No. 657,809. Patented Sept. 11, 1900.

W. BEEBE.

DRAWER EQUALIZER.

(Application filed Mar. 27, 1900.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

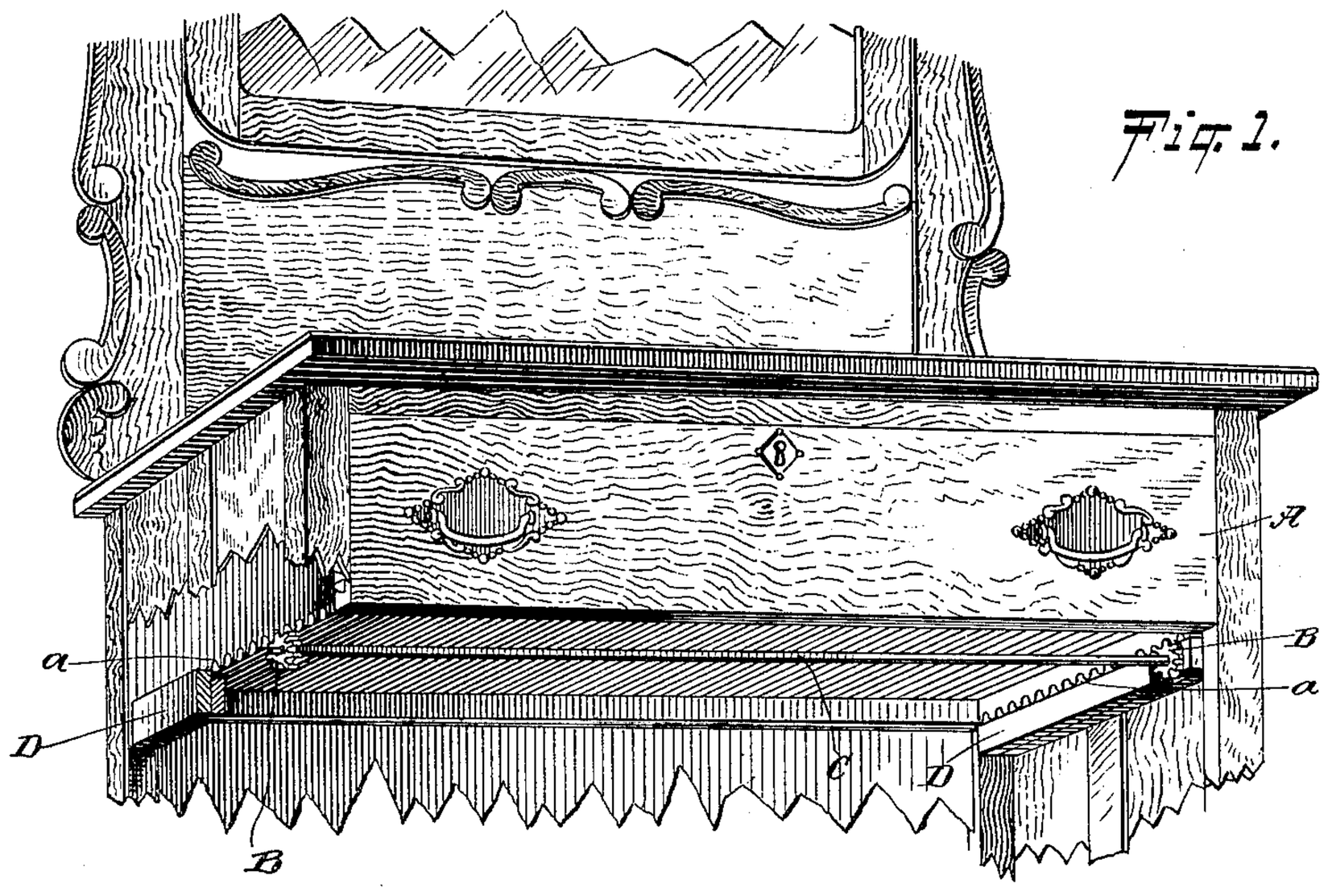
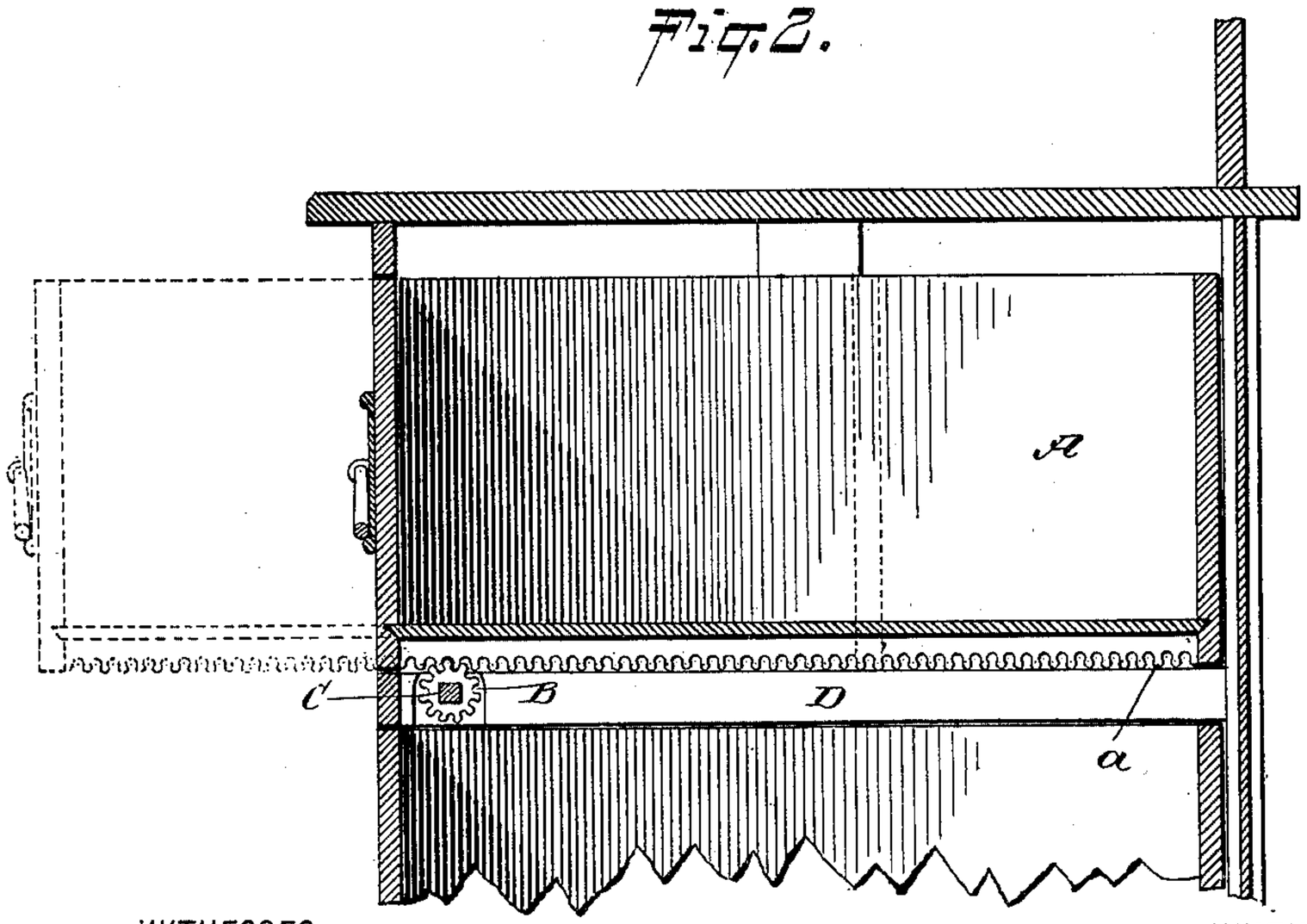


