Dec. 25, 1962 H. J. COHN 3,070,340

EXTENDIBLE AND RETRACTABLE ACCESSORY FOR ARTICLES OF FURNITURE AND SUPPORT FOR THE SAME

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Fig. 1

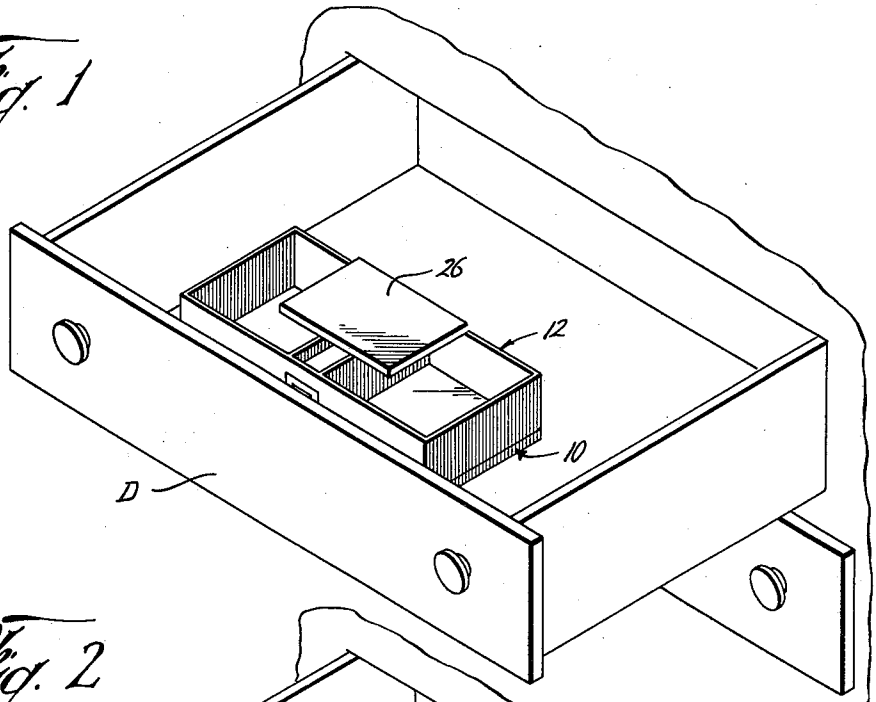
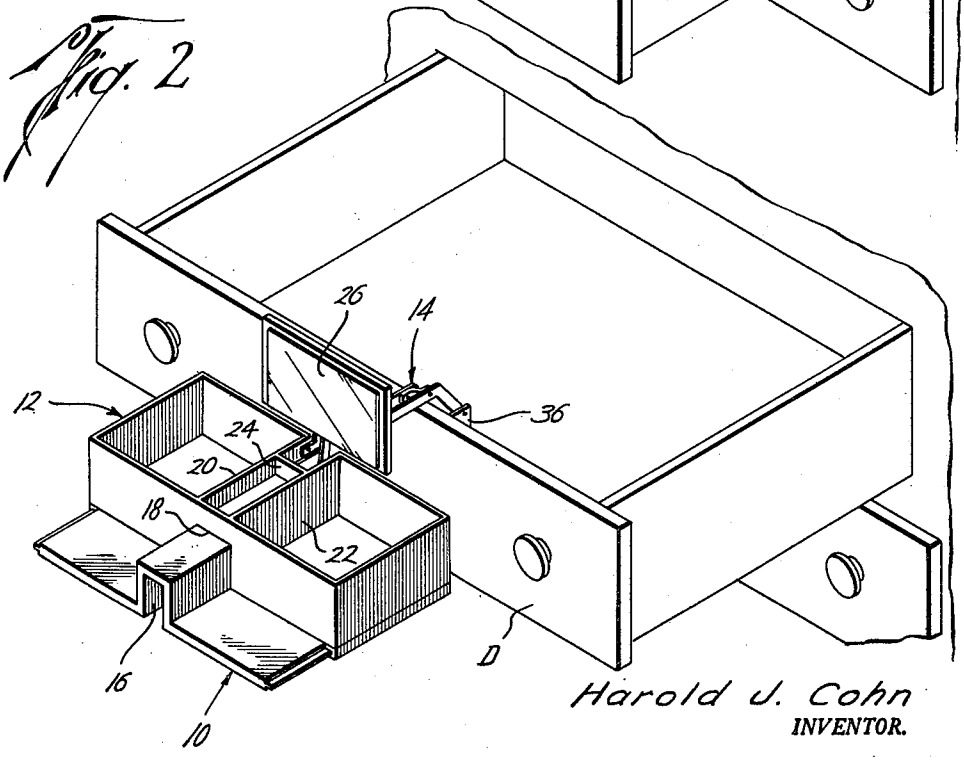


