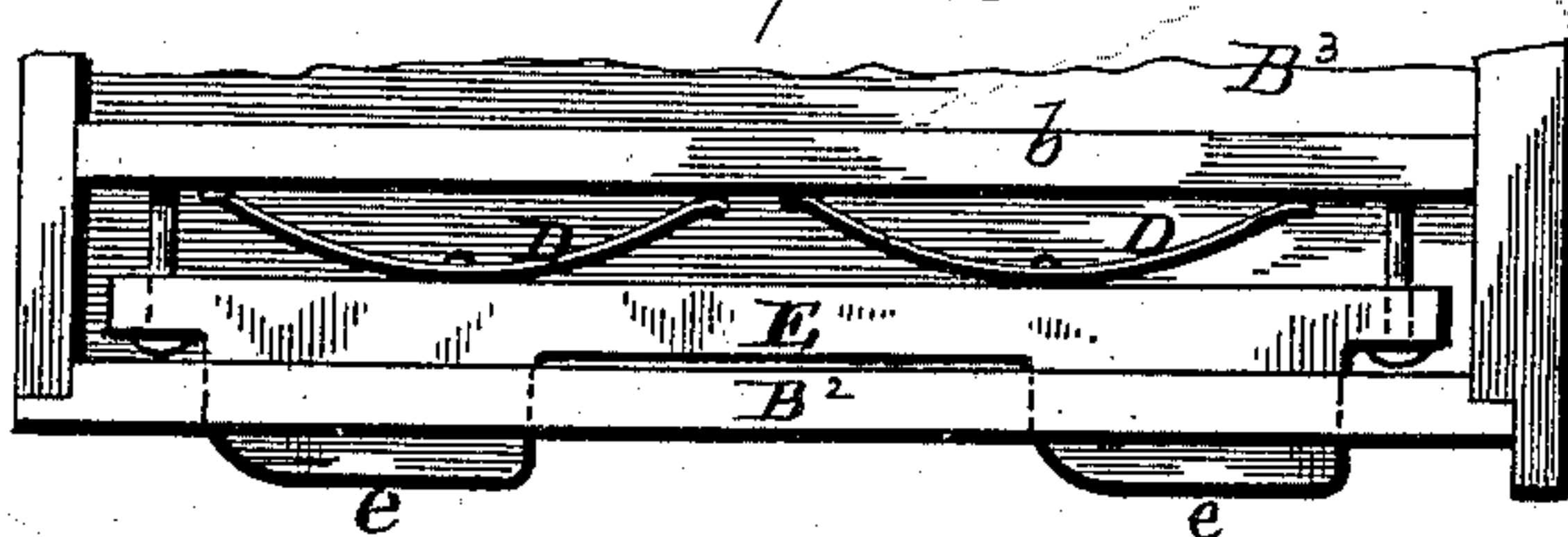
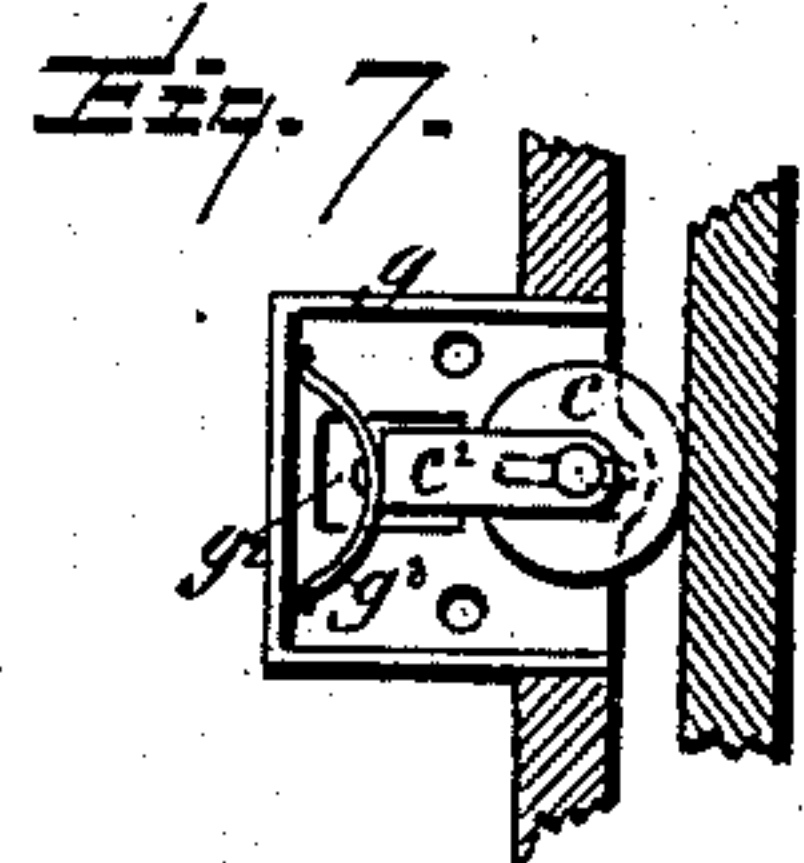
