Jan. 16, 1968 R. H. REISS ET AL 3,363,960

CENTER DRAWER SLIDE CONSTRUCTION

Filed Aug. 31, 1966

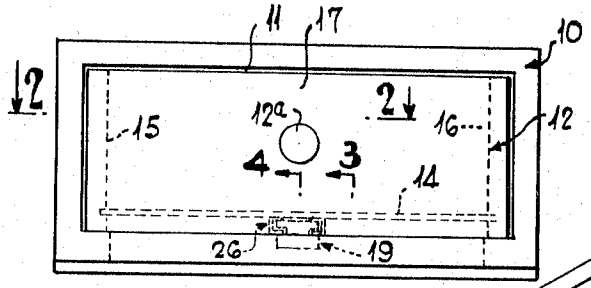


Fig. 1

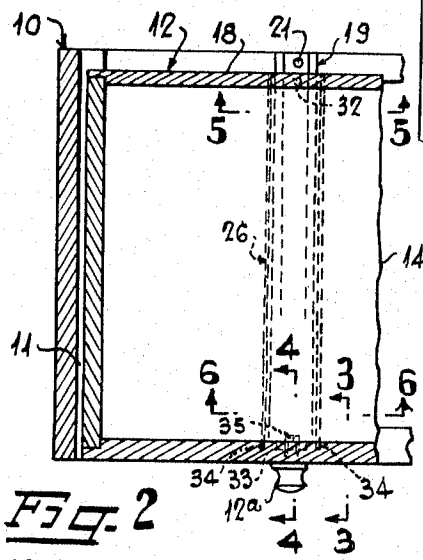


Fig. 2

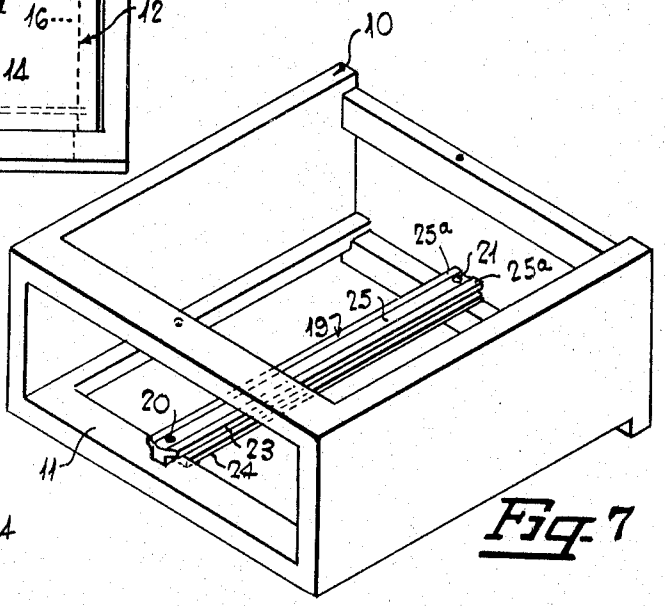


Fig. 7

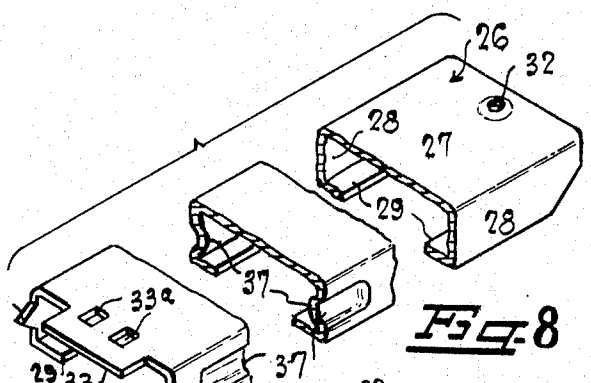


Fig. 8

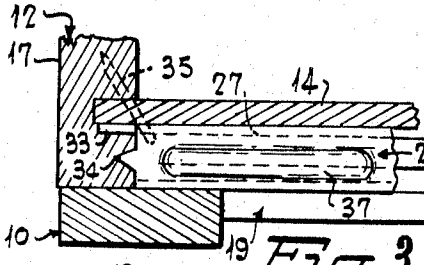


Fig. 3

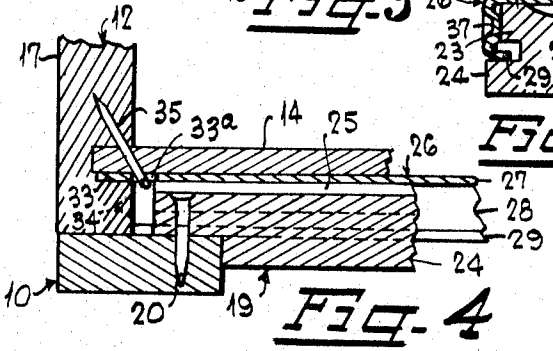


Fig. 4

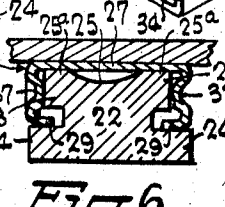


Fig. 6

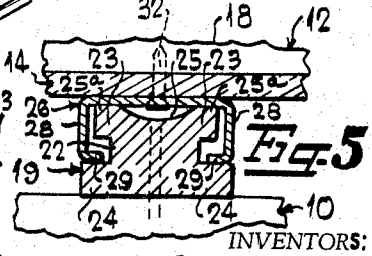


Fig. 5

INVENTORS:
RAYMOND H. REISS
AND JAMES PEDDIE TANNER

BY Robert V. Brown Jr.
ATTORNEY

United States Patent Office 3,363,960
Patented Jan. 16, 1968

3,363,960

CENTER DRAWER SLIDE CONSTRUCTION

Raymond H. Reiss, Deal, N.J., and James P. Tanner, Gastonia, N.C.; said Reiss assignor to Ronthor Reiss Corporation, New York, N.Y., a corporation of Delaware

Filed Aug. 31, 1966, Ser. No. 576,311
5 Claims. (Cl. 312—344)

ABSTRACT OF THE DISCLOSURE

A drawer attached to one member of a pair of telescopic guide members by: transversely penetrating the inside face of the front drawer wall with the outer end of said member, and then anchoring the penetrating end by means of a nail or staple extending transversely through said end and into said wall. The drawer is laterally centered as it approaches closed position by relatively short spacer ribs integral with said anchored guide member and slidably engageable with a stationary center drawer guide bar.

This invention relates to an article of furniture and more especially to an improved center guide construction for controlling the path of movement of a drawer when opening and closing it. More specifically, the invention relates to a slide bearing which rigidly centers the front portion of the drawer, when closed, relative to its associated compartment while permitting limited movement of the rear portion of the drawer.

It is an object of the invention to provide an improved drawer construction in which one member of a pair of telescopic guide members is attached in a novel manner at the front bottom portion of the drawer so as to impart an additional rigidity for resisting the transverse stresses produced by drawer operation.

It is a further object of invention to provide a drawer construction as described above and further including relatively short elongated drawer centering ribs integral with the attached guide member and laterally engageable with a stationary center drawer guide rail as the drawer approaches closed position.

Some of the objects of invention having been stated, other objects will appear as the description proceeds when taken in connection with the accompanying drawings, in which:

