C. H. HYDE.

SASH FOR DIALS.

APPLICATION FILED NOV. 4, 1919.

1,351,853. Patented Sept. 7, 1920.

Fig. 1.

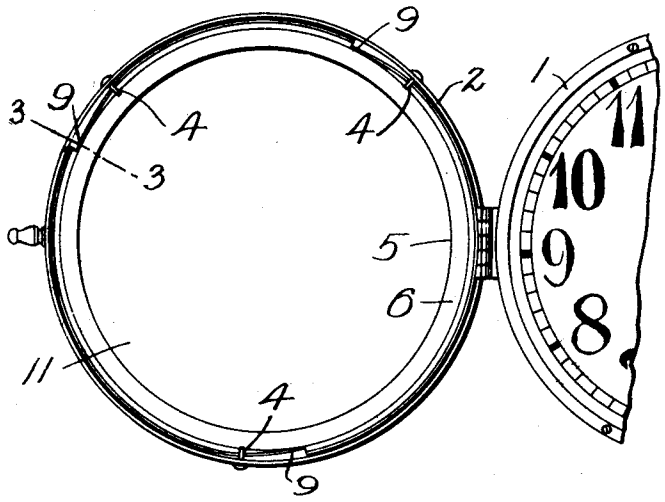


Fig. 2.

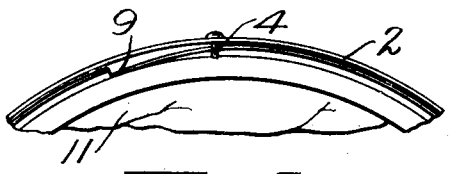


Fig. 5.

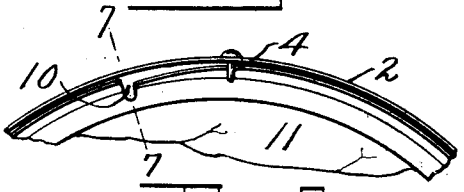


Fig. 3.

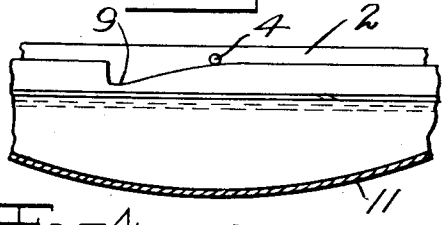


Fig. 6.

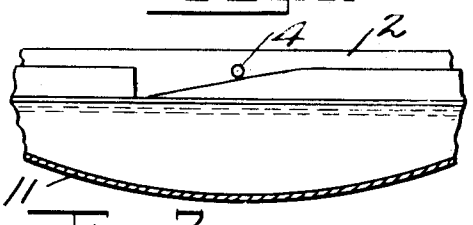


Fig. 4.

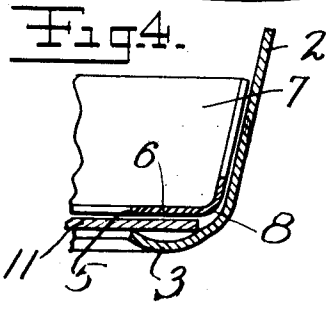
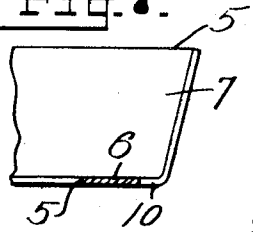


Fig. 7.



Inventor

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By his Attorneys

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UNITED STATES PATENT OFFICE.

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SASH FOR DIALS.

1,351,853. Specification of Letters Patent. Patented Sept. 7, 1920.

Application filed November 4, 1919. Serial No. 335,722.

To all whom it may concern:

Be it known that I, CHARLES H. HYDE, a citizen of the United States, residing at Winsted, Litchfield county, State of Connecticut, have invented a certain new and useful Improvement in Sashes for Dials, of which the following is a full, clear, and exact description.

My invention relates to improvements in sashes for glasses for clock dials and the like, and has for its object to provide a sash in which the glass is easily removable and replaceable and also in which the holding means is adapted to be used in connection with glasses of different thicknesses. Heretofore one great trouble with sashes for clocks has been that in transportation the glasses were liable to be broken so that they had to be replaced. Heretofore these dials have been held in place by using a retaining ring, which was soldered in position. When this is the case, if a glass is broken only a skilled workman can put in a new glass and the result has been that it has been usually necessary to return the sash to the manufacturer. In some instances this is done by removing the hands of the clock and unscrewing the dial to which the sash is hinged and returning it to the factory. In other cases the clock as a whole is returned. In either case parts are liable to be damaged and furthermore there is considerable trouble, expense and delay, which are obviated by the use of my invention.

