Aug. 21, 1956 F. H. ARNIT 2,759,215

DOOR GUIDE AND BEARING

Filed Oct. 29, 1952

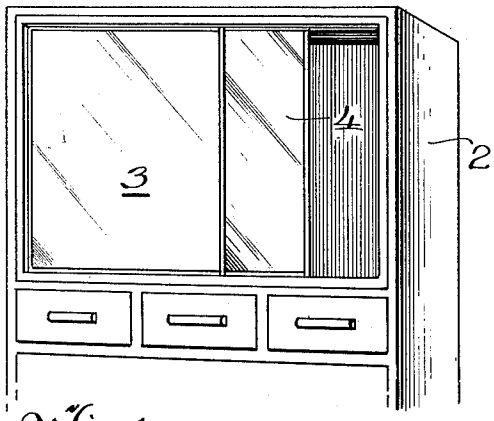


Fig. 1

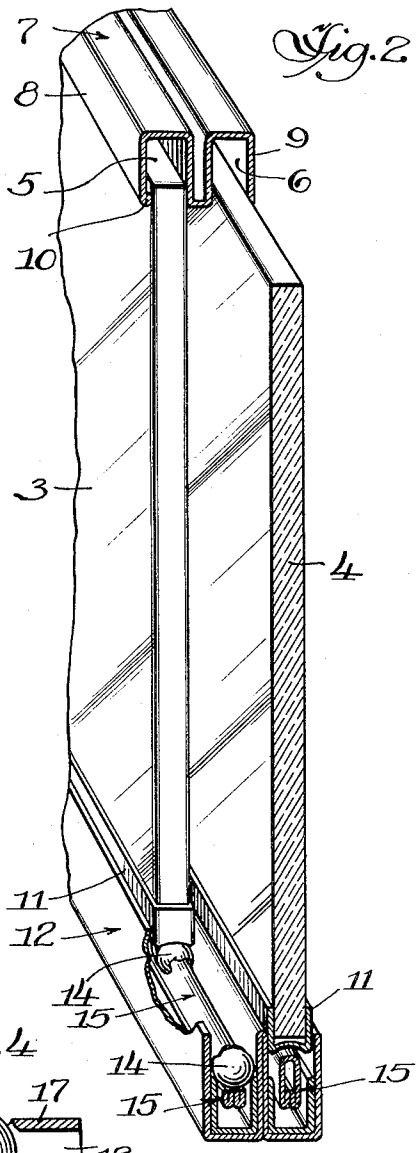


Fig. 2

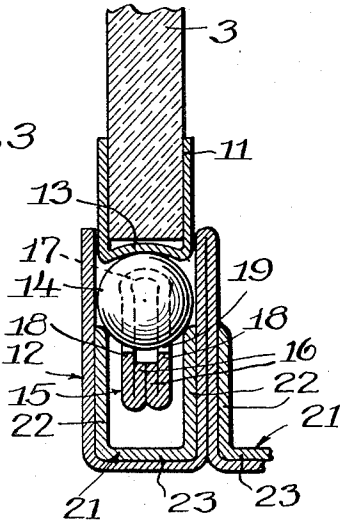


Fig. 3

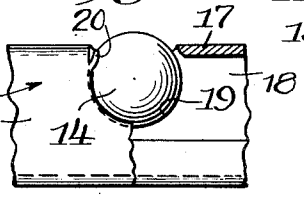


Fig. 4

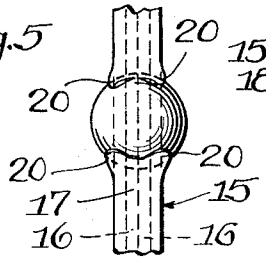


Fig. 5

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2,759,215

DOOR GUIDE AND BEARING

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Application October 29, 1952, Serial No. 317,558

1 Claim. (Cl. 16—96)

This invention relates to an antifriction bearing for supporting sliding closures, such as the doors of showcases or cabinets.

The present invention is an improvement over the bearing disclosed in the Kurtzon Patent No. 2,061,279. The bearing of this earlier patent has been satisfactory insofar as service is concerned, but has the disadvantage of being comparatively expensive to manufacture.

