books and equipment, $55,125.



LIBRARY BOOK ROOM.

Objects.

This College now accomplishes the objects of its endowment in several ways:

First, It gives a substantial education to men and women. Such general information and discipline of mind and character as help to make intelligent and useful citizens are offered in all its departments, while the students are kept in sympathy with the callings of the people.

Second, It teaches the sciences applied to the various industries of farm, shop, and home. Chemistry, physics, botany, entomology, zoölogy and mechanics are made prominent means of education to quick observation and accurate judgment. Careful study of the minerals, plants and animals themselves illustrates and fixes the daily lessons. At the same time lessons in agriculture, horticulture, engineering and household economy show the application of science; and all are enforced by actual experiment.

Third, It trains in the elements of the arts themselves, and imparts such skill as to make the hands ready instruments of thoughtful brains. The drill of the shops, gardens, farm and household departments is made a part of the general education for usefulness, and insures a means of living to all who make good use of it. At the same time it preserves habits of industry and manual exertion, and cultivates a taste for rural and domestic pursuits.

Fourth, It seeks to extend the influence of knowledge in practical affairs beyond the College itself. For this purpose, farmers' institutes have been organized in nearly every county of the state, in which from one to three members of the Faculty share with the people in lectures, essays and discussions upon topics of most interest to farmers and their families. These institutes have brought the College into direct sympathy with the people and their work, so as to make possible a general dissemination of the truths presented. Members of the Faculty are also prominently connected with the state associations for the promotion of agriculture, horticulture, the natural sciences, and education in general. Correspondence as to farmers' institutes or any questions of practical interest in agriculture or related sciences is desired.

The *Industrialist*, published by the College, edited by the Faculty, and furnished to each student, gives a wide circulation to matters of interest in the College.

THE EXPERIMENT STATION.

The Agricultural Experiment Station of the College is organized and maintained under the provisions of what is known as the "Hatch act," and is officially designated as "An act to establish agricultural experiment stations in connection with the colleges established in the several states under the provisions of an act approved July 2, 1862, and the acts supplementary thereto." This was enacted "in order to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and practice of agricultural science." The law specifies in detail "that it shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and waters; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses for forage-plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable."

The Experiment Station, so established, is an important feature of the College. The President of the College, with the professors of agriculture, botany, chemistry, animal husbandry, horticulture, entomology, veterinary science, and dairying, form the Experiment Station Council, by authority of which experiments are undertaken, and carried on in the several departments under the supervision of the professors. The heads of certain important departments of instruction in the College are thus also in charge of the several departments of investigation of the Station, and to a certain extent assistants serve in both capacities. The Experiment Station, therefore, is not definitely localized at the institution, but its work and property are more or less woven in with that of the College. The expenses of the Experiment Station work are separately accounted for, however, and its property is listed in separate inventories. While this arrangement involves some difficulties, it also possesses many advantages—advantages which are mutual. The College work profits by having the investigations of the Sta-

tion going on alongside. The Station profits in that it thus obtains, without charge, the use of the College farm, buildings, heat, light, various collections, museums, and in some cases apparatus. The expenses of the Experiment Station are met by an appropriation by Congress of $15,000 per annum. The aims of the Station may be said to be twofold—those which lead to immediate returns, and those the object of which can be reached only after a series of years. Experiments of the greatest value are often of the latter kind, but if the work of the Station were limited to such, the public would feel that nothing is being accomplished. It is the intention of the Station force to make all of its experiments practical, in the sense that they lead to results which, indirectly if not directly, benefit the agricultural interests of the country.

The Hatch act provides "that bulletins or reports of progress shall be published at least once in three months, one copy of which shall be sent to each newspaper in the state or territories in which they are respectively located, and to such individuals actually engaged in farming as may request the same, and as far as the means of the Station will permit." The publications of the Station include annual reports, bulletins, and press bulletins.

Since 1889 the annual reports contain no details of experiments, but simply outlines of the work of the year in general and in the several departments, and including the financial statements required by law. These annual reports, not being of general interest, therefore, are printed in but small numbers, and sent to libraries and officials only, except on special request.

The bulletins are the means of communicating the results of the Station work directly to the farmers. They are issued in the quantities judged necessary to meet the demand. All investigations are described in them when completed, and they are sent to all on our mailing lists. During the history of the Station the number issued has averaged about eight per annum.

The press bulletins are issued in limited numbers and sent to the papers, to certain state and county officers, and to a considerable number of public or semi-public institutions. They are short, readable, and popular, but at the same time accurate, articles on subjects of current interest, and embodying observations and experiments of members of the Station staff. Extra copies of some of them are printed for use in answering inquiries.

Persons desiring to receive the Station bulletins are requested to address Agricultural Experiment Station, Manhattan, Kan. General correspondence in reference to the Station should be sent in the same

way, but inquiries concerning any special line of investigation should be sent to the head of the department in charge of such work.

FORT HAYS BRANCH STATION.— Congress, in an act approved March 27, 1900, ceded the Fort Hays military reservation, containing 7597.93 acres, to the state of Kansas, on condition that it would establish and maintain there branches of the State Normal School and of the Experiment Station. The state legislature accepted the reservation in an act approved February 7, 1901, and designated a division of the land between the Normal School and the Agricultural College, by which the latter obtained about 3500 acres, including the parts most desirable for agricultural purposes. Situated west of the ninety-ninth meridian, the station will occupy a field entirely different climatically from that of any other station in the country, and the results obtained there ought to benefit a large region extending even beyond the boundaries of the state. Experiments will be tried on a large scale in making tests of varieties and methods of culture, with special reference to the needs of regions with deficient rainfall. Experiments will be made to determine the feeding value of the drought-resisting crops produced. This branch station is supported by a state appropriation. The funds appropriated by Congress cannot be used for the support of substations.

INDUSTRIAL TRAINING.

This institution is preëminently industrial in its aims, methods, and tendencies. While the pure sciences, mathematics and other studies are rigorously taught, there is constantly present a practical atmosphere which incites the student to an application of the principles taught, and thus lends interest and value to the work. In nearly every term of the four-year course the student gives one hour per day to industrial training of one kind or another. This awakens and deepens sympathy with industry and toil, impresses the student with the essential dignity of labor, thus educating toward the industries instead of away from them, and lays a good foundation for a life-work in industrial and technical lines. Even should students not all return to the farm, the shop, or to housewifery, the wider knowledge afforded them and the broader sympathies engendered cannot but redound to their good, and to the advantage of society at large and the industrial classes in particular.

Throughout the first year young men take their industrial in the shops. They thus get a familiarity with tools and methods which enables them to do the wood- and ironwork commonly needed on the farm, and which is useful to all everywhere. The young women take sewing during the first year, and a certain amount of cooking practice.

The utility of this needs no argument. After the first year there are differences in the industrial requirements corresponding to differences in the several courses of study. In the domestic science course the various lines of household art constitute almost the entire industrial work, floriculture being given one term. In the mechanical engineering course shop work in one or another of its various kinds is required every term. In the agriculture course the industrials include practical instruction in the fields, orchards, gardens, and dairy, and in feeding. The general science course offers more latitude in choice of industrials after the first year. Young women may take sewing, cooking, printing, floriculture, or music. Young men may have woodwork, ironwork, dairying, farming, gardening, fruit-growing, or printing. The availability of these industrials depends somewhat on the season in some cases, so that not all are open each term. In addition to the above, a limited number of students are allowed typewriting as the industrial, upon recommendation of the head of a department having a machine.

The labor of students during assigned industrial time is not paid for, as its object is educational, and the student receives full value in the training afforded. In all the instruction in industrial lines special attention is given to making the courses systematic and progressive Students desiring to give extra attention to such work are allowed every opportunity that the departments can afford. Many students acquire sufficient proficiency to be able to turn their skill to a financial advantage during the latter terms of their courses, and all who apply themselves with any diligence obtain a training that cannot fail to be of great benefit to them in after-life. The work of the several industrials will be found described in detail under the individual headings.

EXTENDED COURSE.

Considering the entrance requirements of the institution, the four-year course of study is brief. Where practicable, students are advised to extend the course to five years. For students desiring to do this, additional work will be arranged in departments in which they may desire to specialize. Work done in the extended course may receive special mention on the diploma and be counted against requirements for the second degree.

SPECIAL COURSES.

Persons of suitable age and advancement, who desire to pursue such branches of study as are most directly related to agriculture or other industries, may select such studies, under the advice of the Faculty.

GRADUATE COURSES.

Arrangements can be made for advanced study in the several departments at any time, and outlines of courses will be furnished on application. The electives of the extended course are open to graduates, and special opportunities will be given for investigation and research. Every facility for advancement in the several arts taught at the College will be afforded such students, though they are not required to pursue industrial training while in these courses.

DEGREES.

The degree of bachelor of science is conferred upon students who complete the full course of four years and sustain all the examinations. This degree entitles the holder to credit for studies pursued in any application for state teachers' certificate. (See Laws of 1893.)

The degree of master of science will be conferred in course upon graduates of the College who have received eighteen credits in an approved graduate course, each credit being equivalent to a full study pursued for three months.

Courses will be approved which are in line with any one of the regular undergraduate courses, and include at least six credits in the biological or the physical sciences, or mathematics, and at least six credits in technical or industrial branches.

The principal line of study shall be designated as the major, and another line as the minor study. As nearly as may be, one-third of the time is to be given to the minor and two-thirds to the major study, including in the latter such scientific, mathematical or technical branches as contribute directly to it. The minor study must fill a logical place in the scheme, so that the work as a whole may possess unity.

Applications for graduate study shall be passed upon by the committee on graduate courses and referred by them to the Faculty for action. If approved by the Faculty, the candidate shall obtain an assignment at the beginning of each term for the studies intended to be pursued during the ensuing term. At the close of each term, examinations shall be given in all branches, and the candidate shall be reported as "passed" or "not passed."

Applications for entrance upon graduate study and for changes in major or minor subjects must be presented to the committee on graduate courses within the first week of a College term.

Non-resident candidates will be required to send to the professors in charge of the departments of their major and minor subjects a full and complete report at the middle and end of each term of the work accomplished within that period. Failure to comply with this re-

quirement will cause the candidate to be dropped from the roll of graduate students, to be reinstated only upon approval of the Faculty. At the end of each term, at the option of the instructors, and at a time and place to be designated by them, an examination may be given to non-resident candidates in the major and minor subjects.

Upon the completion of the required work, and by the 15th day of May of the year in which the degree is desired, each candidate shall present to the committee on graduate courses, typewritten and in duplicate, a satisfactory thesis involving original work along the line of his major subject. Thereupon a special examining committee of three shall be appointed from the Faculty, of whom one member shall represent the major subject and another the minor, who shall examine the candidate orally on the subject-matter of his thesis, and report the result of such examination to the Faculty. Upon receipt of the report of this committee, the Faculty will take action concerning the recommendation of the candidate for the degree.

The subject of the thesis must be presented to the committee on graduate courses for approval by the 1st day of January preceding the commencement at which the degree is desired.

Outlines of direction for study and research in various arts and sciences, with special adaptation to the wants and opportunities of individual applicants, will be furnished, at request, to all graduates; and professors in charge will gladly aid by correspondence in any researches undertaken.

The degree of master of science may be conferred upon the graduates of other colleges of like grade with our own, provided the applicant shall first satisfy the Faculty of his proficiency in the industrial studies distinctive of this institution, on the following conditions:

1. The applicant for the master's degree must be a graduate of at least three years' standing, and a resident of Kansas.

2. His graduate study shall have been in line with that required of graduates of this College, as published in our catalogue.

3. He must make application for the degree on or before the 1st day of January preceding the granting of the same. The application must be accompanied with a statement of his course of study, the work upon which the claim for the degree is based, and the subject selected for his thesis.

4. By April 1, an abstract of the thesis must be submitted to the Faculty.

5. Before May 15, the applicant shall present himself for examination. The examination shall be thorough and extensive, and shall be conducted by a special committee of the Faculty.

COURSES OF STUDY.

With a view to providing for the wants of the various classes of students, the following courses of study are offered:

1. Four-year courses, each leading to the degree of bachelor of science: (*a*) General science; (*b*) agriculture; (*c*) domestic science; (*d*) mechanical engineering; (*e*) electrical engineering.

2. Short courses in (*a*) dairying, (*b*) domestic science, (*c*) agriculture.

3. Apprentice courses in the shops, printing-office, and dairy.

Full explanations of the several courses, and of the studies included in them, will be found under the proper headings, and a general view of the four-year courses is given on the pages following.

All the preparatory subjects and nearly all the studies of the first and second years are taught each term, so that students may enter at any term. Students can complete nearly all the work of the first two years by attendance during winter terms only.

MAIN ENTRANCE TO COLLEGE GROUNDS.

ALL COURSES.

FALL TERM.	Algebra III.	5
	English Classics	5
	Elementary Botany	5
	Field-work	2½
	Hygiene	1
	Object Drawing	2½
	Woodwork or *Sewing I*	5
	Military Drill	5
	or *Calisthenics*	2½
WINTER TERM.	Geometry I	5
	English Structure	5
	Agriculture or Cooking	5
	Elementary Psychology	1
	Geometrical Drawing	2½
	Foundry or *Sewing II*	5
	Military Drill	5
	or *Calisthenics*	2½
SPRING TERM.	Geometry II	5
	Rhetoric I	5
	Elementary Physics	5
	Laboratory	2½
	Elementary Projection	2½
	Blacksmithing I or *Sewing III.*	5
	Military Drill	5
	or *Calisthenics*	2½

Music is optional throughout the course.

FOUR-YEAR COURSES.

This and the three following pages give a general view of the four-year courses of study. The first year is the same for all students, excepting that the young men take military drill, agriculture, and shop work, while the young women take calisthenics, cooking, and sewing.

Figures following studies show class hours per week. Subjects in *italic type* require no study outside of class. Military drill is optional for young men of the third and fourth years. There is an elective in each of the last four terms of the general science course. These electives are chosen under the direction of the Faculty. In each case, the electives during the senior year are expected to be in the same line as nearly as possible. The following list is announced, and others will be provided as demanded, in so far as the teaching force available will permit:

FALL TERM.	WINTER TERM.	SPRING TERM.
Differential Calculus.	Integral Calculus.	Differential Equations.
Domestic Science I.	Domestic Science II.	Domestic Science III.
Animal Nutrition.	Agricultural Chemistry.	Stock Feeding.
Dairying.	Breeds of Stock.	Agricultural Physics.
Veterinary Science I.	Veterinary Science II.	Animal Breeding.
Horticulture.	Forestry.	Vegetable-gardening.
German.	German.	German.
Chemistry.	Chemistry.	Chemistry.
Entomology.	Entomology.	Entomology.
Botany.	Botany.	Botany.
Zoology.	Zoology.	Zoology.
History of Education and School Law.	Philosophy of Education.	Methods and Management.

For outline of instruction, see page 42 *et seq.*

SECOND YEAR. COURSES OF STUDY—Continued.

	AGRICULTURE.	DOMESTIC SCIENCE.	GENERAL SCIENCE.	MECH. ENGINEERING.	ELECT. ENGINEERING.
FALL TERM.	Chemistry..... 5 *Laboratory*..... 5 Dairying..... 5 *Laboratory*..... 10 Horticulture..... 5. Library Lectures..... 1 Oratory I..... 2½ *Military Drill*..... 5	Chemistry..... 5 *Laboratory*..... 5 Trigonometry..... 5 Entomology..... 5 *Laboratory*..... 2½ Library Lectures..... 1 *Color* and *Design*..... 5 *Calisthenics*..... 2½	Chemistry..... 5 *Laboratory*..... 5 Trigonometry..... 5 Horticulture..... 5 *Industrial*..... 5 Library Lectures..... 1 *Military Drill*..... 5 or *Calisthenics*..... 2½	Chemistry..... 5 *Laboratory*..... 5 Trigonometry..... 5 Projection Drawing..... 5 Oratory I..... 2½ Library Lectures..... 1 *Blacksmithing II*..... 5 *Military Drill*..... 5	Chemistry..... *Laboratory*..... Trigonometry..... 5 Projection Drawing..... 5 Oratory I..... 2½ Library Lectures..... 1 *Blacksmithing II*..... 5 *Military Drill*..... 5
WINTER TERM.	Organic Chemistry..... 3 Chemistry of Metals..... 2 *Laboratory*..... 5 Physiology..... 5 *Laboratory*..... 2½ Library Lectures..... 1 Oratory II..... 2½ Breeds of Live Stock.... 5 *Stock Judging*..... 5 *Horticulture*..... 5 *Military Drill*..... 5	Organic Chemistry..... 3 Chemistry of Metals..... 2 *Laboratory*..... 5 Home Architecture..... 5 Oratory I..... 2½ Library Lectures..... 1 Dressmaking..... 5 *Laboratory*..... 5 *Calisthenics*..... 2½	Organic Chemistry..... 3 Chemistry of Metals..... 2 *Laboratory*..... 5 Higher Algebra..... 5 Oratory I..... 2½ Library Lectures..... 1 Projection Drawing..... 5 *Industrial*..... 5 *Military Drill*..... 5 or *Calisthenics*..... 2½	Oratory II..... 2½ Chemistry of Metals..... 2½ *Laboratory*..... 5 Higher Algebra..... 5 Kinematics of Machinery 5 Library Lectures..... 1 *Projection Drawing*..... 5 *Machine-shop I*..... 5 *Military Drill*..... 5	Oratory II..... 2½ Chemistry of Metals..... 2½ *Laboratory*..... 5 Higher Algebra..... 5 Kinematics of Machinery.. 5 Library Lectures..... 1 *Projection Drawing*..... 5 *Machine-shop I*..... 5 *Military Drill*..... 5
SPRING TERM.	Analytical Chemistry.... 2½ *Laboratory*..... 7½ Entomology..... 5 *Laboratory*..... 2½ Trigonometry..... 5 Crop Production..... 5 *Grain Judging*..... 2½ *Military Drill*..... 5	Analytical Chemistry..... 2½ *Laboratory*..... 7½ Horticulture..... 5 Oratory II..... 2½ Physiology..... 5 *Laboratory*..... 2½ *Calisthenics*..... 2½	Analytical Chemistry..... 2½ *Laboratory*..... 7½ Entomology..... 5 *Laboratory*..... 2½ Oratory II..... 2½ Physiology..... 5 *Laboratory*..... 2½ *Surveying*..... 2½ *Military Drill*..... 5 or *Calisthenics*..... 2½	Analytical Chemistry.... 2½ *Laboratory*..... 7½ Analytical Geometry.... 5 Descriptive Geometry... 5 Mechanics..... 2½ Shop Lectures..... 2½ *Pattern-making*..... 5 *Military Drill*..... 5	Analytical Chemistry..... 2½ *Laboratory*..... 7½ Analytical Geometry..... 5 Descriptive Geometry..... 5 Mechanics..... 2½ Shop Lectures..... 2½ *Pattern-making*..... 5 *Military Drill*..... 5

Music is optional throughout the course.

For outline of instruction, see page 42 *et seq.*

THIRD YEAR. COURSES OF STUDY—Continued.

	AGRICULTURE.	DOMESTIC SCIENCE.	GENERAL SCIENCE.	MECH. ENGINEERING.	ELECT. ENGINEERING.
FALL TERM.	General History I..... 5 Rhetoric II ..... 5 Animal Nutrition..... 5 Hygiene of Farm Animals..... 2½ Farm Architecture ..... 2½ Oratory III ..... 1 *Agricultural Mechanics* 5 *Horticulture*..... 5	General History I..... 5 Rhetoric II ..... 5 Human Nutrition..... 5 Domestic Science I ..... 2 *Laboratory*..... 5 Oratory III ..... 1 *Laundering* 5	General History I..... 5 Rhetoric II..... 5 Human Nutrition..... 5 Zoology ..... 5 *Laboratory*..... 5 Oratory III ..... 1 *Industrial*..... 5	General History I..... 5 Differential Calculus.... 5 Physics ..... 5 *Laboratory*..... 5 Power Transmission..... 3 Oratory III..... 1 *Mechanical Drawing I.*. 2½ *Machine-shop II* 5	General History I..... 5 Differential Calculus..... 5 Physics..... 5 *Laboratory*..... 5 *Mechanical Drawing I...* 2½ Oratory III ..... 1 *Machine-shop II*..... 5
WINTER TERM.	General History II..... 5 Agricultural Chemistry.. 5 *Laboratory*..... 5 Forestry..... 5 Zoology ..... 5 *Laboratory*..... 5 Oratory III 1	General History II ..... 5 Geology ..... 5 Home Nursing..... 5 Domestic Science II..... 2 *Laboratory*..... 5 Oratory III ..... 1 *Floriculture*..... 5	General History II..... 5 Geology ..... 5 Logic..... 5 Perspective and Sketching..... 2½ Oratory III ..... 1 *Industrial*..... 5	General History II..... 5 Integral Calculus..... 5 Rhetoric II..... 5 Physics..... 2½ *Laboratory*..... 2½ Valve Gears..... 2½ Oratory III ..... 1 *Mechanical Drawing II*, 5 *Machine-shop III*..... 5	General History II..... 5 Integral Calculus..... 5 Rhetoric II..... 5 Physics..... 2½ *Laboratory*..... 2½ Oratory III ..... 1 Theory of Electricity..... 2½ *Laboratory*..... 2½ *Mechanical Drawing II*.. 5 *Machine-shop III*..... 2½
SPRING TERM.	Civics ..... 5 Geology..... 5 Vegetable-gardening .... 5 Stock Feeding..... 5 Oratory III..... 1 *Surveying*..... 2½ *Agriculture*..... 5	Civics ..... 5 Zoology ..... 5 *Laboratory*..... 5 Domestic Science III..... 2 *Laboratory*..... 5 American Literature..... 5 Oratory III 1	Civics ..... 5 Bacteriology..... 2 *Laboratory*..... 5 American History..... 5 Elective..... 5 Oratory III ..... 1 *Industrial*..... 5	Civics..... 5 English Literature ..... 5 Differential Equations .. 5 Steam-boilers..... 2½ Graphic Statics..... 2½ Oratory III ..... 1 *Mechanical Drawing III*..... 5 *Engines and Boilers*.... 5	Civics ..... 5 English Literature ..... 5 Differential Equations.... 5 Theory of Electricity..... 5 *Laboratory*..... 5 Oratory III ..... 1 *Mechanical Drawing III*..... 5 *Engines and Boilers*..... 5

Music is optional throughout the course.

For outline of instruction, see page 42 *et seq.*

FOURTH YEAR. COURSES OF STUDY—Concluded.

	AGRICULTURE.	DOMESTIC SCIENCE.	GENERAL SCIENCE.	MECH. ENGINEERING.	ELECT. ENGINEERING.
FALL TERM.	Physics I..... 5 *Laboratory*..... 5 Veterinary Science I .... 5 Bacteriology..... 2 *Laboratory*..... 5 Farm Management ..... 5 Oratory IV..... 1 *Agriculture* 5	Physics I..... 5 *Laboratory*..... 5 Economic Principles..... 5 Home Sanitation..... 5 Bacteriology..... 2 *Laboratory*. .... 5 Oratory IV..... 1	Physics I..... 5 *Laboratory*..... 5 Economic Principles..... 5 Elective..... 5 Oratory IV..... 1 *Industrial*..... 5	Dynamo and Motor..... 5 *Laboratory*..... 2½ Applied Mechanics I..... 5 Thermodynamics I..... 5 Oratory IV..... 1 *Machine Design I*..... 5 *Eng. Laboratory I*..... 2½ *Machine-shop IV*..... 5	Direct-current Machines .. 5 *Laboratory*..... 5 Applied Mechanics I..... 5 Steam Engineering ..... 5 Oratory IV..... 1 *Machine-shop IV*..... 5
WINTER TERM.	Physics II..... 5 *Laboratory*..... 5 Economic Principles.... 5 Plant Morphology..... 5 *Laboratory*..... 5 Veterinary Science II ... 5 Oratory IV..... 1	Physics II..... 5 *Laboratory*.... ..... 5 English Literature I..... 5 Plant Morphology..... 5 *Laboratory*..... 5 Therapeutic Cookery..... 2 *Laboratory*..... 5 Oratory IV. 1	Physics II..... 5 *Laboratory*..... 5 English Literature I..... 5 Plant Morphology..... 5 *Laboratory*..... 5 Elective..... 5 Oratory IV..... 1	Economic Principles.... 5 Applied Mechanics II... 5 Thermodynamics II..... 5 *Eng. Laboratory II*..... 5 *Machine Design II*..... 5 *Electrical Laboratory*.. 2½ Oratory IV..... 1 *Machine-shop V*..... 2½	Economic Principles..... 5 Direct-current Machines .. 5 *Laboratory*..... 5 Applied Mechanics II..... 5 *Eng. Laboratory I*..... 2½ Dynamo Design..... . 5 Oratory IV..... 1 *Machine-shop V*..... 2½
SPRING TERM.	English Literature..... 5 Animal Breeding ..... 5 Plant Diseases and Breeding..... 5 *Laboratory*..... 2½ Agricultural Physics.... 5 Oratory IV..... 1 Thesis.	English Literature II..... 5 Psychology ..... 5 Household Economics..... 5 American History ..... 5 Oratory IV..... 1 Thesis.	English Literature II..... 5 Psychology ..... 5 Elective ..... 5 *Object Drawing* or..... 5 *Industrial*..... 5 Oratory IV..... 1 Thesis.	Hydraulics..... 5 Thermodynamics III.... 5 *Eng. Laboratory III*... 5 *Engineering Design* ... 5 *Surveying*. .... 2½ Oratory IV..... 1 Thesis.	Hydraulics..... 5 Alternating-current Machines..... 5 *Laboratory*... ..... 5 Power Stations ..... 5 *Eng. Laboratory IV*..... 5 *Surveying*..... 2½ Oratory IV..... 1 Thesis.

Music is optional throughout the course.

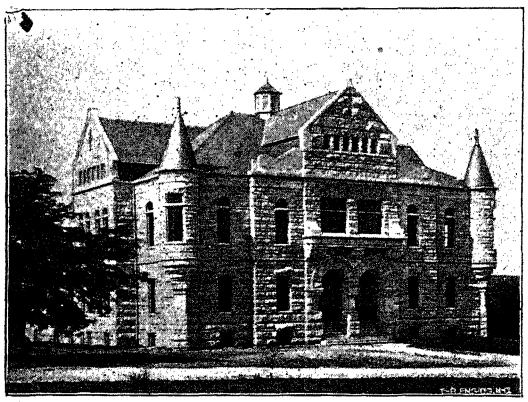
For outline of instruction, see page 42 *et seq.*

Agriculture Course.

The leading feature of the four-year agriculture course is the training offered in methods of farm production. Instruction is given in tillage, crop-production, stock-feeding and breeding, dairying, farm management, orcharding, small-fruit culture, and gardening. Insect life is considered in its relations to the farm, orchard, and garden, including a study of beneficial and injurious insects, with practical methods of combating the latter; and the laws of disease and health are studied, with the causes of diseases of farm animals and methods of avoiding and combating them. Work is required on the farm, and in the orchards and gardens, which will familiarize the student with the best method of conducting operations in these lines; and taken with this work is a study of the results secured by the College in crop-production, fruit-raising, gardening, and feeding for beef, miik, and pork. Three terms of work are given in the carpenter and blacksmith shops, that the student may learn to handle tools and be able to make the common repairs needed on the farm.

Closely connected with agriculture are the sciences upon which successful farm practices are based. Bacteriology is taught, that the student may understand the conditions necessary for promoting the growth of bacteria which add to the fertility of the soil and those which improve the quality of dairy products; and the conditions necessary to prevent the growth of bacteria which exhaust the soil, cause losses in manures, injure dairy products, and bring disease. The laws of plant growth are taught in botany, that the farmer may through their aid grow larger and better crops. An understanding of the laws of physics enables the farmer to store moisture and to reduce the loss of water from the soil by evaporation, so that he can produce crops in dry years. A knowledge of chemistry applied to farm work secures richer soil, better yields, cheaper and greater gain in feeding, and better quality of farm products. The fertility of our new lands has been produced by forces which have been at work for countless ages. A knowledge of the workings of these forces, as taught in geology, helps the farmer to save the fertility of his fields until used for crops and to render available the immense food stores locked up in the soil.

A farmer should be an influential citizen as well as a skilful producer. For this reason, in the agriculture course instruction is given in literature and language, political and economic science, oratory, mathematics, drawing, and music. Such training enables the farmer to take part and become an influential factor in social and public work. Young men securing an education such as is afforded in this course do not leave the farm, but become enthusiastic and successful workers, competent either to manage farms of their own or to superintend farms for others.



AGRICULTURAL HALL.

Agriculture Course.

First column of figures indicates hours per week.
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First Year.

FALL TERM:

Algebra III	5	67
English Classics	5	60
Elementary Botany	5	47
Field-work	2½	47
Hygiene	1	87
Object Drawing	2½	58
Woodwork	5	68
Military Drill	5	74

WINTER TERM:

Geometry I	5	68
English Structure	5	60
Agriculture	5	43
Elementary Psychology	1	80
Geometrical Drawing	2½	58
Foundry	5	69
Military Drill	5	74

SPRING TERM:

Geometry II	5	68
Rhetoric I	5	60
Elementary Physics	5	82
Laboratory	2½	82
Elementary Projection	2½	58
Blacksmithing I	5	69
Military Drill	5	74

Second Year.

FALL TERM:

Chemistry	5	50
Laboratory	5	50
Dairying	5	53
Laboratory	10	54
Horticulture	5	64
Library Lectures	1	66
Oratory I	2½	78
Military Drill	5	74

WINTER TERM:

Organic Chemistry	3	50
Chemistry of Metals	2	50
Laboratory	5	50
Physiology	5	89
Laboratory	2½	89
Library Lectures	1	66
Oratory II	2½	79
Breeds of Live Stock	5	40
Stock Judging	5	46
Horticulture	5	64
Military Drill	5	74

SPRING TERM:

Analytical Chemistry	2½	50
Laboratory	7½	50
Entomology	5	61
Laboratory	2½	61
Trigonometry	5	68
Crop Production	5	43
Grain Judging	2½	43
Military Drill	5	74

Third Year.

FALL TERM:

General History I	5	63
Rhetoric II	5	61
Animal Nutrition	5	52
Hygiene of Farm Animals	2½	89
Farm Architecture	2½	59
Oratory III	1	79
Agricultural Mechanics	5	70
Horticulture	5	65

WINTER TERM:

General History II	5	63
Agricultural Chemistry	5	52
Laboratory	5	52
Forestry	5	64
Zoology	5	62
Laboratory	5	62
Oratory III	1	79

SPRING TERM:

Civics	5	63
Geology	5	63
Vegetable-gardening	5	64
Stock Feeding	5	46
Oratory III	1	79
Surveying	2½	68
Agriculture	5	46

Fourth Year.

FALL TERM:

Physics I	5	83
Laboratory	5	83
Veterinary Science I	5	89
Bacteriology	2	89
Laboratory	5	89
Farm Management	5	43
Oratory IV	1	79
Agriculture	5	46

WINTER TERM:

Physics II	5	83
Laboratory	5	83
Economic Principles	5	63
Plant Morphology	5	48
Laboratory	5	48
Veterinary Science II	5	89
Oratory IV	1	79

SPRING TERM:

English Literature	5	61
Animal Breeding	5	46
Plant Diseases and Breeding	5	48
Laboratory	2½	48
Agricultural Physics	5	44
Oratory IV	1	79
Thesis		

Domestic Science Course.

The aim of the domestic science course is both specific and general. Technically it is an application of the sciences of bacteriology to the study of home sanitation and hygiene, of physiology and chemistry to the composition of foods and their effect, of physics as applied to heating and lighting. These sciences necessarily, therefore, underlie the successful and intelligent conduct of the home, whether it be large or small, and must be included in any well-arranged course of domestic science. In the kitchen laboratory a standard system of measurement is taught, and constant emphasis is placed upon neatness, accuracy and economy in the handling of the material and utensils. The instruction in domestic art includes all the various kinds of hand sewing, the making of plain garments, and a complete system of dressmaking. Thus, while the course is based upon studies of a thoroughly scientific nature, the industrial features characteristic of the College are made highly practical and are continued throughout the course.

While the domestic science course emphasizes, primarily, the practical and material side of life, it does not stop here. To the end that well-rounded culture may be secured, studies are offered in this course in English, history, economics, psychology, and oratory. The young women are constantly reminded that life is not all drudgery; that technical knowledge and scientific skill, even, fail to include the full meaning of education in its highest sense. They are taught that any training that fails to develop, harmoniously, body, mind, and spirit, is inadequate and incomplete. They are brought face to face with ideals as well as with actualities; and are made to see that, while skilful labor is the crowning dignity of life, grace, refinement and self-poise are the highest ingredients of true service.

COOKING LABORATORY.

Domestic Science Course.

First column of figures indicates hours per week.
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First Year.

FALL TERM:

Algebra III	5	67
English Classics	5	60
Elementary Botany	5	47
Field-work	2½	47
Hygiene	1	56
Object Drawing	2½	58
Sewing I	5	54
Calisthenics	2½	80

WINTER TERM:

Geometry I	5	68
English Structure	5	60
Elementary Cooking	5	56
Elementary Psychology	1	80
Geometrical Drawing	2½	58
Sewing II	5	45
Calisthenics	2½	80

SPRING TERM:

Geometry II	5	68
Rhetoric I	5	60
Elementary Physics	5	82
Laboratory	2½	82
Elementary Projection	2½	58
Sewing III	5	54
Calisthenics	2½	80

Second Year.

FALL TERM:

Chemistry	5	50
Laboratory	5	50
Trigonometry	5	68
Entomology	5	61
Laboratory	2½	61
Library Lectures	1	66
Color and *Design*	5	57
Calisthenics	2½	80

WINTER TERM:

Organic Chemistry	3	50
Chemistry of Metals	2	50
Laboratory	5	50
Home Architecture	5	59
Oratory I	2½	78
Library Lectures	1	66
Dressmaking	5	54
Laboratory	5	54
Calisthenics	2½	80

SPRING TERM:

Analytical Chemistry	2½	50
Laboratory	7½	50
Horticulture	5	64
Oratory II	2½	79
Physiology	5	89
Laboratory	2½	89
Calisthenics	2½	80

Third Year.

FALL TERM:

General History I	5	63
Rhetoric II	5	61
Human Nutrition	5	52
Domestic Science I	2	56
Laboratory	5	56
Oratory III	1	79
Laundering	5	56

WINTER TERM:

General History II	5	63
Geology	5	63
Home Nursing	5	56
Domestic Science II	2	56
Laboratory	5	56
Oratory III	1	79
Floriculture	5	64

SPRING TERM:

Civics	5	63
Zoology	5	62
Laboratory	5	62
Domestic Science III	2	56
Laboratory	5	56
American Literature	5	64
Oratory III	1	79

Fourth Year.

FALL TERM:

Physics I	5	83
Laboratory	5	83
Economic Principles	5	63
Home Sanitation	5	56
Bacteriology	2	89
Laboratory	5	89
Oratory IV	1	79

WINTER TERM:

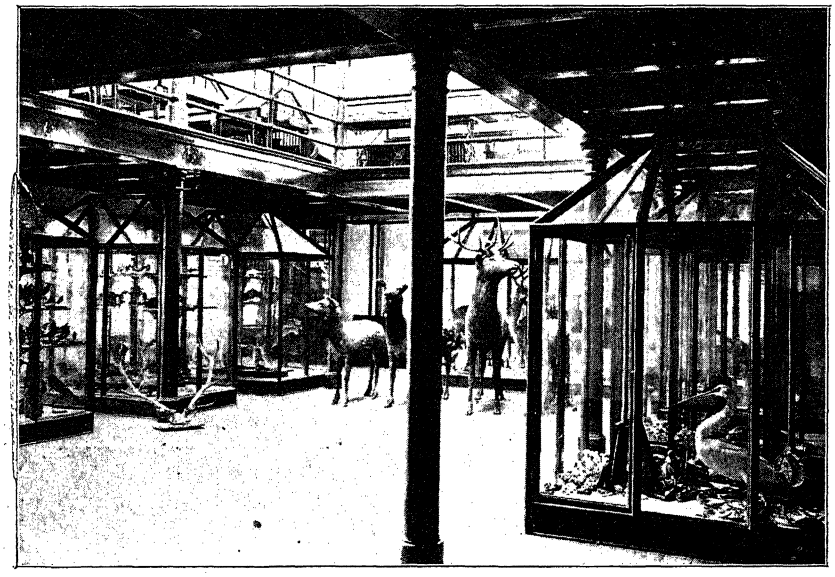
Physics II	5	83
Laboratory	5	83
English Literature I	5	61
Plant Morphology	5	48
Laboratory	5	48
Therapeutic Cookery	2	56
Laboratory	5	56
Oratory IV	1	79

SPRING TERM:

English Literature II	5	61
Psychology	5	80
Household Economics	5	56
American History	5	64
Oratory IV	1	79
Thesis	–	—

General Science Course.

This course is designed to meet the wants of those who seek to obtain a sound and liberal education through the study of the mathematical, physical and natural sciences, English language, and history. It is well adapted to the student who has not yet decided upon his life-work, or who wishes to make this a foundation for further study. It is based on the principle of "a general knowledge of all things before a special knowledge of a few." It will be well worth one's time to take this course before beginning the work of a technical or professional course. The industrial work is a feature of this course, as of all others, and after the first year it is largely elective. This gives ample opportunity to specialize along any line of work, should the student desire. The electives continuing through the four terms gives opportunity for some special lines, as follows: Young men may take analytical geometry, differential and integral calculus, differential equations, with the engineering students, and young women may take the three terms in domestic science with the third-year women of the domestic science course. Work in other departments may be elected, as: Agriculture, chemistry, physics, horticulture and entomology, veterinary science, and German. In each case, the electives for the last three terms are expected to be in the same line as nearly as possible. Other electives will be provided as demanded, as far as the teaching force available will permit. Music is optional throughout the four years, and young women are allowed to take it as an industrial after the first year, by permission of the Faculty.



FIRST FLOOR OF MUSEUM.

General Science Course.

First column of figures indicates hours per week.
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First Year.

FALL TERM:		
Algebra III	5	67
English Classics	5	60
Elementary Botany	5	47
Field-work	2½	47
Hygiene	1	87
Object Drawing	2½	58
Woodwork	5	68
or *Sewing I*	5	54
Military Drill	5	74
or *Calisthenics*	2½	80
WINTER TERM:		
Geometry I	5	68
English Structure	5	60
Agriculture	5	43
or Elementary Cooking	5	56
Elementary Psychology	1	80
Geometrical Drawing	2½	58
Foundry	5	69
or *Sewing II*	5	54
Military Drill	5	74
or *Calisthenics*	2½	80
SPRING TERM:		
Geometry II	5	68
Rhetoric I	5	60
Elementary Physics	5	82
Laboratory	2½	82
Elementary Projection	2½	58
Blacksmithing I	5	69
or *Sewing III*	5	54
Military Drill	5	74
or *Calisthenics*	2½	80

Second Year.

FALL TERM:		
Chemistry	5	50
Laboratory	5	50
Trigonometry	5	68
Horticulture	5	64
Industrial	5	23
Library Lectures	1	66
Military Drill	5	74
or *Calisthenics*	2½	80
WINTER TERM:		
Organic Chemistry	3	50
Chemistry of Metals	2	50
Laboratory	5	50
Higher Algebra	5	68
Oratory I	2½	78
Library Lectures	1	66
Projection Drawing	5	58
Industrial	5	23
Military Drill	5	74
or *Calisthenics*	2½	80
SPRING TERM:		
Analytical Chemistry	2½	50
Laboratory	7½	50
Entomology	5	61
Laboratory	2½	61
Oratory II	2½	79
Physiology	5	89
Laboratory	2½	89
Surveying	2½	68
Military Drill	5	74
or *Calisthenics*	2½	80

Third Year.

FALL TERM:		
General History I	5	63
Rhetoric II	5	61
Human Nutrition	5	52
Zoölogy	5	62
Laboratory	5	62
Oratory III	1	79
Industrial	5	23
WINTER TERM:		
General History II	5	63
Geology	5	63
Logic	5	80
Perspective and Sketching	2½	58
Oratory III	1	79
Industrial	5	23
SPRING TERM:		
Civics	5	63
Bacteriology	2	89
Laboratory	5	89
American History	5	64
Elective	5	28
Oratory III	1	79
Industrial	5	23

Fourth Year.

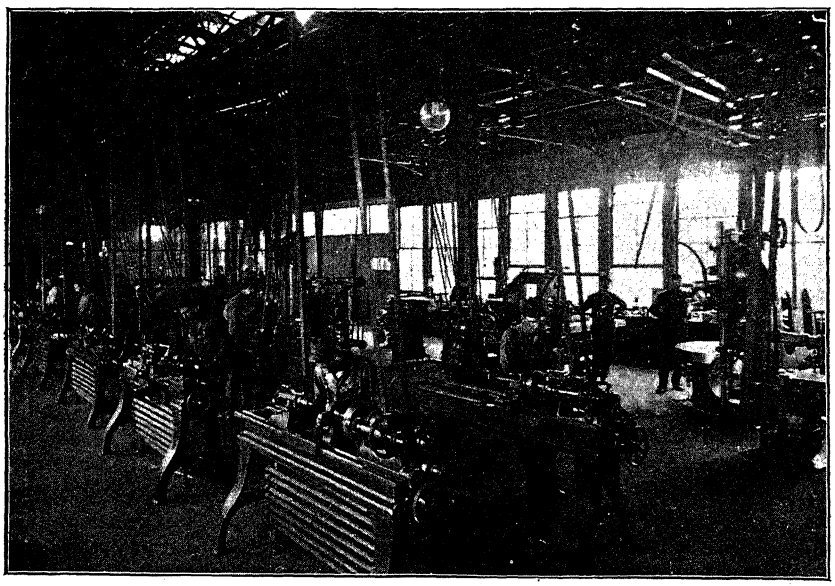
FALL TERM:		
Physics I	5	83
Laboratory	5	83
Economic Principles	5	63
Elective	5	28
Oratory IV	1	79
Industrial	5	23
WINTER TERM:		
Physics II	5	83
Laboratory	5	83
English Literature I	5	61
Plant Morphology	5	48
Laboratory	5	48
Elective	5	28
Oratory IV	1	79
SPRING TERM:		
English Literature II	5	61
Psychology	5	80
Elective	5	28
Oratory IV	1	79
Object Drawing	5	59
or *Industrial*	5	23
Thesis	–	—

Mechanical Engineering Course.

This course offers four years' training in mechanical engineering subjects, and its object is to fit young men for responsible positions in that profession. It prepares for the successful management of machinery and manufacturing establishments, the designing, building and erection of machinery, superintendence of construction, etc. Though the work is largely technical, general studies of a broadening character are not excluded. The course includes instruction by text-book, lecture, laboratory, and workshop practice, and is especially based on mathematics, pure and applied mechanics, physics, chemistry, machine design, structural design, and steam engineering.

The course of study has been laid out with the aim of securing a judicious mixture of theory and practice, such as will not only give the student the technical skill required for engineering operations, but also a broad grasp of the fundamental principles of his profession. The advantages of combining a practical application of principles with theoretical instruction at the time these principles are being impressed by classroom work is well known. The shop work, being purely educational in its character, is so arranged that each student can make as rapid advancement as possible. Instruction is given by skilled workmen, and the work carried on is of a practical character, being, in fact, the building of lathes, engines, drills and machinery for the market and the department. In all shop practice the students work from blue-prints, thus learning to read drawings readily and supplementing the work of the drawing department.

Based upon the fundamental principle that laboratory and shop work, combined with technical training, constitute one of the most important features of engineering education, the course on the opposite page is offered.



MACHINE SHOP.

Mechanical Engineering Course.

First column of figures indicates hours per week.
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First Year.

FALL TERM:

Algebra III	5	67
English Classics	5	60
Elementary Botany	5	47
Field-work	2½	47
Hygiene	1	87
Object Drawing	2½	58
Woodwork	5	68
Military Drill	5	74

WINTER TERM:

Geometry I	5	68
English Structure	5	60
Agriculture	5	43
Elementary Psychology	1	80
Geometrical Drawing	2½	58
Foundry	5	69
Military Drill	5	74

SPRING TERM:

Geometry II	5	68
Rhetoric I	5	60
Elementary Physics	5	82
Laboratory	2½	82
Elementary Projection	2½	58
Blacksmithing I	5	69
Military Drill	5	74

Second Year.

FALL TERM:

Chemistry	5	50
Laboratory	5	50
Trigonometry	5	68
Projection Drawing	5	58
Oratory I	2½	78
Library Lectures	1	66
Blacksmithing II	5	69
Military Drill	5	74

WINTER TERM:

Oratory II	2½	79
Chemistry of Metals	2½	50
Laboratory	5	50
Higher Algebra	5	68
Kinematics of Machinery	5	69
Library Lectures	1	66
Projection Drawing	5	58
Machine-shop I	5	69
Military Drill	5	74

SPRING TERM:

Analytical Chemistry	2½	50
Laboratory	7½	50
Analytical Geometry	5	68
Descriptive Geometry	5	58
Mechanics	2½	69
Shop Lectures	2½	69
Pattern-making	5	70
Military Drill	5	74

Third Year.

FALL TERM:

General History I	5	63
Differential Calculus	5	68
Physics	5	82
Laboratory	5	82
Power Transmission	3	70
Oratory III	1	79
Mechanical Drawing I	2½	70
Machine-shop II	5	70

WINTER TERM:

General History II	5	63
Integral Calculus	5	68
Rhetoric II	5	61
Physics	2½	82
Laboratory	2½	82
Valve Gears	2½	70
Oratory III	1	79
Mechanical Drawing II	5	70
Machine-shop III	5	70

SPRING TERM:

Civics	5	63
English Literature	5	61
Differential Equations	5	68
Steam boilers	2½	70
Graphic Statics	2½	70
Oratory III	1	79
Mechanical Drawing III	5	70
Engines and Boilers	5	70

Fourth Year.

FALL TERM:

Dynamos and Motors	5	84
Laboratory	2½	84
Applied Mechanics I	5	70
Thermodynamics I	5	70
Machine Design I	5	71
Oratory IV	1	79
Engineering Laboratory I,	2½	71
Machine-shop IV	5	71

WINTER TERM:

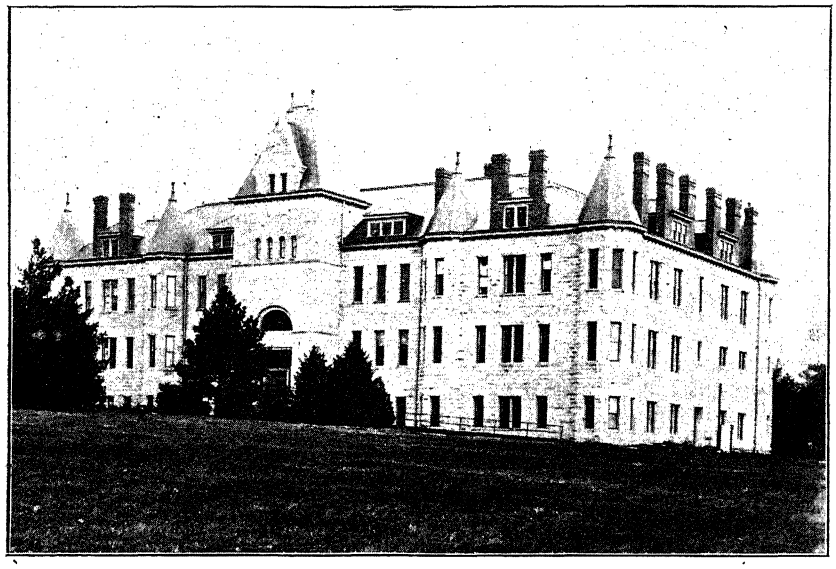
Economic Principles	5	63
Applied Mechanics II	5	71
Thermodynamics II	5	71
Engin'ring Laboratory II,	5	71
Machine Design II	5	71
Oratory IV	1	79
Electrical Laboratory	2½	84
Machine-shop V	2½	71

SPRING TERM:

Hydraulics	5	71
Thermodynamics III	5	71
Engin'ing Laboratory III,	5	71
Engineering Design	5	71
Oratory IV	1	79
Surveying	2½	68
Thesis	–	73

Electrical Engineering Course.

