H. J. & W. D. DAVIES.
Clock-Dial.

No. 209,869. Patented Nov. 12, 1878.

Fig. 1.

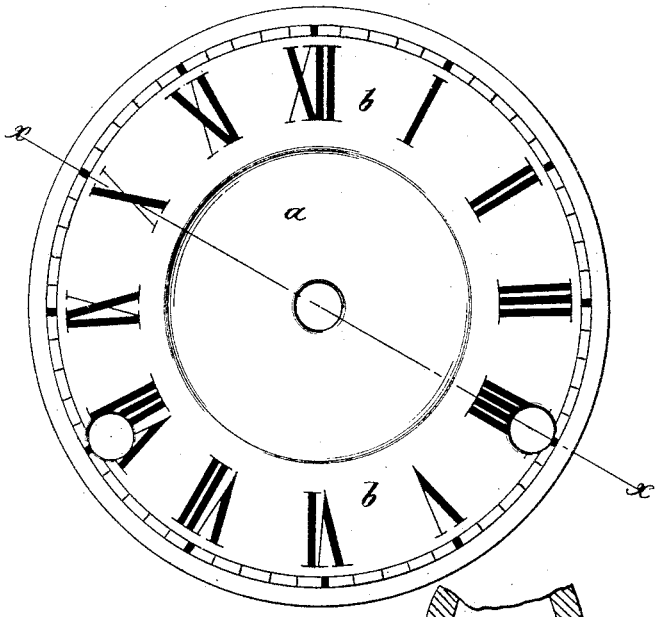


Fig. 2.

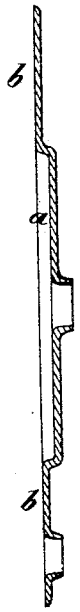
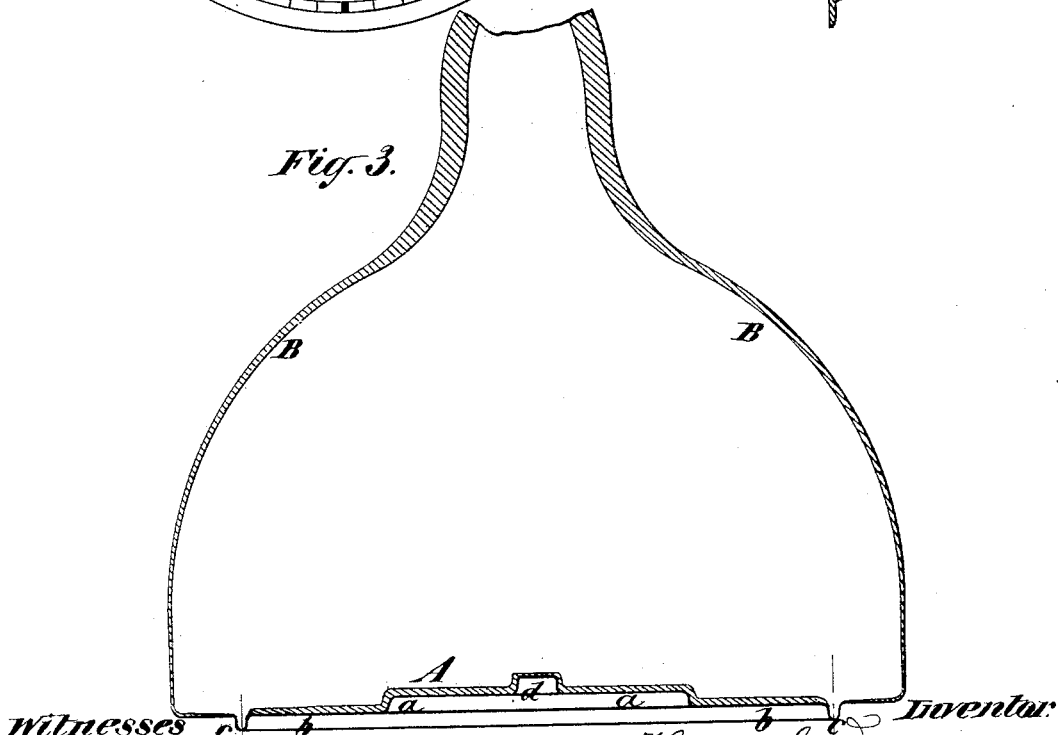


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY J. DAVIES AND WALTER D. DAVIES, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN CLOCK-DIALS.

Specification forming part of Letters Patent No. **209,869**, dated November 12, 1878; application filed June 4, 1878.

To all whom it may concern:

Be it known that we, HENRY J. DAVIES and WALTER D. DAVIES, both of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Clock-Dial; and we hereby declare that the following is a full, clear, and exact description of the same.

This invention consists in a blown-glass clock-dial, produced as hereinafter described.

Figure 1 is a face-view of a dial; Fig. 2, an axial section of the same, showing the facial profile. Fig. 3 is an axial section of a hollow bulb of glass, which is blown to produce such dial.

The dial represented has the central portion, *a*, of its facial profile sunk below the surrounding portion *b*, on which the numerals indicating the hours are inscribed or produced.

The dial is produced by blowing a bulb, A B, of glass, by the ordinary process of glass-blowing, into a metal mold, one face of which has a facial profile corresponding with that of the dial. The said face of the mold, corresponding with the portion B of the bulb, which is to produce the dial, is made somewhat larger than the intended contour of the dial, and has provided in it a groove, into which the glass of the bulb is blown in the form of a hollow bead, as shown at *c* in Fig. 3, immediately around that part which is to form the contour of the dial. This hollow bead will always be exceedingly thin, so that when the bulb is removed from the mold after opening the latter, a few blows upon the portion A of the bulb will cause the said portion to break away from the portion B, which forms the dial, and the fracture will always take place in the thin hollow bead, leaving the portion B intact. Any portions of the hollow bead remaining on the portion B, or dial, may be easily chipped off by striking them with a hard implement; and the glass left in the bottom or back of the center hole, *d*, and also that left at the bottom or backs of any other holes that may be provided in the dial, is easily removed by chipping out or grinding off.

The bulb represented only produces one dial; but a bulb of suitable size to produce several dials may be produced by blowing it into a suitable mold containing several facets, each of which is a counterpart of one of the dials to be produced.

The dial may have the numerals indicating the hours inscribed upon it in any suitable manner; or such numerals may be produced in the glass, in relief or intaglio, by blowing in a suitable mold.

Blown-glass dials of this kind of exceeding beauty may be produced at a cost very much less than that of dials of any other known material, and much less than that of any other kind of glass dial.

We claim—

A clock-dial made by blowing a bulb of glass in a mold, a portion of which conforms to the contour and profile of the dial, and afterward breaking away the superfluous portion of the said bulb, substantially as herein described.

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