FIGURE 1 is a front elevation of an article of furniture embodying the present invention;

FIGURE 2 is a sectional plan view taken along line 2—2 of FIGURE 1;

FIGURE 3 is a sectional detail view taken along lines 3—3 in FIGURES 1 and 2;

FIGURE 4 is a view similar to FIGURE 3 but taken along lines 4—4 in FIGURES 1 and 2;

FIGURE 5 is a sectional detail view taken along line 5—5 in FIGURE 2;

FIGURE 6 is a sectional detail view taken along line 6—6 in FIGURE 2;

FIGURE 7 is an isometric view of the drawer compartment shown in FIGURE 1, but with the drawer removed, and

FIGURE 8 is an isometric fragmentary view of the sliding guide as it appears when detached from the drawer bottom and from the guide rail.

The drawer guide construction according to the present invention is employed in association with a furniture framework **10** having a drawer compartment **11** therein for slidably receiving a drawer **12**. Drawer **12** is provided with horizontal bottom portion **14**, side walls **15** and **16**, and front and back walls **17** and **18** (see FIGURES 1, 5, 6 and 7).

A guide rail **19** for the drawer is disposed longitudinally of compartment **11** and in the lower central portion thereof, said rail having its ends secured as at **20** and **21** to the lower front and back portions, respectively, of the compartment framework. The rail **19** has a substantially I-shaped cross-section comprising a central vertical web portion **22**, a pair of oppositely extending upper flanges **23**, and a second pair of oppositely extending lower flanges **24** (FIGURES 5 and 6). The upper surface of rail **19** has a longitudinal groove **25** therein thereby dividing said upper surface into a pair of relatively narrow parallel ribs **25***a*.

An elongated guide member **26** forms a sliding connection between drawer **12** and rail **19**. This guide is rectangular in cross-section and comprises an upper elongated horizontal portion **27**, a pair of elongated side portions **28** extending vertically downwardly from the opposite edges of portion **27**, and a second pair of elongated horizontal portions **29** extending inwardly from the respective lower edges of portions **28** (FIGURE 8).

The rear end portion of guide **26** is secured to the back wall **18** of the drawer as at **32** (FIGURES 5 and 8). Due to the relatively higher stresses produced when opening and closing the drawer, it has been found necessary to provide an especially strong connection between the front end of guide **26** and the front portion of the drawer as described in detail below.

