July 1, 1958 M. N. RAINIER 2,841,460

DRAWER GUIDE CONSTRUCTION

Filed April 2, 1956

FIG. 1.

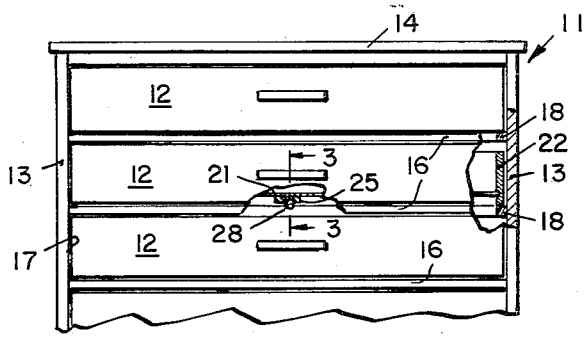


FIG. 2.

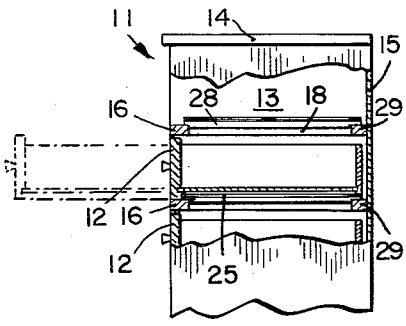


FIG. 3.

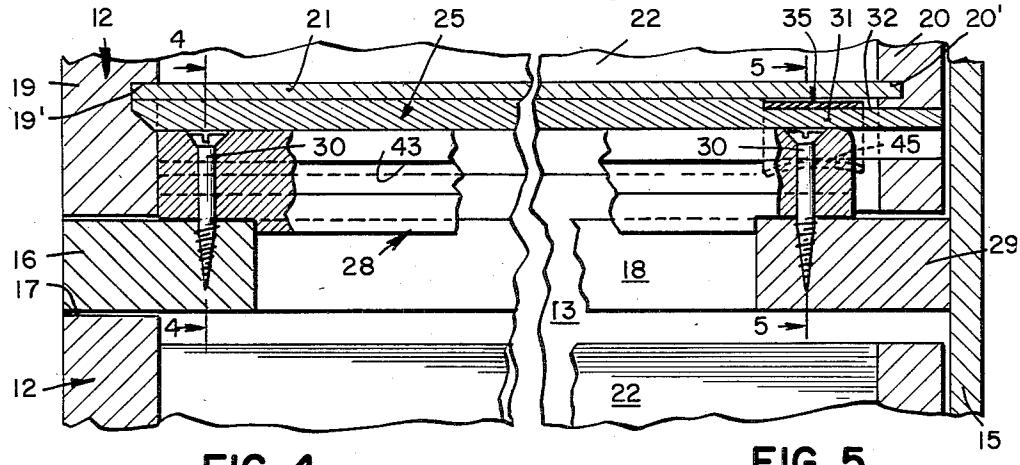


FIG. 4.

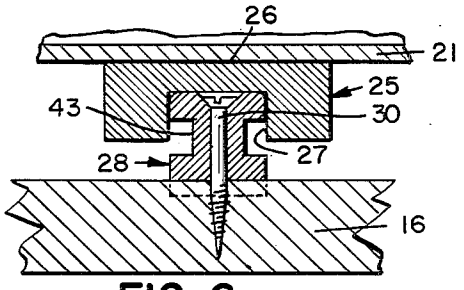


FIG. 5.

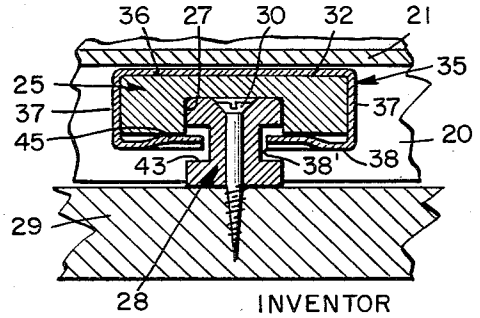


FIG. 6.

