No. 783,245. PATENTED FEB. 21, 1905.

S. M. CLARKE.

SUN DIAL.

APPLICATION FILED OCT. 12, 1904.

Fig. 1.

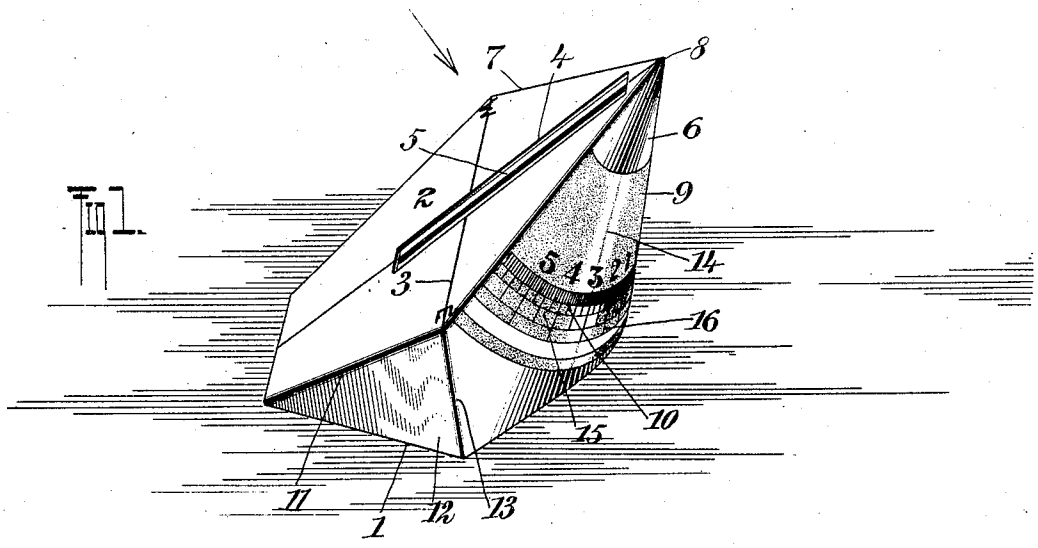
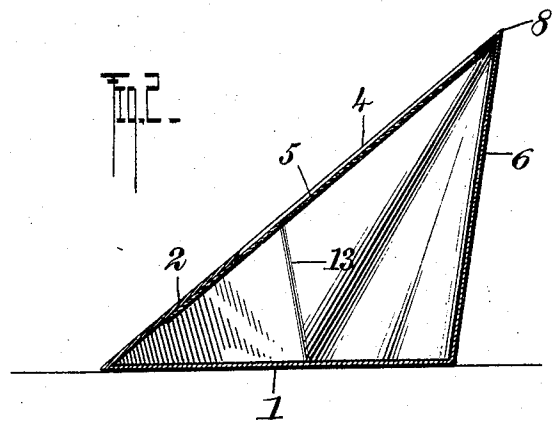


Fig. 2.



WITNESSES:

Geo. F. Kingsbury.

F. D. Burnett

INVENTOR

Selah M. Clarke

BY Munn & Co

ATTORNEYS

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UNITED STATES PATENT OFFICE.

SELAH M. CLARKE, OF NEW YORK, N. Y.

SUN-DIAL.

SPECIFICATION forming part of Letters Patent No. 783,245, dated February 21, 1905.

Application filed October 12, 1904. Serial No. 228,215.

To all whom it may concern:

Be it known that I, SELAH M. CLARKE, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Sun-Dial, of which the following is a full, clear, and exact description.

This invention relates to sun-dials; and my object is to provide such a device which is very simple and easily constructed, while at the same time accurate and neat in appearance.

The invention consists in the construction described hereinafter and definitely set forth in the claims.

Reference is had to the accompanying drawings, which form a part of this specification, in which drawings like characters of reference indicate like parts in both views, and in which—

Figure 1 is a perspective view representing a sun-dial constructed according to my invention. Fig. 2 is a vertical central section.

In its preferred form the sun-dial is provided with a flat base 1, which is adapted to rest upon a horizontal support, such as a table. The face 2 of the dial, which is exposed to the sun, is disposed at an angle with respect to the base, which is substantially equal to the latitude of the place at which the sun-dial is to be used. The face 2 is marked with a transverse east and west line 3 and is provided centrally with a slot or opening 4, which is disposed substantially at right angles to the east and west line. Centrally disposed in the opening 4 there is attached a cord 5, which is the object which casts the shadow upon the index-face 6 of the dial.

The index-face 6 of the dial is a conical surface, as shown, the axis of the cone lying in the plane of the cord 5, so that the converging upper edges 7 of the face 2 of the dial constitute elements of the conical surface. At a suitable distance from the apex 8 of the cone a translucent zone or belt 9 is formed, and beyond this belt a graduated index or scale 10 is formed, which coöperates with the shadow cast by the cord 5, so as to indicate the time of day. The face 2 of the dial is preferably formed with converging side edges 11, to which attach the sides 12 of the dial, said sides being attached along an inclined line 13 to the conical index-face 6.

In using the dial the line 3 is placed in an east and west direction, so that the face 2 is exposed to the sun's rays. In this way the shadow 14 from the cord 5 is cast upon the translucent belt 9 and the time of day accurately read from the index. In order to increase the accuracy of the dial, the semicircles or arcs 15, which constitute a part of the index, lie upon planes disposed at right angles to the axis of the cone of the dial. The dividing-lines 16, which coöperate with the curves 15 to form the index, are straight lines passing through the apex 8 of the cone and constitute elements of the conical surface thereof.

The dial is intended for indoor use, as upon a window-sill, and is preferably constructed of thin but stiff paper, and all the portions of the dial except the translucent belt 9 are preferably colored black, so as to prevent the passage of light except through the opening 4.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A sun-dial having a substantially flat face adapted to be exposed to the sun, and a conical index-face the axis whereof lies substantially in the plane of said first face.

2. A sun-dial having a base adapted to rest upon a support, a substantially flat face at an angle thereto and adapted to be exposed to the sun, and a conical index-face, the axis whereof lies substantially in the plane of said first face.

3. A sun-dial having a substantially flat face adapted to be exposed to the sun and having an elongated opening therein adapted to admit light, and a conical index-face the axis whereof is substantially coincident with said opening.

4. A sun-dial having a substantially flat face adapted to be exposed to the sun, said face having a mark thereupon indicating points of the compass, said face further having an opening disposed substantially at right angles to an east and west line, and a cord mounted in said opening and adapted to cast a shadow, said dial further having a conical graduated

face with a translucent belt, the axis of said conical face lying substantially coincident with said cord.

5. A sun-dial comprising a base and a substantially flat face disposed at an angle to said base determined by the latitute of the place at which the sun-dial is used, said face having an opening therein substantially at right angles to an east and west line on said face, said dial further having a conical index-face, the axis whereof is substantially coincident with said opening.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SELAH M. CLARKE.

Witnesses:
F. D. AMMEN,
JNO. M. RITTER.