

Feb. 8, 1949.

R. CHRISTOPHERSON

2,460,923

PROGRESSIVE DRAWER SUPPORT

Filed Aug. 21, 1944

2 Sheets-Sheet 1

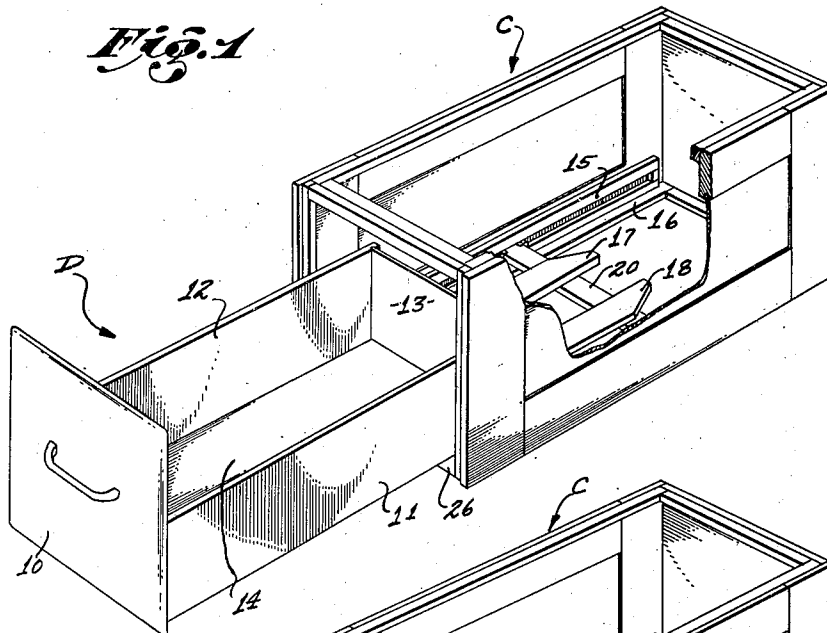
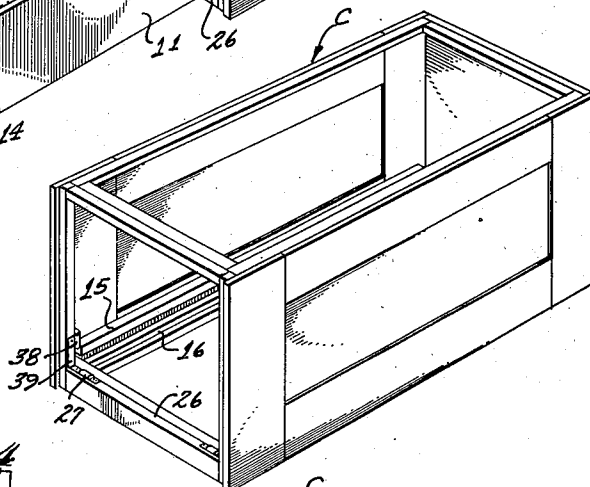
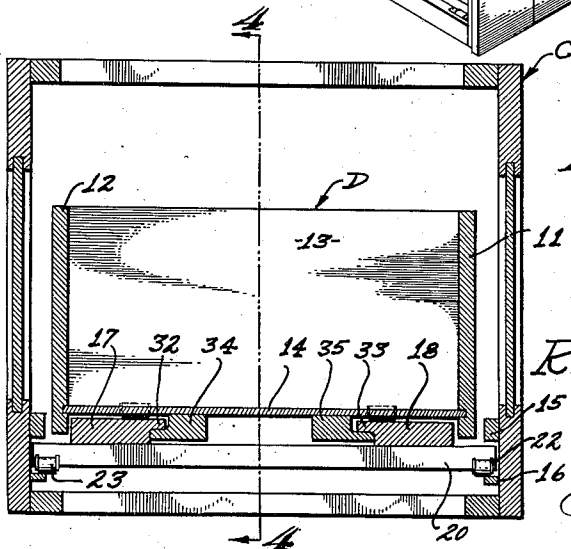


Fig. 2



RAYMOND CHRISTOPHERSON
INVENTOR.

BY

Hayard and Miller
ATTORNEYS

Feb. 8, 1949.