Fig. 2



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Fig. 3

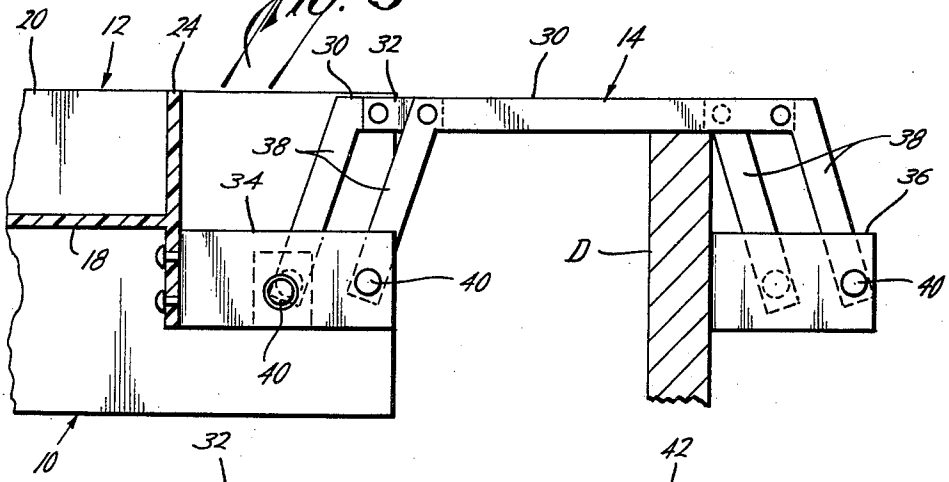


Fig. 4

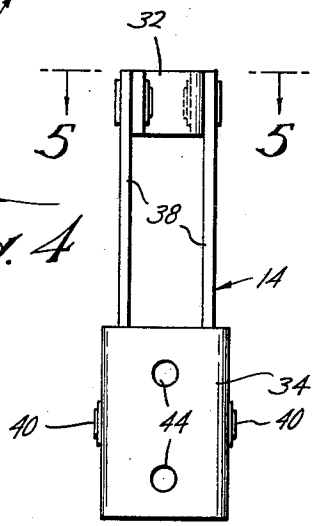


Fig. 5

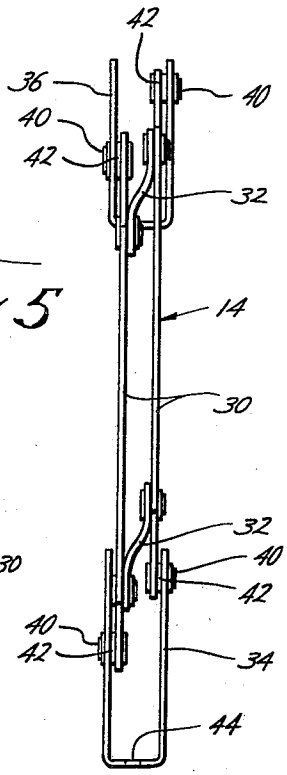
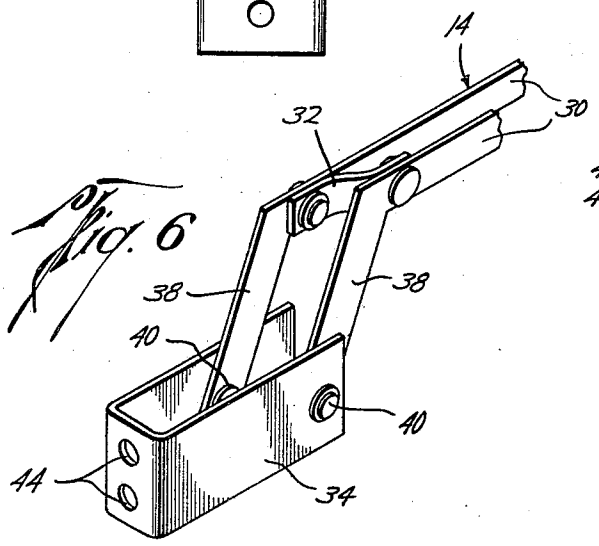