This course is arranged to supply the demand for men who have a practical knowledge of electricity, as well as a thorough knowledge of the principles and laws governing the forces and phenomena with which they have to deal. The applications of electricity are broadening out so rapidly by discovery and invention and by increased commercial applications, that new facts are to be met with almost daily. To meet these demands, the student should be well grounded in all the branches underlying his profession. This course is therefore made strong in mathematical and physical sciences. A well-equipped electrical engineer should also be a mechanical engineer, and must have some training in the principles of steam and hydraulic engineering as well as heat, plumbing, etc. Drawing, machine design, and mechanics of machinery, together with shop practice, occupy a considerable portion of the time of the student. Some general-culture studies are offered in history and economics, oratory, and English. It is believed that this course will give a broad general training, with sufficient technical knowledge to meet the needs of a practical engineer. For the first two years this course is identical with the mechanical engineering course.



PHYSICAL SCIENCE HALL.

Electrical Engineering Course.

First column of figures indicates hours per week.
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First Year.

FALL TERM:		
Algebra III	5	67
English Classics	5	60
Elementary Botany	5	47
Field-work	2½	47
Hygiene	1	87
Object Drawing	2½	58
Woodwork	5	68
Military Drill	5	74
WINTER TERM:		
Geometry I	5	68
English Structure	5	60
Agriculture	5	43
Elementary Psychology	1	80
Geometrical Drawing	2½	58
Foundry	5	69
Military Drill	5	74
SPRING TERM:		
Geometry II	5	68
Rhetoric I	5	60
Elementary Physics	5	82
Laboratory	2½	82
Elementary Projection	2½	58
Blacksmithing I	5	69
Military Drill	5	74

Second Year.

FALL TERM:		
Chemistry	5	50
Laboratory	5	50
Trigonometry	5	68
Projection Drawing	5	58
Oratory I	2½	78
Library Lectures	1	66
Blacksmithing II	5	69
Military Drill	5	74
WINTER TERM:		
Oratory II	2½	79
Chemistry of Metals	2½	50
Laboratory	5	50
Higher Algebra	5	68
Kinematics of Machinery	5	69
Library Lectures	1	66
Projection Drawing	5	58
Machine-shop I	5	69
Military Drill	5	74
SPRING TERM:		
Analytical Chemistry	2½	50
Laboratory	7½	50
Analytical Geometry	5	68
Descriptive Geometry	5	58
Mechanics	2½	69
Shop Lectures	2½	69
Pattern-making	5	70
Military Drill	5	74

Third Year.

FALL TERM:		
General History I	5	63
Differential Calculus	5	68
Physics	5	82
Laboratory	5	82
Oratory III	1	79
Mechanical Drawing I	2½	70
Machine-shop II	5	70
WINTER TERM:		
General History II	5	63
Integral Calculus	5	68
Rhetoric II	5	61
Physics	2½	82
Laboratory	2½	82
Theory of Electricity	2½	83
Laboratory	2½	83
Oratory III	1	79
Mechanical Drawing II	5	70
Machine-shop III	2½	70
SPRING TERM:		
Civics	5	63
English Literature	5	61
Differential Equations	5	68
Theory of Electricity	5	83
Laboratory	5	83
Oratory III	1	79
Mechanical Drawing III	5	70
Engines and Boilers	5	70

Fourth Year.

FALL TERM:		
Direct-current Machines	5	83
Laboratory	5	84
Applied Mechanics I	5	70
Steam Engineering	5	71
Oratory IV	1	79
Machine-shop IV	1	71
WINTER TERM:		
Economic Principles	5	63
Direct-current Machines	5	83
Laboratory	5	84
Applied Mechanics II	5	71
Engineering Laboratory I,	2½	71
Dynamo Design	5	84
Oratory IV	1	79
Machine-shop V	2½	71
SPRING TERM:		
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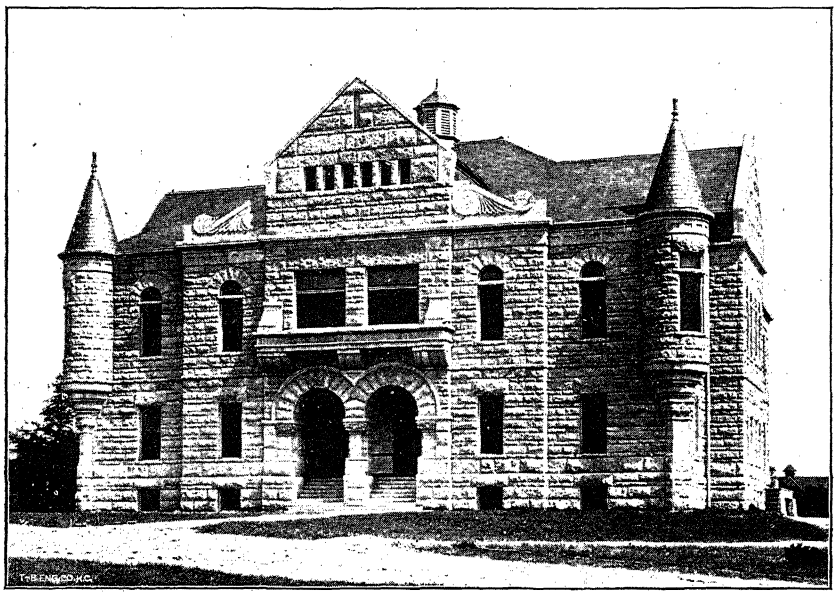


AGRICULTURAL HALL.

STUDENTS TAKING SAMPLES OF SOILS.

Outline of Instruction.

Agriculture.

Agriculture, in its restricted sense, includes four general lines of study: Soils, crops, farm mechanics, and farm management. In the published course of study, farm mechanics and the more advanced work in soils are included in agricultural physics No. 4. Agriculture No. 1 takes up the elementary study of soils and crop production and serves as an introduction to the several branches of agriculture, animal husbandry, and dairying.

It is the purpose to make the agricultural studies thoroughly practical. Agriculture is a business. It is not truly a science, but it depends upon science, and to understand the "principles of agriculture" requires a knowledge of many sciences. Physics, botany, chemistry, geology and mathematics teach theory and science, and the studies in agriculture will assist the student to make the application and put the theory and science into practice on the farm.

1. **Agriculture.** First year, winter term, five hours per week. An elementary study of the soil—its formation, texture, plant-food, moisture, tillage, and fertility; the plant—its relation to the soil and climate, its propagation, growth and cultivation; the kinds of crops and their culture; the animal—its life, feeding, breeding, and management. Text-book, Bailey's Principles of Agriculture.

2. **Crop Production.** Second year, spring term, five hours per week. A study of farm crops as to the preparation of the seed-bed, planting, cultivating, harvesting, root systems, maintenance of soil fertility, rotation of crops, manures and fertilizers, noxious weeds, injurious insects and diseases, and their remedies. Each of the staple crops will be taken up in order, its history, characteristics, method of culture, uses, etc., noted. Seed selection and the storing, feeding and marketing of crops will receive special attention. Crops will be studied in classes as to their special purposes or uses, as hay, forage, silage, pasture, soiling, green manure, and cover crops. New crops will be investigated. All the different crops are grown on the farm, so that the students may see them, or at least see samples in the classroom, and thus become familiar with their characters and methods of culture and handling. Lectures.

Grain Judging.—One afternoon each week, as a supplement to the classroom work in crop production. This will consist mainly of work in the judging room, in the scoring of corn and common cereals according to inspectors' and buyers' standards or according to recognized standards of perfection. A special study will be made of corn in the selection of seed ears. It is surprising how few people can pick out a "good" ear of corn before they are carefully instructed and trained in the vital points, both as to desirable qualities and defects. It is just as important to select and grow a pure and perfect type of corn or wheat as it is to select a well-formed hog or a perfect type of dairy animal for breeding purposes. A higher per cent. of protein, greater productiveness, and other valuable qualities, which may be bred into corn by careful and intelligent selection, should greatly increase the value of this crop to the farmer.

3. **Farm Management.** Fourth year, fall term, five hours per week. Includes a study of the following subjects: Selection of a farm, as to location,

soil, climate, etc.; relation of farming to other occupations; the farm equipment; different systems of farming; field and crop management; keeping farm accounts; necessity, methods and kinds of accounts. Practice work is required of each student, in which he shall carefully prepare records of the farm operations and business transactions for one year on his own farm or that of some successful farmer. Questions of farm economy are carefully studied, such as employment of farm help, purchase, use and care of farm machinery, erection, and care of farm buildings and works, management and care of stock, fencing, ditching, etc. Some study will be made of rural law—relating to property, deeds, and conveyances; water rights; highways; legal fences; trespasses; contracts; liabilities of employer and employee, buyer and seller; notes, mortgages, bills of sale, affidavits, gifts, wills, taxes, etc. Farm management is meant not only to train men so that they may successfully apply business methods in carrying on their own farms but to equip them for the superintending and management of large farms. This college, as well as other agricultural colleges, has many demands for men "who are properly trained in the management of large agricultural interests," and it is the aim of this course to fit men for this work. Text-book, Robert's Farmers' Business Hand-book.

4. Agricultural Physics. Fourth year, spring term, five hours per week. A study of the physical problems of the soil as regards texture, tillage, movements of soil-water, moisture conservation, aerating, warming and draining the soil; the implements of tillage, and the purposes and principles involved in the use of the plow, harrow, roller, subsurface packer, and cultivator; laying out the farm, selecting the building site, arrangement of buildings, and methods of ventilating, warming, lighting, etc.; draft of wagons and farm machinery, road construction, fencing and ditching; farm motors, the horse, principles of draft, the evener, practical uses of power machines, wind, water, steam, gas, electric; farm machinery—elements of machines, lever, wheel and axle, inclined plane, pulley, screw and wedge, principles of friction, belting, etc. Each class of farm machinery will be taken up in its order and studied as to material used in construction, operation in the field, care, etc. Text-book, King's Agricultural Physics.

Animal Husbandry.

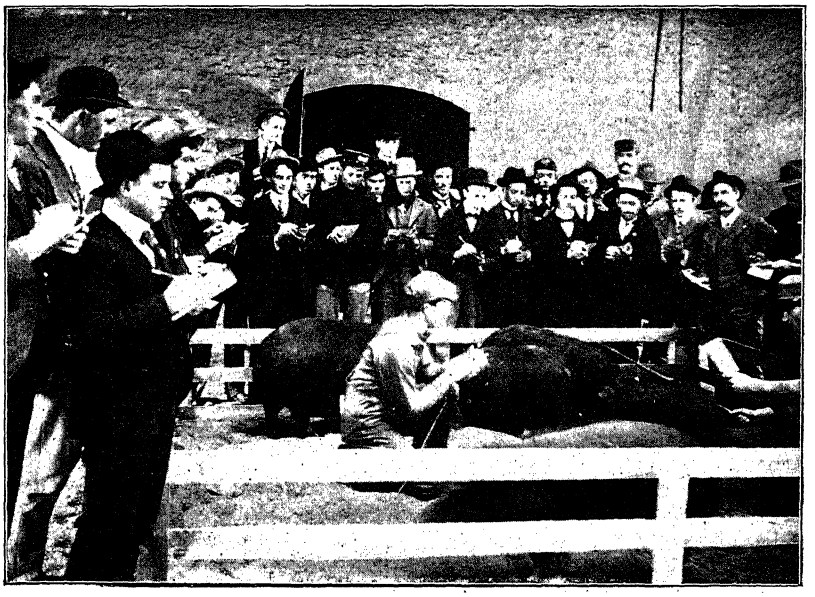
The instruction in animal husbandry is planned with a view of awakening and encouraging an intelligent interest in live stock, so that a student, when he sees an animal, will at once compare it with an ideal that he carries in his mind and note wherein it falls short.

The value of the different feeds and combinations of feeds are taught, so that the student will be able not only to combine feed stuffs to get the required nutrients, but to combine them in the most economical manner to produce desired quantity and quality of product.

The principles of breeding as related to the raising of farm animals are studied, so as to enable the student to know how our improved breeds of live stock have been developed, and how animals of superior merit may not only be perpetuated but improved. This work includes practice in tracing out pedigrees.

The aim is to give the student such knowledge and skill that will enable him to return to the farm and select, feed and breed the best live stock it is possible for him to obtain, or if he has no farm of his own, opportunities are open for young men, after getting some experience, to work into positions as farm managers. Nos. 1, 2 and 3 are required in the agriculture course.

JUDGING CATTLE.



JUDGING SWINE.

1. **Breeds of Live Stock.** Second year, winter term. A study of the market types of live stock; history and characteristics and adaptability of the breeds of live stock; selection and judging of live stock, according the official standard; form as an index to quality; practice in tracing out pedigrees. Text-books, Shaw's Breeds of Live Stock, Craig's Stock Judging.

Stock Judging.—Second year, winter term. Practice in judging chickens, beef cattle, dairy cattle, hogs, horses and sheep according to the official standards.

2. **Stock Feeding.** Third year, spring term. Properties of feed stuffs; adaptation and combination of feeds to meet the needs of various classes of stock under varying conditions; effect of feed on quality of product; preparation of feeds and methods of feeding; studying practical rations; study of experimental work in stock feeding. Text-book, Henry's Feeds and Feeding.

3. **Animal Breeding.** Fourth year, spring term. A study of the laws of heredity, atavism, condition, and variation; principles relating to fecundity; methods of cross-breeding; study of pedigrees of noted individuals and families of various breeds. Text-book, Shaw's Animal Breeding.

4. **Industrial Agriculture.** Third year, spring term, and fourth year, fall term. Those who take this elective along animal-husbandry lines will receive advanced work in judging chickens, horses, cattle, sheep, and swine; practice in judging groups of live stock similar to those arranged at county and state fairs; visiting neighboring farms and breeding yards to judge and classify stock; study of butcher animals on the hoof and on the block.

MEANS OF ILLUSTRATION.

Ten breeds of cattle are represented on the College farm—Aberdeen-Angus, Galloway, Hereford and Shorthorn representing the beef breeds: Ayrshire, Guernsey, Jersey and Holstein-Friesian representing the dairy breeds; and the Polled Durham and the Red Polled representing the dual-purpose breeds. The College has a herd of thirty common cows.

Four breeds of swine have been donated by twenty-five different breeders of Kansas, each breeder sending what he would call a model animal. This furnishes an excellent opportunity to study the ideals of successful breeders.

Several breeds of poultry are owned by the College, and the fanciers around Manhattan loan all additional birds needed for judging purposes.

The College owns some fine Percheron horses, and, in addition, secures the loan of some of the best draft and driving horses in the state for judging purposes.

The judging room, 48x96 feet, is located in a large stone barn at the north end of the College campus, and has a seating capacity of 350.

Botany.

The instruction in the botanical department is along three lines:

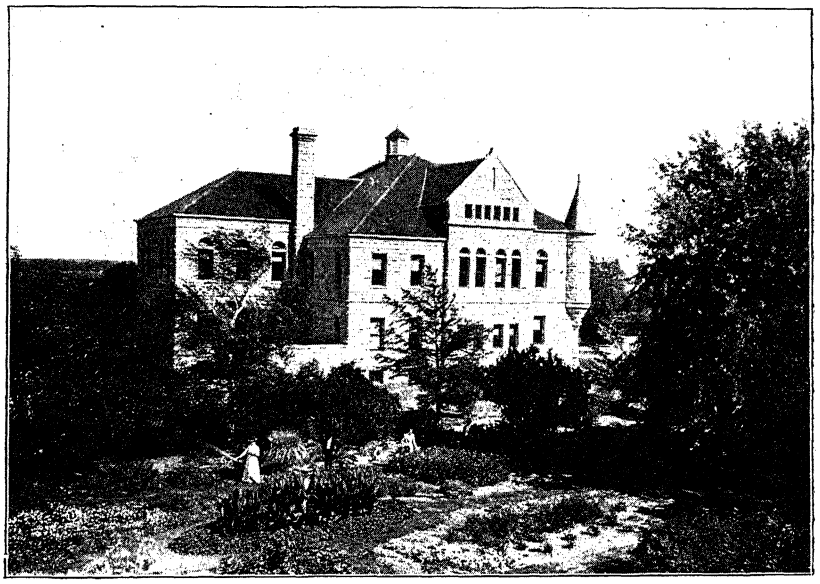
First, as a Pure Science.—The department aims to give the student the training in observation and scientific reasoning, and also the information which he should have as a matter of general knowledge, regardless of his subsequent vocation. Botany is the first natural science to which the student is introduced in his College course, and for this reason it is necessary that he receive in this department his elementary training in scientific methods.

Second, as a Science Underlying Agriculture.—It is well recognized that botany is one of the most important of the sciences upon which the practice of agriculture is based, for the reason that botany deals with plant life, and plant

life is at the basis of agriculture. Whenever practicable, illustrations and examples in both the elementary and advanced work are chosen with particular reference to their bearing upon agriculture.

Third, Technical Botany, including such subjects as are of direct application in agriculture. The training in the special botanical studies of the agriculture course is chiefly of this nature, as will be seen by consulting the outline below.

Of the studies described below, Nos. 1 and 2 are required in the general science and domestic science courses; Nos. 1, 2 and 3 in the agriculture course, and No. 1 in the mechanical and electrical engineering courses.



FLOWER GARDENS.

1. **Elementary Botany.** First year, fall term. This course covers the elements of morphology, physiology, and ecology. All of the great groups of plants are taken up and discussed in the order of their evolutionary development. Especial attention is given to the changes in structure which appear in response to changes in environment. Emphasis is laid upon the plasticity and adaptiveness of the plant organism. By grasping this fundamental conception at the outset, the facts of plant life, particularly studied in horticulture and agriculture, become more comprehensible and significant. A general study of the classification of the plant kingdom, sufficient to enable the student to understand the broad outlines, and the relationships of the great alliances, is secured in this course, and, by coming into close contact with plants as living organisms in their natural habitats, he becomes acquainted with the factors that regulate their life and activity. Coulter's Plant Studies is the text used.

Field-work. Two and one-half hours per week of field-work are required in this work. Certain definite problems in plant ecology, particularly with reference to the economic factors of importance in agriculture, are assigned to different groups of students, and a report of the observations made is required

to be handed in, together with drawings of the representative plants in the locality studied. The materials called for are: A drawing tablet, a key to the local flora, published by the department, and a simple lens.

2. **Plant Morphology.** Fourth year, winter term. During this term the forms and structural relations of representatives of all the great groups of plants are studied in detail in the laboratory. The object of the course is to give the student a comparative understanding of the morphological character of the more important members of the plant kingdom, and a conception of their genetic relationships and development as an evolutionary series.

Laboratory.—Laboratory work; in which accuracy of observation is tested by exact studies of representatives of all the great groups of plants, both with the unaided eye and by means of the microscope. Detail drawings according to furnished outlines are required. Drawing materials are provided by the students. All necessary reagents and instruments are supplied by the department.

3. **Plant Diseases and Breeding.** Fourth year, spring term. The first half of the term is devoted to the study of plant breeding and plant evolution. The laws of heredity and variation are studied, and their application to the improvement of economic plants by selection and cross-breeding. The extended series of experiments now being conducted by the Experiment Station will be used for illustration. The work in plant breeding is conducted by means of lectures and conferences, supplemented by laboratory and field observation so far as possible.

The second half of the term is devoted to the study of causes of disease in economic plants. The student is familiarized by the lectures with the great groups of the parasitic fungi and their chief subsidiary groups. The general morphology of these is discussed successively, and the morphology and physiology of the particular representative of each selected for laboratory study is given in detail, together with combative and preventive measures. A rich herbarium of types and a constantly growing set of duplicates furnish abundant material for the work, and is supplemented by alcoholic specimens properly killed and fixed, and by prepared slides. Ample literature on the subject of plant diseases is afforded by the library of the department and of the Experiment Station. H. Marshall Ward's Disease in Plants is used as a text. Prerequisites are courses 1 and 2 or their equivalents.

Laboratory.—Work in the laboratory, in which pathological specimens are examined, and the changes induced in plants by fungi and by abnormal physical conditions are studied in detail under the microscope. The object of this course is rather to study the workings of disease from the standpoint of the host than to become acquainted with the groups of parasitic fungi, although a sufficient study of the morphology of these for practical purposes is made in the laboratory.

GRADUATE COURSE.

4. **General Morphology of Thallophytes.** Winter term, three afternoons a week. Lectures and laboratory work. This course involves a detailed study of the morphological characters of the algæ, fungi, and lichens.

5. **General Morphology of Bryophytes and Pteridophytes.** Spring term, three afternoons a week. Lectures and labaratory work. The work begun in course 4 is here continued in the higher groups of liverworts, mosses, and ferns. Especial attention is given to evolutionary lines of development in these groups.

6. **General Morphology of Spermatophytes.** Spring term, three afternoons a week. Lectures and laboratory work. The work of this course will be given in alternate years with course 5, and covers the morphology of the gymno-

sperms, monocotyledons, and dicotyledons, representatives of each of the chief groups of these great alliances being studied in considerable detail.

7. **Morphology and Physiology of Economic Grasses.** Spring term, three afternoons a week. Lectures and laboratory work. This course contemplates a detailed study of the cereals and other economic grasses; their history, distribution, structure, and habits.

8. **Ecology.** Fall term, three days a week. This course involves the study of the reactions of plants to their environment in their associative relations as plant societies. Problems of ecological and geographical distribution will be considered, and as far as possible the work will be made individual, each student being directed into some special ecological question as early as possible. Lectures and conferences will furnish general guidance, and special reading will be assigned. The work proper will be strictly in the field.

9. **Plant Histology.** Spring term, two afternoons a week. This is a course in laboratory methods, involving a study of processes of killing, fixing and preserving plant tissue; dehydrating, embedding in paraffin and celloidin; microtome sectioning; staining and mounting of slides. A varied series of preparations will be worked upon, with a view to the acquisition of facility in technique and in the preparation of material for research.

MEANS OF ILLUSTRATION.

A general herbarium, consisting of a large collection of plants of the United States and other countries; a Kansas herbarium, containing specimens illustrating the distribution and variation of plants throughout the state; a twig herbarium, illustrating woody plants in their winter condition; and a seed herbarium, containing a representative collection of seeds and fruits, amounting, all together, to about 70,000 specimens; also thirty-eight compound microscopes, seven dissecting microscopes, tools, reagents, etc. The department is provided with a zinc culture room, and the ordinary apparatus for bacteriology, and with Minot and Schanze microtomes, paraffin embedding ovens, and a complete equipment of glassware and stains for histological and cytological work.

Chemistry.

All of the industries are becoming more and more dependent for their highest success upon intelligent application of the sciences, and the special sciences are making their greatest progress by tracing their phenomena back to the physical and chemical changes that accompany them. A study of chemistry and physics is therefore essential to any understanding of the processes of nature or human industry. In the instruction in chemistry the aim is to insist upon a mastery of the chief concepts of the pure science through the agency of text-book drill, accompanied by demonstrations in the lecture-room, and experimental observations by the student himself in the laboratory. As the course proceeds, illustrations of chemical principles are drawn from the industrial processes of the chemical, agricultural, domestic and other arts, thus impressing the practical nature of the study. The ultimate object of the instruction is to develop in the student the power to form independent judgments upon the manifold problems of daily life in which chemistry plays a part.

Of the studies described below, Nos. 1, 2 and 4 are required in all courses. In addition, the general science course requires No. 3, and 5 or 6, and allows as electives any four of the others; the domestic science course requires Nos. 3 and 5; and the agriculture course, Nos. 3, 6, and 7.

1. **Chemistry.** Second year, fall term. This term's work is designed to give the student a knowledge of the fundamental principles of the science as illustrated by the chemistry of the non-metals. The text-book is supplemented by lectures, and the subjects are amply illustrated by experimental demonstrations. Elementary physics is a prerequisite. Text-book, Remsen's Introduction to the Study of Chemistry.

Laboratory.—The course includes laboratory work five hours per week, in which the student performs most of the experiments of the text-book, or others similar. In this, as in all of the laboratory work in chemistry, the objects are to illustrate chemical phenomena, and to teach care in manipulation, attentive observation, logical deduction, and discrimination and care in recording results and conclusions. Laboratory guide, Remsen and Randall's Chemical Experiments.

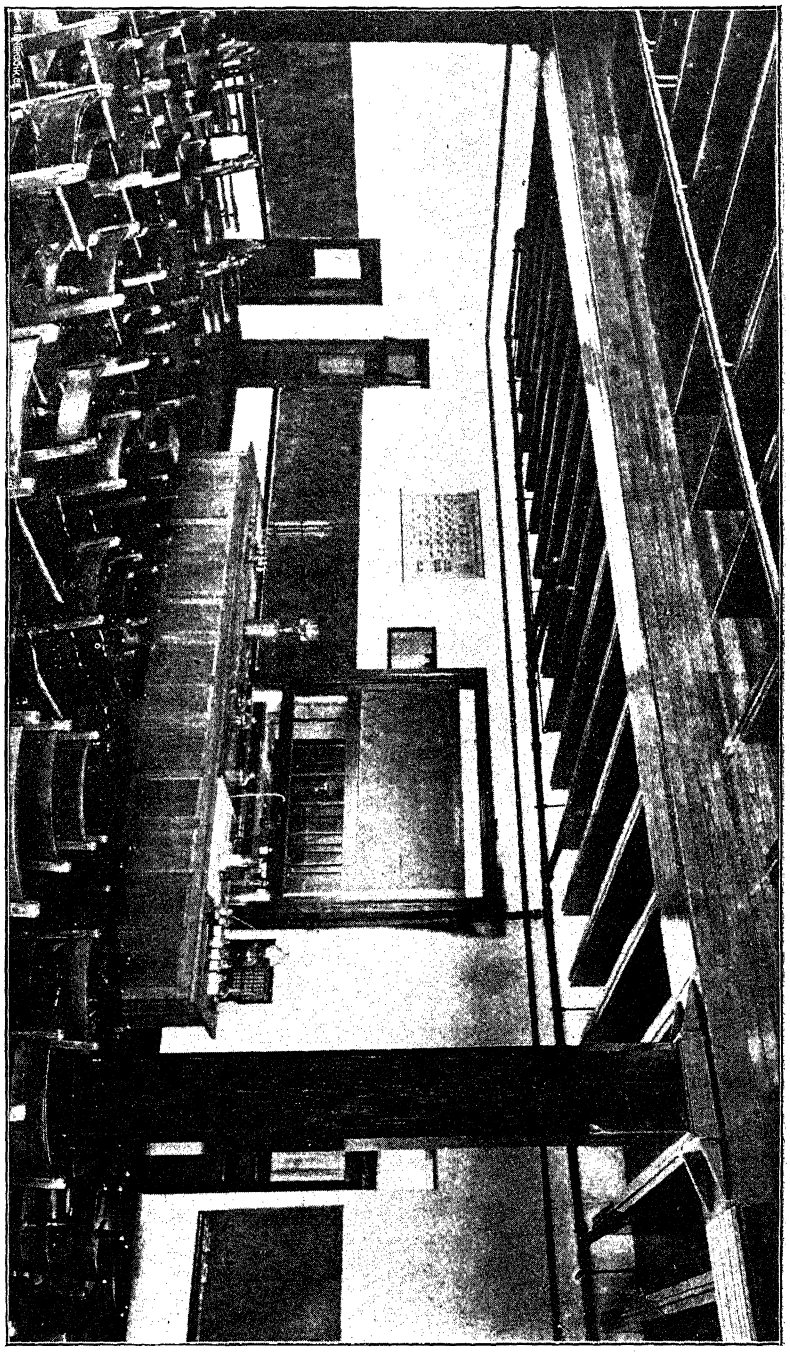
2. **Chemistry of Metals.** Second year, winter term. This is a continuation of the study of inorganic chemistry begun the preceding term. The properties and uses of the more important metals, their occurrence in nature, metallurgy, and the preparation and properties of their most important compounds are considered. At the same time opportunity is taken to develop still further the general principles of chemistry. Text-book, same as for course 1.

Laboratory.—The laboratory work of five hours per week includes exercises illustrating the lessons of the classroom, and blowpipe analysis of the more common minerals, especially those of importance to agriculture or other industries. During the second half of the term preliminary work in qualitative analysis is given, using known single salts or simple mixtures. In this W. A. Noyes's Qualitative Analysis is the text-book.

3. **Organic Chemistry.** Second year, winter term. In a course as brief as this only a few of the most fundamental general principles and reactions can be considered, and especial attention is given to topics bearing upon the arts and industries. The subject is amply illustrated by experiments on the lecture table, but the students have no laboratory work in this connection. Text-book, Remsen's Organic Chemistry (in part), supplemented by lectures. Course 1 must precede this.

4. **Analytical Chemistry.** Second year, spring term. Two lessons and recitations per week accompany the laboratory work. In these and in the laboratory the teaching of analysis as such is a secondary object, although the student is held to the exact observations and careful reasoning required in ascertaining the composition of single substances and mixtures. The prime object of the course is to increase the student's knowledge of chemistry as a whole; by approaching reactions from another direction, to obtain a broader view of the science. The lessons include a review of the more important topics of inorganic chemistry, in which it is seen that the occurrence of elements or compounds in nature and their preparation in the arts are closely connected with the reactions made use of in the identification of them in analysis. The exercises are so arranged as to pass from the simple to the more difficult, and at the same time to facilitate the comparative study of the several cations and anions. Courses 1 and 2 must precede this. Text-books, Remsen's Introduction to the Study of Chemistry, and W. A. Noyes's Qualitative Analysis.

Laboratory.—Nearly all of the work of the term is upon unknown substances, preparation for this having been made the preceding term. The work at first is upon single soluble substances, mixtures and insoluble substances being given later. Text-book, W. A. Noyes's Qualitative Analysis. The larger standard works on chemical analysis are available for reference in addition.



CHEMISTRY CLASS-ROOM.

5. **Human Nutrition.** Third year, fall term. This is a course in the chemistry of foods and nutrition, and includes the following topics, with others: Composition of the animal body; composition of foods, and methods of investigation employed in their study; the changes that the several classes of foods undergo in cooking and digestion, and the functions that they perform in nutrition; daily food requirements, and the balancing of dietaries; food economy. Some attention is also given to water-supply and water purification. Course 3 and physiology must precede this course.

6. **Animal Nutrition.** Third year, fall term. This course is designed to provide a thorough scientific basis for the study of practical stock feeding. It is a study of the relation of the animal body to matter and energy, and includes consideration of the methods of investigation employed, and of the following topics, with others: The chemical changes that feeds undergo in digestion; the tissues that can be built up by the several proximate principles of feeds, and the bodily functions that they can sustain; hence, the requirements of the animal as modified by the purpose for which it is fed; the channels through which the energy of feed is lost or is utilized. Text-book, Armsby's Principles of Animal Nutrition. Course 3 and physiology must precede this.

7. **Agricultural Chemistry.** Third year, winter term. Among the subjects treated are: The soil-making rocks and minerals, and the agencies by which soils are formed from them and other materials; the soil requirements of different crops; the sources of soil fertility, and means of conserving it; the general relations of plants to earth, air, and water; the chemical characteristics of the most important feeding-stuffs, and the effect upon composition, of differences in the mode of planting, time of cutting, selection of seed, etc. Text-books, Snyder's Soils and Fertilizers, and Henry's Feeds and Feeding. These are supplemented by lectures. Courses 3 and 4 must precede this.

Laboratory.—Five hours per week are given to laboratory work, which consists of qualitative or simple quantitative exercises upon substances of direct agricultural interest. These are so planned as to give as great a variety of training as possible in the limited time available.

MORE ADVANCED COURSES.

Advanced work in chemistry is offered in graduate courses and as electives in the general science course. Classes requiring lectures and recitations will not be organized for less than three students.

8. **Inorganic Chemistry.** Fall and winter terms. This course is a thorough study of one of the larger text-books, such as Richter's or Newth's, accompanied by a special course of laboratory work.

9. **Organic Chemistry.** Spring term. This course includes laboratory work, and the study of a text-book adapted to the advancement of the students. When sufficient demand exists it will be extended to two terms.

10. **Chemistry of Foods.** This course is designed for graduate students taking domestic science, and extends through a year. It consists of study of the literature treating of food and nutrition from a chemical standpoint, accompanied by laboratory work in the separation and study of the constituents of foods, drinks, and condiments. This course may be extended to almost any extent, and leads naturally to the quantitative analysis of foods.

11. **Quantitative Analysis.** This may be taken at any time after completing course 4. After the necessary preliminary training, the student may give special attention to any line of quantitative analysis, such as that of foods and fodders,

soils and fertilizers, ores, water, gases, etc. The investigation of special chemical questions is encouraged.

12. **Historical and Theoretical Chemistry.** This course may be arranged for by students who have completed courses 7 and 8.

13. **Mineralogy.** Crystallography, the study of minerals, and blowpipe analysis may be taken concurrently or separately.

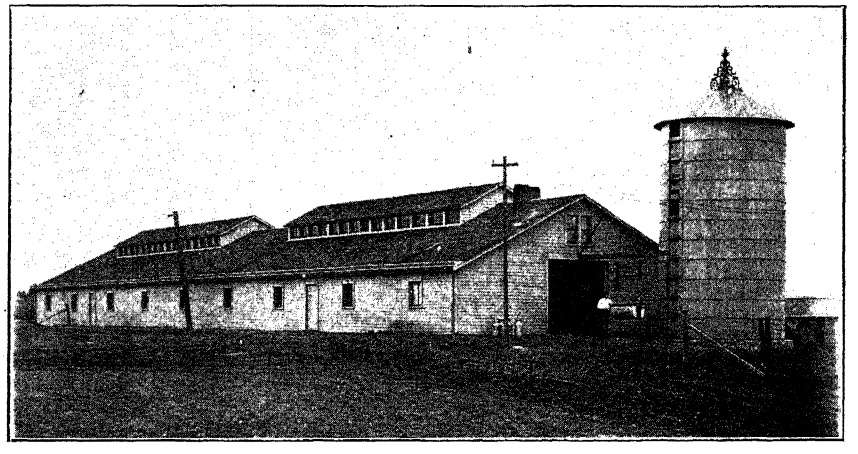
14. **Journal Meeting.** Once a week throughout the year, the officers of the department, with the more advanced students and such others as wish to, meet for papers and discussions upon topics representing the progress of chemical science, chiefly as found in the current journals. The preparation of subjects for presentation at these meetings is a part of the required work of graduate students.

MEANS OF ILLUSTRATION.

The department now occupies its new quarters, the east wing of Physical Science hall. It still lacks much in equipment, but is far better able to do good work than ever before. The lecture-rooms are provided with excellent facilities for demonstrations, and the laboratories have the more necessary items of equipment, to which additions are constantly being made. The laboratories for the first year's work in chemistry will accommodate 138 students at one time, and the desks are so constructed that they may be used by an equal number working at another time. The laboratory for more advanced work provides places for forty-eight students. All of the laboratories are well supplied with draught-hoods. Each student's place is provided with gas and water, and distilled water is piped to all of the laboratories. The collections include representative specimens of the most important ores and minerals, a set of natural crystals, a set of large crystal models, a collection of the minerals of the noted Stassfurth deposit, and chemical preparations illustrating subjects taught.

Dairy.

1. **Dairying.** Second year, fall term. Milk—its secretion, nature, and composition; testing milk, cream, skim-milk, buttermilk, and whey; conditions influencing the quantity and quality of milk; handling of milk for market; butter-making and cheese-making; hand and power separators; cream ripening;



DAIRY BARN AND SILO.

making and marketing butter; study of cows, calves and feeds for the most economical production of dairy products. Text-books, Testing Milk and its Products, by Farrington and Woll; Milk and its Products, by Wing.

Laboratory.—Practice in testing milk and its various products; detection of adulterated milk; tests for distinguishing oleomargarine and butter; testing accuracy of glassware; study of various makes of hand and power Babcock testers; different methods of testing the acidity of milk.

Practice in receiving and separating milk; sterilizing skim-milk; pasteurizing, ripening and churning the cream; washing, salting, working, printing, packing and marketing the butter; practice with various kinds of hand and power separators; with different makes of cream-ripeners, churns, and butter-workers. Rennet tests; setting the milk; cutting the curd; developing acidity; salting, pressing and curing the cheese.

MEANS OF ILLUSTRATION.

Dairy apparatus valued at $10,000, dairy herd $5000, and model dairy barn at $3000; four breeds of pure-bred dairy cattle, two breeds of general-purpose cattle, and fifty head of calves and young stock.

Experiments in feeding cows and calves are in progress during the year. Students in dairying are required to watch and report on these experiments from time to time.

In addition to the regular College equipment, manufacturers of separators, Babcock testers and other dairy supplies have loaned the College several thousand dollars' worth of machinery for instructive purposes.

Domestic Art.

This department provides a systematic course in plain sewing and dressmaking.

The course of work in plain sewing is carefully graded, not only to insure a thorough knowledge of the subject, but to develop hapits of order, accuracy, and self-reliance. Each pupil is required to keep a note-book in which she records a description of the work accomplished. A written examination is held at the end of each term.

Of the studies described below, all young women are required to take Nos. 1, 2, and 3, and those in the domestic science course must take No. 5.

Materials for No. 1 are furnished by the College, the pupil furnishing her own thread, needles, thimble, etc. In Nos. 2, 3, 4, and 5, the pupil furnishes her own materials and makes the garments for herself.

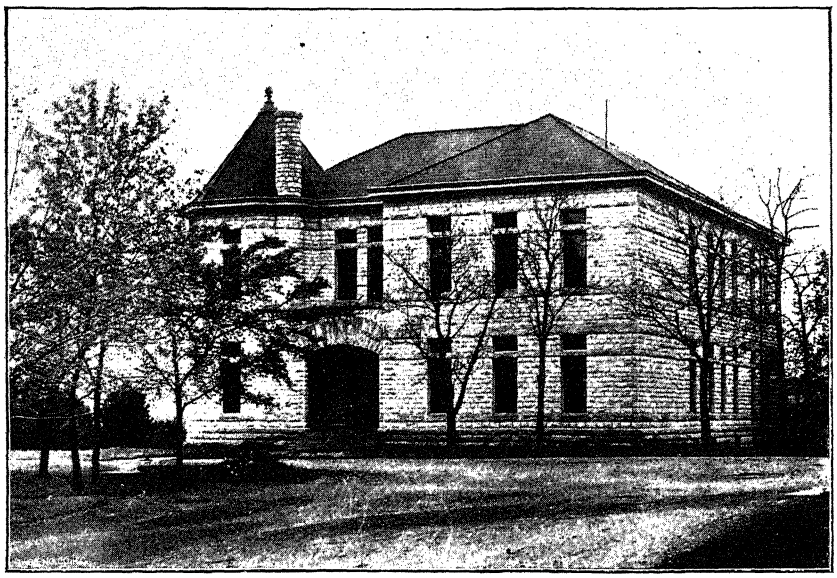
1. **Sewing I.** First year, fall term. The pupil makes a book of models, covering the full course in hand sewing, and consisting of basting, hemming, gathering, darning, patching, etc.

2. **Sewing II.** First year, winter term. Machine practice; drafting, cutting and making underskirt and drawers.

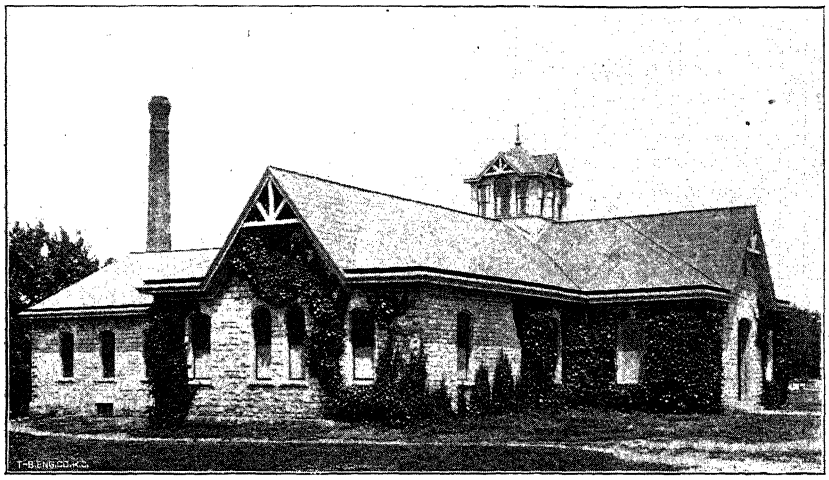
3. **Sewing III.** First year, spring term. Drafting, fitting and making dress without lining.

4. **Sewing IV.** Second year. Cutting and making corset cover and night-dress.

5. **Dressmaking.** Second year, winter term. Nos. 1, 2 and 3 are a prerequisite for this course. The use of a dress-cutting system is taught, and each pupil will be required to draft, cut and make a woolen dress for herself. Ten hours per week are devoted to class work and about three hours' home work is required per week.



KEDZIE (DOMESTIC SCIENCE) HALL.



WOMEN'S GYMNASIUM.

Domestic Science.

Of the studies described below, Nos. 1 and 2 are required of all young women, and Nos. 3 to 10, inclusive, are required in the domestic science course. Nos. 5, 6 and 7 are elective for young women in the general science course.

1. **Hygiene.** First year, fall term. This course consists of lectures in elementary hygiene for women, and covers the care of the human body as well as the general principles of wholesome living.

2. **Elementary Cookery.** First year, winter term. Lectures, with weekly laboratory practice. The course includes the study of fuels, construction and management of stoves, and the effect of heat on the food principles in an elementary but typical manner.

3. **Laundering.** Third year, fall term. The discussion of the scientific principles involved in laundering processes is followed by laboratory practice in the laundry. Soaps, washing fluids, bleaching powders, removal of stains, bluing and starch are considered in both their scientific and practical applications to laundry work. Text-book, Laundry Manual, Balderstein and Limerick.

4. **Home Nursing.** Third year, winter term. This course includes the study of the care of adults and children in sickness and convalescence; aids in sudden illness and to the injured; contagious and infectious diseases, together with sanitary conditions and precautions. Text-book of Nursing, Weeks-Shaw.

5. **Domestic Science I.** Third year, fall term. The fall work opens with the preservation of fruits and vegetables in canning, preserving, and the making of jellies, jams, and fruit juices. Breakfast sequence. The effect of heat on the food principles used in breakfast dishes and beverages is followed by the preparation and serving of breakfasts, considering also quantities, food values, and costs. Text-books, Boston Cooking School Cook-book, Miss Farmer; Expert Waitress, Springstead.

6. **Domestic Science II.** Third year, winter term. Luncheon and supper sequences. The cookery of luncheon and supper dishes is followed by a study of food combinations in bills of fare, and the serving of luncheons and suppers, together with discussions of food values, quantities, and costs. Text-book, same as for domestic science I.

7. **Domestic Science III.** Third year, spring term. Dinner sequences and dietaries. The first part of the term is occupied in the cookery of dinner dishes, construction of bills of fare, and the serving of the dinners, together with a study of food values, quantities, and costs. The last part of the term is spent in a study of dietaries. Text-book, same as for domestic science I.

8. **Home Sanitation.** Fourth year, fall term. This course is a continuation of home architecture, and includes disposal of waste, purity of water, beautiful furnishings, with a study of textiles and utensils; also the cleansing of the house. Reference work required.

9. **Therapeutic Cookery.** Fourth year, winter term. This work comprises special cookery for the sick, and the various ways of administering food to the sick and convalescent. Text-book, Food for the Sick, Doctor French.

10. **Household Economics.** Fourth year, spring term. Development and organization of the home, systematic methods of housekeeping, cost of living, rational division of income and household accounts are topics carefully considered. Papers and reference work required.

Apron, sleeves, cap, towel and holder worn by young women in cooking classes.

Drawing, Descriptive Geometry, and Architecture.

Drawing is the language of form and the key to every artistic and nearly every industrial pursuit. The educational and practical value of an extended and systematic course in its various branches can hardly be overestimated. The general aims of the several courses in industrial art are the same: (*a*) The cultivation of observation and analysis of form; (*b*) the development of correct taste; (*c*) the teaching of the different methods of graphic representation; (*d*) the acquirement of skill in handling drawing tools.

Of the studies described below, Nos. 1 to 6, inclusive, are required in the mechanical and electrical engineering courses; Nos. 1, 2, and 3, in the general science course; Nos 1, 2, 3, 4, and 9, in the domestic science course; and Nos. 1, 2, 3, and 10, in the agriculture course.

The College furnishes drawing-board, T square, triangles and water-colors for the graphic work done at the College; but all tools for home use, including drawing board, T square, triangles, compasses, shading pen, and protractor, must be furnished by the student.

1. **Object Drawing.** First year, fall term. Discussion and drawing of geometrical models and simple objects. Exercises in shading from the object and from the imagination.

2. **Geometrical Drawing.** First year, winter term. Construction of perpendiculars, parallels, angles, polygons, tangents, etc. Construction of the ovoid, oval, ellipse, and spiral. Drawing, in India ink and water-colors, of various geometrical designs and architectural forms. Use of drawing-board and T square. Text book, Walters's Industrial Drawing, envelopes 11 and 12.

3. **Elementary Projection.** First year, spring term. Principles of orthographic projection; the profile plane; the secant plane; rotation in space; change of ground line. Development of surfaces. Interpenetrations of the prism, pyramid, and polyhedron. Projection of the circle, cylinder, and cone. Exercises in pen and brush shading.

4. **Projection Drawing.** Second year, fall or winter terms. Construction and projection of the conic-section lines. Construction of the cycloid, involute, spiral, cissoid, conchoid, curve of pursuit, helix, etc. Construction of screw forms. Interpenetrations of the cone, cylinder, and sphere. Shades and shadows of simple geometric forms. Exercises in pen and brush shading.

5. **Projection Drawing.** Second year, winter term. Problems in monodimetric and isometric projection. The approximate development of the sphere. Problems on the spheric triangle. Shades and shadows produced by local light. Exercises in pen and brush shading. Instruction and practice in the manipulations of the black- and blue-printing processes. Principles of linear perspective.

6. **Descriptive Geometry.** Second year, spring term. Discussion and solution of the usual problems relating to the point, right line, and plane. Generation and classification of lines and surfaces. Discussion and construction of tangents, normals, and asymptotes to lines. Study of osculation, rectification, and radius of curvature. Construction of tangent, normal and asymptotic planes and surfaces. Construction of tangents to curves of intersection. General characteristics of warped surfaces. Graphic analysis of the hyperbolic paraboloid, the conoid, the hyperboloid of revolution, the cylindroid, the helicoid, etc. Construction of tangent planes to warped surfaces. Construction of tangent hyperboloids.

