Sept. 19, 1933. R. WILLARD 1,927,429

FURNITURE CONSTRUCTION

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Fig. 1

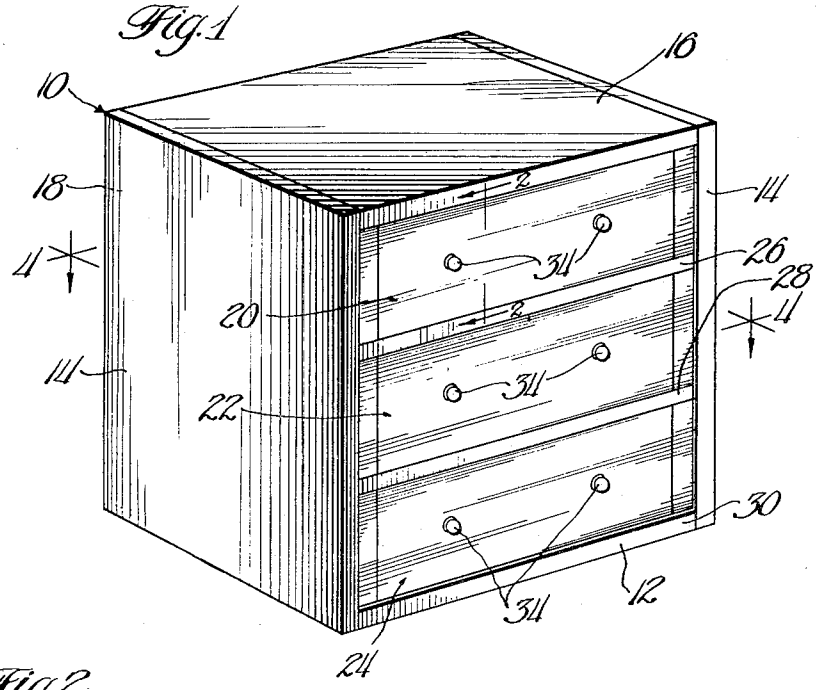


Fig. 2

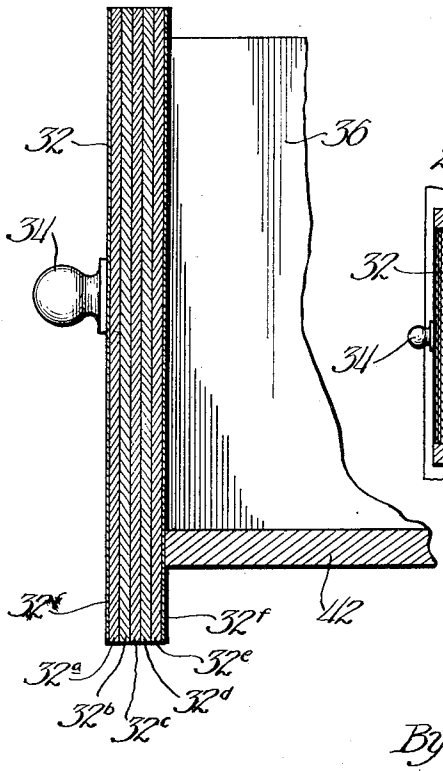
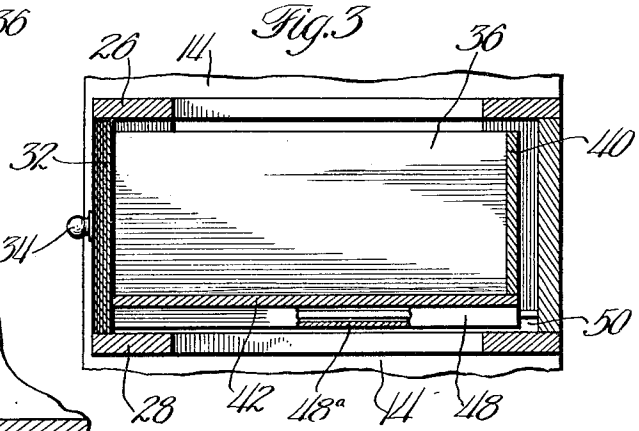


