

H. H. HEMPLER.

Pocket Sun Dial.

No. 48,812.

Patented July 18, 1865.

Fig. 1.

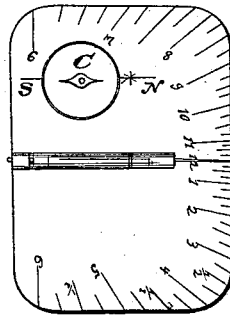


Fig. 3.

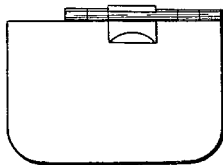
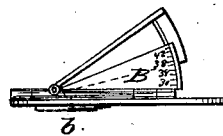


Fig. 2.



WITNESSES

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IMPROVEMENT IN POCKET SUN-DIALS.

Specification forming part of Letters Patent No. **48,812**, dated July 18, 1865.

To all whom it may concern:

Be it known that I, HENRY H. HEMPLER, of the city of Washington, District of Columbia, have invented a new and Improved Pocket Sun-Dial; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and the letters of reference marked thereon.

In the drawings, Figure 1 is a plan view. Fig. 2 is an elevation showing the gnomon or index, and Fig. 3 shows the dial when folded.

The nature of my invention consists in constructing a portable or pocket sun-dial of an economical and convenient form for readily ascertaining the time of the day. It is not liable to get out of order, is very light and small, and can be carried in the vest-pocket without any inconvenience.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct the dial of two plates or leaves, of metal or other suitable material, connected together by means of a central hinge or joint, so as to fold together, as shown at A, Fig. 3. To this central hinge the gnomon or index of the dial is attached, so as to be inclosed between the leaves of the dial when folded together and to stand up at right angles thereto when opened or spread out flat. This is effected by a small projection or lug, *b*, Fig. 3, which is attached to the under side of the hinge, so as to be nipped or clasped between the interior edges of the jointed plates or leaves, when they are unfolded or spread out. By this arrangement the index and the dial-plates mutually support each other, the lug on the hinge serving to prevent the leaves from being

opened beyond a plane or a flat surface, and at the same time, when so opened, preventing the index itself from being turned to either side, or, in other words, holding it in a vertical position.

On the inside of the plates or leaves I graduate or mark in the usual way the lines and figures which constitute the dial. To one of the plates I attach a small compass for the purpose of enabling the observer to place the index in the line of the meridian. This compass may be sunk within the plate to which it is attached, as shown at C, Fig. 1.

I propose, if desirable, to apply to the index an adjustable or sliding plate, pivoted at the lower end thereof, and so graduated at its outer end that its variable elevation will correspond with the declination of the sun at different latitudes, and thus form a correction of the edge of the shadow, as is clearly shown in the drawings at B, Fig. 2.

The operation of my instrument is as follows: When I wish to find the time of day I unfold the plates, set the gage with the latitude I am in, let the compass point to the N, as shown on the dial at C, and the edge of the shadow striking over the index on or between the lines and figures denotes the time of the day.

What I claim as my invention, and desire to secure by Letters Patent, is—

A portable sun-dial with hinged or folding plates and central index, in combination, substantially in the manner herein described.

HENRY H. HEMPLER.

Witnesses:

T. R. BYRNE,
R. B. OWENS.