Fig. 2.

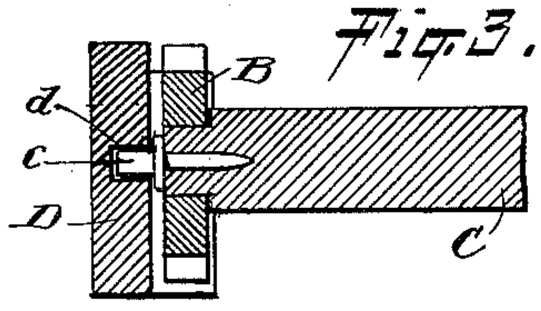


WITNESSES:

William P. Goebel.

I B O'Neil

Fig. 3.



INVENTOR

William Beebe

BY

ATTORNEYS

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Fig. 4.

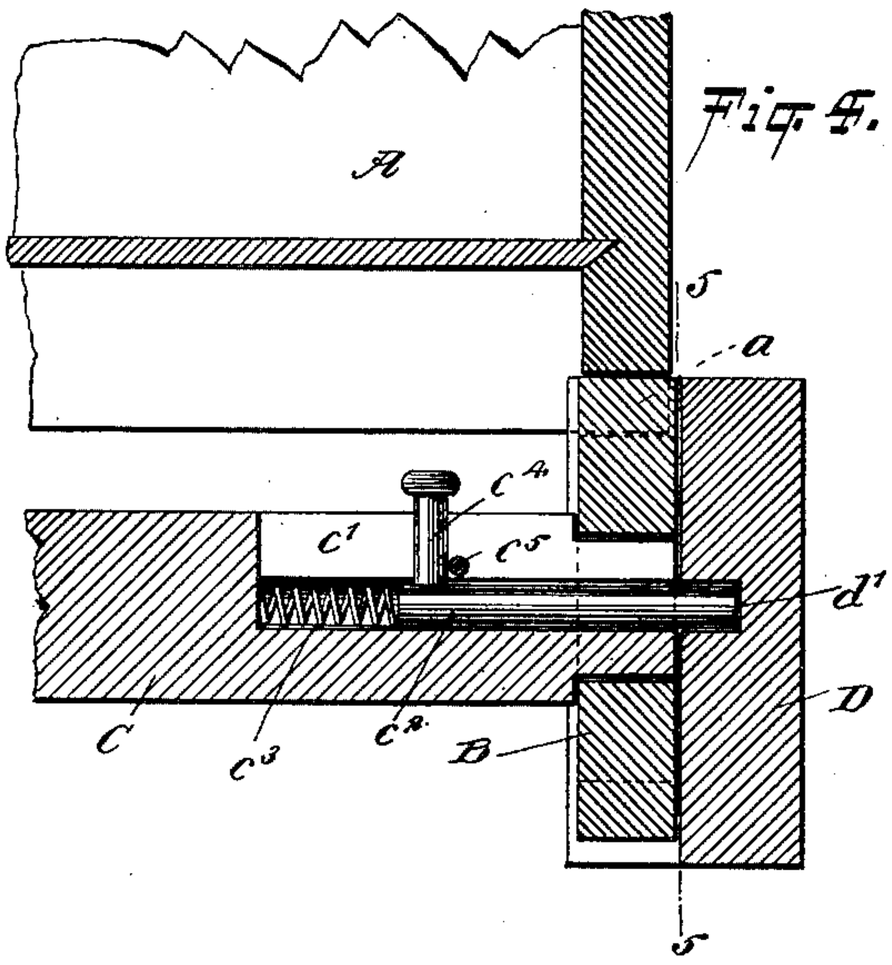


Fig. 5.