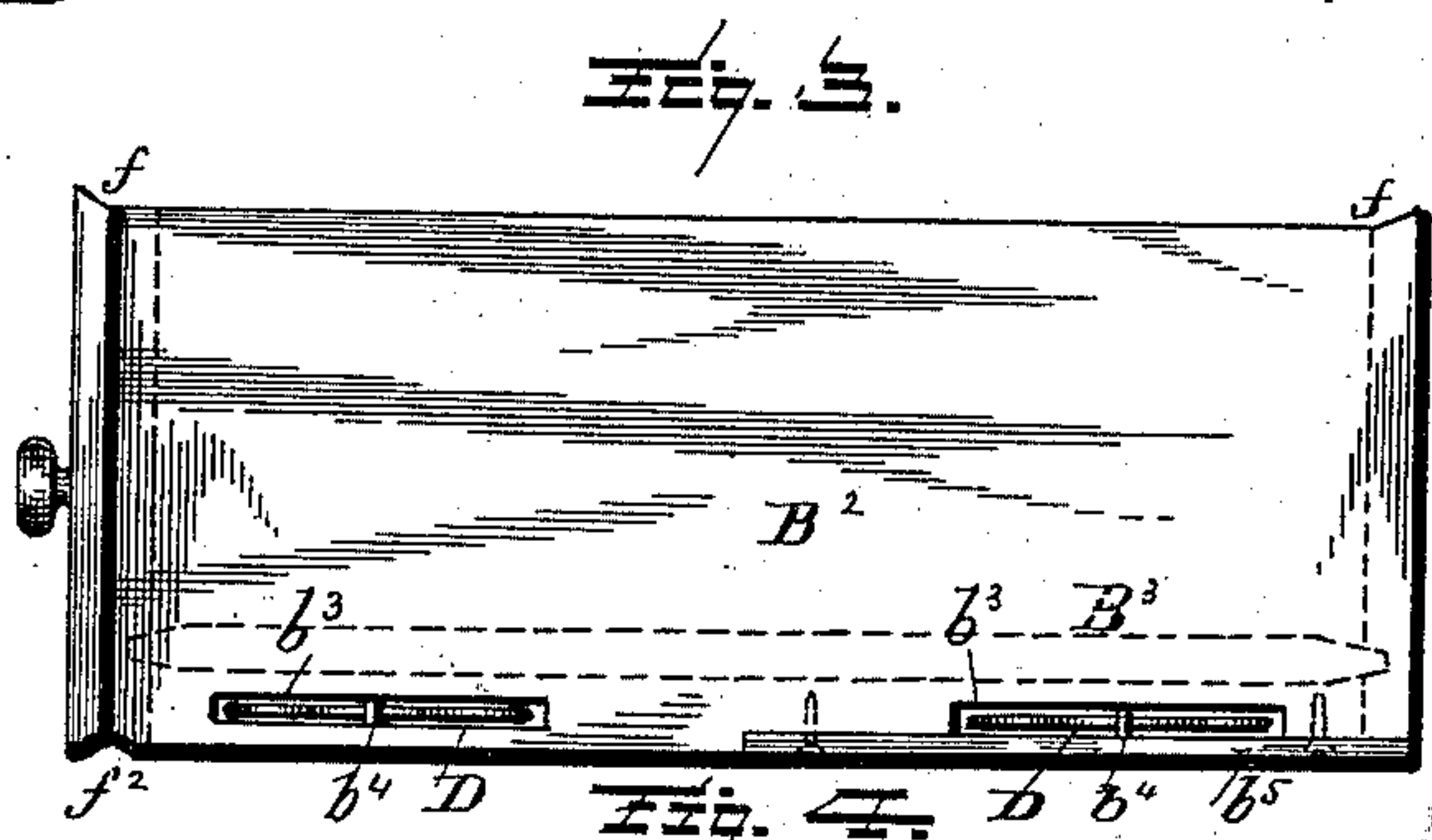
