

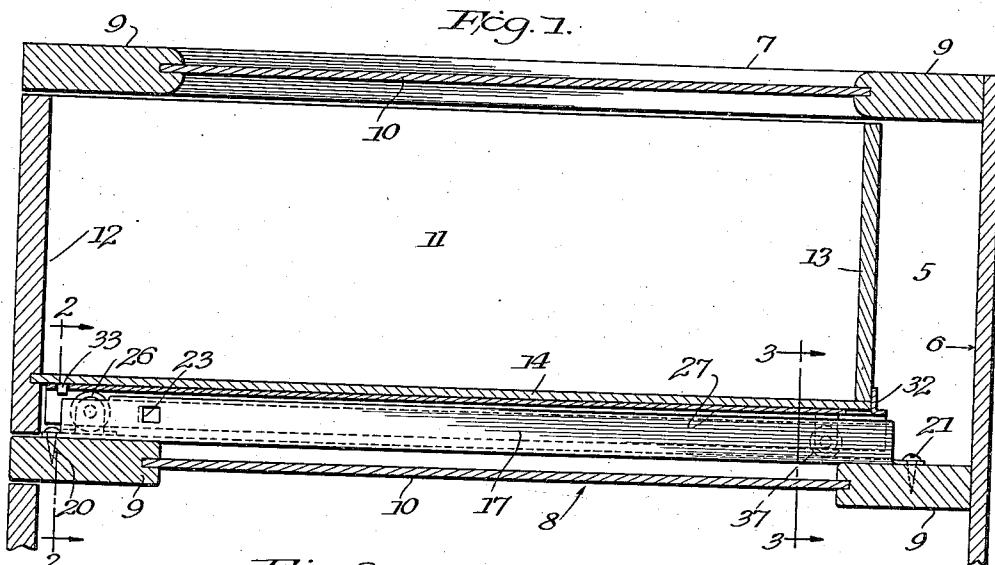
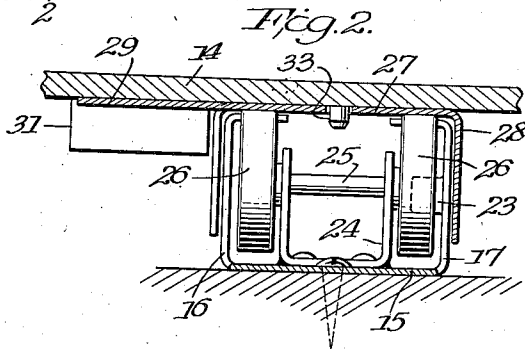
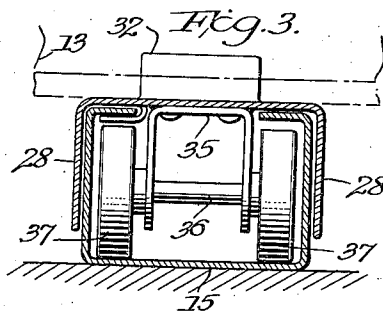
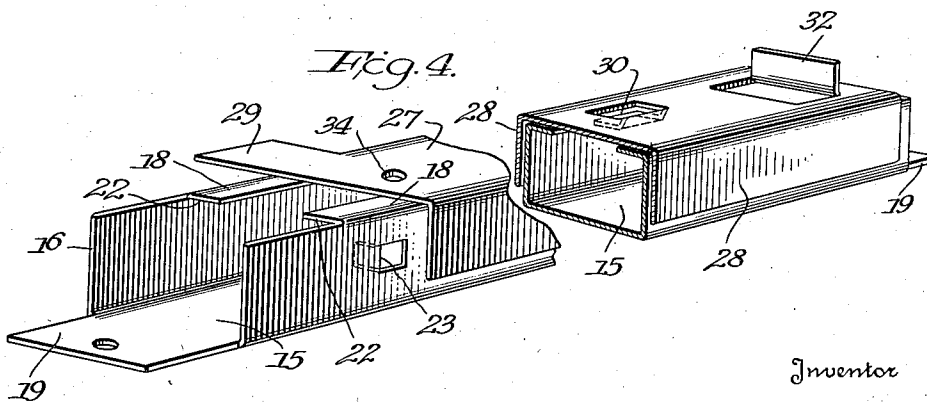
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EXTENSION SUPPORTING ROLLER DRAWER GUIDE

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EXTENSION SUPPORTING ROLLER DRAWER
GUIDE

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3 Claims. (Cl. 45—77)

This invention relates to new and useful improvements in extensible roller drawer guides.

The primary object of this invention is to provide an extensible roller drawer guide which is intended to be positioned beneath a drawer for supporting and guiding the same during its travel into and out of its compartment. It is to be understood that one of these drawer guiding units will be sufficient for drawers of reasonable size and that two or more guiding units may be employed for larger drawers for better carrying the greater weight and for more easily and smoothly guiding such larger drawers.