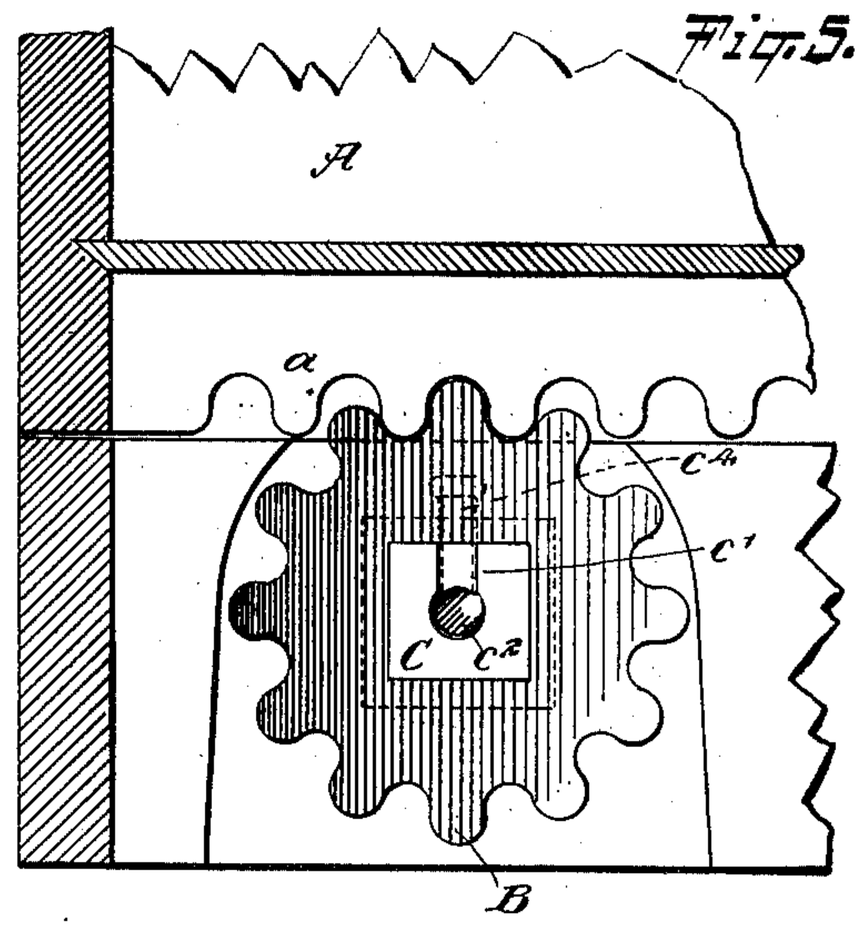


Fig. 6.

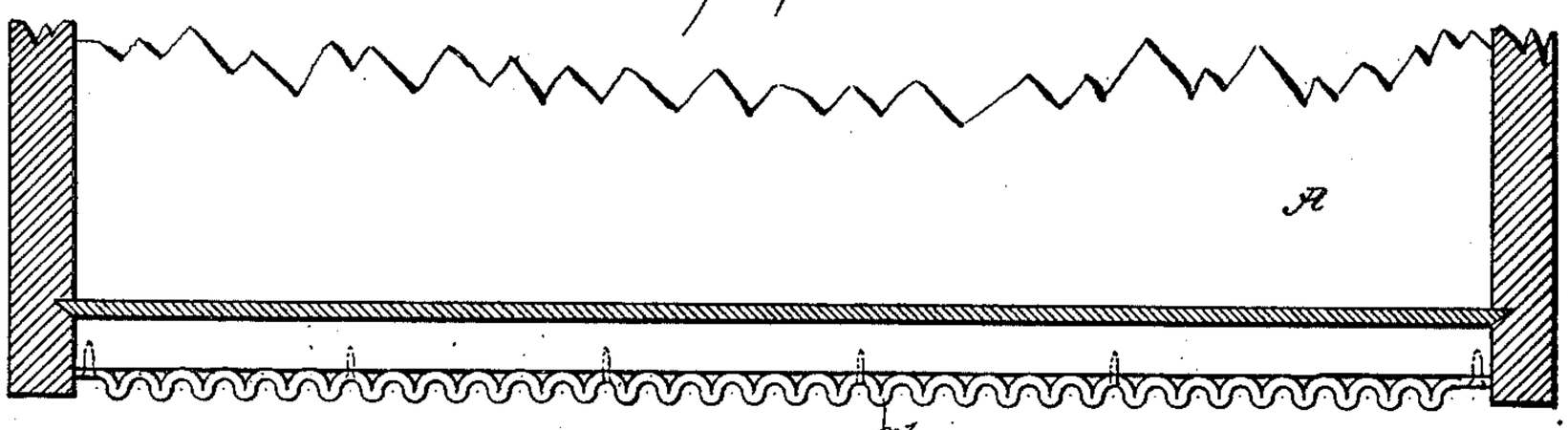


Fig. 8.

