

H. SMITHSON.

DROP DRAWER.

APPLICATION FILED MAR. 18, 1908.

912,328.

Patented Feb. 16, 1909.

Fig. 2.

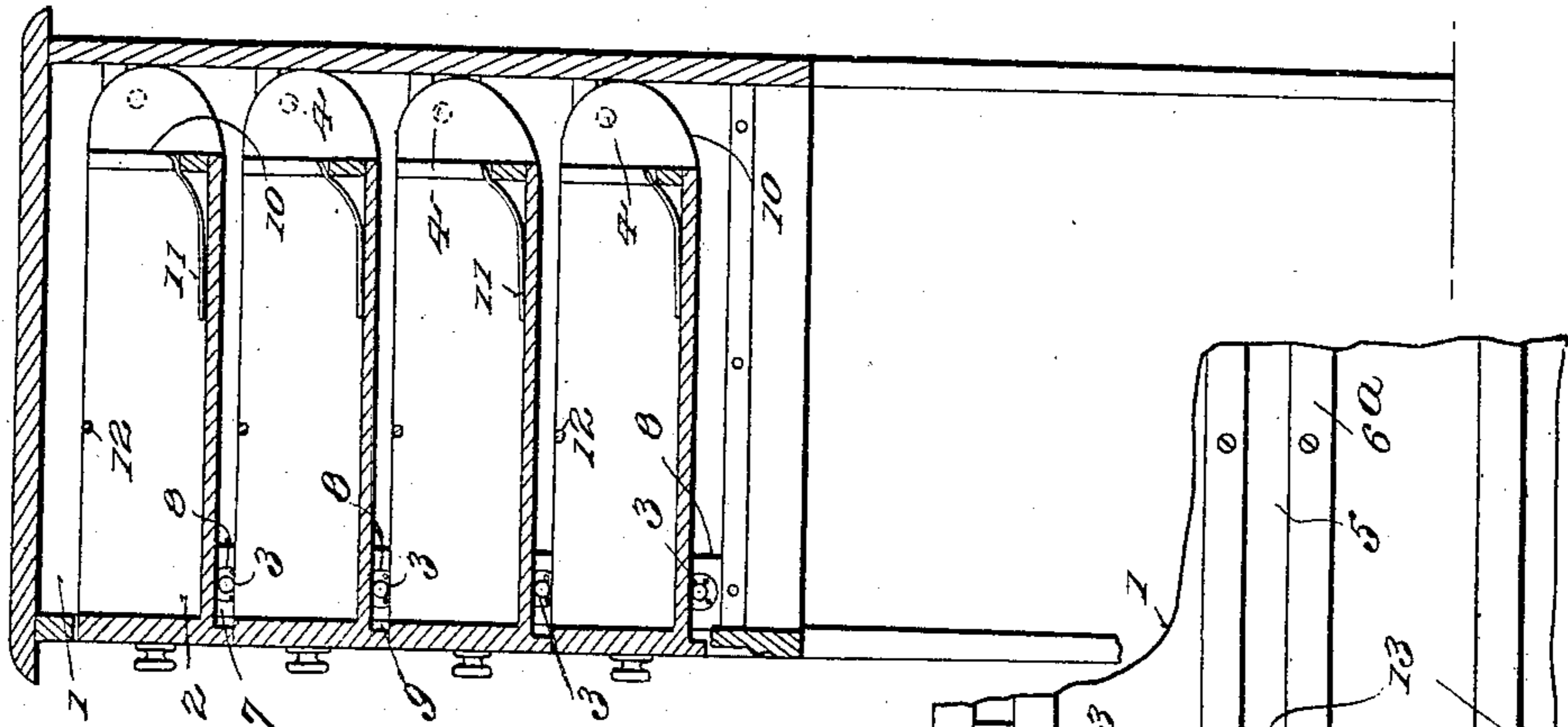


Fig. 4.