A further object of the invention is to provide an extensible supporting roller drawer guide which is fixedly secured to the frame of the piece of furniture equipped with the drawer and is readily detachably connected to the drawer with the result that the drawer may be easily separated from the supporting and guiding device upon complete outward movement of the traveling guide elements relative to the fixed guide element.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawing forming a part of this specification and in which like numerals are employed to designate like parts throughout the same:

Figure 1 is a vertical sectional view through a fragmentary portion of a piece of wooden furniture with a drawer positioned in a compartment thereof and supported and guided by one of the roller drawer guide devices embodying this invention;

Figure 2 is a transverse sectional view taken on line 2—2 of Figure 1;

Figure 3 is a transverse sectional view taken on line 3—3 of Figure 1; and

Figure 4 is a perspective view, with parts broken away, of the extensible supporting roller drawer guide device embodying this invention.

In the drawing, wherein for the purpose of illustration is shown the preferred embodiment of this invention, and referring particularly to Figure 1, there is shown in vertical section a fragmentary portion of a piece of furniture having a drawer compartment 5 provided with a rear wall 6, a top wall 7, and a bottom wall 8. These walls, of course, may be of any desired type of construction, but in the piece of furniture illustrated, the top and bottom walls are formed of frames with dustproofing plies 10 suitably mounted in the same frames. The drawer 11 associated with the drawer compartment 5 for movement inwardly and outwardly thereof is provided with a front wall 12, a rear wall 13, and a bottom wall 14.

The drawer 11 has associated therewith a roller drawer guide which is intended to completely sup-

port the drawer on the lower frame 9 of the bottom wall 8 and to function as the sole guiding means for this drawer during its movement into and out of the compartment 5. This roller drawer guide device is extensible for that purpose and, therefore, consists of two relatively movable or slidable portions. This extensible supporting roller drawer guide device is best illustrated in detail in Figures 2, 3, and 4 and will be described with reference thereto.

The bottom part of the guide structure is of channel formation and consists of the bottom wall 15, the perpendicularly extending side walls 16 and 17, and the laterally inwardly directed top edge flanges 18. The bottom wall 15 is of greater length than the side walls 16 and 17 to provide extensions 19 at the front and rear ends of the device. The front extension 19 is fastened to the frame 9 of the bottom wall 8 by means of a screw, or the like, 20. The rear extension 19 is secured to the frame 9 of the bottom wall 8 by means of a screw, or the like, 21. It will be seen, therefore, that the lower channel shaped guide member is fixedly secured to the framework of the piece of furniture which defines the lower wall of the drawer compartment with which the drawer is associated. By inspecting Figure 4, it will be noted that the top flanges 18 terminate short of the front ends of the side walls 16 and 17 to provide spaces or interruptions in these flanges, which are designated by the reference character 22.

Figures 1, 2, and 4 disclose an ear or lug 23 as being struck from and bent inwardly of the side wall 17. This inwardly struck ear or lug 23 functions as a stop for the rollers carried by the inner end portion of the movable drawer guide part, as will be described at a later point.

Figure 2 discloses a substantially U-shaped bracket 24 which is suitably welded or riveted to the bottom wall 15 adjacent the front end of the same. The side arms 15 of this bracket 24 act as bearings for a shaft 25 which supports at its outer ends the front rollers 26. These rollers are positioned in such a manner as to project through the spaces or interruptions 22 formed in the top wall flanges 18 so that the peripheries of these rollers will be arranged above the top surfaces of the flanges 18.

The movable part of this drawer guide is formed of inverted channel shape in transverse section and includes the top wall 27 with the depending side walls 28. Figure 4 discloses a laterally projecting lug 29 which is carried by the top wall 27. This lug is cut from the front end portion of the left-hand side wall 28, as best illustrated in Figure 2.

It will be noted that this top movable guide part fits over the bottom fixed guide part and is capable of sliding movement relative to said bot-

tom part. For the purpose of holding the top movable part against vertical separation from the bottom part, an angularly shaped lug 30 is struck from the top wall 27 and is bent into a depending offset position. The shape and location of this angular lug 30 adapt the same to extend beneath the left-hand flange 18 of the bottom part, or the flange 18 carried by the upper edge of the side wall 16. This lug 30 slides along this flange 18 during movement of the top part of the guide relative to the bottom part.

