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J. E. ADAMS

3,204,288

SHEET METAL HINGE CLIP

Filed Aug. 23, 1962

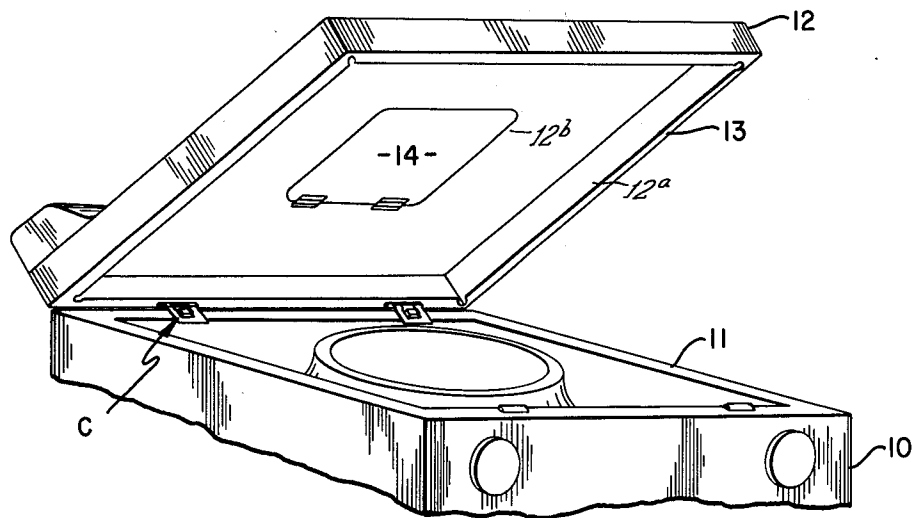


Fig. 1

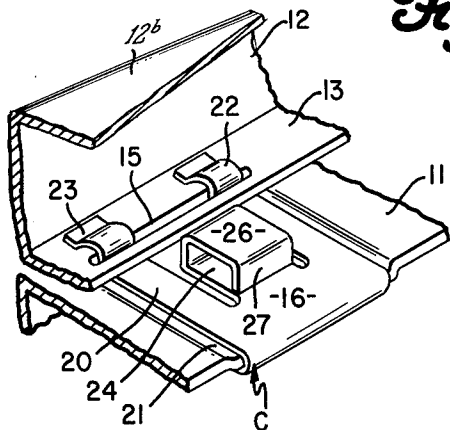


Fig. 2

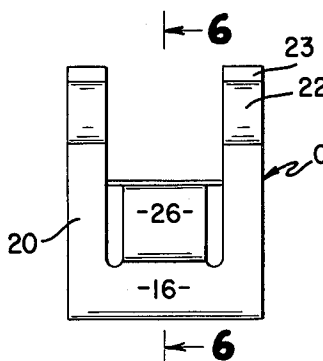


Fig. 3

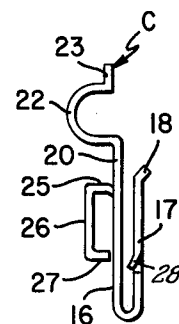


Fig. 4

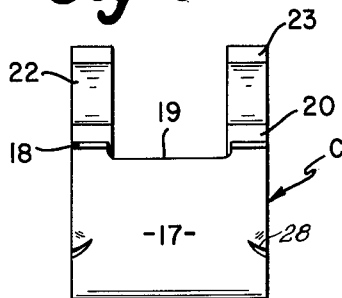


Fig. 5

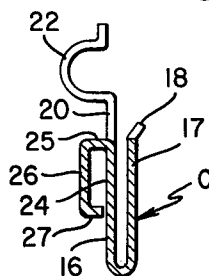


Fig. 6

INVENTOR.
JAMES E. ADAMS
BY *Phalcolu W. Praser*
ATTORNEY

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SHEET METAL HINGE CLIP

James E. Adams, Toledo, Ohio, assignor, by mesne assignments, to The Bishop and Babcock Corporation, Toledo, Ohio, a corporation of Ohio

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3 Claims. (Cl. 16-172)

This invention relates to spring sheet metal clips but more particularly to such clips used hingedly to connect a lid or door to a body and an object is to produce a hinge clip of this character which can be readily applied in position of use, affords an adequate hinge connection between the associated parts, and can be produced economically on a quantity production basis.

Other objects and advantages of the invention will hereinafter appear and, for purposes of illustration but not of limitation, an embodiment of the invention is shown on the accompanying drawing in which

FIGURE 1 is a fragmentary perspective view of the upper portion of an automatic washing machine, the lid of which is shown in raised position;

FIGURE 2 is an enlarged fragmentary perspective view showing one of the hinge clips mounted in position of use with the lid in its nearly closed position;

FIGURE 3 is a top plan view on an enlarged scale of the hinge clip;

FIGURE 4 is a side edge elevation of the hinge clip;

FIGURE 5 is a bottom plan view of the hinge clip; and

FIGURE 6 is a sectional view on the line 6-6 of FIGURE 3.

