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RS 9/7/11

Jay Brownlee Davidson (1880-1957)

Papers, 1905-2005, undated

Descriptive summary

creator: Davidson, Jay Brownlee (1880-1957)
title: Papers
dates: 1905-2005, undated
extent: 20.16 linear feet (35 document boxes, 6 half-document boxes, and 10 photograph boxes)
collection number: RS 9/7/11
repository: University Archives, Special Collections Department, Iowa State University.

Administrative information

access: Open for research
publication rights: Consult Head, Special Collections Department
preferred citation: Jay Brownlee Davidson Papers, RS 9/7/11, Special Collections Department, Iowa State University Library.

Abstract

Jay Brownlee Davidson was born February 15, 1880 in Nebraska. He joined the faculty of Iowa State College (University) as Assistant Professor (1905-1907) in charge of agricultural engineering. Aside from several years spent teaching in California (1915-1919), Davidson spent the next 50 years at Iowa State as Professor (1907-1956) and Head (1907-1946) of the Department of Agricultural Engineering. Davidson became internationally renowned as an expert on agricultural mechanization and worked on projects throughout the United States, Russia, and China. He organized the American Society of Agricultural Engineers, in 1907, and served as its first president. For his achievements in advancing agricultural mechanization, Jay B. Davidson is considered to be the "Father of Agricultural Engineering". This collection includes correspondence, articles, papers, lectures and addresses, bibliographies, biographical information, citations and letters of tribute, photographs, and printed materials regarding agricultural machinery. The papers also include a pictorial record of Davidson's trips to the Soviet Union, Europe, and China. In addition, the collection contains correspondence relating to dynamometers.

Biographical note

Jay Brownlee Davidson was born February 15, 1880 in Nebraska. He graduated from the University of Nebraska with a bachelor's degree (1904) in mechanical engineering. After his graduation, Davidson worked a short while at his alma mater as an instructor in Farm Mechanics before coming to Iowa State College (University) in the summer of 1905. He joined the faculty as assistant professor in charge of agricultural engineering, filling the vacancy left by the departure of Clarence J. Zintheo.

Under Davidson's guidance, agricultural engineering grew from a supplemental program for engineering students to a full four-year curriculum by 1908. Davidson received full professorship in 1907 and served as head of agricultural engineering until 1915, when he left to take a similar position with the University of California at Davis. He returned to Iowa State in 1919 as head of agricultural engineering, continuing in this position until 1946. Davidson retired from the faculty in 1956. He passed away May 8, 1957.

In addition to his work for Iowa State, Davidson became an internationally acclaimed consultant on agricultural mechanization. He worked on projects throughout the United States, Russia, and China. He also was responsible for the organization of the American Society of Agricultural Engineers, in 1907, and served as its first president. In addition, he received the second McCormick Gold Medal. For his achievements in advancing agricultural mechanization, Jay B. Davidson is considered to be the "Father of Agricultural Engineering".

Collection description

The collection (1905-1964, undated) includes correspondence, articles, papers, lectures and addresses, bibliographies, biographical information, citations and letters of tribute, photographs, and printed materials regarding agricultural machinery. The papers also include a pictorial record of Davidson's trips to the Soviet Union (1929-1930); Europe, including the International Congress of Rural Engineering (1935); and China (1947-1949). In addition, the collection contains correspondence from 1912-1917 relating to dynamometers. Correspondents include T. R. Agg, Robert Earle Buchanan, Charles E. Friley, Ernest W. Lindstrom, the Allis-Chalmers Manufacturing Company, the American Society of Agricultural Engineers, J. I. Case Company, Caterpillar Tractor Company, the Committee on Transport Wheel Study (1937-1941), and Deere & Company.

Organization

The collection is comprised of eleven series:

- Series 1: [Biographical Information, 1904-2005, undated \(alphabetical\)](#)
- Series 2: [Correspondence, 1905-1946, undated \(alphabetical\)](#)
- Series 3: [Articles, Speeches, and Writings, 1902-1950, undated \(chronological\)](#)
- Series 4: [Research Subject Files, 1879-1931, undated \(original order\)](#)
- Series 5: [Research Photographs, 1904-1940, undated \(original order\)](#)
- Series 6: [Agricultural Engineering Photographs, 1904-1932, undated \(alphabetical\)](#)
- Series 7: [American Society of Agricultural Engineers, 1926-1957, undated \(alphabetical\)](#)
- Series 8: [Research and Travel, 1904-1949 \(alphabetical\)](#)
- Series 9: [Iowa State University and Departmental Files, 1905-1955, undated \(alphabetical\)](#)
- Series 10: [Slides, undated \(original order\)](#)
- Series 11: [Negatives, 1905-1915, undated \(original order\)](#)

Series 4 and 5 have been arranged according to Davidson's decimal filing system, which can be used to relate articles and clippings with corresponding photographs of the same subject matter. For the most part, the other agricultural engineering photographs and documents have been arranged alphabetically. The slides and negatives have been left in original order.

Description of series

Series 1 Biographical Information **1904-2005, undated**

extent: 0.42 linear feet (15 folders)

description: This series contains various materials relating to the life and work of Jay B. Davidson. Papers include biographic information about Davidson's biographies, business cards, family biography, various diplomas, news clippings, and photographs. Finally, this series holds articles, letters, and pictures on Davidson's life.

Container list

Box	Folder	Title	Dates
33	1	Biographies about Davidson	1926-1958
33	2	Business cards	undated
33	3	Caricature from the Bomb (Iowa State yearbook)	undated
33	4	Davidson memorial scholarship	1957-1964
33	5	Diplomas and certificates	1921-1955
33	6	Family news clippings and biography	2002-2005
35	1	General information	1925-1968, undated
33	7	Letters of condolence	1957
33	8	News clippings and biographies	1919-1994
35	4	News clippings	1919-1994
33	9	Photographs of Davidson, including one with his wife	1904-1951, undated
33	10	Photograph of Davidson Portrait by Othmar Hoffler (1 color photograph; includes biography of Davidson)	1950s circa
33	31	Photographs of Margaret Davidson (7 color slides)	1988
35	10	Sigma Tall Fraternity: Programs, handouts, and news clippings	1924-1954
54	23	Davidson Residence Photographs and Brochure (12 b/w photographs)	2004, undated

Description of series

Series 2 Correspondence 1905-1946 undated

extent: 4.62 linear feet (11 document boxes)

description: This series consists of incoming and outgoing letters regarding Davidson's work. Davidson corresponded with numerous companies including Allis Chalmers, Caterpillar Tractor Company, J.I. Case Company, International Harvester, Iowa Tractor and Implement Company, and the John Deere Plow Company. He also corresponded with members of Iowa State University (known previously as Iowa State College), University of Wisconsin, University of Idaho, and the United States Department of Agriculture (USDA).

