

GRENNAN, Elizabeth (Bennett). October 9, 1880–October 15, 1972.
OHIO UNIVERSITY (BS 1903), UNIVERSITY OF ILLINOIS (MA 1908, PhD 1910).

Elizabeth Ruth Bennett, named Lizzie Ruth at birth, was the daughter of Pennsylvania natives Emmeline (Loux) (1852–1923) and Daniel Tinsman Bennett (1847–1921), who married in 1877. Bennett was born in Shawnee, in Monroe County, in east central Pennsylvania, the second of seven children. Her father was described as a miller in 1880 and 1900 and as proprietor of a livery stable in 1910. The other children in the family were Clara R. (1878–1961), Frank L. (1882–1897), Ida M. (b. 1884), Sarah E. (1886–1924), Lillian M. (b. 1888), and John Loux (1891–1957).

Elizabeth Bennett graduated from the State Normal School in nearby East Stroudsburg, Pennsylvania, in 1898. Her occupation is listed as teacher (unemployed four months) in 1900. She attended Ohio University in Athens where she received her BA in 1903. She held a scholarship in mathematics at the University of Illinois in 1907–08 and a fellowship 1908–10. She received a master's degree in 1908 and her PhD in 1910. Her dissertation in group theory was directed by G. A. Miller. Bennett's doctorate was the second granted by the department, and was the first to a woman.

In 1910 Bennett went to the University of Nebraska in Lincoln as an instructor. Elizabeth Bennett and John Grennan, a faculty member in mechanical engineering at Nebraska, married in Lincoln on June 12, 1913. John Grennan was born in Michigan in 1881. In 1910 he was living with his family in Ann Arbor, Michigan, where he was working as a moulder in a foundry. He attended a summer session at the University of Michigan in 1911, and that fall he was appointed instructor in forge and foundry work at the University of Nebraska. He continued to attend summer sessions at Michigan in 1912 and 1913 and at Nebraska in 1915.

The Grennans remained on the faculty at Nebraska until 1916, when John Grennan took a position as foreman of the forge shop at Michigan Agricultural College (now Michigan State University) in East Lansing. After two years they both moved to the University of Illinois. Elizabeth Grennan was appointed instructor of mathematics in September 1918, apparently on a term by term basis. John Grennan was first appointed for twelve months as instructor in foundry practice and management in the College of Engineering in July 1918 and was reappointed as assistant superintendent of the foundry in July 1919 and again in about March 1920. Both Grennans left Illinois in 1920, and John Grennan went to Camp Grant, an army training facility near Rockford, Illinois, as an instructor of foundry.

In 1922 John Grennan became an instructor of foundry practice in the metal processing department at the University of Michigan; in 1930 he revised a previously published "practical handbook of standard foundry practice" and retired in June 1947 as instructor emeritus of foundry practice.

Elizabeth and John Grennan had no children and remained in Ann Arbor after his retirement. In about 1940 Elizabeth Grennan reported that she was retired, her church affiliation was Unitarian, her hobby was gardening, and her favorite recreation was camping.

John Grennan died in November 1964, and a John Grennan scholarship for studies related to foundry practice or technology in the materials science and engineering department was established as the result of a \$20,000 bequest to the University of Michigan by Elizabeth B. Grennan. Elizabeth B. Grennan died in Ann Arbor in

October 1972, shortly after her ninety-second birthday. She also made a bequest to the University of Illinois that funds an Elizabeth R. Bennett scholarship in mathematics.

Organizational affiliations: AMS, Sigma Xi.

Dissertation:

1910 [Bennett, E. R.] Primitive groups with a determination of the primitive groups of degree 20. PhD dissertation, University of Illinois, directed by George Abram Miller. Printed version, 1912, reprinted from *Amer. J. Math.* 34:1–20.

Publications:

1908 [Bennett, E. R.] Factoring in a domain of rationality. *Amer. Math. Monthly* 15:222–26.

1909 [Bennett, E. R.] Periodic decimal fractions. *Amer. Math. Monthly* 16:79–82.

1912 [Bennett, E. R.] Primitive groups with a determination of the primitive groups of degree 20. *Amer. J. Math.* 34:1–20. Published version of PhD dissertation. Review: *JFM* 43.0200.02 (L. Bieberbach). Presented as “Primitive groups of degree 20” to the AMS, Lincoln, NE, 26 Nov 1910; abstract: *Bull. Amer. Math. Soc.* 17:224 #2.

1914 [Bennett, E. R.] Simply transitive primitive groups whose maximal subgroup contains a transitive constituent of order p^2 , or pq , or a transitive constituent of degree 5. *Amer. J. Math.* 36:134–36. Reviews: *JFM* 45.0252.02 (L. Bieberbach); *Rev. semestr. publ. math.* 23, pt. 1: 1 ([E. B. Cowley](#)). Presented to the AMS, Poughkeepsie, NY, 12 Sep 1911; abstract: *Bull. Amer. Math. Soc.* 18:55 #4.

Abstracts not listed above:

1913a [Bennett, E. R.] The order of the product of two substitutions. *Bull. Amer. Math. Soc.* 19:221 #4. Presented to the AMS, Lawrence, KS, 30 Nov 1912.

1913b [Bennett, E. R.] Transitive groups of degree 107. *Bull. Amer. Math. Soc.* 19:221 #3. Presented to the AMS, Lawrence, KS, 30 Nov 1912.

References to: AmMSc 3–7; AmWom 1935–40; [BioWMath](#).

Other sources: PhD dissertation vita 1912; Owens questionnaire 1937; application for social security account number 1965; Center for Research Libraries College Catalog Collection; communications with University of Illinois Archives, the Bentley Historical Library at the University of Michigan, and Ohio University Archives; *The Semi-Centennial Alumni Record of the University of Illinois (1918)*; Stanford, “The History of the Mathematics Department at the University of Illinois”; US Census 1880, 1900, 1910 PA, 1910 MI, 1920 IL, 1930 MI.

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