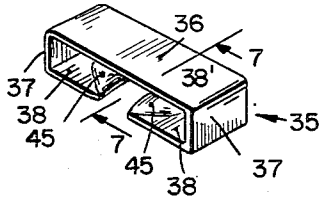
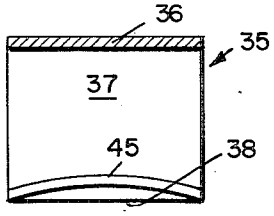


FIG. 7.



INVENTOR

MAURICE N. RAINIER

BY

Mason & Graham

ATTORNEYS

United States Patent Office

2,841,460

Patented July 1, 1958

2,841,460

DRAWER GUIDE CONSTRUCTION

Maurice N. Rainier, Los Angeles, Calif.

Application April 2, 1956, Serial No. 575,410

3 Claims. (Cl. 312—346)

This invention has to do with the construction of wooden drawers for furniture and the like.

In furniture embodying wooden drawers, great difficulty is experienced with the drawers becoming stuck as a result of the expansion or swelling of the drawers due to absorption of moisture. In some types of furniture it is common practice to provide dust or side rails in the drawer housing spaced but a fraction of an inch above the upper edges of the sides of the drawer. These rails serve to limit downward tilting of the drawer when the same is extended. In other types of furniture, tilting of the drawer when extended is limited by the drawer back contacting a center rail. It will be apparent that, in the first case, only slight expansion of the drawer sides vertically causes them to engage the rails in the housing, resulting in the drawer becoming stuck, while, in the second case, a similar expansion of the drawer back, produces the same result.

It therefore is an object of my invention to provide a novel drawer construction which makes it possible to eliminate the common cause of sticking drawers and at the same time provide novel means for guiding the drawer and limiting downward tilting thereof when the drawer is extended.

More particularly it is an object of my invention to provide novel slidable interengaging means between the drawer and a stationary guide rail beneath the drawer which serves as means for guiding and holding the drawer with a minimum of tilt when the drawer is extended, thereby eliminating the necessity for close tolerances between the upper edges of the sides of the drawer and the dust or side rails of the housing, or between the drawer back and a center rail, as the case may be.

A further object is to provide a simple construction which can be readily manufactured and assembled and which is not adversely affected by changes in the humidity.

These and other objects will be apparent from the drawing and the following description. Referring to the drawing:

Fig. 1 is an elevational view, partly broken away, of the upper portion of a chest of drawers or the like.

Fig. 2 is a side elevational view, partly in section, of the chest of drawers of Fig. 1 but with the upper drawer removed;

Fig. 3 is an enlarged fragmentary sectional view on line 3—3 of Fig. 1;

Fig. 4 is a cross-sectional view on line 4—4 of Fig. 3;

Fig. 5 is a cross-sectional view on line 5—5 of Fig. 3;

Fig. 6 is a perspective view of a runner-rail-engaging member; and

Fig. 7 is a sectional view on line 7—7 of Fig. 6.

More particularly describing the invention, numeral 11 designates the upper portion of a chest or drawer housing having slidable wooden drawers 12 therein. The chest or drawer housing comprises side walls 13, a top 14, and a rear wall 15. The drawer housing is provided

with parallel vertically spaced parting rails 16 defining openings 17 which receive the drawers 12. The drawer housing is also provided with side rails or dust rails 18 usually in the same general plane as the parting rails. In one type of conventional construction there is only a fraction of an inch clearance between the upper edges of the sides of a drawer and the undersurfaces of the side rails above it. The side rails may also serve as side runner rails for the drawers.

It is a particular feature of my invention that I provide a special guide means for each drawer thereby making it possible to leave ample clearance between the upper edges of the drawer sides and the side rails and also between the drawer back and the center rail. Each drawer includes a drawer front 19, drawer back 20, a bottom 21, and sides 22. These parts may be secured together in any customary manner. However, for purposes of illustration I show the drawer bottom received in a groove 19' in the drawer front and in a groove 20' in the drawer back.