Furthermore, the glasses, particularly the convex glasses, are liable to be of different thicknesses and if the glass manufacturer is called upon to deliver a glass of substantially uniform thickness the cost of obtaining such uniform glasses is greater than if he is allowed to send glasses of varying thicknesses. By the use of my invention glasses of different thicknesses can be secured in the sash without trouble with the result that there is a considerable saving in the cost of the glasses.

Where my invention is employed a small number of extra glasses can be sent to the retailer so that he will have them on hand and be able to make replacements if necessary, so that the difficulty of broken glasses is practically eliminated and when the clock is once shipped neither it nor its sash is returned to the manufacturer on account of glass breakage.

The principal feature of my invention is the retaining ring with its angularly disposed flanges and its wedge shaped cutaway portions and the projections on the frame coacting therewith.

The following is a description of an embodiment of my invention, reference being had to the accompanying drawings, in which,

Figure 1 shows a rear view of the sash embodying my invention;

Fig. 2 shows an enlarged portion of the sash of Fig. 1;

Fig. 3 shows an inside elevation of a portion of the same;

Fig. 4 shows a section on the line 3—3, Fig. 1;

Fig. 5 shows the rear view of a portion of a modification;

Fig. 6 shows an inside elevation of the same; and

Fig. 7 shows a section of the modified retaining ring on the line 7—7, Fig. 5.

Referring more particularly to the drawing, 1 is a dial to which is hinged a rimmed frame 2 for the glass. This frame 2 is provided with a flange 3 projecting inwardly from its rim and with three pins or projections 4 extending inwardly from the rim portion. 5 is a sheet metal ring having a flange 6 and a drawn-up rim portion 7 approximately at right angles to one another, the external surface at the point 8 of juncture being rounded. The portion 7, however, slants outwardly slightly so as to hug the rim of the frame and thus be adjacent to the bases of the pins 4. In the drawn-up portion 7 at points corresponding to the pins 4 are three cut-away portions 9 having gradually rising wedge surfaces which are adapted to pass beneath the pins 4. Where the flange 6 is of considerable width so that the ring will not readily yield radially, a notch 10 may be formed at the lowest point of one cut-away space as shown in the modified form of Figs. 5 to 7, so that one of the pins 4 may be passed through it. In assembling the parts the glass 11 is put in place and the ring is then put in position so as to clamp it in place. In inserting the ring, the lowermost parts of two of the cut-away portions 9 are placed under two of the pins 4 and the ring is either snapped beneath the third pin, the frame and ring yielding sufficiently to permit

this action and the rounded surface referred to facilitating it, or where the notch 7 is used as in Figs. 5 to 7 the ring is pressed downward so that the third pin passes through the notch 10. When the ring is seated beneath all pins 4 it is turned so that the pins 4 are engaged by the higher portions of the cut-away surfaces 9, thus wedging the glass firmly in place, the axial position of the ring relatively to the pins depending upon the thickness of the glass. The glass is thus held firmly in place by the engagement of the pins with the ring at three points, even though the glasses used are of different thicknesses. By constructing the ring as described, it can be made of sheet metal, stamped and drawn in an ordinary die press.

As will be seen, my invention permits non-skilled workmen to readily replace a glass, and also permits the use of glasses of various thicknesses so that the stated objects of my invention are attained.

As will be evident to those skilled in the art, my invention permits of various modifications without departing from the spirit thereof or the scope of the appended claims.

What I claim is:

1. In a sash for clock dials and the like, the combination of an inwardly flanged outer sash frame having a plurality of inward projections carried by the rim thereof, a glass in said frame, a holding ring within said frame and having a flange adjacent to said glass and a peripheral portion approximately at right angles to said flange, said peripheral portion having upon its rear edge inclined surfaces adjacent to said projections and adapted to coöperate with said projections when said internal ring is turned so as to engage said projections and clamp said glass in said outer ring.

2. In a sash for clock dials and the like, the combination of an inwardly flanged outer sash frame having a plurality of inward projections carried by the rim thereof, a glass in said frame, a holding ring within said frame and having a flange adjacent to said glass and a peripheral portion having an outwardly slanting exterior surface approximately at right angles to said flange, said peripheral portion having upon its rear edge inclined surfaces adjacent to said projections and adapted to coöperate with said projections when said internal ring is turned so as to engage said projections and clamp said glass in said outer ring.

3. In a sash for clock dials and the like, the combination of an inwardly flanged outer sash frame having a plurality of inward projections carried by the rim thereof, a glass in said frame, a holding ring within said frame and having a flange adjacent to said glass and a peripheral portion approximately at right angles to said flange, said peripheral portion having upon its rear edge inclined surfaces adjacent to said projections and adapted to coöperate with said projections when said internal ring is turned so as to engage said projections and clamp said glass in said outer ring, said flange of said ring being notched adjacent to the lower part of one of said inclined portions.

CHARLES H. HYDE.