Oct. 7, 1969 P. M. MacDONALD 3,471,111

SHELF ANCHOR

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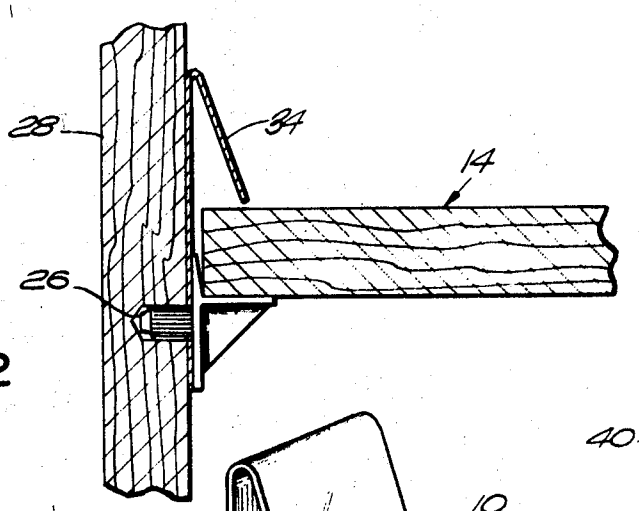

FIG. 2

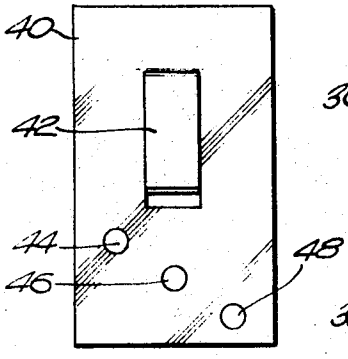

FIG. 3

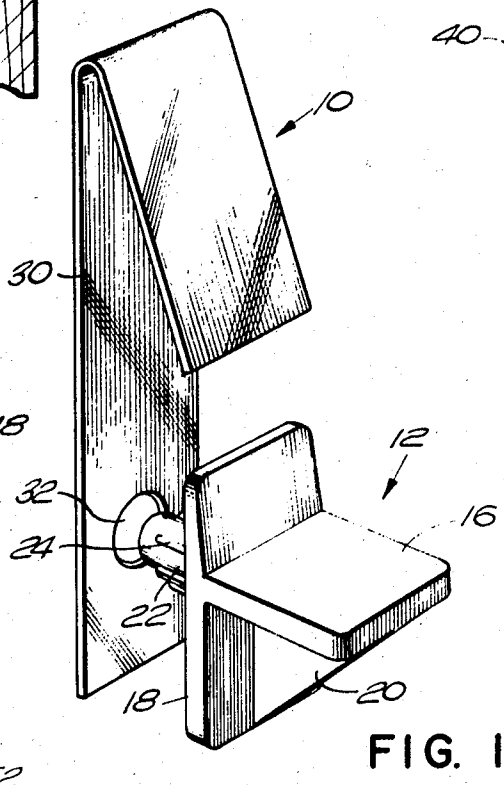

FIG. 1

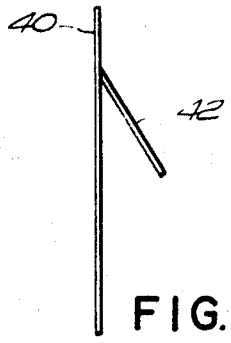

FIG. 4

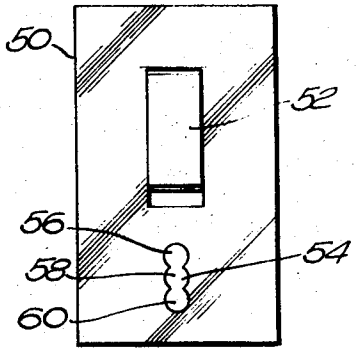

FIG. 5

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SHELF ANCHOR

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ABSTRACT OF THE DISCLOSURE

A device is provided for anchoring shelves which are normally supported only from the bottom as in kitchen cabinets and the like. The anchor is in the form of a flat resilient strip having an angularly extending leg the free end of which is adapted to bear against the upper margin of a shelf when the flat portion is mounted against the side wall of the cabinet, or the like, and held in position by means of the normal shelf supports. The angularly extending leg may be temporarily depressed against the flat body portion by the shelf itself as it is dropped onto the support and will automatically spring out into shelf-engaging position when the edge of the shelf clears the free end of the leg. The shelf may be removed by merely depressing the leg and raising the shelf clear of the anchor.

