

Possessed with a 'determination to solve problems'

By Walter C. Steffen

THEY LEFT THEIR MARK: William Austin Burt and His Sons, Surveyors of the Public Domain, by John S. Burt; Landmark Enterprises; 188 pages; \$35.

A surveyor and inventor born June 13, 1792, in Petersham, Mass., William Austin Burt was a man who, the author writes, "possessed a unique blend of mechanical genius, a quest for accuracy, and a Yankee determination to solve problems."

Those qualities served him well when he found his compass readings fluctuating widely while surveying for the government in Michigan's Upper Peninsula. The cause of these fluctuations became apparent when

Burt discovered the enormously rich range of iron ore that became known as the Marquette Range, the first such deposit discovered in Michigan.

To solve the problem, which made accurate surveys with a magnetic compass almost impossible in some areas and very difficult in others, Burt invented a "solar" compass that used the position of the sun to determine true north. Burt's compass improved the accuracy of surveys so much that all federal surveys eventually were directed to be made using his compass. Burt displayed the instrument in the Crystal Palace at the Great Exposition in London in 1851 and received a "prize" medal for it.

Burt obtained a patent for his compass, but collected less than \$100 in fees for its use because he was more interested in getting the instrument into the hands of as many surveyors as possible to ensure the accuracy of their surveys. He failed to apply for a patent renewal when he was told that the federal government would compensate him for the use of his compass, which, over the years, saved the United States millions of dollars.

Numerous measures seeking compensation submitted to Congress during Burt's lifetime failed, and attempts by Burt's descendants were no more successful.

Burt's inventions did not stop with

the solar compass. Another Burt invention of real practical value was his "astronomical compass," which incorporated the principles of the solar compass with other improvements, "including a complete circle for determining the approximate longitude. It could also be operated during the day or night."

To assist in determining the precise location of ships at sea, Burt produced what he called an "equatorial sextant," also based upon the principles of his solar compass.

Burt also invented a typewriter, but it was overshadowed by other inventors' models.

In addition to detailing William

Austin Burt's life, the author describes the lives and works of his sons, who played important roles in the development of Michigan's Upper Peninsula.

The author, who lives in Orange, Calif., is Burt's great-great-grandson. The Southern California connection goes deeper, including Aunt Dorothy Burt Findlay of Vista, who provided several heirlooms for the author's use, and Richard A. Burt of San Diego, who assisted in editing the manuscript.

The volume is profusely illustrated and has extensive reference notes.

Steffen is a free-lance reviewer.