7 **Perspective and Sketching.** Third year, winter term. Linear perspective is taught as central projection, and is intended to furnish the scientific answers to the questions which constantly confront the student of drawing from the object. It comprises the subjects of vanishing points, vanishing traces, measuring points, cylindric perspective and perspective corrections, shades and shadows in perspective, studio methods. The models used in the work in sketching are objects of utility and beauty, whose forms bear close relationship to geometrical types. The students are led to recognize the facts, relations and principles involved in the apparent form of the object, to note the distribution of light, shade, shadow and reflection on the same, and deduce the general principles which the observation and comparison of these appearances are found to establish. Each student is required to make eighteen original crayon sketches during the term.

8. **Advanced Object Drawing.** Fourth year, spring term. Exercises in pen drawing, crayon and brush shading, architectural and machine drawing, illustrating thesis work, at the option of the student.

9. **Home Architecture.** Second year, winter term, This study is taught by lectures covering the following topics: Location of the home; landscape surroundings; roads, walks, fences, and outbuildings; the individuality of the home; building materials; the historic development of the dwelling-house; foundations and basement; the arrangement of the main-floor rooms; the roof and attic; heating and ventilation; water-supply; water-closets, cesspools, and other drainage problems; paint and varnish; interior decoration; the schoolhouse. Each student is required to design a set of plans, elevations and details of a residence, with modern provisions for heating, ventilation, and drainage.

10. **Farm Architecture.** Third year, fall term. A course of lectures on the following topics: The dwelling-house, roads, walks, culverts, and fences; the general-purpose barn; the dairy barn; the poultry-house and other outbuildings; heating and ventilation; water-supply and drainage. Each student is required to draw a set of plans, elevations and details of a modern dairy barn.

11. **Architectural Course.** The courses of study for all engineering branches must necessarily be the same with regard to work of a preparatory or general character, but differ with regard to the professional branches. Students who intend to take architecture in place of mechanical engineering may substitute architectural studies for the strictly professional work of the third and fourth years of that course. The department of industrial art is well equipped to teach the branches named. It owns a rapidly growing collection of illustrative building material, complete sets of drawings and blue-prints of most of the Kansas state buildings, a photographic camera, a dark room equipped with running water and ruby light, etc. The substantial buildings of the institution and its complete system of heating and lighting furnish additional illustrative material.

LOVERS' LANE.

English Language and Literature.

As its name implies, the work of this department is twofold; on the one hand it deals with the derivation, nature and especially the effective use of our mother tongue in practical discourse; on the other, it studies the literature of the English-speaking world, especially as exemplified by the master writers at different periods of our literary development. Thus the attention of the department is devoted to the study of rhetoric and to the study of literature.

The aim of the instruction in rhetoric is to give a thorough and systematic training in the principles and practice of English composition. The most common errors to which inexperienced writers are subject are pointed out and criticized. The elements of style are studied from a text-book, discussed in daily recitations, and applied practically in the writing of paragraphs, themes, and essays. Attention is given to methods of finding and arranging material and to the application of these methods in the various types of discourse.

In literature, the instruction seeks to give the student an understanding of the nature and characteristics of literature in its leading forms, to develop in him a taste for the best literature and enthusiasm for literary study, to impart to him right methods, to train him in the ability to judge with confidence the literary qualities of any given work, and, through sympathetic study of their masterpieces, to give him some knowledge of the leading authors.

In most of the course the work is pursued by a combination of lectures, classroom study, and seminary investigation. The literature is read at first hand and the student is required to do for himself, by way of interpretation, as much as possible. The extensive and intensive methods are combined: wide reading, to get literary atmosphere and breadth of view; critical study, to develop accuracy and insight. While historical conditions are not neglected, the weight of emphasis is placed upon the permanent qualities of literature as an artistic expression of life. To know what some one has said about a great author is deemed to be of less of importance than to know what a great author has said for himself.

Of the studies described below, Nos. 1, 2, 3 and 4 are required in all courses; No. 5 is required in the domestic science course, and may be taken as an elective in the general science course; No. 6 is required in the engineering and agriculture courses; Nos. 7 and 8 are required in the domestic science and general science courses.

1. **English Classics.** First year, fall term. The careful study of a number of standard authors, English and American, of first-class interest and easy style. As far as possible, the selections are read and discussed in class. Character sketches, paraphrases, abstracts, and analyses, as well as biographical sketches of the authors, are frequently required, so that the students are not only given continual opportunity for studying and rendering the best thought in the best forms, but are, at the same time, encouraged to develop their own thought and powers of expression.

CLASS READINGS.

Coleridge's Ancient Mariner, Tennyson's Princess, Shakspere's Merchant of Venice, Dryden's Palamon and Arcite, Lowell's Vision of Sir Launfal, George Eliot's Silas Marner, Cooper's Last of the Mohicans.

2. **English Structure.** First year, winter term. A study of the etymology of derivative words, of synonyms, of the uses of words, and of the principles of sentence structure, with practical exercises in word and sentence analysis.

3. **Rhetoric I.** First year, spring term. The work of this course is an extension and application of that begun in composition. The student is encouraged

to write freely upon subjects that appeal to him and that arise out of his daily experiences. He is trained, so far as possible, to criticize his own work, to be satisfied with nothing short of excellence, and to realize that composition need not be drudgery and may become a pleasure. Especial attention is given to description and narration.

4. **Rhetoric II.** Third year. Fall term in the domestic science, agriculture and general science courses; winter term in the engineering courses. Theory and practice. Rhetorical analysis. Paragraph and essay writing. Plan-making. Argumentative and oratorical criticism. Studies in oratorical invention and style. Lectures on oratorical composition. Especial attention is given to both the theory and the art of exposition, argument, and persuasion.

5. **American Literature.** Third year, spring term. A rapid survey of the rise and development of American authorship from colonial times to our own day. Study of the lives of representative men of letters. Seminary study of some of the great novels, essays, and longer poems. Classroom study and interpretation of some of the more difficult poems. Lectures.

6. **English Literature.** Third year, spring term. A brief survey of the rise and development of English literature, with library study of typical writers of each period. Lectures: The nature of literature; the nature and elements of poetry; the great periods of English literature. Study of masterpieces.

7. **English Literature I.** Fourth year, winter term. History of the English language and literature. Lectures: What literature is; what poetry is; the beginnings of fiction; the nature of the drama; the plays of Shakspere; the age of Scott, Burns, and Wordsworth; Tennyson and his relation to his age; Browning's theory of art. The study of Thackeray, Shakspere and other great writers out of class, with reports and discussions. The intensive study and interpretation in the class of great masterpieces.

8. **English Literature II.** Fourth year, spring term. A continuation of English literature I.

Entomology and Zoology.

It is not necessary to enlarge upon the importance of the studies in this department either to the student seeking general culture or to the specialist in agricultural lines. The fundamental facts of zoology underlie all appreciation of the special studies peculiar to our institution in animal biology, and are moreover essential to an understanding of the true relation subsisting between man and the creatures under his influence; while those of geology show the application of many principles of physics and biology to commonly observed but otherwise little understood phenomena daily before every one. In courses of study framed to meet the needs of the young in an essentially agricultural community, where most have come from the farms, and most must return to them, a study of the minute but important insect friends and foes of the cultivator is not only desirable but essential. The study of insects, however, offers, in addition, especial opportunity for the development of habits of discriminating observation that will be of value in any walk of life.

Courses 1, 3 and 4 are required in the agriculture, domestic science and general science courses.

1. **Entomology.** Second year, fall or spring term. In the work of this term, the intention is to give the student a basis for the intelligent appreciation of the important relations of the science to agriculture and horticulture. A brief view of structural types precedes an outline of insect classification, and a special

JUDGING POULTRY.

study of the economic bearings of the subject completes the work. Illustrative material is furnished from the individual collections of the students and from the College museum. Charts, dissections and drawings from nature are used to illustrate points of value in classification. The pocket lens used in botany is required in this study. Text-book, Comstock's Manual for the Study of Insects, abridged.

2. **Advanced Entomology.** Fourth year, elective. Courses are offered in the following lines: (*a*) Review of the general subject, with the text-book, Comstock's Manual, extended. This study is desirable as preliminary to work in systematic or economic entomology. (*b*) Entomological methods, including field-work in observation and collection, laboratory work in preparation, dissection, and preservation, and in the study of life-histories, by the aid of the vivarium. (*c*) The independent and critical study of systematic entomology, the work in which may be restricted, when desired, to groups of special agricultural importance. (*d*) Economic entomology, so far as relates to the insects of field and garden, with a special study of methods of repression.

3. **Zoology.** Third year, fall, winter or spring term. This course is an introduction to the study of animals—their structure, functions, habits, origin, relationships, and classification. The student is first introduced to the simplest forms of animals, in which structure and function are expressed in their simplest terms. From the consideration of these he passes in a natural manner to the study of higher and more complex forms, thus obtaining a knowledge of the gradual differentiation of structure and correlative specialization of function so clearly illustrated by the study of types. Special attention is paid to animal ecology, *e. g.*, the relation of animals to their environment, effects of climate, soil, etc.; parasitism, commensalism, symbiosis; natural and artificial selection;

the interdependence of species, and the caution which must be observed in interference with these natural relations. The course should be preceded by organic chemistry and physiology.

MEANS OF ILLUSTRATION.

The zoological museum, containing numerous representatives of the several classes, especially full in fishes and mollusks of Kansas and in illustrations in economic and systematic entomology. Increasing material in skins, alcoholic and anatomical preparations is available also for the use of the student.

4. **Geology.** Third year, winter or spring terms. In this study attention is chiefly given to the subject of physical geology, with a brief view of the arguments and basis of the historical phase of the science. The illustrative collections embrace ample series of specimens, including the College collection of rocks, the stratigraphical collection, and the collection illustrating phenomenal geology, all from the Ward establishment; the educational collection, from the United States Geological Survey; and a valuable series of rocks and rock-forming minerals, from the National Museum. To these are added numerous specimens, especially from Kansas localities; and a small but increasing representation of characteristic fossils is also open to the student.

History and Economics.

Whatever occupation in life men may adopt—whether they become farmers, lawyers, teachers, or merchants—they are first of all citizens. For this reason the College offers to its students instruction in those subjects which fit them in a special manner to discharge the duties which they owe to their state and to the nation, and to form an intelligent judgment concerning the public questions which, as voters or perhaps as officers, they will be called upon to meet. The work of this department is arranged with this end in view.

Nos. 1, 2, 3 and 4 are required in all courses; No. 5, in the general science and domestic science courses.

1. **General History I.** Third year, fall term. An outline of European history from the fall of Rome to the beginning of the Protestant reformation. Special attention will be given to the development of institutional life, particularly the growth of the English constitution, the influence of the crusades and the beginning of the renaissance. Text-book, Adams's European History.

2. **General History II.** Third year, winter term. A continuation of course 1, extending as far as the congress of Vienna. The Protestant reformation, thirty years' war, rise of modern nations, development of absolutism and the cause of the French revolution will be the chief topics here. Text-book, Schwill's Modern Europe.

3. **Civics.** Third year, spring term. This course is given by lectures and text-books, and involves a study of the formation of the constitution, the organi zation and methods of the federal, state and local governments, the most important sections of the state and federal institutions, and a discussion of current topics in politics and legislation. Text-books, Andrew's Manual of the Constitution, Boyd's Cases.

4. **Economic Principles.** Fourth year, fall term. This course is an introduction to the general subject, with elaboration of certain aspects. Care is taken to compare conflicting views and to point out sources of information on all sides of vexed questions. Sound thinking rather than the dogmatic teaching of certain views is the object sought. Text-book, Walker's Political Economy, briefer course.

5. **American History.** An advanced course in American history will hereafter be offered for juniors in the general science course and seniors in the domestic science course, during the spring term. The aim will be to study a brief period of our constitutional history each year, giving particular attention to the development of the federal constitution, rise of political parties, development of our foreign policy, etc. An extensive use of the library will be required of the student, and particular attention will be given to correct methods of historical investigation.

6. **Constitutional Law.** Third or fourth year, spring term. This course is an elective for those students of the third and fourth years who have had civics. In it, during the first half-term, some of the leading decisions of the supreme court interpreting the constitution are studied. In the second half-term, lectures are given on the principles of international law. Text-books, Black on the Constitution, Cases on Constitutional Law.

Horticulture.

It is the object of the department to give such instruction and practice as will enable students to become acquainted with the general principles of plant culture and the application of these principles. Students in the agriculture course are assigned to three terms of class work (1, 2, and 3) and two terms of industrial work during the course. The work is planned to give them such knowledge of horticulture as will best help to increase the comforts, beauties and profits of life on the farms. The young women of the domestic science course are assigned to classes in 1 and 4, and may elect one term in ornamental gardening.

Students in the general science course are assigned to 1, and may elect industrials through the last three years of the course, and other subjects during the terms when classes are formed.

1. **Principles of Horticulture.** Second year, fall term. The work of this term presents the principles of the art, introducing the facts underlying methods of propagation, nursery, orchard and garden treatment; the handling, storing and marketing of fruits. The text-book, Goff's Principles of Plant Culture, is supplemented by lectures.

2. **Forestry.** Third year, winter term. The work of this term presents the general principles and methods of forestry; dealing with the relation of forests to public welfare and the means of regulating, preserving and extending forests. Gifford's Practical Forestry forms the basis of the term's work, supplemented by lectures upon tree-planting for the farm, care of wood-lots, windbreaks, post-planting, etc.

3. **Vegetable-gardening and Small-fruit Culture.** Third year, spring term. The work of this term is given by lectures, and is devoted to methods of field operations, with special attention to seasonable practice, including the use of manures, the application of fungicides and insecticides, the means of securing and maintaining sanitary conditions, and a detailed study of varieties, with reference to their adaptation to local conditions.

4. **Floriculture.** Third year, winter term. This subject, open to young women of the domestic science course, includes general greenhouse work in propagating, potting and caring for plants, window-gardening, the growing of plants in the open air, the treatment of bulbs, annuals, and perennials, and the destruction of plant pests. Practice work alternates with lectures on these topics.

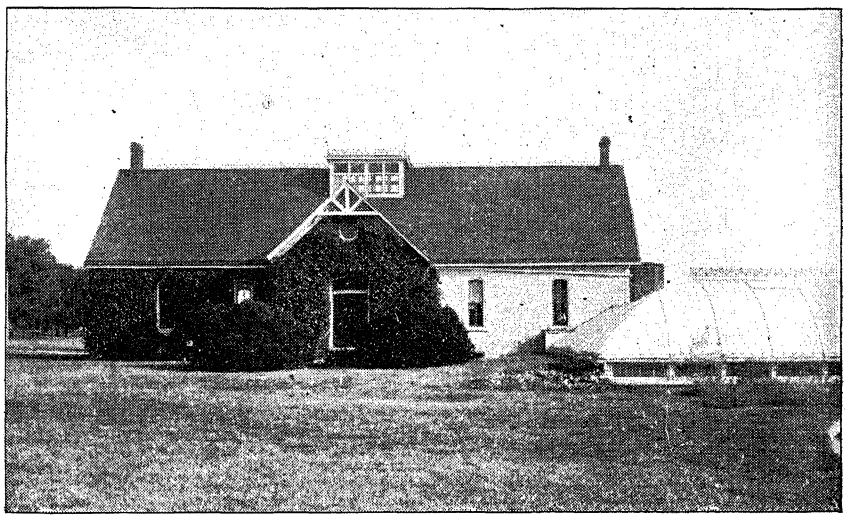
5. **Industrial Horticulture.** Second year, winter term. The practical work of this term is devoted to indoor methods of propagating fruit and ornamental

trees and shrubs, winter pruning of fruit- and forest-trees, and forcing-house work with vegetables.

6. **Industrial Horticulture.** Third year, fall term. The practical work of this term is largely devoted to the seasonable operations of gathering and storing seeds, fruits, and vegetables, the preparation of vegetables for market, the winter protection of garden plants, small fruits, and ornamentals, fall work in orchard and vineyard, and selection and preparation of material for propagation.

ELECTIVES.

7. **Pomology.** Fall term. The work of this term comprises a careful study of varieties of fruit, the means of identification, their variation, in plant and fruit, under different conditions of soil and culture, and their botany and history. The same work with the small fruits may be carried on during the spring term.



HORTICULTURAL HALL AND GREENHOUSES.

8. **Ornamental Gardening.** The principles of this art are studied in relation to their application to the planning and planting of home grounds, streets, parks, and cemeteries. The value of the various trees, shrubs, annual and perennial herbaceous plants for securing desired effects are taken up in detail, with special reference to their use under differing climatic and soil conditions. Graduate students or those electing more than a single term's work in this subject study in fuller detail the foregoing topics and also the propagation, training and general culture of the various plants.

9. **Industrial Horticulture.** Students who elect practical work in horticulture are given more detailed instruction in the work outlined in the regular industrial work, and more advanced work in orchard, garden, nursery, and forcing-house, and in the use of spraying apparatus. Special industrial work in floriculture may be arranged for by either young men or young women. Graduate students who elect horticulture as their major study may devote more than one term to work in the subjects mentioned, and may have other classes arranged in orchard management and the means of maintaining sanitary conditions. A

term's work in the literature of horticulture gives added opportunities for acquaintance with standard works and writers upon various subjects.

The increasing interest in the preservation and increase of forest areas has created a demand for more extended information concerning forest work and methods. The plantations of the College, standing as they do in different soils and situations, offer material for comparison with native growths. The nursery offers opportunity for experience and observation in methods of propagation and transplanting and the formation of new plantings. Young men in the junior and senior years of the general science course may elect the following more extended course than is offered in the agriculture course:

10. **Dendrology.** Lectures. The characters of trees; their habits of growth as influenced by local conditions; distribution of the different species; special study of the native species; flower, leaf and seed characters; methods of propagation.

Industrial.—Nursery practice; planting, thinning and pruning of plantations; pruning and care of shade and ornamental trees.

11. **Forest Technology.** Text, Boulger's Wood. Structure and growth of wood; their classification according to structure and economic uses.

Industrial.—Gathering and storing of seeds; fall and winter planting; special treatment to insure germination, etc.

12. **Silviculture.** Lectures and references. Life-history, laws of growth and requirements of forests; forest characteristics; trees important in forestry and to farm plantings; relation of forestry to national economy.

Industrial.—Forest mensuration. Determinations of volume, height, and stand, and the determination of the volume, height and stand increments. Stem analysis; valuation surveys, etc.

13. **Forest Management.** Plans and plantings of forests; their cultivation, care, and protection; plantings for definite purposes—to prevent erosion, protection from wind, to fix shifting sand, to regulate floods, for the utilization of worthless areas; harvesting, utilization, etc.

MEANS OF ILLUSTRATION.

Orchards comprising seventy-five varieties of apples, forty of plums, thirty of peaches, fifteen of cherries; plantations of native fruits; small-fruit plantations containing many varieties; vineyards containing 175 varieties and six forms of trellises; a large collection in the arboretum and on the grounds of shrubs and timber, shade and ornamental trees; about thirty acres of forest plantings; fifteen acres of nursery and garden; a large collection of native and foreign plants in greenhouses; a collection containing 200 models of fruit; a grape herbarium containing leaves, canes, seeds and photographs of the fruit of 175 varieties of grapes; collections and specimens of woods; herbarium of fungous diseases, and numerous charts. The general library and the department library furnish ample opportunity for research work in various lines.

Library.

Library Lectures. Second year, fall and winter terms. In all the educational institutions there is a tendency to require of students an increased amount of personal investigation along the lines of the studies pursued. The adherence to text-books is less rigid, and the consultation of the various authorities is advised by all instructors. This work necessitates the student spending many hours in the library, among the books with which he is unfamiliar. It is the object of his course of lectures to acquaint the student with the arrangements and con-

veniences of the library, that he may do his reference work more easily and quickly.

The lectures will be required in all courses. The student will be taught thoroughly the system of classification in use in the library, the arrangement of the books in the stacks, and the reasons for such arrangement. He will be instructed in the use of general reference works, the College card catalogue, and the cumulative index. Attention will be directed to the Experiment Station index and the index now being issued by the United States Department of Agriculture. One lecture will be given upon the government documents and mode of finding material therein contained, and one lecture upon the purchase and care of books in private libraries.

Each lecture will be followed by work in the stack-room, affording the student an opportunity to apply the knowledge obtained from the lectures.

CORNER OF CAMPUS.

Mathematics.

It is the aim of the department of mathematics to give a thorough training in a small number of subjects, and to develop in the student the ability to attack new problems, rather than to burden his mind with a large number of facts and special methods. The laboratory plan of instruction is largely adopted. It is also characteristic of the methods of the department that an attempt is made to give the mathematical subjects a touch of human interest by directing the attention of the student to the historical development of these subjects. The following statement contains a brief description of the courses to be given next year:

All numbers are required in the engineering courses; Nos. 1, 2, 3, 4, and 6, in agriculture; Nos. 1, 2, 3, and 4, in domestic science; Nos. 1, 2, 3, 4, 5, and 6, in general science.

1. **Algebra III.** First year, fall term. Text-book, Wells's New Higher Algebra. Quadratic equations, ratio and proportion, arithmetical and geometrical progressions.

2. **Geometry I.** First year, winter term. Text-book, Gore. First, second and third books, with exercises for original demonstrations.

3. **Geometry II.** First year, spring term. Continuation of course 2. Fourth, fifth, sixth, seventh and eighth books, treated as before, with special attention to original work.

4. **Trigonometry.** Second year, fall or spring terms. Text-book, Wentworth. Solution of plane triangles, essentials of goniometry, applications to surveying and navigation.

5. **Higher Algebra.** Second year, winter term. Text-book, Wells's New Higher Algebra. Binomial theorem, undetermined coefficients, logarithms, and general theory of equations.

6. **Surveying.** Second year, spring term. Field-work, two and one-half hours per week. Use and adjustment of instruments; chaining, leveling, and land surveying. The data for a definite series of problems laid out during course in trigonometry are obtained in the field; results platted and computed.

7. **Analytical Geometry.** Second year, spring term. Text-book, Wentworth. Rectangular and polar coordinates; the straight line, circle, ellipse, parabola, hyperbola, and the general equation of the second degree.

8. **Differential Calculus.** Third year, fall term. Text-book, Osborne. The various methods of differentiation, with the usual applications.

9. **Integral Calculus.** Third year, winter term. Same text. Integrations, with applications.

10. **Differential Equations.** Lectures on the theory of the subject, with solution of examples of the various types.

In addition to the above, courses in theory of equations, advanced calculus, theory of functions or other branches of higher mathematics may be given to graduate students, or to undergraduates who are able to carry extra work.

Mechanical Engineering.

The subjects in this course are adapted primarily to the needs of the students in mechanical engineering, but a few subjects are introduced to meet the requirements of the other courses. The subjects are so arranged that the student first learns the principles upon which the action of a mechanism depends in the classroom, and afterwards studies the action of the same mechanism in the laboratories and shops.

In the mechanical engineering course, all studies below are required but 10, 23, and 36.

In the agriculture course, studies 1, 2, 3 and 10 are required.

In the general science course, 1, 2 and 3 are required, and additional shop work is optional.

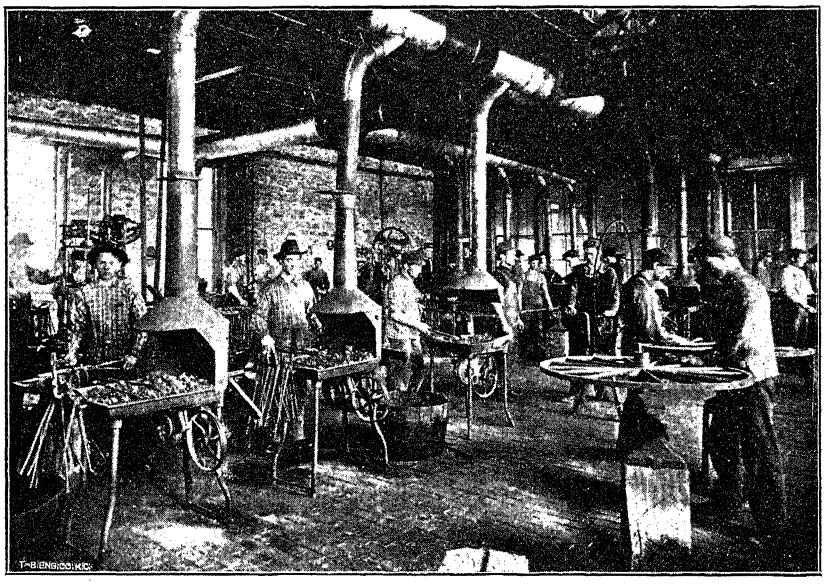
In the electrical engineering course, all subjects for the first two years are required. In the third and fourth years, 12, 13, 15, 16, 19, 20, 21, 23, 25, 26, 27, 31, 32 and 36 are required.

1. **Woodwork.** First year, fall term. A graded set of problems in joining is given, together with practice in working to dimensions, and the proper use and care of bench tools. In connection with this term's work, lectures are given once a week, and students are given an examination upon the subjects taken up in the lectures. Advanced woodwork is given for the students in the general science and other courses who select their industrial in this department.

2. **Foundry.** First year, winter term. Foundry practice is given in both floor and bench molding, including the making of cores, brass and iron castings, and the mixing of special alloys. Cupola practice and the making of machine castings for shop use are included.

3. **Blacksmithing I.** First year, spring term. A graded set of problems designed to teach the operations of drawing, upsetting, welding, and forming, accompanied with instruction in the care of fires and the behavior of iron at different heats.

4. **Blacksmithing II.** Second year, fall term. Advanced work in the forging of iron and the manufacture of steel tools. Instruction is given in tempering, case-hardening, and annealing.



BLACKSMITH SHOP.

5. **Kinematics of Machinery.** Second year, winter term. An elementary course in mechanisms, particularly the principles involved in the construction of gears, cams, and quick return motions. Preparation required: Trigonometry. Text-book, Jones's Machine Design, volume I.

6. **Machine-shop I.** Second year, winter term. Practice in chipping, filing, scraping, and laying out work from drawings.

7. **Shop Lectures.** Second year, spring term. Lectures are given on the construction, use and care of shop tools and on shop methods. Students are marked on notes taken in lectures and on examinations at middle and end of term.

8. **Mechanics.** Second year, spring term. A course in elementary mechanics, including the laws of motion, force, work, and energy, together with the composition and resolution of forces. Preparation required: Trigonometry and kinematics of machinery. Text-book, Dana's Elementary Mechanics.

9. **Pattern-making.** Second year, spring term. This term's work includes wood-turning and pattern-making. Each student is required to turn several specimens and make various patterns.

10. **Agricultural Mechanics.** Third year, fall term. This subject is given to agriculture students. Instruction is given by means of lectures on the design and construction of traction-engines, boilers, and other machines likely to be met with on the farm, The lectures are followed by work in the machine-shop, in bolt-making, grinding, screw-setting, and repairing of machinery. The work in the machine-shop is followed by practice in the operation of traction-engines.

11. **Power Transmission.** Third year, fall term. A course in the transmission of power by means of belts, ropes, gearing, linkages, etc. The time is devoted to the study of the strength of the individual parts and the efficiency of each system. Preparation required: Mechanics and analytical geometry. Text-book, Jones's Machine Design, volume II.

12. **Mechanical Drawing I.** Third year, fall term. Exercises in lettering, shading, and the drawing of simple mechanisms.

13. **Machine-shop II.** Third year, fall term. Instruction in lathe work, gear-cutting, boring, and drilling.

14. **Valve Gears.** Third year, winter term. A study of the design, construction and operation of the valve gears and linkages of steam and other engines. Preparation required: Power transmission and differential calculus. Text-book, Peabody's Valve Gears for Steam-engines.

15. **Mechanical Drawing II.** Third year, winter term. The designs of cams, gears, and quick return motions. Preparation required: Mechanics and mechanical drawing I.

16. **Machine-shop III.** Third year, winter term. Advanced work in lathes, planers, and milling-machines, including tool-making.

17. **Steam-boilers.** Third year, spring term. A study of the construction, erection and operation of steam-boilers and appliances, including the study of tools. Preparation required: Valve gears and integral calculus. Text-book, Peabody & Miller's Steam-boilers.

18. **Graphic Statics.** Third year, spring term. The graphic solution of the problems arising in the construction of roofs, bridges, and other frame structures. This subject is taught by means of lectures and drawing exercises. Preparation required: Mechanics and mechanical drawing II.

19. **Mechanical Drawing III.** Third year, spring term. A continuation of mechanical drawing II, and practice in machine drawing.

20. **Engines and Boilers.** Third year, spring term. The work of this term consists of instruction in the operation and care of boilers and engines, both stationary and traction, and exercises in steam-fitting.

21. **Applied Mechanics I.** Fourth year, fall term: The application of the principles of theoretical mechanics to problems arising in practice. Preparation required: Power transmission and differential equations. Text-book, Goodman's Mechanics Applied to Engineering.

22. **Thermodynamics I.** Fourth year, fall term. A study of the thermodynamic principles of the steam-engine, including both saturated and superheated vapors, and the theory of injectors. Preparation required: Steam-boilers and differential equations. Text-book, Peabody's Thermodynamics of the Steam-engine.

23. **Steam Engineering.** Fourth year, fall term. A course in elementary thermodynamics, valve gears, and steam-boilers, given to electrical engineering students. Preparation required: Calculus. Text-book, Kinealy's Steam-engines and Boilers.

24. **Machine Design I.** Fourth year, fall term. The design of the valve motions and reciprocating parts of the steam-engine, and work in the drawing-room, as designed to accompany the classroom work in thermodynamics I.

25. **Engineering Laboratory I.** Fourth year, fall term. Experiments in valve-setting, efficiency of hoists, gage and planimeter tests, etc. Preparation required: Third-year mechanics and steam-boilers or steam engineering. Text-book, Smart's Laboratory Practice.

26. **Machine-shop IV.** Fourth year, fall term. The time of this term is devoted to the building of a small machine or making the parts of a large one.

27. **Applied Mechanics II.** Fourth year, winter term. A continuation of the work of the previous term, including a study of the strength of materials, and the design of structural members. Preparation required: Applied mechanics I. Text-book, Goodman's Mechanics Applied to Engineering.

28. **Thermodynamics II.** Fourth year, winter term. A continuation of the work of the previous term, including the thermodynamics of gas-engines and air-compressors. Preparation required: Thermodynamics I. Text-book, Peabody's Thermodynamics of the Steam-engine.

29. **Machine Design II.** Fourth year, winter term. The design of a complete machine, engine, or boiler; an application of the principles studied in thermodynamics and applied mechanics. Preparations required: Machine design I, thermodynamics I, and applied mechanics I.

30. **Engineering Laboratory II.** Fourth year, winter term. A continuation of the previous term's work, with practice in running steam-engine and air compressor tests. Preparation required: Thermodynamics I and applied mechanics I.

31. **Machine-shop V.** Fourth year, winter term. A continuation of the previous terms' work.

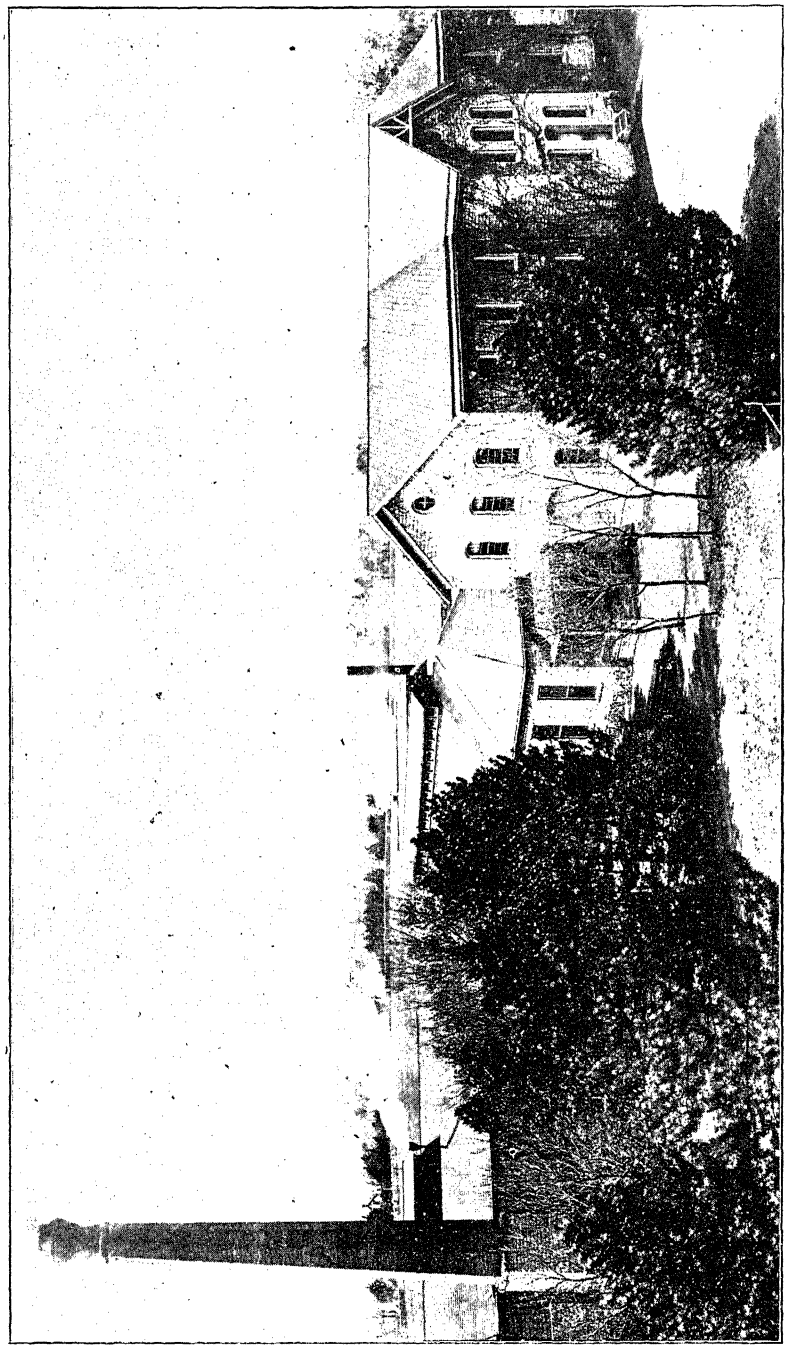
32. **Hydraulics.** Fourth year, spring term. This term's work includes a study of the principles of hydrostatics and the action of water motors. Preparation required: Third-year mechanics and differential equations. Text-book, Merriman's Treatise on Hydraulics.

33. **Thermodynamics III.** Fourth year, spring term. A continuation of the previous terms' work, including a study of refrigerating machines and a study of Hirn's Analysis as Applied to the Steam-engine. Preparation required: Thermodynamics II. Text-book, Peabody's Thermodynamics of the Steam-engine.

34. **Engineering Design.** Fourth year, spring term. The design of a power plant or factory, based upon the work of the previous terms in thermodynamics and applied mechanics. Preparation required: Machine design II, applied mechanics II, and thermodynamics II.

35. **Engineering Laboratory III.** Fourth year, spring term. A continuation of the previous term's work, including tests on the strength of materials and tests on gas-engines. Preparation required: Engineering laboratory II, applied mechanics II, and thermodynamics II.

36. **Engineering Laboratory IV.** Fourth year, spring term. A course in testing the strength of materials and steam-engines, for electrical-engineering students. Preparation required: Steam engineering and applied mechanics II.



MECHANICS' HALL.

37. **Thesis.** Fourth year, winter and spring terms. Engineering students are required to present for graduation a suitable thesis on some subject relating to their work. It is expected that the work done on the thesis will be equivalent to at least five hours per week during the winter term and ten hours per week during the spring term.

EQUIPMENT.

The shops of the Kansas State Agricultural College are furnished with the best modern machinery and tools for working both wood and iron, and are in operation six days per week throughout the year.

Wood Shop.—This wood-working room is 40x103 feet, contains 220 separate kits of tools, and benches for forty-four students in each class, eight wood lathes, with sixteen sets of turning chisels and other tools, wood planer, circular saw, friezer, power mortising machine, grinders, and tool-room containing all kinds of wood-working tools for general use, together with complete outfit of wheelwright's tools.

Machine-shop.—This room is 40x80 feet, contains twelve fourteen-inch engine-lathes, one twenty-eight-inch by twenty-feet engine-lathe equipped with blocks to raise it to sixty-inch swing, one sixteen-inch combination engine- and turret-lathe, speed-lathe, Gray planer, Hendey-Norton shaper, Brown & Sharpe No. 2 universal milling-machine, Walker universal grinder, special drill-grinder, key-seater, bolt-cutter, pipe-machine, vertical drills, fifty-one-inch vertical turning- and boring-mill, benches and tools for fifty students, and a completely stocked tool-room, equipped with the finest modern tools.

Blacksmith Shop. This room is 40x50 feet, equipped with twenty-four forges fitted with power exhaust. Each forge has anvil and complete set of smithing tools. In addition to the general tools for a fully equipped blacksmith shop, there are also installed here a drill-press, emery-grinders, cold saws, and a number of pieces of special apparatus built by the department.

Iron Foundry.—This room is 40x50, equipped with a two-ton cupola, a one-and-one-half-ton steel crane, core oven, an exceptionally large number of flasks, both wood and iron, ladles, etc. The foundry makes all castings for machine building, together with boiler fronts, grate-bars, and special repair work.

Brass Foundry.—This room is 16x30 feet, with furnace, crucibles, flasks, and a complete equipment for bench and floor molding. The product consists of bearings, friction metal, valves, fittings, etc.

Pipe-fitting Room.—This room is 18x50 feet, containing a motor-driven Jarecki pipe-machine, and is completely equipped with tools used by steam-fitters. Practice in pipe-fitting and steam-fitting is given. This room is also used for storing patterns, of which the College has a large and valuable collection.

Engineering Laboratory.—This room is 35x40 feet, and contains a great variety of apparatus, among which may be specified a 100,000-pound testing-machine, both automatic and autographic; Flather transmission dynamometer, for determining the power required by various machines; an eight-horse-power vertical steam-engine; an eight-by-eight Ingersoll-Sargeant air-compressor; a six-horse-power Sturtevant engine, used as an air motor; a ten-horse power Witte gasoline-engine; complete cement-testing outfit; absorption dynamometers; steam- and gas-engine indicators, gage-testing apparatus, and a variety of special machines for the testing of material; also, thermometers, calorimeters, speed indicators, etc. The very complete boiler- and engine-rooms adjoining the laboratory afford special opportunities for the work relating to steam engineering.

Power Plant.—The boiler-room contains five sixty-horse-power horizontal return-flue boilers, three 100 horse-power boilers, pumps, steam-traps, etc. These boilers are use for the generation of steam, both for power and heating purposes, and are independently connected, that they may be tested individually or in groups. The engine-room is equipped with one 100 horse-power, medium speed engine, directly connected to a 60-K. W. multipolar generator, with marble switchboard and complete apparatus; one fifty-horse-power Ball & Wood engine, belted to bipolar generator, with switchboard; one ten-horse-power Atlas engine; one five-horse-power generator, built in the shops, for testing purposes; one Shipman coal-oil engine, and several small dynamos for testing purposes. In connection with the power plant is a very complete rope-driven installation, especially designed for the department.

Drawing-rooms.—On the second floor of the wood-working department are found the drawing-rooms, photographic rooms, and paint and varnish rooms.

Military Training.

This institution being one of the beneficiaries of the act of Congress of 1862, instruction in military tactics is made compulsory. The course of instruction is made to conform strictly to the provisions of General Orders, No. 94, War Department, Washington, D. C., August 9, 1902.

In compliance with the minimum requirements of that order, the course will be both practical and theoretical and applied as follows:

a.—Practical.

1.—Infantry drill regulations, through the school of the battalion in close and extended order.
2.—Advance and rear guards, and outposts.
3.—Marches.
4.—The ceremonies of battalion review, inspection, parades, guard-mounting, and escort of the colors.
5.—Infantry target practice.
6.—Instruction on first aid to the injured.
7.—A guard mounted five times (weather permitting) in each week of the school year, and the guard shall be practically instructed for one hour in the posting and relief of sentinels and their duties.

b.—Theoretical.

1.—The infantry drill regulations, covered by the practical instruction.
2.—The manual of guard duty.
3.—Small-arms firing regulations, parts I, II, and III.
4.—The Articles of War, with specific reference to articles 4, 8, 15, 20, 21, 22, 23, 24, 32, 38, 39, 40, 42, 44, 46, 47, 50, 55, 57, 61, and 65.
5.—And the following records:

Enlistment and discharge papers, including descriptive lists.
Morning reports.
Field and monthly returns.
Muster-rolls.
Rosters.
Ration returns.
Requisitions.
Property returns.

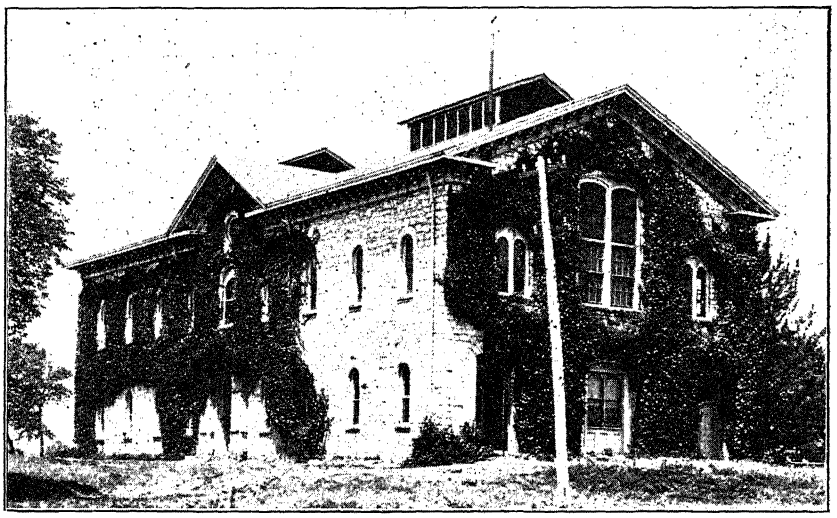
And a lecture course, as follows:

One lecture on the organization of the United States army.
One lecture on the organization of the volunteers and militia.
One lecture on patrols and outposts.
One lecture on marches.
One lecture on camps and camp hygiene.
Three lectures on lines and bases of operations.
Two lectures on the attack and defense of advance and rear guards and outposts and convoys.

All of the foregoing to be illustrated by historical examples. These lectures are to be made the basis of subsequent recitations and of written examinations.

The national government has supplied the College with 245 cadet rifles and an equal number of sets of infantry accouterments; also two three-inch field guns and carriages. Swords, target supplies and annual issues of ball and blank cartridges are also received from the general government. Each student buys his own suit, to be worn whenever he pleases. The following is a description of the suit: "This suit to consist of regulation blue cap, with College emblem; blue blouse, cut and trimmed in officers' style; gray trousers, trimmed with black mohair braid."

War Department Record. At the close of the year the names of the three cadets most distinguished in military science and tactics are reported to the War Department for insertion in the United States army register, and also to the adjutant general of the state.



ARMORY.

Organization. The cadets are organized into a battalion of four companies and a band. The commissioned officers are chosen from the senior and junior classes, and the non-commissioned from the sophomores. All students in the regular courses below the third year are required to take drill, unless excused for physical disability.

Uniform. The uniform is simple and inexpensive, and all students will be required to present themselves in uniform within ten days after assignment.

Text-books. Each military student will be required to provide himself with the following text-books immediately after assignment: United States Drill Regulations (latest edition), The Manual of Guard Duty (latest edition), Small-arms Firing Regulations (latest edition), Military Science (to be prescribed).

The instruction in keeping records will be from blank books, expected to be provided by the War Department after July 1, 1903. The Articles of War specifically mentioned are among the most important for the young officer to know on first entering the service. The records prescribed for study should be thoroughly understood by all graduating cadets, because they show how the soldier enters and leaves the service, how he is accounted for, paid, fed, clothed, armed, and how his military duties are regulated.

Music.

Recognizing music as a factor in education which is practical and elevating, and believing that the germ of artistic faculty exists in every normal person, the following unique and generous provisions have been made for its introduction into the several courses:

Pupils may take music for a single term or more. A full course, extending over four years, includes theory, notation, singing, voice culture, harmony, composition, instrumentation, and technical drill on one or more instruments. The College pianos and organs (limited in number) are used for daily practice by pupils who take music as an industrial.

Instruction in music is furnished free, under the direction of the professor in charge, to all pupils in the College, as follows:

1. **Singing, Notation, and Theory.** Classes will be organized at such periods as will best accommodate the pupils interested.

2. **Instrumental Music, Musical Theory, and Harmony.** Classes will be organized, for pupils in the regular courses, at such periods as will best accommodate them, under the following conditions:

a. **Industrials.** It may be taken as an industrial by ladies only, in connection with their notation and vocal music, after the required industrials of the first year, and after passing an examination equivalent to two terms in vocal music, in which case one period's daily practice at the College or at home is required.

b. **Extras.** It may be assigned as an extra to students, men or women, who do well in their general course of study, on the same conditions as above, excepting as to practice, when students may furnish their own instruments.

c. **Optional.** All music is optional—is taken at the choice of the student—but after assignment regular attendance is required, as at other classes. Class organization shall be wholly under the control of the professor of music.

d. **Musical Organizations.** Each instrument has a distinct function in the science of tonal expression, and only in their combination are the finest effects in the coloring of the melody, harmony and rhythm procured. This combination is made possible in the musical department by the number of pupils and the variety of instruments studied. All students who are sufficiently advanced to join the College glee club, College orchestra, mandolin, guitar and banjo club, elementary band, or the College band, may become members by assignment.

e. **Public Exercises.** Music for commencement week and other public College exercises is furnished by the musical department, under the direction of the professor in charge, and all students in the department shall be subject to his call to assist in furnishing the same.

COURSES OFFERED.

The Voice. In the study of this instrument, the most natural and universal means of musical expression, notation is taught in connection with the establishment of a pure tone, in which there shall be resonance, volume, flexibility, and expression. The instruction will include the rudiments of music, notation, sight-reading, ear-training, theory, harmony, voice culture, methods of teaching, practice in teaching, and drill in solo, quartet and chorus singing. Texts: Brown's Elementary Charts, Emery's Elements of Harmony, Weitzman's Theory, Randegger's Singing; select studies from Concone, Vaccai, Bordogni, Marchesi, and other standard works.