Container list

Box	Folder	Title	Dates
1	1	Advance-Rumley Co.	1932
1	2-11	Agg, T.R., (Engineering Dean)	1931-1946
34	18	Agricultural Club	1909-1926
2	1-9	Agricultural Experiment Station, Ames	1935-1946
3	4	Agriculture Extension Service Committee on Review	1932-1933
3	1-3	Agriculture Extension Service, Ames	1933-1946
3	5-6	Allis Chalmers	1940-1946
3	7-11	American Society of Agricultural Engineers	1931-1935
4	1-10	American Society of Agricultural Engineers	1935-1946
5	1-4	American Society of Agricultural Engineers: transport wheels study	1937-1941
5	5	Barger, E.L. and Harry Ferguson, Inc.	1943-1944
11	1	Bonebright, H.B.	1908-1909
10	13	Brazil Hollow Brick and Tile Co.	1912-1913
5	6	Buchanan, R.E.	1931-1932
5	7	Buchanan, R.E., and Lindstrom, S.W.	1945-1946
10	9	Buffalo Sales Co.	1912
5	8-9	Case, J.I., Co.,	1940-1946
5	10	Caterpillar Tractor Co.	1930

Box	Folder	Title	Dates
35	1	Curtiss, C.F.	1907, 1912
10	10	Curtiss, C.F.	1909-1927
5	11	Curtiss, C.F.	1931-1932
34	19	Davidson home	1911
5	12	Davidson, J.B.: interdepartmental affairs	1912-1946
6	1-2	Deere, John, Plow Co.	1940-1944
6	3	Douglas Fir Plywood Association	1940-1941
6	4-5	Dynamometer Correspondence, includes blueprints and permanent data	1912-1917
6	6-7	Farm Machinery Prices	1932-1933
10	11	Farmer's Cooperative Brick and Tile Co.	1913
6	8	Ferguson, Harry, Inc.	1945-1946
6	9	Friley, Charles E.	1935-1941
7	1	Gregg, H.C.	undated
34	1	Holden, Perry G.	1905-1907
7	2-3	Hughes, R.M.	1931-1935
34	2	Imperial Oil Company, Limited	1911
7	4-5	International Harvester	1928-1946
7	6	Iowa Association of Mutual Insurance Associations	1940-1941
7	7	Iowa Mutual Tornado Insurance Association	1940-1941
7	8	Iowa Retail Farm Equipment Association	1945-1946
7	9	Iowa Tractor and Implement Co.	1945-1946
34	3	Iverson, George	1911
34	4	John Wiley and Sons: Agricultural Engineering Series	1915-1921
34	5	John Wiley and Sons: Agricultural Engineering Series	1922
34	6	John Wiley and Sons: Agricultural Engineering Series	1923
34	7	John Wiley and Sons: Agricultural Engineering Series	1924
7	10-12	Kildee, H.H.	1931-1934
8	1-7	Kildee, H.H.	1934-1946
34	8	King, M.L.	1910
8	8	Knapp, Herman	1932-1933

Box	Folder	Title	Dates
34	9	Lake Cotrill Brick and Tile Co.	1911
8	9	Letters asking for advice	1943-1944
8	10-11	Low Cost Housing Committee (Iowa State College)	1935-1936
34	10	M. Rumley Co.	1910
34	11	MacArthur Cement Products Co.	1915
9	1	Marston, Anson	1923-1932
34	12	Mason City Brick and Tile Co.	1912, 1913
9	2	Massey-Harris, Co.	1944
9	3	McKibben, Eugene	1941
9	4	Minneapolis-Moline Power Implement Co.	1943-1944
9	5	National Resources Planning Board, Regional Development Program Report	1944
9	6	New Idea Inc.	1943-1944
9	7	Oliver Farm Equipment Sales Co.	1940-1941
34	13	Orange Judd Company	1909, 1910
9	8	Pammel, L.H.	1910-1915
34	14	Panama-Pacific Exposition	1914
34	15	Pest control, mechanical: Corn borer and white grub	1926-1927
9	9	Platt, B.H.	1944-1946
9	10	Portland Cement Association	1943-1946
34	16	Position and Activities	1909-1927
33	11	Position and activities at Iowa State	1906-1931, undated
34	17	Professional degrees in agricultural engineering	1911-1926
9	11	Purdue University	1943-1944
9	12	Republic Steel Corp.	1943-1944
34	22	Scoates, Daniel	1912-1917
9	13	Sears Roebuck and Co.	1943-1944
34	20	Sigma Tall	1908
10	12	Stanton, E.W.	1906
34	21	State Fair (Iowa)	1907-1927

Box	Folder	Title	Dates
34	23	Temperature controlled damper developed by Henry Giese	1925-1927
34	25	United States Department of Agriculture	1905-1906
34	24	United States Department of Agriculture	1907-1908
9	15-16	United States Department of Agriculture	1931-1936
9	14-18	United States Department of Agriculture	1931-1943
10	1-2	United States Department of Agriculture	1944-1946
33	12	United States Department of Agriculture, Bureau of Public Roads, Senior Agricultural Engineer Correspondence	1925
10	3	United States Department of Agriculture, re: Soil Conservation Service	1935-1936
10	4-7	United States Department of Agriculture, Weekly Report by Barre, H.J.	1941
10	8	United States Department of Agriculture, Weekly Report by Shedd, C.K.	1940-1941
11	2	University of Idaho, re: Hobart Beresford	1940-1941
11	3	University of Wisconsin	1945-1946
34	26	Zintheo, Clarence J.	1908

Description of series

Series 3 Articles, Speeches, and Writings 1902-1950, undated

extent: 0.84 linear feet (2 document boxes)

description: This series contains a number of articles, speeches, and writings by Jay B. Davidson. These include a number of articles on agricultural engineering and other agricultural subjects. Furthermore, this series contains several speeches by Davidson as well as a lecture notebook of his class. Finally, it also holds news clippings on Davidson and several writings by Davidson's students

