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CABINET DOOR HINGE STRUCTURE

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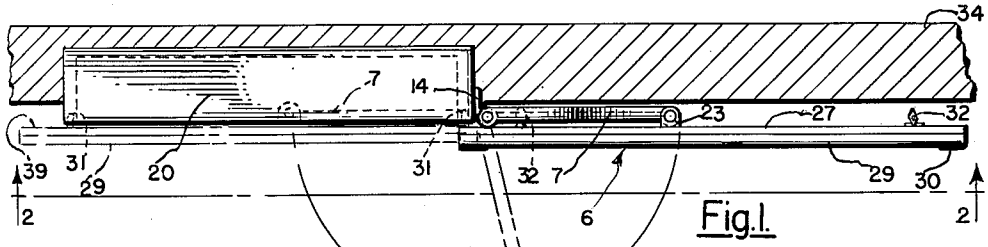


Fig.1.

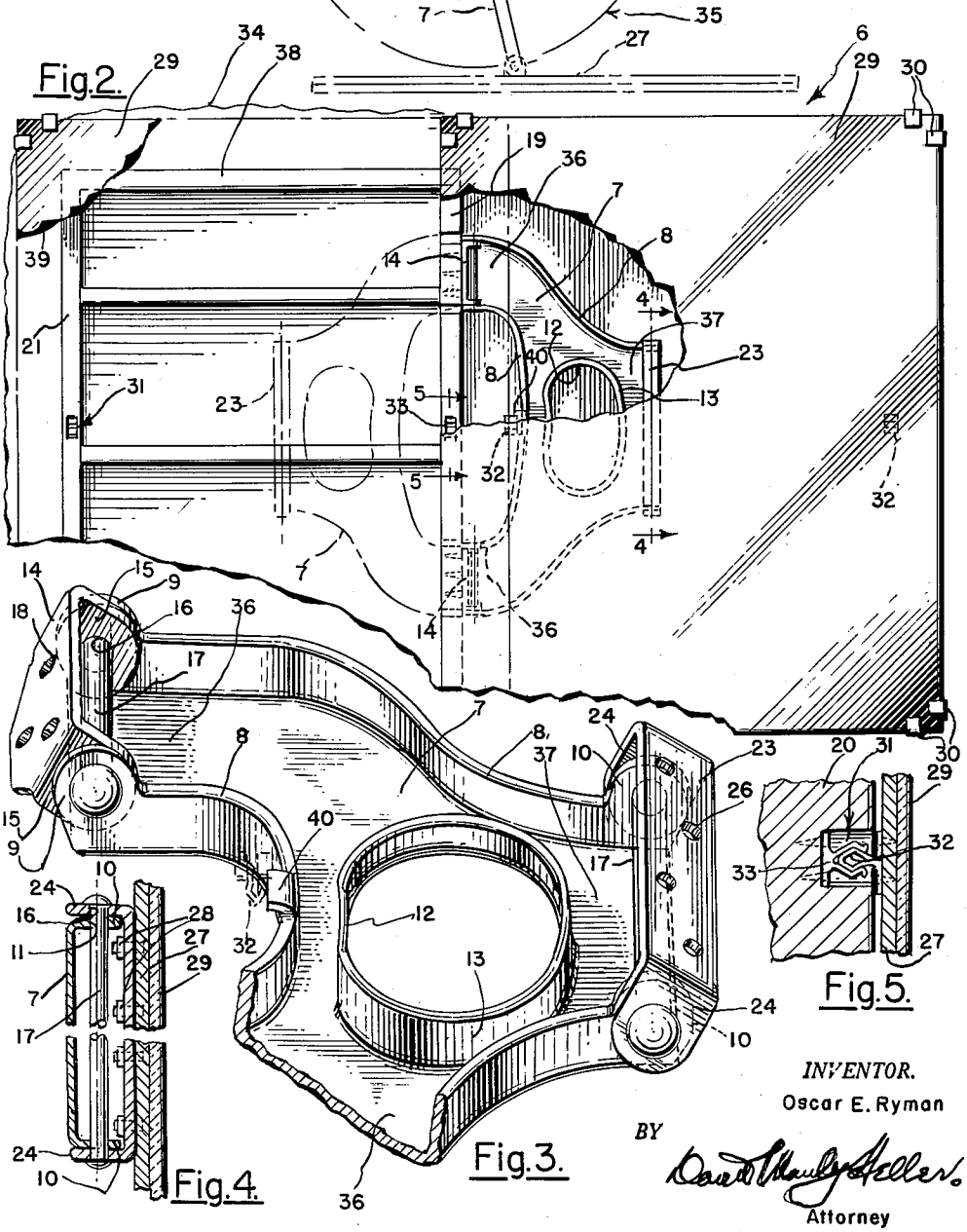


Fig.2.

Fig.3.

Fig.4.

Fig.5.

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CABINET DOOR HINGE STRUCTURE

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4 Claims. (Cl. 16—163)

1

My invention relates to articulate hinge means for medicine cabinet doors.