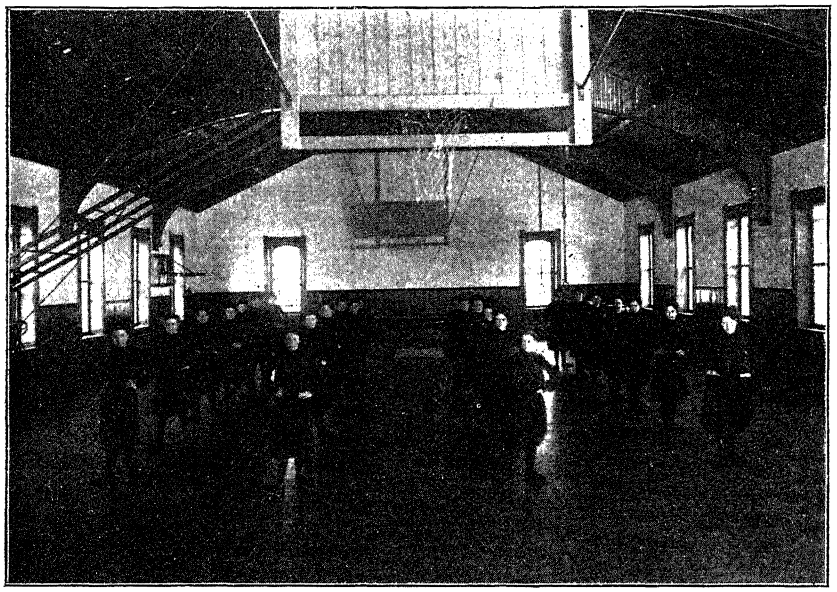
The Piano. In the study of this instrument, which occupies a place of so much dignity and importance in every musical education, great attention is given to every detail of technique and to the development of a correct touch, which is so necessary in giving intelligent expression to musical thought and feeling. It includes formation and position of fingers, hands, wrists, and arms, properties of touch, thorough drill in scale and arpeggio playing, and exercises in accent, rhythm, and expression. The curriculum is chosen from the works of the standard composers, not omitting modern European and American writers, who best represent the modern spirit and progress. The following outline of a course of study, made with reference to the musical value of the selections, as well as to the special necessities of the pupil, may be followed or varied by the professor in charge. Text, selections from the following works or their equivalents: Studies in position and touch—Plaidy, Czerny, Koehler, Mathew's Standard Studies; Mason's Touch and Technic; sonatinas by Clementi; modern pieces. Studies in the development of technique from Heller, Loeschhorn, Lemoine; sonatinas by Kuhlau; Mason's Touch and Technic; Cramer's Studies; inventions by Bach; Kullak's Preparatory Octave School; etudes by Moscheles; sonatas by Mozart; Beethoven; modern pieces; Kullak's Octave School; Tausig's Daily Studies; Bach's Preludes and Fugues; concert pieces by Liszt; Schumann. Memorizing.

The Cabinet and Pedal Organ. The cabinet organ has a field of its own, and should have appropriate treatment, in many respects different from the piano. When properly played it is of much value in church and social circles. It is here taught so as to be preparatory to the piano, the pedal- and pipe-organ. Text, standard schools. Selected studies and pedal studies, chorals, hymns, and recreations suitable to the instrument.

The Violin. Particular attention is given to correct position, intonation, and bowing; also to solo and orchestral playing. Text, selections from the following works or their equivalents: Methods by Wichtl, Henning, and De Beriot; exercises by Danca, Pleyel, Schradick, Kayser, David, and easy solos; etudes of Kreutzer; solos by De Beriot, Leonard, Dancla, Singelee; modern pieces. Memorizing.

Orchestral and Band Instruments. Similar courses of instruction are given on all the more important orchestral and band instruments—string, wood, wind, and brass; also mandolin and guitar. Opportunities are also furnished advanced pupils for orchestral, band, quartet and accompaniment playing. Text, selections from the standard methods; studies and recreations suitable to the instrument.

Musical Theory, Composition, Instrumentation, and History of Music. The aim of these courses is to give the pupil an intelligent conception of music as a science and an art, and to lay a foundation for later studies which he may undertake in the field of artistic performance and of original work in musical composition. The instruction given includes theory, notation, harmony, counterpoint, composition, instrumentation, analysis of form and style, and musical history. Texts: Elson's Theory of Music, Brown's Prismatic Charts, Berlioz's Orchestration, Marx's Composition, Prout's Instrumentation, Mathews's History of Music.



DRILL-ROOM—WOMEN'S GYMNASIUM.

Oratory.

The work of this department is arranged with the special purpose in view of developing all the expressive powers of the student. This is accomplished by training him to think, by emphazing the need of gaining knowledge, and by training him to make that knowledge of benefit both to himself and to others. The greatest educational need of men and women is the ability to use the knowledge that is theirs in an intelligent and effective manner. Every one should be able to converse intelligently, to address a body of fellow citizens extemporaneously, and to fill positions in church and state. We should train for active citizenship. The entire work of this department is based upon the principle that *all expression is the result of thought.* "We must have before we can give. Impression must precede and determine expression." Thinking must precede action. The *aim* of all work in oratory is *naturalness*, and, in order to secure this, nature is studied and her methods adopted.

The course here outlined is arranged in the logical order of the student's needs, and is as thorough and comprehensive as the time will permit. Studies Nos. 1 and 2 are given during two terms, in the second year, in all courses. No. 3 is given throughout the third year in all courses, and No. 4 is given throughout the fourth year in all courses. No. 5 is required of all students having fourth-year assignments. In addition to this regular course, individual assistance will be rendered upon any phase of the work, especially in studies Nos. 3, 4, and 5. For the amount of time required in each course, see "Schedule of Courses of Study," on another page of this catalogue.

1. **Oratory I.** Vocal Expression. In the arrangement of studies vocal expression is regarded as of primary importance, and is placed first because it brings the student to a study of himself and of nature and her processes. Vocal

expression is the manifestation of the action of the mind through the voice. Observations are made of the action of the mind in thinking, the effect of thought upon the voice, and an effort is made to strengthen the thinking powers and to cause the voice to respond more freely to thought, feeling, and emotion. The aim is to stimulate the student, so that expression will be from within outward. Simple, direct and forceful expression, through natural and easy modulations of the voice, is the standard. Definite problems are assigned to each student upon specific points of development. Class book, Praxis of Vocal Expression.

2. **Oratory II.** Extemporaneous Speaking and Debate. It is of the utmost importance that students should be trained as early as possible to think and speak upon their feet. Many there are who show great ability in the delivery of the productions of others, or even their own, after having committed them, but who cannot give even so much as an introductory sentence extemporaneously. Few are the opportunities for delivering a committed speech, but numberless are the occasions that demand the expression of thought extemporaneously. Extemporization requires the most thorough preparation, which, added to the spirit of the occasion, will result in a spontaneous outburst of eloquence that is not possible in the delivery of committed matter. It is placed second in the course only because a student must first learn to think and to reveal thought, before attempting to enlighten or persuade others.

3. **Oratory III.** Principles of Public Delivery. The vocabulary of oratoric delivery and its development. Exercises in vocal and pantomimic training. Problems and special exercises with illustrative discussions. Vocal interpretation of literature. Principles of criticism. Practice in criticism. Platform etiquette. A theoretical and practical study and development of the imagination as the creative instinct. Text-book, Imagination and Dramatic Instinct, part I.

4. **Oratory IV.** Advanced Expression. Principles of education applied to expression. Discussions of the higher forms of literature and expression, and application of principles to special needs of students. Methods of leading orators. Preparation and delivery of orations. Development of the powers of conception, and the ability to express every phase of human experience, as a means of securing ease, simplicity and spontaneity in all forms of speaking. Different forms of dramatic interpretation. The application of the various phases, laws and principles of personal appreciation and interpretation. Assimilation, or the dramatic instinct, is studied for the purpose of developing unity. Text-book, Imagination and Dramatic Instinct, part II.

5. **Oratory V.** Orations. Each senior is required to prepare and deliver an oration upon a subject of his own choosing. All preparation is done under the direction of the professor of oratory. A system of grading upon thought, composition and delivery has been adopted and the work must reach a required standard of perfection. This work is required of *all* students before graduation, regardless of which course they are taking.

Philosophy.

To be able to grapple most advantageously with the serious problems of life, one must have an intimate acquaintance with himself. To be able to become a valuable member of society, he must know how to develop and use his mental powers judiciously. Too many people are inclined to regard their mental activities as a sort of fixed inheritance, with little or no possibility of readjustment. It is the aim of this department to interest the student in a more careful study of the

mental phases of human life, and to aid him in a more definite and systematic knowledge of the meaning of his own concrete experiences.

Course No. 1 below is required of all first-year students, No. 2 is included in the general science course only, and No. 3 in the general science and domestic science courses.

1. **Elementary Psychology.** First year, winter term. This course is intended to give the student (*a*) a general idea of the meaning of psychology, and (*b*) a better method of expending his time and energies in the pursuit of college work. Not less than ten lectures will be given, as follows: (1) Neural basis of mind, (2) perception, (3) imagination, (4) memory, (5) habit, (6) thinking, (7) the emotions, (8) the will, (9) self-confidence, (10) methods of study and work. No text-book used.

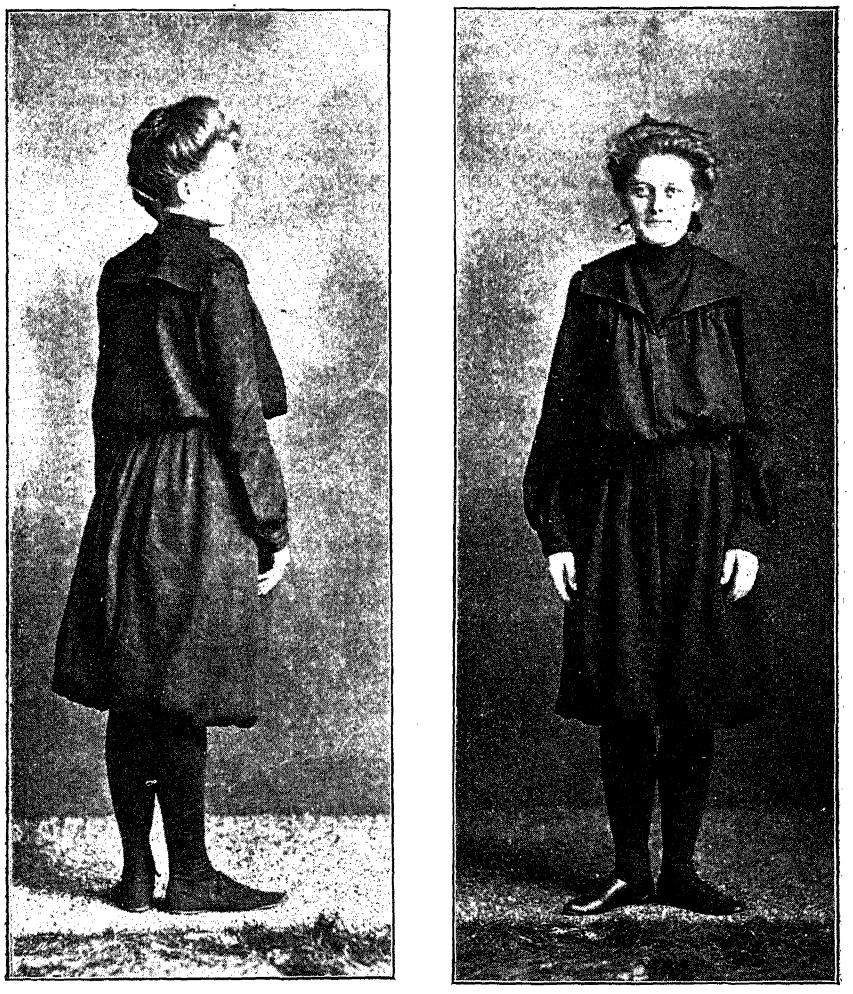
2. **Logic.** Third year, winter term. While formal or deductive logic is studied briefly, the greatest emphasis is placed upon the inductive phase of the subject. Special prominence is given to methods of exact observation and experiment and correct principles of classification. The previous researches and experiences of the students are made to illustrate these principles. Some of the ends sought are: (1) To enable the student to think more clearly and to express his thoughts more lucidly; (2) to enable him more readily to detect the erroneous statements of others, whether made by design or through ignorance; (3) to imbue himself more fully with the scientific spirit, which is the guiding principle of human progress to-day; (4) to lead him into habits of systematic, scientific methods of work in whatever vocation he may follow during later life. Text-book, Creighton.

3. **Psychology.** Fourth year, spring term. An effort is made to master the general principles of the subject, the various mental processes being analyzed and explained. Some attention is also given to theories of right and wrong and correct principles of action. Considerable time is given to the discussion of mental poise, self-control, emotional expression, the influence of the mind on the body, and the like. Special effort is made to enable the student to get the psychologic point of view, to the end that he may obtain a better understanding of himself and of human nature in general. He will then think of others in terms of mental conduct rather than in terms of physical conduct; and, having been made more fully aware of the obstacles that confront every earnest soul, he will become more sympathetic. Finally, as a result of systematic mental discipline, the student may expect to meet with greater success in his chosen vocation. Some simple experiments are performed, and each member of the class is given a topic for special research. Text-book, James.

Physical Training for Women.

The maintenance of a vigorous constitution throughout a young woman's college life is of vital importance. Strength and vigor of brain activity depend upon bodily health and strength. Development, both mental and physical, each to attain its purpose, should go hand in hand. That this perfect development may be realized, a gymnasium for women, well equipped with apparatus, baths, lockers, etc., has been provided, and a well-regulated system of physical training is successfully operated.

The Swedish system of educational gymnastics has been adopted as the basis of the class work, and medical and corrective exercises are given to such as need them. The object of the work is to promote health, strength and symmetry of body, and also to correct physical defects.



CALISTHENIC SUIT.

Daily classes are held in light gymnastics—free standing work, marching, fancy steps, drills with bells, clubs, and wands, with musical accompaniment; heavy gymnastics, including chest weights, horse, parallel bars, flying rings, ladder, stall bars, etc.; gymnastic games.

All young women of the College have access to the privileges of the gymnasium, and all below the third year are required to take the work, except such as are found physically unable to engage in it.

Before entering upon the work a physical examination is made by the director of the gymnasium. The examination includes measurements of physical proportions, and takes note of the conditions of the heart and lungs. From this examination an anthropometric chart is platted, showing size, strength, and development, and defects in comparison with the normal standard. At the close of

the College year a second examination is made and measurements taken, and comparison is made, to show improvement.

A uniform suit has been adopted, and all the girls taking gymnasium work are required to provide themseives with a suit. This should be done before entering school. The suit consists of a blouse waist and bloomers (see cut), and *must* be made in uniform style and color, and of the same kind of cloth. The pattern for the suit may be obtained by sending twenty-five cents and bust measure to the director of physical training. Samples of cloth will be sent on application. Gymnasium shoes may be purchased at any one of the three stores in Manhattan at prices ranging from 50 cents to $1.35. The entire suit, including shoes, need not cost more than three dollars. Those who are unable to provide themselves with suits before entering school may hire them made in Manhattan at a cost of $1.50.

Physics and Electrical Engineering.

In the courses following instruction is given by text-books, lectures, and laboratory work. Attention will be called to the general applications of the principles learned. In all courses special lines of reading will be encouraged, and investigation and experimentation, so far as the equipment of the department will permit.

In all the general courses it is the purpose of the department to thoroughly ground the students in the fundamental principles of the science. In the technical courses it is the aim to give the student instruction and training along more specialized lines, thus fitting him for his chosen field of work.

Of the studies described, Nos. 1, 4 and 5 are required in the agriculture, domestic science and general science courses; Nos. 1, 2, 3, 8, and 9, in the mechanical engineering course; and all except Nos. 4, 5, 8 and 9 in the electrical engineering course.

1. **Elementary Physics.** First year, spring term. The work is intended to give the student a general view of the subject, with such laws and principles as will be useful in scientific study, and includes the most important principles of mechanics, heat, sound, light, and electricity. Text-book, Henderson and Woodhull.

Laboratory.—In this work the importance of accurate observation and conclusions is emphasized. In the laboratory the exercises will consist of measurements with calipers, balances, spherometers, micrometer-microscope, pendulum, and other instruments of like nature. Careful records of experimental work are required.

2. **Physics.** Third year, fall term. Open to electrical and mechanical students. During this term's work the general principles of energy, heat, sound and light will be treated, and the most-approved methods for the measurement of each will be discussed and illustrated. The derivation of laws and formulæ, including the solution of problems involving these laws, will be required. Text-book, Watson.

Laboratory.—Experimental work with all the principal instruments used in exact physical measurements will be given.

3. **Physics.** Third year, winter term. Development of the fundamental laws for the measurement of current and resistance. Discussion of the principal methods of generating and transferring electrical energy. How to make, use and care for cells. The relation of electricity and magnetism. Solution of problems in which both practical and absolute systems of measurement are used. Text-book, Watson.

Laboratory.—This work will give the opportunity to use and become familiar with the various types of batteries and the instruments used in measuring current and resistance.

4. **Physics I.** Fourth year, fall term. A thorough study of the laws of forces and motion. Composition of forces and velocities by graphic and trigonometric solutions. Nature of sound; its wave motion and velocity; the factors that will change the velocity, and the phenomena produced by its reflection. Thermometry, calorimetry, the laws of radiation and the absorption of heat. Text-book, Hastings and Beach.

Laboratory.—This work will be of such nature as to give students an opportunity to make experimental tests of the laws involved in the subjects discussed in the classroom.

5. **Physics II.** Fourth year, winter term. Electricity, magnetism, and light. This course is intended to give the student a historical review of the development of electricity and magnetism. The methods of measuring current and resistance will be discussed and illustrated. The solution of problems involving the laws derived in the classroom is required. Nature of light; laws of reflection and refraction. Construction of images in plane, concave and convex mirrors. Defraction and interference. Text-book, Hastings and Beach.

Laboratory.—This work will include measurement of resistance, current, and potential; electrolysis, magnifying power of lenses, focal lengths, photometry, etc.

6. **Theory of Electricity.** Third year, winter and spring terms. The special work in electrical engineering begins with the third year. A thorough course in physics is begun in the fall term of the third year, a portion of it being devoted to electricity. The theory of electricity is then taken up during the following two terms, and includes a study of the principles underlying the special work of electrical engineering. The following subjects are treated: Current electricity, potential, resistance, quantity, theory of electrical measurements, induction, hysteresis, use of condensers, electro-chemistry, elementary principles of the dynamo and motor, the ballistic galvonometer, Carey-Foster bridge, the various methods for the measurements of high resistances, calibration of commercial voltmeters and ammeters, the storage battery, etc. This course is, in many respects, the most important for the engineer, as it prepares the way for the more advanced work of the fourth year and affords every opportunity for exact measurement and mathematical treatment. Text-book, S. P. Thompson's Elementary Lessons in Electricity and Magnetism.

Laboratory.—It is the purpose of the laboratory course to continue the work of the classroom in the practical application of the principles and methods developed, the experiments being arranged to follow closely the theoretical development of the subject. The experiments include the measurement of current, potential, resistance, quantity, hysteresis, cable-testing, calibration of instruments, photometric tests of arc and incandescent lamps, use of Carey-Foster bridge, battery tests, etc. Especial emphasis is laid on curve drawing and the interpretation of laboratory results. A number of reference books are used in this course.

7. **Direct-current Machinery.** Fourth year, fall and winter terms. A continuation of the course in theory of electricity, including a detailed study of the principles of direct-current machinery, laws of magnetic circuits, the various types of machines and their characteristics, a study of efficiency and regulation, elements of design, the various methods of connecting for output and regulation,

management, care and installation of machines. Text-book, Jackson's Electromagnetism and Construction of Dynamos.

Laboratory.—This course is designed to give familiarity with modern station practice. The laboratory is well equipped with one or more standard types of motors, dynamos, rotary converters, transformers, alternators, constant current transformers, arc and incandescent lamps, and the necessary alternating and direct-current measuring instruments. An extended study is made of direct-current machines and auxiliaries, curve plotting, tracing of EMF and current curves of the various types of machines, photometric measurements of arc and incandescent lamps, various methods of determining efficiencies of motors and dynamos, machine characteristics, regulation, etc. The College and local plants offer addition opportunities for practical work. Courses of reading along the different lines of study are required.

8. **Dynamos and Motors.** Fourth year, fall term. The subjects treated include fundamental principles of dynamos and motors, types of machines, rheostats, speed-controllers, starting-boxes, installation of machines and their management. The use and calibration of measuring instruments are also given as part of this course. Text-book, Sheldon's Dynamo-electric Machines.

Laboratory.—This course consists of practice in exact measurement of current, quantity, resistance, etc.; the practical study of dynamos and motors, lamps, watt-meters, various machine tests, etc. This work is intended to give the student a familiarity with connecting and operating dynamos and motors for lighting and power, and is designed to meet the needs of the practical engineer.

9. **Electric Laboratory.** Fourth year, winter term. This course consists of practical work in the dynamo laboratory to students taking the mechanical engineering course. It is a continuation of the laboratory work offered in the fall term of the fourth year, and is devoted mainly to experiments with alternators, transformers, rotary converters, etc. The outlines for the various tests are taken from various sources. Reference for outside reading relating to the different experiments are given.

10. **Alternating-current Machinery.** Fourth year, spring term. The theory of alternating currents, the production of alternating electromotive forces, impedence, capacity and inductance in alternating-current circuits, measurement of power, the calculation of currents in reactive circuits, polyphase generators, induction motors, starting devices, transformers, etc. Text-book, Sheldon and Mason's Alternating-current Machines.

Laboratory.—Attention is given in this course to the work of testing transformers, alternators, rotary converters, induction motors, enclosed alternating arcs, and the various subjects taken up in classroom discussion.

11. **Dynamo Design.** Fourth year, winter term. In this course each student is required to make the necessary calculations and working-drawings of such parts or mechanisms of electric machinery as may be assigned to him; the work to be based upon classroom discussions.

12. **Power Stations.** Fourth year, spring term. The work in this course is based on Bell's Power Transmission, supplemented by lectures and inspection visits. The treatment includes discussion of station design, methods of power transmission, electric traction, systems of distribution, station management, etc. Text-book, Bell's Power Transmission.

13. **Experimental Physics.** The following courses will be offered in experi-

mental physics to any who have had sufficient work to enable them to take up the more advanced problems in experimental work:

Sound.—Velocity of sound in gases and solids. Effects of resonance and interference. Laws of vibrations of strings.

Light.—Photometry, focal lengths, spectrometry, measurements of wave lengths by Rowland grating, calibration of prism, optical bench, interferometer. Study of bright-line and absorption spectra; polarimetry.

Heat.—Thermometry. Comparison and variation of delicate thermometers. Measurement of high temperatures by use of electrical resistance. Calorimetry. Radiation and conduction of heat. Coefficient of expansion.

Electricity.—This work is offered to students who have had courses 2, 3, and 6, or the equivalent, and consists of advanced work in electrical measurements, special tests of electrical machines, etc.

Preparatory Department.

Inasmuch as many students seek admission to the College with inadequate preparation in one or more of the subjects required for entrance, it has been found necessary to establish a preparatory department, in which such deficiencies can be remedied. The work in this department is under the direction of a principal, with whom are associated two assistants and a number of student assistants. Some of the preparatory classes are also conducted by the heads of the College departments. Instruction is given in all studies required for admission to the College. See "Terms of Admission."

1. **Arithmetic.** Instruction is given in the principles that underlie the various classes of problems, thus teaching the student to rely upon himself, not upon rules. Text, state book.

2. **Algebra I.** This includes the fundamental operations, factoring, highest common divisor, lowest common multiple, and fractions, equivalent to 119 pages of the text, Wells's New Higher Algebra.

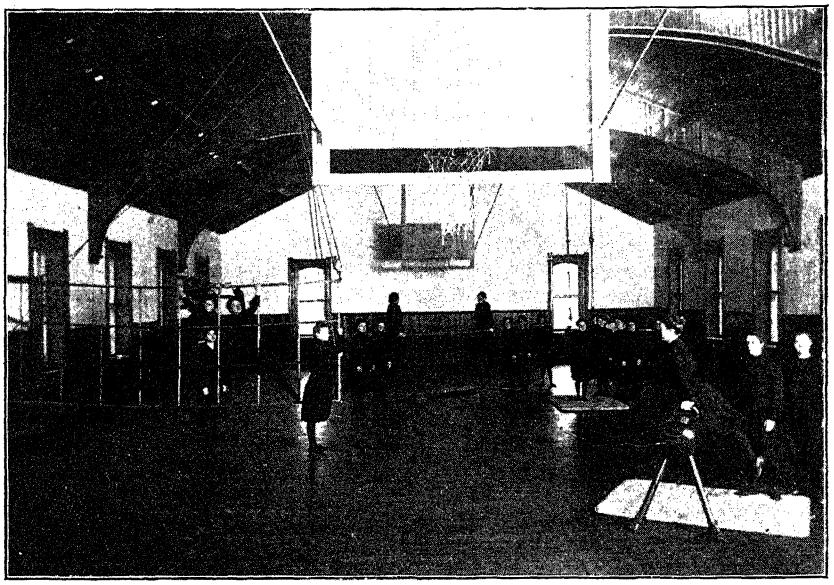
3. **Algebra II.** Simple equations, involution, evolution, theory of exponents, and radicals as far as the subject of quadratic equations.

4. **Bookkeeping.** This is not an extended course, but sufficient instruction is given to enable the individual to open and close accounts in ordinary business transactions. Text, Stevenson.

5. **Free-hand Drawing.** Exercises with forms involving the right line and the arc, illustrating the effects of geometrical arrangement, repetition, alternation, symmetry, proportion, harmony, and contrast. After a few lessons in geometrical lines, the conventional surface ornament is taken up, and more subtle curvatures and complex forms are introduced.

6. **English Grammar.** The aim is to lay a good foundation for the further study of English. Recognizing the fact that grammatical drill develops in students logical habits of thought, besides giving them greater command of language, special attention is given to the analysis and construction of sentences and to the principles of elementary composition. Two classes are formed each term, the B class completing the work in two terms; the A class in one term. Text, Longmans.

7. **English Composition.** One term. The work is based on Smith and Thomas's Composition and Rhetoric. The text is completed to chapter XIII, with the addition of chapter XIX and the appendix, special attention being given to the study of usage and diction. The object of the work of this term is to give



DRILL-ROOM—WOMEN'S GYMNASIUM.

the student a knowledge of the elementary principles of composition, to improve his vocabulary, and to help him overcome the fear of expressing himself in writing. To this end he is encouraged to choose subjects that spring from his own experience or observation, and is required to present one theme each week, which, after being read before the class, receives corrections from the instructor in charge.

8. **English Readings.** As a prerequisite to admission to the College classes in English, a careful study of a number of standard productions of first-class interest and easy style is required. Sketches of authors, both oral and written, character sketches, abstracts and analyses of every production are required. As these productions are read and discussed in class, opportunity is afforded for considerable valuable training in pronunciation and effective reading.

Class Readings—Benjamin Franklin's Autobiography, Irving's Sketch Book, Shakspere's Julius Cæsar, Goldsmith's Deserted Village, Arnold's Sohrob and Rustum, Burns's Representative Poems, Scott's Lady of the Lake, Longfellow's Evangeline.

9. **United States History.** The leading facts, causes and sequences showing the growth of our country and national history are studied, with a view to develop true patriotism. Text, McLaughlin.

10. **Physiology.** This is elementary work, intended to prepare students for the more advanced work given in second year of the agriculture, domestic science and general science courses. As far as possible, models, skeletons and dissecting material is made use of in the classroom. Martin's Elementary Physiology is used as a text.

11. **Geography.** Because of recent history, special attention is paid to the geography of the United States, its possessions, products, resources, methods of transportation, etc. Text, state book.

12. *Other Branches of Study.*—Instruction is also given in spelling, reading, and writing.

Printing Department.

The printing department, in the main building, occupies seven large rooms, viz.: Superintendent's office, composing-room, pressroom, folding room or bindery, stock-room, mailing-room, and storeroom, all well lighted, amply ventilated, and heated by steam.

1. **Instruction.** The lessons embraced may be briefly summarized under these suggestive topics: The elements of news, book and job composition and imposition; proof-reading and correcting; plain and color presswork; adaptation of various grades of inks and papers; newspaper and magazine folding; mailing; tableting of stationery, and pamphlet stitching and stapling. The instruction is of that character in which individual advancement is always taken into account, and opportunity is extended for individual growth in the knowledge of those principles which are of practical utility in the every-day work of a printing-office. Occasion for the gaining of experience and acquirement of skill is supplied by the weekly publication of the *Industrialist*, the *Student's Herald*, and the semiquarterly *Jayhawker*—all in magazine form; the execution of the wide range of job printing needed to furnish the various college departments with blanks, lesson outlines, and stationery, and the college societies with programs, notices, etc.—thus furnishing a greater range of work for instruction than is ordinarily found in the average printing-office.

2. **Equipment.** Thirty pairs of cases; large fonts of six-point, eight-point and ten-point Roman type and italics; a good assortment of wood and metal job type and brass rule; a Babcock two-revolution, four roller "Optimus," quarto-medium and eighth-medium Gordon job presses, and a Monitor wire stitcher, all run by electricity; mitering, rule-curving and stapling machines; paper-cutter, cabinets, stands, imposing-stones, etc.

Veterinary Science, Physiology, and Bacteriology.

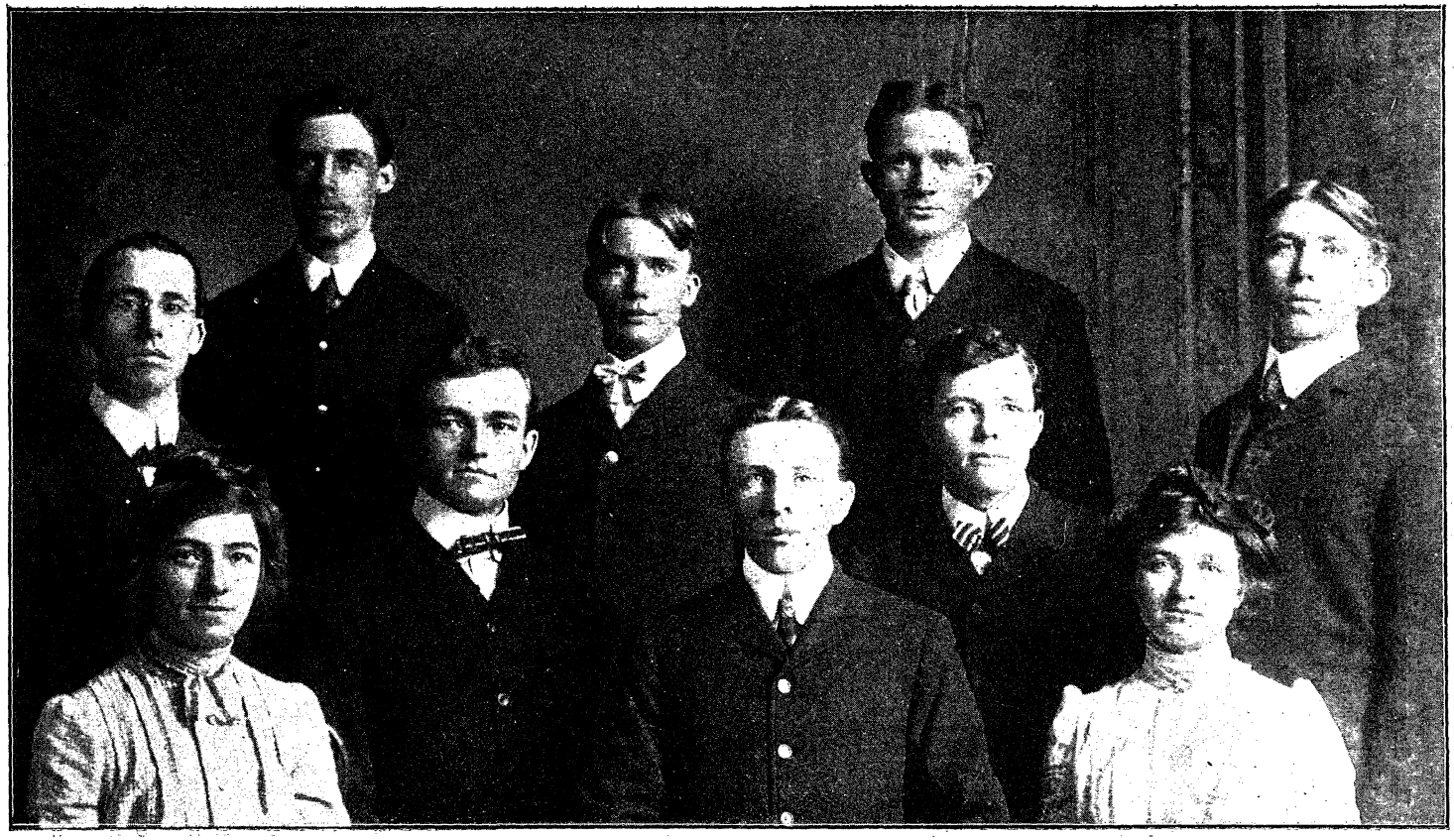
The course in veterinary science is not intended for the training of veterinarians, but to meet the needs of farmers and stockmen in the line of practical nursing, minor surgery, the use of domestic remedies and a general knowledge of diseases of animals and how they can be prevented.

In physiology, it is the aim to give a thorough knowledge of the structure and functions of the human body and a clear understanding of the laws which are essential to its healthy development and preservation. So far as practical, this course is preparatory to work in veterinary science and zoology.

In bacteriology, the student is given a thorough and practical knowledge of bacteria, those that are beneficial as well as those that are injurious, and the various methods by which they can be controlled.

No. 1 is required of all young men; Nos. 2 and 3 are required in the agriculture, domestic science and general science courses; Nos. 4, 5 and 6 are required in the agriculture course.

1. **Hygiene.** First year, fall term. One lecture a week on personal, public and military hygiene and first aid to the injured.



"STUDENTS' HERALD" STAFF.

2. **Physiology.** Second year, winter or spring term. Advanced course in human anatomy and physiology; the gross and microscopic structure of the various tissues and organs of the body and their functions; the various changes, physical and chemical, associated with nutrition, and the conditions that favor the healthy development of the body. Martin's Human Body is used as a text-book. This is supplemented by lectures and laboratory work. This must be preceded by elementary physiology, chemistry I, and elementary physics.

3. **Bacteriology.** Third year, spring term; or fourth year, fall term. These courses consist of the morphology, classification and physiology of bacteria; relation of external condititions to bacterial development; disinfectants and disinfecting; bacteriological technique, preparation of culture media, staining, isolating and identifying bacteria; general fermentation, putrefaction, and decay; bacterial action on foods, nitrification, ptomains, toxins, and other bacterial products; hygiene of infective diseases; the preparation and use of antitoxins and vaccines.

The students of all courses are required to take laboratory work, in which they study cultural and microscopical features; the staining of bacteria and preparation of culture media; thus the student becomes perfectly familiar with bacteriological apparatus. Must be preceded by advanced physiology and zoology. Lectures and laboratory work.

4. **Hygiene of Farm Animals.** Third year, fall term, two and one-half hours per week. Breeding and raising of healthy animals; causes of disease and how prevented; disinfection, quarantine, and vaccination; hygienic quarters, food and methods of feeding; exercise, water, injurious and poisonous foods, parasitic diseases and treatment. Must be preceded by chemistry and advanced physiology.

5. **Veterinary Science I.** Fourth year, fall term. Comparative anatomy of domestic animals, with special reference to disease, conformation and unsoundness; general symptoms of disease; common medicines, their action, doses and methods of giving; wounds and their treatment; surgery. Must be preceded by chemistry, advanced physiology, and hygiene of farm animals.

6. **Veterinary Science II.** Fourth year, winter term. Diseases of farm animals—causes, symptoms, and treatment, special attention being given hygienic nursing and the use of domestic remedies; judging horses as to conformation and soundness. This is intended to meet the practical needs of farmers and stockmen. This must be preceded by physiology, chemistry, hygiene of farm animals, and veterinary anatomy.

Advanced work in human and comparative physiology, bacteriology and veterinary science is offered to students who are qualified. With this advanced work, opportunity for research work, theoretical and practical, will be offered.

MEANS OF ILLUSTRATION.

In addition to the stock upon the College farm, the veterinary museum contains Azoux models of man and horse which are dissectible; also, apparatus, instruments, charts, models, and an excellent collection of parasites of domestic animals. There is also a large collection of anatomic specimens, showing healthy and diseased structures. The bacteriological laboratory is well equipped with microscopes and apparatus for bacteriological work, both elementary and advanced.

The Short Courses.

There are large numbers of young people who from lack of means or time are unable to take an extended course of study, but whose usefulness in the world would be much increased by a little special training. Their earning capacity in the household or on the farm is far from what it might be, and they are thus handicapped in the struggle for a livelihood. To bring to this large portion of the "industrial classes," even in small measure, the "liberal and practical education" provided for by the organic act, the College has established certain short courses of study, with practice.

The teaching in these courses, while no whit less accurate than in the others, is upon a different plane. Taking students without scientific or mathematical training, the instruction must be more largely a giving of facts, without an elaboration of the underlying principles which the regular courses afford. The work is intensely practical. Studying such texts as any bright young man or woman can understand, receiving lectures of the same type, and putting into daily practice through industrial exercises the facts and principles learned in the classroom, the student cannot but be greatly benefited. It is hoped, too, that in many cases young people who had thought that they could not afford a four-year course will, by this taste of the advantages and pleasures of an education, be led into the regular courses.

These courses are put at the seasons of the year which seem likely to accommodate the most students, those for young men being given in the winter term, when farm work is more slack, and the young women's course being in the fall. Four such courses are now offered: A dairy course of one winter term; a domestic science course of two fall terms; farmers' course of two winter terms, and farm dairy course of one winter term.

REQUIREMENTS FOR ADMISSION.

Persons at least eighteen years of age and of good moral character are admitted to these courses as follows:

Persons between the ages of eighteen and twenty-one will be admitted upon presentation of common-school diploma, grammar-school certificate, teacher's certificate, or high-school diploma, or upon passing an examination in the following subjects: Reading, writing, spelling, arithmetic, grammar, geography, physiology, and United States history. Persons over twenty-one will be admitted without examination, but should have sufficient education to enable them to understand the simple text-books used, and to handle readily problems in common and decimal fractions and percentage. They will be required to attend strictly and constantly to their duties, or leave. They have the same free use of the College library that other students have. Owing to the peculiar nature of the work and to the slight degree of preparation which it assumes, ***students are required to be present at the very beginning of the course, and those applying later will not be admitted.***

The short courses are in no sense equivalent to the long courses, and no one should take a short course who can take a whole or even a part of one of the

long courses. All of the common-school branches are taught each term; all of the first-year subjects, except elementary botany, which is not taught during the winter term, and nearly all of the second-year studies are taught each term; so that it is possible for one to get nearly all subjects of the first two years by attending during the winter terms only.

Domestic Science Short Course.

First Year, Fall Term, Twelve Weeks.

Figures following subjects indicate hours per week.

Lectures and Practice in Cooking	15
Sewing	15
Drawing	5

Second Year, Fall Term, Twelve Weeks.

Lectures and Practice in Cooking	8
Home Nursing	2
Physiology and Hygiene	5
Vegetable-gardening and Floriculture	5
Dressmaking	10

First Year, Fall Term, Twelve Weeks.

Lectures and Practice in Cooking. The study of stoves, stove construction, management and fuels are the first topics considered, followed by experiments illustrating the effect of heat upon starch and proteid. The principles are then applied to the cookery of cereals, vegetables, beverages, breads, meats, soups, and simple cake mixtures and puddings. During the term lectures are given by the departments of chemistry and physics illustrating the application of a few fundamental scientific principles to cookery. At stated intervals lectures are also given on home sanitation and household accounts.

Sewing. Pupil makes a model book covering the full course in hand sewing, and consisting of basting, gathering, darning, patching, etc. Machine practice, drafting, cutting and making underskirt and drawers; drafting, fitting and making dress without lining; cutting and making corset cover and night-dress. Materials for the model work will be furnished by the College. Each pupil will furnish her own material for the garments, but if sufficient proficiency is shown in making the first garment, pupils may be allowed to take orders for the others.

Drawing. The work in drawing is especially adapted to the needs of this class of students; it will consist of free-hand and geometrical drawing.

Second Year, Fall Term, Twelve Weeks.

Lectures and Practice in Cooking. Canning, preserving, salads, cakes, pastries, desserts, the planning and serving of meals and invalid cooking are topics considered, accompanied by lectures from the departments of chemistry and physics.

Home Nursing. This implies simple suggestions for the sick-room and its furnishings, and means of adding to the comfort of the sick.

Physiology and Hygiene. Physiology and hygiene of the human body, laws of health, and care of the sick.

Vegetable-gardening and Floriculture. The first half of the term is devoted to vegetable-growing. Subjects treated include the raising of vegetables for home and for market, with location, soils, manures, tools, irrigation, etc., best suited for crops grown in kitchen- and market-gardens; the construction and manipulation of hotbeds, cold-frames, and winter gardens; the growing of early and late crops, their special treatment, methods of cultivation, planting, trans-

planting, harvesting, and marketing; a study of varieties suitable to local conditions; and the origin, nature and methods of improvement of vegetables. The last half of the term is devoted to floriculture. Lectures in the classroom are supplemented by practical exercices in the greenhouses and gardens, treating of the propagation and culture of flowers, including the treatment of seeds, cuttings, mixing of soils, potting, repotting, watering, cut flowers, packing, and the many operations that attend amateur and commercial flower-gardening.

Dressmaking. Pupil will be taught the use of a dress-cutting system, cutting, fitting and making woolen dress. Pupil must furnish her own material, and cut and make a dress for herself.

Farmers' Short Course.

First Year, Winter Term, Twelve Weeks.

Figures following subjects indicate hours per week.

Crop Production	5
Feeds and Feeding	5
Breeds of Live Stock	5
Stock Judging	5
Horticulture	5
Carpentry	5

Second Year, Winter Term, Twelve Weeks.

Botany	5
Elementary Physics	5
Farm Mechanics and Management	5
Diseases of Farm Animals	5
Grain Judging	5
Blacksmithing or *Traction-engines*	5

FIRST YEAR.

Crop Production. A study of the soil—its formation, types or classes, composition, characteristics, uses, physical characters, texture, purposes and problems of tillage, conserving soil moisture, warming, ventilating and draining the soil. The implements of tillage, principles involved in their construction and use. A study of the plant—its relation to soil and climate; its life, growth and propagation; its root system, principles of seed selection, preparation of seed-bed, methods of cultivation, etc. The fertility of the soil, tillage, manures, fertilizers, and rotation of crops. A study of crops by classes and varieties, as grains, grasses, corn, forage, silage, soiling and root crops; practical methods of culture—saving, feeding, and marketing. Text-book, Bailey's Principles of Agriculture.

Feeds and Feeding. The properties of feed stuffs, and their combination to secure good returns at least cost with products having the desired qualities; effect of feeds on quality of products; construction of farm buildings and appliances to secure the best returns from feed and for saving labor; a study of the feeding on the College farm. Text-book, Henry's Feeds and Feeding.

Breeds of Live Stock. A study of the market types of live stock; history and characteristics and adaptibility of the breeds of live stock; selection and judging of live stock according to the official standards; forms as an index to qualities; practice in tracing out pedigrees. Text-books, Shaw's Breeds of Live Stock, Craig's Stock Judging.

Stock Judging. Practice work. Practice in judging chickens, beef cattle, dairy cattle, hogs, horses and sheep according to official standards.

Horticulture. General principles underlying plant growth; structure and functions of the various parts of the plants; nutrition, formation of seeds, etc.;

propagation by seedage, cuttage, graftage, and layerage; environment, including the effects of temperature, light, food- and water-supply; possibilities of improvement by cultivation, training, and selection. Text-book, Goff's Principles of Plant Culture.

Carpentry. Elementary woodwork in joinery and construction, followed by general woodwork and carpentry; care and use of farm machinery; the building of frame structures, such as stables, piggeries, poultry-houses, ice-houses, and farm creameries, will be given, both by lectures and by practical work.

SECOND YEAR.

Botany. The laws of plant growth which have a direct bearing upon the raising of grasses, grains, clovers, forage-plants, and weeds; a study of the common fungi that affect cultivated plants; seed-testing; practical methods of farm seed-breeding.

Elementary Physics. This course is designed to give the student a knowledge of the fundamental principles upon which the various physical phenomena depend. The course does not provide laboratory practice. Numerous class demonstrations illustrate the various subjects of mechanics, hydrostatics, heat, light, sound, etc.

Farm Mechanics and Farm Management. The first half of the term will be devoted to rural engineering and farm machinery, and will include laying out of the farm, as regards the selecting of building sites, location of farm buildings, division of the farm into fields, and plans for crop rotation; the construction of buildings and works as to principles of construction, plans, specifications, and estimates of the cost of farm buildings, and the water-supply, sewerage, drainage, roads, fences, etc.

Several lectures will be devoted to the elements of machines, disclosing the principles involved in the use of the lever, evener, wheel and axle, pulley, inclined plane, screw, and wedge. The several classes of farm machinery will be taken up in their order and studied as to the principles of construction and use of each machine, and attention will be given to the operation, care and repairing of farm machinery, and to the building of machinery sheds.

During the latter half of the term, instruction and practice work will be given in keeping farm accounts, and in the application of business methods to farm operations. Economic questions relating to the employment and management of farm help, outlay for farm equipment, buildings, and improvements, the buying of machinery and marketing of crops will receive attention. Some instruction will be given in simple questions of rural law, relating to property, deeds, leases, contracts, water rights, line fences, notes, bills of sale, mortgages, interest, taxes, etc. Text-book, Robert's Farmers' Business Handbook.

Diseases of Farm Animals. The common ailments of farm animals are discussed, their causes and symptoms explained, and preventives and remedies suggested. Inoculation against blackleg will be performed by the student in this course.

Grain Judging. This will be a continuation of the study of crop production, and will consist mainly of work in the judging-room, in scoring corn and the common cereals according to inspectors' and buyers' standards or according to recognized standards of perfection. Lectures and quizzes will be given, explaining the work in the judging-room. A special study will be made of corn in the selection of seed ears. Very few farmers will select a "good" ear of corn before they have been carefully instructed and trained to note defects and vital points. It is necessary to know the characteristics of a breed and its recognized standard

of perfection before one can intelligently select breeding animals. This is true also of a variety of corn or wheat, and the improved qualities of higher protein, greater vitality and larger productiveness which may be bred into corn by careful and intelligent selection should greatly increase the value of this crop to the farmer.

Blacksmithing. Forging and welding, construction of singletree clips, wagon ironing, clevises, horseshoes, sharpening and tempering plows and tools, general repair work. Advanced work is also offered in the care and management of boilers and engines. If the student desires, he can make a forge and set of blacksmith tools to take home with him, paying only for the iron used.

Farm Dairy Course.

Winter Term, Twelve Weeks.

Figures following subjects indicate hours per weeks.

Dairying	5
Crop Production	5
Feeds and Feeding	5
Breeds of Live Stock	5
Stock Judging	5
Carpentry	5
Dairy Practice	5

Dairying. Milk—its secretion, nature, and composition; causes and conditions influencing the quantity and quality of milk; testing of glassware used in the dairy; testing of the quality of milk, cream, buttermilk, and skim-milk. Text-book, Wing's Milk and its Products.

Dairy Practice. Practice in handling milk and its products from the time it leaves the cow until it is marketed as butter, cheese, or sanitary milk. The dairy-room is fully equipped with hand and power separators, Babcock tests, churns, and butter-workers, aerators, heaters, sterilizers, milk and cream vats, factory-cheese apparatus, Mann's acid tests, and other needed apparatus. Many manufacturers have volunteered to loan us machinery, so that the dairy students may test of the work of the different makes of separators, churns, etc.

The remainder of this course is the same as the first year of the farmer's short course.

Dairy Course.

Winter Term, Twelve Weeks.

Figures following subjects indicate hours per week.

Dairying	5
Feeds and Feeding	5
Diseases of Dairy Animals	2½
Bookkeeping	2½
Butter- and Cheese-making	5
Dairy Practice	10
Boiler and Engine	5

Dairying. Milk—its secretion, nature, and composition; causes and conditions influencing the quantity and quality of milk; testing of glassware used in the dairy; testing of the quality of milk, cream, buttermilk, and skim-milk. Text-book, Wing's Milk and its Products.