Container list

Box	Folder	Title	Dates
35	3	Lecture Notebook: Physics Course	1902
11	42	"Raising Water by Compressed Air"	1904

Box	Folder	Title	Dates
11	47	"Steam Turbines"	1904
11	4	"Agricultural Engineering"	1906
11	5	"Agricultural Engineering"	1913
11	18	"Creamery Organization and Construction"	1913
11	8	"Agricultural Engineering as a Branch of Agricultural Education in the State Colleges of the United States"	1914
11	9	"Agricultural Engineering as a Profession"	1914
33	15	"Agriculture and the Engineer"	1915
11	39	"Moveable Hog Houses"	1916
33	23	"How to Get Better Hay with much less Labor"	1926
33	16	"Are You Worth a Cent and a Half an Hour as a Motor"	1927
33	24	"L Block, a New and Cheaper Farm Building Idea"	1927
33	28	"Will The Combine Displace the Grain Binder"	1927
33	25	"Light on Electric Lighting"	1927 circa
11	43	"Report of an Investigation of Experiments in Cornstalk Harvesting for Industrial Purposes"	1928
11	32	"Harvesting Cornstalks for Industrial Uses"	1930
33	21	"Harvesting Cornstalks For Industrial Uses," Iowa Agricultural Experiment Station Bulletin 74; includes original images	1930
33	22	"How Successful Farming Helps the Implement Dealer" and "Farm Machines for 1931"	1931
33	27	"Why Cultivate and How"	1932
33	26	"Six Operations of Growing Corn in Pictures"	1932-1941
11	13	"Appraising Improvements in Farm Machines"	1933
11	56	"Wind Electric Plants"	1933
33	14	"1934 Machines: Gains in Quality of Implements are Noted"	1934
11	14	"Basin Method of Planting Row Crops and a Basin Lister Planter"	1935
11	52	"Tractive Efficiency of the Farm Tractor"	1935
33	18	"Down Machinery Row for 1936"	1936
33	20	"Easily They Roll Along"	1936

Box	Folder	Title	Dates
11	24	"Farm Equipment Research and Testing Stations in Europe"	1936
33	29	"Wings in the Wind; Bring Welcome Electricity to Lighten Farmer's Work"	1937
33	13	"193 Out of 196 Owners Put an O.K. on Rubber-Tired Tractors"	1939
33	19	"Down Machinery Row for 1941"	1941
11	6	"Agricultural Engineering"	1944
33	17	"Beat the weeds For More Bushels"	1944
11	28	"Farm Power"	1946
33	30	"Researching Mechanical Farm Equipment" (speech)	1949
11	34	"History of the American Society of Agricultural Engineers"	1950
11	10	"Agricultural Engineering Faculty"	undated
11	7	"Agricultural Engineering"	undated
11	11	"Agriculture and the Engineer"	undated
11	12	"Application of Power to Agriculture"	undated
11	15	"Bursting of Clay Block Silos"	undated
11	16	"Chilled Plows"	undated
11	17	"Common Grass Seeds and the Usual Method of Harvesting"	undated
11	19	"Development of Agricultural Engineering"	undated
11	20	"Ditching Machines and Implements"	undated
11	21	"Early Days"	undated
11	22	"Economic Depression as a Challenge to the Agricultural Engineer"	undated
11	23	"Elements Effecting the Location of Manufactories of Agricultural Equipment"	undated
11	25	"Farm Implements"	undated
11	26	"Farm Machinery and Its Relation to Agricultural Development"	undated
11	27	"Farm Machinery as a Social Element"	undated

Box	Folder	Title	Dates
11	29	"Farming Bonanza Farms without Draft Animals and the Machinery Used"	undated
11	30	"Frederick Walter Ives"	undated
11	31	"Future of the Farm Tractor"	undated
11	33	"Haying Machinery"	undated
11	35	"Horse as a Motor"	undated
11	36	"Ice Houses"	undated
11	37	"Investigate Tractor Value"	undated
11	38	"Iowa Silo"	undated
11	40	"Principles of Tillage"	undated
11	41	"Quality Value Discussion"	undated
11	44	"Seeding Machinery"	undated
11	45	"Shall We Discard Our Plows?"	undated
11	46	"State Aid for Drainage Work"	undated
11	48	"Suggested List of Agricultural Engineering Topics Covering One Year"	undated
11	49	"Things New in Tractors"	undated
11	50	"Tillage Machinery"	undated
11	51	"Traction Plowing"	undated
11	53	"Twenty Years of Progress"	undated
11	54	"USDA"	undated
11	55	"What the Farmer Wants in Service"	undated
11	57	"Winnipeg Motor Competition and the Modern Tractor"	undated
12	1	Students' writings on successful farming of the future and value, care, and application of manure	undated

Description of series**Series 4 Research Subject Files 1879-1931, undated**

extent: 1.68 linear feet (4 document boxes)

description: Davidson devised a two-way decimal filing system that related articles and clippings to photographs of similar subject matter. By noting the number assigned to a particular category in the research subject file, one can determine quickly if there are photographs (see Series 5) on the same subject and vice versa. Information on the classification system can be found in box 35, folder 12. These files include written material regarding farm operations as they apply to agricultural engineering.

Container list

Box	Folder	Title	Dates
12	2	Agricultural engineering	1923-1928
35	12	Classification system information	1918
12	3	General engineers	1926-1927
12	4	General sciences	undated
12	5	Farm management and agricultural economics	1921-1928
12	6	Soils, fertilizers, crops, livestock, livestock products	1926
12	7	.10 Materials .12 Vegetable, rubber, wood, etc. .13 Metals .14 Concrete (also .17) .15 Clay .19 Miscellaneous	1905-1930, undated
12	8	.20 Land development, general .21 Hydraulics of irrigation and drainage	1906-1912, undated
12	9	.220 Drainage and flood control, general .221 Structures, drains, etc. .222 Drainage district administration .223 Effects of drainage .224 Erosion, terracing, etc.	1908-1930, undated
12	10	.230 Irrigation, general .231 Structures	1906-1913, undated
12	11	.240 Land clearing, general	1908-1913, undated

