

Sighting: a sundial at the historic Bryan Mullanphy School in St. Louis, Missouri
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William B. Ittner (1864 - 1936) was a St. Louis architect who designed many of the school buildings in St. Louis. In 1897, Ittner became Commissioner of School Buildings for the Board of Education in St. Louis. Many of the approximately 48 school buildings designed and created under his guidance in and around St. Louis while he served as Commissioner continue to this day as active schools; others now provide housing, and some stand empty in poor condition. The last school designed by Ittner is still open, now serving as a magnet school for about 430 students attending prekindergarten to fifth-grade classes. It is the Bryan Mullanphy School, located at 4221 Shaw (38.617°N, 90.255°W), now sometimes called the Mullanphy Botanical Gardens Elementary School because of its proximity to and interaction with the nearby Missouri Botanical Garden and, also, it is sometimes called the Mullanphy Investigative Learning Center. Classes having a science orientation are offered, with support from the Missouri Botanical Garden, the St. Louis Science Center and the St. Louis Zoo. The name of the school varies these days, but Ittner named it in 1897 after Bryan Mullanphy (1809 - 1851) who had been a mayor of St. Louis; Ittner named other of his schools after well known people of the time: Eliot School (after Washington University's founder William Greenleaf Eliot), Jackson School (after Pres. Andrew Jackson), Monroe School (after Pres. James Monroe), Sherman School (after William Tecumseh Sherman), Field School (after Eugene Field), Emerson School (after Ralph Waldo Emerson), McKinley School (after Pres. Wm. McKinley), Farragut School (after Adm. David Farragut), Henry School (after Patrick Henry), Clark School (after William Clark), etc. (see ref. 1).

A vertical sundial of simple design is located on the south wall of the school building.¹ The dial is presently not functional for much of the day due to the shadow cast by a nearby tree. Figure 1 shows a portion of the south wall of the school, including the sundial masked by the tree. The dial with its downward-sloping gnomon is seen behind the tree in Figure 2. The picture of the sundial in Figure 3 was taken at 1:41 PM CDT on 7 May 2019. Using the relation $T_{sundial} = T_{civil} + EOT - D - L$, where $EOT \approx 3.3$ minutes on the May 7 date, $D = 1$ hour accounting for daylight-savings time being in force, and $L = 4(90.255 - 90) \approx 1$ minute indicates that the dial should show

$$T_{sundial} \approx 13:41:0 + 0:3:31 - 1:0:0 - 0:1:0 = 12:43:31.$$

This suggests that Ittner's sundial at the Mullanphy School displays this sundial time to a reasonable approximation, especially considering that its only time markings are hour lines.

¹ The wall on which the sundial is mounted declines approximately 7° west of south, as estimated by using Google Earth.



Figure 1. South wall of the Mullanphy School



Figure 2 A view of the sundial displaying its gnomon



Figure 3 Sundial at 1:41 PM CDT on 7 May 2019

Information Sources

1. <https://nextstl.com/2012/09/the-st-louis-schools-of-william-b-ittner/>
2. <https://www.distilledhistory.com/ittnerschools/>
3. https://en.wikipedia.org/wiki/Bryan_Mullanphy
4. <https://www.slps.org/Domain/1294>
5. <http://www.stlouiscitytalk.com/posts/2013/02/mullanphy-school>