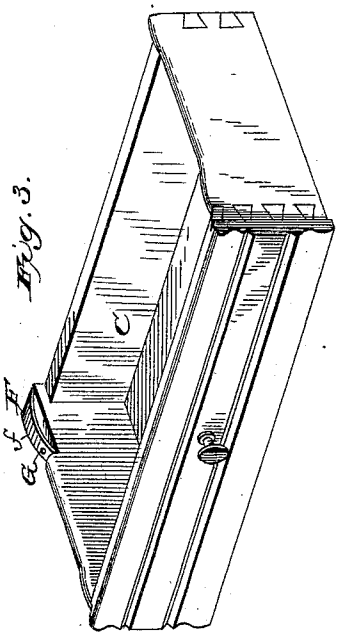
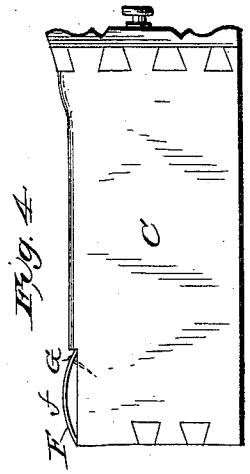
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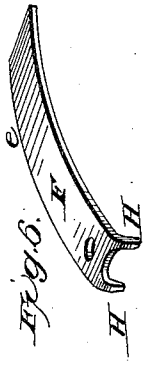
# D. C. CLAPP

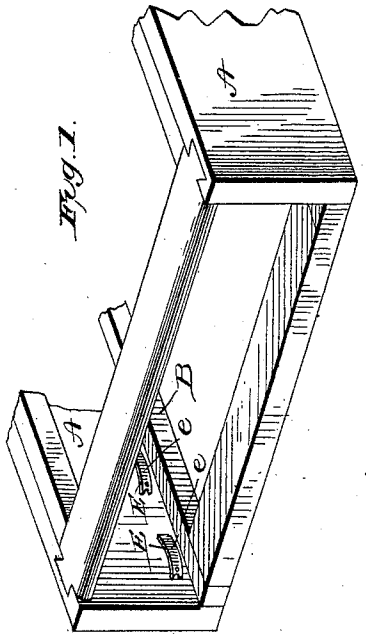
## BUREAU, &c.

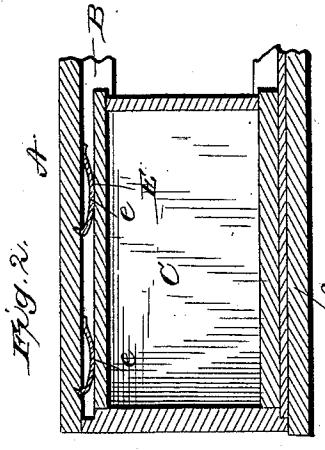
No. 432,371. Patented July 15, 1890.

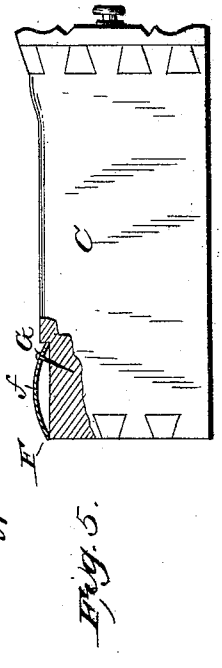



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

DWIGHT C. CLAPP, OF OWOSSO, MICHIGAN, ASSIGNOR OF TWO-THIRDS TO DAVID M. ESTEY AND THE ESTEY MANUFACTURING COMPANY, BOTH OF SAME PLACE.

## BUREAU, &c.

SPECIFICATION forming part of Letters Patent No. 432,371, dated July 15, 1890.

Application filed February 26, 1889. Serial No. 301,210. (No model.)

*To all whom it may concern:*

Be it known that I, DWIGHT C. CLAPP, a citizen of the United States, and a resident of Owosso, in the county of Shiawassee and State of Michigan, have invented certain new and useful Improvements in Bureaus and Similar Articles of Furniture; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view showing a portion of a bureau case or frame of my improved construction, the drawer having been removed. Fig. 2 is a horizontal sectional view of the same. Fig. 3 is a perspective view of the drawer appertaining to my improved bureau. Fig. 4 is a side view of the same. Fig. 5 is a longitudinal vertical sectional view through one of the sides of the drawer, and Fig. 6 is a perspective detail view of one of the springs.

Like letters of reference denote corresponding parts in all the figures.

This invention relates to improvements in frames or cases for bureaus, chiffoniers, and similar styles of "case" furniture in which drawers are used, of that class in which either the case or the drawer, or both, are provided with yielding springs to permit of the free and easy sliding of the drawers in the event of warping or swelling of the wood of which the case or drawer is made; and my present improvement is designed as an improvement upon the invention covered by Letters Patent dated April 17, 1888, and numbered 381,337, and in which invention I employed a single curved spring placed upon the drawer and bearing against the casing of the bureau or the like; and this invention differs from said invention in that I employ a number of small curved springs in the casing to bear against the drawer, and also place a small curved spring or springs on the side or sides of the drawer adapted to bear against the casing, this construction effecting the desired object more thoroughly and perfectly than in my former construction; and my improvement further consists in the detailed construction and combination of the bureau, case, and drawer or drawers, as will be hereinafter more fully described and claimed.

Reference being had to the accompanying drawings, the letter A designates the sides of a bureau, case, or frame of my improved construction. The drawer guides or supports are shown at B and the drawer at C. Each of the drawer-recesses D is provided on its inside, a suitable distance above the drawer-guide B, with one or more springs, (shown at E,) said springs being plain, flat, or leaf springs, bent to form a bulge or curve *e*, adapted to bear against the adjacent side of the drawer.

The drawers are provided with one or more similar springs F, fastened at the upper rear corners, so as to bear against the partitions or drawer-guides above. These drawer-springs F do not differ in construction and arrangement from the case-springs E, and are, like the latter, provided with a raised bulge or swell *f* to give them the requisite flexibility or elasticity. One end of the spring is fastened in the top of the drawer-side, either by means of a rivet G, or the spring may be constructed as shown in the detail view, Fig. 6—that is to say, that end of the springs which is to be fastened in the drawer is bent at right angles and notched to form two sharp downwardly-projecting prongs or teeth H, adapted to be driven into the wood of the drawer-side and forming the means of attachment of the spring to the same. Similarly the case-springs E may be fastened to the inner sides of the drawer-recesses, either by means of rivets, or these springs may be formed with teeth or prongs at one end adapted to be driven into the wood of the case from the inside. By providing both the case and the drawers which are inserted in the case with these springs I provide for swelling or shrinkage of the wood and cause the drawers to move easily and freely at all times. I dispense with yielding bars or slides, thereby greatly simplifying the construction of the bureau. Again, these springs can be manufactured at a very small cost, and by providing them with the fastening prongs or teeth

II they may be fastened either in the case or upon the drawer, or in both, in a moment of time and by any person of ordinary intelligence.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The improvement herein described and shown, consisting in the combination of the drawer with the casing having a series of curved flat springs adapted to bear against the sides of the drawer, substantially as described.

2. The improvement herein described and shown, consisting in the combination of the casing with the drawer having its sides notched or cut out and curved flat springs placed in said notches and bearing against the casing, substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

DWIGHT C. CLAPP.

Witnesses:

E. L. BREWER,

LEO G. BREWER.