(No Model.)

T. B. ATTERBURY.

GLASS MOLD AND MANUFACTURE OF GLASS CLOCK CASES.

No. 265,300. Patented Oct. 3, 1882.

Fig. 5.

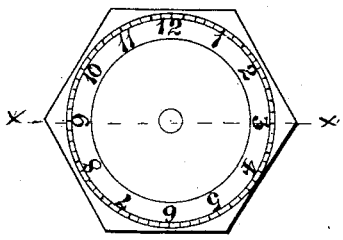


Fig. 1.

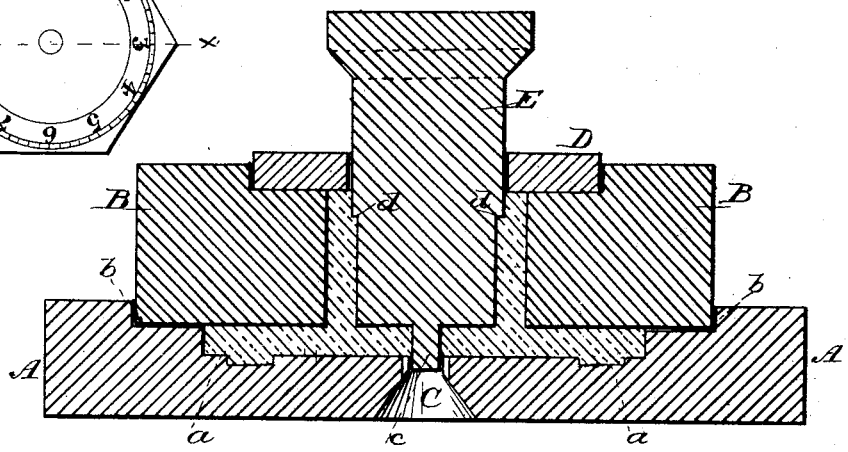


Fig. 2.

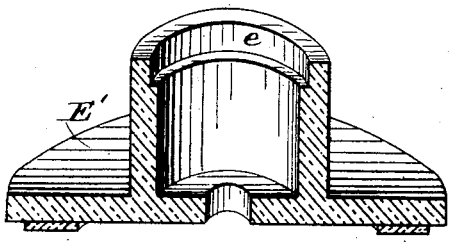


Fig. 6.

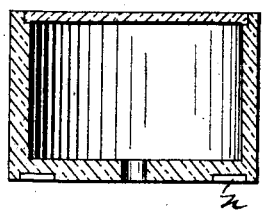


Fig. 7.

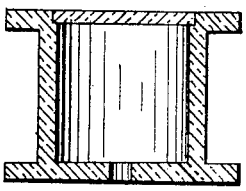


Fig. 3.

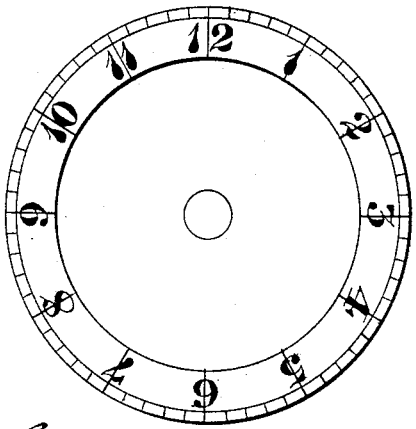
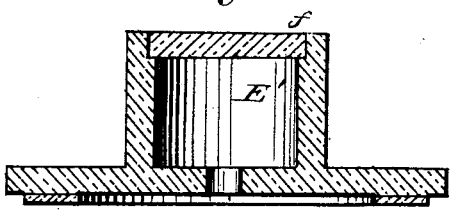


Fig. 4.



WITNESSES

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GLASS-MOLD AND MANUFACTURE OF GLASS CLOCK-CASES.

SPECIFICATION forming part of Letters Patent No. 265,300, dated October 3, 1882.

Application filed September 4, 1882. (No model.)

To all whom it may concern:

Be it known that I, THOMAS B. ATTERBURY, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Glass-Molds and in the Manufacture of Glass Clock-Cases; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to glass-molds, and in the manufacture of clock-cases and dial-plates in one piece; and to this end my invention consists in forming the mold proper in two sections—a base or bottom piece and a ring which forms the body of the mold, together with the usual mold-ring, which gives form to the top of the article to be pressed.

My invention consists, further, in a novel process of ornamenting or embellishing the numerals or index-figures of a glass clock face or dial, as will more fully hereinafter appear.

Referring to the drawings which form a part of this specification, Figure 1 is a sectional view of the mold with the article therein. Figs. 2 and 4 are sectional views of a clock-case formed in one piece. Fig. 3 is a front view of the face of the clock-case. Fig. 5 is a front view of a hexagonal clock-case having plain sides, without a projecting dial-plate. Fig. 6 is a sectional view on the line *x x* of Fig. 5. Fig. 7 is a sectional view of a case having a projecting flange on the rear portion for supporting the same.

I will first describe the molds and manner of operating the same, and then point out the advantages of my improved clock case, together with a cheap and simple process of painting or producing the figures or numerals of the dial-plate in ornamental colors.

