Sept. 9, 1941. A. C. KENNEDY 2,255,290

ROLLER DRAWER GUIDE

Filed April 16, 1940

Fig. 1

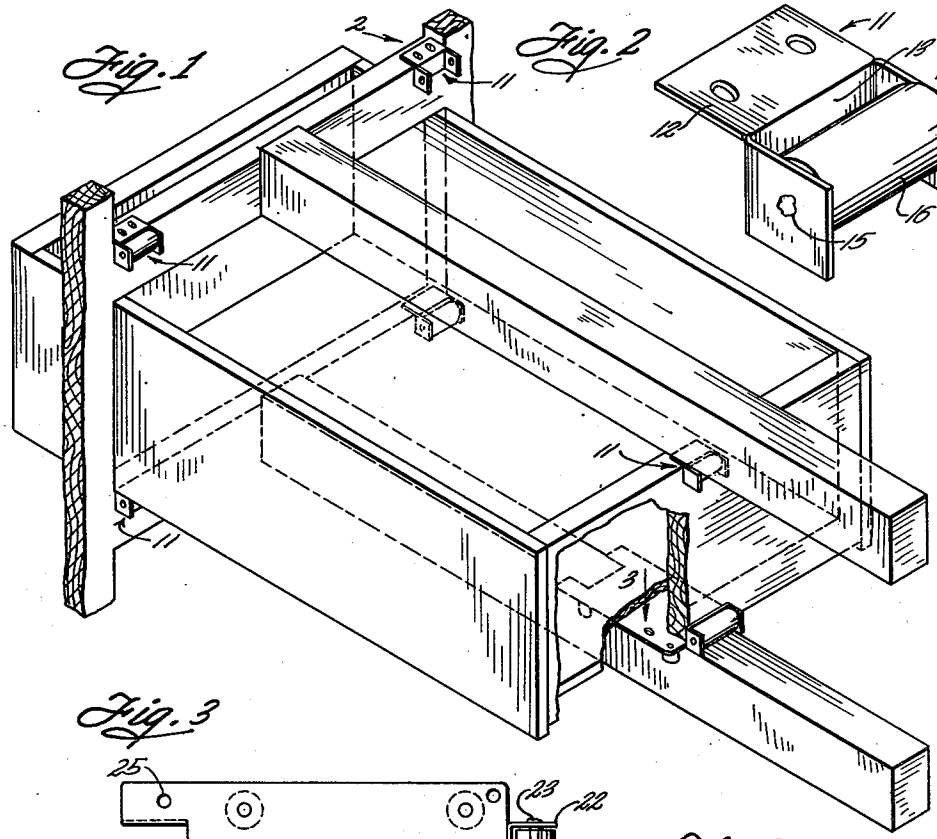



Fig. 2




Fig. 3

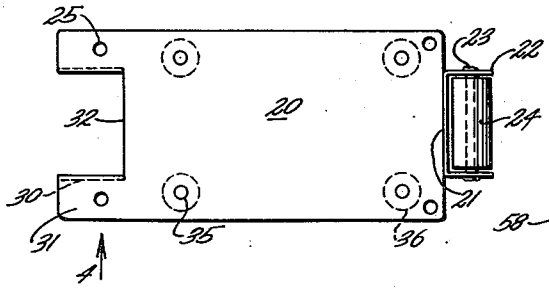



Fig. 6

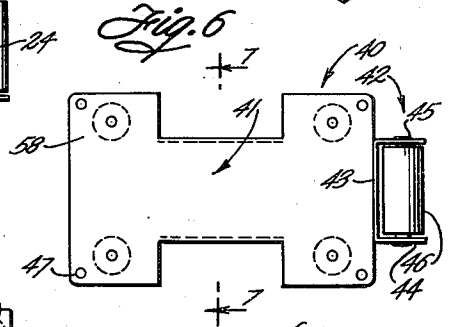



Fig. 4

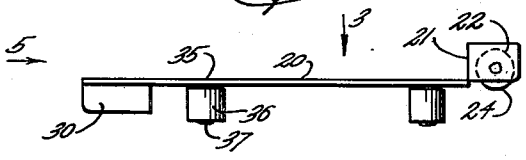



Fig. 7

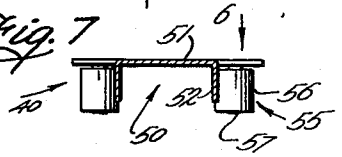
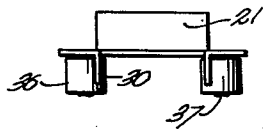



Fig. 5




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2,255,290

## ROLLER DRAWER GUIDE

Albert C. Kennedy, Long Beach, Calif., assignor of one-half to Janice C. Kennedy, Long Beach, Calif.

Application April 16, 1940, Serial No. 329,871

8 Claims. (Cl. 45—77)

My invention may be considered as an improvement or a further development of my Patent No. 1,866,835 entitled Roller bearing drawer guide, issued July 12, 1932 and of my patent application, Ser. No. 243,973, filed December 5, 1938 for Roller bearing drawer and guides and matured to Patent No. 2,202,209, issued May 28, 1940.