Feeds and Feeding. Properties of common feed stuffs; their effect on the character and yield of milk and butter; adaptation and combination of feeds to meet the needs of dairy cows; effect of feed on quality of product; preparation of feeds and methods of feeding; compounding of dairy rations to secure the best

yield at least cost. Study of the feeding of the College dairy herd; the dairy farm and care and management of dairy herd. Text-book, Henry's Feeds and Feeding.

Diseases of Dairy Animals. The common ailments of calves and dairy cows are discussed and their causes and symptoms explained, remedies and preventives suggested, all from a practical farmer's standpoint. During the dairy school the College herd will be tested with tuberculin and the students taught how to make the test.

Bookkeeping. Practice in bookkeeping that will enable the student to understand the underlying principles, followed by training in keeping books for farm, dairy and creamery accounts.

Butter- and Cheese-making. The handling of the milk for the market and for butter-making, including milking, straining, aerating, cooling, preserving, and shipping; testing; creaming of milk by the separator; cream-ripening and butter-making. Construction and management of skimming stations and creameries; methods of handling farm-separator cream; methods of dealing with patrons. The handling of milk for cheese-making; contamination, aeration, enzymes, rennet, making of cheddar cheese, cutting and heating curd, drawing whey, dripping and milling the curd, salting and pressing the curd, curing and packing the finished cheese, construction of cheese factories. Swiss, limburger, edam and cottage cheese. Test-books: Decker's Cheese-making, Wing's Milk and its Products, Farrington and Woll's Testing Milk and its Products. Lectures.

Dairy Practice. Practice in handling milk and its products from the time it leaves the cow until it is marketed as butter, cheese, or sanitary milk. Students may choose either creamery, butter-making, cheese-making, or private dairying. Thorough instruction and practice will be given in all three of these lines. The dairy-room is fully equipped with hand and power separators, Babcock tests, churns and butter-workers, aerators, heaters, sterilizers, milk and cream vats, factory-cheese apparatus, Mann's acid tests, and other needed apparatus. Many manufacturers have volunteered to loan us machinery, so that the dairy students may make test of the work of the different makes of separators, churns, etc.

Boilers and Engines. Lectures and practice in the firing of boilers, care and running of engines, pumps, etc.; practice in shops.

Apprentice Courses.

Mechanical Department.

Many who are unable to take the four-year engineering course and who wish to learn a trade will find in the apprentice courses opportunities to obtain practical skill in one of the following trades: (*a*) Carpentry, (*b*) blacksmithing, (*c*) foundry, or (*d*) machine-shop practice.

In the apprentice courses the advantages of the shops are offered to a limited number of young men who cannot enter regularly in the College classes. Since instruction, rather than money-making, is the object of these courses, it can be readily seen that the apprentice work, under skilled instructors, offers many advantages over the ordinary trade apprenticeship. The number that can be accommodated for the coming year is estimated at thirty-two, and the work given is of the most practical character. Apprentices are taken in the shops in the order of their application. A short course in mechanical drawing is given in connection with the apprenticeships in this department. This course is designed to enable the young men to read drawings and blue-prints readily. It is not expected that it will give them the skill necessary for them to become draughtsmen. The drawing is optional and does not count toward the completion of the courses.

Requirements for Admission.

Persons at least eighteen years of age and of good moral character are admitted, as follows:

Persons between the ages of eighteen and twenty-one will be admitted upon presentation of common-school diploma, grammar-school certificate, teacher's certificate, or high-school diploma, or upon passing an examination in the following subjects: Reading, writing, spelling, arithmetic, grammar, physiology, and United States history. Persons over twenty-one will be admitted without examination. Their taking one of the regular four-year courses must be obviously impracticable; must observe College regulations; must agree to work at least thirty hours per week in the shops, and must remain in the shops for a minimum period of eighty weeks. No charge of any kind is made, nor is any pay given to apprentices. All apprentices are taken on one month's trial, that those not naturally suited for such work may be relieved of the necessity of remaining the full period. Graduates of these courses are given a certificate showing proficiency in line of work pursued.

Heat and Power Department.

A course in boiler and engine attendance is given in this department. It is based on the same lines as those mentioned above, the requirements for admission being the same.

Printing Department.

Persons may enter the printing department under the same requirements as above. The work consists of composition, proof-reading, press- and job-work.

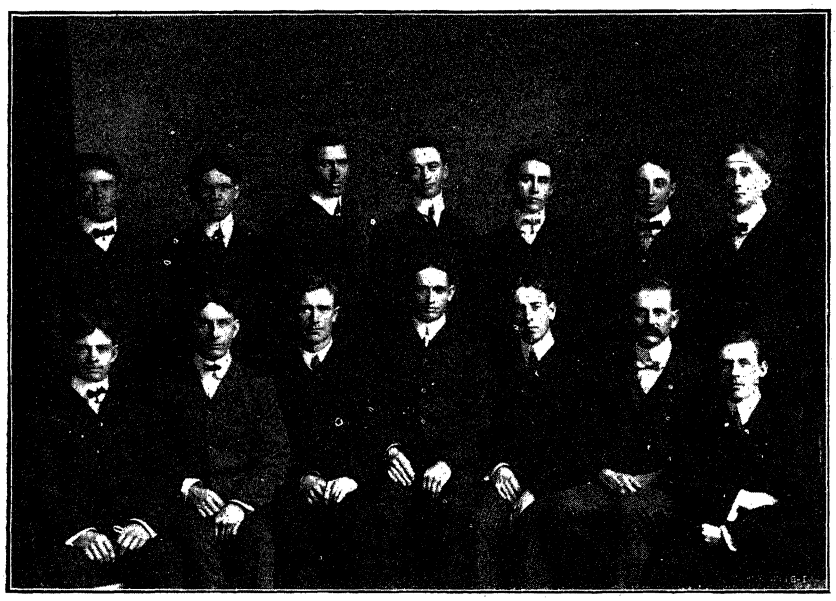
Young Men's Christian Association.

The Young Men's Christian Association now holds an important place in the college and university life of our country. With a membership of 48,000, it easily ranks as the largest student organization in the college world. To the association more than to any other human agency must be given the credit of the marked change in the attitude of college men toward Christianity. A few years ago there was a feeling that a Christian was a weak and effeminate sort of a being—a harmless freak, without force of character, and a species to be carefully avoided by the manly, athletic student.

To-day the Christian men of the association lead its activities, captain football, baseball and track teams, win debates, oratorical contests and highest honors in the classroom. Now Christian men comprise fifty-two per cent. of the student body—a percentage six or seven times as high as in the country in general.

Our own association is trying to keep in line with the associations in other colleges by standing for clean Christian living. It aims to help those young men to whom the strong temptations of student life appeal with great force. The Y. M. C. A. seeks to train and develop its members in organized Christian effort, so that their lives may be placed to the best advantage not only in college but in the community where they live after graduation.

To the student entering college for the first time the association is especially helpful. He is furnished with a handbook of useful information, met at the trains, assisted to find a boarding and rooming place, given a reception, and in-



Y. M. C. A. CABINET.

vited to associate his efforts with the men who wish to be his friends. Headquarters are maintained, with reading- and game-room. Here he is a welcome guest. The association offers to him, as to the old student, the opportunity to join a mission-study class and one of the several Bible-study classes. A regular, systematic course in Bible study is provided. This course is arranged for daily private study, with a weekly class-meeting where the students discuss the work of the past week. Prospective students are invited to write to the general secretary in regard to the association or for information about the College not contained in the catalogue.

Young Women's Christian Association.

The Young Women's Christian Association, with a membership of 156, is made up of the strongest young women in College. It is heartily supported by the Faculty and Regents, and exerts a most vigorous and healthful Christian influence throughout the College. It is based upon the fundamental principles of Christianity and seeks to create a sentiment for all that is pure and true and right. Since the object of the association is the development of Christian character, it seeks to organize and unite all the Christian forces for practical work. It strives to put into daily practice the right theories of living.

When a young lady gets off the train at Manhattan she is met by a committee from the Young Women's Christian Association, who will assist her in finding a suitable boarding place. The association seeks in every way possible to aid the new student. Guides are supplied to show her to her respective classrooms for the first time. The idea of the association is to make each new girl feel at home in the College, and know that when she meets a Y. W. C. A. girl she meets a friend who is interested in her welfare.

Some of the most important features of the association:

1. The fall campaign committee, who seek to start new girls in the right direction.
2. The lookout committee, who care for those who may be ill or need special care.
3. Weekly devotional meetings, which are a source of inspiration to higher ideals.
4. Prayer studies, Bible-study and mission-study classes, which broaden the view of Christian work.
5. Opportunity for social development through socials or receptions given each month by the association.
6. Opportunity for doing active Christian work among college girls.
7. A general secretary, the employed officer of the association, and the advisory committee, chosen from the Faculty or other Christian women who are interested in the work, sustain a general advisory relation to the officers of the association and assist them in carrying out the plans of the work.

All young women contemplating attending the College are invited to write to the general secretary of the association for information concerning the College or Y. W. C. A. work.

General Information.

Terms of Admission.

Persons over fourteen years of age will be admitted in any of the following ways:

1. Kansas teacher's certificate, provided no subject is below seventy per cent.

2. Diploma received on completion of a county course of study which has been approved by the Faculty.

3. Certificate of passing the grammar grade or diploma from the high school of any city or county with a course of study approved by the Faculty.

4. Pass a satisfactory examination in reading, spelling, writing, geography, arithmetic, United States history, English grammar, and physiology.

Persons over eighteen years of age will be admitted to the preparatory classes if unable to pass the common-school branches.

Full admission to the first year, in addition to the common-school branches—reading, spelling, writing, geography, arithmetic, United States history, English grammar, and physiology—requires bookkeeping, English composition, English readings, algebra to quadratic equations, and free-hand drawing. It is quite possible for a good student who enters somewhat behind to make up his deficiency in a year or two and graduate in four years.

All of the preparatory studies are taught each term; and all of the first-year studies except botany, which is not taught during the winter term, and nearly all of the second-year subjects are taught each term; so that a person may enter at the beginning of any term and find work suited to his advancement.

Examinations for admission are held at the beginning of each term. Applicants at other times during the school year have special examinations. These examinations are chiefly written, and a grade of seventy per cent., at least, must be obtained to pass a study.

On entrance, applications for advanced standing in the courses or for credit for certain studies in the courses may be made to the chairman of the committee on examinations. After entrance, such applications should be made to the professor in charge of the study. In any case the applicant will be required to pass such an examination as the professor in charge deems necessary.

The courses of the following cities and counties have been approved by the Faculty, and others may be submitted at any time:

CITIES.

Abilene.	Coffeyville.	Hiawatha.	Lyons.	Pratt.
Alma.	Columbus.	Holton.	Manhattan.	Russell.
Anthony.	Concordia.	Horton.	Mankato.	Salina.
Argentine.	Council Grove.	Humboldt.	Marion.	Scranton.
Arkansas City.	Dexter.	Hutchinson.	McPherson.	Sedan.
Atchison.	Dodge City.	Independence.	Minneapolis.	Seneca.
Augusta.	El Dorado.	Iola.	Neodesha.	Solomon City.
Baldwin.	Ellsworth.	Junction City.	Newton.	St. Mary's.
Belleville.	Emporia.	Kanopolis.	Olathe.	Topeka.
Beloit.	Eureka.	Kansas City.	Osage City.	Valley Falls.
Burlingame.	Fort Scott.	Kingman.	Osborne.	Wamego.
Burlington.	Fredonia.	La Cygne.	Oswego.	Washington.
Caldwell.	Garden City.	Larned.	Ottawa.	Waverly.
Chanute.	Garnett.	Lawrence.	Paola.	Wellington.
Cherryvale.	Gaylord.	Leavenworth.	Parsons.	Wellsville.
Chetopa.	Girard.	Lebo.	Pittsburg.	Winfield.
Clay Center.	Great Bend.	Lincoln.	Pomona.	Wichita.
Clifton.				

COUNTIES.

Allen.	Elk.	Kingman.	Phillips.	Shawnee.
Barber.	Ellis.	Labette.	Pottawatomie.	Sherman.
Bourbon.	Ellsworth.	Lane.	Pratt.	Smith.
Chautauqua.	Franklin.	Lincoln.	Reno.	Thomas.
Cheyenne.	Geary.	Logan.	Republic.	Trego.
Clay.	Gove.	Marion.	Rice.	Wabaunsee.
Cloud.	Greeley.	Miami.	Riley.	Wallace.
Coffey.	Harper.	Mitchell.	Rooks.	Washington.
Comanche.	Harvey.	Morris.	Rush.	Wilson.
Cowley.	Jefferson.	Nemaha.	Russell.	Woodson.
Decatur.	Jewell.	Norton.	Scott.	Wyandotte.
Douglas.	Johnson.	Ottawa.		

COUNTY HIGH SCHOOLS.

Atchison and Dickinson.

Counties and cities on the accredited list may be called upon at any time to furnish evidence that they are maintaining a satisfactory standard of scholarship.

Students should make every effort to enter on the first day of the term. Those entering later will be at a serious disadvantage, and if more than two or three weeks late should expect to take review work or fewer studies. If unable to enter before mid-term it will be better to wait until the next term.

Hospitants.

That mature persons not able to attend College continuously may nevertheless be able to enjoy, in a measure, the privileges of the institution, an invitation has been extended to all citizens of Kansas who may be so disposed to visit the College, its lectures, laboratories, library, shops, and various departments, and to avail themselves, as fully of its advantages as may be consistent with their wishes, with the needs and duties of the regular students, and with the harmonious and successful working of the institution. Following are certain rules concerning hospitants:

Persons regularly attending any of the classes of the Kansas State

Agricultural College, without assuming the regular duties of students, will be known as hospitants, and—

1. Must be persons of mature age, whose attendance on regular college duties is obviously impracticable.

2. Must be properly enrolled at the President's office.

3. May attend any of the regular classes of the institution, subject to the same regulations, with regard to punctuality and attendance, as are imposed upon regular students, except as to recitations and examinations.

4. May use the library, as regular students.

5. Are not entitled to laboratory privileges without special recommendation of the professor in charge and the permission of the Faculty.

Examinations.

Examinations for admission are held at the beginning of each term, as shown in the calendar of the college year. Applicants at other times during the school year have special examinations. These examinations are chiefly written, and a grade of seventy per cent., at least, must be obtained to pass a study.

Examinations in the courses are held twice each term, as announced in the calendar. The results of the examinations, marked on a scale of 100, are combined with the grades of the preceding daily exercises into a grade for the period. Grades reported to the Secretary for record are made up by giving the mid-term record a value of one-third and the record for the last half of the term a value of two-thirds. For passing a study, the mean grade so calculated, and also the grade for the last half of the term, must be at least seventy. Any student receiving less than a passing grade on two or more studies may be required to drop back or withdraw from the College. Any student may receive a certificate of standing, upon leaving College at the close of a term.

Students deficient in entrance studies must make good such deficiencies before entering on the work of the second year. Students are not catalogued in the third-year class unless all deficiencies of the preceding years are provided for. Candidates for graduation must make good all deficiencies before entering on the work of the spring term of the fourth year. No student is considered as a candidate for graduation who, after the opening of the fall term, is deficient more than three full studies in addition to regular work. Extra work is not allowed to any student who failed in any branch the preceding term, or whose average grade for all branches was less than eighty.

After entering college, students are allowed special examinations only upon recommendation of the professor in charge, and by permission of the committee on assignments. Permission for examina-

tion in studies not pursued with a class must be obtained at least two months before the examination is held. All such examinations are held under the immediate supervision of the professor in charge, and are thorough and exhaustive. Students desiring credit for work done elsewhere must bring certificates and catalogues to show that the work done is equivalent to ours. The right is reserved to cancel any credits if the work of the student in succeeding branches shows insufficient preparation.

Regulations in Regard to Substitutions.

With the five regular courses that the College now offers, most of the requirements of students are met. For one reason or another, however, some students find it necessary or desirable to substitute something else for the work that their respective courses would require. To place such substitutions on a systematic basis, the following regulations have been adopted by the Faculty:

1. Substitutions shall, as far as practicable, give training similar to that of the work displaced.

2. No student shall be allowed a substitution for work in which he has failed.

3. Unless made necessary by the acts of the Board of Regents or of the Faculty, substitutions shall not be allowed: (*a*) To students who are below the third year; (*b*) to students who have failed in any study of the two terms' work immediately preceding; (*c*) unless arranged for in advance.

4. Students desiring to substitute other work for any requirement in their respective courses of study must present written requests to the committee on assignments.

5. When a request for substitution is made by any student, the committee on assignments shall consult with all of the professors whose work is touched by the proposed substitution, and if unable to agree with them the case shall be submitted to the Faculty.

6. All substitutions arranged by the committee on assignments shall be reported to the Faculty by posting on the Faculty bulletin-board, and if not objected to within one week shall be reported to the Secretary for record in the students' register.

General Duties and Privileges.

General good conduct, such as becomes men and women anywhere, is expected of all. Every student is encouraged in the formation of sound character by both precept and example, and expected, "upon honor," to maintain a good repute. Failure to do so is met with prompt dismissal. No other rules of personal conduct are announced.

Classes are in session every week-day except Monday, and no stu-

dent may be absent without excuse. Students cannot honorably leave the College before the close of a term, unless excused beforehand. A full and permanent record of attendance and scholarship shows to each student his standing in the Collage.

Chapel exercises occupy fifteen minutes before the meeting of classes each morning, and absence from them is noted.

There are five prosperous literary societies, which meet weekly in rooms set apart for their use. The Alpha Beta and Franklin open to both sexes, and the Ionian for young women, meet Saturday afternoon. The Webster and the Hamilton admit to membership young men only, and meet on Saturday evening.

At various times during the year the College halls are opened for social and literary entertainments for the whole body of students, or for classes. For the last six years the students have organized and presented courses of entertainments, which have been of high value, and of a moderate expense to each individual.

Earning One's Way.

The courses of study are based upon the supposition that the student is here for study, and a proper grasp of the subjects cannot be obtained by the average student unless the greater part of his time is given to college duties. Students in straightened circumstances are encouraged and aided in every way possible, but unless exceptionally strong, both mentally and physically, are advised to take lighter work by extending the course, if obliged to give any considerable time to self-support. As a rule, a student should be prepared with means for at least a term, as some time is necessary for one to make acquaintances and learn where suitable work may be had.

The lines in which employment may be had are various. The College itself employs student labor to the extent of about $1200 per month, the rate paid being ten cents per hour. This work is on the farm, in the orchards and gardens, in the shops and printing-office, for the janitor, etc. As one's ability and trustworthiness becomes established, more responsible and more remunerative work may be had, to a limited extent. Many students obtain employment in the town; some work for their board in families in town or in the country near the College. Labor is everywhere respected, and the student who earns his way is honored by all. He will necessarily have little time for the lighter pleasures that may be incident to college life.

Expenses.

TUITION IS FREE. An incidental fee of $3 per term will be charged all students from Kansas. Students from outside of Kansas will be charged an incidental fee of $10 per term and an enrolment fee of

$10. Rooms, board and washing are not furnished by the College. Board, with furnished room, can be procured in private families at from $2.50 to $3.50 per week, or table board in student clubs from $2 to $2.25 per week. Furnished rooms, without board, can be obtained at from $3 to $5 per month. Some students board themselves at even less cost, and rooms for the purpose can be obtained at a rent of from $1 to $3.50 per month. Washing costs from 50 cents to 75 cents per dozen. Books cost about $3 per term. Young men below the junior year will be required to have military uniforms costing about $12, and young women below the junior year must have a calisthenic suit costing about $3. Ordinary expenditures, aside from clothing and traveling expenses, range from $100 to $200 per year. No institution in the state furnishes an education at less cost to the student.

Business Directions.

General information concerning the College and its work, studies, examinations, grades, boarding places, etc., may be obtained from the President or the Secretary.

Questions, scientific or practical, concerning the different departments of study or work, may be addressed to the several professors and superintendents.

Loans upon school-district bonds are to be obtained from the Loan Commissioner.

Bills against the College should be presented monthly, and, when audited, are paid from the office of the State Treasurer.

All payments of principal and interest on account of bonds or land contracts must be made to the state treasurer, at Topeka. Applications for extension of time on land contracts should be sent to the Secretary of the Board of Regents, at Manhattan.

The *Industrialist* may be addressed through Pres. E. R. Nichols, managing editor.

Donations for the library should be sent to the Librarian; donations for the museum, to the curator of the museum.

Applications for farmers' institutes should be made as early in the season as possible, addressing Institute Department, Kansas State Agricultural College.

Applications for the publications of the Experiment Station, and general inquiries concerning its work, should be addressed to Agricultural Experiment Station; but correspondence concerning any special line of investigation should be sent to the member of the Council in charge of the work concerning which information is desired.

All half-tones in this catalogue were made from photographs taken by Dr. S. C. Orr, of Manhattan, who has done all the College view work for the last four years.

Students.

GRADUATES.

IN COURSE LEADING TO MASTER'S DEGREE.

William Anderson, B. S. '98.....*Physics, Mathematics.*
Cleburne, Riley county.

Elizabeth Edna (Asbury) Derr, B. S. '00, *Domestic Science, Chemistry.*
Topeka, Shawnee county.

Frederick Waldemar Christensen, B. S. '00.....*Chemistry.*
Randolph, Riley county.

Maude Mildred Coe, B. S. '02.....*Domestic Science.*
Yates Center, Woodson county.

Homer Derr, B. S. '00.....*Physics, Mathematics.*
Topeka, Shawnee county.

Charles Eastman, B. S. '02.....*Veterinary Science, Physiology.*
Ogden, Riley county.

Josephine Finley, B. S. '00.....*Domestic Science.*
Manhattan, Riley county.

Edward Wilfred House, B. S. '02.....*Forestry, Botany.*
Manhattan, Riley county.

George Logan, B. S. '02.....*Veterinary Science, Agriculture.*
Manhattan, Riley county.

Eva Talitha Rigg, B. S. '02.....*Domestic Science.*
Marvin, Phillips county.

Gertrude Ella Stump, B. S. '96.....*Domestic Science, Chemistry.*
Manhattan, Riley county.

George Carpenter Wheeler, B. S. '95....*Agriculture, Dairying, Chemistry.*
Manhattan, Riley county.

NON-RESIDENT.

John Berthold Dorman, B. S. '96.....*Chemistry, Physics.*
West New Brighton, N. Y.

John Martin Kessler, B. S. '99.....*Horticulture, Botany.*
Eldora, Iowa.

Harry Delphos Orr, B. S. '99.....*Physiology, Chemistry.*
Chicago, Ill.

Helena Maude Pincomb, B. S. '01.....*Domestic Science, Chemistry.*
Pittsburg, Crawford county.

Frank Edwin Uhl, B. S. '96.....*Bacteriology, Agriculture.*
Gardner, Johnson county.

IN ADVANCED WORK NOT LEADING TO A DEGREE.

Ina Foote Cowles, B. S. '01.....*Music, Domestic Science.*
Sibley, Douglas county.

Christine Delphine Hofer, B. S. '02.....*Music, Drawing.*
Manhattan, Riley county.

Henrietta Mattie Hofer, B. S. '02.....*Music, Drawing.*
Manhattan, Riley county.

Charles W. Lyman, B. S. '96.....*Chemistry.*
Salina, Saline county.

Hattie May Noyes, B. S. '91.....*Domestic Science, Chemistry.*
Wabaunsee, Wabaunsee county.

Andrew Edward Oman, B. S. '00.....*Forestry.*
Winkler, Riley county.

Florence Helen Vail, B. S. '01.....*Chemistry.*
Manhattan, Riley county.

SENIORS.

Name.	Post-office and county (or state).
Amy Alena Allen,	Manhattan, Riley.
Grace Allingham,	Manhattan, Riley.
Wallace W. Baird,	Milford, (Riley.)
Wallace Newton Birch,	Manhattan, Riley.
Otis Neel Blair,	Lyndon, Osage.
Georgia Evaline Blaney,	Manhattan, Riley.
Richard Franklin Bourne,	Delphos, Ottawa.
Frank William Boyd,	Kensington, Smith.
William Armfield Boys,	Pomona, Franklin.
Howard McCune Chandler,	Kansas City, Wyandotte.
Clark Stewart Cole,	Manhattan, Riley.
De Verne Corbin,	Oxford, Sumner.
James A. Correll,	Manhattan, Riley.
Amos Luther Cottrell,	Wabaunsee, Wabaunsee.
Jennie Pearl Cottrell,	Wabaunsee, Wabaunsee.
Wilma Greene Cross,	Topeka, Shawnee.
Claude Carrol Cunningham,	Manhattan, Riley.
William Doz Davis,	Marquette, McPherson.
Charles Sumner Dearborn,	Silver Lake, Shawnee.
Robert William DeArmond,	Lincoln, Lincoln.
Thomas E. Dial,	Leavenworth, Leavenworth.
Roy Nathan Dorman,	Wabaunsee, Wabaunsee.
Orrin Pomeroy Drake,	Beattie, Marshall.
Lewis Sidney Edwards,	Emporia, Lyon.
Robert Alexander Esdon,	Olsburg, Pottawatomie.
Corinne Failyer,	Manhattan, Riley.
Maude Irene Failyer,	Manhattan, Riley.
Estella May Fearon,	Manhattan, Riley.
Ralph B. Felton,	McPherson, McPherson.
Ray Bonifield Felton,	McPherson, McPherson.
George T. Fielding,	Manhattan, Riley.
James William Fields,	McPherson, McPherson.
Beulah Fleming,	Smith Center, Smith.
Arthur B. Gahan,	Manhattan, (Pottawatomie).
Edwin Chase Gardner,	Homewood, Franklin.
Fred Norton Gillis,	Keene, Wabaunsee.
Clara S. Goodrich,	Mankato, Jewell.
Edith Anna Goodwin,	Detroit, Dickinson.
Ellsworth Paul Goodyear,	Oatville, Sedgwick.
Augusta Griffing,	Manhattan, Riley.

Name.	Post-office and county (or state).
Alanson L. Hallsted,	Havana, Montgomery.
Esther E. Hanson,	Marquette, McPherson.
Arthur Hurchel Helder,	Manhattan, Riley.
Edward Howard Hodgson,	Little River, Rice.
Pearl Holderman,	Chetopa, Labette.
Hartley Bowen Holroyd,	Manhattan, Riley.
Sarah C. Hougham,	Manhattan, Riley.
John Samuel Houser,	Oxford, Sumner.
Axel H. Johnson,	Marquette, McPherson.
Jesse McCullah Jones,	Moran, Allen.
Hernon Curtis Kyle,	Cawker City, Mitchell.
Raymond George Lawry,	Manhattan, Riley.
Rose Margaret McCoy,	Manhattan, (Pottawatomie).
Edwin William McCrone,	Haddam, Washington.
Kirk P. Mason,	Cawker City, Mitchell.
Bessie A. Mudge,	Manhattan, Riley.
Albert Marvin Nash,	Burlington, *Iowa.*
Harold Theodore Nielsen,	Denmark, Lincoln.
Ivan L. Nixon,	Manhattan, Riley.
Virginia Viola Norton,	Manhattan, Riley.
Russell Arthur Oakley,	Reedsville, Marshall.
Anna Louella O'Daniel,	Manhattan, Riley.
Clara Pancake,	Tully, Rawlins.
Celoa Alice Perry,	Manhattan, Riley.
Alexis Joseph Reed,	Smith Center, Smith.
Earl Nathaniel Rodell,	Marquette, McPherson.
Alice May Ross,	Manhattan, Riley.
Alfred Hayes Sanderson,	Marysville, Marshall.
John Marcus Scott,	Westmoreland, Pottawatomie.
Henry August Sidorfsky,	Le Roy, Coffey.
Emma Estella Smith,	Wamego, (Wabaunsee).
Horace Frederick Smith,	Wamego, (Wabaunsee).
Harley Lee Snodgrass,	Manhattan, Riley.
Harold Addison Spilman,	Manhattan, Riley.
Lois Stump,	Manhattan, Riley.
Harry Raymond Thatcher,	Great Bend, Barton.
Helen B. Thompson,	Wamego, (Wabaunsee).
John Augustus Thompson,	Edwardsville, Wyandotte.
Sarah Pauline Thompson,	Osborne, Osborne.
Dovie May Ulrich,	Manhattan, Riley.
Harry Nelson Vinall,	Oakley, Logan.
Alberta Suena Voiles,	Manhattan, Riley.
Orin Russell Wakefield,	Wilsey, Morris.
Leon Vincent White,	Manhattan, Riley.
Alice M. Worley,	Natoma, Osborne.
Walter Scott Wright,	Marvin, Phillips.

JUNIORS.

Edward E. Adamson,	Altamont, Labette.
Marian Allen,	Manhattan, Riley.
James George Arbuthnot,	Cuba, Republic.
Albert Clay Aumann,	Geuda Springs, (Cowley).

Name.	Post-office and county (or state).
Clinton Jesse Axtell,	Blue Rapids, Marshall.
Flora Evacelia Ballou,	Delphos, Ottawa.
William Burgess Banning,	Lyndon, Osage.
Asa William Barnard,	Manhattan, Riley.
Clara Florence Barnhisel,	Newton, Harvey.
Frank Lorin Bates,	Manhattan, Riley.
Louis Blaine Bender,	Highland, Doniphan.
John Jeremiah Biddison,	Manhattan, Riley.
McDonald Biddison,	Manhattan, Riley.
Charles P. Blachly,	Manhattan, Riley.
Frank Andrus Blakslee,	Manhattan, Riley.
Walter Brant,	Wichita, Sedgwick.
Viva Brenner,	Porterville, Bourbon.
Thomas Warner Buell,	Roanoke, *Texas.*
Eva Maggy Burtner,	Manhattan, Riley.
Ray Arthur Carle,	Topeka, Shawnee.
August Belmont Carnahan,	Douglass, Butler.
Joseph Griffith Chitty,	Frankfort, Marshall.
Andrew D. Colliver,	Galva, McPherson.
Gertrude Matilda Conner,	Mitchell, Rice.
Perry Alfred Cooley,	Manhattan, Riley.
Victor L. Cory,	Dundee, Barton.
Bertha Cowles,	Sibley, Douglas.
Ella Criss,	Grigsby, Scott.
Jules Cool Cunningham,	Glasco, Cloud.
Mary E. Davis,	Manhattan, Riley.
Aubrey W. Deane,	Muscatine, *Iowa.*
Minnie Estella Deibler,	Manhattan, Riley.
Lisla C. Dial,	Stockdale, Riley.
Lawrence A. Doane,	Manhattan, Riley.
May Doane,	Manhattan, Riley.
Carl O. Duehn,	Clements, Chase.
Glen Edgar Edgerton,	Manhattan, Riley.
Carl C. Elling,	North Cedar, Jefferson.
Elizabeth Finlayson,	Summerfield, Marshall.
Jessie Lois Fitz,	Vinland, Douglas.
Hattie L. Forsyth,	Dwight, Morris.
Louis Cloyd Foster,	Newton, Harvey.
George W. Gasser,	Neosho, *Missouri.*
William H. Goodwin,	Detroit, Dickinson.
Walter Otis Gray,	Crestline, Cherokee.
Rockwell W. Greene,	Lincoln, Lincoln.
John Bernice Griffing,	Manhattan, Riley.
Francis Linus Grimm,	Solomon, Dickinson.
Mabel Estelle Groome,	Williamsburg, Franklin.
Charles Alfred Groves,	Edwardsville, Wyandotte.
Mary Elizabeth Longfellow Hall,	Eatonville, Cowley.
Harry Vaughn Harlan,	Walnut, Crawford.
Harriett Harter,	Owatonna, *Minnesota.*
Mamie Magdelene Hassebroek,	Manhattan, Riley.
Mamie Eva Helder,	Manhattan, Riley.
William A. Hendershot,	Manhattan, Riley.

Name.	Post-office and county (or state).
Henry Hess,	Hesston, Harvey.
Orley Justin Hillyer,	Manhattan, Riley.
Chester Albert Hite,	Pond Creek, *Oklahoma.*
Frederick Earl Hodgson,	Little River, Rice.
Evan James,	Bala, Riley.
James Johnson,	Manhattan, Riley.
John Arthur Johnson,	Manhattan, Riley.
Jesse W. Joss,	Kirksville, *Missouri.*
Evan Kernohan,	Beverly, Lincoln.
Helen Kernohan,	Beverly, Lincoln.
Ralph Teeter Kersey,	Louisville, Pottawatomie.
Kenneth William Kimble,	Manhattan, Riley.
Charles Franklin Kinman,	Clay Center, Clay.
George Otto Kramer,	Wabaunsee, Wabaunsee.
Ed. Logan,	Manhattan, Riley.
George W. Loomis,	Girard, Crawford.
Rhoda C. McCartney,	Oakes, *North Dakota.*
Nellie Reeder McCoy,	Meriden, Jefferson.
Sara Grace McCrone,	Haddam, Washington.
Vera Alta McDonald,	Manhattan, Riley.
Edward Purcell McDowell,	Manhattan, Riley.
Ollie Jane Martin,	Garnett, Anderson.
Freide E. Marty,	Merriam, Johnson.
Howard David Matthews,	Carthage, *Missouri.*
Vernon Matthews,	Carthage, *Missouri.*
Chester Arthur Maus,	Topeka, Shawnee.
George C. Miller,	Valencia, Shawnee.
Leanore Elizabeth Miller,	Manhattan, Riley.
Winfred L. Milner,	Belleville, Republic.
Julia Anna Monroe,	Whiting, Jackson.
Helen Monsch,	Louisville, *Kentucky.*
Samuel Erwin Morlan,	Courtland, Republic.
Benjamin Frank Mudge,	Manhattan, Riley.
Mary Lorena O'Daniel,	Westmoreland, Pottawatomie.
Florence Phillips,	Garrison, Pottawatomie.
Myron A. Pierce,	Owatonna, *Minnesota.*
Tom Lawrence Pittman,	Hammond, Bourbon.
Burr Nuton Porter,	Oronoque, Norton.
Charles A. Pyles,	Morrill, Brown.
Ralph Ramsbottom,	Munden, Republic.
William Arthur Randle,	Bala, Riley.
Arthur J. Rhodes,	Manhattan, Riley.
Emmit D. Richardson,	Glen Elder, Mitchell.
Clarence M. Riker,	Oswego, Labette.
Florence Rebecca Ritchie,	Manhattan, Riley.
Kate L. Robertson,	Manhattan, Riley.
Jesse Loyde Rogers,	Louisburg, Miami.
Fred Calvin Romig,	Curran, Harper.
Lawrence V. Sanford,	Oneida, Nemaha.
James G. Savage,	Bluff Springs, *Illinois.*
Nickolas Schmitz,	Little River, Rice.
Roy A. Seaton,	Jewell, Jewell.

Name.	Post-office and county (or state).
John T. Skinner,	Neodesha, Wilson.
Garfield William Skow,	Leonardville, Riley.
Homer A. Smith,	Logan, Phillips.
Margie Smith,	Manhattan, Riley.
Sallie Maud Smith,	Manhattan, Riley.
Guy Emerson Souders,	Manhattan, Riley.
Crete Spencer,	Manhattan, Riley.
Arthur S. Stauffer,	Newton, Harvey.
Mary Catherine Strite,	Ogden, Riley.
K. Elizabeth Sweet,	Burlington, Coffey.
Charles Bartholow Swift,	Williamsburg, Franklin.
Wendell Phillips Terrell,	Fort Worth, *Texas*.
Henry Thomas,	Wichita, Sedgwick.
Carl Thompson,	Garrison, Pottawatomie.
John Bert Thompson,	Leon, Butler.
Roger S. Thompson,	Osborne, Osborne.
Norman Lee Town,	Valencia, Shawnee.
Freida Trunk,	Lyons, Rice.
William Turnbull,	Summerfield, Marshall.
Gertrude M. Vance,	Manhattan, Riley.
Fred VanDorp,	Topeka, Shawnee.
Nettie J. Wayland,	Kansas City, Wyandotte.
Frank Cooper Webb,	Clearwater, Sedgwick.
William Allen Webb,	Clearwater, Sedgwick.
James Halley Whipple,	Olivet, Osage.
Orville Blaine Whipple,	Olivet, Osage.
Amelia Jennie Wiest,	Manhattan, Riley.
William J. Wilkinson,	Manhattan, Riley.
George Leroy Williston,	Manhattan, Riley.
Robert S. Wilson,	Eatonville, Cowley.
George Wolf,	Manhattan, Riley.
Retta Womer,	Womer, Smith.
Earnest A. Wright,	Smith Center, Smith.

SOPHOMORES.

Harvey Adams,	Ozawkie, Jefferson.
Elva Veola Akin,	Manhattan, Riley.
Pearle Akin,	Manhattan, Riley.
Charles Wesley Allison,	Fort Scott, Bourbon.
Flora Bell Austin,	Osage City, Osage.
Nellie Wilhelmina Baird,	Marquette, McPherson.
Walter Raymond Ballard,	Baxter Springs, Cherokee.
Jessie Mary Ballou,	Delphos, Ottawa.
Frank Everett Balmer,	Woodston, Rooks.
Harvey P. Barndt,	Sabetha, Nemaha.
R. A. Barry,	Belle Plaine, Sumner.
Harry N. Bealey,	Morrill, Brown.
Atwood N. H. Beeman,	St. Louis, *Missouri*.
Herbert F. Bergman,	Manhattan, Riley.
Walter Herman Berkey,	Louisburg, Miami.
Raymond Russell Birch,	Manhattan, Riley.
Helen Elizabeth Bottomly,	Manhattan, Riley.

Name.	Post-office and county (or state).
Warren Luther Bowlby,	Fairport, Russell.
Roy C. Bowman,	Oxford, Sumner.
Edward Brant,	Wichita, Sedgwick.
Flora Edna Brenner,	Manhattan, Riley.
George K. Brenner,	Manhattan, Riley.
Edwin H. Brown,	Lincoln, *Nebraska.*
Frank E. Brown,	Highland, Doniphan.
William Wilkinson Buckley,	Clyde, Cloud.
Harvey A. Burt,	Bronson, Bourbon.
Fred Gordon Campbell,	Hutchinson, Reno.
Robert Moore Campbell,	Wamego, Pottawatomie.
Albert F. Cassell,	Beverly, Lincoln.
Robert Archer Cassell,	Manhattan, Riley.
Robert Merritt Chamberlain,	Stockton, Rooks.
Levi Charles Chase,	Hoyt, Jackson.
James Hamilton Cheney,	Great Bend, Barton.
Florence Christina Christensen,	Randolph, Riley.
Roy H. Clark,	Newton, Harvey.
Lida Ethel Clemons,	Manhattan, Riley.
Delmer Coffman,	Manhattan, Riley.
William Irving Coldwell,	Oxford, Sumner.
Earle Albert Cole,	Cuba, Republic.
Mary Margaret Cole,	Manhattan, Riley.
Orlo Loomis Coleman,	Oneida, Nemaha.
Roy Venoia Coleman,	Oneida, Nemaha.
Mary P. Colliver,	Galva, McPherson.
Archie Conner,	Lyons, Rice.
Edna L. Converse,	Rhinehart, Dickinson.
Ruth Cooley,	Manhattan, Riley.
Marvin James Copping,	Delphos, Ottawa.
Don Carl Corbin,	Owens, *Oklahoma.*
Forrest Leslie Courter,	Downs, Osborne.
Edgar Andrew Cowles,	El Dorado, Butler.
Charles Curtis Crowley,	Council Grove, Morris.
Charles William Cummings,	Wilmore, Comanche.
Mamie Grace Cunningham,	Fairview, *Oklahoma.*
Dickie Davies,	Green, Clay.
Edith Nellie Davis,	Manhattan, Riley.
Guy R. Davis,	Kansas City, *Missouri.*
Jay L. Dow,	Manhattan, Riley.
Odessa Della Dow,	Manhattan, Riley.
Ula May Dow,	Manhattan, Riley.
Mary Josephine Edwards,	Emporia, Lyon.
Arthie Aileen Edworthy,	Solomon, Dickinson.
Perylle Avis Embry,	Ottawa, Franklin.
Earl Joy Evans,	Jewell, Jewell.
William K. Evans,	Colby, Thomas.
Minter Farrar,	Axtell, Marshall.
Scott Stuart Fay,	Wilsey, Morris.
Edith Louisa Felton,	McPherson, McPherson.
Harlow Ferguson,	Wabaunsee, Wabaunsee.
Arba C. Ferris,	Conway, McPherson.

Name.	Post-office and county (or state).
Lathrop Weaver Fielding,	Manhattan, Riley.
Lena Finley,	Manhattan, Riley.
Pearl Frost,	Esbon, Jewell.
Charles Wesley Fryhofer,	Randolph, Riley.
Robert Anson Fulton,	Beloit, Mitchell.
Christian A. Gabelman,	Fairport, Ellis.
George A. Gilkison,	Oberlin, Decatur.
Tilden Gingerich,	Vassar, Osage.
Elbert Ernest Greenough,	Bennington Ottawa.
David H. Gripton,	Smith Center, Smith.
Herbert Revere Groome,	Manhattan, Riley.
George H. Gross,	Abilene, Dickinson.
Edna Haines,	Manhattan, Riley.
Avery Vernon Hancock,	Guthrie, *Oklahoma.*
Richard Nimrod Hankins,	Iola, Allen.
Boline Hanson,	Jamestown, (Republic).
Otto Albert Hanson,	Marquette, McPherson.
William H. Harold,	Marion, Marion.
Arthur Garfield Harris,	Lincoln, *Nebraska.*
Lola May Harris,	Harveyville, Wabaunsee.
John Harrison,	Manhattan, Riley.
Milo M. Hastings,	Effingham, Atchison.
Clarence Hawkinson,	Marquette, McPherson.
Edna Hawkinson,	Marquette, McPherson.
Leslie Eugene Hazen,	Centralia, Nemaha.
Harry Russell Heim,	Lincoln, Lincoln.
Harold C. Herman,	Reserve, Brown.
Esther Cecelia Hjelm,	Manhattan, Riley.
Benoni Hoffhines,	Marquette, McPherson.
Anna Hostrup,	Manhattan, Riley.
Mabel Howell,	Manhattan, Riley.
Charles Clinton Howenstine,	Manhattan, Riley.
Bessie Isabel Hudson,	Manhattan, Riley.
Roy Hulse,	Keats, Riley.
William H. Irving,	Baker, Brown.
Linnie A. Jacobs,	Garrison, (Riley).
Susie C. Jacobs,	Garrison, (Riley).
Cora B. Janes,	Quincy, *Illinois.*
Charles Fredrick Johnson,	Mayday, Riley.
Winifred Mae Johnson,	Solomon Rapids, Mitchell.
Laura Frances Jones,	Moran, Allen.
Ralph Le Roy Joss,	Sabetha, Nemaha.
George Henry Kellogg,	Manhattan, Riley.
Clarence Brady Kirk,	Burr Oak, Jewell.
Mildred I. Kirkwood,	Marysville, Marshall.
Nina H. Kirkwood,	Marysville, Marshall.
Luie Edgar Klein,	Manhattan, Riley.
Bertha Krotzer,	Manhattan, Riley.
Charles Kruger,	Seneca, Nemaha.
Clair Legere,	Hill City, Graham.
Halvor Lindland,	Manhattan, Riley.
William Ljungdahl,	Manhattan, (Geary).

Name.	Post-office and county (or state).
Namaus Lock,	Kansas City, *Missouri*.
Daniel Andrew Logan,	Manhattan, Riley.
Roy Earl Zane Long,	Neodesha, Wilson.
Vallie Myrtle Long,	Simpson, Mitchell.
Samuel Ellison Lorimer,	Olathe, Johnson.
John E. P. Lowe,	Phillipsburg, Phillips.
Roy Munroe McKee,	Offerle, Edwards.
Ernest Wilson Matherly,	Manhattan, Riley.
Lloyd Cummins Matson,	Longton, Elk.
Grace Burchett Maxey,	Pomona, Franklin.
Richard Meyer,	Riley, Riley.
Bessie May Montgomery,	Smith Center, Smith.
John Clemet Morrison,	Great Bend, Barton.
Mary Mudge,	Manhattan, Riley.
Lewis J. Munger,	Hollis, Cloud.
Dawn Victoria Murphy,	Keats, Riley.
Verda Ellen Murphy,	Manhattan, Riley.
William Bartle Neal,	Larned, Pawnee.
Ruth Emma Neiman,	Whitewater, Butler.
Bernard R. Nelson,	Lawrence, Douglas.
Frank Newell,	Zeandale, Riley.
Ross N. Newland,	Groveland, McPherson.
Rachel Gertrude Nicholson,	Manhattan, Riley.
Margaret Alice Norton,	Manhattan, Riley.
Jens Nygard,	Denmark, Lincoln.
Amer B. Nystrom,	Topeka, Shawnee.
Leo E. Oates,	Garnett, Anderson.
Allace L. Ober,	Ottawa, Franklin.
Elinore B. Ober,	Ottawa, Franklin.
Anna Matilda Olson,	Manhattan, Riley.
Henry Otto,	Philadelphia, *Pennsylvania*.
Charles Martin Paddock,	Manhattan, Riley.
Louis Reynolds Parkerson,	Manhattan, Riley.
Nell Paulsen,	Whiting, Jackson.
John J. Peckham,	Courtland, Republic.
Arthur Alexander R. Perrine,	Newton, Harvey.
Ruth A. Pfohl,	Princeton, *Indiana*.
Luther B. Pickett,	Emporia, Lyon.
Charles Holcomb Popenoe,	Topeka, Shawnee.
Raymond Ramage,	Arkansas City, Cowley.
Ernest Carl Reed,	Genoa, *Illinois*.
Fanny E. Reynolds,	Cawker City, Mitchell.
Elvin Rickman,	Manhattan, Riley.
Eva May Rickman,	Manhattan, Riley.
Jesse Clyde Rickman,	Manhattan, Riley.
Nellie Eva Rickman,	Manhattan, Riley.
Jennie Inez Ritner,	Manhattan, Riley.
Dorse Robinson,	Beloit, Mitchell.
Hannah Rollins,	Agra, Phillips.
Sarah Rollins,	Agra, Phillips.
George Rummel,	Hartford, Lyon.

