Oct. 7, 1941. L. STICKLEY 2,257,822

DRAWER GUIDE

Filed Aug. 30, 1938 2 Sheets-Sheet 1

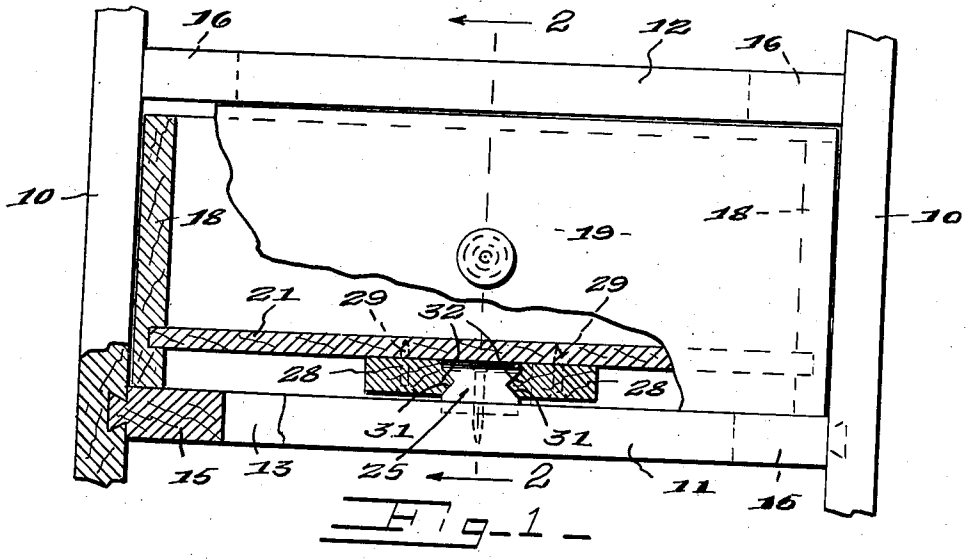


Fig-1

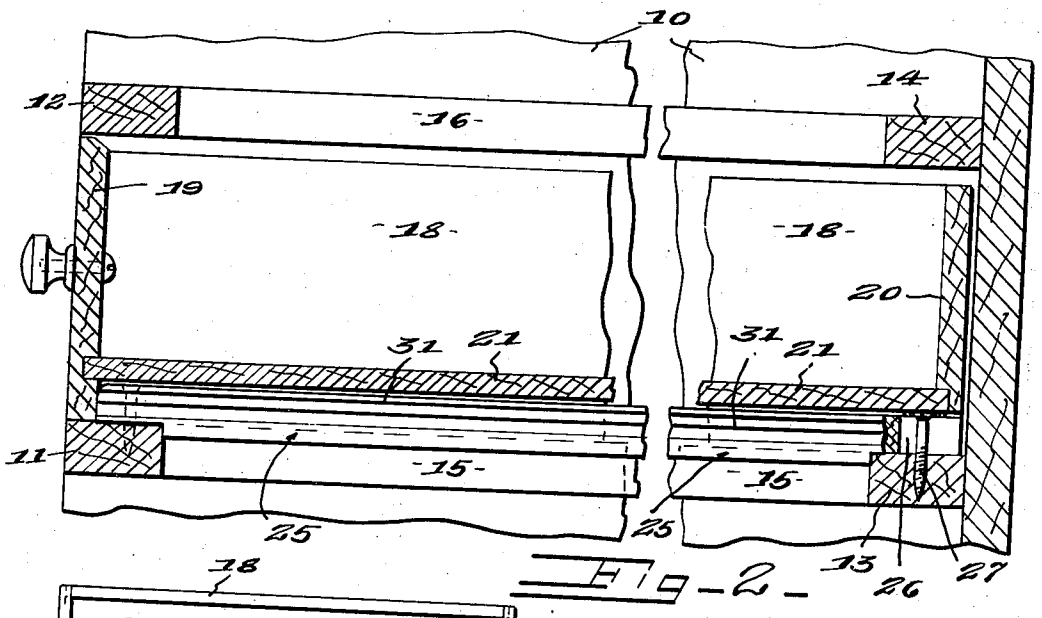


Fig-2

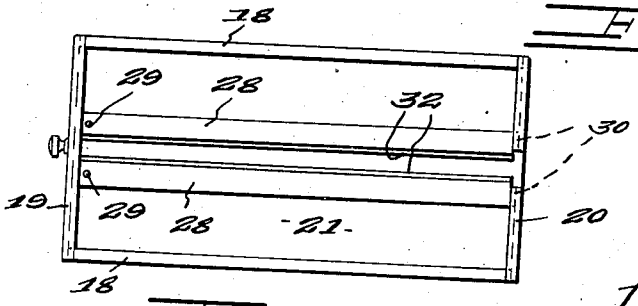


Fig-3

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DRAWER GUIDE

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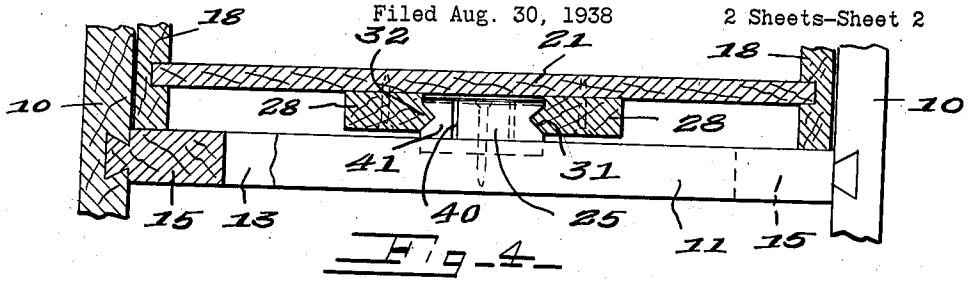


Fig-4

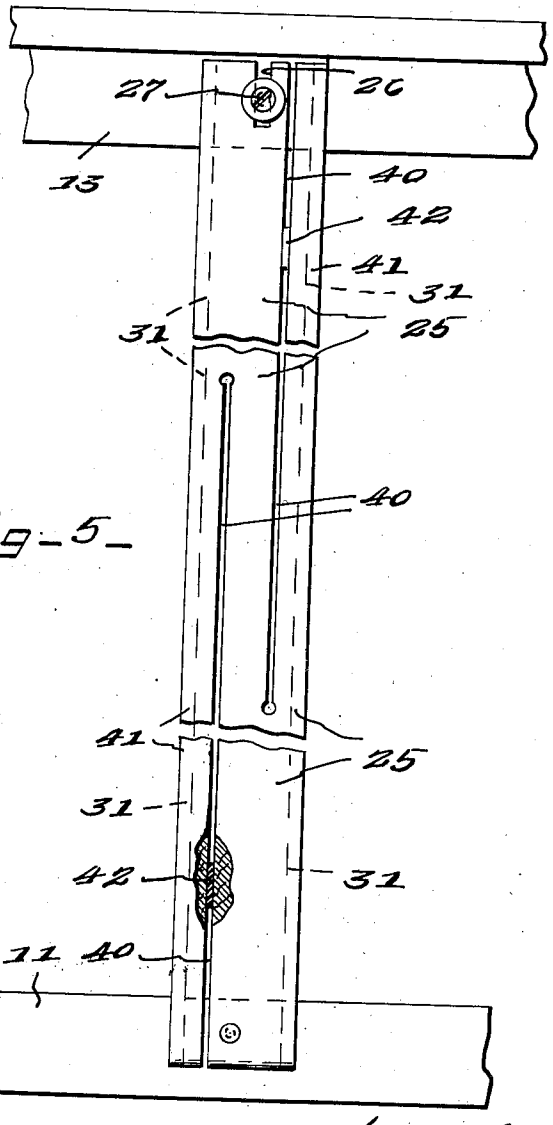


Fig-5

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Patented Oct. 7, 1941 2,257,822

UNITED STATES PATENT OFFICE

2,257,822

DRAWER GUIDE

Leopold Stickley, Fayetteville, N. Y.

Application August 30, 1938, Serial No. 227,536

3 Claims. (Cl. 45—77)

This invention relates to means for guiding a drawer during sliding movement thereof in the framework in which the drawer is mounted, and particularly where the framework and drawer are made of wood in conventional furniture construction.

The invention more particularly relates to that type of drawer guide in which the guide is arranged centrally of the drawer and of the opening in which the drawer slides and by which the drawer is guided both laterally and vertically during the sliding movement of the drawer.

These guides usually include a guide rail fixed to the frame structure centrally of the drawer opening and extending from the front to the rear thereof, and a second guide rail or guide member secured to the bottom of the drawer, these members being formed with complemental abutting surfaces whereby the members are cooperable to guide the drawer in both the horizontal and vertical directions. While these drawer guides, in general, form effective means for guiding the drawer, they have not been employed extensively due to the tendency of the guide members to bind and to split or break when the full width of the drawer is pulled out of the frame.

This invention has as an object a drawer guide of the type referred to so constructed that the drawer may initially be fitted loosely in the frame opening, whereby it will not swell or expand to cause any sticking of the drawer, and the guide is operable to accurately guide the drawer in the opening so as to provide easy sliding movement of the drawer and at the same time the guide is of maximum strength to support the drawer vertically when the drawer is pulled out of the framework the maximum distance.

The invention consists in the novel features and in the combinations and constructions hereinafter set forth and claimed.

In describing this invention, reference is had to the accompanying drawings in which like characters designate corresponding parts in all the views.

Figure 1 is a front elevational view of a drawer and contiguous portions of the framework, with parts broken away, illustrating my invention.

Figure 2 is a lengthwise sectional view taken on substantially lines 2—2, Figure 1, with the guide rail member shown in elevation.

Figure 3 is a bottom plan view of a drawer embodying my invention.

Figure 4 is a fragmentary, front elevational view of the framework partly in section, and of the bottom portion of the drawer in section of a modified form of the invention.

