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E. SWEDMAN ET AL

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ADJUSTABLE SHELF BRACKET AND SUPPORTING STANDARD

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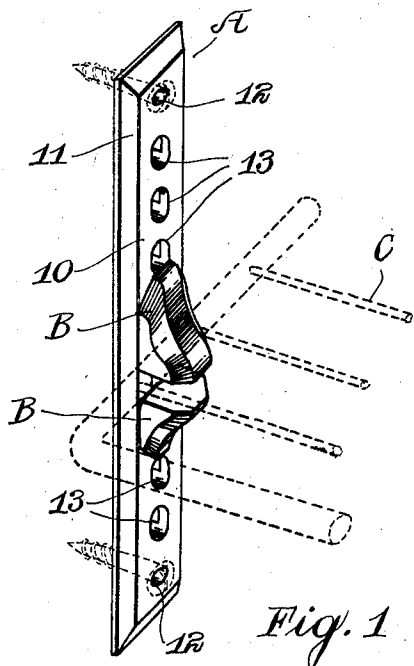


Fig. 1

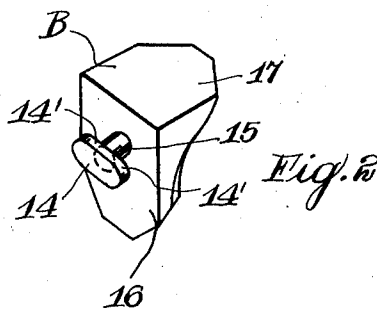


Fig. 2

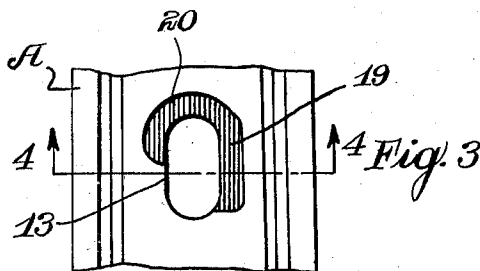


Fig. 3

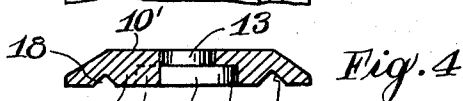


Fig. 4

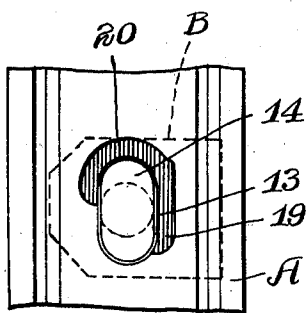


Fig. 5

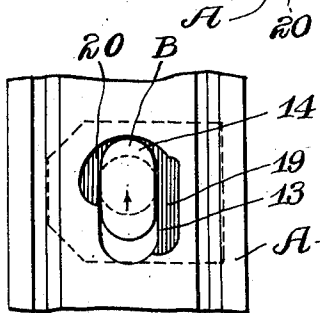


Fig. 6

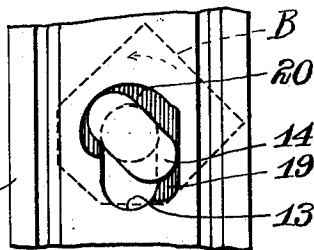


Fig. 7

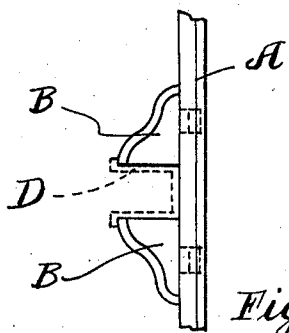


Fig. 8

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ADJUSTABLE SHELF BRACKET AND
SUPPORTING STANDARD

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4 Claims. (Cl. 248—243)

This invention relates to an adjustable shelf bracket and supporting standard which is adapted to provide a standard which may be fixed to the wall of a cabinet, such as in refrigerators, and which includes a removable adjustable shelf bracket which can be set into different positions in the standard and locked in the desired position.

