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**Lehigh University
Information Resources**

Special Collections

Flyer

lehigh student research: the early days

In 1893, Lehigh senior C.L. McKenzie prepared a thorough study of the Hill-to-Hill bridge between Bethlehem and South Bethlehem while it was still a covered wooden bridge. The thesis includes four photographs of the structure; it is a detailed primary source document of this important structure, and has been used by historians. [See p. 2 for photograph.]

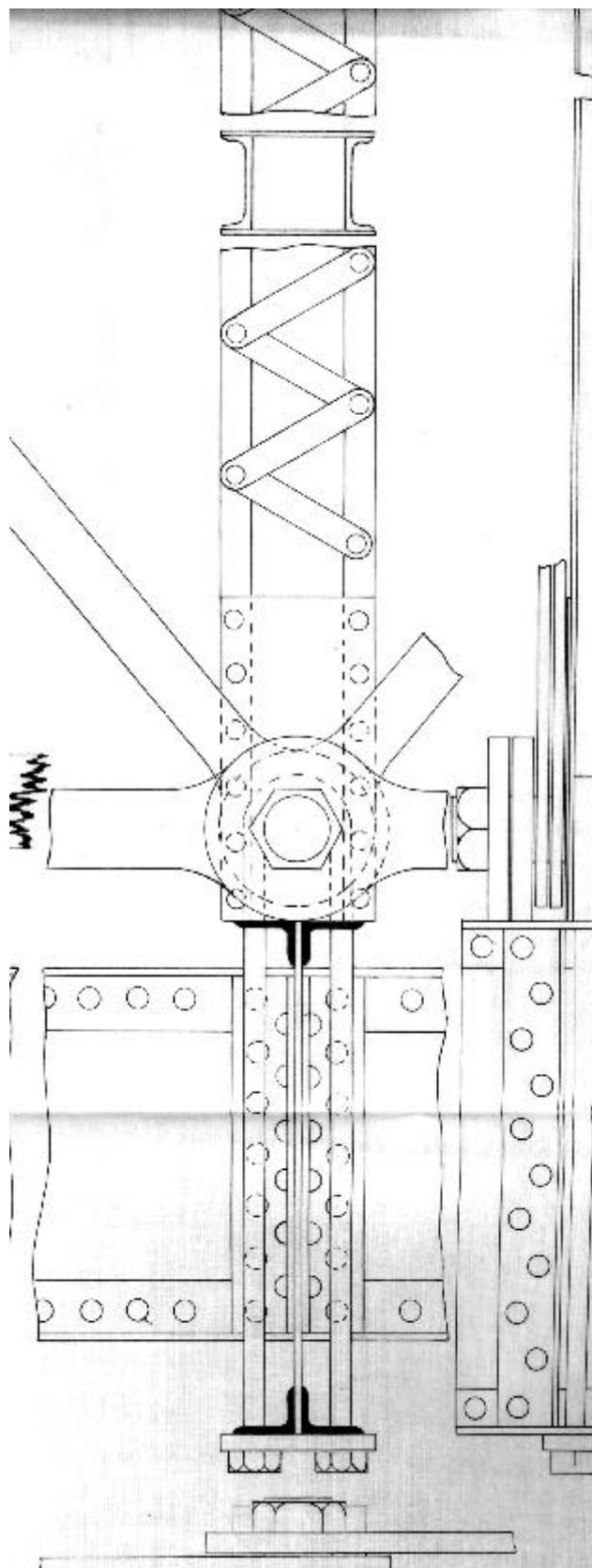
The reason for this project is explained in a notice quoted here from a Lehigh register of the 1870s, only a few years after the establishment of the University.

Graduating Theses. Every student, in each of the Schools [The School of General Literature and the School of Tech-nology] will be required to present a thesis upon some topic connected with his special School, as a necessary portion of the exercises for his final examination for a diploma. These theses shall be accompanied by drawings and diagrams when the subjects need such illustration. . . .

What this meant was that each graduating senior had to sit himself down and write something reasonably original relating to his course of study in order to earn the right to a Lehigh diploma.