Box	Folder	Title	Dates
12	12	.30 Machinery and equipment, general .303 Relation of machinery to production .304 Economics .3041 Relation of equipment to cost .306 Efficiency, traction and dynamometer tests .307 Lubrication	1909-1931, undated
12	13	.31 Crop machinery, general and tillage machinery .3111 Plows and ridging devices .3113 Harrows and rollers .3115 Cultivators and weeders .3121 Grain seeders and drills .3122 and .3160 Fertilizer and seeder attachments .3123 Corn, cotton and cane planters .3124 Potato, onion planter .3125 Beet cultivator	1911-1930, undated
12	14	.3131 Binders, headers, reapers and combines for grain, grass and sorghum .3132 Corn, cane and bean harvesters .3133 Cotton harvesting .3134 Root crop diggers and harvesters .3135 Mowers, rakes, loader and stackers	1910-1930, undated
12	15	.3140 Crop processing machinery .3141 Threshers and hullers .3142 Graders, scarifiers and cleaners .3143 Shellers, dehullers, shredders and cutters .3147 Grain blower and conditioner	1911-1930, undated
13	1	.3150 Spraying, dusting and fumigating .3151 Corn borer control machinery	1908-1931, undated
13	2	.3160 Fertilizing machinery, general .3161 Spreaders, manure and lime .317 Crop loading and elevating machinery .319 Miscellaneous	1908-1930, undated
13	3	.320 Livestock dairy machinery, general .321 Feeder and roughage grinders .3241 Dairy machinery and equipment	1913-1930, undated
13	4	.330 and .331 General .340 Minor farm tools and equipment, general	1925, undated

Box	Folder	Title	Dates
13	5	.350 Pumps and pumping equipment, general .361 Excavating and grading equipment .380 Household machinery .390 Miscellaneous	undated
13	6	.425 .429 Power farming .44 Heat engines	1908-1919, undated
13	6	.40 Power .402, .403, .404 Power, general	1917-1927, undated
13	7	.410 Animal power (types and accessories) .412 Horse power	1907-1921, undated
13	8	.420 Motor, general .421 Cost of horse labor .422 Wind	1906-1919, undated
13	9	.424 Traction engines	1911-1918, undated
13	10	.425 and .426 Tractors	1912-1921, undated
14	1	.450 Electric .455 Uses and appliances	1911-1927, undated
14	2	.460 Automotive applications, general .461 Tractors .462 Trucks	1913-1930, undated
14	3	.463 Automobiles (see "automobile number" of the Orange Judd, Farmer)	1910-1913, undated
14	4	.500 Roads, general .510, .520, .530, and .540 Types of roads .550 Laws .560 Bridges and culverts .570 Maintenance	1911-1913, undated
14	5	.590 Good roads	1903-1918, undated

Box	Folder	Title	Dates
14	6	.610 Courses of study, general .611 Agricultural mechanics .612 and .613 Field engineering and farm homes .615 Water on farm .620 Technical societies .630 Experimental work, policies, methods, etc. .640 Public demonstrations and exhibits .660 Laboratory equipment	1905-1931, undated
14	7	.700 Buildings, general .701 and .702 Building codes, contracts and specifications, estimates, and farmstead plans .703, .704, .705 Concrete (details), types of construction	1905-1917, undated
14	8	.710 Dwellings	1905-1917, undated
15	1	.720 Buildings for farm animals, general .721 General purpose barns .722 Horse barns .723 Dairy barns .724 Beef cattle barns .725 Sheep and goat barns .726 Hog houses .727 Poultry houses	1905-1926, undated
15	2	.730 Buildings for farm products .731 Hay and feed storage barns .732 Grain, seed and corn cribs .733 Silos .734 Root and fruit storage	1908-1905, undated
15	3	.740 Building--housing equipment and supplies, general .741 Machinery, sheds, garages, and shops .744 Ice houses	1911-1928, undated
15	4	.750 Buildings for manufacturing and processing .751 Smokehouses .752 Milk houses, creameries, etc.	1907-1923, undated
15	5	.770 Livestock and poultry equipment, general .771 Watering tanks, troughs and heaters .772 Feed racks, self feeders and feeding floors .773 Dipping vats, oilers, wallowers .776 Fences and fencing .7763 Posts .7900 Miscellaneous buildings	1907-1914, undated

Box	Folder	Title	Dates
15	6	.800 Structural equipment, general .810 Heating .820 Lighting .830 Ventilation .840 Refrigeration and cooling	1909-1913, undated
15	7	.850 Sanitation and water supply, general .851 Sewage treatment .855 Water supply	1879-1922, undated
15	8	.900 Miscellaneous farm equipment .910 Iowa State University buildings and people	undated

Description of series

Series 5 Research Photographs 1904-1940, undated

extent: 5.88 linear feet (14 document boxes)

description: This series consists of over 3,000 photographs, which are arranged in the same system Davidson organized the research subject files. By noting the number assigned to a particular category in the photograph file, one can determine if there is a subject file (see Series 4) on the same subject. Information on the classification system can be found in box 35, folder 12. Subjects covered include agricultural machinery, buildings, soils, and roads.

Container list

Box	Folder	Title	Dates
15	9	.130 Metals .160 Cement (14 b/w photographs)	1908, undated
15	10-11	.220 Drainage and flood control, general .221 Structures .2210 General .2212 Tile drains .220 Drainage district administration .224 Erosion (25 b/w photographs)	1904-1917, undated
16	1-2	.2241 Terracing (54 b/w photographs)	1905-1917, undated

Box	Folder	Title	Dates
16	3	.2242 Gully control .23 Irrigation .230 Irrigation, general .231 Irrigation, structures .232 Irrigation, farm practice in applying water .233 Irrigation, sewage .240 Land clearing, general (37 b/w photographs)	1906-1936, undated
16	4	.30 Machinery and equipment .305 Machine design .306 Traction and dynamometer tests (44 b/w photographs)	1906-1934, undated
16	5-6	.31 Crop machinery .3111 Plows and Ridging Devices (47 b/w photographs)	1910-1938, undated
17	1	.3111 Plows and Ridging Devices (16 b/w photographs)	1938, undated
17	2	.3112 Rotary hoes .3113 Harrows (22 b/w photographs)	1915-1938, undated
17	3-5	.3115 Cultivators and weeders (130 b/w photographs)	1919-1938, undated
17	6	.312 Planters and seeders .3121 Grain seeders and drills (21 b/w photographs)	1938-1940, undated
18	1	.3123 Corn, cotton and cane planters and thinners .3124 Potato planters, etc. .3125 Beet planters, etc. .3126 Garden drills (33 b/w photographs)	1927-1934, undated
18	2-6	.3130 Harvesting machinery (147 b/w photographs)	1918-1930, undated
19	1	.3132 Corn, cane and bean harvester (32 b/w photographs)	1913-1930, undated
19	2	.3133 Cotton pickers .3134 Root crop diggers and harvesters (11 b/w photographs)	1919-1929, undated
19	3	.3135 Mowers, rake loaders and stackers (19 b/w photographs)	1909-1929, undated