BACKGROUND OF THE INVENTION

Field of the invention

This invention relates generally to shelf supporting devices and more particularly is directed towards a novel shelf anchor for restraining a self against displacement.

Description of the prior art

Shelves, particularly those provided in kitchen cabinets and the like, normally are supported by small brackets which may be mounted to the cabinet wall at any one of a number of different height positions. In practice, the shelf support is formed with a post which is inserted in sockets preformed in the cabinet wall. The support normally provides only a shoulder for the lower edge of the shelf and does not restrain the shelf against upward displacement. As a result cabinet manufacturers normally package shelves separately and the shelves are not mounted until the cabinet is installed. This avoids damage to the cabinet during shipment by the shelves, which are restrained only against downward displacement, banging about within the cabinet. The practice of separately packaging the shelves is unsatisfactory since it adds to production costs and oftentimes the shelves will become lost or separated from the cabinet during shipment. Accordingly it is an object of the present invention to provide a simple, low cost shelf anchor which cooperates with conventional shelf supports to hold the shelf against displacement during shipment, permitting installation of shelves at the factory.

Summary of the invention

This invention features a shelf anchor comprising a relatively thin, flat body portion having an angularly extending resilient leg and at least one aperture to accommodate the post for the normal shelf support. When mounted the body of the anchor lies flat against the side wall of the cabinet and is held in position by means of the shelf support. The downwardly extending leg terminates above the shelf support by a distance substantially equal to the thickness of the shelf. The shelf is mounted by merely lowering it down over the inclined leg which will yield sufficiently to pass the shelf down onto the support. Once the top edge of the shelf clears the lower end

of the leg, the leg will snap out to bear against the upper surface of the shelf, firmly locking it in position.

Brief description of the drawings

FIG. 1 is a view in perspective of a shelf anchor made according to the invention with a conventional shelf support also shown,

FIG. 2 is a detailed cross-sectional view in side elevation of a shelf installed in a cabinet or the like and a shelf anchor mounted in position,

FIG. 3 is a view in front elevation showing a modification of the invention,

FIG. 4 is a view in side elevation thereof, and,

FIG. 5 is a view in front elevation showing another modification of the invention.

Description of the preferred embodiments

Referring now to the drawings and to FIGS. 1 and 2 in particular, reference character **10** generally indicates a shelf anchor made according to the invention. The anchor is a one-piece device preferably fabricated from a resilient strip steel and cooperates with a conventional shelf support **12** in mounting a shelf **14** against displacement.

The shelf support **12** shown is typical of devices now in use in kitchen cabinets and the like for mounting shelves. The support, in practice, is a molded plastic item having a horizontal shelf supporting surface or shoulder **16** extending out from a main body portion **18** and reinforced by means of a web portion **20**. Extending rearwardly from the body portion **18** is a generally cylindrical post **22** which normally is formed with integral ribs **24** which broach the walls of a socket **26** formed in a vertical wall **28** of the cabinet or the like. In practice, the wall **28** is formed with a plurality of sockets **26** which register with similar sockets on opposite walls and permit supports **12** to be inserted at selected heights according to the desired height of the shelf **14**.

The shelf anchor **10**, as shown in FIGS. 1 and 2, comprises a flat body portion **30** having a circular opening **32** formed near the lower end thereof to accommodate the post **24** of the support **12**. The body portion **30** of the anchor typically is on the order of two to three inches or so in length and is formed with an inclined leg **34** extending downwardly from the top of the body portion. The leg **34** is somewhat shorter than the body portion and when the anchor is mounted in position the free end of the leg **34** terminates above the shoulder **16** by a distance corresponding to the thickness of the shelf **14**. The leg **34**, as shown in FIG. 2, extends at an angle from the body portion **30** which lies flat against the wall **28**. The anchor itself is held in position by means of the shelf support **12** which is mounted by means of the post **22** inserted in the socket **26**.

