May 12, 1931. W. H. BALZER 1,804,734

HINGED BEZEL FOR CLOCKS

Filed Nov. 17, 1927

Fig. 1

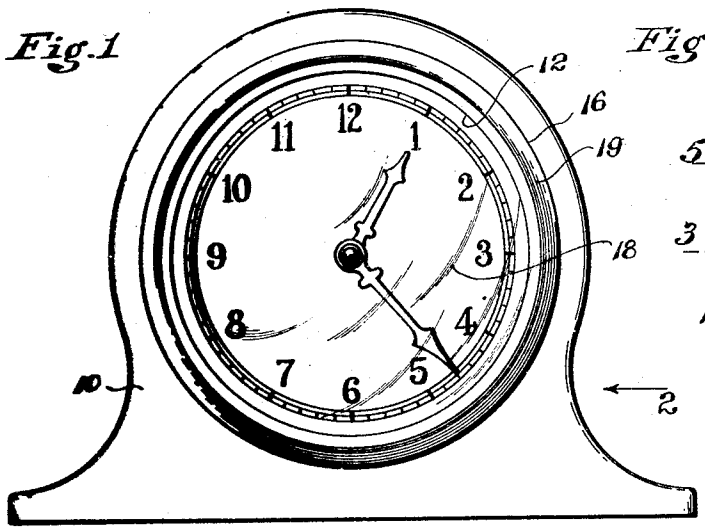


Fig. 2

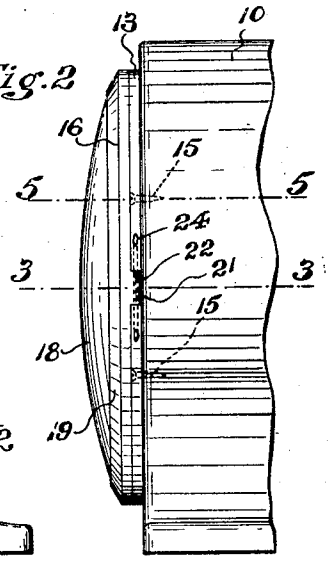


Fig. 6

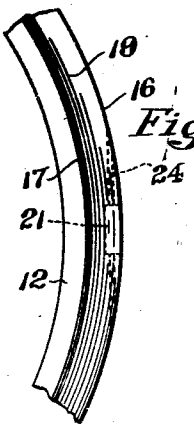


Fig. 7

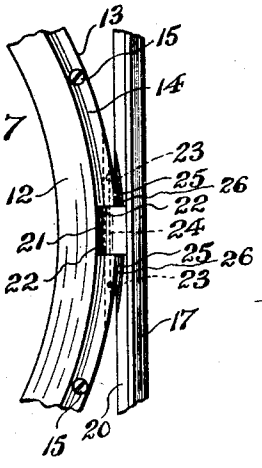


Fig. 3

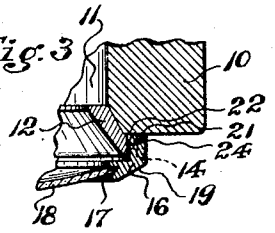


Fig. 4

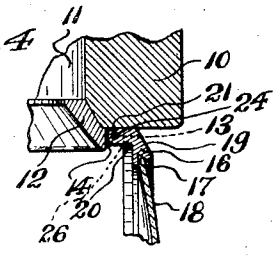


Fig. 8

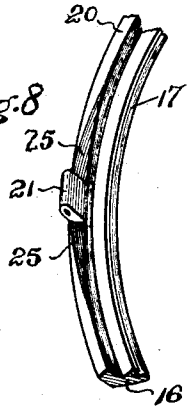
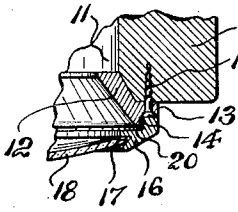


Fig. 5



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Patented May 12, 1931 1,804,734

UNITED STATES PATENT OFFICE

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HINGED BEZEL FOR CLOCKS

Application filed November 17, 1927. Serial No. 233,783.