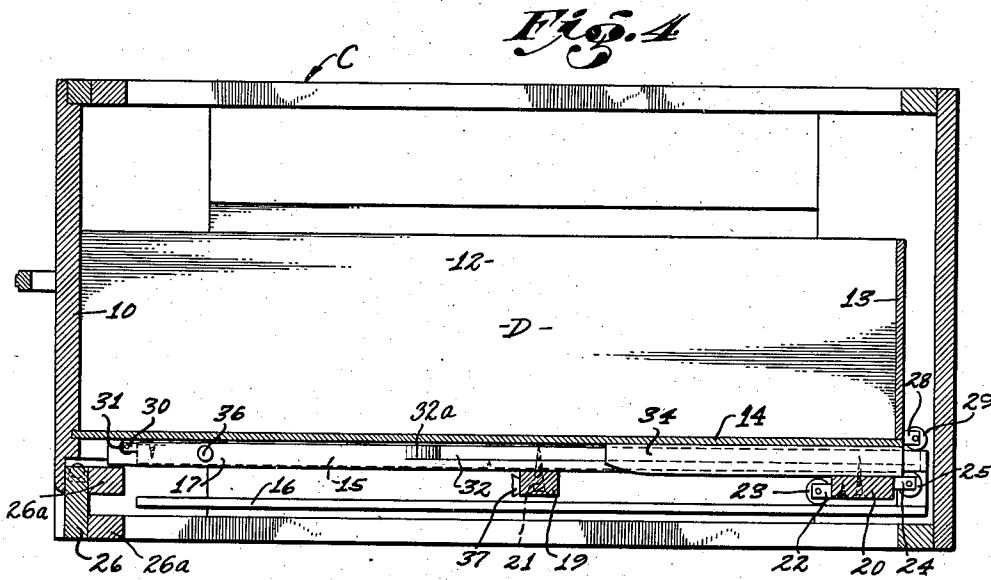
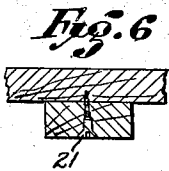
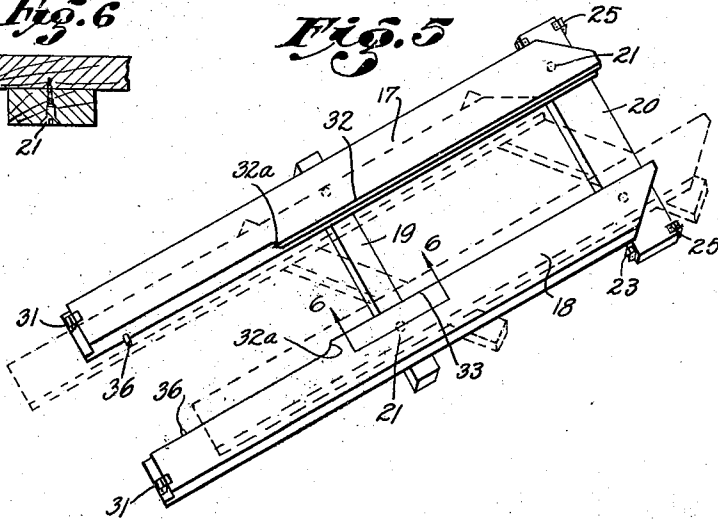
R. CHRISTOPHERSON

2,460,923

PROGRESSIVE DRAWER SUPPORT

Filed Aug. 21, 1944

2 Sheets-Sheet 2



RAYMOND CHRISTOPHERSON
INVENTOR.

BY

BY
Hazard and Miller
ATTORNEYS

UNITED STATES PATENT OFFICE

2,460,923

PROGRESSIVE DRAWER SUPPORT

Raymond Christopherson, Long Beach, Calif., assignor to National Cabinet Company, Long Beach, Calif., a limited partnership

Application August 21, 1944, Serial No. 550,431

2 Claims. (Cl. 45—77)

1

This invention relates to improvements in drawer constructions.

An object of the invention is to provide a drawer and drawer compartment adapted to receive the drawer, with an anti-friction runner construction which will facilitate withdrawing the drawer from the compartment and returning it thereto and which will support the drawer in its fully withdrawn position.