Fig. 3



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Fig. 4

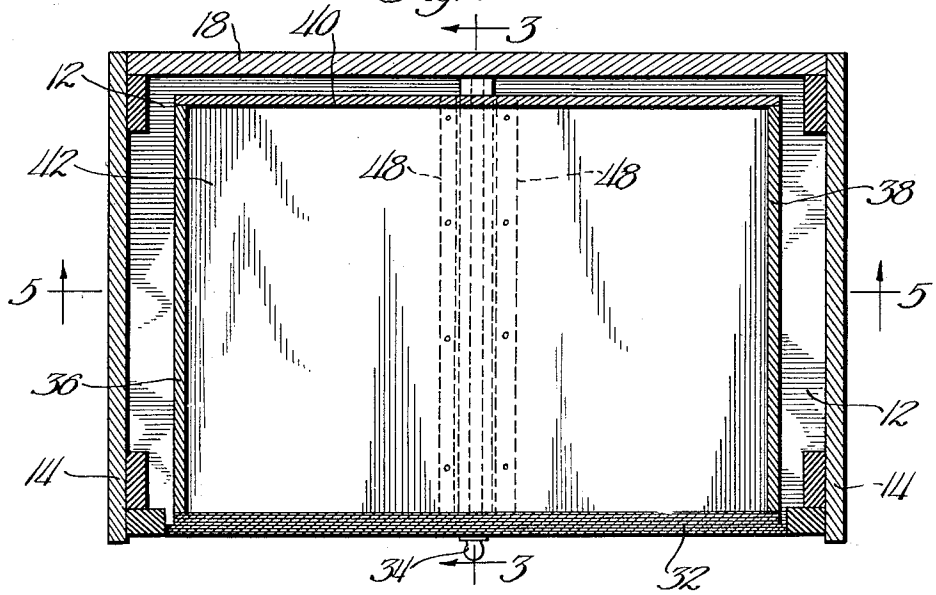


Fig. 5

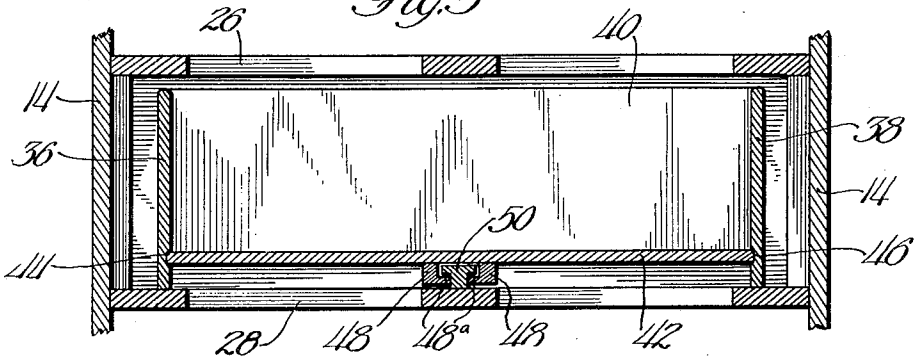
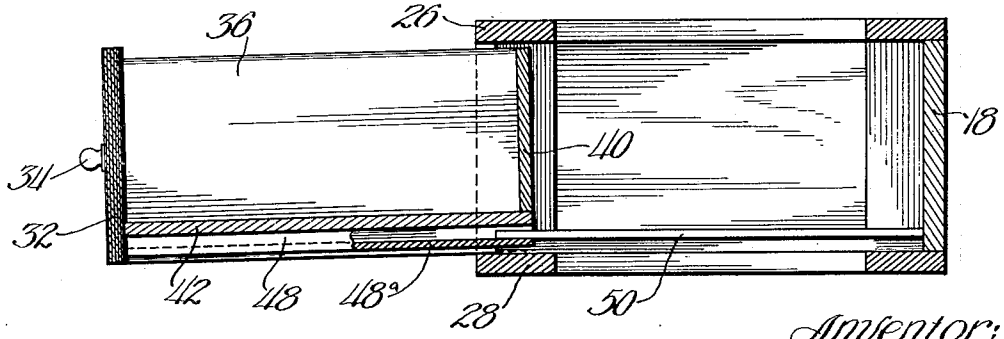


Fig. 6



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UNITED STATES PATENT OFFICE

1,927,429

FURNITURE CONSTRUCTION

Rudolph Willard, Huntington, W. Va.

Application July 11, 1929. Serial No. 377,446

1 Claim. (Cl. 45—77)

My invention relates generally to improvements in furniture construction and more particularly to an improved drawer construction for articles of furniture such as buffets, bureaus, desks and the like.

In the construction of furniture of the above-mentioned type, no provision is ordinarily made to prevent shrinking or swelling of the front wall or the side panels of the drawers under different atmospheric conditions, which causes sticking in the supporting frame, with the result that at certain times of the year in certain parts of the country it is practically impossible to open or close the drawers of such articles.

It is the general object of my invention to provide a new and improved drawer construction that will eliminate sticking of drawers in the drawer compartment under different atmospheric conditions.

It is an object of my invention to provide a drawer front of a built-up construction which will prevent warping of the drawer front.

It is an object of my invention to provide a non-swellable and non-shrinkable drawer front, or panel.

It is a further object of my invention to provide a new and improved drawer guide.

