L. M. MAYNE.

DETACHABLE DRAWER.

APPLICATION FILED JAN. 12, 1916.

1,213,121.

Patented Jan. 16, 1917.

3 SHEETS—SHEET 1.

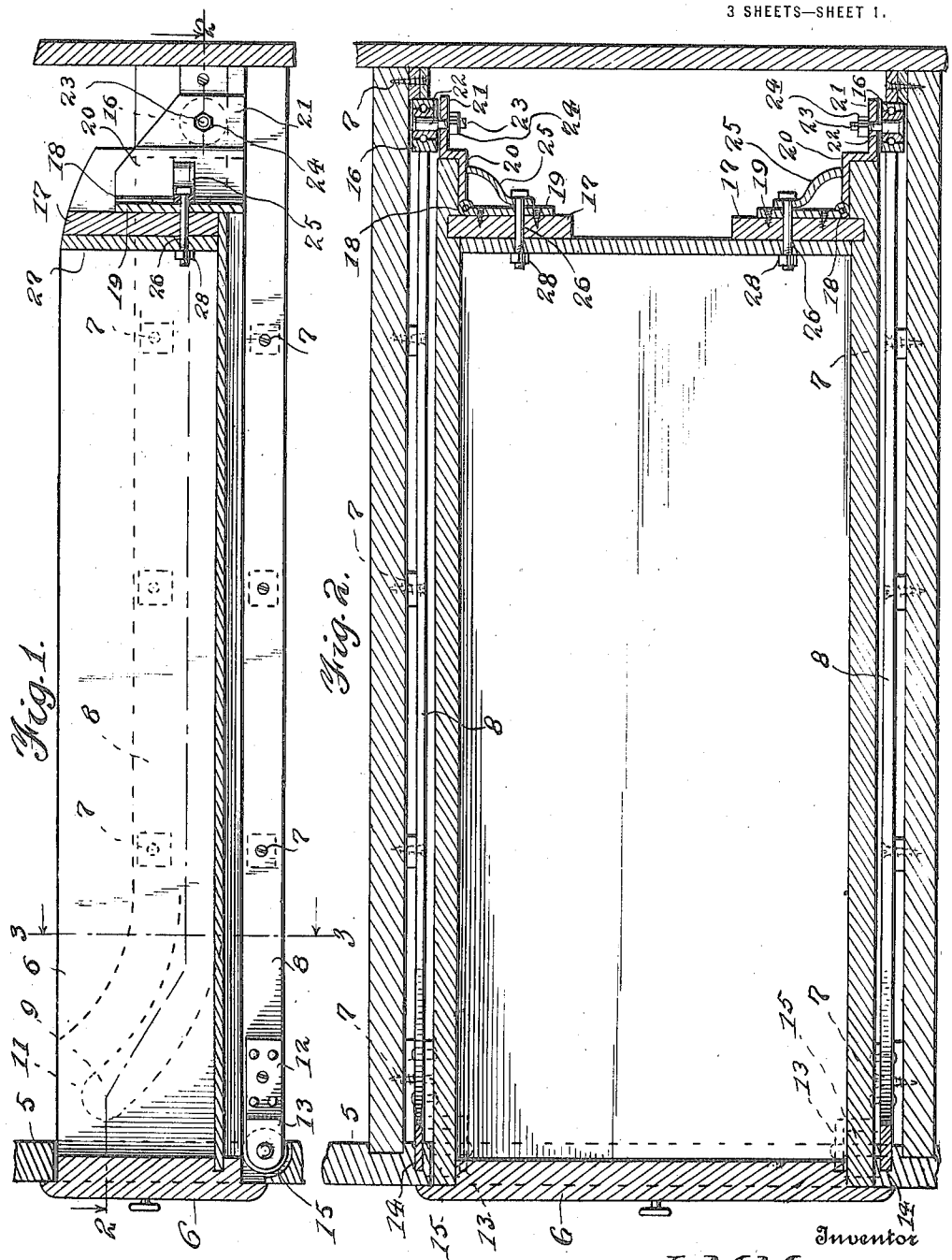

Fig. 1.

Fig. 2.

Witnesses

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3 SHEETS—SHEET 2.

Fig. 3.

