F. E. MANCHESTER.

DRAWER SLIDE.

APPLICATION FILED JAN. 16, 1918.

1,412,699. Patented Apr. 11, 1922.

Fig. 1.

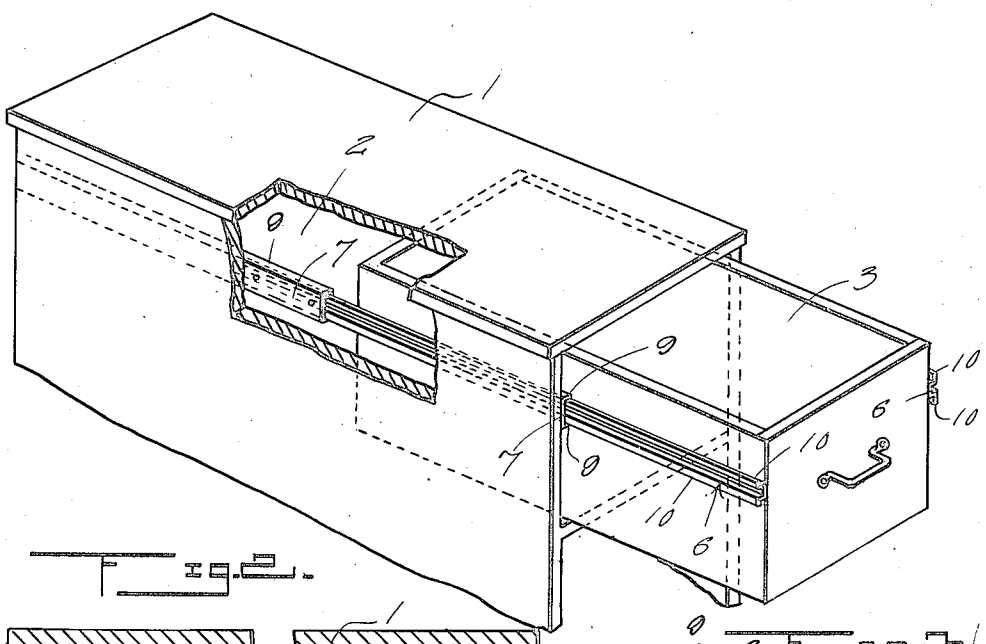


Fig. 2.

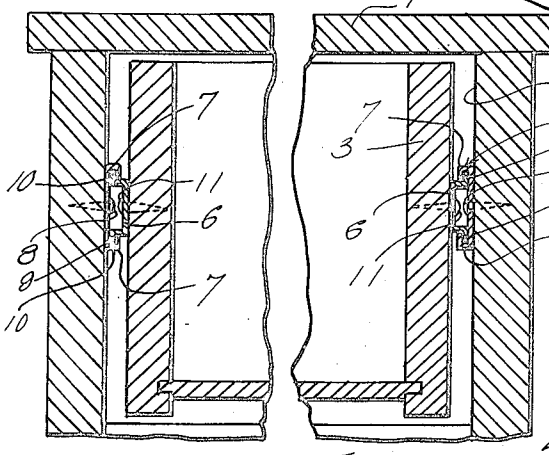


Fig. 3.

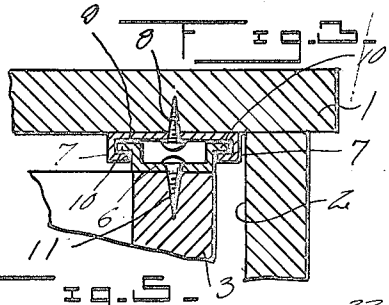


Fig. 4.

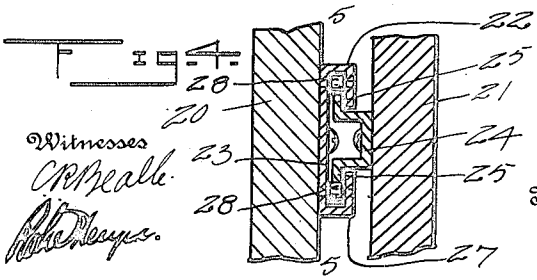
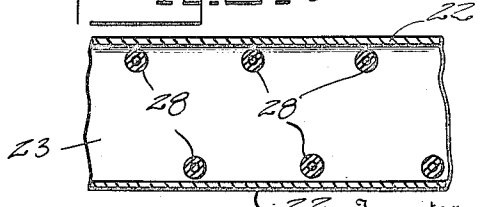


Fig. 5.



Witnesses

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DRAWER SLIDE.

1,412,699. Specification of Letters Patent. Patented Apr. 11, 1922.

Application filed January 16, 1918. Serial No. 212,090.

To all whom it may concern:

Be it known that I, FRANK E. MANCHESTER, a citizen of the United States, residing at Fall River, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Drawer Slides; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to metal drawer slides and the primary object of the invention is to provide metal drawer slides which are extremely simple in construction, and which will slidably support a drawer within the body of the article of furniture or cabinet so that the drawer may be opened to expose its entire length without tilting and which slide will also practically prevent friction, enabling the drawers to be easily opened or closed.

With the foregoing and other objects in view this invention consists in such novel features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawings and claimed.

In describing the invention in detail, reference will be had to the accompanying drawings wherein like characters designate like and corresponding parts throughout the several views and in which:

Figure 1 is a perspective view of a fragment of a cabinet showing a drawer slidably supported thereto and showing the improved drawer slides applied, also having a part of the cabinet broken away to expose the connection between the drawer carried member and the cabinet carried member of the slide structure.

Figure 2 is a vertical cross section through a drawer and cabinet showing the improved slides applied to the sides.