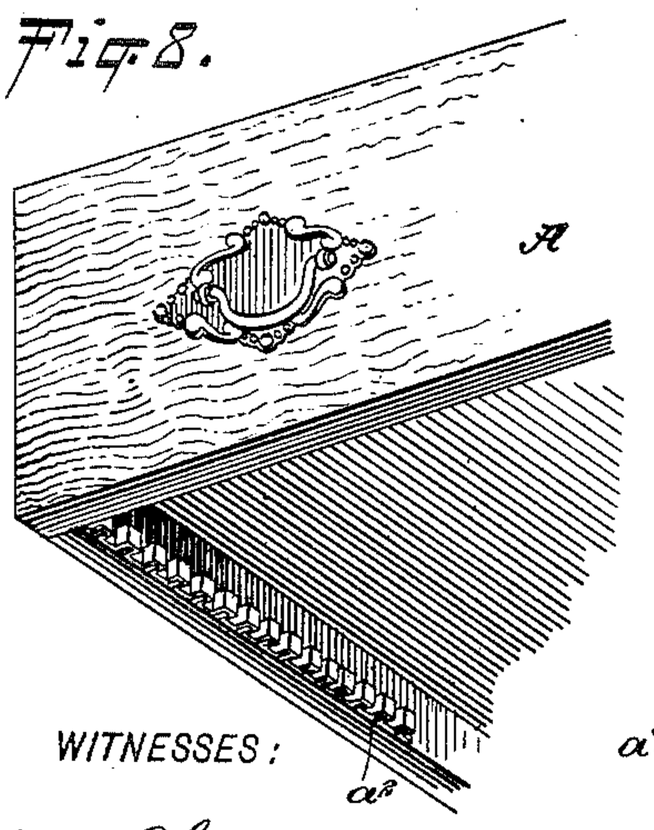


Fig. 7.

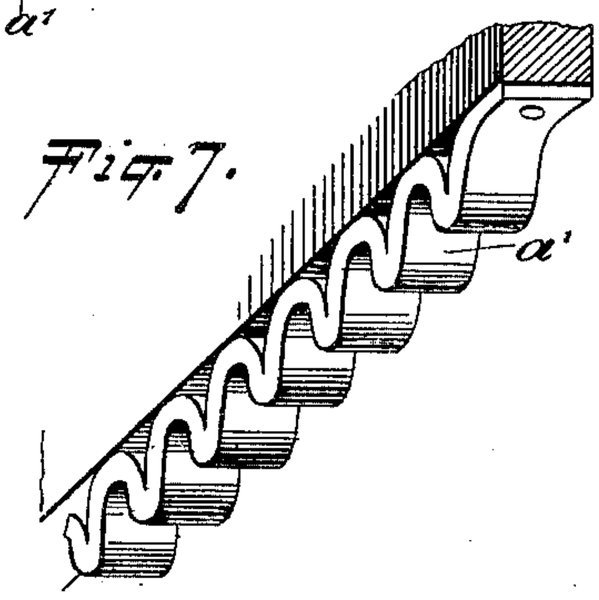
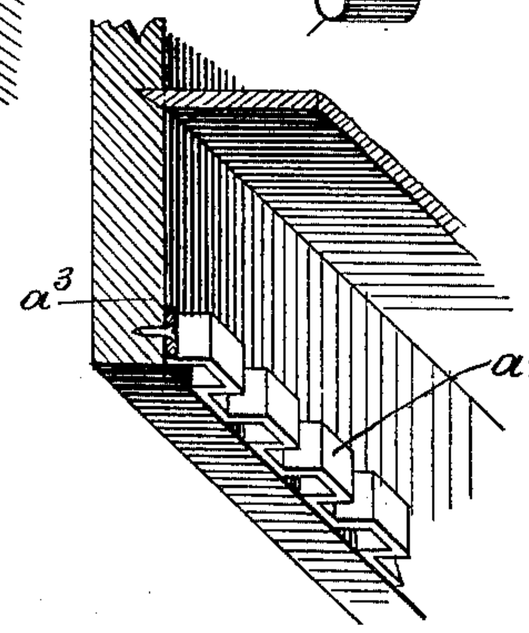


Fig. 9.



WITNESSES:

William P. Goebel.

I. B. Owens.

INVENTOR

William Beebe

BY

ATTORNEYS

UNITED STATES PATENT OFFICE.

WILLIAM BEEBE, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND MARTHA B. MOSHER, OF SAME PLACE.

DRAWER-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 657,809, dated September 11, 1900.

Application filed March 27, 1900. Serial No. 10,355. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BEEBE, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Drawer-Equalizer, of which the following is a full, clear, and exact description.

The purpose of this invention is to provide means for equalizing the movement of drawers in furniture, causing the drawers to move equally at both sides and preventing them from binding, which objection is almost invariably present in articles of furniture as formerly constructed.

This specification is the disclosure of several forms of my invention, while the claim defines the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a fragmentary perspective view showing a dressing-case with my invention applied thereto. Fig. 2 is a vertical section of the same. Fig. 3 is a detail section showing one end of the shaft and the gear thereat. Fig. 4 is a detail section showing the other end of the shaft and the gear thereat. Fig. 5 is a sectional view on the line 5 5 of Fig. 4. Fig. 6 is a fragmentary section showing a modified construction. Fig. 7 is a fragmentary perspective view further illustrating such modification, and Figs. 8 and 9 are fragmentary perspective views illustrating a further modification.