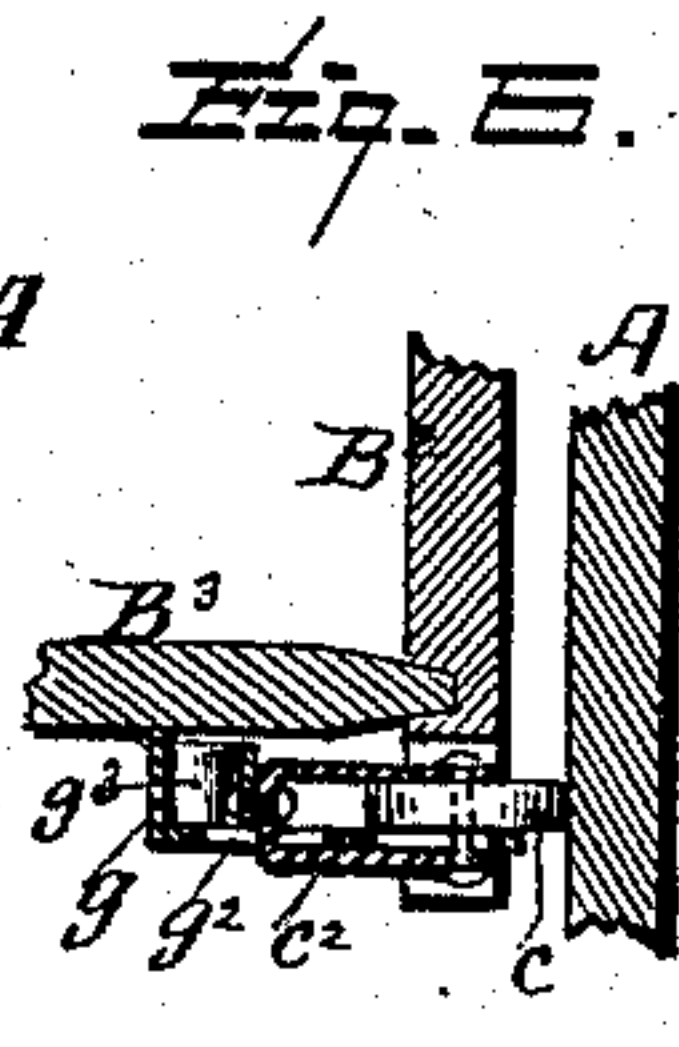
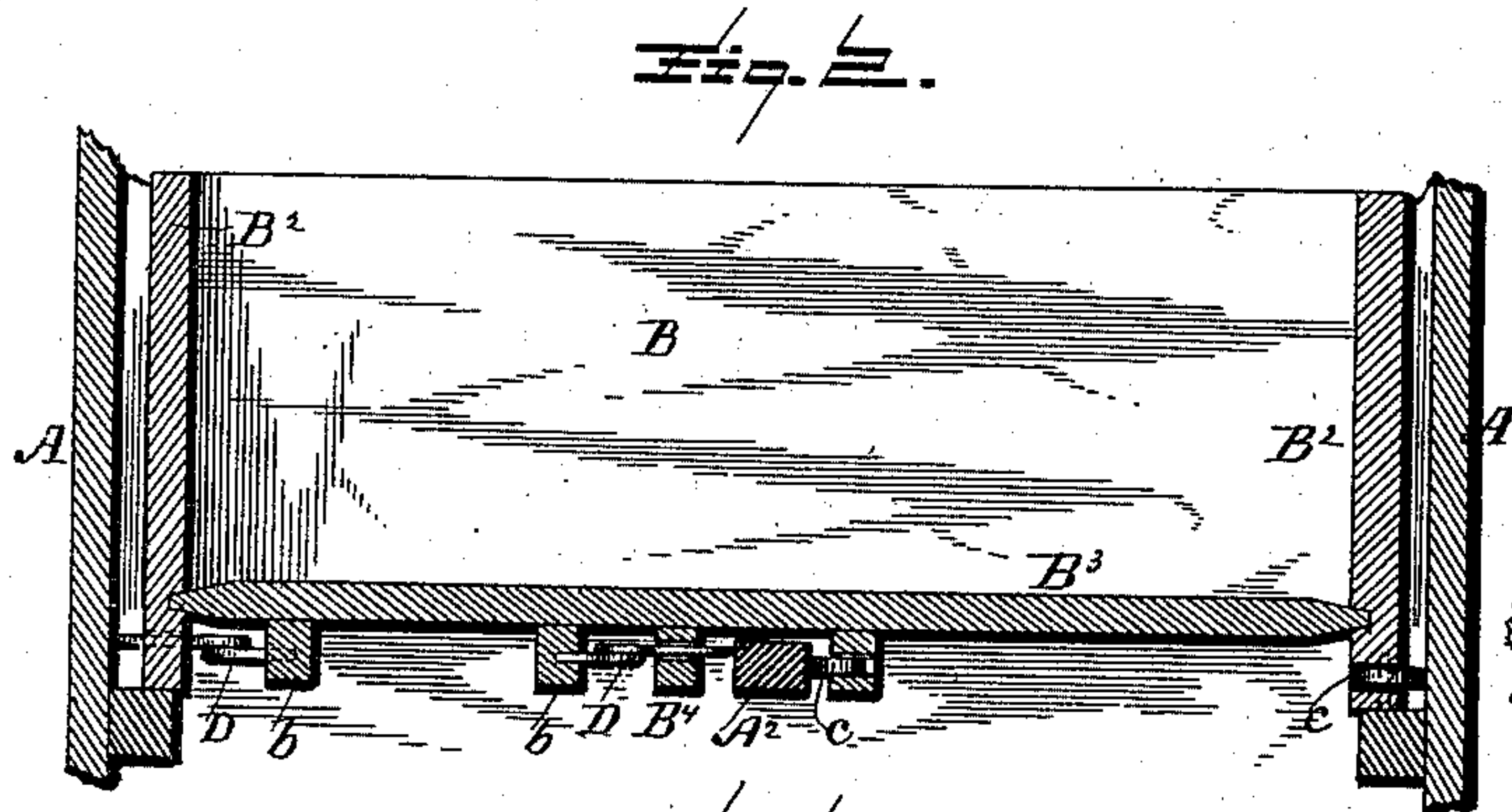