Figure 3 is a fragmentary vertical section through one corner of a drawer and cabinet showing the improved slides applied to the upper end of the drawer.

Figure 4 is a fragmentary vertical cross section through a modified form of the slide and

Figure 5 is a vertical section through the modified form of the slide.

Referring more particularly to the drawings, 1 designates the cabinet of any desired structure, which is provided with a drawer receiving opening 2 within which is slidably mounted the usual type of drawer 3.

The improved slide structure is indicated by the numeral 5. The slide structure carried by each side of the drawer 3, comprises an inserting member 6 which is attached to the side of the drawer and a receiving member 7 which is attached to the inner surface of the sides of the cabinet 1 as clearly shown in the drawings. The receiving member 7 is constructed of a flat bar of metal which has its outer surface lying in facial abutment with the inner side of the cabinet 1 and attached thereto by suitable fastening means 8. The upper and lower edges of the bar or plate of which the receiving member 7 is formed are bent to form substantially U-shaped receiving guides 9 which receive the longitudinally extending flanges 10 formed upon the inserting member 6 which is carried by the side of the drawer 3. The inserting member 6 is formed of a bar or strip of sheet metal bent to form substantially a U-shape, the right portion of which lies in facial abutment with the drawer 3, to which it is attached by suitable attaching means 11. The flanges 10 are formed upon the end of the leg of the U-shaped portion of the inserting member 6 and ride in the receiving guide 9 formed on the upper and lower edges of the receiving member 7 as clearly shown in Figures 1 and 2 of the drawings. The inserting member 6 projects beyond the inner end of the drawer for a distance substantially one third of the length of the drawer so that the drawer may be opened to expose the entire inner surface thereof without tilting the drawer.

In Figure 3 of the drawings, the improved drawer slide structure is illustrated as attached to the under surface of the top of the drawer compartment 2 and to the upper edge of the drawer 3. In all respects, the drawer slide illustrated in Figure 3 is identical with that illustrated in Figures 1 and 2, and previously described.

In Figures 4 and 5 of the drawings, a modified form of the improved drawer slide is illustrated. In this form, the cabinet wall is indicated by the numeral 20, and the drawer by the numeral 21. The modified form of slide is generically indicated by the numeral 22 and comprises a receiving member 23 carried by the cabinet 20 and

an inserting member 24 carried by the drawer 21. The inserting member 24 is composed of a strip or bar of sheet metal to form substantially a U-shape, and having a pair of vertically extending flanges 25 formed at the outer ends of its legs, which flanges are inserted in the receiving guides 27 that are formed upon the upper and lower edges of the receiving member 23. The receiving member 23 has a plurality of anti-friction rollers 28 mounted in the guide adjacent the upper and lower edges thereof, which rollers are engaged by the edges of the flanges 25, for preventing friction during the sliding movement of the drawer 21.

By reference to Figure 4 of the drawing, it will be seen that the lateral or horizontal flanges of the relatively stationary member 23 are arranged at right angles to the body of said member and that the inwardly directed or vertical flanges are of considerable width and arranged parallel to the body of the member, and as the result these flanges form guideways of considerable depth and width. Furthermore, it will be seen that the diameter of the anti-friction rollers is less than the depth of the guideways and that the rollers are journaled in the guideways inwardly of the longitudinal edges of the inwardly directed flanges. The faces of the rollers are approximately equal in width to the width of the guideways so as to insure the longitudinal edges of the outwardly directed flanges of the relatively movable member engaging the rollers no matter what their position may be in the guideways. Those portions of the inwardly directed flanges of the relatively stationary member which extend beyond the rollers, overlap the outwardly directed flanges of the relatively movable member and in view thereof prevent said outwardly directed flanges from becoming laterally displaced from the guideways, and furthermore permit the slides to be used at the top of a drawer as well as at the sides thereof. To provide the maximum anti-friction bearing surface for the relatively movable member, for the use of the minimum number of rollers, the rollers of the respective guideways are, as shown in Figure 5, arranged in staggered relation.

The modified form of drawer slide is particularly designed for use upon heavy drawers.

By constructing the improved slide of metal, the drawer will be free from the inconveniences caused by changes in weather conditions, so that the drawer may be easily opened or closed at any time, regardless of the conditions of the weather.

In reducing the invention to practice, certain minor features of construction, combination and arrangement of parts may necessitate alterations to which the patentee is entitled provided such alterations are comprehended within the scope of what is claimed.

What is claimed is:

A drawer slide comprising a relatively stationary member consisting of a strip having its longitudinal edges rebent to provide laterally directed flanges arranged at right angles thereto and inwardly directed flanges arranged parallel thereto and of greater width than the lateral flanges, said flanges forming guideways of considerable depth and width, a series of rollers journaled in each guideway and the rollers of the respective series being arranged in staggered relation, the rollers having faces approximately equal in width to the width of the guideways and considerably smaller in diameter than the depth of the guideways, the rollers being journaled in the guideways inwardly of the inner ends of said inwardly directed flanges and those portions of said flanges projecting beyond the rollers forming stops or guides, and a relatively movable member consisting of a strip having its longitudinal edges bent to provide laterally extending flanges arranged at right angles thereto and entering the relatively stationary member between the opposing edges of its inwardly directed flange and to provide outwardly directed flanges arranged parallel to the strip and extending into said guideways inwardly beyond the longitudinal edges of said inwardly directed flanges and contacting with the rollers, the stop or guide portions of said inwardly directed flanges limiting the lateral movement of said outwardly directed flanges in the guideways and also permitting the slide to be used at the side or top of a drawer.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK E. MANCHESTER.

Witnesses:

ARTHUR TURNER,

LUTHER R. BLOSSOM.