Box	Folder	Title	Dates
19	4	.314 Crop processing machinery (30 b/w photographs)	1904-1929, undated
19	5	.315 Spraying and dusting machinery .316 Fertilizing machinery .317 Loading and conveying machinery (25 b/w photographs)	1911-1936, undated
19	6	.32 Livestock machinery .321 Feed mixers, grinders and cooker .324 Milking machinery (27 b/w photographs)	1907-1925, undated
19	7	.34 Minor farm tools .35 Pumps .36 Construction machinery .3616 Elevators, loaders, etc. (33 b/w photographs)	1907-1929, undated
20	1	.410 Power .411 Animal power .412 Water power .42 Gasoline power .43 Wind power .4410 Heat engines (27 b/w photographs)	1907-1931, undated
20	2	.45 Electric engines .4521 Generation .46 Automotive applications (3 b/w photographs)	1917, undated
20	3-6	.461 Tractors (119 b/w photographs)	1910-1931, undated
21	1	.461 Tractors (26 b/w photographs)	1910-1931, undated
21	2	.462 Trucks .463 Automobiles (29 b/w photographs)	1909-1929, undated
21	3	.51 Roads, earth .52 Roads, gravel (10 b/w photographs)	1906-1908, undated
21	4	.601 Agricultural engineering buildings at Iowa State College and elsewhere (29 b/w photographs)	undated

Box	Folder	Title	Dates
21	5	.6111 Blacksmithing .6112 Carpentry and building (25 b/w photographs)	1906-1917, undated
21	6	.6113 Farm machinery .6115 Farm motors .6115 Power transmission (19 b/w photographs)	1904-1927, undated
21	7	.612 Field engineering .6121 Class in agricultural surveying .614 Farm home Equipment, farm machinery repair .615 Well boring machine .621 Presentation of F.B.I. Cup .63 Experimental work (17 b/w photographs)	1904-1939, undated
22	1	.64 Public demonstrations .65 Scientific apparatus .651 General .652 Measuring and recording instruments (Dynamometer) .66 Laboratory Equipment (34 b/w photographs)	1904-1934, undated
22	2	.66 Laboratory equipment .67 Drawing Room, Agriculture Engineering Department (8 b/w photographs)	1904-1915 undated
22	3	.70 Buildings (6 b/w photographs)	1908-1921, undated
22	4	.703 types of construction .7031 construction .7034 Barns .7040 building construction .7042 Masonry roof (36 b/w photographs)	1915-1931, undated
22	5	.705 Concrete arch L-block construction (63 b/w photographs)	1915-1925, undated
22	6	.71 Dwellings (42 b/w photographs)	1913-1928, undated

Box	Folder	Title	Dates
23	1	.71 Dwellings .72 Buildings for farm animals .72013 Barns (28 b/w photographs)	1908-1917, undated
23	2	.721 Barns (16 b/w photographs)	1915-1930, undated
23	3	.721 Barns (37 b/w photographs)	1911-1921, undated
23	4	.722 Barns (19 b/w photographs)	1910-1920, undated
23	5	.723 Barns (25 b/w photographs)	1916-1920, undated
23	6	.723 Barns (49 b/w photographs)	1911-1923, undated
23	7	.726 Hog houses (7 b/w photographs)	1914-1924, undated
24	1	.726 Hog houses (36 b/w photographs)	1914-1924, undated
24	2	.727 Poultry houses .728 Caviary (26 b/w photographs)	1909-1920, undated
24	3	.731 Hay and feed storage barns .732 Grain, seed, and corn cribs (28 b/w photographs)	1915-1929, undated
24	4	.732 Grain, seed, and corn cribs (30 b/w photographs)	1915-1929, undated
24	5	.733 Silos (51 b/w photographs)	1908-1922, undated
24	6	.733 Silos (25 b/w photographs)	1908-1918, undated
25	1	.733 Silos (62 b/w photographs)	1910-1920, undated
25	2	.733 Silos (50 b/w photographs)	1908-1928, undated

Box	Folder	Title	Dates
25	3	.734 Roots and fruit storage .736 Smokehouses .740 Building--housing equipment and supplies, general .741 Machinery, sheds, garages, and shops .743 Manure disposal .751 Smokehouses (27 b/w photographs)	1913-1925, undated
25	4	.752 Milk houses, creameries, etc. (18 b/w photographs)	1912-1925, undated
25	5	.752 Milk houses, creameries, etc. (18 b/w photographs)	1912-1925, undated
25	6	.754 Clay block storage tank (50 b/w photographs)	undated
25	7	.76 Fences and fencing .77 Livestock and poultry equipment (62 b/w photographs)	1915, undated
26	1	.77 Livestock and poultry equipment, general .771 Watering tanks, troughs and heaters (14 b/w photographs)	1911-1923, undated
26	2	.771 Watering tanks, troughs, and heaters (25 b/w photographs)	1910-1925, undated
26	3	.772 Horse barns (17 b/w photographs)	1911-1920, undated
26	4	.773 Dipping vats, oilers, wallowers .774 Sheep feeding crates (10 b/w photographs)	1913, undated
26	5	.776 Fences and fencing .77631 Concrete fence posts (25 b/w photographs)	1913-1919, undated
26	6	.77631 Concrete fence posts (23 b/w photographs)	1914-1919, undated
26	7	.77631 Concrete fence posts (15 b/w photographs)	1914, undated
26	8	.77631 Concrete fence posts .77633 Fence posts .7764 Corrosion study (23 b/w photographs)	1910-1914, undated