As shown in Figs. 1 to 5, the drawer A, which may be of any form, has the lower edges of its sides formed with teeth *a* thereon, thus producing a rack. These teeth are exposed at the bottom of the drawer and mesh, respectively, with pinions B, which are fastened to the ends of a shaft C, and this shaft is mounted in the parts D of the framing of the dressing-case, said shaft extending transversely across the dressing-case beneath the drawer. The pinions B are contained in cavities formed in the said parts D of the framing, as shown best in Figs. 2 and 5. Now it is clear that with the pinions B meshed with the racks *a*, as shown, the drawer is caused to move true into and out of the dressing-case and unequal movement of its sides is prevented. Thus I avoid the binding of the drawer when it is moved.

As shown in Fig. 3, one end of the shaft C is provided with a journal *c*, which is seated in the bearing *d*. The other end of the shaft C is formed (see Figs. 4 and 5) with a longitudinally-disposed slot *c'*, such slot extending from the center or axial point of the shaft outward to the side thereof. In this slot is placed a journal c^2, which is slidable therein to project outward, as shown in Fig. 4, and is pressed to this position by an expansive spring c^3. The journal c^2 is provided with a thumb-pin c^4 for permitting the journal to be drawn back to a position wholly within the slot *c'*. The outward movement of the journal c^2 is limited by a stop c^5 of any suitable form. The journal c^2 is fitted to turn in a bearing *d'* in the frame D, which bearing is of the same form as the bearing *d*. Under this arrangement the shaft C, with its attached pinions B, may be placed in and out of position at will. This is effected by projecting the journal *c* into the bearing *d* and then pushing the journal c^2 inward, so that it lies wholly within the slot *c'*. The end of the shaft C may then be placed directly opposite the bearing *d'* and the journal c^2 allowed to spring out into its bearing. This construction will be found convenient in connection with all styles of furniture, and also not only in building new furniture, but in adapting the invention to furniture already in use. The invention may be applicable to existing furniture with a facility equal to that with which it may be applied during the construction of the furniture. In applying the shaft C to furniture already built it is simply necessary to bore two holes, forming the bearings *d* and *d'*, as explained. In doing this it is not necessary to form recesses or cavities in the framing of the furniture, as I have shown in connection with the arrangement in Figs. 1 to 5, inclusive, since the pinions will then set inside of the framing D and in position properly to mesh with the rack, which will be set in a manner hereinafter described.

If desired, the racks need not be formed by cutting them in the material forming the sides

of the drawer. As shown at a' in Figs. 6 and 7, I may form the rack of a separate piece of material—that is to say, of a strip of metal with the rack-teeth suitably produced thereon. This rack is fastened by screws or otherwise to the lower edges of the sides of the drawer, and the operation of the device when thus arranged is the same as that previously described. The racks may also be fastened to the inner faces of the sides of the drawer below its bottom, as shown at a^2 in Figs. 8 and 9, in which case the racks are formed by producing angular bends in the strip of metal and placing the strip so that it will engage the pinions in an edgewise position. This construction enables the racks to be formed in any desired lengths and subsequently cut off to suit the size of the drawer to which they are to be applied. This rack a^2 is especially useful in adapting the drawer-equalizer to furniture already constructed.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination with an article of furniture having a drawer-opening, and provided in the inner faces of the walls of said opening with oppositely-arranged recesses forming bearings, and a drawer fitted to slide in the said opening and provided with racks on its bottom, one at each end, of a shaft below the drawer and provided at its ends with pinions meshing with the racks on the drawer, said shaft having at one end a fixed journal fitting in one of the said recesses or bearings, and provided at its other end, with a central and longitudinally-extending passage and a slot extending from the passage out through the side of the shaft, a journal fitted to slide in the passage of the shaft and fitting in the other recess or bearing, the said journal being provided with a lateral projecting pin extending out through the slot of the shaft and serving as a means for moving the journal inward, a spring in the passage and serving to force the journal outward, and a stop extending across the slot of the shaft and with which the pin of the journal engages to limit the outward movement of the journal, substantially as herein shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM BEEBE.

Witnesses:
F. W. HANAFORD,
EVERARD BOLTON MARSHALL.