Another object of the invention is to provide a runner construction for drawers and drawer compartments adapted to receive the same, wherein the drawer compartment has top and bottom rails at the sides thereof comprising, a pair of runners connected by cross bars, at least one of which is equipped with rollers engageable with the top and bottom rails, the cross bars being pivotally connected to the runners in such a manner as to facilitate collapse of the runner construction which facilitates its insertion into, or removal from the drawer compartment.

With the foregoing and other objects in view, which will be made manifest in the following detailed description and specifically pointed out in the appended claims, reference is had to the accompanying drawings for an illustrative embodiment of the invention, wherein

Figure 1 is a perspective view of a drawer and drawer compartment, the drawer being illustrated in fully withdrawn position and supported by the improved runner construction.

Fig. 2 is a perspective view of the drawer compartment;

Fig. 3 is a transverse vertical section through the rear portion of the drawer compartment and through the drawer therein;

Fig. 4 is a longitudinal section taken substantially upon the line 4—4 upon Fig. 3;

Fig. 5 is a perspective view of the runner forming a part of the improved progressive drawer support illustrating in dotted lines the position that it may assume on insertion or withdrawal; and

Fig. 6 is a partial view in vertical section taken substantially upon the line 6—6 upon Fig. 5.

Referring to the accompanying drawings wherein similar reference characters designate similar parts throughout, the present invention may be embodied or incorporated in any conventional type of drawer construction wherein there is a drawer compartment C provided by any suitable structure and which is adapted to receive the drawer D. The drawer illustrated is of the conventional type having a front wall 10,

2

side walls 11 and 12, a back wall 13 and a bottom 14.

As shown in Fig. 3 the side walls 11 and 12 extend downwardly below the bottom 14 in conformity with conventional drawer construction and as illustrated in Fig. 4 the front wall 10 preferably extends laterally beyond the edges at the entrance to the drawer compartment so as to cover or conceal the same when the drawer is in closed position. These projecting portions of the front wall 10 may also serve as stops limiting rearward movement of the drawer.

In the compartment C at the sides thereof adjacent the bottom there are spaced top and bottom rails 15 and 16. These may be formed of any suitable material although wood is preferable and may be secured to the sides of the compartment C in any preferred or conventional manner. A runner construction is provided to rollably support the drawer in the compartment. This runner construction comprises two spaced runners 17 and 18. Connected together by cross bars 19 and 20, the connecting means of which may be simple screws 21 and serve to pivotally connect each of the cross bars to the two runners so that although the cross bars will normally be disposed at right angles to the lengths of the runners, the runners and cross bars may pivot relatively to each other in the form of a parallelogram as shown in Fig. 5 in dotted lines to facilitate insertion of the runner construction into the drawer compartment and its removal therefrom. On the ends of the cross bar 20 there are secured brackets 22 which in turn rotatably mount rollers 23 which are engageable with the lower rails 16. In a similar manner cross bar 20 has brackets 24 mounted thereon which rotatably mount rollers 25 that rollably engage the undersides of the upper rails 15. In this manner the runner construction is rollably supported at its rear end between the top and bottom rails 15 and 16. At the front of the drawer compartment C near its entrance there is a transverse member or front rail 26 within which there are recessed rollers 27 that project slightly above the top surface of the member as to rollably engage and support the forward ends of the runners 17 and 18. In this manner the runner construction may readily roll relatively to the compartment, the rear end of the runner construction being rollably supported between rails by means of the rollers 23 and 25 while the forward end of the runner construction is rollably supported by having the runners 17 and 18 resting on the rollers 27. The transverse member or front rail 26 may be backed up or

3

reinforced by strips 26a secured thereto and extending transversely across the drawer compartment.