These patents are for a type of drawer guide in which the cabinet or other similar construction having the drawer opening is provided with a lower guide bar usually centrally located longitudinally of the drawer so that the drawer is guided by the bar using drawer guides of the type illustrated in the patent. Where a series of drawers are located one above the other, there is a guide bar for the underside of each drawer and such bar may be utilized as a track for a roller guide mounted on the inner end of the drawer.

An object and feature of my present invention is the simplification of drawer guides requiring a lesser number or a reduced number of styles of the roller guides, the purpose being to reduce the number of types necessary to make and to be held in stock and used in building up cabinets or the like. A main characteristic of my present invention may be considered a bottom guide for the drawer characterized by a plate having a roller guide mounted at one end thereof by constituting an angle structure on the end of the plate with ears projecting from one of the sides of the angle at the end and between such ears having a guide roll mounted on an axle. This plate may then be secured to the underside of the drawer and the angle supported roller guide engage the top of a lower guide bar. The same type of plate with the angle mounting for the roller may be fitted on the inner end of the drawer to engage the underside of an upper guide bar. A further arrangement is to attach the plate to the bottom of the drawer opening of the cabinet with the angle structure and the roller positioned inside of the cabinet, the roller being located to engage the lower edges of the two sides of the drawer

A further object and feature of my invention consists in elongating the angle plate so that this may be attached to the underside of the drawer and have marginal guides to engage the opposite sides of the bottom guide bar. This construction causes a better centering of the drawer and lessens the danger of the drawer binding even when heavily weighted. A further characteristic of one form of my invention is providing a flat elongated plate with the angle mounting for a horizontal roller guide at one end, the plate being perforated for attachment to the underside of the drawer with the angle end fitting against the inner end of the drawer. The roller thus rides on the upper edge of the bottom guide bar. With this construction I provide either downwardly flanged guides engaging on opposite sides of the bottom bar with a sliding fit or providing vertical rollers mounted on vertical axles attached to the marginal portions of the plate. In a preferred construction both the flanges and the vertical guide rollers are utilized to engage the sides of the bottom bar. In another type of my invention the bottom plate is made in the form of a partial channel, the web being adapted to attach to the bottom of a drawer with the flange extending downwardly to engage on opposite sides of the bottom guide bar. In this construction the angle bracket is formed integral with one end of the plate to ride on the top of the bottom guide bar. With this construction I may also use the vertical guide rollers.

My invention is illustrated in connection with the accompanying drawing, in which:

Fig. 1 is a perspective view partly broken away of a cabinet construction with a drawer and illustrating the types of roller guides.

Fig. 2 is a perspective view of the simple roller guide indicated by the arrow 2 of Fig. 1.

Fig. 3 is a plan of one type of bottom roller guide for attachment to the bottom of a drawer indicated by the arrow 3 of Fig. 1 and also the arrow 3 of Fig. 4.

Fig. 4 is a side elevation taken in the direction of the arrow 4 of Fig. 3.

Fig. 5 is an end elevation taken in the direction of the arrow 5 of Fig. 4.

Fig. 6 is a plan of a further modification of the plate roller guide of Fig. 3 taken in the direction of the arrow 6 of Fig. 7.

Fig. 7 is a transverse section on the line 7—7 of Fig. 6 in the direction of the arrows.

Referring first to the construction of Fig. 2, in this I employ an angle plate 11 in which a horizontal plate 12 has an angle end 13 illustrated as turned downwardly A pair of ears 14 extend from the ends of the angle end 13 and form journals for the axle 15 on which axle the roller 16 is journaled. In this construction the ears 14 are preferably substantially on alignment with or parallel to the edges of the plate 12.

In the construction of Figs. 3, 4 and 5, an elongated plate or web 20 has an angle end 21

formed integral therewith and bent upwardly. From this end there are two ears 22 similar to the ears 14 of Fig. 2 which are extending outwardly from the ends of the angle portion 21. An axle 23 is mounted in these ears and a horizontal roller 24 journaled between the ears.. The plate is preferably provided with perforations 25 for screws or other attaching devices to fasten the plate to the underside of a drawer with the angle end portion 21 fitting on the outside surface of the inner end of the drawer. It is preferable in this construction to have a pair of flanges 30 bent downwardly from the plane of the plate 20. Such plate may thus be considered as having two fingers 31 extending beyond the end 32 of the central or web portion of the plate. These flanges 30 may thus engage on opposite sides of a bottom guide bar. In addition vertical axle studs 35 are secured to the plate 20 adjacent its marginal edges. Each of these has a roller guide 36 mounted on such studs, the studs having a riveted head 37 to retain such rollers in position. These rollers thus engage on opposite sides of the bottom guide bar.

In the construction of Figs. 6 and 7, the bottom guide assembly 40 consists of a flat plate 41 having the angle type of roller guide 42 at one end, this being constructed by a right angular end piece 43 integral with the plate 41, there being opposite ears 44 at the ends of the angle piece, an axle 45 between the ears and the roller 46 journaled on the axle. This construction is provided with perforations 47 for attaching screws or nails. In this construction there is a central channel 50 formed by a central web portion 51 of the plate and two depending flanges 52. In addition if desired vertical guide roller assemblies 55 include the vertical rollers 56 mounted on rivet headed stub axles 57, these latter being secured to outwardly extended end portions 58 of the plate 41.

