Aug. 25, 1931. J. WALTER 1,820,548

DRAWER SUPPORT AND GUIDE

Filed Nov. 24, 1930

Fig. 1.

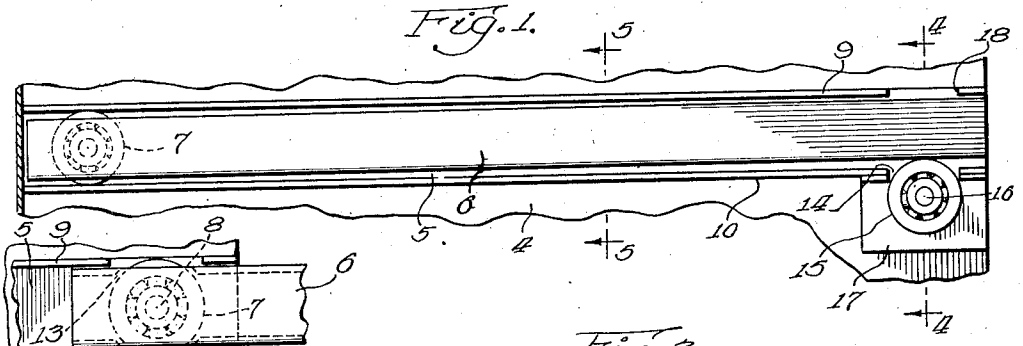


Fig. 2.

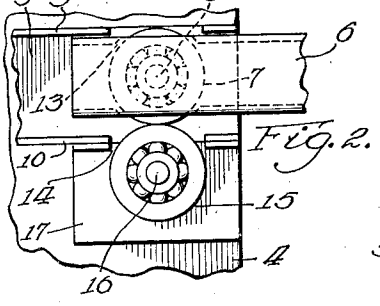


Fig. 3.

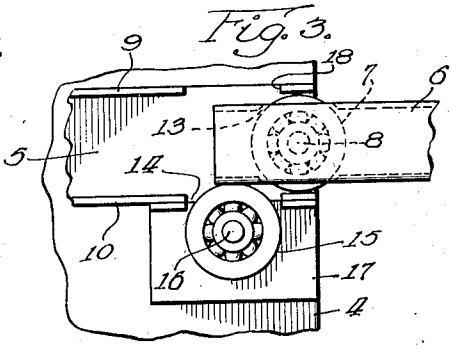


Fig. 4.

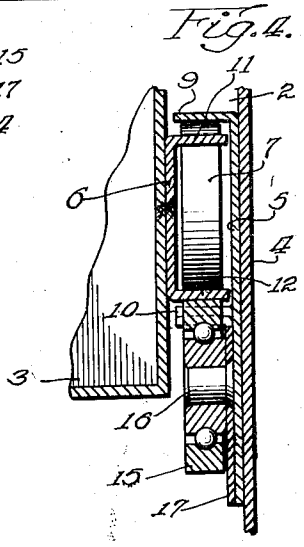


Fig. 6.

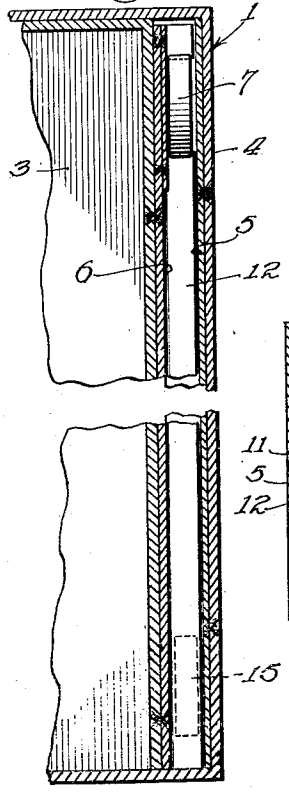
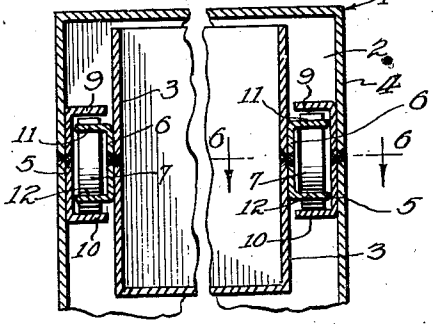


Fig. 5.



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UNITED STATES PATENT OFFICE

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DRAWER SUPPORT AND GUIDE

Application filed November 24, 1930. Serial No. 497,855.

