D. E. HUNTER.

CABINET DRAWER AND CASE.

APPLICATION FILED DEC. 26, 1914.

1,172,711.

Patented Feb. 22, 1916.

2 SHEETS—SHEET 1.

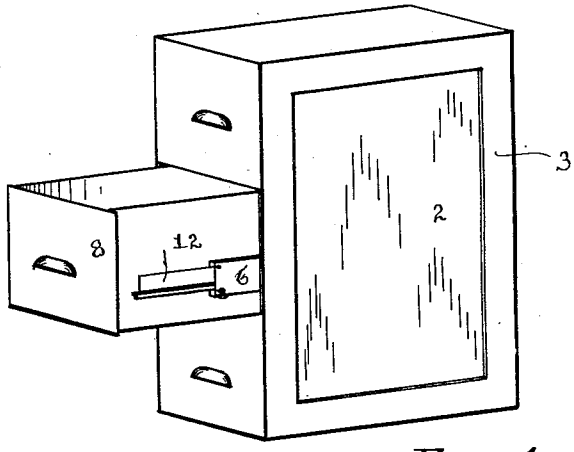


Fig. 1.

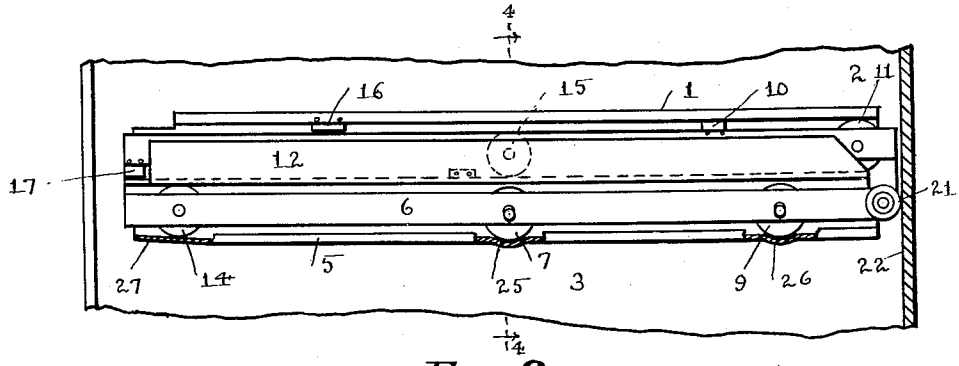


Fig. 2.

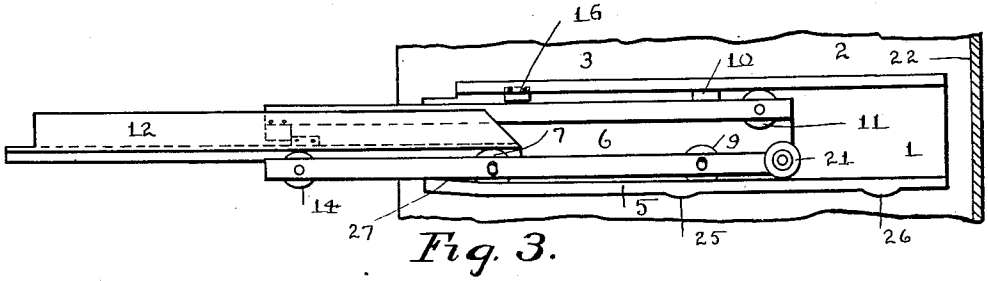


Fig. 3.

WITNESSES:

Anthony Vander Hoot

Marion A. Thompson

Cyrus E. Perkins

INVENTOR

David E. Hunter

BY

Cyrus W. Rice

his ATTORNEY

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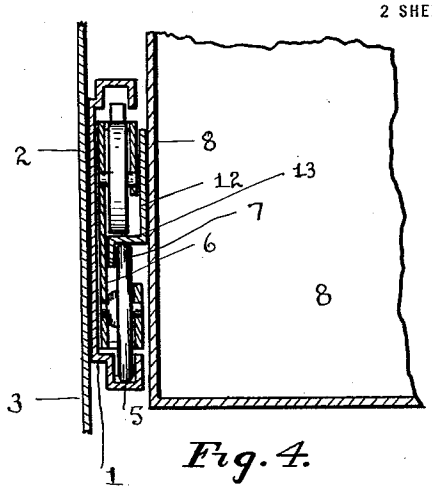


Fig. 4.