In practice, the shelf **14** will be supported by four supports **12** one at each corner of the shelf. However, the shelf may be held down against upward displacement by means of only two anchors **10**, at diagonally opposite corners of the shelf, since two will effectively restrain the shelf against displacement. With the shelf anchors mounted in position, the shelf **14**, which has been pre-cut to the desired size, is held above the supports **12** and the anchors **10** and then is lowered down towards the shoulder supporting surfaces **16**. As the shelf drops towards the supports the lower corners will first engage the angularly extending legs **34** of the anchors and with a nominal amount of downward pressure applied to the shelf the legs will yield to move downwardly and finally to rest upon the support surfaces **16**. As soon as the upper edge of the shelf **14** clears the free end of the leg **34**, the leg **34** will snap outwardly into its normal extended position shown in FIG. 2 and will engage the upper marginal edge of the shelf, thus firmly locking the shelf in position. The

cabinet with the shelf in position may then be crated and shipped without fear of the shelf becoming dislodged.

The anchors may be left in position or, if desired, they may be removed once the cabinet has been finally installed. The shelf may be removed by merely manually depressing the leg **34** inwardly and then raising the shelf **14** clear of the support and anchor.

Referring now to FIGS. 3, 4 and 5 there are shown modifications of the invention. In FIGS. 3 and 4 the anchor is in the form of a flat metal plate **40**, preferably of a strip metal, rectangular in outline and formed with a centrally punched out leg **42** extending angularly downward and serving the same function as the leg **34** in the principal embodiment. In FIG. 3 it will be seen that the lower portion of the plate **40** is formed with a series of apertures **44**, **46** and **48** diagonally spaced apart. The function of the apertures is to accommodate the post of the shelf support in accordance with the thickness of the shelf which is to be installed. It will be understood that for a thin shelf, such as ½", aperture **44** will be employed in order that the free end of the leg **42** will bear against the upper surface of the shelf when installed. For medium thickness shelves, such as ⅝", aperture **46** will be employed whereas for thick shelves, such as ¾", aperture **48** will be employed. In this fashion the same anchor may be employed for a variety of shelf thicknesses, the shelf being properly fastened by the anchor without objectionable clearance between the free end of the leg and the upper surface of the shelf.

In the FIG. 5 embodiment plate **50**, similar to plate **40** of FIG. 3, is likewise formed with a centrally punched out resilient leg **52**. However, in this instance the lower portion of the plate is provided with a single aperture **54** in the form of three vertically spaced arcuate merging sectors **56**, **58** and **60** vertically aligned with one another. Each sector is designed to accommodate the post of the shelf support which may be inserted in any one of the three sectors according to the thickness of the shelf which is to be installed.

Having thus described the invention what I claim and desire to obtain by Letters Patent of the United States is:

1. An anchor for cabinet shelves and the like mounted by means of a socket formed in an upright cabinet wall, comprising in combination

(a) a unitary structure having a thin, flat body portion adapted to be mounted flat against said wall,

(b) a support having a forwardly extending shoulder portion, a rearwardly extending post for insertion in said socket and a generally flat central portion extending above and below said shoulder and post,

(c) said body portion being formed with at least one opening of a size and shape to accommodate said rearwardly extending post extending therethrough,

(d) said structure having a resilient leg extending downwardly and forwardly therefrom,

(e) the free end of said leg terminating generally in line with the forward edge of said shoulder and at a distance from the shoulder of said support corresponding to the thickness of said shelf and adapted to engage the shelf margin when said shelf is placed on said shoulder.

2. An anchor according to claim **1** wherein said body portion is formed with a plurality of communicating vertically aligned semicircular spaced openings whereby the distance between the free end of said leg and said shoulder may be selectively varied according to the thickness of said shelf.

3. An anchor according to claim **1** wherein said leg is bent angularly from one end of said body portion.

4. An anchor according to claim **1** wherein said leg is formed from a central portion of said body portion extending angularly therefrom.

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U.S. Cl. X.R.

108—152; 248—250