A feature resides in making a standard and shelf bracket which may be made of plastic or other suitable material, and wherein a metallic channel may be supported by the bracket means in which the shelf which is supported by the bracket is adapted to slide.

In refrigerators it is desirable to provide a means which will permit the shelf supporting brackets to be adjusted so that the shelves supported by the brackets and standard may be placed in different positions. This permits the compartments or space between the shelves to be varied whenever it is desirable. The standard and bracket members may be molded or die-cast, permitting the same to be made of different colors, if desired, and which provides a supporting means for the shelves in refrigerators and other compartments where an adjustable supporting means is desired for shelves.

The standard is made in strip formation, with a series of openings shaped to the form of a lug which projects from the back of the bracket. The lug is provided with projecting ear portions which are adapted to fit in a groove formed in the back of the bracket so as to frictionally engage in the groove when the bracket is rotated into operative position to lock the same in working position. When the bracket is turned out of working position, the lug coincides with the opening formed in the standard so that the bracket may be removed and adjusted into another opening and locked in the same manner as set forth, to change the position of the bracket in relation to the standard, thus providing an adjustable bracket to change the position of the shelf supported by the bracket. It is preferred that two bracket members be used, one upon which the shelf is adapted to rest, and the other directly above the same, to act as an upper guiding member so that the shelf supported by the brackets may be slid between the two brackets and thus be held like in a groove. When the bracket members are made of non-metallic material, it is desirable to provide a metal channel which fits between the two bracket members and in which the edge of the shelf is adapted to slide. The adjustable bracket and the supporting standard may be

made of plastic material to provide an economical construction in the manufacture of the same.

These features together with other details and objects will be more clearly and fully set forth in the specification and claims.

In the drawing:

Figure 1 illustrates a perspective of the position of the standard, and a pair of the adjustable bracket members in position to support a shelf, only a portion of the shelf being illustrated in dotted outline.

Figure 2 is a perspective inner view of one of the bracket members.

Figure 3 is a detail of a portion of the standard, looking at the same from the rear.

Figure 4 is a section on the line 4—4 of Figure 3.

Figure 5 is a similar view to Figure 3, showing the lug of the bracket coinciding with the opening in the standard to receive the lug in the standard.

Figure 6 illustrates the lug on the bracket moved upward in the act of attaching the bracket to the standard and the first operation thereof.

Figure 7 illustrates the rotation of the bracket, a portion of which is illustrated in dotted outline, showing the manner in which the bracket is rotated to lock the same to the standard.

Figure 8 is a direct side view of a pair of the brackets in operative position, showing a metallic channel in dotted outline supported by the brackets and showing only a portion of the standard.

The standard A may be made of any suitable material, but for some purposes it is desirable to make the same of plastic material which is non-metallic and which permits the molding or die-forming of the same out of different colored materials, thus providing a decorative shelf supporting means for the inside of refrigerators. This is also true of the adjustable bracket supporting members B, however, if it is desirable, these members may both be made of die-castings, or other suitable material not herein specified.

The standard members are in strip-like formation, with a body portion 10 and with beveled marginal edges 11. Openings 12 are formed in the ends of the body 10 so that the standard A may be attached to the side wall of the refrigerator cabinet by screws or other suitable means desirable for fixing the same to the wall. Elongated holes 13 are formed in the standard A which are for the purpose of receiving a similarly shaped head or lug 14 which is carried by the shaft 15 on the adjustable bracket members B.

The brackets B have a flat back portion 16 from which the shaft 15 extends. The shaft 15 and the head or lug 14 are integrally formed with the bracket B. The bracket B has a shelf bearing surface 17 which extends at right angles to the back surface 16 and upon which a shelf C, illustrated in dotted outline, may rest or be positioned between the surfaces 17 of the respective upper and lower brackets B, as illustrated in Figures 1 and 8.