The illustrated embodiment of the invention comprises a rectangularly shaped automatic clothes washer housing 10, which has an open upper end, surrounded by an inwardly extending flange 11. Hingedly connected to the flange 11, as will hereinafter be more fully described, is a lid 12 for covering the open top of the housing. The lid 12 has a flat body 12b and downwardly extending edge walls 12a. Projecting inwardly from and at right angles to the bottom edges of the walls 12a is a coextensive flange 13. It will be understood that the lid 12 is opened only for service use to obtain access to the working parts of the washer. Disposed centrally of the lid is a hingedly mounted cover 14, which is normally used for introducing and removing clothes to the washer. At the rear end of the lid and formed in the lid flange 13 is a pair of laterally spaced longitudinally elongate slots 15. Associated with the housing flange 11 and the lid flange 13 is a pair of sheet metal hinge clips C enabling hinged movement of the lid 12 relative to the washer housing.

Each of the hinge clips C comprises a flat body 16 which is bent into a U-shape and thereby provides an under arm 17 substantially parallel with the body portion 16. The free end of the under arm 17 is outwardly inclined, as indicated at 18, to facilitate the application of the clip to the housing flange 11. It will be apparent that there are a pair of outwardly inclined end portions 18, the portion therebetween being cut away as indicated at 19.

Integral with the body 16 and coextensive therewith is a pair of laterally spaced parallel spring arms 20 which extends substantially beyond the body portion. The clip is applied to a downwardly embossed portion 21 on the housing flange 11 so that the body portion of the clip as well as the arms 20 thereof are approximately flush with the upper surface of the housing flange 11.

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Adjacent the outer end of each of the arms 20 is an upwardly curved or arched portion 22 and integral with the outer end thereof is a flat terminal portion 23 which, as indicated particularly on FIGURE 4, is spaced slightly above and parallel with the respective arm 20. It will be understood that the arched portions 22 of the arms 20 of each clip project through an elongate slot 15 in the lid flange 13 and the terminal portions are adapted to abut against the inner surface of the lid flange 13, particularly when the lid is in its closed position.

Spaced from each upwardly arched portion 22 of the respective spring arms 20, a distance determined by the space between the respective elongate slot 15 and the adjacent free edge of the lid flange 13, is a resilient stop 26 against which the free edge of the lid flange 13 is adapted to abut. The resilient stop is an integral part of the hinge clip and is formed from a strip disposed between the spring arms 20. This strip is bent at substantially right angles in a direction upwardly or away from the arms 20 to provide a relatively short vertical wall portion 25. The strip is then bent in a direction substantially parallel with the arm to provide a horizontal somewhat longer wall portion 26 and at the outer end of the wall portion 26 the strip is bent at substantially right angles toward the body of the strip to provide a short vertical wall portion 27. This box like structure provides a resilient stop against which the edge portion of the lid flange 13 can abut and thereby yieldingly hold the lid in the adjusted position.

In order to secure the clip to the embossed portion 21 of the housing flange 11, prongs 28 are struck from the edge portion of the underarms 17 of the U form and impinge against the under side of the embossure to resist any retrograde movement of the clip.

Numerous changes in details of construction, arrangement and operation can be effected without departing from the spirit of the invention, especially as defined in the appended claims.

What I claim is:

1. The combination of a body having a flanged opening, a lid for closing the opening and having depending side walls terminating in an inwardly extending flange provided with an elongate slot, a sheet metal hinge clip for connecting the lid to the body, said clip having a flat body and a terminal portion bent upon itself to form a U-shaped clip for engagement with the body flange, a pair of laterally spaced substantially straight integral arms on said body, an upwardly arched end portion on the free end portion of each arm and extending through the elongate slot in the lid flange, a terminal portion on each arm approximately parallel to the associated arm and extending beyond the respective arched portion and arranged to engage the inwardly extending flange of the lid for enabling the adjacent edge of the lid to pivot about said arched portions, and a resilient stop member integral with the clip body and disposed between said arms, said resilient stop member being spaced from said arched end portions such as to ensure engagement of the lid flange with said stop member.

2. The structure as claimed in claim 1 in which the body flange is embossed to receive the hinge clip so that the body of the latter is approximately flush with adjacent portions of the flange.

3. The structure as claimed in claim 1 in which the resilient stop member consists of a strip of metal bent

upwardly then outwardly parallel to the body and then downwardly to form a box-like structure.

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DONLEY J. STOCKING, *Primary Examiner.*

M. HENSON WOOD, JR., *Examiner.*