A most important object of my invention is to provide articulate hinge means of dual hinge construction for medicine cabinet doors, so designed and mounted between the medicine cabinet and the medicine cabinet door, to permit the mirrored surface thereof to be maintained facing forwardly in both closed and opened positions.

A further important object of my invention is to provide articulate hinge means for medicine cabinet doors, so mounted upon the said medicine cabinet door, as to permit the friction door latching means to function both as a means for holding the said medicine cabinet door closed, and for maintaining the door firmly in its open position, parallel with the wall upon which the cabinet is mounted.

A still further object of my invention is to provide articulate hinge means for medicine cabinet doors, the said hinge means being stamped in one operation from sheet metal forming flared edges thereon to provide light weight and sturdy construction.

A further object of my invention is to provide articulate hinge means for medicine cabinet doors, the hinge body thereof having a lightening hole with flared edges formed therein during the stamping process to further lighten and at the same time strengthen the said hinge body.

A further object of my invention is to provide articulate hinge means for medicine cabinet doors, which may be economically produced in large quantities for use in connection with mirrored door medicine cabinets.

Other objects and advantages inherent in my invention will be disclosed in the following description and in the accompanying illustrations, in which like parts are designated by like numerals and in which:

Fig. 1 is a top view of a medicine cabinet mounted within a wall, and showing my articulate hinge means mounted thereon, and attached to the mirrored cabinet door. The said mirrored cabinet door, and articulate hinge means are also shown by phantom lines in several operating positions.

Fig. 2 is a front view of my invention taken looking in the direction of arrows 2—2 on Fig. 1, showing the door open and having parts broken and cut away to show the mounting and construction of the articulate hinge means; showing also a portion of the door at the upper left hand corner indicating an overlapping section

2

thereof extending beyond the perimetral confines of the cabinet.

Fig. 3 is an enlarged perspective view of the articulate hinge means of my invention with parts cut away showing the articulate hinge connections of the cabinet and mirror mounting brackets thereof.

Fig. 4 is an enlarged cross-sectional view showing the mounting of the mirror holding bracket taken substantially on line 4—4 on Fig. 2.

Fig. 5 is an enlarged fragmentary cross-sectional view, taken substantially on line 5—5 on Fig. 2 showing the friction type door latch means used in connection with my invention.

Referring to the illustrations, my invention is generally designated 6, and consists of a U-shaped body element 7, which is preferably formed by a sheet metal stamping forming flanged strengthening edges 8 on the outer and inner edges of the arm portions 36, and base portion 37. The ends of the said flanged edges 8 are formed into ears 9 and 10 on the arm and base portions 36 and 37 respectively. Aligned holes 11 are drilled in ears 9 and 10 as shown. Bent ears 15 are oppositely formed at right angles on cabinet attaching brackets 14 so that the said cabinet attaching brackets 14 will fit between the ears 9 on arm portions 36. Holes 16 are drilled in ears 15 in alignment with drilled holes 11 on ears 9 for the insertion of hinge pins 17. A latching ear 40 extends over the flanged strengthening edge 8 on the inner side of U-shaped body element 7 to engage the male element 32 of a friction latching means 31, when the door 27 is in open position.

The cabinet attaching brackets 14 are attached to cabinet wall 19 of medicine cabinet 20 by bracket attaching means 22 through bracket attaching holes 18 in the triangularly shaped body of cabinet attaching bracket 14. The said cabinet attaching brackets 14 are mounted upon wall 19 so that the hinge portion is flush with the open edge 38 of medicine cabinet 20. Bent ears 24 are oppositely formed at right angles on mirror attaching bracket 23, and holes 16 are drilled therein in alignment with the holes 11 in ears 10. In assembly the ears 24 of mirror attaching bracket 23 overlap the ears 10 of hinge body element 7. The said mirror attaching bracket 23 is attached to the back side of mirror door 27 by attaching means 28 through bracket attaching holes 26 therein. The mirror 29 is mounted upon mirror door 27 by mirror supporting lugs 30. The said mirror 29 and mirror door 27 are preferably of somewhat greater magnitude

than the medicine cabinet 20 permitting overlap portions 39 on all four edges. The male elements 32 of friction door latch means 31 are mounted on the under-side of the said overlap portions 39 in alignment with female elements 33 mounted within the edges of side walls 19 and 21 of medicine cabinet 20. The said friction door latch means 31 are so mounted between the door support 27, and medicine cabinet 20 to permit the mirrored door 27 to be held securely when in a closed position, and also to be held firmly in place parallel with wall 34 due to the latching ear 40 on body element 7. A lightening hole 12 may be formed in body element 7 during the stamping process forming a flared inner edge 13 providing added strength to body element 7 as well as greater lightness thereto.