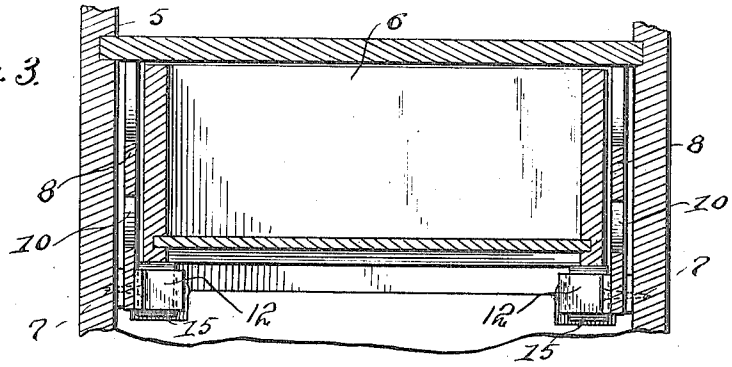


Fig. 4.

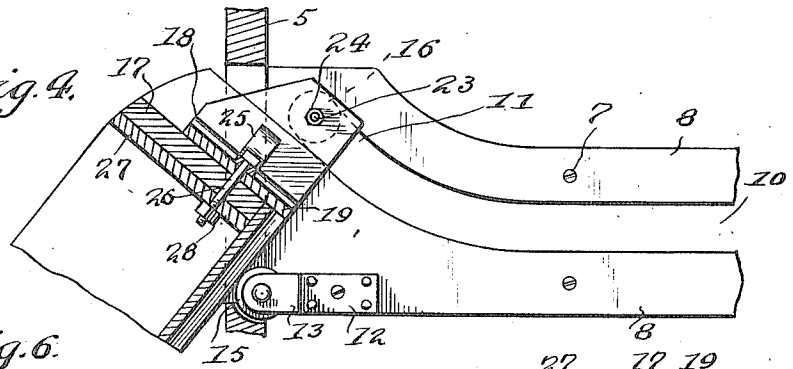


Fig. 6.

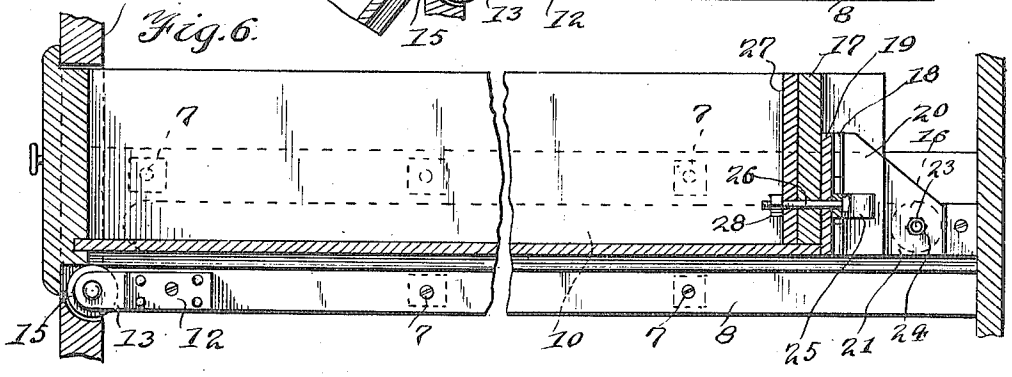
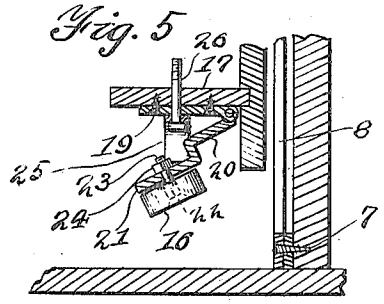


Fig. 5



Witnesses

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3 SHEETS—SHEET 3.

Fig. 7.