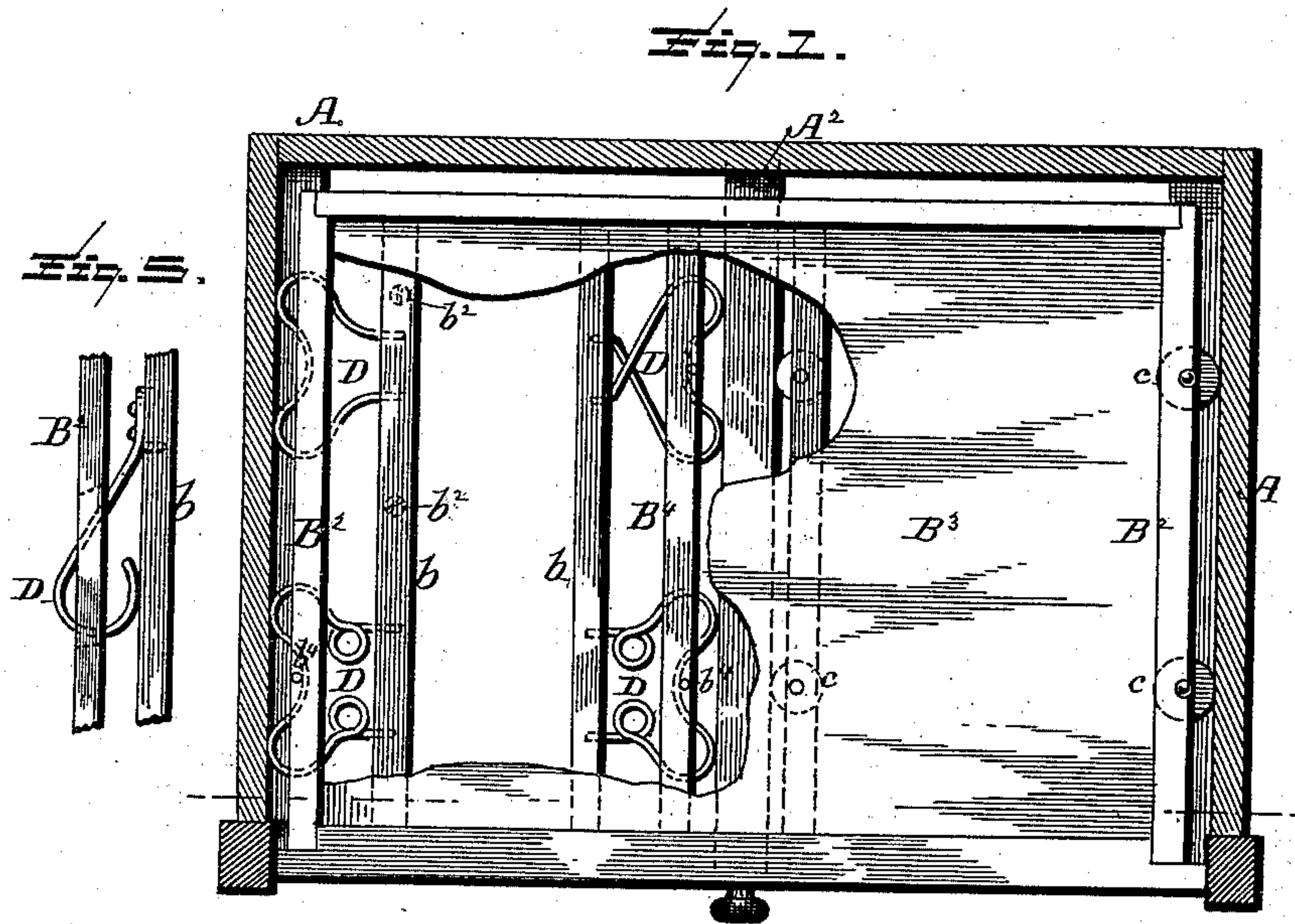