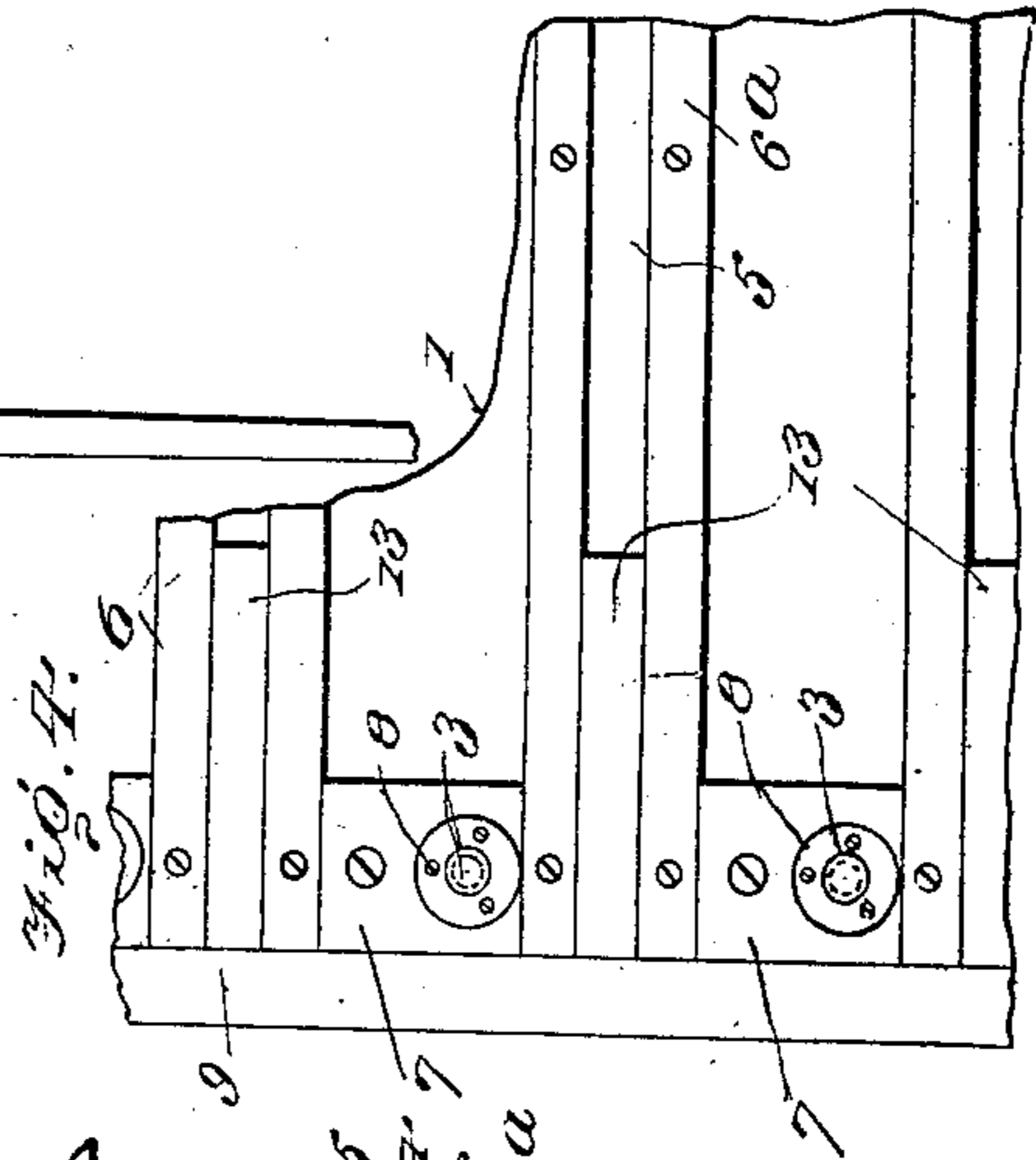


Fig. 1.