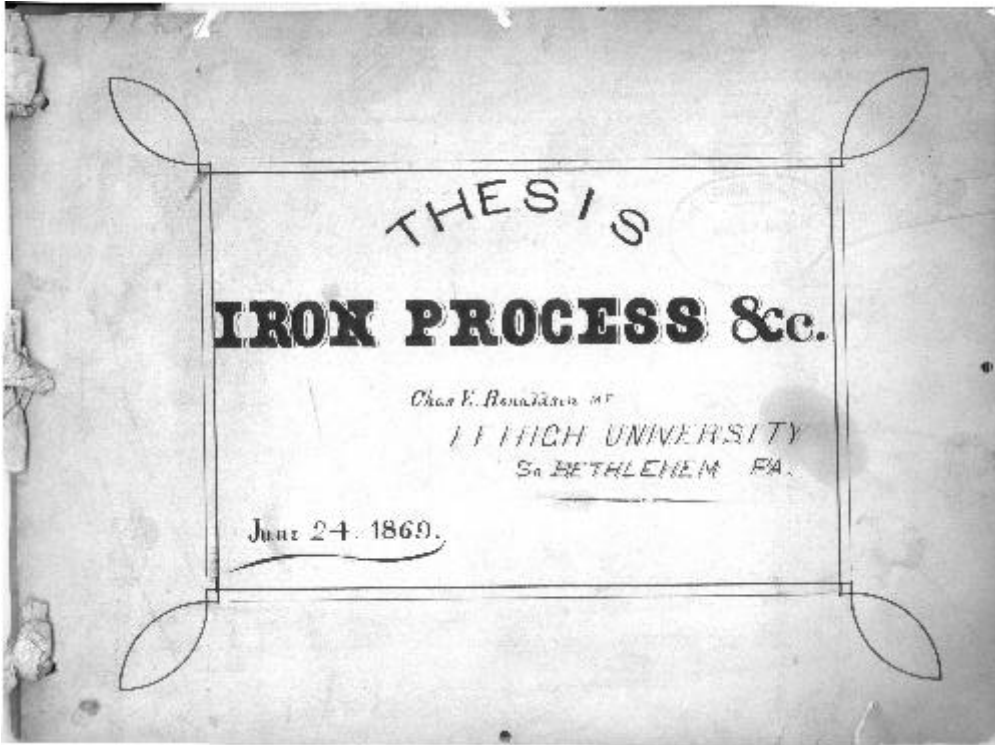
In fact, most of these bachelors' theses remain in Special Collections today, not only forming a part of the

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students' records, and the record of teaching and research at the University, but also constituting a body of material worthy of consultation today.

Granted, many have small value except as examples of



how important drafting skills were. Indeed, some of the large folding diagrams are works of art as well as functional objects. An example appears in the righthand column of the previous page.

The first thesis we have was prepared by a member of the class of 1869, Charles E. Ronaldson for the degree of M.E., or Mechanical Engineering, and was titled "Iron Process, Etc." Beginning in the 1872 catalogue, the theses were listed so it's possible to see what's gone missing. Of the 10 thesis listed for that year, for example, the library still has seven.

The graduating thesis remained an important part of the Lehigh curriculum for at

late nineteenth-century pedagogy. If all the student-designed bridges over the Lehigh River had been built, for example, the stream would now be entirely obscured from view for a substantial distance. And, for a certain period of its history, the river's flow rate is extremely, one might say excessively, well-documented.

It's also true that practically every industrial steam boiler in the Valley at the end of the 19th century was tested by a Lehigh student at least once.

However, more than occasionally a Lehigh student like McKenzie provided important historical documentation through his researches. In 1872, for example, James C. Polhemus wrote his thesis on the pediments of the Brooklyn Bridge, which he visited while they were still under construction.

Theses also marked the introduction of new topics to the curriculum. In 1902, for example, the first thesis on auto-motive mechanics appeared, comparing the use of steam, electric and internal combustion engines in automobiles, and written by Robert M. Bird. The following year the first one on reinforced concrete (at the time called concrete steel) in construction was produced by R. L. Adams.

Students also looked at sanitary engineering, railroad and rolling stock construction, mining machinery, and a number of other subjects.

Students in the School of General Literature also had to fulfil the same requirement. They were in the minority at the time on campus, and their theses lack the originality and historical value that is a byproduct of the technical ones.

Many of the engineering theses serve as a reminder of

least the first fifty years of the existence of the



University, and then began to wane. The last one we have dates from the early 1950s.

Special Collections has made a concerted effort to catalog these documents, numbering over 1800, and thereby make them accessible, first by selecting the most useful ones based on current interests, and then working to complete the process year by year, starting with the oldest. At present, all that we have through 1905 are cataloged and in ASA, complete with subject headings; cataloging is selective thereafter.

Many have proven their worth as significant documentation of historic local technology, and will continue to be a valuable part of the Library's collections. — P.A.M.

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Special Collections materials are available for research and

con-sultation without restriction. For further information contact Philip A. Metzger, Curator of Special Collections, or Ilhan Citak, Special Collections Assistant. Reading room hours are Monday through Friday, 1 p.m. to 5 p.m. or by appointment. Telephone: (610) 758-4506; fax (610) 758-6091; e-mail: inspc@lehigh.edu.