The bearing constructed in accordance with my present invention functions in substantially the same manner as the bearing disclosed in the above mentioned Kurtzon patent, but is less expensive to manufacture and the ball bearings are held more efficiently in the ball carrier.

The structure of the present invention by means of which the above and other advantages are attained will be described in the following specification, taken in conjunction with the accompanying drawings, showing a preferred illustrative embodiment of the invention, in which:

Fig. 1 is a fragmentary perspective view of a cabinet provided with sliding glass doors embodying the invention;

Fig. 2 is a fragmentary perspective view of a pair of sliding glass doors, partly in section, with parts broken away to illustrate the antifriction bearings;

Fig. 3 is a fragmentary cross sectional view showing one of the glass doors mounted on the bearing;

Fig. 4 is a fragmentary side view, partly in elevation and partly in section, showing one of the ball bearings in its carrier; and

Fig. 5 is a fragmentary top plan view of the structure shown in Fig. 4.

In the drawings the reference numeral **2** indicates a cabinet having sliding glass doors **3** and **4**. The upper edges of the glass doors are held by channel members **5** and **6** which are part of the upper track **7**. The bottom edge of each outer side wall **8** and **9** of the track **7** is bent inwardly and upwardly, as indicated at **10**, Fig. 2, to provide a frictional fit for the upper edges of the doors **3** and **4**.

The lower edge of each door is provided with a shoe **11** which fits one channel of a lower track **12**. The lower track comprises a metal strip bent to form a pair of longitudinally extending channels in side by side relationship. The bottom wall **13** of shoe **11** is slightly concave to increase the frictional contact of the shoe with the ball bearings **14**. The ball bearings are mounted in longitudinally spaced relationship in a carrier **15**.

Carrier **15** comprises a metal strip having its longitudinal edges bent inwardly, as indicated at **16**. The metal strip is bent along its longitudinal center line to bring the inwardly bent edge portions **16** into juxtaposition and to form an upper wall **17** and side walls **18** for the carrier **15**. The side walls **18** and the upper wall **17** are provided

with a plurality of cut outs **19** to form seats for the ball bearings **14**. The opposite edges of upper wall **17** adjacent each cut out **19** are provided with inwardly extending projections **20** adjacent opposite edges of cut out portions **19** which fit over the periphery of the ball bearing **14** for engaging the ball and spacing the same from the major part of the periphery of intervening top wall portions to hold it securely in the carrier **15**. The projections **20** are comparatively short, and therefore are rigid enough to prevent their being bent out of shape. The vertical distance between the projections **20** and the bottom edge of the cut outs **19** is slightly greater than the vertical distance between the outer surfaces of the ball bearing adjacent these points to allow a slight vertical movement of the ball bearings when they are mounted in the carrier.

A channel **21** is snugly fitted into each half to form a part of the lower track **12** and has vertical side walls **22**. Ball bearings **14** rest on the upper edges of the vertical side walls. The walls **22** are high enough so that the ball carriers do not reach the bottom **23** of the channel **21** when the ball bearings are in contact with the upper edges of side walls **22**. The slight vertical play of the ball bearings between the bottom of the cut out **19** and the projections **20** causes the carrier to be supported by the ball bearings through their contact with projections **20**, so that the ball bearings are free of any contact with the bottom of the cut out **19**. This construction allows the ball bearings to rotate very freely when the doors **3** or **4** slide thereon.

From the foregoing it will be seen that I have devised an antifriction bearing that will permit free sliding movement of the doors mounted thereon and will prevent accidental displacement of either the ball bearings or the doors sliding thereon.

Although I have described a preferred embodiment of the invention in considerable detail, it will be understood that the description thereof is intended to be illustrative, rather than restrictive, as many details may be modified or changed without departing from the spirit or scope of the invention. Accordingly, I do not desire to be restricted to the exact details of construction described.

I claim:

A door guide and bearing for a sliding door, comprising a track member, a carrier having a pair of spaced side walls and an upper wall, said carrier being provided with longitudinally spaced cut-out portions each forming a seat for a ball bearing, a ball bearing mounted in each of said seats riding on said tracks and said upper wall of said carrier having inwardly extending projections, adjacent opposite edges of said cut-out portions for engaging the balls and spacing the same from the major part of the periphery of intervening top wall portions, and extending beyond the vertical planes of the side walls of said carrier.

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