

UNITED STATES PATENT OFFICE

2,223,071

DRAWER GUIDE

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Application May 13, 1940, Serial No. 334,827

3 Claims. (Cl. 45-77)

My invention relates to a drawer guide for providing anti-friction supporting means for a drawer so that it may be easily moved into and out of the casing in which it is located even when such a drawer is of large size and loaded with heavy material. More particularly my invention pertains to that type of drawer guide in which the tracks for supporting the rear end of the drawer are located not between the side walls of the casing and the sides of the drawer but above the sides of the latter so as to obtain the maximum width of drawer possible in the available space.

One object of my invention is to provide means by which the forward movement of the drawer is arrested to prevent its accidental withdrawal from the casing but which will permit such withdrawal without the removal of any of the parts.

Another object of my invention is to provide means for preventing wood to wood contact between the drawer and casing during the movement of the former in the latter.

Other objects of my invention are to improve the details of construction of a drawer guide of the type referred to.

In the accompanying drawing which illustrates one form of drawer guide made in accordance with my invention, Figure 1 is a vertical longitudinal section, the drawer being shown in its forward position and partially broken away; Figure 2 is a vertical longitudinal section of the front end of the structure with the drawer in closed position; Figure 3 is a section taken on the line 3-3 of Figure 2; Figure 4 is a section taken on the line 4-4 of Figure 1; and Figure 5 is a fragmentary top plan view of the rear end of the drawer.

The casing in which the drawer is located may represent a filing cabinet, the pedestal of a desk or any similar article of furniture. It comprises a top 6, a front wall 7, a rear wall 8 and side walls 9. The drawer is formed of a front wall 10, a rear wall 11, side walls 12 and a bottom 13. The front wall 10 is of such height as to fit freely in the drawer opening 14 in the front wall 7 of the casing and is provided with the usual drawer pull 15. The side and rear walls of the drawer are, however, of considerably less height so as to provide space above the said side walls for the tracks for supporting the rear end of the drawer.

There are two pairs of these tracks, one pair being placed at each side of the casing. Each pair of tracks is formed by a channel bar 16 secured to the adjacent wall 9 by screws 17. One flange of the channel bar forms the upper track

18 and the other the lower track 19. Secured to the rear end of the drawer at each side is a bracket 20 carrying a roller 21. The diameter of the roller 21 is slightly less than the distance between the tracks 18 and 19 so that the roller may run on either track without contacting the other. When the drawer is in its extreme forward position, as shown in Figure 1, the roller 21 comes into contact with a stop 22 formed by punching out and bending a portion of the web of the angle bar. The lower track 19 terminates slightly to the rear of the roller 21 when the drawer is in its forward position and the portion of the lower flange forward of this point is bent into the plane of the web to form a wear plate 23 extending downwardly between the side wall of the casing and the side wall of the drawer.

To support the drawer from the bottom I provide a pair of anti-friction rollers 24 carried in brackets 25 and so positioned as to engage the lower edges of the side walls 12 of the drawer. As direct contact of the roller with the wood is not desirable because of the resultant wear, I apply to the lower edge of each side wall 12 a channel bar 26. The web of this channel bar engages the roller 24 and its outer flange projects between the walls 9 and 12 to form a wear plate 27. The channel is easily and effectively secured in position without the use of nails or screws by slightly compressing or crimping its flanges as shown in Figure 3.

In the operation of my guide when the drawer is in its rear position, the rollers 21 rest on the lower tracks 19, as shown in dotted lines in Figure 1, and run on these tracks as the drawer moves forward until the projecting portion overbalances the portion within the casing. The rollers will then shift from the lower to the upper track. This shift may occur at either side of the mid position of the drawer due to unequal distribution of the load therein. It is, therefore, desirable to extend the lower tracks as far forward as possible and still permit the downward movement of the rollers 21 when they have engaged the stops 22. To remove the drawer from the casing its forward end is raised after it has reached the position shown in full lines in Figure 1. This causes the drawer to tilt on the rollers 24 as a fulcrum, lowering the rollers 21 until they can pass under the stops 22. The use of the wear plates 23 and 27 prevents wood to wood contact between the drawer and casing in a lateral direction and contributes to the smooth running action of the drawer.

Having fully described my invention, what I

claim as new and desire to secure by Letters Patent of the United States is:

1. The combination with a drawer, of a casing therefor, upper and lower tracks secured to the casing at each side of the drawer, said tracks being positioned above the side walls of the drawer, a pair of rollers carried by the rear end of the drawer and extending between the tracks to cooperate with one or the other as the balance of the drawer shifts, and a stop preventing the removal of the drawer from the casing until the forward end of the drawer is raised, said lower tracks terminating at a point permitting the downward swing of the rollers when the forward end of the drawer is raised.
2. The combination with a drawer, of a casing therefor, a channel bar secured to the casing at each side of the drawer above the side walls of the drawer, the flanges of each of said channel bars forming upper and lower tracks, a pair of rollers carried by the rear end of the drawer and extending between the tracks to cooperate with one or the other as the balance of the drawer shifts, and a stop preventing removal of the

drawer from the casing until the forward end of the drawer is raised, the forward ends of the lower flange being bent downwardly to project between the side of the drawer and casing to prevent contact of these parts and to permit the downward movement of the rollers when the forward end of the drawer is raised.

3. The combination with a drawer, of a casing therefor, a channel bar secured to the casing at each side of the drawer above the side walls of the drawer, the flanges of each of said channel bars forming upper and lower tracks, a pair of rollers carried by the rear end of the drawer and extending between the tracks to cooperate with one or the other as the balance of the drawer shifts, and a stop formed by an integral part of the channel bar for preventing the removal of the drawer from the casing until the forward end of the drawer is raised, the lower flange terminating at a point permitting the downward swing of the rollers when the forward end of the drawer is raised.

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