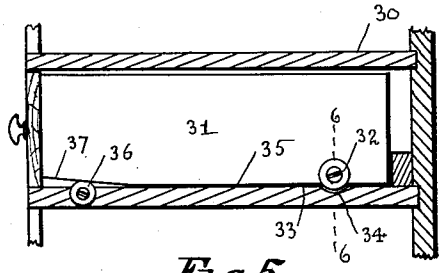


Fig. 5.

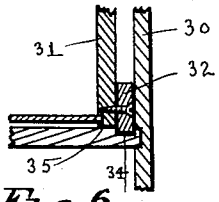


Fig. 6.

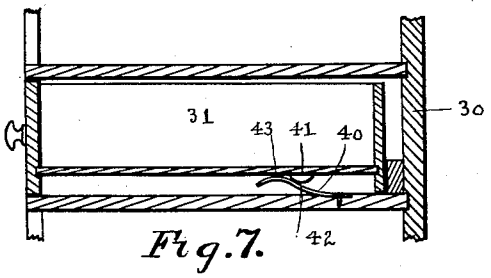


Fig. 7.

WITNESSES:

Anthony Vander Nott

Marion A. Thompson

Cyrus A. Perkins

INVENTOR

David E. Hunter

BY

Cyrus W. Rice

his ATTORNEY

UNITED STATES PATENT OFFICE.

DAVID E. HUNTER, OF MUSKEGON, MICHIGAN, ASSIGNOR TO THE SHAW WALKER COMPANY, OF MUSKEGON, MICHIGAN, A CORPORATION OF MICHIGAN.

CABINET DRAWER AND CASE.

1,172,711. Specification of Letters Patent. Patented Feb. 22, 1916.

Application filed December 26, 1914. Serial No. 878,996.

To all whom it may concern:

Be it known that I, DAVID E. HUNTER, a citizen of the United States, residing at Muskegon, in the county of Muskegon and State of Michigan, have invented new and useful Improvements in Cabinet Drawers and Cases, of which the following is a specification.

My present invention relates to cabinet drawers and their cases. When cabinet drawers (especially such as are provided with anti-friction bearings) are quickly closed, they are liable to rebound into a partially open position. Sometimes too, drawers remain, when intended to be closed, in such a partially open position, or for other causes they may be thus partially opened after being closed. Their contents are of course, thus exposed to dust, etc.; and any automatic locking device with which the structure may be furnished, remains (on account of their partially open position) out of operative engagement with the drawers.

The object of my present invention is to overcome such difficulties by providing means whereby the rebound of the drawer upon being closed may be checked, and also whereby the drawer when partially open by its rebound or otherwise, may be automatically entirely closed. This and any other objects appearing hereinafter are attained by, and the invention finds preferable embodiment in, the organization hereinafter described and illustrated by the accompanying drawings, in which:—

Figure 1 is a view in perspective of a cabinet case and drawers to which my invention is applied; Fig. 2 is an internal side view of a portion of such case provided with a "progression" drawer slide in closed position; Fig. 3 is a similar view, but showing the drawer slide in open or extended position; Fig. 4 is an enlarged vertical sectional view of such drawer taken on a plane corresponding with line 4—4 of Fig. 2; Fig. 5 is a side view of a drawer and vertical sectional view of a drawer case (without a drawer slide) to which my invention is applied; Fig. 6 is a transverse vertical sectional view of the same on a plane corresponding to line 6—6 of Fig. 5; and Fig. 7 is a vertical longitudinal section of a drawer with its case, and illustrating a modified construction.

In the embodiments of my invention chosen for detailed description and illustration by the drawings, Figs. 1, 2, 3 and 4 show a case and drawer provided with what is commonly known as a "progression" anti-friction drawer slide on which the drawer is reciprocatingly mounted in the case. This drawer slide comprises a primary slide member 1 carried on the inner surface of each of the sides 2 of the case 3 and has a tra[illegible] 5 in which is adapted to travel the intermediate slide member 6, being mainly supported medially of its length by a guided member or roller 7 and being also supported when the drawer 8 is pushed in by the inner roller 9, both which roll along on the track 5. A suitable guided member, as the lug 10 or roller 11 (or both as shown) travels in the upper guide 4, such roller 11 serving as an upward thrust-resisting member when the drawer is drawn out.