This drawer-guide connection includes a flat lip or projection **33** integral with the horizontal portion **27** of the guide, a pair of pointed projections **34** integral with the vertical sides **28** of the guide, and a pin or staple **35**. It will be observed in FIGURES 2, 3 and 4 that lip **33** and pointed projections **34** are parallel extensions of the guide which penetrate the inside face of front drawer wall **17** to hold the upper horizontal surface **27** of the guide against the lower surface of the drawer bottom and to resist vertical stresses between the guide and drawer wall. Horizontal stresses such as produced by a pull upon drawer knob **12***a*, however, require means such as staple **35** which extends transversely of the guide and penetrates perforations **33***a* in lip **33** as well as drawer bottom **14** and front wall **17** thereby further anchoring the projections **33** and **34** in their penetrating positions in wall **17**.

Referring again to FIGURES 5 and 6, it will be noted that the inner opposed longitudinal edges of guided portions **29** terminate in spaced relation to one another and also in spaced relation to the opposite sides of the rail web portion **22** therebetween when the guide is slidably mounted on the rail. Likewise, the inner opposed faces of guide **26** are spaced apart a greater distance than the overall width of the upper flanges **23**. The above-mentioned spacing or clearances permits the rear portion of guide **26** to have limited lateral or horizontal movement relative to rail **19** during the closing and in a fully closed position of the drawer **12**. The significance of this clearance will become apparent in connection with the description below of the drawer centering construction.

The drawer centering structure includes a pair of bosses **37** extending inwardly from the front ends of portions **28** of guide **26**, the distance between the inner opposed faces of the bosses being substantially the same as the overall width of upper rail flanges **23** (FIGURE 6). Bosses **37** are rigid and disposed a fixed distance apart. As the drawer **12** approaches a closed position, the bosses **37** slidably engage rail flanges **23** to rigidly center the front end of the drawer. At the same time, the previously described clearances between the inner back portions of guide **26** and the rail **19** permits limited lateral movement of the intermediate and back drawer portions to prevent binding or excessive frictional contact. Briefly stated, the closing drawer is permitted to rock horizontally about the centering bosses substantially as a hub.

Another important feature which supplements the self-centering structure described above is the antifriction characteristics residing in the contacting surfaces between rail **19** and guide **26**. One of the members **19** or **26** is made of a soft material such as wood or plastic and the other of a relatively hard material such as metal. In addition, the members **19** and **26** have sliding contact therebetween along relatively narrow parallel paths. Specifically, the relatively narrow elongated bottom portions **29** of the guide slide upon the upper surfaces of bottom flanges **24**; the longitudinal centering bosses **37** slide against the outer vertical faces of upper flanges **23**; and the horizontal top portion **27** of the guide slides upon ribs **25***a* of the rail **19** (FIGURES 5 and 6). It will be further noted that the vertical distance between the inner opposed surfaces of the top and bottom flanges **23** and **24** is somewhat greater than the thickness of elongated guide portions **29** to thereby limit the vertical drawer tilt but allow operating clearance.

In the drawings and specification, a preferred form of invention has been disclosed, and although specific terms are employed they are used in a generic sense and not for purpose of limitation, the scope of the invention being set forth in the following claims.

We claim:

1. In combination with an article of furniture having a drawer and a drawer compartment adapted to receive said drawer, said drawer having a horizontally disposed bottom and rear, front and side walls joined to said bottom, a stationary guide rail for slidably receiving said guide member, a horizontally disposed projection integral with one end of said slide member and penetrating the inside face of said front drawer wall, and means extending transversely through said projection for securing the latter in its penetrating position.

2. The combination as defined in claim **1** wherein the guide member is an inverted U-shaped section extending from the front to the rear walls of the drawer and wherein said rail has a uniform cross-section throughout its length

which has a shape similar to but smaller than the interior of said U-shaped member, and rigid means projecting inwardly from the front end portion of said guide and engageable with the opposite sides of said rail as the drawer approaches closed position to thereby prevent relative lateral movement between the front end of the guide and rail.

3. The combination as defined in claim **1** wherein said projection comprises a flat metallic lip extending longitudinally of said slide member, said lip having at least one perforation therein substantially at its intersection with the inside surface of said front drawer wall, and wherein said securing means comprises an elongated pin extending through said perforation into said front drawer wall at an acute angle to the inside vertical surface of the latter.

4. The combination as defined in claim **1** wherein said slide member comprises an intermediate horizontally disposed longitudinal flat section, said section having second and third longitudinal flat sections extending vertically downwardly from the opposite longitudinal edges thereof, respectively, and further comprising second and third horizontally disposed projections respectively integral with the ends of said second and flat sections and penetrating the inside face of said front drawer wall.

5. The combination as defined in claim **4** wherein the respective inner surfaces of said intermediate, second and third flat sections slidably engage the guide rail along relatively narrow parallel paths.

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JAMES T. McCALL, *Primary Examiner.*