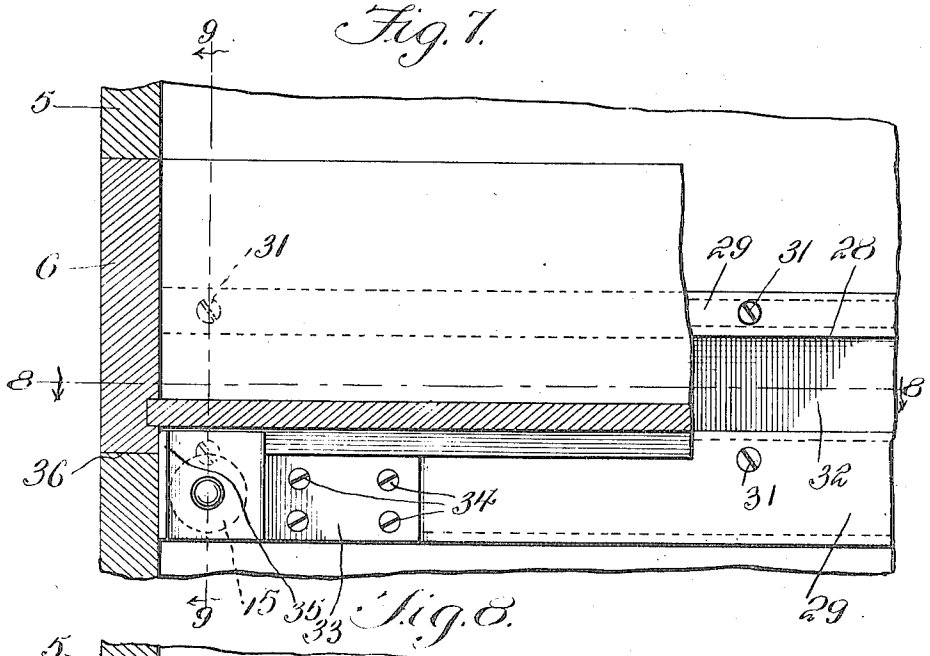


Fig. 8.

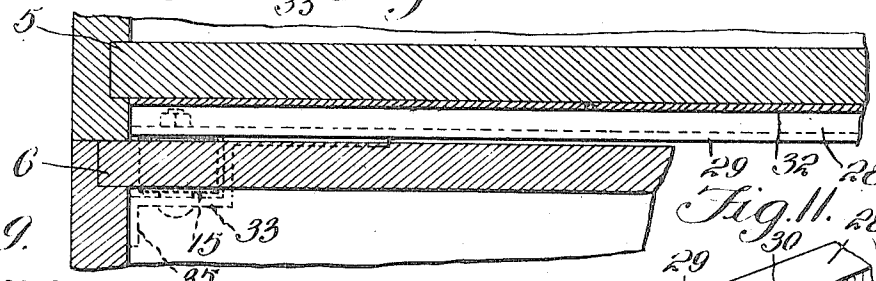


Fig. 9.

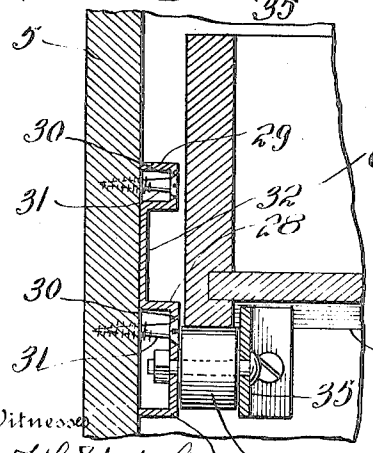


Fig. 10.

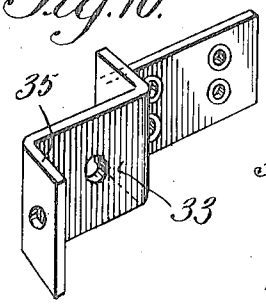
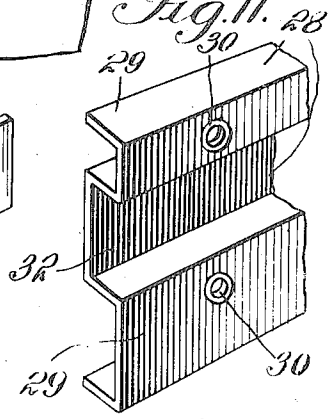


Fig. 11.



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UNITED STATES PATENT OFFICE.

LEANDER M. MAYNE, OF COLUMBIA, SOUTH CAROLINA.

DETACHABLE DRAWER.

1,213,121. Specification of Letters Patent. Patented Jan. 16, 1917.

Application filed January 12, 1916. Serial No. 71,758.

