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SASH FOR DIAL SCALES

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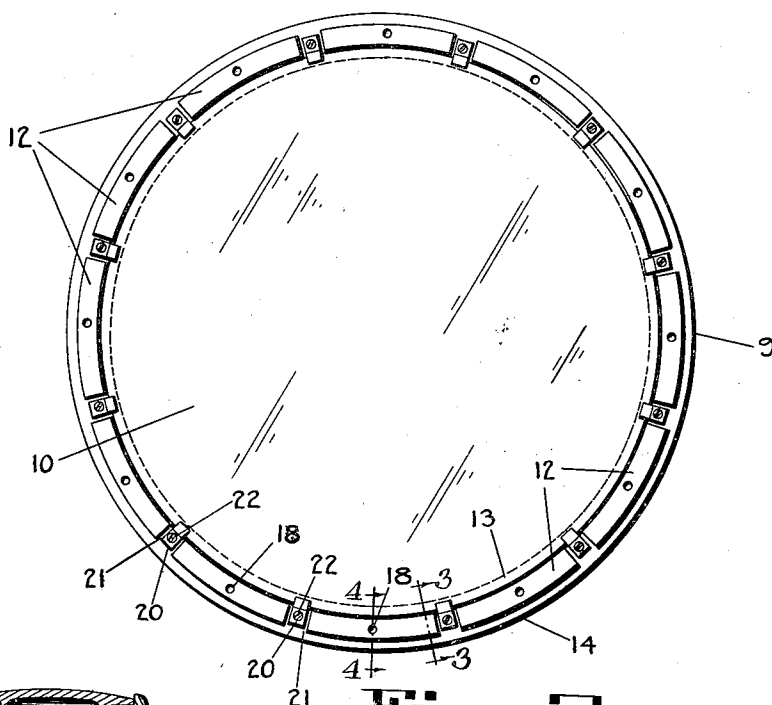


Fig. 2.

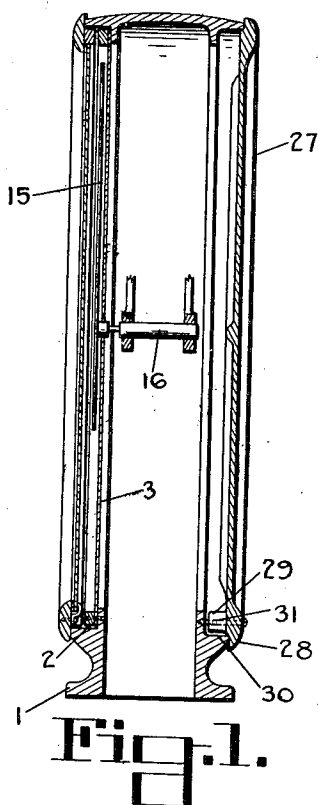


Fig. 1.

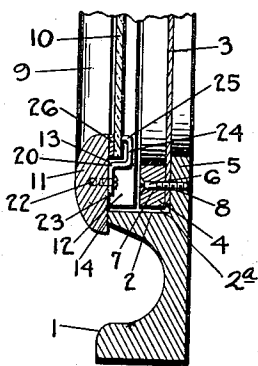


Fig. 3.

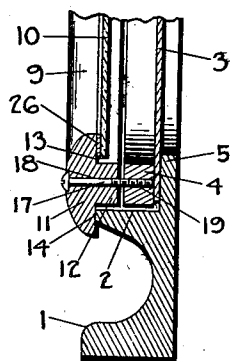


Fig. 4.

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SASH FOR DIAL SCALES

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8 Claims. (Cl. 116—129)

This invention relates to improvements in sashes for dial scales, particularly to combination devices for securing both the dial and dial glass in position in the dial head housing and is disclosed in Patent No. 2,014,274, Automatic dial scale, Alfred Bousfield, Sept. 10, 1935.

An important object of the invention is to provide simple means for mounting the dial in the housing and holding it securely therein.

Another object is to provide efficient means for fastening the dial glass to the sash, whereby the glass may be readily attached as well as detached when necessary.

Another object is to provide a series of resilient attaching clips for the dial glass having means for pressing the glass firmly in place in the sash at equidistant points along the circumference of the glass.