This invention relates to roller guide means for drawers such as are employed in metal cabinets, desks or till constructions, and the purpose of the invention is to minimize any looseness or freedom of motion of the drawer except in inward and outward directions according to the horizontal guides therefor.

The purpose of the invention is accomplished by means of the construction illustrated, in which:

Figure 1 is an inside view partly in section and broken away, showing drawer guiding channels and rollers.

Fig. 2 is a fragmentary view illustrating how a roller on the drawer carrying channel may clear a stationary guide roller when the drawer is inserted or taken out of the drawer opening of the frame structure.

Fig. 3 is a view similar to Fig. 2, showing the relationship of the drawer guiding rollers before one passes the other.

Fig. 4 is a sectional view taken on the line 4—4 of Fig. 1.

Fig. 5 is a sectional view partly broken away, taken on the line 5—5 of Fig. 1.

Fig. 6 is a horizontal sectional view taken substantially on line 6—6 of Fig. 5, the roller on the drawer channel being shown in full.

The drawer guiding means as illustrated, is an all-metal structure as applied to a metal cabinet and metal drawer. It consists of horizontally disposed channel bars spot welded to the side walls of the structure forming the drawer receiving space. Cooperating guide channels are spot welded to the sides of the drawer and rollers are arranged for cooperating with the guide channels, so that there is substantially no freedom of oscillation permitted the drawer in a vertical direction, while the construction is such that there is no difficulty in the matter of assembly or necessity for installing the rollers after the drawer is in place.

Referring to the drawings, the metal cabinet 1, within which the drawer is to be mounted, as indicated, is formed to provide the drawer receiving space 2. The drawer 3 is horizontally slidable within the space 2, and for this purpose the side walls 4 of the cabinet 1 have spot welded at the inner sides thereof, horizontally disposed channel bars 5, and the drawer 3 also has spot welded to it narrower channel bars 6 which extend into the channel bars 5. Near the inner end of the drawer the channel bar 6 supports a ball bearing roller 7 mounted upon a rivet 8 extending from the channel bar. The diameter of roller 7 is substantially the same as the vertical distance between the flanges 9 and 10 of channel bar 5, and accordingly projects beyond the flanges 11 and 12 of the smaller inner channel bar 6. The latter therefore has its flanges 11 and 12 cut away at 13 near the roller. In order to maintain the channels 6 and the drawer to which they are secured, in exactly horizontal position, the flange 10 is cut away at 14 to permit a stationary roller 15 to project through this opening and engage the lower surface of flange 12 on channel 6.

The roller 15 is carried by a rivet 16 projecting from a bracket 17 secured to the side wall 4 of cabinet 1. With this arrangement the drawer is supported in horizontal position at the four points provided by pairs of rollers 7 and 15, and oscillation of the drawer in a vertical direction is minimized by this arrangement. The inner end of the drawer cannot be rocked vertically, since the rollers 7 substantially fit between the flanges 9 and 10 of the fixed channel bar 5.

In order that the drawer may be inserted or removed irrespective of the fact that the roller 15 projects through the flange 10, the upper flange 9 is cut away at 18 opposite the cut 14 in flange 10. Thus, when it is desired to insert or remove the drawer from the cabinet, the rollers 7 are free to ride up over the rollers 15, as indicated by Fig. 2.

In operation of this drawer guiding means, the drawer may be freely moved in and out, as guided by rollers 7 and 15 at the sides thereof, silently, as but small free play or oscillation is permitted in a vertical direction, due to the close fit of rollers 7 in channels 5, and the weight of the forward end of the drawer maintains the desired contact with rollers 15.

I claim:

Drawer guiding means comprising a frame

structure having side walls to which are attached horizontally disposed fixed channel bars with their flanges projecting inwardly, a drawer having side walls to which are attached channel bars of less width than the first mentioned channel bars and having flanges projecting inwardly between the flanges of the fixed channel bars, rollers carried by the drawer channels and substantially fitting between the flanges of the fixed channel bars, the lower flanges of the fixed channel bars being cut away at one point, stationary rollers carried by side walls of the frame structure and projecting through the cutaway points of the lower flanges, and the upper flanges of said stationary channels being cut away at points opposite the cut away points on the lower flanges.

Signed at Hammond, Ind., this 21st day of November 1930.

JOSEPH WALTER.