On the rear wall 13 of the drawer there are secured spaced brackets 28 which rotatably mount rollers 29 that rest upon the top surfaces of the runners 17 and 18. Near the forward ends of the runners the runners are recessed and have brackets 30 mounted therein that rotatably mount rollers 31 which rollably engage the bottom 14 of the drawer. The runners 17 and 18 have inwardly extending opposed flanges 32 and 33 formed thereon which extend from the rear ends of the runners forwardly for a substantial portion of their length. The forward ends of these flanges terminate at 32a and are bevelled outwardly to merge with the opposed inner surfaces of the runners 17 and 18 respectively. Cleats 34 and 35 are secured to the bottom of the drawer and have complementary flanges arranged for sliding engagement with the flanges 32 and 33. These cleats extend forwardly from the rear wall of the drawer a distance somewhat shorter than the length of the flanges 32 and 33. These flanges function to prevent the drawer from tipping downwardly relatively to the runner construction when the drawer is in the fully withdrawn position as illustrated in Fig. 1. Pins 36 extend inwardly from the inner faces of the runners 17 and 18 and may engage the cleats 34 and 35 when the drawer is in its fully withdrawn position. These pins, however, are spaced considerably from the forward ends of the flanges 32 and 33 so that, when the drawer approaches its fully withdrawn position, by tipping the drawer upwardly, the cleats may disengage the flanges 32 and 33 and the flanges on the cleats passed above the dowels to detach or dismount the drawer from the runner construction. On the forwardmost cross bar 19, bumpers 37 are preferably secured which are engageable with the rear face of the rear face of the uppermost strip 26a to limit forward movement of the runner construction.

The sides of the drawer compartment are also preferably equipped with rollers 38 which may be arranged to engage the sides 11 and 12 of the drawer. These rollers may be rotatably mounted in a bracket that is integral with the bracket that rotatably supports rollers 27. Such a bracket illustrated at 39 consists merely of a short metal stamping having apertures therein for the reception of attaching screws. This stamping is angular in form so as to conform to the lower corners of the entrance to the drawer compartment.

From the above described construction it will be appreciated that as the drawer D is drawn forwardly the initial movement is facilitated by the drawer rolling relatively to the runner construction by means of the rollers 29 and 31. Eventually the forward ends of the cleats 34 and 35 will engage the dowels 36 and cause the runner construction to go forwardly, such movement being facilitated by the rollers 25, 23 and 27. In this manner the runner construction will be caused to partially project from the drawer compartment C and function somewhat as a cantilever beam supporting the drawer in its fully

4

withdrawn position wherein it is substantially entirely withdrawn from the compartment. If it should be desired to remove the drawer from the runner construction entirely, this may be accomplished by lifting the forward end of the drawer as it approaches the end of its forward movement so that the cleats will pass above the dowels 36. If it should be desired to remove the runner construction itself from the compartment, this may be readily accomplished by causing the runner construction to assume a parallelogram position which collapses or narrows the width of the runner construction and enables the rollers 23 and 25 to be withdrawn from between the top and bottom rails.

Various changes may be made in the steps of the process without departing from the spirit and scope of my invention as claimed.

I claim:

1. In combination with a drawer compartment having a bottom rail across the forward end thereof and a drawer in the drawer compartment, means providing upper and lower rails at the sides of the compartment, cross bars extending across the compartment one of which carries rollers adapted to roll on said rails, runners connecting the cross bars intermediate the ends thereof, said runners being pivotally connected to the cross bars, rollers on the lower rail at the front of the compartment adapted to rollingly support the runners, the drawer being longitudinally movable over the runners, rollers on the drawer for rollingly supporting the drawer on the runners, means limiting forward movement of the runners with relation to the bottom rail, and means limiting forward movement of the drawer with respect to the runners.

2. In combination with a drawer compartment having a bottom rail across the forward end thereof and a drawer in the drawer compartment, means providing upper and lower rails at the sides of the compartment, a collapsible runner construction having cross bars and runners pivotally connected together rollably supported between the upper and lower rails, and means providing flanges on the drawer engageable with the inner faces of the runners whereby the drawer may move relatively to the runner construction and the runner construction may move relatively to the compartment and said flange providing means may hold the runner construction in fully expanded position within the compartment.

RAYMOND CHRISTOPHERSON.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
771,319	Noblett	Oct. 4, 1904
810,823	Tohey	Jan. 23, 1906
1,089,514	Wagemaker	Mar. 10, 1914
1,212,992	O'Brien	Jan. 16, 1917
1,686,472	Simpson	Oct. 2, 1928
1,927,429	Willard	Sept. 19, 1933
2,343,692	Miller	Mar. 7, 1944