With these and other objects in view, as will hereinafter be pointed out, the invention resides, in general, in the particular characteristics and combinations of elements illustrated in the accompanying drawing and set forth in the appended claims.

In the drawing, wherein like reference characters indicate like parts in the several views,—

Figure 1 is a vertical cross section of an annular dial head housing of a scale, showing the dial and dial glass in position in the housing, together with the preferred means for mounting the dial and dial glass in the housing.

Figure 2 is a rear elevation of the outer attachable sash showing the dial glass fastened therein.

Figure 3 is an enlarged fragmentary view, partly in section, on the line 3—3 of Fig. 2, showing the means for attaching the dial and dial glass.

Figure 4 is an enlarged fragmentary view, in section, on the line 4—4 of Fig. 2, showing the means for attaching the outer sash carrying the dial glass to the dial securing ring.

Referring to the drawing, 1 designates an annular dial head housing, in which there is a circular opening 2 in its front wall having an annular interior recess 2a forming a rabbet therein and adapted to hold a circular dial 3 disposed in a vertical plane, and constituting an inner sash. An annular attachable dial securing ring 4 (Fig. 3) is adapted to co-operate with the recess 2a in holding the dial 3 in position in the housing 1 in conjunction with the annular upright rear wall 5 of the recess 2a. In mounting the dial 3 in the housing 1 the dial is placed in the recess 2a against its upright wall 5 and the ring 4 is then superimposed on the dial, while countersunk

screws 6 pass through spaced openings 7 in the dial ring 4 and coinciding openings in the dial and are fastened in threaded screw holes 8 in the annular rabbet wall 5, thereby holding the dial securely in the housing.

An annular attachable outer sash 9 (Figs. 2, 3 and 4) for holding the dial glass 10 comprises a main body portion 11 and a series of spaced, inwardly extending attaching portions 12 leading therefrom and adapted to fit in the annular recess 2a of the dial housing 1 when assembled therewith. The outer sash 9 is provided with vertically extending inner and outer flanges 13 and 14, the outer flange 14 serving in conjunction with the attaching portions 12 to centralize the outer dial sash 9 and glass 10 with relation to the dial head opening 2. Ample space is provided between the dial 3 and the dial glass 10 for the free rotation of the indicator 15, which is mounted on the shaft 16 supported within the housing and operatively connected to the weighing mechanism, as shown in the above referred to patent. The outer sash 9 is secured to the dial ring 4 by screws 17, which pass through spaced openings 18 in the main portion 11 and extended portions 12 of the outer sash 9 and engage spaced threaded openings 19 in the dial ring 4, thereby joining and fastening the outer sash 9 securely in position on the dial ring 4.

In order to provide means for readily attaching the dial glass 10 to the outer sash 9 a series of spaced spring clips 20 are inserted in open spaces 21 (Figs. 2 and 3), which intervene between the attaching portions 12 and each of the clips 20 is secured in its space 21 by a screw 22. Each clip 20 is formed with an attaching lug 23, which is secured by a screw 22 to the main portion 11 of the outer sash, while an offset arm 24 extends from the lug 23 and is provided with an inwardly disposed finger 25, between which and the flange 13 of the outer sash (Fig. 3) the dial glass 10 is inserted and firmly held in place. By thus disposing the series of clips 20 on the outer sash the fingers 25 press the dial glass 10 firmly in place in the outer sash at equidistant points along the entire circumference, thereby, holding the glass securely in position in the sash. In mounting the dial glass an annular gasket 26 of rubber or other suitable resilient material is inserted between the outer sash 9 and the dial glass 10, by which means a tight joint between the dial glass and the outer sash is formed, while dust and moisture are thus effectively excluded. A back cover 27 for the housing 1 is provided with an annular flange 28 and spaced inwardly ex-

tending bosses 29 mounted in an annular recess 30 in the rear of the housing 1 and secured thereto by screws 31.

It will be noted that the spaced openings 18 in the outer sash 9, in which the attaching screws 17 are inserted, are adapted to coincide with the spaced openings 19 in the dial ring 4 through which the attaching screws 6 pass in fastening the dial and dial ring 4 to the housing.

While I have shown a preferred embodiment of my invention it is evident that modifications of the invention may be made that will come within the scope thereof and, therefore, I do not desire to limit the invention to the exact form of construction shown and described herein.

