

WASHBURN OBSERVATORY



Fig. 1. Washburn Observatory with Library wing complete c. 1900. [folder 9/1, Washburn Observatory jf-9]

Constructed in 1877, the Washburn Observatory was erected entirely with funds donated by ex-governor Cadwallader Colden Washburn. It was the first building donated to the University. It houses a 15.6 inch refracting telescope, that was in constant use by the Astronomy Department from 1881 until 1959 when the new observatory at Pine Bluff opened. The old observatory now houses the Institute for the Study of the Humanities, and has been placed on the National Register of Historical Places. The old telescope is still used for elementary instruction and is available to the public on the first and third Wednesday of each month.

As early as 1867, when Professor Sterling requested that the Main Hall building committee include an observatory in the dome of that building, it was felt that without an astronomical observatory there was some truth to the charge that the University was little more than a glorified high school. This was most clearly expressed in the 1875 regents report: "In this age, an astronomical observatory is one of the characteristic and essential features of every educational institution of this order. It is scarcely possible to conceive of a university worthy of the title, where professors and attendants are denied this necessary instrumentality."¹

It is probable that in 1875 Bascom had already discussed the donation of an observatory with ex-governor Washburn. The legislature of 1876, as part of the 1/10 mill tax levied for the University income, added an amendment that set aside \$3,000 per year "for astronomical work and for instruction in astronomy so soon as a complete and well equipped observatory shall be given the University

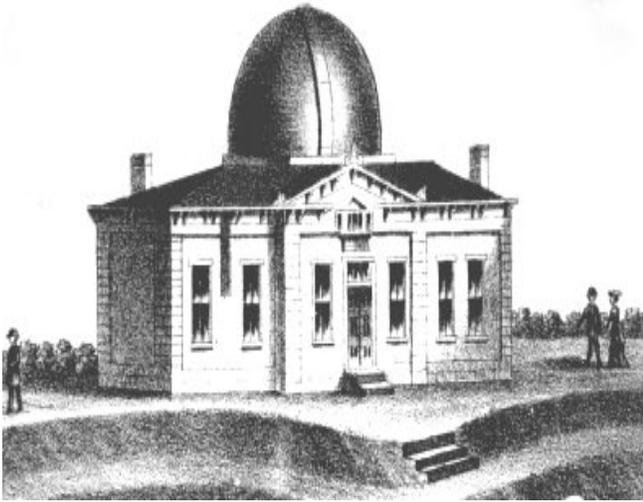


Fig. 2. A detail from an 1878 etching of the University, showing the Observatory, which had not actually been completed at that time. This view is from the south. Director Watson convinced C. C. Washburn to add a small wing to the west (left) end as a clock and transit room, and a large wing on the east, for calculating rooms, living quarters, and a darkroom. [etching on wall of Archives]

in its own grounds without cost to the state."² Several sources state or imply that ex-governor Washburn was the driving force behind this amendment.³

Whether or not the act was orchestrated, the local press carried in September 1877 an announcement, written by John Bascom, that C. C. Washburn intended to "erect and fully equip a superior astronomical observatory for the University of Wisconsin."⁴ The announcement of the gift to the board of regents came at their meeting of November 20, 1877. The formal notification to the legislature was contained in the regent's report of 1877, in which president Bascom referred to an act of "private munificence... [allowing] an astronomical observatory to be constructed and furnished wholly at the personal cost of the donor."⁵

Washburn left very little for the University to do; he selected the site, hired the architect (David R. Jones), selected the contractor (who began construction in May of 1878), kept a close eye on the progress of the work, and paid the bills. He may have also helped select the equipment. By the time of his report to the regents in 1878 president Bascom could say, "The Observatory ... is now nearly completed and ready for the instruments and when finished and in operation, I feel confident that no better equipped or more convenient observatory, and none better adapted to the purposes sought, can be found in the country."⁶

In October 1878, while the building was under construction, Bascom was able to obtain the services of the Michigan astronomer James C. Watson who came partly for the research possibilities at the new facilities and partly for the use of the beautiful house on the hill, then being vacated by president Bascom. The beautiful observatory site inspired a popular song in the 1930s "It's Dark on Observatory Hill", which extolled its virtue as a place to take a date.⁷

The building at that time was only intended to be the central drum, which supported the dome and containing the main telescope [see Fig. 2.]. Watson immediately convinced Washburn to add two wings to the tiny observatory, a west wing for a transit and clock room, and an east wing for calculating rooms, and living quarters. The Observatory was in use and the east wing completed by April 18, 1881.⁸ The east wing later (1883) became the home of the Woodman Astronomical Library. The \$3000 annual payment from the legislature was enough to support the Observatory and to pay Watson a salary second only to Bascom's at the University. By the time the Observatory was complete and dedicated in 1882 both Washburn and Watson were dead, Washburn in May of 1882 at age 64, Watson of pneumonia in 1880 at age 42.