Name.	Post-office and county (or state).
William Paul Schroeder,	Lebanon, Smith.
Orville Oshell Scott,	Hutchinson, Reno.
Garfield Shirley,	Newman, Jefferson.
Martin Roy Shuler,	Clifton, Washington.
G. Wallace Simpson,	Council Grove, Morris.
Herbert Newton Skinner,	Jewell, Jewell.
Ethel Louise Smith,	Kansas City, Wyandotte.
Stanley Van Smith,	Ozawkie, Jefferson.
Walter Emery Smith,	Lebo, Coffey.
Winfield Weber Smith,	Norton, Norton.
Zula E. Soupene,	Manhattan, Riley.
Harvey Spencer,	Millerton, Sumner.
George A. Spohr,	Manhattan, Riley.
Julia C. Spohr,	Manhattan, Riley.
Henry Adam Spuhler,	Manhattan, Riley.
William Wesley Stanfield.	Chanute, Neosho.
Blanche Stevens,	Humboldt, Allen.
Harry L. Stevens,	Green, Clay.
Orin A. Stevens,	Blue Rapids, Marshall.
Effie L. Stewart,	Humboldt, Allen.
Daisy May Strite,	Manhattan, Riley.
Ernest Felix Swanson,	Hollis, Cloud.
Jessie A. Sweet,	Stockdale, Riley.
Howard Taylor,	Chapman, Dickinson.
Reuben D. Thomas,	Waterville, Marshall.
Charles L. Thompson,	Leon, Butler.
Claude B. Thummel,	Axtell, Marshall.
Jessie Leona Travis,	Oakley, Logan.
James Monroe Trobert,	Kelly, Nemaha.
Marcia Elizabeth Turner,	Rock Creek, Jefferson.
Horace E. Ulrich,	Manhattan, Riley.
Grace E. Umberger,	Hymer, Chase.
Harry Umberger,	Hymer, Chase.
Eleanor Belle VanOrsdel,	Riley, Riley.
Rebecca Rees Washington,	Manhattan, Riley.
Scott Wear,	Oatville, Sedgwick.
Henry R. Webster,	Yates Center, Woodson.
Joseph Franklin Weed,	Athol, Smith.
Pauline Emilie Wetzig,	Winkler, Riley.
Earl Wheeler,	Bridgeport, Saline.
Inez Wheeler,	Bridgeport, Saline.
Clarence Earl Whipple,	Olivet, Osage.
Clarence H. White,	Burlington, Coffey.
David Dwight White,	Newton, Harvey.
Harry White,	Council Grove, Morris.
Howard B. White,	North Topeka, Shawnee.
Thomas F. White,	Little River, Rice.
Wayne White,	Burlington, Coffey.
Jenevi M. Wilkinson,	Topeka, Shawnee.
Rose Wilkinson,	Manhattan, Riley.
Robert E. Williams,	Herington, Dickinson.
Edgar M. Wilson,	Eatonville, Cowley.

Name.	Post-office and county (or state).
Frederick W. Wilson,	Hill City, Graham.
Charles H. Withington,	Allen, Lyon.
Katherine J. Witt,	Hartshorne, *Indian Territory.*
Frank Woodruff,	Yates Center, Woodson.
Jay G. Worswick,	Ozawkie, Jefferson.

FRESHMEN.

Francis C. Abbott,	Manhattan, Riley.
Ernest L. Adams,	Ozawkie, Jefferson.
Bess Alexander,	Welda, Anderson.
Kate Alexander,	Welda, Anderson.
Lizzie Bea Alexander,	Manhattan, Riley.
Jessie Patience Allen,	Manhattan, Riley.
Susie L. Allen,	Clay Center, *Nebraska.*
Cora Elizabeth Allison,	Florence, Marion.
Clarence Lee Allman,	Manhattan, Riley.
William I. Alstead,	Randolph, Riley.
Harold H. Amos,	Manhattan, Riley.
Cyrus J. Anderson,	Hollis, Cloud.
Florence Olive Anderson,	Randolph, Riley.
Harry N. Anderson,	Abilene, Dickinson.
John M. Andrews,	Beloit, Mitchell.
Mitchell Andrews,	Beloit, Mitchell.
Loyd B. Babbit,	Hiawatha, Brown.
Benjamin B. Baird,	Milford, (Riley).
Robert Obidiah Baird,	Cuba, Republic.
James Edward Baker,	Brenner, Doniphan.
Raymond C. Barr,	Manhattan, Riley.
May Barry,	Manhattan, Riley.
Charles Earle Bassler,	Waterloo, *Nebraska.*
Mabel Baxter,	Manhattan, Riley.
Julia Susanna Bayles,	Manhattan, Riley.
William Fielding Bayne,	Tisdale, Cowley.
Ira J. Beach,	Winfield, Cowley.
Samuel Keith Beach,	Keene, Wabaunsee.
Jesse N. Bealey,	Morrill, Brown.
Leslie Ward Beckman,	Randolph, Riley.
Alvan E. Beeler,	Grantville, Jefferson.
Ivan R. Beeler,	Grantville, Jefferson.
Alfred J. Belin,	Green, (Riley).
Kate Bell,	Manhattan, Riley.
Ira Roscoe Berkey,	Louisburg, Miami.
Evelyne Myrtle Berkley,	Manhattan, Riley.
Harrison Roy Betz,	Chapman, Dickinson.
Clare Biddison,	Manhattan, Riley.
Ethel Viola Bixby,	Solomon Rapids, Mitchell.
Horace Bixby,	Solomon Rapids, Mitchell.
Leola Pearl Bixby,	Solomon Rapids, Mitchell.
Bessie Louisa Blanchard,	Marysville, Marshall.
Mary Bolton,	Paxico, Wabaunsee.
Herbert Jefferson Bottomly,	Manhattan, Riley.
Gordon B. Bourne,	Delphos, (Cloud).

Name.	Post-office and county (or state).
Clementine Rigby Bower,	Manhattan, Riley.
Thomas W. Bower,	Manhattan, Riley.
Warren R. Boyd,	Kensington, Smith.
Harry Delwyn Briggs,	Manhattan, Riley.
John Briggs,	Manhattan, (Geary).
James E. Brock,	Chase, Rice.
James Robert Brock,	Frankfort, (Nemaha).
Frank F. Brooke,	Garnett, Anderson.
Byrdie Anna Brown,	Manhattan, Riley.
Foster L. Brown,	Hiawatha, Brown.
G. Homer Brown,	Arkansas City, Cowley.
Grace Florence Brown,	Manhattan, Riley.
Albert Cooper Buffum,	Manhattan, Riley.
Rollin Bull,	Lenora, Norton.
Alten Clyde Burger,	Reserve, Brown.
Harley Joe Burger,	Reserve, Brown.
Walter E. Burt,	Bronson, Bourbon.
William Archie Bush,	Oakland, Shawnee.
W. Wesley Bush,	Little River, Rice.
Arthur Butler,	Lawrence, Douglas.
Robert Orlin Butler,	Topeka, Shawnee.
Fred Wallace Caldwell,	Garnett, Anderson.
Frankie Calvin,	Riley, Riley.
John Willard Calvin,	Manhattan, Riley.
Delwin Morton Campbell,	Meriden, Jefferson.
Kate Lavenia Campbell,	Manhattan, Riley.
Stella Campbell,	Goodrich, Linn.
Will Ward Campbell,	Emporia, Lyon.
John Sheldon Canfield,	Belleville, Republic.
Torje Carlson,	Almena, Norton.
Nannie Carnahan,	Stockdale, Riley.
Estella Victoria Carson,	Dodge City, Ford.
Walter Carson,	Dodge City, Ford.
Frank A. Chamberlain,	Stockton, Rooks.
Addie Clark,	Manhattan, Riley.
Curtis E. Clark,	Reserve, Brown.
Frederick Maxwell Clark,	Manhattan, Riley.
Millicent E. Clark,	Manhattan, Riley.
Norman H. Clark,	Welcome, Geary.
Robert Earl Clark,	Meeker, *Colorado.*
Lee S. Clarke,	Wagoner, *Indian Territory*
Dora Clarkson,	Fairport, Russell.
Alice Pearl Cloud,	Wabaunsee, Wabaunsee.
Stella May Clure,	Des Moines, *Iowa.*
Edith E. Coffman,	Manhattan, Riley.
Amy Cole,	Manhattan, Riley.
Edwin Lloyd Cole,	Manhattan, Riley.
Roy Allison Collier,	Liberal, Seward.
Allan Colman,	Manchester, Dickinson.
Roy William Conkey,	Nortonville, Jefferson.
Claude S. Conner,	Lyons, Rice.
Hermon H. Conwell,	Topeka, Shawnee.

Name.	Post-office and county (or state).
W. Howard Cook,	Kingman, Kingman.
George Vicary Cooke,	Freeport, Harper.
Ralph Cooley,	Manhattan, Riley.
Bernard C. Copeland,	Idana, Clay.
Mary Copley,	Manhattan, Riley.
Grover C. Cottingham,	Le Roy, Coffey.
Ethel Cowles,	Sibley, Douglas.
Glen H. Crippen,	Council Grove, Morris.
Lurie Mae Crofut,	Manhattan, Riley.
Wardie Albertus Crofut,	Manhattan, Riley.
Everet William Cudney,	Belpre, Edwards.
Floyd M. Cudney,	Belpre, Edwards.
Herman L. Cudney,	Belpre, Edwards.
Margaret Ruth Cunningham,	Glasco, Cloud.
Sol Whitney Cunningham,	Manhattan, Riley.
Harry Albert Cure,	Atchison, Atchison.
June Currier,	Garnett, Anderson.
Ross Curtis,	Vermilion, Marshall.
Roy Dale,	Manhattan, Riley.
Winifred Anna Dalton,	Saint George, Pottawatomie.
Curtis Lynn Daughters,	Lincoln, Lincoln.
Clyde Ostrand Davidson,	Columbus, Cherokee.
Donald Davies,	Green, Clay.
Aurel N. Davis,	Manhattan, Riley.
Ernest Davis,	Parsons, Labette.
Herbert Lee Davis,	Junction City, Geary.
Joseph Nelson Davis,	Elk Falls, Elk.
Robert Lee Davis,	Vermilion, Marshall.
William L. Davis,	Fairview, Brown.
Anna Eliza Day,	Manhattan, Riley.
Loea Bessie DeArmond,	Manhattan, Riley.
Alexander Denneler,	Winchester, Jefferson.
Frank Willis Denton,	Chetopa, Labette.
Florene B. Deputy,	Manhattan, Riley.
Fred Stephen Dever,	Le Roy, Coffey.
Roy H. Dillingham,	Hiawatha, Brown.
Charles Morton Dole,	Doles Park, McPherson.
Edward S. Dolph,	McLouth, Jefferson.
Harry Douglas,	Manhattan, Riley.
Alice Ada Dresser,	Manhattan, Riley.
Fredrick Lee Duncan,	Delphos, Ottawa.
Curtis Antony Eastwood,	Berlin, Bourbon.
Walter H. Edmundson,	Home, Marshall.
Leonard Roscoe Elder,	Osage City, Osage.
M. Carrie Elliott,	Beatrice, *Nebraska.*
William Earl Ellsworth,	La Cygne, Linn.
Marshal Elsas,	Chillicothe, *Missouri.*
Esther E. Ericson,	Manhattan, Riley.
Harriet Maria Esdon,	Olsburg, Pottawatomie.
Chauncey D. Evans,	Council Grove, Morris.
Lois Failyer,	Manhattan, Riley.
Arthur Eugean Fairman,	Wakefield, Clay.

Name.	Post-office and county (or state).
Lena Cora Fay,	Wilsey, Morris.
Florence May Felton,	McPherson, McPherson.
Harry H. Ferguson,	Philadelphia, *Pennsylvania.*
Edna J. Flatter,	Manhattan, Riley.
Fenton Burn Fleming,	Athol, Smith.
Mabel D. Fleming,	Smith Center, Smith.
M. Edith Forsyth,	Dwight, Morris.
Frank W. Fortna,	Chase, Rice.
Jerry J. Foster,	Paradise, Russell.
James Wilson Freeman,	Walnut, Crawford.
Newton Staley Gall,	Reserve, Brown.
John M. Garrity,	Perth, Sumner.
Albert Gasser,	Manhattan, Riley.
Eunice May Gates,	Manhattan, Riley.
Laura Gates,	Manhattan, Riley.
Jesse E. George,	Ottawa, *Indian Territory.*
Olga Effie George,	Manhattan, Riley.
Charles A. Gilkison,	Larned, Pawnee.
Walter W. Gillespie,	Buffalo, Wilson.
William Thomas Gilliford,	Olsburg, Pottawatomie.
Oliver Holmes Gish,	Acme, Dickinson.
Walter S. Gish,	Abilene, Dickinson.
Jessie Mae Gist,	Capioma, Nemaha.
Adolph J. Goering,	Moundridge, McPherson.
Jessie Lucretia Gove,	Cherokee, Crawford.
Harry V. Graham,	Beverly, Lincoln.
Lewis W. Graham,	Turon, Reno.
Mont J. Green,	Randall, Jewell.
May Lucetta Griffing,	Manhattan, Riley.
Pauline Gripton,	Smith Center, Smith.
Walter Purtee Groves,	Edwardsville, Wyandotte.
Aaron Guth,	Sterling, Rice.
Harry T. Hamler,	Hulen, *Oklahoma.*
Ora Elmer Hammond,	Tilley, *Missouri.*
Joy Belle Hancock,	Guthrie, *Oklahoma.*
Allen Hansford,	Topeka, Shawnee.
Louis William Hanson,	Greenleaf, Washington.
Daisye Ina Harner,	Manhattan, Riley.
Irl Hinman Harris,	Cape Girardeau, *Missouri.*
John Willson Harris,	Chicago, *Illinois.*
Grace Ellen Harrison,	Manhattan, Riley.
Ida F. Hassebroek,	Manhattan, Riley.
David Frank Hawkins,	Lyndon, Osage.
Oliver Hawks,	Morrill, Brown.
Charles Robert Hedrick,	Carthage, *Missouri.*
Lamar Raper Hennessy,	Neodesha, Wilson.
Jestie Lovinia Hepler,	Manhattan, Riley.
Vara S. Hepler,	Manhattan, Riley.
Oliver W. Hess,	Alma, Wabaunsee.
Vern E. Hess,	Almena, Norton.
George William Hewins,	Valencia, Shawnee.
Minnie May Hicks,	Wamego, Pottawatomie.

Name.	Post-office and county (or state).
Inez Leota Hjort,	Manhattan, Riley.
Jennie Hoffhines,	Marquette, McPherson.
Lark Hoffman,	Manhattan, Riley.
Ross Elmer Hoffman,	Manhattan, Riley.
Gertrude Elma Hole,	Washington, Washington.
William Warren Hole,	Washington, Washington.
George E. Hornbuckle,	Paola, Miami.
Ruby Abigail Howard,	Fulton, *Oklahoma.*
Annice Howell,	North Topeka, Shawnee.
Harvey B. Hubbard,	Beloit, Mitchell.
Elsie Pearl Humphreys,	Kiowa, Barber.
Annie Hutchings,	Pomona, Franklin.
Guy Charles Hutchinson,	Bellaire, Smith.
William Harry Ijams,	Aurora, Cloud.
Irene Ingraham,	Manhattan, Riley.
Helen C. Inskeep,	Manhattan, (Pottawatomie).
Minnie Ora Jenkins,	Council Grove, Morris.
Josiah Anderson Jeter,	Saint Clere, Pottawatomie.
Alta L. Jewitt,	Yates Center, Woodson.
Elmer Johnson,	Latimer, Morris.
Edward M. Johnston,	Caldwell, Sumner.
Tom Henry Johnston,	Manhattan, Riley.
Charles Sumner Jones,	Moran, Allen.
George W. Jones,	Hill City, Graham.
Seneca Jones,	Bala, Riley.
Robert Jordan,	Caldwell, Sumner.
Chester G. Joy,	Cora, Smith.
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Clara Myrtle Kahl,	Manhattan, Riley.
Grover Cleveland Kahl,	Manhattan, Riley.
William W. Kendall,	Tonganoxie, Leavenworth.
Almira Kerr,	Idana, Clay.
William Francis Kerr,	Idana, Clay.
Fredric Arthur Kiene,	Valencia, Shawnee.
Emory Murvin Kiger,	Burlington, Coffey.
Thomas Barr Kiger,	Burlington, Coffey.
Mary Kimball,	Manhattan, Riley.
Herbert Kindred,	Lenape, Leavenworth.
John Fred Kindsvater,	Manhattan, Riley.
Elizabeth Hattie Klein,	Manhattan, Riley.
Joseph P. Klein,	Manhattan, Riley.
Bessie Bell Knight,	Manhattan, Riley.
Edna Beth Knostman,	Manhattan, Riley.
Willis Kramer.	Auburn, Shawnee.
Hans Hanson Krogh,	Jamestown, (Republic).
Albert Laravana Larson,	Marquette, McPherson.
Robert Gould Larzelere,	Wathena, Doniphan.
Will G. Lemmon,	Nardin, *Oklahoma.*
Clyde Livingston Lewis,	Kansas City, Wyandotte.
Percy E. Lill,	Andale, Sedgwick.
Guy Gilbert Lilley,	Star, Greenwood.
Theodosia Lofinck,	Manhattan, Riley.

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Laura Lillian Lyman,	Manhattan, Riley.
William E. McAvoy,	Iuka, Pratt.
Andrew DeLos McCampbell,	Manhattan, Riley.
Charles Wilbur McCampbell,	Manhattan, Riley.
Edward Louis McClaskey,	Girard, Crawford.
George W. McClung,	Jewell, Jewell.
Homer McGrew,	Kansas City, Wyandotte.
Lewis McHenry,	Stockton, Rooks.
James K. McKenzie,	Parkerville, Morris.
Matthew McKeon,	Frankfort, Marshall.
Fred B. McKinnell,	Maize, Sedgwick.
Charles E. McLaughlin,	Newton, Harvey.
Irwin Clearnce McManis,	Manhattan, Riley.
Charles Edward McMillan,	Plymouth, Lyon.
John Roger McMillan,	Williamsburg, Franklin.
Cora E. McNutt,	Ottawa, Franklin.
Alma McRae,	Goodrich, Linn.
Alva Mabry,	Little River, Rice.
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Robert Johnson Mackey,	Oskaloosa, Jefferson.
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Phillip Edward Marshall,	Denison, Jackson.
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Sarah Mead,	Dexter, Cowley.
James E. Merritt,	Manhattan, Riley.
Edward M. Miers,	Manhattan, Riley.
Bernard P. Miller,	Lorraine, Ellsworth.
Clarence Metcalf Miller,	Manhattan, Riley.
Edgar S. Miller,	Derby, Sedgwick.
Fred Carl Miller,	Belvue, Pottawatomie.
Clarence Moffitt,	Winfield, Cowley.
Ira James Monroe,	Whiting, Jackson.
Roy N. Monroe,	Whiting, Jackson.
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Bertha James Morgan,	Topeka, Shawnee.
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Loren Claire Morgan,	Cherryvale, Montgomery.
James Morrison,	Ford, Ford.
William Thomas Morrison,	Phillipsburg, Phillips.
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Willard Austin Moyer,	Keats, Riley.
Alvan Taylor Munger,	Hollis, Cloud.
Mabel Murphy,	Manhattan, Riley.

Name.	Post-office and county (or state).
Kate Murray,	Ogden, Riley.
Helen Mabel Mustard,	Manchester, Dickinson.
Bessie Myers,	Ogden, Riley.
Myra Myers,	Marquette, McPherson.
Nellie Florence Nason,	Rossville, Shawnee.
Frank M. Neal,	Topeka, Shawnee.
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Lloyd Nicklin,	Emporia, Lyon.
Bessie Minerva Nicolet,	Manhattan, Riley.
Christ G. Nielson,	Lincoln, Lincoln.
Segrid Elizabeth Nystrom,	Topeka, Shawnee.
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Alice E. O'Brien,	Manhattan, Riley.
Faye H. Oliver,	Dwight, Morris.
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Victor Emanuel Oman,	Walsburg, Riley.
William Oliver Orr,	Chase, Rice.
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Carl Phillips,	Choteau, *Indian Territory*.
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Martha S. Pittman,	Hammond, Bourbon.
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Charles Clinton Randle,	Bala, Riley.
Elizabeth Randle,	Bala, Riley.
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John C. Reasoner,	Reserve, Brown.
Harry Earl Reed,	Stockton, Rooks.
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Claude Reynolds,	Jewell, Jewell.
Bertie Fay Richards,	Tyner, Smith.

Name.	Post-office and county (or state).
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James Richards,	Manhattan, Riley.
Melvin Rinehart,	Smith Center, Smith.
Nellie Pearl Robbins,	Manhattan, Riley.
Albert Finis Roberts,	Morrill, Brown.
Jesse Ed. Rodkey,	Blue Rapids, Marshall.
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Jay F. Ross,	Manhattan, Riley.
Worth D. Ross,	Manhattan, Riley.
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Oscar Arthur Savage,	Bluff Springs, *Illinois*.
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Walter Ray Schenck,	Tonganoxie, Leavenworth.
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Mamie Gardiner Scott,	Arkansas City, Cowley.
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Jay Latimer Smith,	Ozawkie, Jefferson.
Ned Smith,	Manhattan, Riley.
Ruth Anna Smith,	Manhattan, Riley.
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Harry Spears,	Richmond, Franklin.
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Samuel George Stead,	Preston, Pratt.
Mabel Stevens,	Humboldt, Allen.
Arthur Lee Stevenson,	Hepler, Crawford.
Bruce Stewart,	Plattsburg, *Ohio*.
Claudius Stewart,	North Topeka, Shawnee.
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Grace Elizabeth Streeter,	Milford, Geary.
Lyman Bradley Streeter,	Milford, Geary.
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Janie Strong,	Kensington, Smith.
Mary E. Strong,	Kensington, Smith.
Durward Stuber,	Wilmot, Cowley.
William James Sturgeon,	Emerson, *Iowa*.

Name.	Post-office and county (or state).
Charles Edward Stutzman,	McPherson, McPherson.
Daniel Charles Sullivan,	Ulysses, Grant.
Anna Swart,	Manhattan, Riley.
Bertha Florence Sweet,	Manhattan, Riley.
Agnes Taylor,	Abilene, Dickinson.
Irene Alma Taylor,	Chapman, Dickinson.
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May Tempero,	Clay Center, Clay.
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Raymond Charles Thompson,	Manhattan, Riley.
Fred J. Thomson,	Manhattan, Riley.
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Willie Clide Thurlow,	Oxford, Sumner.
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Elbert Wren Thurston,	Manhattan, Riley.
S. Ray Tilbury,	Arkansas City, Cowley.
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Sadie Mae Travis,	Oakley, Logan.
Allan Raymond Trobert,	Manhattan, Riley.
Maude May Trobert,	Manhattan, Riley.
Tillie Trunk,	Caldwell, Sumner.
Elliott Garfield VanEveren,	Manhattan, Riley.
Lucy Faye VanEveren,	Manhattan, Riley.
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Frank Hannibal Walters,	Manhattan, Riley.
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James R. Wear,	Barnard, Lincoln.
Chauncey Iles Weaver,	Wakefield, Clay.
Hall D. Webster,	Manhattan, Riley.
Charles Miller Weeks,	Lincoln, Lincoln.
Roy D. Welstead,	Mayview, Jewell.
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Helen Clara Westgate,	Manhattan, (Geary).
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Arthur Chase White,	Delphos, Ottawa.
Ralph Richard White,	Newton, Harvey.
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John Henry Willig,	Pavilion, Wabaunsee.
Vesta Williston,	Manhattan, Riley.
Carl Emory Wilson,	Emmons, Washington.
Fred D. Wilson,	Murdock, Butler.
Lawrence Lyle Wilson,	Murdock, Butler.
Ray C. Wilson,	Murdock, Butler.
Eleanor Cornelia Winne,	Manhattan, Riley.
James Harlan Wolcott,	Garfield, Pawnee.
Cora E. Wood,	Freeport, Harper.

Name.	Post-office and county (or state).
Cora Etta Wood,	Manhattan, Riley.
Elsie Jane Wood,	Ogden, Riley.
Alba M. Woods,	Saint George, Pottawatomie.
John Lyman Woods,	Saint George, (Riley).
James Percy Worsley,	Maplehill, Wabaunsee.
George Leroy Wright,	Marvin, Phillips.
Guy Yerkes,	Hutchinson, Reno.
Clifford C. Young,	Manhattan, Riley.
James Walter Zahnley,	Dwight, Morris.
Asa Calvin Zimmerman,	Moray, Doniphan.

PREPARATORY.

John Jacob Abrahams,	Formosa, Jewell.
Ethel Alexander,	Manhattan, Riley.
Carrie Anderson,	Blue Rapids, Marshall.
Charles J. Anderson,	Cleburne, Riley.
Ruben Hartley Anderson,	Riverdale, Sumner.
Will Anderson,	Osage City, Osage.
Winfield Scott Armstrong,	Topeka, Shawnee.
May Asbury,	Topeka, Shawnee.
Phœbe Amelia Aspelin,	Dwight, Geary.
Eppa Cleceland Ausherman,	Elmont, Shawnee.
Ruben Oliver Axelton,	Randolph, Riley.
Andrew O. Bacus,	Ness City, Ness.
Emily Josephine Baker,	Protection, Comanche.
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William P. Barber,	Windom, McPherson.
Francis Alva Barnett,	Emporia, Lyon.
Walter Andrew Bartholf,	Grandcane, *Louisiana.*
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Harry Garfield Beall,	Grantville, Jefferson.
Martin J. Bengston,	Windom, McPherson.
Louis Berges,	Onaga, Pottawatomie.
Ida Adelia Blachly,	Leonardville, Riley.
Frank Blaylock,	Saint Clere, Pottawatomie.
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Arminta H. Breckbill,	Detroit, Dickinson.
Mary Brookens,	Harlan, Smith.
Bessie Marie Brooks,	Keats, Riley.
George E. Brooks,	Marysville, Marshall.
Leonard Brown,	Manhattan, Riley.
Louis Brown,	Manhattan, Riley.
Wallace Bull,	Marysville, Marshall.
Alfred L. Burdett,	Rosemont, Osage.
Fred Lee Burns,	Walnut, Bourbon.
William Burtner,	Manhattan, Riley.
Melvie Cahill,	Randall, Jewell.
Charley Caldwell,	Kincaid, Anderson.
George William Caldwell,	Tyner, Smith.
Lee Milton Campbell,	Manhattan, Riley.

Name.	Post-office and county (or state).
Jesse R. Chapple,	Chanute, Neosho.
Claud F. Cheney,	Fort Scott, Bourbon.
C. Grace Clarkson,	Fairport, Russell.
Lyman Joel Coffman,	Emporia, Lyon.
George Alfred Collier,	Overbrook, Osage.
Lewis M. Collins,	Council Grove, Morris.
Bertha Cook,	Russell, Russell.
Walter E. Cook,	Russell, Russell.
Leroy Coon,	Reserve, Brown.
Robert Lee Cormack,	Solomon, Dickinson.
J. Leonard Cox,	Latimer, Morris.
Adelia Cree,	Manhattan, Riley.
Lulu Bird Criswell,	Manhattan, Riley.
James Wesley Crooks,	Frankfort, Marshall.
Lester Roy Davidson,	Yates Center, Woodson.
Irma Davies,	Green, Clay.
Frank Lee Davis,	Lakin, Kearny.
Jennie Singleton Davis,	Manhattan, Riley.
Mayme Davis,	Manhattan, Riley.
Merton Linden Davis,	Norton, Norton.
Lynn DeGarmo,	Great Bend, Barton.
Sadie Elizabeth Deibler,	Manhattan, Riley.
Russell DeLair,	Oketo, Marshall.
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Chester Derry,	Saint Clere, (Jackson).
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Ida E. DeSelm,	Manhattan, Riley.
Louis C. DeSelm,	Manhattan, Riley.
Warren K. Dodge,	Manhattan, Riley.
Emma Dole,	Canton, McPherson.
Fay Douglas,	Manhattan, Riley.
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Robert H. Dunn,	Paola, Miami.
Gustave Eastman,	Ogden, Riley.
Lewis Edmonds,	Topeka, Shawnee.
Guy Henry Edwards,	Phillipsburg, Phillips.
(Mrs.) Robertha Gilbert Edwards,	Woodruff, Phillips.
Fred Eigenmann,	Vermilion, Marshall.
Josa Howard Embry,	Taloga, *Oklahoma.*
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Justus L. Evans,	Marion, Marion.
Ruth Esther Evans,	Westmoreland, Pottawatomie.
Bessie Irene Fear,	Lasita, Riley.
John H. Fee,	Zenith, Stafford.
Harry Fetrow,	Enon, Barber.
Cydney Field,	Ionia, Jewell.
Stella Finlayson,	Summerfield, Marshall.
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Daniel Forsyth,	Howard, Elk.
Emily Fritz,	Beattie, (Marshall).
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John Earnest Funk,	Homewood, Franklin.

Name.	Post-office and county (or state).
George C. Gardner,	Chanute, Neosho.
Grace Evelyn Gardner,	Homewood, Franklin.
Edwin Garrigues,	Zeandale, Riley.
Howard C. Garwood,	Clyde, Cloud.
John Christopher Geyer,	Havensville, Pottawatomie.
Harvey Allen Gibbons,	Pratt, Pratt.
Claud Demaunt Ginter,	McLouth, Jefferson.
Emil A. Gladd,	Stockholm, Wallace.
Emma Mathilda Gladd,	Stockholm, Wallace.
Daniel Albert Glenn,	Wamego, Pottawatomie.
Claude Lyman Goff,	Meeker, *Colorado.*
Thomas Jefferson Gosch,	Sterling, Rice.
George L. Graves,	Kiowa, Barber.
Loren Omer Gray,	Galena, Cherokee.
Elwood R. Griest,	Clyde, Cloud.
Charles Osborne Griffin,	Boyle, Jefferson.
Cora Alma Grimm,	Pavilion, Wabaunsee.
Ida Mae Groves,	Edwardsville, Wyandotte.
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Watson P. Handley,	Monument, Logan.
Clarence Henry Haney,	Courtland, Republic.
Charles H. Hanson,	Greenleaf, Washington.
John Milburn Hardy,	Manhattan, Riley.
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Frank Harrison,	Topeka, Shawnee.
Sarah Elmena Harrison,	Glen Elder, Mitchell.
Harry Hart,	Fort Scott, Bourbon.
Charles C. Hastings,	Edgerton, Johnson.
Lillias Irean Hatfield,	Belleville, Republic.
Clara Cleveland Haynes,	North Topeka, Shawnee.
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William Hemphill,	Pratt, Pratt.
Edward Henery,	Goff, Nemaha.
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Ethel Dula Hodges,	Saint George, Pottawatomie.
George F. C. Hoerner,	Manhattan, Riley.
Merl Holben,	Norcatur, Decatur.
Joseph Allen Hollinger,	Rhinehart, Dickinson.
Thomas Frederick Holmes,	Abilene, Dickinson.
Ada Statira Holroyd,	Manhattan, Riley.
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David H. Hull,	Kiowa, Barber.
Pansy Claribel Humphreys,	Kiowa, Barber.
Clyde Earnest Huston,	Rosalia, Butler.
Orlando Delton Hutto,	Monument, Logan.
Sylva Ethol Flossy Jackson,	Garrison, Pottawatomie.
Thomas Burton Jackson,	Stockton, Rooks.
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Rosetta James,	Bala, Riley.
Romney Jewell,	Manhattan, Riley.

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Alfred Johansen,	Codell, Rooks.
Herman Berger Johnson,	Axtell, Marshall.
Selma A. Johnson,	Axtell, Marshall.
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Mary Lea Jones,	Wakefield, Clay.
Thomas Nelson Jones,	Plymouth, Lyon.
William Brown Jones,	Plymouth, Lyon.
Vessie May Joyner,	Manhattan, Riley.
Miner M. Justin,	Agra, Phillips.
Mintar M. Keen,	Clay Center, Clay.
David Simpson Kellogg,	Manhattan, Riley.
Clyde Kendall,	Latimer, Morris.
H. Claude Kennedy,	Freeport, Harper.
John M. Kerr,	Orion, Gove.
Foster Klous,	Junction City, Geary.
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Charles Kolsky,	Jennings, Decatur.
Emma Rosetta Lane,	Kansas City, Wyandotte.
Elvin Larson,	Marquette, (Ellsworth).
Anna Belle Lasley,	Lyons, Rice.
Lytle James Laux,	Westmoreland, Pottawatomie.
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Bertha Bell Lewis,	Topeka, Shawnee.
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Katie Linhart,	Irving, Marshall.
Charles Lipperd,	Oxford, Sumner.
Albert W. Little,	Burlingame, Osage.
Charles Earl Low,	Washington, Washington.
Ernest Arthur Lund,	Manhattan, (Pottawatomie).
Frank J. Lund,	Lasita, Riley.
Ida Lund,	Lasita, Riley.
Paul C. Lyman,	Thayer, Neosho.
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Gussie McCormick,	Zeandale, Riley.
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Nellie May McCutcheon,	Manhattan, Riley.
Ethel McDonald,	Manhattan, Riley.
Scott Roger McDonald,	Manhattan, Riley.
U. B. McGreevy,	Great Bend, Barton.
Horace A. McLaughlin,	Bronson, Allen.
Janet L. McLaughlin,	Hiawatha, Brown.
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Jacob Mans,	Hanover, Washington.
William Woods Marriott,	Holton, Jackson.
Adolphus Mater,	Chanute, Neosho.
Daisy Viola Mathews,	Westmoreland, Pottawatomie.
Earnest May,	Piedmont, Greenwood.
Frank B. Mayhew,	Belpre, Edwards.

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Wyman A. Messenger,	Cleveland, Kingman.
Arden Lee Messick,	Oakley, Logan.
Nina Beatrice Metler,	Manhattan, Riley.
Amelia E. Miller,	Lasita, Riley.
Harry Miller,	Larkin, Jackson.
Francis Burzley Milliken,	Hill City, Graham.
Edward L. Minnis,	Wewoka, *Indian Territory.*
John Wesley Minnis,	Wewoka, *Indian Territory.*
Berton Lawrence Mitchell,	Elmont, Shawnee.
Nellie C. Mitchell,	Manhattan, Riley.
Roy V. Mitchell,	Groveland, McPherson.
Vernie Lorena Mize,	Olathe, Johnson.
George A. Moffatt,	Clyde, Cloud.
Walter Mogge,	Halifax, Wabaunsee.
Mary Emma Moore,	Americus, Lyon.
William E. Moore,	Americus, Lyon.
Theodore Edward Morlan,	Weston, Geary.
George Morris,	Council Grove, Morris.
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Julia Nelson,	Montrose, Jewell,
Rachel Nelson,	Montrose, Jewell.
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Edward O'Conner,	Saint John, Stafford.
Daniel O'Neill,	Hoyt, Jackson.
Burton Sylvester Orr,	Topeka, Shawnee.
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Grace Palmer,	Burlingame, Osage.
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Grover Perry,	Clyde, Cloud.
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Landon L. Platt,	Saint Joseph, *Missouri.*
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Jacob Reynolds Porter,	Oronoque, Norton.
Lee Etherton Porter,	Stafford, Stafford.
Lulu Pearl Price,	Fostoria, Pottawatomie.
John Prickett,	Wamego, Pottawatomie.
Bertha Pringle,	Eskridge, Wabaunsee.
Myldred Pringle,	Eskridge, Wabaunsee.

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William Fransis Quinlan,	Newman, Jefferson.
Ralph E. Reber,	Morrill, Brown.
Mattie A. Reed,	Kanopolis, Ellsworth.
Harry S. Reynolds,	Burr Oak, Jewell.
Calbert M. Richardson,	Moline, Elk.
Estella May Rigg,	Kirwin, Phillips.
Joseph Potter Rishel,	Poe, Logan.
Ross Robb,	Jewell, Jewell.
James Roberts,	Junction City, Geary.
Jesse Smith Roberts,	Denison, Jackson.
Percy M. Roberts,	Clearwater, Sumner.
Karl Rollenhagen,	Wheaton, Pottawatomie.
Nels Rosedale,	Frankfort, Marshall.
Anselm Ruden,	Axtell, Marshall.
Logan B. Rudrauff,	Burlington, Coffey.
John Russell,	Ashton, Sumner.
Lyal E. Russell,	Redfield, Bourbon.
Lynne H. Ryon,	Wakefield, (Dickinson).
Leslie Victor Ryther,	Topeka, Shawnee.
Lawrence Guppy Sage,	Willard, Shawnee.
Clarence W. Sanders,	Osage City, (Lyon).
Federico Sarabia,	Panay, *Kalino, P. I.*
John Schaede,	Yates Center, Woodson.
George Schiffbauer,	Arrington, Atchison.
Hugo Schild,	Hanover, Washington.
P. B. Schmidt,*	Inman, McPherson.
Richard C. Schneider,	Hillsboro, Marion.
Carl Robert Schultze,	Melvern, Osage.
Robert Seaton,	Saint Clere, Pottawatomie.
George Edger Selby,	Westmoreland, Pottawatomie.
Hedry Lee Settle,	Basil, Kingman.
George H. Shank,	Salina, Saline.
Perry M. Sharp,	Martin City, *Missouri.*
Robert Sheldon,	North Topeka, Shawnee.
Albert Sheridan,	Emporia, Lyon.
Howard Leslie Sherman,	Manhattan, Riley.
Amelia Shimek,	Cuba, Republic.
Clinton Shotts,	Yates Center, Woodson.
Bart W. Shulda,	Cuba, Republic.
Ross Lorain Shunk,	Hutchinson, Reno.
Earl E. Shupe,	Arkansas City, Cowley.
Ella May Whitehead Simair,	Manhattan, Riley.
Jay Sitterley,	Manhattan, Riley.
Kate Minnie Sitterley,	Manhattan, Riley.
Cora Smith,	Manhattan, Riley.
Fred J. Smith,	Hamlin, Brown.
Luther Earle Snyder,	Mateer, *Oklahoma.*
Talmage Solt,	Webb City, *Missouri.*
Arthur Sooly,	Elbing, Butler.

* Deceased.

Name.	Post-office and county (or state).
Irving Ray Spencer,	Lecompton, Douglas.
Frank Jacob Spuhler,	Okarche, *Oklahoma*.
Daniel W. Steinhour,	Winfield, Cowley.
James Francis Stirrat,	Mina, Marshall.
Estella Blanche Stoeker,	Detroit, Dickinson.
William Franklin Strong,	Kensington, Smith.
Alva Stryker,	Blue Rapids, Marshall.
Clarence A. Stutzman,	McPherson, McPherson.
Ida Mae Stutzman,	McPherson, McPherson.
Elton C. Swingle,	Manhattan, Riley.
Colman Swope,	Yates Center, Woodson.
Dallas Omer Tawney,	Rantoul, Franklin.
Grace Elwis Taylor,	Rossville, Shawnee.
Benjamin W. Tempero,	Clay Center, Clay.
Samuel H. Thomas,	Bunker Hill, Russell.
John T. Throbeck,	Norway, Republic.
Carl Totten,	Throop, Washington.
Clarence William Totten,	Throop, Washington.
Archie Nolen Townsend,	Manhattan, Riley.
Lottie Townsend,	Westmoreland, Pottawatomie.
Clark Travelute,	Marysville, Marshall.
William Arthur Travis,	Manhattan, Riley.
Bernard Lee Ulrich,	Manhattan, Riley.
Ben H. VanDalsen,	Fairview, Brown.
Edward Martin VanMeter,	Northfield, *Minnesota*.
Karl VanSickle,	Fancy Creek, Clay.
Clarence Dudley Vawter,	Topeka, Shawnee.
Arthur Wagner,	Kingman, Kingman.
Frank B. Wagner,	Kingman, Kingman.
Elwood L. Walker,	Dresden, Decatur.
F R. Wallack,	Cuba, Republic.
Glen A. Warner,	Mullinville, Kiowa.
Anton Westerburg,	Savonburg, Allen.
Alfred Tollet White,	Portia, *Arkansas*.
Earl Williams,	Pawnee Rock, Barton.
Fred Lawrence Williams,	Olpe, Lyon.
James Ernest Wilson,	Eskridge, Wabaunsee.
Eugene Talbot Winship,	Trenton, *Missouri*.
John Walter Wiseman,	North Topeka, Shawnee.
Leonard E. Womer,	Womer, Smith.
Forest Lee Woods,	Mulock, *Texas*.
Charles Worrel,	Manhattan, Riley.
Bert Wright,	Ionia, Jewell.
John Yeagley,	Marion, Marion.
Clyde Yoeum,	Saint John, Stafford.

SPECIAL STUDENTS.

(Mrs.) Helen K. Ashton,	Denver, *Colorado*.
Florence Nina Barger,	Smith Center, Smith.
Clinton Beck,	Kinsley, Edwards.
Emma Elizabeth Bliss,	Mankato, Jewell.
Guerdon G. Charlton,	Lawrence, (Jefferson).

Name.	Post-office and county (or state).
Edith DePriest,	Salina, Saline.
Minnie L. Forceman,	Vliets, Marshall.
Charles Mason Gear,	Clifton, Clay.
Gertrude Givens,	Manhattan, Riley.
George William Hale,	Manhattan, Riley.
Olive E. Harter,	Owatonna, *Minnesota.*
Charles Harts,	Lyons, Rice.
Kate Alice Jewett,	Udall, Cowley.
Winnie K. Likes,	Pomona, Franklin.
Alice M. Loomis,	Crete, *Nebraska.*
Andrew Martin,	Frankfort, Marshall.
Marshall H. Matts,	Homewood, Franklin.
Charles F. Miller,	Hill City, Graham.
Archie E. Moore,	Manhattan, Riley.
Lulu Gertrude O'Daniel,	Manhattan, Riley.
(Mrs.) Lena Davis Paull,	Manhattan, Riley.
Laura Christine Paulsen,	Manhattan, Riley.
Alice Virginia Potter,	Topeka, Shawnee.
Eunice Putnam,	Manhattan, Riley.
Margaret Isabel Ritner,	Manhattan, Riley.
Theodore William Romig,	Wellington, Sumner.
(Mrs.) Theodore H. Scheffer,	Manhattan, Riley.
Harvey High Schollenberger,	Wichita, Sedgwick.
Eunice Janette Skow,	Leonardville, Riley.
Milton David Snodgrass,	Manhattan, Riley.
Hal Lewis Sponsler,	Hutchinson, Reno.
Hibbard H. Thomson,	Manhattan, Riley.
Mayme G. Trimmer,	Waynoka, *Oklahoma.*
Bolivar Kernest Walters,	Manhattan, Riley.
Wilfred F. Wheeler,	Argentine, Wyandotte.
Mrs.) Anna B. Withington,	Manhattan, Riley.

DAIRY SHORT-COURSE STUDENTS.

Charles C. Andrews,	Lyle, Decatur.
Verne D. Boutwell,	Wanamaker, Shawnee.
Arthur Edward Brown,	Tonganoxie, Leavenworth.
Frederick L. Bushong,	Belpre, Edwards.
Clarence Conway,	Salina, Saline.
Walter M. Conway,	Salina, Saline.
Wilbur DeWitt Criley,	Lyndon, Osage.
Russell DeLair,	Oketo, Marshall.
Will C. DeSelm,	Oakvale, Smith.
Lawrence Edward Drown,	Manhattan, Riley.
Ralph Elder,	Osage City, Osage.
Robert Dudley Glidden,	Homewood, Franklin.
Elbert B. Hall,	Claflin, Barton.
George Earle Haney,	Williamsburg, Franklin.
John W. Holtz,	Iola, Allen.
Ben W. Jenkins,	Ottawa, Franklin.
Robert A. Ketchum,	Colby, Thomas.
Abner H. McManis,	Beloit, Mitchell.
Ellsworth McManis,	Quickville, Thomas.

Name.	Post-office and county (or state).
Chester Allen Moody,	Eudora, Douglas.
Clarence Charles Newman,	Virgil, Greenwood.
Leonard Marion Peairs,	Lawrence, Douglas.
John Edman Perkins,	Wakefield, Clay.
Frank H. Richey,	Cleveland, *Tennessee*.
John Newton Rigg,	Kirwin, Phillips.
Lawrence Riley,	Kipp, Saline.
John Elliott Ross,	Smith Center, Smith.
Lynne H. Ryon,	Wakefield, (Dickinson).
Samuel Webster Shields,	Meriden, Jefferson.
Bernie Smith,	Haven, Reno.
David Philip Smith,	Wakefield, Clay.
Cloid G. Sprigg,	Prattburg, Stafford.
John Tompkins,	Waverly, Coffey.
Alonzo F. Turner,	Oakley, Logan.
Clayborne C. Turner,	Oakley, Logan.
August J. L. Warnken,	Cunningham, Kingman.
George Everett Whitney,	Manhattan, Riley.
Hannah Worthington,	Americus, Lyon.

FARMERS' SHORT-COURSE STUDENTS—SECOND TERM.

Ralph Baker,	Saxman, Rice.
John H. Fee,	Zenith, Stafford.
Mortiermer Shontz Furst,	Peabody, Marion.
Roscoe Good,	Cimarron, Gray.
Watson P. Handley,	Monument, Logan.
Grover C. Hattan,	Mount Hope, Sedgwick.
Orlo Bertie Haven,	Belleville, Republic.
Otis Lantis,	Sedgwick, Harvey.
Tip H. Lantis,	Sedgwick, Harvey.
O. W. Minear,	Canton, McPherson.
William Nelson,	Marysville, Marshall.
Arthur E. Oden,	Sterling, Rice.
Charles Henry Ryan,	Muscotah, (Jackson).
Charles Albertis Way,	Canton, McPherson.
Leonard Wingfield,	Junction City, Geary.

FARMERS' SHORT-COURSE STUDENTS—FIRST TERM.

Carl Ames,	Diller, *Nebraska*.
H. Roy Anderson,	Bigelow, Marshall.
Harry D. Baldwin,	Erie, Neosho.
George W. Bearnes,	Salina, Saline.
Clarence Blackler,	North Topeka, Shawnee.
Meck Brazelton,	Wathena, Doniphan.
Reuben Llewellyn Butts,	Jewell, Jewell.
Arthur A. Carson,	Winchester, Jefferson.
Albert Sutcliff Culverwell,	Dentonia, Jewell.
William A. Cuthbertson,	Pittsburg, Crawford.
William Earl Dannefer,	Cuba, Republic.
George Henry DeWyke,	Randolph, Riley.
John Dickson,	Elmdale, Chase.
Roy H. Dillingham,	Hiawatha, Brown.

Name.	Post-office and county (or state).
Fred H. Doll,	Larned, Pawnee.
Charles H. Doryland,	Junction City, Geary.
William Edgar Downing,	Deerfield, Kearny.
Charles Einsel,	Greensburg, Kiowa.
Cas Nelson Estes,	Stafford, Stafford.
William H. Etherton,	Troy, Doniphan.
Edward Ellsworth Ford,	Moran, Allen.
John Wesley Fowler,	Meriden, Jefferson.
Ernest Furman,	Clearwater, Sedgwick.
Charles E. Gabrielson,	Hutchinson, Reno.
William Floyd Garrison,	Beattie, Marshall.
Charles A. Gilkison,	Larned, Pawnee.
William E. Glynn,	St. Marys, Pottawatomie.
Barton Greene,	Bazaar, Chase.
Ellis M. Hallock,	Milo, Lincoln.
Edgar Allan Hammett,	Marysville, Marshall.
Frank Hardacre,	Smith Center, Smith.
Roy Harlin,	Tonganoxie, Leavenworth.
Charles Harts,	Lyons, Rice.
Cyrus Walton Harvey,	Galena, Cherokee.
Gusta Hearn,	Hardtner, Barber.
Charles Hertach,	Claflin, Barton.
John Stuart Hill,	Melvern, Osage.
Henry Hoffhines,	Marquette, McPherson.
W. M. Hoss,	Brainerd, Butler.
Elmer J. Hughes,	Lawrence, Jefferson.
Clyde Earnest Huston,	Rosalia, Butler.
Peter Jochumson,	Lyndon, Osage.
Oscar Johnson,	Osage City, Osage.
Cyrus Paul Jones,	Mantey, Linn.
Ross Jones,	Manchester, Dickinson.
Robert Jordan,	Caldwell, Sumner.
Joseph P. Klein,	Manhattan, Riley.
Hans Hanson Krogh,	Jamestown, Republic.
Fred W. Lamb,	Prattburg, Stafford.
H. Merle Lamborn,	Leavenworth, Leavenworth.
Harry Lancaster,	Bunker Hill, *Illinois.*
Morton H. Lancaster,	Bunker Hill, *Illinois.*
Frank J. Landis,	Abilene, Dickinson.
W. W. Clark Leach,	Meade, Meade.
John O. Lewis,	Clifton, Clay.
John Edson Love,	Arkansas City, Cowley.
Carl Emmet McKee,	Offerle, Edwards.
Horace A. McLaughlin,	Bronson, Allen.
G. M. Miller,	Cottonwood Falls, Chase.
Daniel Lee Naylor,	Albia, Washington.
Fredolph Frank Nelson,	Olpe, Lyon.
Edward O'Connor,	Saint John, Stafford.
Oscar Olson,	Osage City, Osage.
William John Ott,	Gardner, Johnson.
Ernest J. Palmer,	Geuda Springs, Cowley.
Peter Peterson,	Bremen, Marshall.