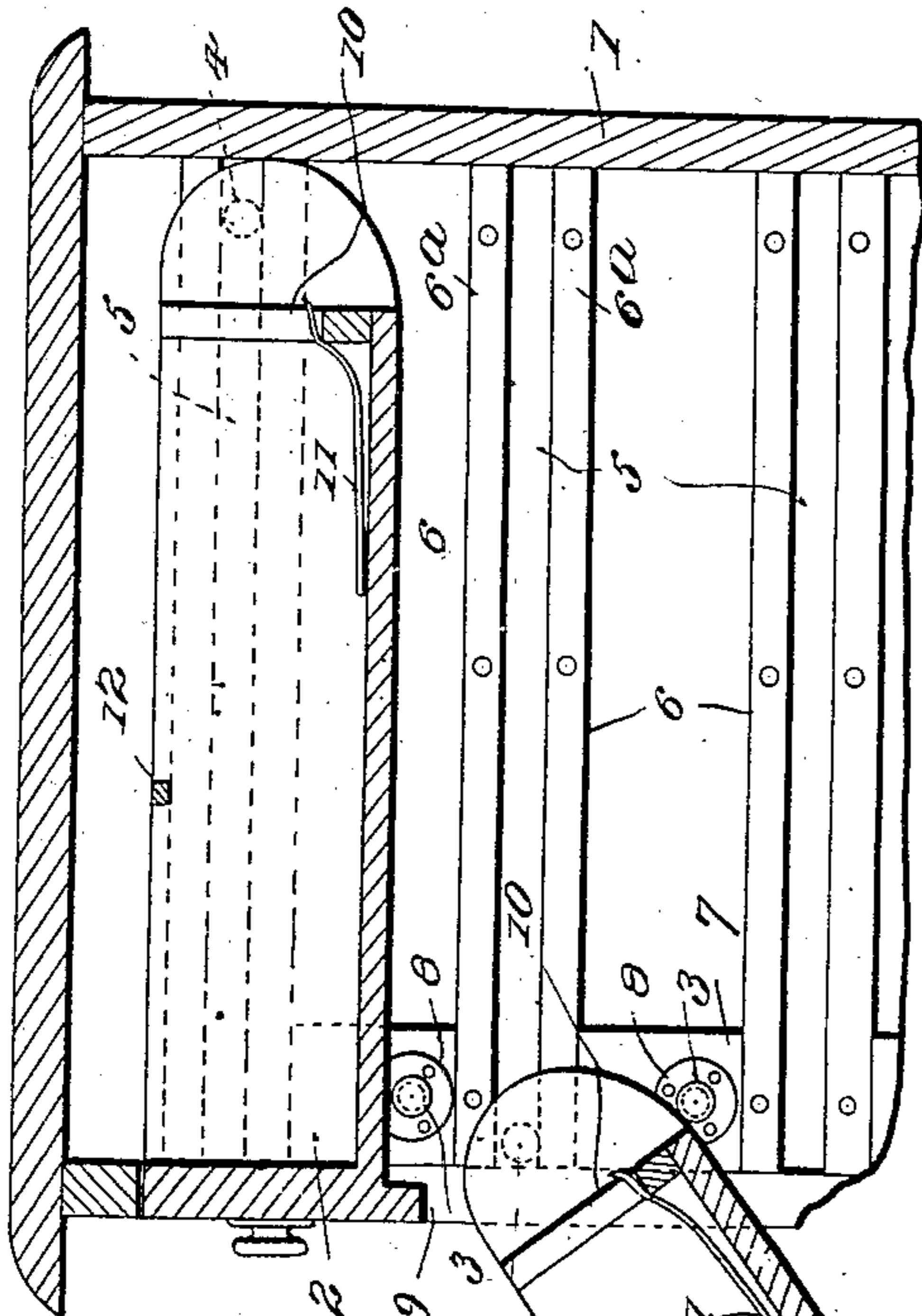