To all whom it may concern:

Be it known that I, LEANDER M. MAYNE, a citizen of the United States, residing at Columbia, in the county of Richland and State of South Carolina, have invented new and useful Improvements in Detachable Drawers, of which the following is a specification.

The present invention has relation to furniture and more particularly to improvements in a novel form of drawer which is simple and inexpensive in its construction and will operate easily and smoothly without binding upon the withdrawal or insertion of the drawer in its casing.

The object of the invention is to design a novel form of guide for receiving rollers, certain of such rollers being so mounted upon the drawer for permitting of the removal of the latter from the casing.

A still further object of the invention is to provide a guide for the drawer which will permit of the latter being tilted into an angular position when withdrawn from the casing.

With the above and other objects in view, the invention consists in the novel features, details of construction and combination of parts which will hereinafter be more fully set forth, illustrated in the accompanying drawings and pointed out in the appended claims.

Figure 1 is a longitudinal sectional view through a portion of a cabinet. Fig. 2 is a horizontal section taken through the cabinet. Fig. 3 is a transverse section. Fig. 4 is a detail view illustrating the swinging roller in track engaging position. Fig. 5 is a detail section illustrating the swinging track roller in inactive position. Fig. 6 is a longitudinal section illustrating a modified form of track. Fig. 7 is a detail fragmentary longitudinal sectional view of a further modified form of the invention. Fig. 8 is a section taken on line 8—8 of Fig. 7. Fig. 9 is a section taken on line 9—9 of Fig. 7. Fig. 10 is a perspective view of the drawer stopping means used in connection with the modified form of Fig. 7. Fig. 11 is a detail perspective of one of the tracks removed from the cabinet.

Referring to the parts by way of reference characters, 5 denotes a portion of a cabinet having mounted therein for both sliding and tilting movement, a drawer 6. Detachably connected to the inner walls of the cabinet 5 through the medium of screws 7, are tracks 8. These tracks 8 are constructed of a single blank of metal slotted as at 9 throughout its longitudinal extent to provide guide ways 10. The foremost end of the guide ways gradually curve upwardly as at 11, the purpose of which will be clearly pointed out. Passing through the lowermost forward edge of the track 8 is an angular clip 12 provided with a bearing opening 13 adapted to aline with a similar opening 14, the latter being formed in the forward free end of the track, and journaled in the respective openings 13 and 14 is a stationary ball bearing guide roller 15, which supports the bottom of the drawer and guides the same when either inserted or withdrawn from the casing. The second movable guide roller 16 is carried by spaced blocks 17 rigidly connected with the opposite opposed side faces of the drawer 6. The said movable guide roller is connected to the blocks 17 through the medium of a hinge 18 including a stationary plate 19 and a horizontally swinging plate 20. This plate 20 is provided with an angular offset portion 21 in which the roller 16 is journaled and offset rearwardly and laterally of the drawer 6. The connection of the movable guide roller 16 with the offset portion 21 includes a bearing 22 having a threaded end 23 for threadedly receiving a securing nut 24, whereby upon the removal of such nut from the fastening 22, the slidable guide roller may be removed from the offset portion 21. The movable plate 20 of the hinge 18 is prevented from any inward swinging movement, through the medium of a brace 25 swiveled to the plate 19 through the medium of a pin 26. The free end of this brace is of a cam structure, whereby the free end of the brace will tightly bind against the movable plate 20 when the former is in plate holding position.

Mounted in the back of the drawer and transversely thereof is a member 27, which is detachably connected to the blocks or hinge pieces 17 by means of a thumb screw 28, whereby it will be apparent that when the drawer has been ejected and it is desired to entirely remove the drawer from the casing 5, the member 27 is detachably connected with the hinge blocks 17 and slid forwardly in the drawer, permitting the insertion of the hand in rear of the member 27 and allowing the members 25 to be swung upon its pivot 26. After this operation, the

slidable guide roller 16 may be swung inwardly in a horizontal plane to the plane of movement of the drawer. Of course it will be understood that when it is desired to mount the drawer upon the tracks, the movable plate 20 is swung outwardly in a direction toward the tracks 8 until the roller 16 is operatively engaged with the guide slot 10 of the tracks, and after this operation, the brace 25 is swung until its cam face tightly binds against the outer face of the movable plate 20, thereby preventing any accidental inward swinging movement of said guide roller 16. The member 27, which by the way is in the form of a sub-back, or the like, is moved rearwardly until it engages with the hinge blocks 17, after which the member 27 is detachably connected with the hinge block 17 and the drawer is mounted upon the tracks for a sliding and tilting movement.