Box	Folder	Title	Dates
27	1	.79 Miscellaneous buildings (26 b/w photographs)	1909-1919, undated
27	2	.793 Sales pavilion (33 b/w photographs)	1919-1920, undated
27	3	.82 Farm lighting plant .8221 Acetylene plant .823 Lighting plants .8241 Lamps .840 Refrigeration and cooling .8511 Septic tanks .8512 Sewage disposal .8553 Concrete reservoirs .8554 Well top .8562 Plumbing repairs .8563 Hydraulic ram (19 b/w photographs)	1907-1915, undated
27	4	.90 Miscellaneous farm equipment (16 b/w photographs)	1910-1922, undated
27	5	.90 Miscellaneous farm equipment (14 b/w photographs)	1910-1922, undated
27	6	.90 Miscellaneous farm equipment (32 b/w photographs)	undated
27	7	.90 Miscellaneous farm equipment (31 b/w photographs)	undated
27	8	.90 Miscellaneous farm equipment (35 b/w photographs)	undated
28	1	.90 Miscellaneous farm equipment (18 b/w photographs)	undated
28	2	.91 Miscellaneous farm equipment (34 b/w photographs)	1928, undated
28	3	.91 Miscellaneous farm equipment (33 b/w photographs)	1904-1934,
28	4	.91 Miscellaneous farm equipment (10 b/w photographs)	1919, undated
28	5	.923 Miscellaneous farm forms (2 b/w photographs)	1923-1928

Description of series

Series 6 Agricultural Engineering Photographs 1904-1932, undated

extent: 1.26 linear feet (3 document boxes)

description: This series contains photographs not arranged in the decimal filing system Davidson had used. The images pertain to topics such as silos, barns, fences, concrete and plaster, brick and glass, trucks, and farm machinery for planting, fumigating, tilling, and harvesting. There are also photographs relating to Davidson's invention, the dynamometer.

Container list

Box	Folder	Title	Dates
28	6	Brick, glass, tile, etc. (2 5x7, 2 8x10 b/w photographs)	1916-1928, undated
28	7	Cattle barns (13 b/w photographs)	1910-1928, undated
28	8	Concrete, gravel, plaster, etc. (20 b/w photographs)	1908-1921, undated
28	9	Concrete, gravel, plaster, etc. (22 b/w photographs)	1904-1928, undated
28	10	Corrosion experiments (20 b/w photographs)	1908-1912, undated
29	1	Dynamometer: includes picture of "Horse Model" (20 b/w photographs)	1904-1925, undated
29	2	Farm buildings (12 b/w photographs)	1915-1922, undated
29	3	Farmstead views (11 b/w photographs)	1911-1923, undated
29	4	Fences and related equipment (18 b/w photographs)	1910-1923, undated
29	5	Fumigating machinery (5 b/w photographs)	1910-1912, undated
29	6	Gasoline consumption experiment (5 b/w photographs)	1909-1911, undated
29	7	General farm machinery (11 b/w photographs)	1904-1926, undated

Box	Folder	Title	Dates
29	8	Graphs and charts (17 b/w photographs)	1908-1928, undated
29	9	Harrows (11 b/w photographs)	1921-1928, undated
29	10	Harvesting equipment (26 b/w photographs)	1904-1929, undated
30	1	Harvesting machinery (13 b/w photographs)	1912-1929, undated
30	2-4	Miscellaneous--includes pictures of testing models for various pieces of farm equipment (94 b/w photographs)	1907-1932, undated
30	5	Planting machinery (3 b/w photographs)	1925, undated
30	6	Poultry house (2 b/w photographs)	1910-1914
30	7	Rural development of electricity (12 b/w photographs)	1927, undated
30	8	Silos (21 b/w photographs)	1909-1913, undated
31	1	Silos (25 b/w photographs)	1910-1926, undated
31	2	Testing equipment (38 b/w photographs)	1906-1927
31	3	Tillage machinery (12 b/w photographs)	1926-1929
31	4	Tools (4 b/w photographs)	1925-1926
31	5	Trucks (2 b/w photographs)	1915

Description of series

Series 7 American Society of Agricultural Engineers 1926-1957, undated

extent: 0.42 linear feet (1 document box)

description: This series contains various materials relating to Davidson's activities in the American Society of Agricultural Engineers including files on the 25th annual meeting held at Iowa State, correspondence, a newsletter of ASAE's College Section, and a brief history of ASAE. Davidson was one of founding members of ASAE. In 1906, he met with two other instructors in agricultural engineering, C.A. Ocock (University of Wisconsin) and F.R. Crane (University of Illinois) to discuss the creation

of an annual conference. A year later, another meeting was held and the American Society of Agricultural Engineers was born.

Container list

Box	Folder	Title	Dates
32	1	20 th -23 rd Annual Meeting: programs and newsletters	1926-1929
32	2	24th Annual Meeting: programs and correspondence	1930
32	3	25th Annual Meeting: committees - correspondence	1931
32	4	25th Annual Meeting: committees - listings	1930
32	5	25th Annual Meeting: committees - local arrangements, correspondence	1930-1931
32	6	25th Annual Meeting: committees - publications, correspondence	1931
32	7	25th Annual Meeting: correspondence - companies	1930-1931
32	8	25th Annual Meeting: correspondence - Iowa State College (University) administrators	1929-1931
32	9	25th Annual Meeting: correspondence - graduates	1931
32	10	25th Annual Meeting: exhibits - correspondence and lists	1930-1931
32	11	25th Annual Meeting: financial report	1931
32	12	25th Annual Meeting: general notes	1930-1931
32	13	25th Annual Meeting: housing	1931
32	14	25th Annual Meeting: instructor's course	1931
32	15	25th Annual Meeting: program and registration information	1931
32	16	College Section: <i>Confessor</i>	1923-1926, undated
32	17	Correspondence	1908-1923
32	18	Divisions and committees: programs	1929-1930
32	19	History of ASAE: "Fifty Candles to Light the Future"	1957

Description of series

Series 8 Research and Travel 1904-1949

extent: 2.1 linear feet (5 document boxes)

description: This series contains various materials relating to Davidson's research, patents, and various research-related trips around the world. It encompasses several scrapbooks, including Davidson's trip to Russia as a member of the American Biro-Bidjan Commission and his travels throughout China. This series also holds numerous slides on his trip to China.