This invention relates to improvements in hinged bezels for the glazed dial covers of clock cases; and the invention has reference, more particularly, to a novel and simple construction of pivoted or hinged bezel in which the hinge structure is concealed so that the continuity of the dial cover frame and its bezel ring is uninterrupted and its neat and attractive appearance unmarred by exteriorly projecting and frequently unsightly hinge elements, usually in the form of projecting knuckles.

This invention therefore has for its principal object to provide a novel construction of hinge for pivotally connecting a bezel ring with the main or fixed frame of a glazed clock-dial cover, which is arranged in such manner that exteriorly exposed or projecting hinge knuckles are eliminated, and in place thereof a hinge structure is furnished the elements of which are so disposed as to be positioned entirely within the exterior circumference of the bezel ring and behind the latter so as to be wholly concealed when the same is closed upon the fixed frame, thus greatly enhancing the neat and trim appearance of the clock-dial cover, while nevertheless retaining all the desirable mechanical advantages and convenience of a hinged or pivoted bezel ring.

The invention is clearly illustrated in the accompanying drawings, in which:—

Figure 1 is a face view of a clock having a glazed dial cover including a hinged bezel ring made according to and embodying the principles of this invention; Figure 2 is a side view of the same, looking in the direction of the arrow 2 in Figure 1, but showing the rear part of the clock-case broken away; Figure 3 is a fragmentary sectional view, taken on line 3—3 in Figure 2; Figure 4 is a view similar to that shown in Figure 3 but with the bezel ring swung on its hinge connection to open position; Figure 5 is a sectional view, taken on line 5—5 in Figure 2; Figure 6 is a fragmentary face view of the dial cover frame with the bezel ring closed, and Figure 7 is a similar view with bezel ring open; and Figure 8 is a fragmentary inside face view of the bezel ring alone, and illustrating certain elements of the novel hinge structure of this invention.

Similar characters of reference are employed in all of the hereinabove described views, to indicate corresponding parts.

Referring now to said drawings, the reference character 10 indicates a clock-case of any selected design having an opening 11 through which the clock-face or dial of the encased clock-work is exposed. Inserted in the case opening 11 to overlie and surround the marginal portions of the clock-face or dial is the main frame or stationary ring 12 of the dial cover. This main frame or stationary ring 12 may be of any suitable cross-sectional shape, but is preferably of inwardly beveled shape as shown, and is preferably so arranged that its inner portion is countersunk in the case opening 11 but with its outer portion projecting outwardly beyond the plane of the front face of the clock-case 10. Integrally formed in connection with said main frame or stationary ring 12 is an external annular flange 13 adapted to overlie and abut the exterior marginal portions of the case opening 11. Said flange 13 is spaced or stepped back relative to the outwardly projecting portion of said main frame or stationary ring 12 so as to provide an annular seat 14 to receive portions of a hinged bezel ring as will be subsequently explained. To secure said main frame or stationary ring 12 in desired fixed relation to the clock case 10, fastening screws 15 or other suitable fastening means may be passed through the flange 13 to screw into the body of said clock-case; the heads of said screws being countersunk in flush relation to the outer face of said flange 13.

The reference character 16 indicates a

bezel ring having in its interior circumferential portion a bezel groove 17 to receive and embrace the margins of a cover-glass or crystal 18 by which the clock-dial is enclosed or covered. Said benzel ring 16 may be given any desired ornamental configuration as to its exposed external face; in the accompanying drawings, however, a simple bevel front face 19 is shown by way of illustration. Integrally or otherwise formed in connection with said bezel ring 16 is a rearwardly projecting annular shoulder 20 adapted to seat itself in the seat 14 of said main frame or stationary ring 12, when the former occupies normal closed relation to the latter.