The ultimate slide member 12 which carries the drawer 8 has a sustaining flange 13 supported by and traveling on said roller 7 and the roller 14 and, (when the drawer is pushed in) on the roller 9, the upward thrust of such ultimate slide member when drawn out being resisted or sustained by a roller 15. A suitable stop 16 against which the lug 10 strikes, limits the outward movement of the intermediate slide member and the ultimate slide member's outward movement is limited by a suitable stop 17 on the intermediate member. A suitable buffer 21, preferably of rubber, carried at the inner end of the intermediate member, may be provided to receive the stroke of the back 22 of the case on one side and that of the inner end of the drawer on the other, when the drawer is pushed in.

My present invention consists in providing means for yieldingly holding the drawer closed and for yieldingly resisting the rebound of the drawer when closed; and further, for automatically closing the partially open drawer or for returning it to its closed position after such rebound.

In the construction above described, such means comprise a depression 25 in the track 5 into which the roller 7 is adapted to enter

by gravity (the weight of the drawers, etc.)—and preferably a similar depression 26 into which the roller 9 is in like manner adapted to enter and rest,—when the drawer is closed, as shown in Fig. 2. To insure the closing of the partially open drawer, or the returning of it to entirely closed position after its rebound, I provide also an incline 27 on the opposite side of the track 5 in a vertical direction from the depression; that is, in the construction now being described and shown in Figs. 1, 2, 3 and 4, the incline is upward and the depression downward from the level of the track. The roller 14 travels up this incline in the first portion of the drawer's movement from its closed position. This incline extends outwardly far enough to carry the roller 14 a sufficient distance to insure the drawer's closing by gravity from a partially open position, after the outward movement of the drawer has carried the other rollers out of the depressions 25 and 26. It will thus be seen that the depressions themselves tend to yieldingly hold the drawer closed and to resist its rebound; but should this tendency be overcome, then the incline serves to return the drawer to closed position.

Figs. 5 and 6 show a case 30 and a drawer 31 of simple form, *i. e.* without an intervening drawer slide. In this embodiment the roller 32 carried near the inner end of the drawer rolls on a track 33 on the case, which track has a depression 34 coöperating with such roller as do the depressions 25 and 26 with the rollers 7 and 9 in the other construction described above. The under side edge 35 of the drawer forms a movable track on which rolls the roller 36 mounted on the case, and has an incline 37 near its outer end, coöperating with such roller as does the incline 27 with the roller 14 in said other construction. It is thus seen to be immaterial whether there be one track having the depression or depressions and the incline, or whether there be two tracks one of which has the depression and the other the incline; or whether the roller is carried by the drawer and the track by the case, or vice versa.

In the embodiment of my invention shown in Fig. 7, I provide a leaf spring 40 mounted on the case, and a lug 41 having inclined outer and inner faces carried by the drawer. As the drawer is pushed in, the lug engages and rides over and its low point 42 passes beyond the high point 43 of the spring which by its engagement with the inclined inner face of the lug yieldingly holds it closed and tends to close it if it is not drawn out far enough for the lug's low point to pass the spring's high point in the drawer's rebound or out movement.

Not confining myself to details of construction shown or described, I claim:—

1. In an organization of the character described, a case, a drawer reciprocatingly mounted in the case, means for yieldingly resisting the rebound of the drawer from its closed position, and means coacting with the first-mentioned means in yieldingly resisting such rebound, and adapted to automatically return the drawer to its closed position after the rebound has been checked by the first-mentioned means.

2. In an organization of the character described, a case member, a drawer member, rollers carried by one member, and a track carried by the other member and having a depression into which one roller is adapted to enter by gravity in the drawer's closed position, and an incline oppositely disposed in a vertical direction from the depression, on which the other roller is adapted to travel in the first portion of the drawer's movement from its closed position.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

DAVID E. HUNTER.

Witnesses:

CHARLES B. VAN DYKE,

ANDREW B. NEVINS.