Container list

Box	Folder	Title	Dates
53	1	China Trip: Report on Agriculture and Agricultural Engineering in China	1949
39		China Trip: Loose images	1948-1949
38	1	China Trip: Scrapbook (1 of 4), includes index	1947-1949
38	2	China Trip: Scrapbook (2 of 4)	1947-1949
38	3	China Trip: Scrapbook (3 of 4)	1948-1949
38	4	China Trip: Scrapbook (4 of 4)	1948-1949
53	2	China Trip: Slides (includes 76 slides)	1948-1949
53	3	China Trip: Slides (includes 87 slides)	1948-1949
53	4	China Trip: Slides (includes 103 slides)	1948-1949
35	5	Research: Crystal Lake Project	1942
35	6	Research: Hog House, "The Iowa" Correspondence	1913-1919
35	7	Research: Patents	1904-1929
35	9	Research: Patents	1917-1941
35	8	Research: Patents Traction Dynamometers Correspondence	1913
35	11	Scrapbook of Russian trip as a member of the American Biro-Bidjan Commission (Photocopy)	1929-1930
49		Scrapbook of Russian trip as a member of the American Biro-Bidjan Commission (includes 467 photographs)	1929-1930
40		Scrapbooks: International Conference	1935

Description of series

Series 9 **Iowa State College (University) and Departmental Records** **1905-1955, undated**

extent: 1.26 linear feet (3 document boxes)

description: This series contains materials relating J.B. Davidson's work at Iowa State College (later known as Iowa State University). Along with Davidson's work in the Department of Agricultural Engineering, including budget records, course materials, enrollment numbers, and details on farm equipment, this series also contains Davidson's records on early graduates of the department. Furthermore, this series also holds Davidson's correspondence with other university departments such as the offices of the President and Treasurer.

Container list

Box	Folder	Title	Dates
36	1	Agriculture Division: Course of Study Committee Correspondence and Minutes	1909
36	2	Agriculture Division: Course of Study Committee Correspondence and Minutes	1909
36	3	Experiment Station Bulletin: Correspondence	1909-1927
36	4	Agricultural Engineering Station: Budget Reports	1941-1943
36	5	Agricultural Engineering Station: Budget Records	1936-1939
36	6	Agricultural Engineering Station: Budget Records	1939-1940
36	7	Agricultural Extension: Correspondence	1906-1930
36	8	Building information for Agricultural Engineering Hall: Correspondence and Floor Plan	1906-1914
36	9	Building information: Davidson Hall	1941-1942
36	10	Campus Building and Structure: Correspondence	1910-1931
36	11	Department's Blacksmith and Repair Service: Correspondence	1914-1927
36	12	Departmental Budget Reports	1906-1927, undated
37	1	Departmental Budget Reports	1928-1947
38	2	Department of Agricultural Engineering: Correspondence	1909-1955

Box	Folder	Title	Dates
38	3	Department of Agricultural Engineering Course Fees: Correspondence	1907-1920
38	4	Department of Agricultural Engineering: Course Materials AE 80: Agricultural Engineering Orientation	1925, undated
38	5	Department of Agricultural Engineering: Course Materials Ag En 447 Agricultural Engineering Applications	undated
38	6	Department of Agricultural Engineering: Course offering	1905-1926
38	7	Department of Agricultural Engineering: Enrollment Numbers Correspondence	1915, undated
38	8	Department of Agricultural Engineering: Equipment and Supplies	1905-1930, undated
38	9	Department of Agricultural Engineering: Farm Machine Correspondence	1912-1929
38	10	Department of Agricultural Engineering: Farm Leases	1928, 1930
38	11	Department of Agricultural Engineering: Graduates Address Book	undated
38	12	Department of Agricultural Engineering: Graduate: Correspondence	1910-1926
38	13	Department of Agricultural Engineering: Graduate information sheets (1 of 2)	1931
38	14	Department of Agricultural Engineering: Graduate information sheets (2 of 2)	1931
38	15	Department of Agricultural Engineering: Graduates 1916	1916-1924
38	16	Department of Agricultural Engineering: Graduates 1917 A-G	1914-1923
40	1-2	Agricultural Engineering Station, budget records	1936-1941
41	2	Department of Agricultural Engineering: Graduates 1910, 1912	1922-1923
41	3	Department of Agricultural Engineering: Graduates 1913	1913-1923, undated
41	4	Department of Agricultural Engineering: Graduates 1914	1916-1922, undated
41	5	Department of Agricultural Engineering: Graduates 1915	1919-1924, undated

Box	Folder	Title	Dates
41	6	Department of Agricultural Engineering: Graduates 1918-1921	1918-1927
41	7	Department of Agricultural Engineering: Graduates 1922	1919-1930, undated
41	8	Department of Agricultural Engineering: Graduates 1923 A-B	1919-1926, undated
41	9	Department of Agricultural Engineering: Graduates 1923 C-Z	1919-1926, undated
41	10	Department of Agricultural Engineering: Graduates 1924 A-C	1922-1924
41	11	Department of Agricultural Engineering: Graduates 1924 C-Z	1922-1924
54	1	Department of Agricultural Engineering: Graduates 1925-1926	1925-1926, undated
54	2	Department of Agricultural Engineering: Graduates 1927	1924-1929, undated
54	3	Department of Agricultural Engineering: Graduates 1928	1924-1929, undated
54	4	Department of Agricultural Engineering: Graduates 1929	1924-1929, undated
54	5	Department of Agricultural Engineering: History of Department	1915-1926
54	6	Department of Agricultural Engineering: Organization and Joint Administration and Engineering	1912-1914
54	7	Department of Agricultural Engineering: Reports	1905-1927
54	8	Department of Agricultural Engineering: Scholarships	1912
54	9	Department of Agricultural Engineering: Short Courses	1909-1929
54	10	Department of Agricultural Engineering: Staff Information	1912-1930
54	11	Department of Agricultural Engineering: Staff and Faculty Listings	1914-1925
54	12	Department of Agricultural Engineering: Student Recruitment	1915-1925
54	13	Department of Agricultural Engineering: Student Workers	1913-1927
54	14	Department of Agricultural Engineering: Students	1906-1915

Box	Folder	Title	Dates
54	15	Department of Agricultural Engineering: Textbooks Considered	1913-1921
54	16	Department of Agricultural Engineering: Train Unloading Platform	1909-1914
54	17	Finance Committee Correspondence	1907-1930
54	18	Office of the President Correspondence	1914-1929
54	19	Office of the Treasurer Correspondence	1905-1930
54	20	Publicity Committee Correspondence	1913
54	21	Purchasing Committee Correspondence	1905-1907
54	22	Registrar's Office Correspondence	1905-1946

Description of series

Series 10 Slides **Undated**

extent: 2.94 linear feet (7 card file boxes)

description: This series consists of conventional and lantern slides containing a variety of images relating to agriculture and rural life, including rural electrification, soil conservation, farm machinery, and slides of the Soviet Union.