Figure 5 is a top plan view of a modified form of guide rail.

A conventional frame structure is shown in the drawings consisting of side members 10, front cross rails 11, 12, rear cross rails 13, 14, and side rails 15, 16. The drawer is of conventional construction consisting of sides 18, front 19, rear 20, and a bottom 21, which is spaced upwardly a short distance from the bottom edges from the side, front and rear members of the drawer. The side members 18 are supported by and slidable upon the side rails 15 of the drawer receiving framework.

The drawer guide consists of a guide rail member and two guide members. The guide rail member 25 extends from the front rail 11 to the rear rail 13. The front end of the rail is fixedly secured to the rail 11 by a screw or similar means, and the inner or rear end is formed with a slot 26 to receive a screw 27. The purpose of the slot and screw is to permit relative expansion and contraction between the frame and the rail guide 25. The guide members 28 extend throughout the width of the drawer, being secured centrally thereto adjacent the front 19, as by screws 29. The guide members 28 are formed at their inner ends with tenons 30 arranged in a groove formed in the back member 20. The guide members 28 are arranged in parallel spaced apart relationship on each side of the guide rail 25.

An important feature of my invention resides in the particular formation of the confronting sides of the members 25, 28. The guide rail member 25 is formed on its sides with V shaped grooves 31 arranged a short distance downwardly from the top of the rail and extending throughout the length of the same. The guide members 28 are formed on their sides confronting the rail 25 with ribs 32 also of V formation and which extend into the V grooves 31 as illustrated in Figure 1. The arrangement of the grooves 31 and ribs 32 is such as to space the guide members 28 a short distance above the front and rear rails 11, 13, and to effect a slight clearance between the bottom 21 of the drawer and the top of the guide rail 25.

I find that the V formation of the guide members effects a particularly strong construction which gives adequate support to the drawer even when it is pulled outwardly substantially its full depth.

This construction also provides an exceptionally free sliding drawer which will not bind at any time during the sliding movement of the drawer.

A guide rail of modified structure is shown in Figures 4 and 5. In this structure, the rail is formed with slots extending inwardly from each end a sufficient distance to effect a considerable overlap in the central portion of the rail. The function of these slots is to permit a transversely yielding movement of the sides **41** of the rail. As here shown, the rail **25** is formed with a slot **40** arranged adjacent the side edge of the rail and extending inwardly from each end thereof. With this structure, endwise movement of the drawer is yieldingly opposed and any swelling of the rail transversely under high humidity conditions will not effect a binding of the guide means even though the guides **28** are spaced to normally snugly engage the sides **41** of the rail.

The pressure exerted by the side members **41** against the rails **28** may be increased by inserting a small block **42** of yielding material, such as rubber, in the slots **40**. With this arrangement, the drawer may be initially fitted to the opening in the framework with sufficient clearance to prevent swelling of the drawer in its engagement with the framework under any conditions. However, the loosely mounted drawer is maintained centrally of the opening and is guided accurately, and sliding movement is effected with a minimum force.

What I claim is:

1. The combination of a framework having a drawer receiving opening therein and a drawer loosely mounted in said opening, of guide means for guiding the drawer during sliding movement in said opening, said means comprising a guide rail extending from the front to the rear of the frame centrally of the drawer opening and being provided with transversely yieldable side members formed with V shaped grooves, a pair of guide members secured to the bottom of the drawer and extending in spaced apart relationship from the front to the rear thereof, said guide members being formed with V shaped ribs complemental with the grooves in the side members of the guide rail and slidably engaging the same to guide the drawer during sliding movement thereof in the opening of the frame.

2. The combination of a framework having a drawer receiving opening and a drawer loosely mounted in said opening, of guide means for guiding the drawer during sliding movement thereof in said opening, said means comprising a guide rail extending from the front to the rear of the frame centrally of the drawer opening, said guide rail being fixedly secured to the framework at one end and having movement relative thereto at the opposite end and being formed with a slot extending lengthwise from each end of the guide rail, said slots being arranged in spaced apart overlapping relationship, a pair of guide members secured to the bottom of the drawer, the sides of said guide rail being formed with V shaped grooves and the confronting edges of said guide members being formed with complemental V shaped ribs, said guide members being spaced apart to slidably engage the sides of said guide rail.

3. The combination of a framework having a drawer receiving opening therein and a drawer slidably mounted in said opening, of guide means for guiding the drawer during sliding movement in said opening, said means comprising a guide rail extending from the front to the rear of the framework centrally of the drawer receiving opening and being formed with a slot extending lengthwise from each end thereof, said slots being arranged in spaced apart relation and overlapping at the central portion of the rail whereby the side edges of the rail are transversely yieldable throughout the major portion of their length, each side edge of said rail being formed with a groove extending lengthwise of the rail and said guide rail being fixedly secured at one end to the framework and being secured at its opposite end to the framework to have relative lengthwise movement thereto, a guide member secured to the bottom of the drawer and comprising a pair of depending spaced apart rails with their confronting edges slidably interlocking with the edges of said first mentioned guide rail.

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