(No Model.)

E. J. BROWN.  
DRAWER.

No. 410,068.

Patented Aug. 27, 1889.



Witnesses  
L. C. Mills.  
Chas. Schiller.

Inventor  
Edward J. Brown,  
by E. E. Masson,  
Attorney



# UNITED STATES PATENT OFFICE.

EDWARD J. BROWN, OF WASHINGTON, DISTRICT OF COLUMBIA.

## DRAWER.

SPECIFICATION forming part of Letters Patent No. 410,068, dated August 27, 1889.

Application filed June 14, 1889. Serial No. 314,320. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD J. BROWN, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Drawers, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to bureaus, washstands, and other articles of cabinet furniture provided with sliding drawers; and the object of my invention is to provide drawers with suitable compensating devices, by which sticking of the drawers is prevented when expansion takes place and looseness is avoided when contraction takes place. I attain these objects by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a top view of a drawer placed within a frame or a piece of furniture shown in section, the bottom of said drawer being broken away to show the yielding bearings attached to strips secured to and under the bottom of said drawer. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a side view of the same. Fig. 4 is a bottom view of a portion of a drawer, showing one end thereof and springs bearing against strips attached to the bottom of the drawer, said springs being provided with a frictional bearing-block extending through the side of the drawer. Fig. 5 is a top view of a portion of the spring carrying and guiding strips of a drawer with a modified form of spring connected therewith. Fig. 6 is a vertical section of a portion of the drawer and of its inclosing-frame, showing one of the frictional rollers mounted in a yielding link provided with a spring and inclosed in a sheet-metal frame secured to the bottom of the drawer. Fig. 7 is a top view of the same yielding-retained roller and its carrying-frame.