The standard A may be formed with grooves 18 along the inner surface of the same, if desired. A series of openings 13 are formed in each standard which are spaced apart in a manner so as to permit the brackets B to be adjustably supported within the openings 13. The openings 13 connect into the openings 13' which are formed on the back surface of the member A and which are shaped with the shoulder portions 19 and 20 so that when the head 14 has been projected through the opening 13 and into the opening 13', the bracket B may be rotated as illustrated in Figures 6 and 7 as indicated by the arrows, to cause the ears 14' on the end of the head 14 to engage against the shoulder portions 19 and 20, respectively. Thus when the head 14 is inserted through the opening 13 and 13' with the surface 16 engaging against the outer surface 10' of the standard A, and the bracket B is rotated in the direction of the arrows indicated in Figure 7, the head 14 will be positioned at right angles to its inserting position, and the ends 14' will lock frictionally against the surfaces 19 and 20, respectively, thus holding the bracket B in operative position, as illustrated in Figures 1 and 8.

In Figure 3 a metal channel D, illustrated in dotted outline, is positioned between the pair of brackets B, to illustrate a metal channel means supported between the brackets in which the shelf such as C may slide. The metal channel D will reinforce the brackets B against any wear by the sliding of the shelf C between the same.

It will be apparent that the brackets B may be used angularly adjusted into any of the respective openings 13 in the standard A so as to adjust the position of the bracket B, or a pair of the brackets B may be used as illustrated, to provide a limited space for supporting a shelf C. When the brackets B are used in pairs, they may be adjusted to any desired position on the standard A and they act to support the shelf from the bottom and the top to hold the same against tipping or tilting. My special shelf standard and adjustable bracket is particularly desirable for refrigerator cabinets when made of plastic or non-metallic material and in the color desired. The standard A fits snugly against the wall and the adjustable brackets give a range of adjustment for the shelf supported by the same which is very desirable. The brackets B, when set into the desired operative position, are adapted to hold the shelf firmly in place.

The standard and bracket members may be made of any suitable material and formed by die-

casting, if desired, or by any other suitable means adapted to make the standard and bracket in the form shown so that the bracket members may be readily adjusted into the desired positions.

In accordance with the patent statutes, the principles and operation of the shelf standard and adjustable bracket have been set forth in a manner to describe the particular form shown; however, the scope of the invention should be considered within the appending claims that variations may be made in accordance therewith.

We claim:

1. A shelf support comprising a standard member having an aperture therein elongated in shape, a bracket member having a shank projecting therefrom, and an elongated head on said shank of a size to fit through said aperture in said standard member, a bearing surface about said aperture against which said head may engage when turned out of registry with said opening, and shoulder means on the standard engaging the edges of said head to limit the rotative movement of said head.

2. A shelf support comprising a standard member having an elongated aperture therein, and a bracket member engageable with said standard member; said bracket including a shank and elongated head of a size to fit through the elongated aperture in said standard member, an enlargement in said aperture adjoining said elongated aperture providing a bearing surface for said elongated head on said bracket member when said bracket member is twisted, and shoulder means engaging the side edges of said elongated head to limit pivotal movement of said bracket member with respect to said standard member.

3. A shelf support comprising a standard member having an elongated aperture therein, a bracket member; said bracket member having a shank projecting therefrom extendible through said aperture, and an elongated head on said shank of a size to fit through said aperture, a bearing recess in said standard member over which said head may pivot when extended through said aperture, the edge of said recess having a cam formation for engaging said head as said head is pivoted to urge said shank toward one end of said elongated aperture.

4. A shelf support comprising a standard member having an elongated aperture therein, a bracket member, and stop means engageable with one side of said shelf said bracket member including means engageable with the other side of said shelf, a shank on said engageable means longitudinally slidable in said elongated aperture, a head on said shank, a bearing surface on said standard member engageable with said head, and shoulder means on said standard member engageable with said head to move said shank toward said stop means as the bracket member is pivoted.

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