In the illustration of Fig. 1 the type of guide of Figs. 3, 4, and 5 are shown attached to the underside of the drawer adjacent its inner end in which it will be seen that the roller 24 rides on the top of the lower guide bar and the angle bracket member for the horizontal roller 24 has an angle end fitting against the outside face of the inner end of the drawer. The flanges 30 form guides on opposite sides of the bottom guide bar and the rollers 36 also engage the sides of this lower guide bar.

The bottom guide construction of Figs. 6 and 7 may be substituted for that of Figs. 3, 4 and 5. In this construction the flanges 52 of the channel section 50 engage in opposite sides of the bottom guide bar as do also the vertical guide rollers 56 and the horizontal roller 46 is adapted to ride on the upper side of the bottom guide bar.

The simple angle type of roller bracket and guide assembly of Fig. 2 is preferably used as illustrated in Fig. 1 in which two of these are secured to the upper edge of the lower side of the drawer opening, the rollers projecting inside and forming a support for the lower side edges of the drawer. One of these roller guides of Fig. 2 may be secured to the upper edge of the inner end of the drawer, the roller engaging the underside of the guide bar next above the drawer.

Various changes may be made in the details of the construction without departing from the spirit or scope of the invention as defined by the appended claims.

I claim:

1. A roller drawer guide having a plate adapted to fit on the bottom of a drawer, such plate having a central web with a pair of fingers at one end, flanges on the fingers such flanges being at right angles to the plane of the web and adapted to engage on opposite sides of a guide bar, the web at the end opposite the fingers having an upturned angle end with a pair of ears extending from the opposite sides of said end parallel to the axis of the web and a roller journalled between said ears adapted to engage the upper edge of a guide bar.

2. A drawer guide having a flat plate with means for attachment to the underside of a drawer, such plate having a central web with an integral angle piece at one end, the angle piece having ears extending from its opposite ends parallel to the axis of the web, a roller journalled between said ears adapted to engage the upper side of a guide bar, the plate at the opposite end of the web having a pair of fingers in the plane of the web with downwardly bent flanges to engage on opposite sides of a guide bar and rollers mounted on vertical axle studs secured to the plate to engage on opposite sides of a guide bar.

3. A roller drawer guide comprising in combination a flat plate having a central web portion and two depending flanges on opposite sides thereof adapted to engage on opposite sides of a guide bar, the plate having vertical guide rollers mounted on axle studs extending in the same direction as the flanges and adapted to engage on opposite sides of the guide bar.

4. A drawer guide comprising in combination a flat plate having means for attachment to the underside of a drawer, such plate at a central portion having a web with two opposite depending flanges adapted to engage on opposite sides of a guide bar, the plate at one end having an upturned end piece, at right angles to the plane of the web with a pair of ears extending outwardly from the opposite ends of said end piece, the ears being parallel to the axis of the web and a roller journalled between the ears adapted to engage the top of a guide bar.

5. A drawer guide comprising in combination a flat plate having means for attachment to the underside of a drawer, such plate at a central portion having a web with two opposite depending flanges adapted to engage on opposite sides of a guide bar, the plate at one end having an upturned end piece at right angles to the plane of the web with a pair of ears extending outwardly from the opposite ends of said end piece, the ears being parallel to the axis of the web and a roller journalled between the ears adapted to engage the top of a guide bar, the plate having outwardly extended end portions beyond the web, vertical studs secured thereto and rollers, the studs and rollers depending in the same direction as the flanges, the rollers being adapted to engage on opposite sides of a guide bar.

6. A roller guide formed of a sheet metal plate and having an angle end forming a right angle with the web portion of the plate, a pair of ears at right angles to such angle end, an axle between the ears parallel to the plane of the plate, a roller journalled on the axle, the periphery of the roller at one portion projecting beyond the plane of the plate, a pair of flanges at right angles to the plate web and extending in an opposite direction to the angle end, a plurality of pairs of rollers each having an axle at right angles to the plane web with a roller thereon parallel to the flanges, the measurement of the angle end and the pair of ears being equal to the

transverse measurement of the web portion of the plate and the measurement of the flanges and the portion of the web of the plate to which they are connected being equal to the transverse measurement across the plate web.

7. A drawer guide comprising in combination a flat plate adapted for attachment to the underside of a drawer, a pair of flanges extending downwardly from the plane of the plate to engage on opposite sides of a guide bar below the drawer, a pair of rollers attached to the plate with their axles parallel to the flanges, the rollers engaging on opposite sides of the guide bar and the rollers being positioned longitudinally of the plate from the flanges.

8. A roller drawer guide comprising in combination a flat plate, means to attach the plate to the underside of a drawer, a pair of parallel flanges depending from the plate and at right angles thereto, vertical studs secured to the plate and extending in the same direction as the flanges, guide rollers on the studs, the flanges and the guide rollers being spaced longitudinally of the plate and adapted to engage on opposite sides of a guide bar located below the plate.

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