Name.	Post-office and county (or state).
William Elbridge Poor,	Chapman, Dickinson.
Lee Etherton Porter,	Stafford, Stafford.
Wilford David Porter,	Bloomington, Phillips.
George Percival Potter,	Peabody, Marion.
Edward George Pro,	Julia, Kingman.
Gwilym Thomas Protheroe,	Lebo, Coffey.
William F. Pyke,	Detroit, Dickinson.
Robert Rathgeber,	Hunter, Osborne.
C. P. Rife,	Lyons, Rice.
Thomas Jefferson Robinson,	Manhattan, Riley.
Morris Rogers,	Clyde, Cloud.
Oscar V. Roller,	Tecumseh, Shawnee.
Oscar G. Russell,	Pence, Scott.
James Scalapino,	Everest, Brown.
Sam Schlatter,	Conway, McPherson.
William C. Schlatter,	Conway, McPherson.
John Sessler,	Uniontown, Bourbon.
George H. Shank,	Salina, Saline.
John C. Shields,	Meriden, Jefferson.
Earl E. Shupe,	Arkansas City, Cowley
Ira Davis Smith,	Saint Clere, Pottawatomie.
Harry Scott Spencer,	Yates Center, Woodson.
J. Weir Steuart,	Winchester, Jefferson.
Anshelm J. Strom,	Dwight, Morris.
Sam P. Tallman,	Clearwater, Sedgwick.
Floyd Ivan Tinsley,	Canton, McPherson.
Albert L. Tombaugh,	Athol, Smith.
Harlow Gilbert VanDuser,	Fredonia, Wilson.
Edward L. Vogel,	Saint Louis, *Missouri*.
Arthur D. Wagner,	Kingman, Kingman.
Frank B. Wagner,	Kingman, Kingman.
Ray Webster,	Victor, Lincoln.
Wilbert Russell Wheeler,	Jewell, Jewell.
John Edward Wiese,	Spearville, Ford.
Charles M. Wilke,	Troy, Doniphan.
Alfred Arthur Williams,	Yates Center, Woodson.
John Walter Wiseman,	North Topeka, Shawnee.
James Garfield Wright,	Marvin, Phillips.
Clyde Yocum,	Saint John, Stafford.
Edgar York,	Dunlap, Morris.
Oscar York,	Dunlap, Morris.
David H. Zuck,	Mount Carroll, *Illinois*.

DOMESTIC SCIENCE SHORT-COURSE STUDENTS—SECOND TERM.

Addie Adams,	Ozawkie, Jefferson.
Dora Eva Allman,	Ellis, (Trego).
Grace Bicknell,	Hoisington, Barton.
Margaret Bigelow,	Yates Center, Woodson.
Effie Alma Crawford,	Paola, Miami.
Minnie Bertha Doll,	Larned, Pawnee.
Leonora Darlin Eggen,	Florence, Marion.
Anna Hawkinson,	Randolph, Riley.

Name.	Post-office and county (or state).
Sadie Elizabeth Knight,	Manhattan, Riley.
Winnie K. Likes,	Pomona, Franklin.
Laura Markham,	Throop, Washington.
Mary Edith Morrow,	Blue Rapids, Marshall.
Alice Virginia Potter,	Topeka, Shawnee.
Edna Rader,	Manhattan, Riley.
(Mrs.) Anna B. Withington,	Manhattan, Riley.
Reba Wolf,	Manhattan, Riley.
Alba M. Woods,	Saint George, Pottawatomie.
Hannah Worthington,	Ackerland, Leavenworth.

DOMESTIC SCIENCE SHORT-COURSE STUDENTS—FIRST TERM.

Maud E. Allingham,	Manhattan, Riley.
Lucy M. Ashcraft,	Manchester, Dickinson.
Jessie Mary Ballou,	Delphos, Ottawa.
Kate Levenia Campbell,	Manhattan, Riley.
Ollie Collier,	Emporia, Lyon.
Gertrude Crippen,	Council Grove, Morris.
Eva L. Davidson,	Yates Center, Woodson.
Josie Davidson,	Yates Center, Woodson.
Abbie Dearborn,	Manhattan, Riley.
Nellie June Doane,	Manhattan, Riley.
Florence May Felton,	McPherson, McPherson.
Minnie L. Forceman,	Vliets, Marshall.
Evelyn Brown Franklin,	Manhattan, Riley.
Grace Evelyn Gardner,	Homewood, Franklin.
Emma A. Hanson,	Olsburg, Pottawatomie.
Hilma Hanson,	Olsburg, Pottawatomie.
Emmeline Hildenbrand,	Ellsworth, Ellsworth.
Wilhelmina Hildenbrand,	Ellsworth, Ellsworth.
Rose Holbert,	Manhattan, Riley.
Pansy Claribel Humphreys,	Kiowa, Barber.
Hattie E. Jones,	Manhattan, Riley.
Dessie Kuns,	McPherson, McPherson.
Emma Rosetta Lane,	Kansas City, Wyandotte.
Vida Lucile McAfee,	Topeka, Shawnee.
Alvena McCoy,	Meriden, Jefferson.
Charlotte Ethel Merritt,	Manhattan, Riley.
C. Louise Merritt,	Manhattan, Riley.
Jennie Emma Mitchell,	Florence, Marion.
Mabel E. Moffatt,	Clyde, Cloud.
Loulu Alberta Moore,	Haven, Reno.
Nona Estella Moore,	Cherryvale, Montgomery.
Birdie Peckham,	Haven, Reno.
Mary M. Petty,	Manhattan, Riley.
Frances Zoe Rhoades,	Gardner, Johnson.
Lizzie Richel,	Williamsburg, Franklin.
Margery Evelyn Russell,	Pence, Scott.
Hattie J. Schoonover,	Haven, Reno.
Lou Belle Shirley,	Perry, Jefferson.
Ethel Louise Smith,	Kansas City, Wyandotte.
Mabel Smith,	Logan, Phillips.

Name.	Post-office and county (or state).
Amanda D. Swanson,	Axtell, Marshall.
Norah L. Taylor,	Berryton, Shawnee.
Elsie Annette Uhl,	Gardner, Johnson.
Grace Voiles,	Manhattan, Riley.
Georgiana Welstead,	Mayview, Jewell.

APPRENTICES IN SHOPS.

Hawley Howard Akin,	Manhattan, Riley.
G. Homer Brown,	Arkansas City, Cowley.
Howard Frank Butterfield,	Manhattan, Riley.
Edgar Hamilton Dearborn,	Silver Lake, Shawnee.
Julius W. Dinse,	Elmo, Dickinson.
Byron L. Evans,	Mankato, Jewell.
D. N. Gish,	Bainbridge, *Pennsylvania.*
John V. Goodsheller,	McPherson, McPherson.
John Otto Greenwalt,	Princeton, Franklin.
Charles Osborne Griffin,	Boyle, Jefferson.
Charles Frank Haas,	Neodesha, Wilson.
John Julus Hanson,	Burns, Marion.
Sam E. Judd,	Manchester, Dickinson.
Roscoe R. Keeler,	Ottawa, Franklin.
Harry Ancil Kennedy,	Lawrence, Douglas.
Orrin O. Kennedy,	Lawrence, Douglas.
John Henry Kindsvater,	Manhattan, Riley.
George Kubin,	McPherson, McPherson.
Van J. Kubin,	McPherson, McPherson.
Emmet Leroy Locke,	Riley, Riley.
Mark E. McColm,	Emporia, Lyon.
Charles E. McLaughlin,	Newton, Harvey.
Fred Evert McManis,	Manhattan, Riley.
Fred Marty,	Longford, Clay.
Joseph A. Ozbun,	Breeze, *Missouri.*
Carl Peter August Palmer,	Manhattan, Riley.
John Thompson Parker,	Lakin, Kearny.
John Edman Perkins,	Wakefield, Clay.
Abraham F. Regier,	Moundridge, (Harvey).
Federico Sarabia,	Panay, *Kalino, P. I.*
Howard Leslie Sherman,	Manhattan, Riley.
James N. P. Smith,	Sterling, Rice.
Jacob Socolofsky,	Tampa, Marion.
Frank T. Spencer,	Gypsum, Saline.
Arthur Leroy Stauffer,	South Haven, Sumner.
Chester A. Steele,	Manhattan, Riley.
John Stegaman,	Dresden, Decatur.
Robert Maxwell Sutters,	Gideon, Douglas.
John Isaac Thomas,	Millerton, Sumner.
Hibbard H. Thomson,	Manhattan, Riley.
John T. Throbeck,	Norway, Republic.
William A. Turner,	Rock Creek, Jefferson.
Ralph Kirkland Ware,	Manhattan, Riley.
Andrew Charles Wenger,	Russell, Russell.
Nelson B. Wilson,	Fort Scott, Bourbon.
Scott Wilson,	Ozawkie, Jefferson.

BOILER AND ENGINE APPRENTICES.

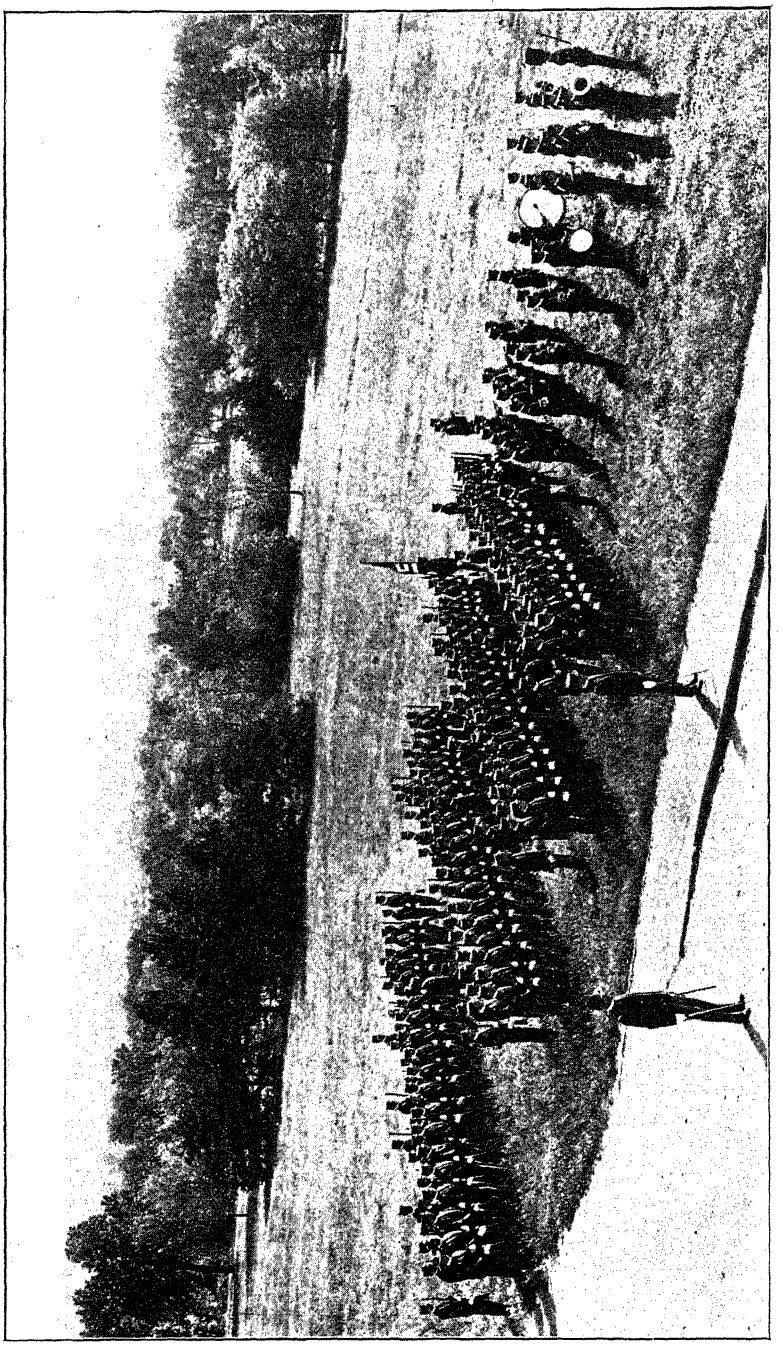
Name.	Post-office and county (or state).
John Jacob Abrahams,	Formosa, Jewell.
Charles A. Ahlberg,	Morganville, Clay.
Cecil L. Amick,	Stockton, Rooks.
Harry E. Bowen,	Lawrence, Douglas.
Benjamin Franklin Britton,	Fort Worth, *Texas*.
Lee Milton Campbell,	Manhattan, Riley.
Charles Cook,	Great Bend, Barton.
Roysel Darrow,	Asherville, Mitchell.
Howard P. Duncan,	Westmoreland, Pottawatomie.
Ben T. Farman,	Neosho Falls, Woodson.
Charles Mason Gear,	Clifton, Clay.
O. M. Goodrich,	Mankato, Jewell.
Charles A. Harter,	Independence, Montgomery.
Henry C. Hodgson,	Little River, Rice.
Silas Edman Jeter,	Saint Clere, Pottawatomie.
J. A. McGreagor,	Haddam, Washington.
L. E. Marvin,	Bennington, Ottawa.
John W. Munson,	Manhattan, Riley.
Robert W. Oakes,	McPherson, McPherson.
Hugh Oliver,	Carson, Pottawatomie.
Aaron Peterson,	Windom, Rice.
Benjamin C. E. Roberson,	Belle Plaine, Sumner.
Francis Ralph Wicks,	Hunnewell, Sumner.
Charles H. Yost,	Chester, *Nebraska*.

APPRENTICES IN PRINTING.

Bertha May Dana,	Manhattan, Riley.
Albert J. Dobson,	Kansas City, *Missouri*.
Azelia Lewis,	Blue Rapids, Marshall.

APPRENTICES IN DAIRYING.

Gustave Eastman,	Ogden, Riley.
Robert A. Ketchum,	Colby, Thomas.
Ellsworth McManis,	Quickville, Thomas.
John Tompkins,	Waverly, Coffey.
George Everett Whitney,	Manhattan, Riley.



COLLEGE BAND AND BATTALION.

SUMMARY.

CLASSES.	*Men.*	*Women.*	*Totals.*
Graduate	13	11	24
Senior	57	29	86
Junior	97	44	141
Sophomore	152	77	229
Freshman	326	145	471
Preparatory	255	87	342
Special	16	20	36
Dairy	37	1	38
Farmers' short course	123	.....	123
Domestic science short course	.....	63	63
Apprentices	76	2	78
Counted twice	43	14	57
Totals	1,109	465	1,574

From 90 counties of Kansas, 1486.
From 21 other states, 88.

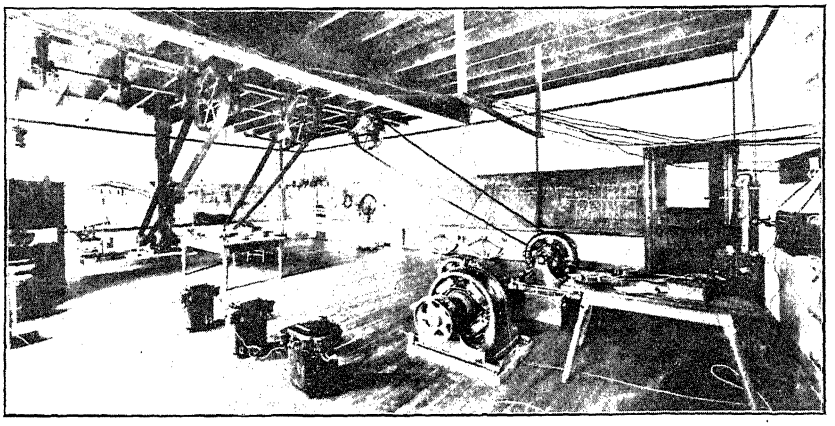
RECORD OF ATTENDANCE, 1879–1903.

COLLEGE YEAR.	Domestic science short course	Farmers' short course	Dairy	Apprentice	Special	Preparatory*	First year	Second year	Third year	Fourth year	Postgraduate	Counted twice	Total	Graduated
1878-79	....	....	...	...	1	.....	89	89	16	12	.....	...	207	9
1879-80†	....	....	...	...	1	.....	166	61	35	11	2	...	276	7
1880-81‡	....	....	...	...	6	.....	178	48	24	9	2	...	267	8
1881-82	....	....	...	...	5	.....	227	50	19	11	.....	...	312	9
1882-83	....	....	...	...	4	.....	241	60	30	12	.....	...	347	12
1883-84	....	....	...	...	2	.....	255	92	26	18	2	...	395	17
1884-85	....	....	...	...	2	.....	271	71	36	16	5	...	401	14
1885-86	....	....	...	...	1	.....	273	91	35	24	4	...	428	21
1886-87	....	....	...	...	...	.....	303	100	44	24	10	...	481	21
1887-88	....	....	...	...	...	.....	305	92	46	27	2	...	472	22
1888-89†	....	....	...	...	...	.....	266	103	41	28	7	...	445	25
1889-90	....	....	...	...	1	.....	307	105	63	28	10	...	514	27
1890-91†	....	....	...	...	...	.....	343	135	50	53	12	...	593	52
1891-92	....	....	...	...	...	.....	336	139	62	37	10	...	584	35
1892-93	....	....	...	...	...	.....	339	110	66	43	29	...	587	39
1893-94	....	....	...	...	...	.....	275	141	72	42	25	...	555	39
1894-95	....	....	...	...	5	.....	276	108	89	64	30	...	572	57
1895-96	....	....	...	...	3	.....	353	121	67	71	32	...	647	66
1896-97*	....	....	...	...	6	67	321	163	69	62	46	...	734	55
1897-98	....	....	6	9	15	77	316	174	77	82	57	10	803	69
1898-99	....	....	26	35	40	110	306	177	92	65	40	21	870	53
1899-00†	24	47	57	50	32	162	376	163	109	69	27	22	1,094	58
1900-01	47	109	72	79	23	318	348	183	80	74	40	52	1,321	69
1901-02	41	125	66	87	19	298	396	206	120	65	32	59	1,396	52
1902-03	63	123	38	78	36	342	471	229	141	86	24	57	1,574	....

* Previous to 1896–'97 the preparatory students were not listed separately from the first-years.

† Requirements for admittance raised.

‡ Course strengthened.



ELECTRICAL ENGINEERING LABORATORY.

GENERAL PHYSICS LABORATORY.

Graduates.

This list is made from the best data obtainable. A favor will be conferred by notifying the College Secretary of any errors or changes.

1867.

Henry L. Denison, A. M., 1257 Clarkson street, Denver, Colo. Official stenographer.
Belle M. (Haines) Pond, A. M., 1821 Clay street, Topeka, Kan. Housewife.
Emma L. (Haines) Bowen, A. M., Manhattan, Kan. Housewife.
John J. Points, A. M., Omaha, Neb. Lawyer.
Martha A. (White) Abbott, A. M., 283 South Oakley boulevard, Chicago, Ill. Housewife.

1871.

Emily M. (Campbell) Robinson, A. B. Died in 1877.
Ella F. (Denison) Whedon, A. B., 1845 D street, Lincoln, Neb. Housewife.
Luella M. Houston, A. B., Denver, Colo.
Charles O. Whedon, B. S., 1845 D street, Lincoln, Neb. Lawyer.
Kate E. (White) Turley, A. B., 973 Jackson boulevard, Chicago, Ill. Housewife.

1872.

Theophania M. (Haines) Huntington, A. B. Died in 1880.
Albert Todd, A. M., Presidio, Cal. Captain artillery corps, United States army.
S. Wendell Williston, A. M., M. D., Ph. D., Chicago, Ill. Professor of paleontology in the University of Chicago.

1873.

Eliza R. (Davis) Stringfield, A. B., 1111 Santee street, Los Angeles, Cal. Housewife.
Sam Kimble, A. B., Manhattan, Kan. Judge twenty-first district.

1874.

Harry A. Brous, A. M., M. D., Manhattan, Kan. Physician.
Edgar F. Clark, A. B., New Whatcom, Wash. Lawyer and post-office inspector.
John E. Davis, B. S., D. D. S., 737 Oak street, Columbus, Ohio. Dentist.
William D. Gilbert, A. B., Atchison, Kan. Lawyer; inspector of rural free-delivery routes.
A. Judson White, A. B., 288 Oakley boulevard, Chicago, Ill. Minister.

1875.

Reuben E. Lofinck, B. S., Manhattan, Kan. Merchant.
Alice E. (Stewart) Points, A. M. Teacher.

1876.

George A. Gale, A. B., Mangona, Fla. Merchant and postmaster.
Ella M. (Gale) Kedzie, A. B., Lansing, Mich. Teacher of art.
Nellie (Sawyer) Kedzie Jones, M. S., Berea, Ky. Housewife.
Carrie M. Kimball, A. B., Garden Grove, Cal. Art instructor.
Minerva E. Whitman) Heiser, A. B., Lyndon, Kan. Housewife.

1877.*

Ella S. Child, Manhattan, Kan. Dressmaker.
George H. Failyer, M. S., Washington, D. C. Scientist in bureau of soils, United States Department of Agriculture.
John S. Griffing, M. S., Manhattan, Kan. Merchant.
Walter C. Howard, Ione, Amador county, California. Minister.
Frederick O. Hoyt. Died in 1884.
Louis E. Humphrey, Chapman, Kan. Druggist.
James F. La Tourette, Idaho Springs, Colo. Miner.
Marion F. Leasure, LL. B., La Cygne, Kan. Lawyer.
William Ulrich, M. S.

1878.*

Albert N. Godfrey, M. S., Port Townsend, Wash. United States customs service.
Charles S. McConnell. Died in 1902.
George S. Platt. Died in 1878.
Amos E. Wilson, Leavenworth, Kan. Banker.

1879.*

Arthur T. Blain, Monrovia, Cal. Nurseryman.
Etta (Campbell) Blain, Monrovia, Cal. Housewife.
Wilmer K. Eckman, Longview, Tex. Bank cashier.
Corvin J. Reed, St. Clere, Kan. Farmer.
Harry C. Rushmore, 2028 North Fifth street, Kansas City, Kan. Commercial traveler.
Wm. H. Sikes, Leonardville, Kan. Merchant and grain dealer.
Lewis A. Salter, Carmen, Okla. Lawyer.
Ella (Vincent) McCormick, Broughton, Kan. Bookkeeper.
Clarence E. Wood, A. B., Cherokee, Okla. Editor.

1880.*

Augustine Beacham, Seattle, Wash. Principal of schools.
Lizzie R. (Cox) Kregar, Milford, Kan. Housewife.
Emma (Hoyt) Turner, Peru, Ill. Housewife.
Emma (Knostman) Huse, Manhattan, Kan. Housewife.
Grace (Parker) Perry, Pocatello, Idaho. Housewife.
Noble A. Richardson, San Bernardino, Cal. Superintendent of city schools.
Maria E. (Sickels) Davis, Chicago, Ill. Housewife.

1881.*

Flora (Donaldson) Reed, St. Clere, Kan. Housewife.
Ulysses G. Houston.
Fletcher M. Jeffrey, Globe building, Seattle, Wash. Lawyer.
William J. Jeffrey. Died in 1900.
Darwin S. Leach, ———, Africa.
William J. Lightfoot, 307 May street, Cripple Creek, Colo. United States examiner of surveys.
Dalinda (Mason) Cotey, Logan, Utah. Professor of domestic arts, State Agricultural College of Utah.
Wirt S. Myers, 209 Marion street, Tampa, Fla. Furniture manufacturer.

*B. S. has been granted all graduates since 1877.

1882.*

J. Chester Allen. Died in 1885.
Ida (Cranford) Sloan.
Edward V. Cripps.
Warren Knaus, M. S., McPherson, Kan. Editor.
Mattie E. (Mails) Coons, Manhattan, Kan. Housewife.
Allie S. (Peckham) Cordry, Hutchinson, Kan. Housewife and art teacher.
Belle (Selby) Curtice, 604 American Bank building, Kansas City, Mo. Housewife.
Burton L. Short, Kansas City, Kan. Assistant postmaster.
John A. Sloan.

1883.*

James W. Berry, Jewell, Kan. Lumberman and contractor; Regent Kansas State Agricultural College.
Mary C. Bower, Manhattan, Kan. Clerk.
Lewis W. Call, LL. M., D. C. L., Washington, D. C. Chief clerk judge-advocate general's office, United States War Department.
Emma E. Glossop, 503 Antoine street, St. Joseph, Mo. Teacher.
William J. Griffing, Manhattan, Kan. Farmer and fruit-grower.
Phœbe E. Haines, M. S., Manhattan, Kan. At home.
Hortense L. (Houston) Martin, Miami, I. T. Housewife.
Jacob Lund, M. S., Manhattan, Kan. Superintendent of heat and power department, Kansas State Agricultural College.
Katie I. (Meguire) Sheldon, Riverside, Cal. Housewife.
J. Dana Needham, Lane, Kan. Merchant.
Milan T. Ward, M. D., Orion, Ill. Physician.
Julius T. Willard, M. S., Manhattan, Kan. Professor of chemistry, Kansas State Agricultural College; director Experiment Station.

1884.*

Emmett S. Andress, Lakin, Kan. Farmer.
Florence J. Brous, Kansas City, Kan. Teacher in high school.
Bartholomew Buchli, M. S., D. V. S., Alma, Kan. Farmer and stockman.
John H. Calvin, LL. B. Died in 1898.
William A. Corey, Salt Lake City, Utah. Teacher and editor.
Henry M. Cottrell, M. S., Odebolt, Iowa. Superintendent of seed department of Cook's farm.
Carrie F. (Donaldson) Brown, Portland, Ore. Housewife.
Florence A. Donaldson. Died in August, 1888.
Frank W. Dunn, Magdalena, Sonora, Mexico. Assayer.
I. Day Gardiner. Died in 1899.
Edwin H. Kern, Grand Junction, Colo. Farmer and abstracter.
Marion M. Lewis. Died in 1895.
Charles L. Marlatt, M. S., 1440 Massachusetts avenue, Washington, D. C. Assistant chief, division of entomology, United States department of agriculture.
Lincoln H. Neiswender, Silver Lake, Kan. Farmer.
Geo. C. Peck, Junction City, Kan. Feed dealer.
Hattie L. (Peck) Berry, Jewell, Kan. Housewife.
John W. Shartel, Oklahoma City, Okla. Lawyer.

*B. S. has been granted all graduates since 1877.

1885.*

Thomas Bassler, Batchelder, Okla. Horticulturist.
Albert Deitz, 720 West Twenty-first street, Kansas City, Mo. Merchant.
Geo. E. Hopper, M. S., Arkansas City, Kan. Contractor.
Florence F. Hough, Great Bend, Kan.
Frank A. Hutto, M. S., Ph. D., Stillwater, Okla. Professor of history and economics, Oklahoma Agricultural and Mechanical College.
J. Allen Lewis, M. S., C. E., 328 Fourth street, Brooklyn, N. Y. Civil engineer.
Nellie J. Murphy, South Denver, Colo. Trained nurse.
Arthur L. Noyes, Wabaunsee, Kan. Farmer.
Clarence D. Pratt, Dallas, Tex. General agent paint company.
Rollin R. Rees, Minneapolis, Kan. Attorney.
Frederick J. Rogers, M. S., Palo Alto, Cal. Assistant professor of physics, Leland Stanford Jr. University.
Dorothy E. C. (Secrest) Hungerford, Randolph, Kan. Housewife.
Grace Wonsetler, M. D. Physician.
Effie E. (Woods) Shartel, Oklahoma City, Okla. Housewife.

1886.*

Lillie B. Bridgman, M. S., corner Sixteenth and Utah streets, San Francisco, Cal. Professor of physics, California School of Mechanic Arts.
Louis P. Brous, M. S., Mexico City, Mexico. Architect.
Paul H. Fairchild, M. D., 178 Fulton street, New York city. Publisher of medical journals and president of Pulvola Chemical Company.
Abbott M. Green, Lookout, Modoc county, California. Civil engineer and teacher.
James G. Harbord, M. S., Manila, P. I. Captain, Eleventh U. S. cavalry, division of insular affairs, War Department.
John U. Higinbotham, 205 La Salle street, Chicago, Ill. Cashier National Biscuit Company.
Maria C. (Hopper) Getty, Downs, Kan. Housewife.
E. Ada (Little) MacEwan, Kalamazoo, Mich. Housewife.
Frank L. Parker, Hutchinson, Kan. Merchant.
Edward H. Perry, Oklahoma City, Okla. Editor and publisher.
H. Augustus Platt. Died in 1903.
Ada H. (Quinby) Perry, Oklahoma City, Okla. Housewife.
Ida H. (Quinby) Gardiner, 1514 Laguna street, Santa Barbara, Cal. Housewife.
Minnie Reed, M. S., 1515 N. Main street, Santa Ana, Cal. Teacher in high school.
David G. Robertson, 100 Washington street, Chicago, Ill. Lawyer.
Edward O. Sisson, Peoria, Ill. Director Bradley Polytechnic Institute.
John W. Van Deventer, Sterling, Colo. Editor and publisher.
George W. Waters, Dillon, Colo. Ranchman.
William E. Whaley, 5467 Lexington avenue, Chicago, Ill. Dean and instructor in history, South Side Academy.
F. Henrietta (Willard) Calvin, Manhattan, Kan. Librarian Kansas State Agricultural College.
John L. Wise, East St. Louis, Ill. Merchant.

1887.*

Edgar A. Allen, Carlisle, Pa. Assistant superintendent of Indian school.
Fred H. Avery. Died in 1896.
Claude M. Breese, M. S., Manhattan, Kan. County clerk.

*B. S. has been granted all graduates since 1877.

John B. Brown, M. S., Morris, Minn. Supt. of Morris Indian Training School.
Walter J. G. Burtis, Fredonia, Kan. Farmer.
Mark A. Carleton, M. S., Washington, D. C. Cerealist in bureau of plant industry, United States Department of Agriculture.
Nellie E. (Cottrell) Stiles, Fullerton, Cal. Housewife.
Bert R. Elliott, Dawson City, British Yukon Territory. Miner.
Frederick B. Elliott, Manhattan, Kan. Real-estate and insurance agent.
Clara M. Keyes, Warner, Cal. Teacher.
Fred. G. Kimball, St. Michaels, Alaska. Miner.
Frederick A. Marlatt, Manhattan, Kan. Proprietor Blue Valley Manufacturing Company.
William J. McLaughlin, Randolph, Utah. Editor.
Mary E. Moses, Manhattan, Kan. At home.
Charles A. Murphy, Clay Center, Kan. Teacher of science, Clay county high school.
Orlando G. Palmer, LL. M., Camp Thomas, Chickamauga Park, Lytle, Ga. Second lieutenant, Seventh United States cavalry.
Louis B. Parker. Died in 1889.
James E. Payne, M. S., Fort Collins, Colo. Field agent in charge of plains investigation, Colorado Experiment Station.
Seward N. Peck, 157 Grattan street, Topeka, Kan. Cabinet-maker, railroad shops.
George N. Thompson, Belmond, Iowa. Mechanic.
Willis M. Wright, Jennings, La. Farmer.

1888.*

Grant Arnold, Toledo, Wash. Teacher.
Bertha H. Bacheller, M. S., Kansas City, Mo. Teacher of domestic science, manual-training school.
Clement G. Clarke, Plainville, Conn. Minister.
Alexander C. Cobb, Wagoner, I. T. Farmer and carpenter.
Mattie (Cobb) Clarke, Plainville, Conn. Housewife.
Minnie H. Cowell, Steyning, Sussex, England. Trained nurse.
Lyman H. Dixon, Buffalo, N. Y. Architect.
David G. Fairchild, M. S., Washington, D. C. Agricultural explorer, United States Department of Agriculture.
Carl E. Friend, Soldier, Kan. Banker, and Regent Kansas State Agricultural College.
John R. Harrison, Washington, D. C. Post-office inspector.
Humphrey W. Jones, 1251 Lincoln street, Topeka, Kan. Teacher of music in city schools.
Nathan E. Lewis, 149 East Fifth street, Plainfield, N. Y. Draftsman.
Abbie L. Marlatt, M. S., 261 Benefit street, Providence, R. I. Teacher of domestic science manual-training school.
William C. Moore, Parsons, Kan. Editor and publisher.
Ernest F. Nichols, New York, N. Y. Professor of experimental physics at Columbia University.
Harry E. Robb, Eureka, Kan. Farmer and county surveyor.
Anna Snyder, Kansas City, Kan. Teacher in School for Blind.
Edwin H. Snyder, 2822 Indiana avenue, Denver, Colo. Editor and publisher.

*B. S. has been granted all graduates since 1877.

Oliver L. Utter, 72 Mount Vernon street, Boston, Mass. Student in Boston University.
Aaron Walters. Died in 1892.
Lora L. (Waters) Beeler, M. S., 2469 N. Springfield avenue, Irving Park, Chicago, Ill. Housewife.
Daniel W. Working, jr., Denver, Colo. Farmer; state board of agriculture.

1889.*

Emma A. Allen. Died in 1891.
Joseph W. Bayles, Onaga, Kan. Minister.
Walter R. Browning, Padonia, Kan. Grain dealer.
David E. Bundy, Braman, Okla. Minister.
Samuel S. Cobb, Wagoner, I. T. Cattle dealer and postmaster.
Judson H. Criswell, Manhattan, Kan. Sales clerk.
Mattie I. (Farley) Carr, Winthrop, Wash. Housewife.
Clarence E. Freeman, M. S., Chicago, Ill. Professor of electrical engineering, Armour Institute of Technology.
Hattie L. (Gale) Sanders, Mangona, Fla. Housewife.
John S. Hazen, Springfield, Mo. United States weather bureau observer.
Albert B. Kimball, Scandia, Kan. Editor and postmaster.
William Knabb, Hiawatha, Kan. Assistant bank cashier.
Mary C. Lee, Manhattan, Kan. Student Pratt Institute, Brooklyn, N. Y.
Alonzo A. Mills, Fullerton, Cal. Nurseryman.
Susan W. Nichols, 724 North Twenty-third street, St. Joseph, Mo. Bookkeeper and stenographer.
Walter H. Olin, M. S., Ames, Iowa. Assistant in farm corps, Iowa State College of Agriculture and Mechanic Arts.
Eli M. Paddleford, Birmingham, Kan. Minister.
Maude F. (Sayers) DeLand, lock box 390, Pittsburg, Pa. Housewife.
Florine (Secrest) Linderman, Willow Glen, San Jose, Cal. Housewife.
Stanley Snyder, Oskaloosa, Kan. Farmer.
Charles W. Thompson, Holton, Kan. Dentist.
Jane C. Tunnell, Joliet, Ill. Instructor in pedagogy.
Ina M. (Turner) Bruce, St. Louis, Mo. Housewife.
Robert U. Waldraven, Julian, Neb. Minister.
Henry S. Willard, M. D., Manhattan, Kan. Physician and druggist.

1890.*

Samuel I. Borton, Rocky Ford, Colo. Farm superintendent, American Beet Sugar Company.
Frank A. Campbell, Highlands, Colo. Reporter.
Arthur F. Cranston, Parsons, Kan. Lawyer.
John Davis, Alva, Okla. Professor of English and literature, Oklahoma Normal School.
Grant W. Dewey, Manhattan, Kan. Photographer.
Charles J. Dobbs, 1215 Denny Way, Seattle, Wash. Lawyer.
Charles W. Earle, 1942–48 Curtis street, Denver, Colo. Advertising agent.
Schuyler C. Harner, Keats, Kan. Merchant.
John W. Ijams, Cache, Okla. Farmer in United States Indian service.
Bertha S. (Kimball) Dickens, M. S., Manhattan, Kan. Housewife.
Eusebia (Knipe) Curtis, Council Grove, Kan. Housewife.

* B. S. has been granted all graduates since 1877.

Nellie P. (Little) Dobbs, 1215 Denny Way, Seattle, Wash. Housewife.
Ellsworth Thomas Martin, LL. B., Chicago, Ill. Lawyer.
Silas C. Mason, M. S., Berea, Ky. Professor of horticulture and biology, Berea College.
Wilton L. Morse, Mancos, Colo. Farmer.
Albert E. Newman, Watonga, Okla. County superintendent and editor.
Julia R. Pearce, Washington, D. C. Assistant in the soil survey, bureau of soils, United States Department of Agriculture.
Emil C. Pfuetze, Manhattan, Kan. Lumber dealer.
William H. Sanders, Mangona, Fla. Plumber and builder.
Emma Secrest, A. M. Died in 1898.
Marie Barbara (Senn) Heath, M. S., Seattle, Wash. Housewife.
Ralph Snyder, Oskaloosa, Kan. Farmer and stockman.
George E. Stoker, A. B., Topeka, Kan. Lawyer.
Walter T. Swingle, M. S. Traveling in Italy; physiologist, bureau of plant industry, United States Department of Agriculture.
Gilbert J. VanZile. Died in 1899.
Harry N. Whitford, M. S., Botany building, Chicago, Ill. Assistant in botany, University of Chicago.
Thomas E. Wimer. Died in 1890.

1891.*

William Aaron Anderson, Kansas City, Kan. Bookkeeper for Long-Bell Lumber Company.
William Sherman Arbuthnot, D. V. S., Republic, Kan. Veterinary surgeon and druggist.
Herman William Avery, Wakefield, Kan. Farmer and merchant.
Judd Noble Bridgman, M. S., Hickman's Mills, Mo. Civil engineer.
Robert James Brock, Manhattan, Kan. Lawyer and county attorney; Regent Kansas State Agricultural College.
Francis Charles Burtis, M. S., Stillwater, Okla. Professor of agriculture and horticulture, Oklahoma Agricultural and Mechanical College.
Charles Albert Campbell, 815 Twenty-second avenue, Denver, Colo. Minister.
Spencer Norman Chaffee, Louisville, Ky. Student medical college.
Clay Ephraim Coburn, 422 North Fourth street, Kansas City, Kan. Physician.
Gertrude Coburn, Peoria, Ill. Assistant professor of domestic economy, Bradley Polytechnic Institute.
Tina Louise (Coburn) Tomson, Cedar Rapids, Iowa. Housewife.
Rachel Callie (Conwell) Thoburn, Oklahoma City, Okla. Housewife.
Christine Mossman Corlett, Guthrie, Okla. Teacher.
Mary Emmeline (Cottrell) Payne, M. S., Fort Collins, Colo. Housewife.
Phil Sheridan Creager, 3409 McGee street, Kansas City, Mo. Wholesale flour, biscuits and produce merchant.
Kary Cadmus Davis, M. S., Ph. D., Menominee, Wis. Principal and director of the Dunn county school of agriculture.
Thomas Clarke Davis, Benedict, Kan. Farmer.
Helen Pearl (Dow) Peck, 1617 Beverley road, Brooklyn, N. Y. Housewife.
Anna (Fairchild) White, 157 Valley road, Montclair, N. J. Housewife.
Harry Benson Gilstrap, Chandler, Okla. Editor, publisher, and postmaster.
Almon Arthur Gist, Fort Riley, Kan. Telegraph operator and station agent.
Amy Myrtle (Harrington) Deibler, Leadville, Colo. Housewife.

* B. S. has been granted all graduates since 1877.

Delpha May (Hoop) Montgomery, Tampa, Kan. Housewife.
Mayme Amelia (Houghton) Brock, Manhattan, Kan. Housewife.
Willis Wesley Hutto, Manhattan, Kan. Painter and paper-hanger.
George Victor Johnson, Sedan, Kan. Editor.
Frank Mullett Linscott, D. V. S., Farmington, Kan. Stock-raiser.
Bessie Belle Little, Philadelphia, Pa. Teacher of physical culture, Bryn Mawr College.
Albert Edward Martin, Streator, Ill. Manager telephone company.
Nellie Evangeline (McDonald) Thayer. Died in 1902.
David Collins McDowell, Elkton, Colo. Merchant.
Alfred Midgley, Minneapolis, Kan. Clerk.
Madeleine Wade Milner, La Salle, Ill. Librarian.
Paul Chambers Milner, Carbondale, Ill. Farmer.
Harry Elbridge Moore, Kingfisher, Okla. Implement dealer.
John Otis Morse, Mound City, Kan. Lawyer and clerk of district court.
Hattie May Noyes, Manhattan, Kan. Teacher and graduate student, Kansas State Agricultural College.
Louise (Reed) Paddleford, Birmingham, Kan. Housewife.
Artemus Jackson Rudy, R. F. D. No. 1, Oleander, Cal. Fruit-raiser.
Henry Vernon Rudy, Fresno, Cal. Fruit-raiser.
Charlotte Jane (Short) Houser, M. S., [B. S. Dickinson College, Carlisle, Pa.,] Reedsville, Pa. Housewife.
Ben Skinner, M. D., Granada, Kan. Physician.
Caroline Scott (Stingley) Van Blarcom. Died in 1899.
Lillian Alice (St. John) Williams, 841 Osage avenue, Kansas City, Kan. Housewife.
Ellis Cheney Thayer, Joplin, Mo. Miner.
Sam L. Van Blarcom, M. D., 817 Garfield avenue, Kansas City, Kan. Railway postal clerk.
Frank Albert Waugh, M. S., Amherst, Mass. Professor of horticulture in Massachusetts Agricultural College.
Fannie Elizabeth (Waugh) Davis, M. S., Menominee, Wis. Housewife.
Flora Emilie Wiest, Manhattan, Kan. Teacher in city schools.
Bertha (Winchip) Spilman, 515 Second street, S. E., Washington, D. C. Housewife.
Alfred Orrin Wright, Lake Charles, La. Farmer.
Effie Jeanetta Zimmerman, M. S., Tempe, Ariz. Preceptress in the Normal School of Arizona.

1892.

Grace Maria Clark, M. S., Berea, Ky. Clerk in executive office, Berea College.
George L. Clothier, M. S., M. F., Washington, D. C. Field assistant, bureau of forestry, United States Department of Agriculture, and student in Yale School of Forestry.
Lillian Clyde Criner, McPherson, Kan. Editor.
Harry Darnell, Cosmopolis, Wash. Principal of schools.
William H. Edelblute, Rathdrum, Idaho. County surveyor and fruit-grower.
Elizabeth (Edwards) Hartley, Manhattan, Kan. Housewife.
John Frost, Schroyer, Kan. Farmer.
Effie (Gilstrap) Frazier, Chandler, Okla. Housewife.
Ava (Hamill) Tillotson, M. S., Hill City, Kan. Housewife.

---

*B. S. has been granted all graduates since 1877.

J N Harner. Died in 1897.
Loyall S. Harner, 1122 Lincoln street, Colorado Springs, Colo. Clerk.
Charles Pinckney Hartley, M. S., Washington, D. C. Assistant in physiology, bureau of plant industry, United States Department of Agriculture.
John William Abraham Hartley, Manhattan, Kan. Farmer and teacher.
James Laird McDowell, McCammon, Idaho. Farmer.
Robert A. McIlvaine, Silver Lake, Kan. Principal of schools.
Kate (Oldham) Sisson, 124 W. Fourth avenue, Columbus, Ohio. Housewife.
Daniel Henry Otis, M. S., Manhattan, Kan. Professor of animal husbandry, Kansas State Agricultural College.
Ivan Bryan Parker, M. D., Hill City, Kan. Physician, and president Graham County State Bank.
Warner S. Pope. Died in 1899.
Burton Homer Pugh, box 2, Topeka, Kan. Merchant.
Elias W. Reed, Ann Arbor, Mich. Medical student.
Robert Stirling Reed.
Arthur Daniel Rice, Oketo, Kan. Minister.
Fred C. Sears, M. S. Wolfville, Nova Scotia. Director of provincial school of horticulture.
Birdie E. Secrest, Randolph, Kan. Student at Teachers' College, New York city.
May Secrest, Stevens Point, Wis. Professor of domestic science in the Wisconsin State Normal School.
Ruth Tipton (Stokes) Sears, M. S., Wolfville, Nova Scotia. Housewife.
Harry W. Stone, Portland, Ore. General secretary Y. M. C. A.
Walter Percival Tucker, Santa Barbara, Chihuahua, Mexico, via El Paso. Accountant for mining company.
Mary Alice (Vail) Waugh, Amherst, Mass. Housewife.
Robert Lynn Wallis. Died in 1895.
Ora Rebecca (Wells) Traxler, Irving, Kan. Housewife.
Daniel F. Wickman, P. O. box 107, Topeka, Kan. Farmer.
George Washington Wildin. Mechanical engineer.
Charles Ernest Yeoman. Died in 1902.

1893.*

Edmund Clarence Abbott, Santa Fe, N. M. County attorney.
Edwin McMaster Stanton Curtis, Detroit, Mich. Clerk for Michigan Central Railroad Company.
Corinne Louise (Daly) Burtis, Stillwater, Okla. Housewife.
Laura Greeley Day, 417 Wabash avenue, Wichita, Kan. Special lecturer on domestic economy.
Ione (Dewey) Sutherland. With King Dodo Opera Company.
Albert Dickens, Manhattan, Kan. Professor of horticulture, Kansas State Agricultural College.
Mary Maud Gardiner, M. S., Stillwater, Okla. Professor of domestic science, Oklahoma Agricultural and Mechanical College.
Susie (Hall) Linscott, Farmington, Kan. Housewife.
Mary Francis Burgoyne Harman, Kansas City, Kan. Teacher of art, Kansas City high school.
Ivy Francis Harner, M. S., Ruston, La. Professor of domestic science, Louisiana Industrial Institute.

* B. S. has been granted all graduates since 1877.