A is the base-plate of the mold, and is provided on its upper surface with a cavity, *a*, in which the dial-plate is formed, said cavity being provided with figures or Roman numerals in elevation or in depression, so as to form on the face of the dial-plate the proper time-index in relief or in depression, as indicated in Figs. 2, 4, and 6. The base-plate is also provided with another offset or cavity, *b*, to receive and hold the main body B of the mold.

C is an opening in the center of the base-plate, through which the projecting point *c* of the plunger is caused to pass in the process of pressing, and which forms an opening in the center of the dial-plate or front of the case to receive the hand-operating stem or arbor of the clock mechanism.

B is the body of the mold, which acts as a ring, and also the mold-body. This may be made in two pieces, hinged together, when an article is to be produced having projecting flanges, as shown in Fig. 7, or where the main body of the case is made square or of irregular form; but for ordinary plain-bodied cases—such as are to be placed or mounted in an additional frame or support—I make the ring or body B in one piece.

D is the ordinary top ring, which arrests the upward flow of glass and gives form to the upper edge of the article.

E is the plunger, and is provided with an offset, *d*, by which a ledge, *e*, is formed in the case E′, to receive and support a closing piece or stopper, *f*, adapted to fit the opening in the rear of the case, and by which the works of the clock are completely and effectually incased. As before mentioned, the plunger is provided with a projecting point, *c*, for forming a perforation in the dial or face of the case.

I have described and shown a clock-case and a mold for making the same which is designed to be placed in an additional frame or support of wood or other suitable material. I will now proceed to describe clock-cases made according to my invention, which will form of themselves the completed clock-case without any additional support or casing.

In Figs. 5 and 6 I have shown a face and sectional view of a clock-case made with six sides and without the projecting flange for the dial-plate, while in Fig. 7 I have shown a case in which the main body may be round, square, or of any desired configuration, and with a projecting flange or rim, *g*, at the rear end thereof, which is square in its circumferential contour.

By the construction just described I produce a clock-case which needs no additional

support, but can be set on a mantel-piece or other convenient place without any previous preparation having been made for it.

I have not shown or described molds for making the cases shown in Figs. 5, 6, and 7; but it will be obvious to any one skilled in the art how such molds should be constructed and operated. I make these clock-cases of any desired color, and where the time-indicating figures or numerals are raised on the surface of the dial I grind or etch off the surface of the glass of such raised portions, so that the figures will show more distinctly. For instance, if the case is made of blue glass, when the figures are etched or ground as above described, they will show white, and so it may be said of any color.

In case the figures or numerals are sunk in the face of the dial-plate, as shown at *h* in Fig. 6, they may be painted or inlaid with a different color from the body of the case.

A very cheap, quick, and effective way of producing the numerals or index-figures in a different color from the main portion of the dial is to paint the face or dial of any desired color, and in case the figures or numerals are in relief on the face of the dial all that is necessary to be done is to wipe the paint from off the figures or numerals, thus leaving the figures or numerals of a different color, or simply paint the figures or paint the body or face of the dial, all except the figures or numerals. For instance, suppose the case to be made or pressed from black glass, by painting the face white and removing the color from the figures or numerals they are left in relief in black color; or suppose a case or dial-plate is pressed with sunk or depressed figures or numerals in white glass, then paint the face any color desired, leaving the figures white or of the color of the glass of which the case is formed.

I am aware that glass clock-cases, broadly considered, are not new; but, so far as I am aware, no one has ever made or produced a clock-case and dial-plate combined in one piece of glass.

The advantages of such a case are obvious. The works of the clock are completely isolated from dust, and in a great measure from atmospheric influences, and where it is desired to run the clock or a series of clocks by electricity, as is now being done, the works of the clock will be completely isolated or insulated by the glass case which surrounds it, and be removed from all disturbing elements, and thus the keeping of correct time is insured. Furthermore, by making the case and dial-plate in one piece the cavity for the reception of the clock mechanism can be made of the exact size required.

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

1. In the manufacture of glass clock-cases, the mold plate or bed herein described, provided with elevations or depressions therein or thereon for forming the index figures or letters on the dial portion of the case, and also with a central opening for producing a perforation in the dial to receive the arbor of the hands or indicators of the clock, as set forth.

2. In a mold for pressing glass clock-cases, the base A, provided with the central perforation, C, in combination with the body B and plunger E, said plunger being provided with a projecting pin, *c*, for forming a perforation in the face of the clock-face, as set forth.

3. The base A, provided with a depressed portion or offset, *b*, in combination with the body B, as and for the purpose set forth.

4. As a new article of manufacture, a glass clock-case the sides and face of which are made in one piece, with the index numerals or figures impressed thereon or therein, as set forth.

5. A clock-case the sides and face of which are made or pressed of one piece of glass, the rear portion of which is provided with a ledge, *e*, for the reception of the piece *f*, whereby the works of the clock are inclosed and excluded from dust, as set forth.

6. The method herein described of forming index numerals or figures on the face of glass clock-cases, the same consisting in pressing said figures in or on the dial-face, and then grinding, etching, or painting said numerals or figures in the manner described, so as to produce them in a different color from the main portion or body of the dial-face, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS B. ATTERBURY.

Witnesses:
D. P. BERG,
JULIUS STENGEL.