In said drawings, A represents a frame, which may be a part of a bureau, washstand, or other article of cabinet furniture, provided with sliding drawers B. To prevent said drawers from sticking to their casing or frame when they become expanded on account of dampness or other causes, either the drawers have their sides recessed narrower than the front or the frame is recessed to permit the reception of devices interposed between the

drawer and its frame. These devices consist of one or more rollers  $c$ , rotatably mounted in a slot formed in one of the sides  $B^2$  of the drawer at points lower than the bottom  $B^3$  of the drawer, and said rollers bear against the inner side of the frame, while one or more springs D, carried by the opposite end of the drawer, also bear against the inner side of the frame at that end, and said springs are also located at points lower than the bottom of the drawer. The springs are preferably made of wire, and have their ends inserted in a wood strip  $b$ , secured to the front and back or to the bottom of the drawer, and if the springs D are of uniform length the distance at which the strip  $b$  is set from the side of the drawer regulates the tension upon the spring, and as the strip  $b$  may be secured to the bottom of the drawer by screws  $b^2$  said adjustment can be easily made.

To prevent the springs D from extending too far beyond the sides  $B^2$  of the drawer when the drawer is pulled out from its frame, either two grooves  $b^3$  in the same horizontal plane are used to receive the two loops of the spring or a simple but longer groove  $b^3$  is used with a pin  $b^4$ , driven vertically across it in front of the inward middle bend of the spring. The groove  $b^3$  can also be obtained by recessing the bottom edge of the sides  $B^2$  and forming a groove  $b^3$  therefrom by means of a strap  $b^5$ , of wood or metal, secured to the bottom edge of said sides  $B^2$ .

If desired, a single-loop spring may be used, as shown in Fig. 5, said spring being also preferably of wire.

If wood is preferred for a rubbing-surface, the spring D may be provided with a wood bar E, having projections  $e$  extending through and beyond the slots in the sides  $B^2$  of the drawer, as shown in Fig. 4.

Although it is simpler to pivot the rollers  $c$  directly to the drawer, said rollers can also be yieldingly retained, as shown in Figs. 6 and 7, in which the pivot-pin of said rollers is carried by a sheet-metal link  $c^2$  in the form of a bent staple that is straddling a sheet-metal frame  $g$ , that is secured to the bottom  $B^3$  of the drawer, said frame having a large slot  $g^2$  for the passage of the link  $c^2$  and a narrow slot for the passage of the pivot-pin of the roller, and a spring  $g^3$  is placed between the rear of



the link  $c^2$  and the bent-over end of the frame  $g$ , to yieldingly support the link  $c^2$ , and consequently the rollers  $c$ .

If it is desired to have the sides of the drawer free from projections, the strips  $b$ , receiving the ends of the springs, and slotted guide-strips  $B^4$  for said springs can be secured to the bottom of the drawer near its middle and the curved part of said springs made to bear against one side of a strip  $A^2$ , forming a part of the drawer-receiving frame, while the rollers  $c$  bear against the opposite side of said strip. The upper edge of the front and back of the drawer is inwardly beveled at  $f$ , to reduce the amount of frictional surface against the under side of the drawer-receiving opening in the bureau or other article of furniture, and the bottom edge of the front of the drawer is grooved at  $f^2$ , Fig. 3, for the same purpose; but the top and bottom of the inclosing-frame are kept horizontal and unbeveled. Parts of the invention shown in this case are also shown and described in another application filed May 21, 1889, Serial No. 311,619.

Having now fully described my invention, I claim—

1. In a bureau, washstand, or other article of cabinet-ware, the combination, with the

frame or casing thereof, of a drawer loosely fitted therein, the bottom strips secured thereto, and a yielding frictional bearing secured to said drawer under the bottom thereof and passing through its sides, the bottom strips or the sides of the drawer having slots to guide and retain said yielding bearing, substantially as described.

2. The combination, with a frame or casing, of a drawer loosely fitted therein, the bottom strips secured to said drawer, and a spring secured to said drawer under the bottom thereof and passing through its sides, the bottom strips or the sides of said drawer being slotted to guide and retain said spring, substantially as described.

3. The combination of a frame and the slotted bottom strips of a drawer to guide and retain a spring, with a drawer, and a spring secured to said drawer under the bottom thereof and pressing against said frame, substantially as described.

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

EDWARD J. BROWN.

Witnesses:

E. E. MASSON,  
CHAS. SCHILLER.