Referring to Figures 1 and 3 it may be readily seen that the opposed relationship in the mounting of the hinge brackets 14 and 23 will permit an arc of rotation of 180 degrees as shown by arrow 35 in Fig. 1. It is thus apparent that the mirrored surface 29 of mirror door 27 will face outwardly in both its open and closed positions. It is further apparent upon examination of views 1 and 2 that one of the said male elements 32 will hold the said mirror door 27 firmly in closed position when engaging the said latching ear 40. It may also be observed that the mirror door 27 in the closed position is tightly closed against cabinet 20 due to the construction and mounting of my articulate hinge means 6 and concealed at all times.

The most important advantage accruing from my articulate hinge means resides in the fact that the mirrored surface 29 is at all times facing forwardly or outwardly, permitting its use when the mirror door is opened or closed. This is an important and novel departure from the standard construction of mirrored cabinet doors in present use, wherein the mirror surface is turned to the wall when the door is open.

The second important feature of my invention is the fact that the mirror door may be fastened in an open position parallel with the wall 34 upon which the medicine cabinet is mounted, this prevents the mirror door from hanging or swinging part way away from the wall as is possible with mirrored doors in medicine cabinets in present use.

A still further important advantage of my invention resides in the light weight and strength of the hinge means which is adaptable to any medicine cabinet of standard make. It may also be pointed out that my articulate hinge means is adaptable to storage cabinets having doors in which it is desirable to have a parts list always in view when the cabinet is opened or closed.

Although my invention has been described, the terms used are to be deemed terms of description rather than terms of limitation, my intention being to retain the right to all mechanical equivalents of the structural elements depicted, provided they fall within the purview of the appended claims.

Having thus disclosed and revealed my invention, what I claim as new and desire to secure by Letters Patent is:

1. Articulate hinge means and snap holding means adapted to be secured to a cabinet and a cabinet door opening in parallelogramic relationship to the said cabinet for latching the said cabinet door in open position, comprising a pair of cabinet attaching brackets adapted to be secured to the said cabinet, a cabinet door attaching bracket adapted to be secured to the rear surface of the said cabinet door, U-shaped bracket means having an end portion forming ears to accommodate the said cabinet door attaching bracket in articulate relationship, and having also arm portions each provided with plural ear portions to be secured articulately to the said cabinet attaching brackets, snap holding means including male latch means releasably engageable and mountable on the rear surface of the said cabinet door, and a latching ear portion extending over the edge of the clutch portion of the said U-shaped bracket means releasably engaging the said male latch means to maintain the said cabinet door in open position.

2. Articulate hinge means and snap holding means adapted to be secured to a cabinet and a cabinet door opening in parallelogramic relationship to the said cabinet for latching the said cabinet door in open position, comprising a pair of cabinet attaching brackets adapted to be secured to the said cabinet, a cabinet door attaching bracket adapted to be secured to the rear surface of the said cabinet door, U-shaped bracket means having an end portion forming ears to accommodate the said cabinet door attaching bracket in articulate relationship, having also arm portions each provided with plural ear portions to be secured articulately to the said cabinet attaching brackets, snap holding means including male latch means releasably engageable and mountable on the rear surface of the said cabinet door, a latching ear portion extending over the edge of the crotch portion of the said U-shaped bracket means releasably engaging the said male latch means to maintain the said cabinet door in open position, and reenforcement flanges on the perimetral configuration of the said arm portions.

3. Articulate hinge means and snap holding means adapted to be secured to a cabinet and a cabinet door opening in parallelogramic relationship to the said cabinet for latching the said cabinet door in open position, comprising a pair of cabinet attaching brackets adapted to be secured to the said cabinet, a cabinet door attaching bracket adapted to be secured to the rear surface of the said cabinet door, U-shaped bracket means having an end portion forming ears to accommodate the said cabinet door attaching bracket in articulate relationship, and having also arm portions each provided with plural ear portions to be secured articulately to the said cabinet attaching brackets, snap holding means including male latch means releasably engageable and mountable on the rear surface of the said cabinet door, and a latching ear portion extending over the edge of the crotch portion of the said U-shaped bracket means releasably engaging the said male latch means to maintain the said cabinet door in open position, the said cabinet door having its front surface always facing forward.

4. Articulate hinge means and snap holding means adapted to be secured to a cabinet and a cabinet door opening in parallelogramic relationship to the said cabinet for latching the said cabinet door in open position, comprising a pair of cabinet attaching brackets adapted to be secured to the said cabinet, a cabinet door attaching bracket adapted to be secured to the rear surface of the said cabinet door, U-shaped bracket means having an end portion forming

ears to accommodate the said cabinet door attaching bracket in articulate relationship, having also arm portions each provided with plural ear portions to be secured articulately to the said cabinet attaching brackets, snap holding means including male latch means releasably engageable and mountable on the rear surface of the said cabinet door, a latching ear portion extending over the edge of the crotch portion of the said U-shaped bracket means releasably engaging the said male latch means to maintain the said cabinet door in open position, and reenforcement flanges on the perimetral configuration of the said arm portions, the said cabinet door having its front surface always facing forward.

OSCAR E. RYMAN.

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