In Fig. 6 of the drawings, I have shown a slight modified form of track, which is identical in construction with the track 8, only to the extent of forming the roller guide slot 10 therein, and instead of providing the slot with an upwardly extending portion 11, the slot is extended in a straight plane, which prevents the drawer from tilting. Therefore, it is understood that the means for permitting the removal of the drawer from the casing may be used on a straight sliding drawer instead of a tilting drawer, should it be so desired to do so.

In Figs. 7 to 11 inclusive of the drawings, I have illustrated a still further modified form of track employed in connection with the cabinet 5 and it is to be understood that the drawer mounting and detaching means is to be used in connection with this form of track identically as disclosed in Figs. 1 to 6 of the drawing and therefore the form of track used in this particular instance is indicated by the reference character 28 and is constructed from a single strip of sheet metal or the like material having its marginal edges bent to provide U-shaped attaching flanges 29, each of which having an aperture 30 for permitting of the fastening means 31 to pass therethrough and secure the tracks 28 to the opposed inner walls of the cabinet 5 and in spaced parallelism one to the other. The formation of the flanges 29 provides the track 28 with a depressed groove 32 which forms the tracks with guideways extending throughout their length. It is, of course, to be understood that the purpose of these guideways 32 is to permit of the rollers 16 to travel therein and facilitate the opening and closing of the drawer 6. The clip 33 is secured to the lowermost flange 29 of the track 28 through the medium of screws 34 and is further secured to the front inner face of the cabinet 5 in adjacent relation to the drawer opening formed therein, disposing the Z-shaped extension 35 of the clip in obstructing relation with the drawer opening 36, the purpose of which serving as a stop for limiting the inward sliding movement of the drawer and holding the drawer flush with the front face of the cabinet when the same is in a closed position. This clip also serves as a bearing for the stationary ball bearing guide roller 15 as do the clips 12 of the other forms of my invention.

From the foregoing description, taken in connection with the accompanying drawing, the advantages of construction and of the method of operation will be readily apparent to those skilled in the art to which the invention relates, and while I have described the principles of operation of the device together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative and that such advantages may be made when desired as are within the scope of the claims appended thereto.

Having described my invention, what is claimed is:

1. In combination, a casing, drawers therefor, and means slidably mounting the drawers within said casing, said means comprising tracks, a guide roller fixed at one end of the tracks, and a second roller swingingly mounted on the drawer for sliding movement on said tracks and means having connection with the drawer for preventing any accidental swinging movement of the second roller from said track.

2. In combination, a casing, drawers mounted therein and means for permitting of a slidable and detachable connection of the drawers with the casing, said means embodying a fixed and a movable plate, a guide roller mounted on said movable plate and means carried by the fixed plate and binding against the movable plate for preventing any inward swinging movement of said movable plate.

3. In combination, a casing, drawers therefor, tracks secured in said casing, a roller hingedly connected to the rear end of the drawer for movement on said tracks, and pivotally mounted means for locking the hinge against movement.

4. In combination, a casing, drawers therefor, tracks secured within said casing, a guide roller, a hinge for swingingly connecting the guide roller to the rear end of said drawer for movement on said tracks, a bolt passing through said hinge, and means pivotally mounted on said bolt for locking the roller against movement.

5. In combination, a casing, drawers therefor, tracks secured within said casing, a guide roller, a hinge for swingingly connecting the guide roller to the rear end of said drawer for movement on said tracks,

a bolt passing through said hinge, and means pivotally mounted on said bolt for locking the hinge against inward horizontal swinging movement.

6. In combination, a casing, tracks secured within said casing, a drawer mounted on said tracks and provided with blocks, a member mounted in said drawer and having detachable connection with said blocks, a guide roller detachably connected to said blocks for inward horizontal swinging movement.

In testimony whereof I affix my signature in presence of two witnesses.

LEANDER M. MAYNE.

Witnesses:

KATE OWINGS,

GUS. R. STORK.