Margaretha Elise Horn, Dr. O., 335 Hubbard avenue, Detroit, Mich. Teacher of sciences, Detroit high school.
Marcia Ione Hulett, Cleveland, Ohio. Osteopathist.
Mac F. Hulett, 5½ West Broad street, Columbus, Ohio. Osteopathist.
Fred Hulse, Manhattan, Kan. Carpenter.
Charles Augustus Kimball, Courtland, Kan. Editor and lawyer.
Maud Ethel Knickerbocker, Lead, S. Dak. Teacher.
Thomas Eddy Lyon, 110½ North Fifth street, Springfield, Ill. Lawyer.
William Otis Lyon, 103 Seaton street, N. W., Washington, D. C. Clerk.
McLeod Wilson McCrea, Winchester, Kan. Farmer.
Rose Edith McDowell, Elkton, Colo. At home.
George Lane Melton, ———
Eusebia DeLong (Mudge) Thompson, Marysville, Kan. Housewife.
Nora (Newell) Hatch, R. F. D. No. 2, Manhattan, Kan. Housewife.
August Fred. Niemoller, Stitt, Kan. Teacher.
Susie Amanda Noyes. Died in 1894.
Henry Leamer Pellett, Eudora, Kan. Stock-raiser.
Charles John Peterson. Randolph, Kan. Farmer.
Carl Frederic Pfuetze, Manhattan, Kan. Lumber dealer.
John Dewitt Riddell, M. D., Enterprise, Kan. Physician.
John Albert Rokes, Holton, Kan. Lawyer.
Agnes (Romick) Edgar, Honcut, Cal. Housewife.
Fred Raymond Smith, Manhattan, Kan. Lawyer and court stenographer.
George Wildman Smith, M. D., Manhattan, Kan. Physician.
William Elmer Smith, 814 New York Life building, Kansas City, Mo. Lawyer.
John Eugene Thackrey, 2746 Belleview avenue, Kansas City, Mo. Minister.
Joseph B. Thoburn, Oklahoma City, Okla. Secretary Oklahoma Territorial Board of Agriculture.
Charles Henry Thompson, Palo Alto, Cal. Student at Leland Standford Jr. University.
George K. Thompson, Marysville, Kan. County superintendent.
William James Yeoman, Mankato, Kan. Merchant.

1894.*

Frank Weber Ames, 803 Collier street, Pittsburg, Pa. Clerk Carnegie Steel Company.
Clara Francelia Castle, M. S., Manhattan, Kan. At home.
George Luther Christensen, Houghton, Mich. Instructor in mechanical engineering, Michigan School of Mines.
John Cornelius Christensen, Manhattan, Kan. County treasurer.
Lorena Estella Clemons, Manhattan, Kan. Secretary Kansas State Agricultural College.
Martha Cottrell, Wabaunsee, Kan. At home.
Sarah Esther (Cottrell) Wright, Jennings, La. Housewife.
Alverta May Cress, Manhattan, Kan. At home.
Fannie Jane Cress, 203 Washington street, Wheaton, Ill. Artist.
Ernest A. Donaven, M. D., Mount Hope, Kan. Physician.
Jephthah W. Evans, M. D., Blue Rapids, Kan. Physician.
Isabelle Russell (Frisbie) Criswell, Manhattan, Kan. Housewife.
Eugene Leonard Frowe. Died in 1898.
Walter Harling, Lehigh, Utah.

* B. S. has been granted all graduates since 1877.

Lorena Marguerite (Helder) Morse, Manhattan, Kan. Housewife.
Mark V. Hester, Haviland, Kan.
Charles Ross Hutchings, 2821 N. Twentieth street, Omaha, Neb. Civil engineer for American Smelter and Refining Company.
Isaac Jones, jr., Etiwanda, Cal. Fruit-grower.
Stella Victoria (Kimball) Tucker, Santa Barbara, Chihuahua, Mexico, via El Paso. Housewife.
Mary Eliza (Lyman) Otis, M. S., Manhattan, Kan. Housewife.
William Henry Moore, Manhattan, Kan. Florist and horticulturist.
Sarah (Moore) Foster, 314 Melrose ave. N., Seattle, Wash. Housewife.
James Francis Odle, Manhattan, Kan. Farmer.
Charles Randolph Pearson, Collyer, Kan. Teacher.
Horace Greeley Pope, 413 and 414 Massachusetts building, Kansas City, Mo. Lawyer.
Minnie Louisa Romick, 567 Gordon street, Pomona, Cal. Principal of La Verne schools.
Winnie Luella (Romick) Chandler, R. F. D. No. 2, St. Louis, Mo. Housewife.
Victor Irvin Sandt, Wells, Minn. Principal of manual training.
John Alfred Scheel, 817 Neosho street, Emporia, Kan. Carpenter.
Jacob Ulrich Secrest, Randolph, Kan. Farmer.
Charles Chrisfield Smith, Manhattan, Kan. Real-estate agent.
Jennie Ruth (Smith) Strong, Kinsley, Kan. Housewife.
Wesley Ohio Staver, Kern, Cal. Lawyer.
John Stingley, Wichita, Kan. Commercial agent for the Ohio Cultivator Co.
John Edwin Taylor. Died in 1896.
Delbert L. Timbers, Osborne, Kan. Teacher.
Phebe Carey (Turner) Clothier, St. Marys, Kan. Housewife.
Samuel Robert Vincent, Deer Creek, Okla. Teacher.
Lucy Helena Waters, A. M., Livermore, Cal. Teacher in high school.

1895.*

Edward Jones Abell, Leonardville, Kan. Farmer and teacher.
Carl D. Adams, 719 S. Sixth street, Kansas City, Mo. Swift Packing Company.
Robert John Barnett, Manhattan, Kan. Assistant postmaster.
Burton Wesley Conrad, Sabetha, Kan. Liveryman.
Florence Ruth Corbett, foot of East Twenty-sixth street, New York, N. Y. Dietitian in the department of public charities.
Sid Henry Creager, 316 Keith & Perry building, Kansas City, Mo. Wholesale flour, biscuit and produce dealer.
Elsie Emeline Crump, Boulder, Colo. Teacher city schools.
David Thomas Davies, Riley, Kan. Farmer.
Frank Andrew Dawley, Waldo, Kan. Farmer and stock-raiser.
Daisy Day, M. S., Onaga, Kan. At home.
Flora (Day) Barnett, M. S., Manhattan, Kan. Housewife.
George Adam Dean, Manhattan, Kan. Assistant in entomology, Kansas State Agricultural College.
Lillie Christena (Dial) Falin, Cleburne, Kan. Housewife.
Lucy Ellis, Westmoreland, Kan. Teacher.
Victor Emrick, 1034 East Main street, Portland, Ore. Clerk in passenger auditing office, Oregon Railway and Navigation Company.
George Forsyth, Franklin, Ind. Sales agent.

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Ernest Harrison Freeman, Chicago, Ill. First laboratory assistant in electrical engineering at Armour Institute of Technology.
Florence Eleanor (Fryhofer) Webster, Manhattan, Kan. Housewife.
George William Fryhofer, 119 Seventeenth street, Denver, Colo. Lawyer.
Oscar Hugo Halstead, 218 South Sixth street, St. Joseph, Mo. Instructor in mathematics, Platt's Commercial College.
Hortensia (Harman) Patten, 122 Lake street, Chicago, Ill. Housewife.
John Bright Harman, Gill, Kan. Farmer.
Clarence V. Holsinger, Rosedale, Kan. Fruit-raiser.
Christian Andrick Johnson, Success, Kan. Farmer.
John James Johnson, Litchfield, Ill. Physician and insurance agent.
Fred. Ralph Jolly, Olathe, Kan. Editor of *Mirror*.
William Irving Joss, B. S. D. O., 17 Prospect street, Newark, N. Y. Physician.
Maud Estella (Kennett) Darnell, Cosmopolis, Wash. Housewife.
Myron Arthur Limbocker, Pomona, Kan. Cashier in bank.
Samuel Alexander McDowell, Elkton, Colo. Freight agent for the C. T. & T. Company, of Victor, Colo.
Laura Sara (McKeen) Smith, Russell, Kan. Housewife.
Theo. Wattles Morse, M. S., Manhattan, Kan. Soliciting editor for *Live-stock Indicator*.
Oscar Albert Otten, Fairbury, Neb. Telegraph operator.
William Hackworth Painter. Died in 1901.
Charles Wesley Pape, M. S., Box 190, Topeka, Kan.
Ethel (Patten) Ames, 803 Collier street, Pittsburg, Pa. Housewife.
John Vernon Patten, 122 Lake street, Chicago, Ill. Manufacturer.
William H. Phipps, Junction City, Kan. Salesman for Empire Separator Co.
Alice Julia (Quintard) Peck. Died in 1899.
Frederick Ellsworth Rader, Sitka, Alaska. Alaskan Experiment Station.
Ralph Waldo Rader, Fayetteville, Ark. Fruit-grower.
Ada Rice, Manhattan, Kan. Assistant in English department, Kansas State Agricultural College.
Benjamin Franklin Simeon Royer, St. Joseph, Mo. Physician.
Charles Baxter Selby, Marion, Va. Lawyer.
Mabel Gertrude (Selby) Laughlin, Ouray, Colo. Housewife.
Ernest P. Smith, box 276, Birmingham, Ala. Molder in foundry.
Frederick John Smith, Russell, Kan. Editor.
Kitty Myrtle (Smith) Wheeler, Manhattan, Kan. Housewife.
Marietta Smith, corner Park avenue and Humboldt street, Denver, Colo. Nurse in homeopathic hospital.
William Henry Steuart, Winchester, Kan. Farmer.
Cora Idella (Stump) Chaffee, Lasita, Kan. Housewife.
Dora (Thompson) Winter, 2410 E. Twenty-fourth street, Kansas City, Mo. Housewife.
Elvin Creveling Trembly, Comiskey, Kan. Farmer.
George Carpenter Wheeler, Manhattan, Kan. Herdsman for dairy husbandry department and graduate student, Kansas State Agricultural College.
Mary Elizabeth (Willard) Emrick, 1034 E. Main street, Portland, Ore. Housewife.
Olive Mabel (Wilson) Holsinger, Rosedale, Kan. Housewife.
Ora Gertrude Yenawine, Randall's Island, New York, N. Y. Instructor in sewing, New York House of Refuge.

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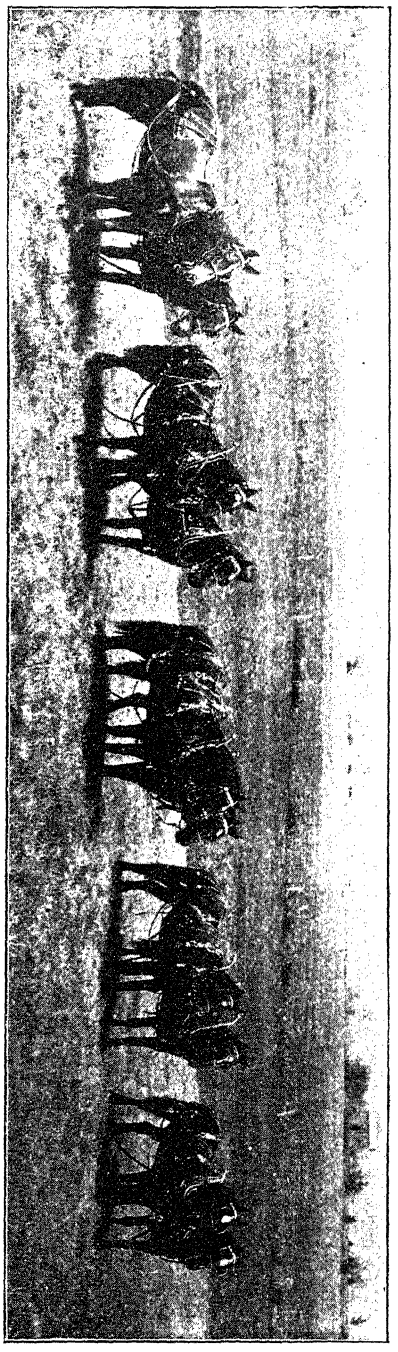

COLLEGE TEAMS.

1896.*

May Haines Bowen, Manhattan, Kan. Instructor in mathematics, Kansas State Agricultural College.

Con Morrison Buck, M. S., Marceline, Mo. Civil engineer on Santa Fe railroad.

Margaret Isaphene (Carlton) Doane, College Park, Md. Housewife.

William Annesley Cavenaugh, Fort Leavenworth, Kan. Lieutenant company D, Twentieth infantry.

William Arthur Coe, Ford, Kan. Farmer and stock-raiser.

Charlotte Mabel (Cotton) Smith, Ames, Iowa. Housewife.

Ernest Brown Coulson, Sweetwater, Tex.

George Henry Dial, Cleburne, Kan. Teacher and farmer.

Charles Francis Doane, M. S., College Park, Md. Dairy herdsman; Maryland Agricultural College.

John Berthold Dorman, West New Brighton, N. Y. Professor of chemistry and physics, Westerleigh Collegiate Institute, and graduate student Kansas State Agricultural College.

Bradford Dougherty, 632 Minnesota avenue, Kansas City, Kan. Merchant.

Charles Silar Evans, M. D., Grand Encampment, Wyo. uperintendent of Good Shepherd hospital.

Robert Kilby Farrar, Downs, Kan. Superintendent of city schools.

George William Finley, Tonkawa, Okla. Principal of city schools.

Joanna Freeman. Died in 1897.

John Jacob Fryhofer, 810 Byers avenue, Joplin, Mo. Stenographer and bookkeeper for mining company.

Elmer George Gibson, Stockdale, Kan. Farmer.

George Clifton Hall, Manhattan, Kan. Farmer.

Alonzo Charles Havens, Dwight, Kan. Farmer.

Gertrude Julia (Havens) Norton, College Park, Md. Housewife.

Lawrence Wilbur Hayes, 906 Monroe street, North Topeka, Kan. Commission merchant.

John Warren Holland, Manila, P. I. Assistant cashier, United States custom-house.

Henry George Johnson, Chicago, Ill.

Susan Effie (Johnson) Cooper, Success, Kan. Housewife.

Marian Elizabeth Jones, M. S., Manhattan, Kan. Superintendent of domestic art department, Kansas State Agricultural College.

Thomas Lormer Jones, 1016 Walnut street, Kansas City, Mo. Piano-tuner.

Edward Clarence Joss, D. V. S., 118 S Twenty-sixth street, Seattle, Wash. Bureau of animal industry, United States Department of Agriculture.

Royal S. Kellogg, M. S., Fay, Kan. Agent bureau of forestry, United States Department of Agriculture.

Mark Kirkpatrick, Haileyville, I. T. United States land surveyor.

Edith Lynette (Lantz) Simmons, Victor, Colo. Housewife.

Sue (Long) Strauss, 220 Woodlawn avenue, Topeka, Kan. Housewife.

Charles W. Lyman, Salina, Kan. Commercial traveler, and graduate student Kansas State Agricultural College.

Charles Dwin McCauley, Wilburn, Kan. Draftsman.

Charles Sumner Marty, Sun, Kan. Ranchman.

Elda Lenore (Keen) Moore, Manhattan, Kan. Housewife.

Arthur Houston Morgan, Phillipsburg, Kan. Farmer.

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*B. S. has been granted all graduates since 1877.

Clara Verena Newell, Stella, Neb. Teacher.
Ellen Elizabeth (Norton) Adams, Cheyenne Wells, Colo. Housewife.
John Bitting Smith Norton, M. S., College Park, Md. State pathologist and professor of botany, Maryland Agricultural College.
Hattie A. (Paddleford) McFadden, Walsburg, Kan. Housewife.
Mary Kerilla (Painter) Rogers, Stockholm, Okla. Housewife.
Elva Luthera (Palmer) Thackrey, 2746 Belleview avenue, Kansas City, Mo. Housewife.
Inez Luella (Palmer) Barrows, Clifton, Kan. Housewife.
Fannie (Parkinson) Moyer, Melvern, Kan. Housewife.
Archie Carpenter Peck, Francis, I. T. Manager of mill and cotton-gin.
Arthur Lewis Peter, M. D., 403-4 Mack block, Denver, Colo. Physician.
Charles Edwin Pincomb, Merriam, Kan. Stockman.
Mary Josephine (Pincomb) Moats, Tampico, Mexico. Housewife.
John Poole, R. F. D. No. 2, Manhattan, Kan. Farmer.
Edgar Arthur Powell, R. F. D. No. 1, Osage City, Kan. Farmer and stock-raiser.
Lisle Willits Pursel, 904 Michigan avenue, Kansas City, Mo. Traveling salesman for Swift & Company.
Howard Newton Rhodes, Manhattan, Kan. Traveling salesman for Jas. Kirk, Chicago.
Ambrose Elliott Ridenour, Manhattan, Kan. Foreman of foundry, Kansas State Agricultural College.
Mary Etta (Ridenour) Plowman, Jewell, Kan. Housewife.
Isaac Archie Robertson, Manhattan, Kan. Clerk.
Grace Anna Secrest. Died in 1902.
Carl Snyder, Oskaloosa, Kan. Farmer.
Max Gilbert Spalding, Eureka, Kan. Teacher and farmer.
Orville Ashford Stingley, 913 East Thirty-sixth street, Kansas City, Mo. Inspector in bureau of animal industry, United States Department of Agriculture.
Sadie (Stingley) Haggman, 718 West Eleventh street, Los Angeles, Cal. Housewife.
Gertrude Ella Stump, Manhattan, Kan. Assistant in domestic art department and graduate student, Kansas State Agricultural College.
Miriam Esther (Swingle) Joss, 118 South Twenty-sixth street, Seattle, Wash. Housewife.
William Elwood Thackrey, Geneva, Neb. Manual-training teacher, Indian service.
James Dunbar Trumbull, Riley, Kan. Merchant.
Frank Edwin Uhl, Gardner, Kan. Farmer, and graduate student Kansas State Agricultural College.
Edwin H. Webster, Manhattan, Kan. Inspector and dairy expert, United States Department of Agriculture.

1897.*

Cora Atwell, R. F. D. No. 3, North Topeka, Kan. At home.
Roger Williams Bishoff, Eudora, Kan. Farmer.
Mary Frances Carnell, Bunker Hill, Kan.
William Burns Chase, Hoyt, Kan. Hardware merchant.
Frank E. Cheadle, Erwin, Okla. Painter.
Robert Waitman Clothier, M. S., Cape Girardeau, Mo. Professor of chemistry and agriculture, Third District Normal School.

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*B. S. has been granted all graduates since 1877.

Maggie A. (Correll) Uhl, Gardner, Kan. Housewife.
Mabel Crump, 527 Delaware street, Kansas City, Mo. Stenographer for R. G. Dun.
Fred Volley Dial, Cleburne, Kan. Clerk.
Viola Grace Dille, Ottawa, Kan. Bookkeeper.
Samuel Dolby. Died in 1903.
George Doll, Larned, Kan. Teacher and farmer.
Anna Phillipina (Engel) Blackman, Manhattan, Kan. Housewife.
Emma Finley, Lordsburg, Cal. Teacher in La Verne schools.
Martha Fox, Manhattan, Kan. Nurse.
Philip Fox, M. S., Williams Bay, Wis. Appointment from Carnegie Institution to do solar work at Yerkes Observatory.
Ned Merrill Green, Fort Niobrara, Neb. Second lieutenant, Twenty-fifth infantry, United States army.
Mary Eliza Haulenbeck. Died in 1901.
Lewellyn Gaines Hepworth, Burlingame, Kan. Seed merchant.
Ina Emma Holroyd, Manhattan, Kan. Assistant in preparatory department, Kansas State Agricultural College.
Myrtle Hattie (Hood) Johnson, Success, Kan. Housewife.
Charles Henry Hoop, Manhattan, Kan. Clerk.
Winifred Anna (Houghton) Buck, Marceline, Mo. Housewife.
Bret Redmon Hull, Alta Vista, Kan. Lumber dealer.
Clay Berkey Ingman, Barnes, Kan. Farmer.
Gertrude May (Lyman) Hall, Hyattsville, Md. Housewife.
Frederick Hugo Meyer, Basehor, Kan. Creamery company.
Valentine Maelzer, Challis, Idaho. Farmer and teacher.
Sherman Bodwell Newell, Greenwood, S. Dak. Teacher in Yankton Indian Training School.
Oliver Ezra Noble, Hobart, Okla. Government surveyor.
Jesse Baker Norton, M. S., Washington, D. C. Assistant in bureau of plant industry, United States Department of Agriculture.
Mary Augusta Norton, Manhattan, Kan. At home.
Bertha Olivia Olson, Manhattan, Kan. At home.
Hilda Sophia (Olson) Axelton, Randolph, Kan. Housewife.
Russell John Peck, McFarland, Kan. Teacher.
William Oscar Peterson, box 203, Randolph, Kan. Farmer.
Eva Louise Philbrook, Oxnard, Cal. At home.
Rufus M. Philbrook. ———.
William Joseph Rhoades, Olathe, Kan. Cashier in bank.
Carl Rice, Cauayan, Isabella prov., North Luzon, P. I. Government employee.
Thomas Meade Robertson, Coffeyville, Kan. Dentist.
Homer Joseph Robison, Taal, Batanzas prov., P. I. Hospital steward, United States army.
Edward Shellenbaum, Randolph, Kan. Clerk in post-office.
Alice Myrtle Shofe, Manhattan, Kan. At home.
Charles Wesley Shull, Leoti, Kan. Farmer.
Alfred Caleb Smith, 7503 Sunnyside avenue, Seattle, Wash. Electrician.
Phœbe Jane Smith, 514 West Eighth street, Pueblo, Colo. Teacher city schools.
Wilhelmina Henrietta Spohr, Manhattan, Kan. Teacher city schools.
Charles Harrison Stokely, Burlingame, Ark.
John E. Trembly, Comiskey, Kan. Farmer.

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Harriet Agnes Vandivert, Manhattan, Kan. Instructor, Kansas State Agricultural College.
Olive Voiles, Cedar Rapids, Iowa. Head nurse in St. Luke's Hospital.
John Minton Westgate, M. S., Washington, D. C. Scientific assistant in bureau of agrostology, United States Department of Agriculture.
Mark Wheeler, Manila, P. I. First lieutenant, Fourth United States infantry.
Clare Annie (Wilson) Dutton, Council Grove, Kan. Housewife.

1898.*

Emory Sherwood Adams, Manila, P. I. Lieutenant in Fourteenth United States infantry.
Joshua William Adams, Cheyenne Wells, Colo. Rain Belt Experiment Station.
Samuel John Adams, Cheyenne Wells, Colo. Farmer.
Thomas Walter Allison, Florence, Kan. Farmer and fruit-grower.
William Anderson, Manhattan, Kan. Assistant in mathematics and graduate student, Kansas State Agricultural College.
Jessie Geneva (Bayless) Staver. Lenexa, Kan. Housewife.
Hope Brady, Manhattan, Kan. Teacher city schools, Liberal, Kan.
Robert Henry Brown, Manhattan, Kan. Assistant in music, Kansas State Agricultural College.
Earl Carver Butterfield, 1737 F street, N. W., Washington, D. C. Scientific aid in bureau of plant industry, United States Department of Agriculture.
John Alfred Conover, Ames, Iowa. Special student in Iowa State College.
Minnie Laura Copeland, 3216 Wabash avenue, Chicago, Ill. Graduate nurse.
Lucy Maria (Cottrell) Pottorf, Riley, Kan. Housewife.
Anna Magdalena Dahl, R. F. D. No. 1, Montrose, Kan. Teacher in Hardy, Neb.
Inga Josephine Dahl, R. F. D. No. 1, Montrose, Kan. At home.
Cassie Belle Dille, Ottawa, Kan. Stenographer.
Emma Phillipine Doll, Freeport, Ill. Student in Globe Hospital and Training School.
Cora Elizabeth (Ewalt) Brown, Manhattan, Kan. Housewife.
Guy Francis Farley, Melvern, Kan. Grain merchant.
Mary (Finley) Ridenour, Manhattan, Kan. Housewife.
Arthur Lorenzo Frowe, Wamego, Kan. Student at Drake University, Des Moines, Iowa.
William Logan Hall, M. S., Hyattsville, Md. Assistant forester in bureau of forestry, United States Department of Agriculture.
Anna Viola (Hanson) Higinbotham, Manhattan, Kan. Housewife.
Walter Eugene Hardy, Sedgwick, Ark. Secretary of Culver Lumber and Manufacturing Company.
James Madison Harvey, Junction City, Kan. Farmer.
Emmett Vivian Hoffman, Enterprise, Kan. Business manager of flouring-mill.
Guy Dudley Hulett, D. O., 409 South Sixth street, Kirksville, Mo. Professor of physiology and principles of osteopathy, American School of Osteopathy.
Bertha Emma Ingman, Barnes, Kan. At home.
Ary Cordelia Johnson, 512 East First street, Trinidad, Colo.
Charles Percy King.
Bessie May (Locke) Noble, Hobart, Okla. Housewife.
Olive Long. Died in 1902.
William Andrew McCullough, M. D., Linwood, Kan. Physician.
Inez Isadore (Manchester) Allison, Florence, Kan. Housewife.

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Florence Adelia Martin. Died in 1901.
Henry Alba Martin, Admire, Kan. Creamery.
Alice Maude Melton, Manhattan, Kan. Clerk in director's office, Experiment Station.
George Gerkein Menke, Seattle, Wash. Electrician for Sunset Telephone Company.
Mary Frances Minis, Manhattan, Kan. Clerk in real-estate office.
May Moore, Manhattan, Kan. Bookkeeper.
Harriet Grace Nichols, Liberal, Kan. At home.
Schuyler Nichols, M. D., Liberal, Kan. Physician.
Lucy Junie Parks, Manhattan, Kan. Teacher.
Ernest Byron Patten, Carthage, S. Dak. Grain dealer.
C. Jeanette Perry, Manhattan, Kan. Clerk in secretary's office, Kansas State Agricultural College.
Emilie Matilda Pfuetze, Manhattan, Kan. Cashier in store.
John Martin Pierce, Alexander Valley, Cal. Fruit-grower.
Raymond Haines Pond, M. S., 410 East Liberty street, Ann Arbor, Mich. Student of botany, University of Michigan.
William Poole, R. F. D. No. 2, Manhattan, Kan. Farmer.
Willis Thomas Pope, Honolulu, H. I. Professor of nature study and agriculture in the Territorial Normal School of Hawaii.
Nora May (Reed) Pierce, Alexander Valley, Cal. Housewife.
Gertrude Elizabeth Rhodes, Manhattan, Kan. Teacher.
Henry William Rogler, Bazaar, Kan. Farmer.
Ferdinand John Rumold, Dillon, Kan. Farmer.
Martin Wilbur Sanderson, Marysville, Kan. County surveyor.
Olive Maria Sheldon, Manhattan, Kan. At home.
Edwin Lee Smith, Manhattan, Kan. Teacher and farmer.
Oliver Russell Smith, Socorro, N. M. Professor of civil engineering, New Mexico School of Mines.
Bertha (Spohr) Smith, 621 Louisiana street, Lawrence, Kan. Housewife.
Andrew B. Symns, R. F. D. No. 4, Atchison, Kan. Farmer.
Cora Thackrey, Valentine, Neb. Teacher.
Harriet Emerson (Thackrey) Reece, Valentine, Neb. Housewife.
Henry Marsden Thomas, 1416 West Eleventh street, Kansas City, Mo. Traveling salesman for J. I. Case Threshing Machine Company.
Elsie Lucile Waters, 2469 North Springfield avenue, Chicago, Ill. Stenographer.
Fred Dorsey Waters, Dillon, Colo.
Abner Davis Whipple, 531 West Sixty-first place, Chicago, Ill. Clerk in auditor's office of Chicago & Eastern Illinois railroad.
Adelaide Frances (Wilder) Sawdon, 405 Thirty-third street, Chicago, Ill. Housewife.
Josephine Hannah (Wilder) McCullough, Linwood, Kan. Housewife.
Frank Yeoman, 514 Hall building, Kansas City, Mo. Lawyer.
Frederick Zimmerman, Kirksville, Mo. Manager of dairy herd.

1899.*

Bonnie Frances Adams, Cheyenne Wells, Colo. Teacher.
Morrison Carpenter Adams, Marvin, Kan. Teacher.
Melvia Fairetta Avery, Wakefield, Kan. Teacher.
Albert Edwin Blair, box 301, Lyndon, Kan. Continental Creamery Company.

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James Courtney Bolton, Paxico, Kan. Farmer.
Joseph Abbott Butterfield, El Reno, Okla. Carpenter.
Willit Ramson Correll, Overbrook, Kan. Farmer.
Ernest Lerned Cottrell, Wabaunsee, Kan. Farmer.
Alfred Burton Dille, jr., Edgerton, Kan. Farmer.
Francis Joseph Habiger, Bushton, Kan. Wheat-grower and stock-raiser.
John George Haney, Hays, Kan. Superintendent Fort Hays Branch Experiment Station.
John Andrew Harvey, Junction City, Kan. Farmer.
Grace Edna Hill, Manhattan, Kan. Teacher in city schools.
Hiram Adsit Holzer, Pittsburg, Kan. Draftsman for Santa Fe railroad.
Charles Clifford Jackson, Westmoreland, Kan. Stock-raiser.
Fred Emanuel Johnson, Kansas City, Mo. Laboratory instructor in organic chemistry at the Kansas City Veterinary College.
Harry Wallace Johnston, Herington, Kan. Telegraph operator in dispatcher's office of the Chicago, Rock Island & Pacific railway.
Lot Parker Keeler, 287 Second street, Portland, Ore. Carpenter.
John Martin Kessler, Eldora, Iowa. Gardener and florist, and graduate student Kansas State Agricultural College.
Albert Thomas Kinsley, M. S., 112 E. Lexington street, Independence, Mo. Bacteriologist at the Kansas City Veterinary College.
Frank Elmer LaShelle, Wray, Colo. Printer.
Christian Dagobert Lechner. ———.
Ross Long, Manhattan, Kan. Lawyer.
Louisa Mary (Maelzer) Haise, Russell, Kan. Housewife.
Kate Anna Manly, Manhattan, Kan. Teacher.
Claud Masters, lock box 676, Ardmore, I. T. Clerk of Chickasaw Town-site Commission.
Robert Bertice Mitchell, Fort Monroe, Va. Second lieutenant, artillery corps, United States army.
Jennie June (Needham) Carter, Lane, Kan. Housewife.
Roscoe Townley Nichols, M. D., Liberal, Kan. Physician.
Fanny Gertrude Noyes, Wabaunsee, Kan. At home.
Harry Delphos Orr, 2548 Indiana avenue, Chicago, Ill. Student assistant in chemistry in medical school of the Northwestern University, and graduate student Kansas State Agricultural College.
George Washington Owens, Tuskegee, Ala. Professor of agriculture and dairying.
Carrie Vashti (Painter) Des Marias, Lakeland, Kan. Housewife.
Ella Emerson Peck, Lexington, Okla. Teacher.
Anna C. Pfuetze, Olathe, Kan. Teacher of household economy in School for the Deaf.
Andrew Pottorf, Riley, Kan. Farmer.
Mary Bly (Pritner) Lockwood, Meadville, Pa. Housewife.
Otto Independence Purdy, El Reno, Okla. Associate editor *Daily American*.
Delmer William Randall, Manhattan, Kan. Contractor.
William Harry Roberts, Perry, Okla. Principal of schools.
Frank Sessions Sheldon, Grand Rapids, Mich. Traveling salesman.
Louisa Mary Spohr, Topeka, Kan. Director of nurses in Christ hospital.
Annie Louisa (Streeter) Haney, Hays, Kan. Housewife.
Nellie Towers, Manhattan, Kan. At home.

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Otho Sprague True, Vera, Kan. Farmer.
James Otis Tulloss, Sedan, Kan. Merchant, and Regent Kansas State Agricultural College.
William Guy Tulloss, Rantoul, Kan. Farmer.
George Franklin Wagner, Enterprise, Kan. Farmer.
Mary Lana (Waugh) Smith, 7503 Sunnyside avenue, Seattle, Wash. Housewife and journalist.
Charles Bernard White, Hudson, Colo. Ranchman.
Nannie Elizabeth Williams, 4226 Botanical avenue, St. Louis, Mo. Stenographer.
Alexander George Wilson. Died in 1902.
Frederick Otto Woestemeyer, Lebanon, Tenn. Student Cumberland University.

1900.*

Elizabeth Jane Agnew, Manhattan, Kan. Assistant in domestic science Kansas State Agricultural College.
Elizabeth Edna (Asbury) Derr, Manhattan, Kan. Graduate student Kansas State Agricultural College.
Effie Elizabeth (Bailey) Foltz, Zeandale, Kan. Housewife.
Alvah I. Bain, Marysville, Kan. Farmer.
Harry H. Bainer, Trenton, Mo. Dairy herdsman at Ruskin College.
Charlotte Almira Berkey, Ore, Mo. Teacher.
John Harold Blachly, Manhattan, Kan. Mechanic.
Minerva Blachly, Manhattan, Kan. Bookkeeper in secretary's office, Kansas State Agricultural College.
Zina Leigh Bliss, Washington, D. C. Assistant forest expert, bureau of forestry, United States Department of Agriculture.
Fred Winchester Bobbitt, Perry, Okla. Draftsman.
Lillie Grace Bolton, Paxico, Kan. At home.
Prudence Dell Broquet, Norton, Kan. At home.
Nellie (Burtner) Sargent. Died in 1901.
Clarence Asa Chandler, R. F. D. No. 2, St. Louis, Mo. Shaw's Botanical Gardens.
Frederick Waldemar Christensen, Randolph, Kan. Farmer, and graduate student Kansas State Agricultural College.
Ernest Mansel Cook, Oakley, Kan. Principal of schools at Summerville, Kan.
Charles McClain Correll, Manhattan, Kan. Teacher in city schools.
Jennie Maude Currie, 906 Madison street, Topeka, Kan. At home.
Harry Leroy Dern, Kingman, Kan. Teacher.
Homer Derr, Manhattan, Kan. Instructor and graduate student, Kansas State Agricultural College.
Mary Alberta (Dille) Hulett, 409 S. Sixth street, Kirksville, Mo. Housewife.
Robert Edward Eastman, Hampton, Va. Professor of agriculture at Hampton Institute.
Jennie Edelblute, Manhattan, Kan. Clerk.
Eugene Emrick, ———.
Josephine Finley, Manhattan, Kan. Graduate student Kansas State Agricultural College.
Harry Verne Forest, Thayer, Kan. Draftsman.
George Ogden Greene, M. S., Manhattan, Kan. Assistant in horticulture, Kansas State Agricultural College.
Herman Haffner, Junction City, Kan. Florist.

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Gustaf William Hanson, lock box 953, Wichita, Kan. Mechanical draftsman and designing engineer.
James William Harner, Keats, Kan. Merchant.
Daisy Gladys Hoffman, 310 First street, Jackson, Mich. Directress of kindergarten.
Walter Fisk Lawry, Manhattan, Kan. Civil engineer.
Amanda Culp McCarty, Mountain Grove, Mo. Instructor in music, Mountain Grove Academy.
N. Ollie McCurry, Plymouth, Kan. Telegraph operator.
George G. McDowell, Elkton, Colo. Miner.
Roland McKee, Blue Rapids, Kan. Farmer.
Nettie McLaren, Altoona, Kan. At home.
Charles Dudley Montgomery. Died in 1902.
Fred Byers Morlan, R. F. D. No. 1, Courtland, Kan. Farmer.
Andrew Edward Oman, Winkler, Kan. Teacher, and graduate student Kansas State Agricultural College.
Kate Paddock, Manhattan, Kan. At home.
Joseph Lloyd Pancake, Tully, Kan. Stock-raiser.
Albert William Parrack. Died in 1901.
Edith Perkins, box 138, South Pasadena, Cal. At home.
Elenore Perkins, box 138, South Pasadena, Cal. At home.
Paul du Chaillu Piersol, ———.
Luther Eugene Potter, Grand Junction, Colo. Superintendent of farm at Indian school.
Clara Spilman, Beloit, Kan. Instructor in domestic science at the State Industrial School for Girls.
Mabel Stewart, Neosho, Mo. Teacher.
Stella Stewart, Northampton, Mass. Student at the Clarke Training School.
Fayette Charles Sweet, Lockwood, Beaver county, Oklahoma. Stockman.
Cora Edith Swingle, South Canaan, Pa. Teacher.
Dean Brett Swingle, 325 M street, N. W., Washington, D. C. Assistant in pathology, bureau of plant industry, United States Department of Agriculture.
Barton Thompson, Garrison, Kan. Farmer and teacher.
Laura Helen Trumbull, Manhattan, Kan. Teacher.
Jessie May Wagner, Enterprise, Kan. At home.
Luther Watts Waldraven, Randolph, Kan. Farmer.
Kate Elizabeth Zimmerman, Santa Fé, N. M. Instructor in domestic art, Allison school.

1901.*

Delmer Akin, Manhattan, Kan. Law student at Kansas State University, Lawrence, Kan.
Cyrus Norton Allison, corner Eleventh and Locust streets, Kansas City, Mo. Dental student.
Loua Adella Blachly, Manhattan, Kan. Teacher.
Harry S. Bourne, Delphos, Kan. Farmer.
Charles J. Burson, Niotaze, Kan. County surveyor.
Howard Frank Butterfield, 510 N. Walnut street, Pittsburg, Kan. Instructor in manual training in city schools.
Edwin Charles Cook, Oakley, Kan. Farmer.

*B. S. has been granted all graduates since 1877.

Ina Foote Cowles, Manhattan, Kan. Instructor in domestic art and graduate student, Kansas State Agricultural college.
Trena Dahl, Montrose, Kan., R. F. D. No. 1. At home.
Fannie Rachel Ellen Dale, Manhattan, Kan. Instructor in business college.
Herman August Dieball, Albuquerque, N. M. Insurance agent.
Edgar Willis Doane, Palo Alto, Cal. Student Leland Stanford Jr. University.
Otto H. Elling, Hays, Kan. Foreman at Fort Hays Branch Experiment Station.
Valentine Meacham Emmert, Blue Rapids, Kan. Farmer.
Rainey Faris, 130 E. Sixth street, Alton, Ill. Draftsman for Western Cartridge Company.
Harry Haines Fay, Wilsey, Kan. Farmer.
Fred Fockele, Waverley, Kan. Cashier in bank.
Louisa Gerteis, Derby, Kan. Teacher.
Maud Hart, Good Hill, S. Dak. Instructor in domestic science in Indian school.
Fred Willis Haselwood, Palo Alto, Cal. Student Leland Stanford Jr. University.
Minnie Howell, 1725 Topeka avenue, Topeka, Kan. Instructor in domestic science, industrial institute.
Edith Huntress, Manhattan, Kan. At home.
Louis Berten Jolley, 384 S. Paulina street, Chicago, Ill. Student Chicago Homeopathic Medical College.
Helen Knostman, Manhattan, Kan. Clerk in post-office, Kansas State Agricultural college.
Daniel Ladd, Palo Alto, Cal. Student Leland Stanford Jr. University.
Erma Elizabeth Lock, Mountain Grove, Mo. At home.
Harvey McCaslin, Palo Alto, Cal. Student Leland Stanford Jr. University.
Madge Ruth McKeen, Manhattan, Kan. At home.
John A. McKenzie, Solomon, Kan. Farmer.
George Matinson, Palo Alto, Cal. Student Leland Stanford Jr. University.
Walter E. Mathewson, Manhattan, Kan. Assistant in chemistry, Kansas State Agricultural College.
Emma Maude (Miller) Cook, Oakley, Kan. Housewife.
Margaret Jane Minis, Manhattan, Kan. Assistant librarian, Kansas State Agricultural College.
Clarence William Morgan, Phillipsburg, Kan. Teacher and farmer.
Eugene Lawrence Morgan, Phillipsburg, Kan. Student at Kansas Medical College, Topeka.
Ruth Atwill Mudge, Manhattan, Kan. Instructor and stenographer, Kansas State Agricultural College.
Jessie May Mustard, Manchester, Kan. Teacher at Hope, Kan.
Martha Nitcher, 7503 Sunnyside avenue, Seattle, Wash. Stenographer.
John H. Oesterhaus, Holton, Kan. Clerk.
Carrie Bell Oneel, Effingham, Kan. At home.
Helena Maude Pincomb, Pittsburg, Kan. Instructor in domestic art in Pittsburg high school, and graduate student Kansas State Agricultural College.
Bryant Poole, R. F. D. No. 2, Manhattan, Kan. Farmer.
Leroy Rigg, Kirwin, Kan. Farmer.
William Stephen Sargent, Lost Cabin, Wyo. Foreman of sheep ranch.
Maude (Sauble) Rogler, Bazaar, Kan. Housewife.
Charles A. Scott, Washington, D. C. Assistant forest expert, bureau of forestry, United States Department of Agriculture.
Anna Louisa (Smith) Kinsley, 112 East Lexington street, Independence, Mo. Housewife.

Adelaide Strite, R. F. D. No. 1, Manhattan, Kan. Teacher.
Anna Odette Summers, Waterville, Kan.
Lucy Sweet, Santa Cruz, Cal. At home.
Perrin K. Symns, R. F. D. No. 4, Atchison, Kan. Farmer.
Estella Mae Tharp, Arkansas City, Kan. Teacher.
Helen Castle True, Vera, Kan. At home.
Harry Castle Turner, Rock Creek, Kan. Teacher.
Florence Helen Vail, Manhattan, Kan. Instructor and graduate student, Kansas State Agricultural College.
Mary Caroline Wagner, Enterprise, Kan. At home.
Eleanor Mary White, R. F. D. No. 4, Newton, Kan. Teacher.
Katharena Winter, Manhattan, Kan. Clerk.
Lucie Joan Wyatt, Westmoreland, Kan. Teacher.
Henry Theador York. Died in 1902.

1902.*

Mamie Alexander, Manhattan, Kan. Assistant in office of farm department and graduate student, Kansas State Agricultural College.
Edgar McCall Amos, Manhattan, Kan. Newspaper reporter.
Henry Albert Avery, Wakefield, Kan. Hardware and implement merchant.
Etta Marie Barnard, Manhattan, Kan. Teacher in Cleburne school.
Mary Olive Barr, Manhattan, Kan. Teacher.
George Ford Bean, Topeka, Kan. Machinist in Santa Fe shops.
Charles Dallas Blachly, Leonardville, Kan. Teacher.
Bessie Sarah Bourne, Delphos, Kan. Teacher at Hollis.
Martha Amelia Briggs, R. F. D. No. 2, Manhattan, Kan. At home.
Emma M. Cain, Clay Center, Kan. Teacher at Randolph.
Floyd Adelbert Champlin, Phillipsburg, Kan. Stockman.
Elijah Ellis Chase, Merriam, Kan. Farmer.
Charles Howard Clark, Colorado Springs, Colo. Dairyman at Durham dairy.
Maude Mildred Coe, Manhattan, Kan. Assistant in domestic art and graduate student, Kansas State Agricultural College.
Murray Stanley Cole, 870 Third street, San Bernardino, Cal. Draftsman in Santa Fe shops.
Robert Curtise Cole, Trenton, Mo. Foreman of Vrooman farm.
Lottie Irene Crawford, 52 Livingston street, Brooklyn, N. Y. Student at Pratt Institute.
Sarah Emily Davies, Bala, Kan.
Della Drollinger, Garrison, Kan. Teacher.
Charles Eastman, Manhattan, Kan. Graduate student Kansas State Agricultural College.
Leslie Arthur Fitz, Washington, D. C. Assistant in bureau of forestry, United States Department of Agriculture.
Glick Fockele, Gridley, Kan. Editor.
Clark A. Gingery, Caldwell, Kan. Foreman of nursery.
William Lee Harvey, Arkalon, Kan. County attorney.
William Rutherford Hildreth, Altamont, Kan. Farmer.
Christine Delphine Hofer, Manhattan, Kan. Graduate student Kansas State Agricultural College.
Henrietta Mattie Hofer, Manhattan, Kan. Graduate student Kansas State Agricultural College.

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Edouard Wilfred House, 713 Monroe street, Topeka, Kan. Mechanic in Santa Fe shops, and graduate student Kansas State Agricultural College.
Letta Birdilla Keen, Clay Center, Kan. At home.
Edgar Willis Kimball, Manhattan, Kan. Teacher at Keats.
Arthur Henry Leidigh, R. F. D. No. 3, Hutchinson, Kan. Farmer.
George Logan, Manhattan, Kan. Instructor and graduate student, Kansas State Agricultural College.
Otto Meade McAninch, R. F. D. Manhattan, Kan. Farmer.
Amelia Augusta Maelzer, Challis, Idaho. Teacher.
Myrtle Mather, Bloomington, Ill. Instructor in dietetics in Brokaw hospital.
Roger Bonner Mullen, Lake Bay, Wash. Fruit-grower.
Grover Poole, R. F. D. No. 2, Manhattan, Kan. Farmer.
Abbie Elida Putnam, Manhattan, Kan. Teacher.
Henry Paul Richards, Manhattan, Kan. Special apprentice with the Santa Fe Railway Company, at Topeka, Kan.
Eva Talitha Rigg, Manhattan, Kan. General secretary of Young Women's Christian Association and graduate student, Kansas State Agricultural College.
John Francis Ross, Chillocco, Okla. Professor of agriculture in Indian school.
Pontus Henry Ross, Kenai, Alaska. Assistant in United States experiment station.
Fred Lewis Schneider, Kansas City, Mo. Student at Kansas City Veterinary college.
Edmund Ray Secrest, Washington, D. C. Assistant forest expert, bureau of forestry, United States Department of Agriculture.
Glen Reid Shepherd, 623 Oakland avenue, Kansas City, Kan.
Charles Franklin Smith, Keighley, Kan. Teacher.
Walter Hayward Spencer, Yates Center, Kan. Farmer.
John Thomas Stafford, Maher, Colo.
Myrtie Lucy Toothaker, Wheaton, Kan. Teacher.
Fred Walters, 515 Nevada avenue, Trinidad, Colo. Building superintendent.
Lilly Maud Zimmerman, Moray, Kan. Student pianoforte.

SUMMARY.

The number of graduates up to 1903 is 866, of whom 328 are women. Graduates previous to 1877 pursued, with two exceptions, a classical course, and received the degree of bachelor of arts. Since 1877, all have received the degree of bachelor of science, after a four-year course in the sciences, with good English training.

Of the 538 men, 26 are deceased, and the remainder are reported in the following occupations:

Farmers and stock-raisers	106
Farm foremen	5
Fruit-growers, nurserymen, and gardeners	15
Professors and instructors in colleges	37
Superintendents of agricultural experiment stations	4
Assistants in agricultural experiment stations and agricultural colleges	9
In United States Department of Agriculture	20
In United States government civil service	19
In military service	8
Regents Kansas State Agricultural College	4
Superintendents and teachers in public schools	39
Teachers in Indian schools	8
Graduate students Kansas State Agricultural College	11
Students in other institutions	17
Physicians and students of medicine, druggists, and dentists	28
Lawyers	27
District judge	1
Ministers and secretaries of Y. M. C. A	11
Journalists	22
Architects and builders	7
Draftsmen	7
Civil, electrical, mining and mechanical engineers	11
Mechanics	12
Manufacturers	5
Miners	6
Telephone and telegraph operators and managers	4
Officials and official clerks	4
Clerks and bookkeepers	16
Merchants	34
County and state officials	13
Bankers and cashiers	9
Commercial travelers	9
Creamery men	5
Agents	7
Piano-tuner	1
Abstracter	1
Photographer	1
Painters and paper-hangers	2
Secretary of Board of Agriculture	1
Solar observer	1
Unknown	17
Total	564
In two occupations	52
	512

Of the 328 women, 15 are deceased, and the remainder occupied as follows:

Housewives	137
Teachers in public schools	45
Teachers of domestic science and domestic art, and dietitians	18
Professors and instructors in colleges	13
Teachers of art and music	6
Physicians	2
Students in other institutions	6
Graduate students Kansas State Agricultural College	11
Instructors and assistants in agricultural colleges and experiment stations	9
Secretary of Kansas State Agricultural College	1
Librarians and assistant librarians	3
Nurses	7
Bookkeepers, stenographers, clerks	17
Milliners and dressmakers	2
Journalist	1
Telegraph operator	1
Secretary of Y. W. C. A	1
Kindergarten teacher	1
In United States Department of Agriculture	1
With opera company	1
At home	36
Unknown	5
Total	324
In two occupations	11
	313

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