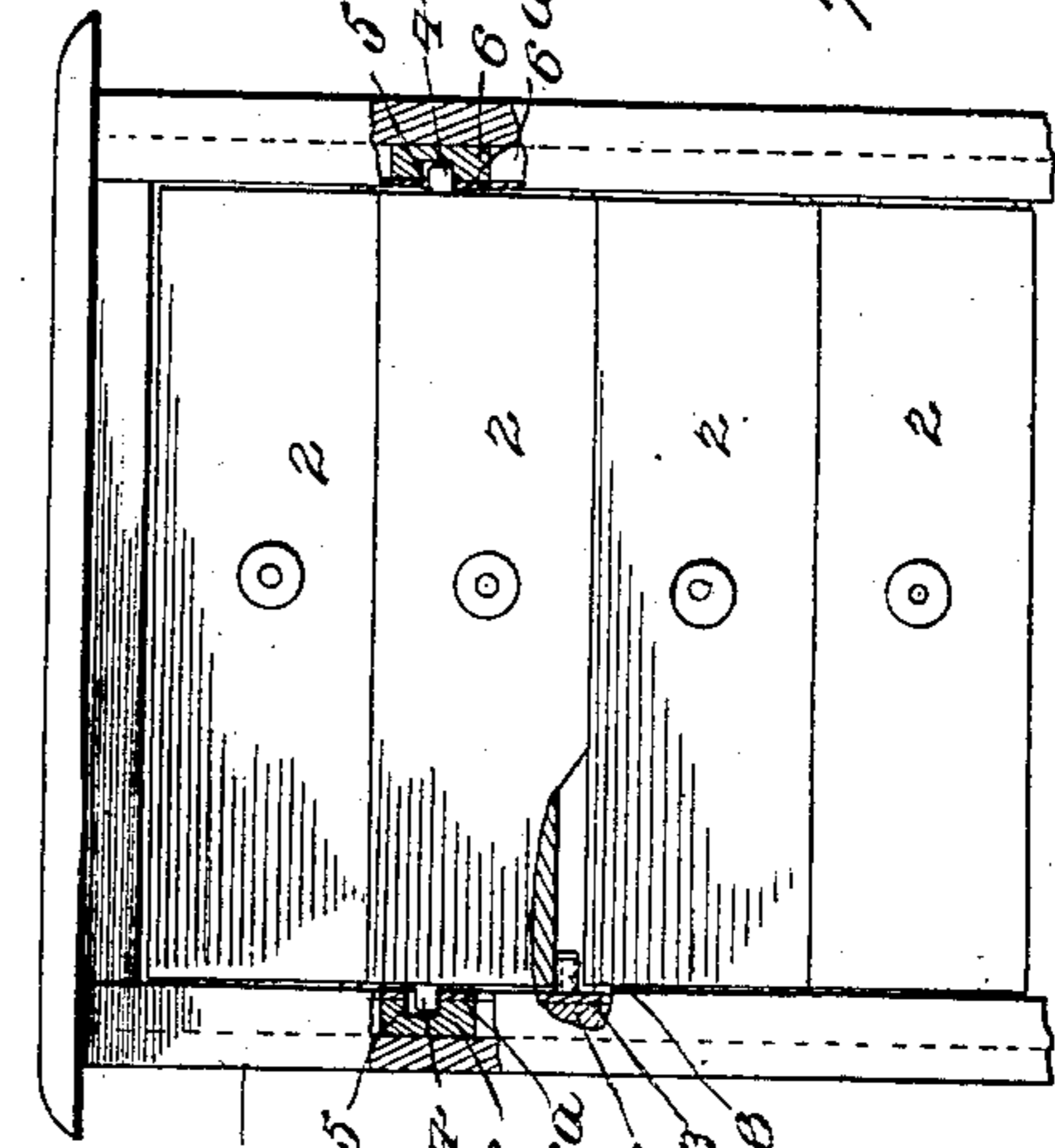


