

CHEMICAL ENGINEERING



Fig. 1. Chemistry Hall in 1890 looking up Observatory Drive from Park Street. The machine shops are visible behind chemistry. [x25-836]

The first dedicated chemistry building was erected in 1885 at 600 North Park Street, and housed chemistry until 1905 when chemical engineering moved in. In 1968 it was demolished to make way for the undergraduate library, Helen C. White Hall.

The genesis of this, the University's first dedicated chemistry building (of at least three), was the miserable experience from the two previous homes of chemistry. In referring to Main Hall [later Bascom Hall] historian J. F. A. Pyre says of chemistry's first home: "... poorly heated, poorly ventilated ... dimly overcrowded, while the fumes of Irving's blast furnaces and the chlorine and sulfide gases always exuding from Daniells' laboratory mounted the staircases and mingled in every ... discussion."¹ The unpleasantness and discomfort caused by the presence of laboratories in Main Hall were the justifications used to build the original Science Hall in 1875, chemistry's second home. By the time that building was destroyed by fire in 1884, much had been learned about the requirements of buildings intended for instruction in the sciences, particularly regarding ventilation. When the new science group was planned and built in 1885 (see Appendix A for background), the heating plant included a separate system to provide high pressure steam to the chemistry building specifically to run the ventilation systems.

The chemistry building was a 48 X 148 foot rectangle, two stories above a basement (a 50 foot addition to the north end was built in 1894). The basement was of Madison sandstone and the rest of the building of white brick. The contractor was John Trumbull of Whitewater, who agreed to a completion date of December 31, 1885 (for \$20,000); it was finally ready for use in November 1887. Like the machine shop behind it (also by Trumbull), the chemistry building was of 'slow-burn' construction, intended to slow and limit the spread of fire.² This technique was a cost compromise



Fig. 3. The first chemistry building comes down in 1965 to make way for Helen C. White Hall. The machine shops are on the left; they were demolished next. [Helen C. White folder ns-3110]

between flammable wood construction, and the safer but very expensive fireproof method used on Science Hall. There is no record of a serious fire at the chemistry building and since the building was deliberately destroyed after 90 years of use, the building style was apparently a good choice.³ The labs were kept from polluting the lecture halls by placing them at opposite ends of the building. The assaying labs and ore crushers were in the basement to minimize noise and fumes.

In an article written for the Alumni Magazine in 1909, professor Kahlenberg recounts some difficulties of planner W. W. Daniells.⁴ "There were earnest protestations from some of the regents of the university that the plans for the chemical laboratory called for altogether too large a building. It was represented that such a building could not be filled in a hundred years."⁵ Within fifteen years the building was overflowing and a new one was on the drawing board. When that new chemistry building (now Chamberlin Hall) was finished in 1905 the old chemistry building was turned over to engineering for the department of chemical engineering.⁶ This and parts of the medical school remained in the building until it was demolished in 1965 to make way for the construction of Helen C. White Hall.

1) *Wisconsin*, J. F. A. Pyre p. 210

2) *University of Wisconsin Catalogue* 1885-1886 p. 99

3) Two fires in the machine shop building of similar slow-burn construction were contained and extinguished with minimal spread.

4) William Willard Daniells came to the University in 1868 as head of agriculture, then of analytical chemistry. In 1880 he became professor of chemistry and occupied that chair until 1907 when succeeded by Kahlenberg. He is the Daniells referred to by Pyre above.

5) *Wisconsin Alumni Magazine*, November 1909 p. 105

6) There was considerable competition for this space (e.g. english, medicine and engineering). The head of chemical engineering, Charles Burgess, had made a few bronze letters, and in the dead of night boldly had the legend "Chemical Engineering" mounted on the building. For 50 years Burgess resisted losing that space to the medical department by pointing to the sign in imperishable bronze. Alexander McQueen, *A Romance in Research, The Life of Charles F. Burgess*, p. 126.