Fig. 6



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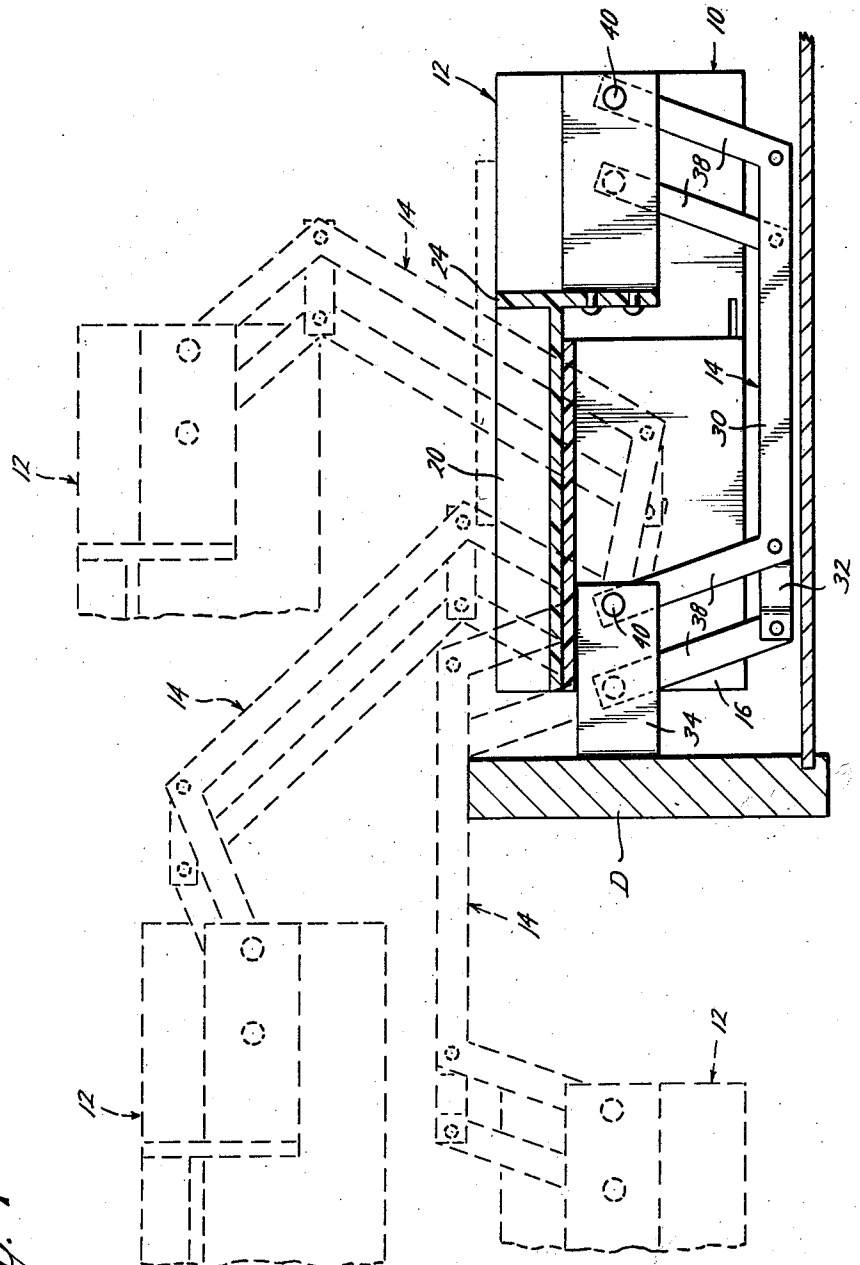


Fig. 7

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EXTENDIBLE AND RETRACTABLE ACCESSORY FOR ARTICLES OF FURNITURE AND SUPPORT FOR THE SAME

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Filed Nov. 14, 1960, Ser. No. 68,849
7 Claims. (Cl. 248—284)

This invention relates to furniture, and more particularly to a tray and supporting structure therefor which may be applied to a drawer of an article of furniture, or the like, to permit the tray to be moved to an extended position out of the drawer or to a retracted position within the same.

The invention may be used for a variety of purposes where it is desired to provide a tray, shelf, or the like to hold any desired articles and to support the same in an extended position at a convenient location for the user and to permit the same to be moved to a retracted or out-of-the-way position when desired.

An important object of the invention is to provide a tray and support structure therefor adapted to be attached to a drawer of an article of furniture and which are designed for coaction to support the tray in an extended position out of the drawer or in a retracted position within and below the top of the drawer and by which the tray is at all times held in a horizontal position.

Another object of the invention is the provision of a tray and supporting structure therefor by which the tray may be movably supported on a drawer for movement into and out of the drawer and which is designed to securely hold the tray against wobbling or rocking movement.

A further object of the invention is to provide a tray and supporting structure therefor for use with a drawer of an article of furniture, which is of compact design and rugged construction and in which the parts are arranged for coaction to occupy but little space when the tray is in its retracted position in the drawer.