I claim:—

1. In a device of the character described, an annular dial head housing provided with a circular opening in its front wall and having an annular interior recess leading therefrom, an annular attachable outer sash adapted to be mounted in the said dial head housing, a dial mounted in the recess, a dial holding ring therefor, the said ring and dial being secured within the said recess, the said outer sash comprising a main body portion provided with inner and outer flanges extending at right angles thereto and a series of spaced attaching portions extending inwardly from the said main body portion into the said recess, the said attaching portions being adapted to fit in the said recess and thereby to centralize the said outer sash within the dial head housing, and attaching means for securing the said outer sash in position in the housing and co-operating with spaced openings in the said main body portion, the spaced attaching portions and the dial holding ring in securely fastening the said parts in the housing.

2. In a device of the character described, an annular dial head housing provided with a circular opening in its front wall and having an annular interior recess leading therefrom, an annular attachable outer sash adapted to fit in the said recess, a series of extended attaching portions having an intervening open space between successive adjoining attaching portions, a dial glass mounted in the said outer sash, and a series of spaced resilient attaching members disposed at equidistant points around the circumference of the dial glass, the said attaching members being inserted in the said open spaces and adapted to securely fasten the dial glass in the outer sash.

3. In a device of the character described, an annular dial head housing provided with a circular opening in its front wall and having an annular interior recess leading therefrom, an annular attachable outer sash adapted to fit in the said recess, a series of extended attaching portions having an intervening open space between successive adjoining attaching portions, a dial glass mounted in the said outer sash, and a series of spaced resilient attaching members disposed at equidistant points around the circumference of the dial glass and inserted in the said open spaces, each resilient attaching member comprising a lug, an offset arm extending from the said lug toward the dial glass and provided with means for pressing the dial glass firmly into position in the outer sash.

4. In a device of the character described, an annular dial head housing provided with a circular opening in its front wall and having an annular interior recess leading therefrom, an an-

nular attachable outer sash adapted to fit in the said recess, a series of extended attaching portions having an intervening open space between successive adjoining attaching portions, a dial glass mounted in the said outer sash, and a series of spaced resilient attaching members disposed at equidistant points around the circumference of the dial glass and inserted in the said open spaces, each resilient attaching member comprising a lug, an offset arm extending from the said lug toward the dial glass and provided with an inwardly disposed finger adapted to engage the dial glass and press it firmly in position on the said upper flange.

5. In a device of the character described, an annular dial head housing provided with a circular opening in its front wall and having an annular interior recess leading therefrom, an annular attachable outer sash adapted to fit in the said recess, a series of extended attaching portions having an intervening open space between successive adjoining attaching portions, a dial glass mounted in the said outer sash, an annular resilient gasket disposed on the upper flange of the outer sash, and a series of spaced resilient attaching members disposed at equidistant points around the circumference of the dial glass and inserted in the said open spaces, each resilient attaching member comprising an offset arm and an angularly disposed finger leading therefrom having its tip end in engagement with the dial glass and pressing it firmly against the said gasket.

6. In a device of the character described, an annular dial head housing provided with a circular opening in its front wall and having an annular interior recess leading therefrom constituting an inner sash, an annular attachable outer sash provided with spaced inwardly extending attaching portions adapted to fit in the said recess, a dial glass mounted in the said outer sash, and resilient attaching members mounted between the spaced attaching portions and adapted to engage and fasten the dial glass securely in the outer sash.

7. In a device of the character described, an annular dial head housing provided with a circular opening in its front wall and having an annular interior recess leading therefrom constituting an inner sash, an annular attachable outer sash adapted to fit in the said recess, a dial glass mounted in the said outer sash, and a series of spaced resilient attaching members disposed around the circumference of the outer sash and having each a rearwardly bowed resilient arm extending across the edge of the glass into engagement with the glass to fasten the same in the said sash.

8. In a device of the character described, an annular dial head housing provided with a circular opening in its front wall and having an annular interior recess leading therefrom constituting an inner sash, an annular attachable outer sash, a series of spaced inwardly extending attaching portions, a dial glass mounted in the said outer sash, and a series of spaced attaching members disposed around the circumference of the outer sash between the spaced attaching portions and having each a rearwardly bowed resilient arm extending across the edge of the glass into engagement with the glass to fasten the same in the said sash.

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