For the purpose of detachably securing the drawer 11 to the top part of the guide device, a block 31 is adhesively secured to the bottom wall 14 of the drawer. This block is arranged so as to bear against the laterally projecting ear or lug 29, as shown in Figure 2. This block 31 and lug 29 prevent the drawer from being pulled outwardly relative to the top part of the guide. To prevent the drawer from being pushed inwardly independently of the top part of the guide, a lug or ear 32 is struck upwardly from the rear end portion of the top 27 of the upper guide part. To prevent lateral movement of the drawer relative to the guiding device, a pin 33, of any desired type, is intended to depend from the bottom wall 14 of the drawer and to be removably received within the aperture 34 formed in the front end portion of the upper guide part.

Figures 1 and 3 disclose an inverted, substantially U-shaped bracket 35 which is suitably welded or riveted to the inner surface of the top wall 27 of the upper guide part. The depending arms or sides of this U-shaped bracket act as bearings for the shaft 36 which has journaled at its opposite ends the rollers 37. These rollers are positioned between the bottom wall 15 and the flanges 18 of the lower fixed guide part.

By inspecting the several figures, it will be seen that the drawer 11 may be easily and smoothly rolled into and out of the drawer compartment 5. The front rollers 26 will at all times bear against the under surface of the top wall 27 of the upper guide part. The rear rollers 37 will bear against either the inner surface of the bottom wall 15 of the lower guide part of the inner surfaces of the flanges 18, depending on which way the drawer is balanced relative to the front rollers 26. It will be appreciated that during substantially the first half of the outward movement of the drawer, the latter will be balanced or tipped downwardly at its rear about the front roller 26 as a fulcrum. After the drawer has been moved outwardly of the compartment 5 so that its front portion is overbalanced relative to the rear portion, the rear of the drawer will move upwardly until the rollers 37 bear against the flanges 18. The rollers will travel over these flanges during the remainder of the outward movement of the drawer. The inwardly struck lug or ear 23 will engage one of the rear rollers 37 to limit outward movement of the drawer and the upper guide part.

When the drawer is moved outwardly until a rear roller 37 engages the inwardly struck lug or ear 23, the drawer may be lifted from the upper guide part to remove the pin 33 from the aperture 34, the block 31 from the laterally projecting lug 29, and the rear wall 13 of the drawer out of engagement with the upwardly struck lug 33. This separation of the drawer from the guide structure may be readily accomplished. The drawer may also be very readily returned to its connected condition with reference to the upper guide part when it is desired to return the drawer

to the compartment 5. Although the extensible supporting drawer guide illustrated and described herein includes the use of rollers, it is to be understood that such rollers can be dispensed with and that the device will still operate very efficiently and effectively to support and guide a drawer during its movement into and out of its drawer compartment.

It is to be understood that the form of this invention herewith shown and described is to be taken as a preferred example of the same and that various changes in the shape, size, and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described the invention, I claim:

1. In a drawer construction, means for providing a drawer receiving compartment and including a bottom wall therefor, a channel-shaped guide part fixedly secured to said bottom wall and having inwardly directed top edge flanges interrupted at one end, rollers journaled on the front portion of said guide part and projecting partially thereabove through the interruptions in said flanges, an inverted channel-shaped guide part fitted over the fixed guide part and bearing on said rollers, rollers journaled on the rear portion of said inverted guide part and engageable with the bottom and the flanges of the fixed guide part, a drawer for the compartment, and means for supporting the drawer on said inverted guide part.

2. In a drawer construction, means for providing a drawer receiving compartment and including a bottom wall therefor, a channel-shaped guide part fixedly secured to said bottom wall and having inwardly directed top edge flanges interrupted at one end, rollers journaled on the front portion of said guide part and projecting partially thereabove through the interruptions in said flanges, an inverted channel-shaped guide part fitted over the fixed guide part with the sides of both parts closely positioned, rollers journaled on the rear portion of said inverted guide part and engageable with the bottom and the flanges of the fixed guide part, a drawer for the compartment, and means for detachably mounting the drawer on said inverted guide part.

3. In a drawer construction, means for providing a drawer receiving compartment and including a bottom wall therefor, a channel shaped guide part fixedly secured to said bottom wall at its opposite ends only, said guide part being of a length to extend substantially the entire depth of said drawer compartment and having inwardly directed top edge flanges terminating short of the outer ends of the side of said part to provide openings, rollers journaled on the front portion of said guide part within the channel of the same and projecting partially thereabove through the aforementioned flange openings, an inverted channel shaped guide part fitted over the fixed guide part and bearing on said rollers, rollers journaled in the rear portion of said inverted guide part and engageable with the bottom and the flanges of the fixed guide part, a drawer for the compartment resting on the inverted guide part, lugs struck from and bent at right angles to the top and one side of the inverted guide part, and means on said drawer engageable with said lugs for detachably connecting the drawer and inverted guide part against relative horizontal movement.

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