Another object of the invention is the provision of a tray and supporting structure therefor, of the character mentioned, embodying pivotally connected, parallel disposed, support arms shaped to extend over the upper edge of a wall of the drawer to support the tray in an extended position out of the drawer and in which the tray and support are shaped for coaction to substantially enclose the support arms when the tray is in a retracted position within the drawer.

A still further object of the invention is to provide a tray and supporting structure therefor, of the type referred to embodying a shelf upon which the tray is removably positioned, and wherein the shelf is formed with a downwardly opening recess within which the support arms are positioned when the shelf is in its retracted position in the drawer.

The above and other important objects and advantages of the invention will be apparent from the following detailed description constituting a specification of the same when considered in conjunction with the annexed drawings, wherein—

FIGURE 1 is a perspective view, on a reduced scale, illustrating a preferred embodiment of the invention and showing the same in its retracted position in a drawer;

FIGURE 2 is a view similar to that of FIGURE 1, showing the device of the invention in its extended position;

FIGURE 3 is a fragmentary, side elevational view, showing details of structure and the manner of attachment of the supporting structure of the invention, the same being shown in its extended position;

FIGURE 4 is an end elevational view of the supporting

structure of the invention separated from the shelf and tray of the same;

FIGURE 5 is a top plan view of the supporting structure of the invention as illustrated in FIGURE 4;

FIGURE 6 is a fragmentary, perspective view of one end of the supporting structure of the invention as shown in FIGURE 5; and

FIGURE 7 is a fragmentary side elevational view showing the invention with the supporting structure thereof in several different positions of extension and retraction.

Referring now to the drawings in greater detail, the invention comprises a shelf 10 of generally rectangular configuration, upon which a tray 12 is slidably and removably supported, and a supporting structure generally designated 14, by which the shelf is movably attached to a suitable support, such as a drawer D of an article of furniture, such as a dresser, bureau, or the like, whereby the shelf and tray may be moved to a retracted position, as shown in FIGURE 1, within the drawer, or to an extended position, as shown in FIGURE 2, in front of the drawer. The shelf 10 may have a central, upwardly extending, hollow rib 16, or the like, and the tray 12 may be formed with a bottom recess 18 to fit the rib. The tray 12 is preferably provided with internal partitions, such as those indicated at 20, 22 and 24, forming compartments for the reception of any desired articles, such as jars, bottles or other containers of cosmetics which it may be desired to hold at a convenient location for use. A mirror 26 may also be pivotally mounted on the shelf in any convenient manner to be folded down on the top of the tray, as seen in FIGURE 1, when the tray is supported in the drawer, and to be positioned upright, as seen in FIGURE 2, when the tray is in its extended position.

The support structure 14 is made up of elongated, spaced apart, parallel support arms 30, connected together in longitudinally offset relation by pivotal spacers or links 32, and provided at the ends of the support with U-shaped attaching brackets 34 and 36. Each of the arms 30 has downturned portions 38 at its opposite ends to be positioned between the arms of the U-shaped brackets and which are perforated for pivotal attachment thereto, as by means of rivets 40, or the like. The support arms are pivotally connected to the arms of the brackets in longitudinally offset relation, and suitable spacer means, such as the washers 42 may be inserted between the arms and the brackets to hold the arms in spaced relation thereto to prevent rubbing of the arms on the brackets. The spacing links 32 may conveniently be of S or Z shape and are pivotally connected to the arms at longitudinally offset locations to hold the arms in predetermined spaced relation, but to permit pivotal movement of the arms about the rivets 40 to allow the shelf and tray to be moved into and out of the drawer in a horizontal position.

The bracket 34 is attached to the shelf in any convenient manner, as by means of rivets extending through openings, such as those indicated at 44 in the bracket, or otherwise, and the bracket 36 is similarly attached to the inner face of the front wall of the drawer D at a distance below the top edge thereof, such that the arms 30 may be fully extended over the upper edge of the drawer to support the tray in front of the drawer.

The brackets 34 and 36 are of a width to allow the brackets to enter the hollow rib 16 when the shelf is in its retracted position in the drawer, so that the support arms and brackets are housed in the rib when the tray is in its stored away position.

Because of the longitudinally offset arrangement of the support arms and the pivotal connection of the spacer links 32 to the arms, it will be apparent that the support structure is very strong and securely held against wobbling while at the same time holding the shelf and tray at all times in a horizontal position. It will also be noted that

even in the event that the rivets 40 should become worn or loosened, the arms will securely support the shelf in its extended position by engagement with the upper edge of the drawer, as seen in FIGURE 3, and in its retracted position by engagement of the arms with the bottom of the shelf in the hollow rib 16.