The drawer is provided with a special runner, designated generally 25. This member is attached in any suitable manner to the drawer front and the drawer back and may be glued to the drawer bottom. The member 25 has a flat upper surface 26 and a central groove or channel 27 in its undersurface. The channel slidably receives a stationary guide rail, designated generally 28. The latter is mounted upon and secured to the parting rail 16 at the front and the back rail 29 at the rear of the drawer housing as by means of screws 30 and glue (not shown).

The runner 25 is provided with a section 31 at the rearward end portion thereof which is of reduced cross-sectional area providing the stepped surface 32 beneath the drawer bottom 21. It is a particular feature of my invention that I here apply a guide rail-engaging member, designated 35. This substantially encompasses the runner 25 and may comprise a metal body formed to provide a main section 36 which overlies the upper portion of the runner, side portions 37 and opposed end portions 38 which lie generally in a plane parallel to the plane of the main portion 36 except as will be noted below. The end portions project inwardly beyond the sides of the longitudinal groove 27 provided in the undersurface of the runner 25 to receive the stationary guide rail 28. The latter is provided with side grooves 43 which freely receive the ends 38 of the member 35 as best shown in Fig. 5.

With the construction described it will be apparent that the rear portion of the drawer can rise only a limited distance with reference to the stationary guide rail so that when the drawer is extended the guide-rail-engaging member 35 serves to hold the drawer to a slightly tilted position. It is thus possible to reduce the sides 22 of the drawer in height so that in the event they swell they will not contact the dust or guide rails 18 and cause sticking of the drawer and to similarly reduce the drawer back so that it will not contact the undersurface of the central rail or guide member for the drawer above.

Preferably the inner edges 38' of the guide-rail-engaging member are beveled somewhat as shown and the end portions convexly curved upwardly somewhat in the middle at 45 to provide easier running of the parts. If desired, the member 35 may be ribbed or dimpled for strength.

Although I have illustrated and described a preferred form of my invention, I contemplate that various changes and modifications can be made therein without departing from the invention, the scope of which is indicated by the following claims.

I claim:

1. In furniture construction embodying a drawer hous-

ing providing a drawer compartment and a drawer movable in the compartment, a drawer guide means comprising a stationary guide rail in the housing extending from front to rear in the drawer compartment, a runner member attached to the bottom of the drawer and having a longitudinal groove in the undersurface slidably receiving the upper portion of said stationary guide rail, said runner member having a stepped surface at its rearward end portion, and a runner-rail-engaging member of metal comprising a strap of metal of general C-shape having a main portion overlying the stepped portion of said runner member, side portions depending therefrom and lower end portion projecting inwardly toward each other in a plane substantially parallel to the plane of the main portion, said stationary guide rail having a groove in each side freely receiving the end portions of said runner-rail-engaging member, respectively.

2. A drawer guide means as set forth in claim 1, in which said runner-rail-engaging member is loosely assembled with relation to the drawer and the runner member.

3. In furniture construction embodying a drawer housing providing a drawer compartment and a drawer movable in the compartment, drawer guide means comprising a laterally grooved, stationary guide rail extending from front to rear in the drawer compartment, a runner on the bottom of the drawer having a groove slidably receiving the upper portion of said stationary guide rail, and interengaging means on said runner and said stationary guide rail limiting movement of the rear portion of said drawer vertically with respect to said stationary guide rail; said interengaging means comprising a single metal strap of narrow width compared to the depth of the drawer mounted at the rear end portion of, and substantially encompassing, said runner terminating in opposed end portions received in the grooves in said guide rail.

References Cited in the file of this patent

UNITED STATES PATENTS

1,248,133	Kemp et al.	Nov. 27, 1917
1,927,429	Willard	Sept. 19, 1933