The novel hinge connection for pivotally relating said bezel ring to said main frame or stationary ring 12 comprises a hinge knuckle 21 perforated from end to end and disposed to project rearwardly from and in the plane of the annular shoulder 20 of said bezel ring 16. The flange 13 of said main frame or stationary ring 12 is provided with a cut-away portion or notch 22 into which extends the perforated end portion of said hinge knuckle 21. The flange 13 is provided with a bore 23 disposed to cross said cut-away portion or notch 22 and aligned with the perforation of said hinge knuckle 21, when the latter is operatively disposed within said cut-away portion or notch 22. The outer extremities of the said bore 23 will intersect the circumferential periphery of said flange 13 at points beyond each side of said cut-away portion or notch 22. When the hinge knuckle 21 is operatively engaged in the cut-away portion or notch 22, so that its perforation is aligned with the bore 23, a pintle or hinge pin 24 is inserted through the bore 23 and perforate hinge knuckle, thus pivotally connecting the bezel ring and main frame or stationary ring 12 together.

When the hingedly connected bezel ring and main frame or stationary ring are assembled, and the former is closed upon the latter, the shoulder 20 of the one will engage in the seat 14 of the other, and since the hinge knuckle 21 is rearwardly projecting from the shoulder 20 and in the plane thereof, it will be obvious that no part of the novel hinge structure is exposed beyond the external periphery or circumference of the bezel ring, nor is the smooth peripheral continuity of the latter in any way interrupted or marred. In order to assure smooth swinging movement of the bezel ring to open position without friction or obstruction, the shoulder 20 adjacent to each end of the hinge knuckle 21 is inwardly beveled to provide clearance spaces 25 extending from the exterior peripheral edge downwardly and inwardly to intersect the inner circumferential face of said shoulder, said beveled clearance spaces merging with the interior peripheral edge of the shoulder 20. The said beveled clearance spaces 25 permit the free turning of the shoulder 20 around the peripheral edge portions 26 of the flange 13, and yet are so disposed as not to disfigure the outer circumferential face of said shoulder 20 of the bezel ring 16.

It will be understood that the meeting portions of the bezel ring 16 and main frame or stationary ring 12 may be provided, at a point opposite the hinge connection thereof, with any suitable form of cooperating catch or latch means (not shown) adapted to yieldably retain the former in closed relation to the latter.

It will be obvious that some changes can be made in novel construction and arrangement of parts hereinabove described and as illustrated in the drawings without departing from the scope of this invention as defined in the appended claims, hence it is intended that the foregoing description and the disclosure of the drawings shall be considered as illustrative and not in a limiting sense.

Having thus described my present invention, I claim:—

1. A device of the class described, comprising a stationary ring having an external annular flange, a bezel ring to hold a cover glass, said bezel ring having a rearwardly projecting annular shoulder to normally overlie and abut said flange of said stationary ring, a perforate hinge knuckle extending rearwardly from and beyond said shoulder, said flange of said stationary ring having an indented notch to receive said hinge knuckle and also having a bore aligned with the perforation of said hinge knuckle, the outer ends of said bore terminating in the circumferential face of said flange, a pintle mounted in said bore and extending through said perforate hinge knuckle, and the annular shoulder of said bezel ring adjacent each end of said hinge knuckle having inwardly beveled clearance spaces extending from the exterior periphery thereof downwardly to intersect the interior face thereof.

2. A device of the class described, comprising a stationary ring to bound an opening, said stationary ring having an external annular flange to overlie a supporting body, fastening means engaged through said flange with said body, a bezel ring to hold a cover glass, said bezel ring having a rearwardly projecting annular shoulder to overlie and abut said flange of said stationary ring, a perforate hinge knuckle extending rearwardly from and beyond said shoulder, said flange of said stationary ring having an indented notch to receive said hinge knuckle and also having a bore aligned to intersect said notch, the outer ends of said bore terminating in the circumferential face of said flange, a pintle mounted in said bore

and extending through said perforate hinge knuckle, and the annular shoulder of said bezel ring adjacent each end of said hinge knuckle having inwardy beveled clearance spaces extending from the exterior periphery thereof downwardly to intersect the interior face thereof.

In testimony, that I claim the invention set forth above I have hereunto set my hand this 14th day of November, 1927.

WERNER H. BALZER.