Container list

Box	Envelope	Title	Dates
42	1-51	Soil Conservation (51 lantern slides)	undated
42	52-65	Rural Electrification (14 lantern slides)	undated
42	66-89	Farm Machinery (24 lantern slides)	undated
43	1-28	Farm Machinery (28 lantern slides)	undated
43	29-75	Miscellaneous (47 lantern slides)	undated
43	76-88	Russia (13 lantern slides)	undated
44	1-61	Russia (61 lantern sides)	undated
45	1-56	Russia (56 lantern slides)	undated
45	57-85	Automobiles (29 lantern slides)	undated
46	1-19	Automobiles (19 lantern slides)	undated

Box	Envelope	Title	Dates
50	1	Laying tile with hook 4/5 A67 (print is in box 16, folder 1) negative number 0068635, glass	undated
50	2	Protector for tile at terminus A68 (print is in box 16, folder 1) negative number 0068636, glass	undated
50	3	Tools used in ditching and tiling A70 (print is in box 16, folder 1) negative number 0068637, glass	undated
50	4	Method of leveling bottom of ditch 4/5 A71 (print is in box 16, folder 1) negative number 0068638, glass	undated
50	5	Covering tile in ditch with plow (front view) 4/5 A66 (print is in box 16, folder 2) negative number 0068639, glass	undated
50	6	.221 Drainage (print is in box 16, folder 1) negative number 0068640, glass	1905 circa
50	7	.221, Milford Township Drainage District No.32, Story County, IA, (print is in box 16, folder 2) negative number 0068641, glass	undated
50	8	.224, Concrete culvert- Zumwalt Farm Soil Erosion, (print is in box 16, folder 2) negative number 0068642, glass	undated
50	9	.224, Soil erosion Oct. 1, 1914 barns of Zumwalt Farm, (print is in box 16, folder 2) negative number 0068643, glass	1914
50	10	Well boring machine, A1 (print is in box 16, folder 4) negative number 006864, glass	undated
50	11a-11c	.3216, Garden machinery, (print is in box 17, folder 5) negative number 006865 (3 copies), glass	undated
50	12	C. A. Arnold House, first floor plan (print is in box 22, folder 2) negative number 0068646, glass	1915
50	13	C. A. Arnold House, second floor plan (print is in box 22, folder 2) negative number 0068647	1915
50	14	C. A. Arnold House, kitchen and pantry floor plan (print is in box 22, folder 2) negative number 0068648, glass	1915
50	15	C. A. Arnold House, kitchen floor plans (print is in box 22, folder 2) negative number 0068649 (2 copies), glass	1915

Box	Envelope	Title	Dates
50	16	C. A. Arnold House, kitchen and pantry floor plans (print is in box 22, folder 2) negative number 0068650, glass	1915
50	17	.77631, Concrete posts, March 1914, (print is in box 25, folder 3) negative number 0068651, glass	1914
50	18	.77631, Concrete posts, March 1914, (print is in box 25, folder 3) negative number 0068652 (top right corner is broken), glass	1914
50	19	.77631, Concrete posts, March 1914, (print is in box 25, folder 3) negative number 0068653, glass	1914
50	20	.77631, Concrete posts, March 1914, (print is in box 25, folder 3) negative number 0068654, glass	1914
50	21	.77631, Concrete posts, March 1914, (print is in box 25, folder 3) negative number 0068655, glass	1914
50	22a, 22b	.77631, Concrete posts, September 1914, (print is in box 25, folder 3) negative number 0068656 (2 copies), glass	1914
50	23	.77631, Concrete posts, September 1914, (print is in box 25, folder 3) negative number 0068657, glass	1914
50	24	.77631, Cement post showing failure, May 22, 1914, (print is in box 25, folder 3) negative number 0068658 (2 copies)	1914
50	25	.77631, Cement post showing failure, May 22, 1914, (print is in box 25, folder 3) negative number 0068659, glass	1914
50	26	.77631, Concrete fence posts, September 1914, (print is in box 25, folder 4) negative number 0068660, glass	1914
50	27	.77631, Concrete fence posts, September 1914, (print is in box 25, folder 4) negative number 0068661, glass	1914
50	28a, 28b	.77631, Concrete fence posts, September 1914, (print is in box 25, folder 4) negative number 0068662 (2 copies), glass	1914
50	29a, 28b	Homemade steel form for concrete posts, .77631 (print is in box 25, folder 4) negative number 0068663 (2 copies), glass	undated
50	30	.77631, Test of cement post, April 10, 1914, (print is in box 25, folder 4) negative number 0068663, glass	1914

Box	Envelope	Title	Dates
50	31	.77631, Concrete corner posts, January 8, 1914, (print is in box 25, folder 5) negative number 0068664, glass	1914
50	32	.77631, Concrete corner posts, with child sitting on it, January 8, 1914, (print is in box 25, folder 5) negative number 0068665, glass	1914
50	33	.77631, Concrete corner posts, single post strung with fencing, January 8, 1914, (print is in box 25, folder 5) negative number 0068666, glass	1914
50	34	.77631, Concrete corner posts, gate post with brace, January 8, 1914, (print is in box 25, folder 5) negative number 0068667, glass	1914
50	35	.77631, Concrete corner posts, September 1914, (print is in box 25, folder 5) negative number 0068669, glass	1914
50	36	.77631, Concrete corner posts, September 1914, (print is in box 25, folder 5) negative number 0068670, glass	1914
50	37	.77631, Concrete corner posts, September 1914, (print is in box 25, folder 5) negative number 0068671, glass	1914
51		Negatives (350 b/w negatives)	undated
52		Negatives (186 b/w negatives)	undated