It is a further object of my invention to provide a new and improved drawer guide and support.

A further object of my invention is to provide a drawer construction which is simple to make, which is rugged, and which may be economically manufactured.

Other objects and advantages will be apparent from the following description, reference being had to the accompanying drawings, in which

Fig. 1 is a perspective view of a chest of drawers constructed in accordance with my invention;

Fig. 2 is a vertical sectional view of the drawer taken on the line 2—2 of Fig. 1;

Fig. 3 is a fragmentary vertical sectional view taken on the line 3—3 of Fig. 4 (parts being broken away to show other parts);

Fig. 4 is a plan sectional view taken on the line 4—4 of Fig. 1;

Fig. 5 is a fragmentary cross-sectional view taken on the line 5—5 of Fig. 4; and

Fig. 6 is a view similar to Fig. 3, showing a drawer in extended position.

In the embodiment chosen to illustrate my invention, I have shown a chest of drawers indicated in its entirety at 10, but it will be understood that the drawers may be part of a desk, bureau, buffet or any other similar article of furniture employing drawers. The chest is shown with a base 12, side walls 14, top 16 and back wall 18. The chest contains three drawers 20, 22 and 24, supported by the horizontally extending frame members, 26, 28 and 30.

The non-swellable or non-shrinkable drawer fronts 32 are provided with door knobs 34. The drawer front has an odd number of plies of wood 32*a*, *b*, *c*, *d*, *e* of approximately equal thickness and a ply 32*f* of veneer on either side of the wood plies. Side walls 36 and 38 of the drawer and back wall 40 are shown spaced away from the enclosing frame and are shown as being of ordinary wood but it will be understood that the sides, back and bottom of my improved drawer may also be of built-up ply-wood providing a non-swellable or non-shrinkable construction in which event the clearance provided in the drawer compartment may be substantially reduced. However, for the purpose of this application, the description will be confined to a drawer provided with only a non-swellable or non-shrinkable built-up ply-wood front wall. No attempt is made to prevent the other walls from warping or swelling but the clearance all around is for the purpose of keeping these walls from bearing against the enclosing frame at any point even though warping or swelling has taken place.

A drawer bottom 42 is mounted in grooves 44 and 46 in side walls 36 and 38, and is provided with lateral drawer guides 48. These guides cooperate with a stationary guide block 50 mounted on the horizontal supporting member to control the vertical tilting motion of the drawer, in a manner to be further explained. The drawer guides extend throughout the depth of the drawer and are formed with a protruding lip or ledge portion 48*a*. Guide block 50 is T-shaped and also extends throughout the depth of the drawer and is fixedly mounted on the horizontal frame member. It can readily be seen that by combining the two a tongue and groove connection is formed.

As best shown in Fig. 5, there is a clearance between the guides 48 and guide block 50. This is provided so that if wood strips are used for drawer guides the wood in the drawer guide will swell and shrink just as much in percentage as any wood but due to the fact that the members which fit together in the guide are usually under an inch in thickness, the total swelling and shrinkage will be less than the allowance in looseness of fit, which is normally provided in the guide to make the drawer run easily.

The drawer guide and guide block are further utilized to support the drawer in an extended position (see Fig. 6) by reason of the fact that the enclosing frame is spaced away at the top of the drawer as well as at the sides and rear, the only contact between the drawer and the frame occurring when the drawer is closed and the side walls are resting on the frame.

The construction of front wall 32 will now be further explained: In the device shown in the drawings I have used five plies of ⅛ inch veneer and a front ply of some face veneer such as walnut, and a back ply to balance it. Both of these plies would be thin veneer approximately ¼ inch thick, and by adding these two thin plies of veneer the balance of the panel with respect to shrinking and swelling will not be appreciably affected. In general, my improvement lies not in the use of ply-wood but in so constructing it as to balance the panel and make each ply counteract the tendency of the adjacent plies to shrink and swell.

The results obtained by a construction of the type described may be attributed to the combination of the features as hereinbefore explained.

While I have illustrated and described a preferred embodiment of my invention, it is to be clearly understood that my invention is not limited by these details but is capable of other modifications and adaptations within the scope of the appended claim.

What I claim is:

An article of furniture constructed of wood and having a drawer compartment, a drawer in said compartment, the relative sizes of the compartment and the drawer allowing clearance between the two, and co-operating wooden means between the drawer and the bottom wall of said compartment for guiding said drawer into its open or closed position, said means serving to support said drawer in its normal plane when extended and serving further to prevent shifting of said drawer, said means comprising a T-shaped guide block secured to said compartment and L-shaped lateral guide means secured to the lower end of said drawer and embracing the oppositely extending flanges of said T-shaped guide block.

RUDOLPH WILLARD.