The building as dedicated [see Fig. 1.] is described as: "A Neo-Classical Revival building in

the Italianate style 80 ft. long, 42 ft. wide, with a 48 ft. high dome."⁹ Its cost is estimated at \$40,000 to \$50,000. On Jan. 6, 1880 the regents had mason James Livesey install a plaque inside the main entrance reading: "Erected and finished A. D. 1878, by the munificence of Cadwallader C. Washburn, and by him presented to the University of Wisconsin—a tribute to general science. In recognition of this gift, this tablet is inserted by the regents of the University".

The Observatory was intended primarily as a research facility, and its instruments were of very high quality for the time. Washburn's instructions to Alvan Clark and Sons of Cambridge for the telescope were that it should be superior in size to the telescope at Harvard. Its lens size was 15.6 inches, making it the third largest refracting instrument in the country at that time. This telescope remained the principal instrument of the observatory for 80 years.¹⁰

An unusual function of the observatory, in the early days, before the wide availability of accurate clocks was the precise determination of local time. Director Holden set up the practice of selling the time service to railroad companies passing through Wisconsin as well as a small number of local businesses, and regulating the University's clocks.¹¹

A distinguished roster of directors followed Watson, including Edward Holden (1883-1886), George Comstock [1886-1922), Joel Stebbins (1922-1948) and Alfred Whitford (1948-1958). Substantial astronomical discoveries made here include the development of photometry (astronomy by recording amplified light) by Alfred Whitford. It was said that this technique would detect a candle a mile away.¹²

By 1950 it was clear that due to automobile traffic and city encroachment the site was no longer suitable for a first class research observatory. As Director Joel Stebbins said, "The ... road past the observatory has cured the darkness."¹³ In 1959 the new facility at Pine Bluff (15 miles west of Madison) opened, and the Department of Astronomy moved to the sixth floor of the Sterling Hall wing. The Washburn Observatory was taken over by the Institute for the Study of Humanities and the interior space was remodelled for that purpose. The Clark telescope remains available to the general public on 1st and 3rd Wednesdays (weather permitting) as requested by C. C. Washburn in his 1877 bequest.

1) *Report of the Regents of the University of Wisconsin*, 1875 p. 4.

2) *Laws of Wisconsin* 1876, Chapter 117.

3) J. F. A. Pyre, *Wisconsin* p. 212, University Press, May 31, 1879 p. 4, and the University Press October 5, 1877 p. 5.

4) *Wisconsin State Journal*, September 18, 1877.

5) *Report of the Regents of the University of Wisconsin*, 1877 p. 8. No trace has been found of any original offer from Washburn to Bascom.

6) *Report of the Regents of the University of Wisconsin*, 1878 p. 7. The unavailability of the financial records for this project is due to the fact that the state, and therefore the University did not yet require complete control of donated building projects. This change would come in the wake of the Science Hall dispute in 1888.

7) R. C. Bless, Washburn Observatory, 1878-1978, University Archives Washburn Observatory subject file. Bless says that Watson was "wooed [by Wisconsin and Michigan] with an ardor nowadays reserved for football coaches". The home, now the Observatory Hill office building, was specified as part of the job offer to Watson. The song was written by Harold Spina and Johnny Burke. I am indebted to Margaret Stephenson for bringing this song to my attention

8) *University Press* April 18, 1881, p. 3.

9) Washburn Observatory site file State Historical Society Library Historic Preservation Department

10) R. C. Bless, Washburn Observatory, 1878-1978, pp. 1-2. University Archives Washburn Observatory subject file.

11) University Press, September 15, 1881, and February 3, 1882. Detailed descriptions of the timekeeping technique are included.

12) R. C. Bless, Washburn Observatory, 1878-1978, pp. 3-12. University Archives Washburn Observatory subject file. It is said that this experiment was actually tried by grad students, and a candle on picnic point was rather easily detected.

13) Stebbins Joel The Washburn Observatory 1878-1958, from Publications of the Astronomical Society of the Pacific Vol. 70, No. 416, Oct. 1958.