It will thus be seen that the invention, constructed as described above, provides an extendible and retractable shelf or tray device, which is of simple design, easily applied to existing articles of furniture, or the like, and by which the shelf is held horizontal in all positions of adjustment of the support.

The invention is disclosed herein in connection with a certain specific embodiment of the same, but it will be understood that this is intended by way of example only, and that the structure and arrangement of the parts is susceptible of numerous changes within the spirit of the invention and the scope of the appended claims.

Having thus clearly shown and described the invention, what is claimed as new and desired to secure by Letters Patent is:

1. The combination with a tray-like object formed with a downwardly opening bottom recess extending from side to side across the object and open at its opposite ends, of device for movably supporting the object on a supporting structure in an upright, horizontal position for bodily movement into and out of positions in horizontal planes at different elevations, comprising laterally spaced, parallel arms of generally inverted U shape and means pivotally connecting the arms to the object and to the supporting structure at equally longitudinally offset locations on the object and said structure to position the arms to lie within said recess when the object is in one of said planes and to be out of said recess when the object is in another of said planes.

2. The combination with a tray-like object formed with a downwardly opening bottom recess extending from side to side across the object and open at its opposite ends, of device for movably supporting the object on a supporting structure in an upright, horizontal position for bodily movement into and out of positions in horizontal planes at different elevations, comprising laterally spaced, parallel arms of generally inverted U shape, means pivotally connecting the arms to the object and to the supporting structure at equally longitudinally offset locations on the object and said structure to position the arms to lie within said recess when the object is in one of said planes and to be out of said recess when the object is in another of said planes and means forming pivotal connections between the arms at locations mediate the object and supporting structure.

3. The combination with a tray-like object formed with a downwardly opening bottom recess extending from side to side across the object and open at its opposite ends, of device for movably supporting the object on a supporting structure in an upright, horizontal position for bodily movement into and out of positions in horizontal planes at different elevations, comprising laterally spaced, parallel arms, having end portions disposed in downwardly extending, longitudinally offset relation, and means forming longitudinally offset pivotal connections with the object and said end portions at one end of the arms and with the supporting structure at the other end of the arms to position the arms to lie within said recess when the object is in one of said planes and to be out of said recess when the object is in another of said planes.

4. The combination with a tray-like object formed with a downwardly opening bottom recess extending from side to side across the object and open at its opposite ends, of device for movably supporting the object on a supporting structure in an upright, horizontal position for bodily movement into and out of positions in horizontal planes at different elevations, comprising laterally spaced, parallel arms, having end portions disposed in longitudinally offset relation, means forming longitudinally offset pivotal connections with the object and said end portions at one end of the arms and with the supporting structure at the other end of the arms to position the arms to lie within said recess when the object is in one of said planes and to be out of said recess when the object is in another of said planes, and means pivotally connecting the arms mediate said end portions.

5. The combination with a tray-like object formed with a downwardly opening bottom recess extending from side to side across the object and open at its opposite ends, of device for movably supporting the object on a supporting structure in an upright, horizontal position for bodily movement into and out of positions in horizontal planes at different elevations, comprising laterally spaced, parallel arms, link means extending between and pivotally connected to the arms at equal distances from the ends of the arms, and means forming longitudinally offset pivotal connections between the arms and object at one end of the arms and between the arms and the supporting structure at the other ends of the arms to position the arms to lie within said recess when the object is in one of said planes and to be out of said recess when the object is in another of said planes.

6. The combination with a tray-like object formed with a downwardly opening bottom recess extending from side to side across the object and open at its opposite ends, of device for movably supporting the object on a supporting structure in an upright, horizontal position for bodily movement into and out of positions in horizontal planes at different elevations, comprising parallel arms of equal length, link means extending between and pivotally connected to the arms at equal distances from the ends of the arms, and means forming longitudinally offset pivotal connections between the arms and object at one end of the arms and between the arms and the supporting structure at the other end of the arms to position the arms to lie within said recess when the object is in one of said planes and to be out of said recess when the object is in another of said planes.

7. The combination with a tray-like object formed with a downwardly opening bottom recess extending from side to side across the object and open at its opposite ends, of device for movably supporting the object on a supporting structure in an upright, horizontal position for bodily movement into and out of positions in horizontal planes at different elevations, comprising parallel arms, means forming pivotal connections between the arms and object at longitudinally offset locations, and means forming pivotal connections between the arms and the supporting structure at locations which are offset longitudinally at the same distance as said first named offset locations to position the arms to lie within said recess when the object is in one of said planes and to be out of said recess when the object is in another of said planes.

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