Fig. 3.



Witnesses

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# UNITED STATES PATENT OFFICE.

HENRY SMITHSON, OF ORTONVILLE, MINNESOTA, ASSIGNOR OF ONE-THIRD TO CHARLES E. CHRISMAN, OF ORTONVILLE, MINNESOTA.

## DROP-DRAWER.

No. 912,328.

Specification of Letters Patent.

Patented Feb. 16, 1909.

Application filed March 18, 1908. Serial No. 421,941.

*To all whom it may concern:*

Be it known that I, HENRY SMITHSON, citizen of the United States, residing at Ortonville, in the county of Bigstone and State of Minnesota, have invented certain new and useful Improvements in Drop-Drawers, of which the following is a specification.

The present invention relates to furniture and more particularly to improvements in drawers of that type which are peculiarly mounted so as to be tilted into an angular position after being withdrawn.

The object of the invention is to design a novel drawer which is simple and inexpensive in its construction and will operate easily and smoothly without binding of the parts.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a vertical sectional view through the upper portion of a casing provided with drawers mounted in accordance with the invention, one of the drawers being withdrawn and tilted into an inclined position. Fig. 2 is a similar view on a reduced scale showing the entire casing. Fig. 3 is a front elevation of the casing, parts being shown in section. Fig. 4 is a detail view of one of the interior sides of the casing showing the use of filling blocks to prevent entire withdrawal of the drawer.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawing the numeral 1 designates the casing within which the drawers 2 are mounted, the said drawers being disposed one above the other and being adapted to be tilted into an angular or upright position after being withdrawn. These drawers 2 may be of any conventional construction and rest upon guide rollers 3 carried by the sides of the casing 1 toward the forward portion thereof. It will also be observed that the sides of the drawers 2 are provided at their rear ends with the rollers 4 which are received within guide ways 5 on opposite sides of the casing. In the preferred embodiment of the invention these

rollers 4 are disposed about one-third way from the top of the drawers and if found desirable both the rollers 4 and the guide rollers 3 may be provided with ball bearings. As shown on the drawings the guide ways 5 are in the nature of grooves which are formed in cleats 6 secured to the casing and if found desirable metallic reinforcing strips 6<sup>a</sup> may be secured to the cleats upon opposite sides of the grooves to prevent wear. Blocks 7 are interposed between the various cleats 6 at the front of the casing and have the plates 8 secured thereto, the said plates being formed with bearings upon which the guide rollers 3 are journaled. This construction has the advantage of enabling the sides of the casing to be formed of panels or comparatively thin material. The ends of the grooves or guide ways 5 are closed by the vertical strips 9 which form stops to engage the rollers 4 and prevent the drawers being withdrawn entirely from the casing. It will be entirely obvious however that after the drawers have been withdrawn the same can be tilted downwardly into an angular position, the magnitude of the angle through which they may be tilted depending upon the distance between the front of the casing and the guide rollers 3. In the present instance the rear ends of the drawers are cut away as indicated at 10 and strips 11 are provided for swinging the contents of the drawer outwardly away from the bottom. It will also be observed that a transverse strip 12 extends across the top of each of the drawers and these strips aid in retaining the contents of the drawers in position therein. Should it for any reason be desired to prevent tilting movement of the drawers the desired result can be accomplished by placing the filling strips 13 in the forward portions of the grooves or guide ways 5, the said filling strips engaging the rollers 4 and preventing the drawers being withdrawn to a sufficient extent to be tilted.

Having thus described the invention, what is claimed as new is:

In a drop drawer, the combination of a casing, corresponding series of transverse cleats secured to the interior of the casing upon opposite sides thereof, each of the cleats being formed with a longitudinal groove, vertical strips applied to the front of the casing and extending across the for-

ward ends of the said grooves, blocks inter-  
posed between the cleats of each series at  
the front of the casing, guide rollers carried  
by the blocks and spaced from the front of  
5 the casing, drawers slidable upon the guide  
rollers, and a second set of rollers carried  
by the sides of each drawer and operating  
within the grooves of the corresponding  
cleats, the said second rollers being located  
10 toward the rear end of the drawers and co-

operating with the guide rollers to admit  
of the drawers being tilted into an inclined  
position after being withdrawn.

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

HENRY SMITHSON. [L. s.]

Witnesses:

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M. I. MATTHEWS.