

No. 668,078.

Patented Feb. 12, 1901.

H. F. BAKER.
ANTIFRICTION DRAWER SUPPORT.

(Application filed May 7, 1900.)

(No Model.)

2 Sheets—Sheet 1.

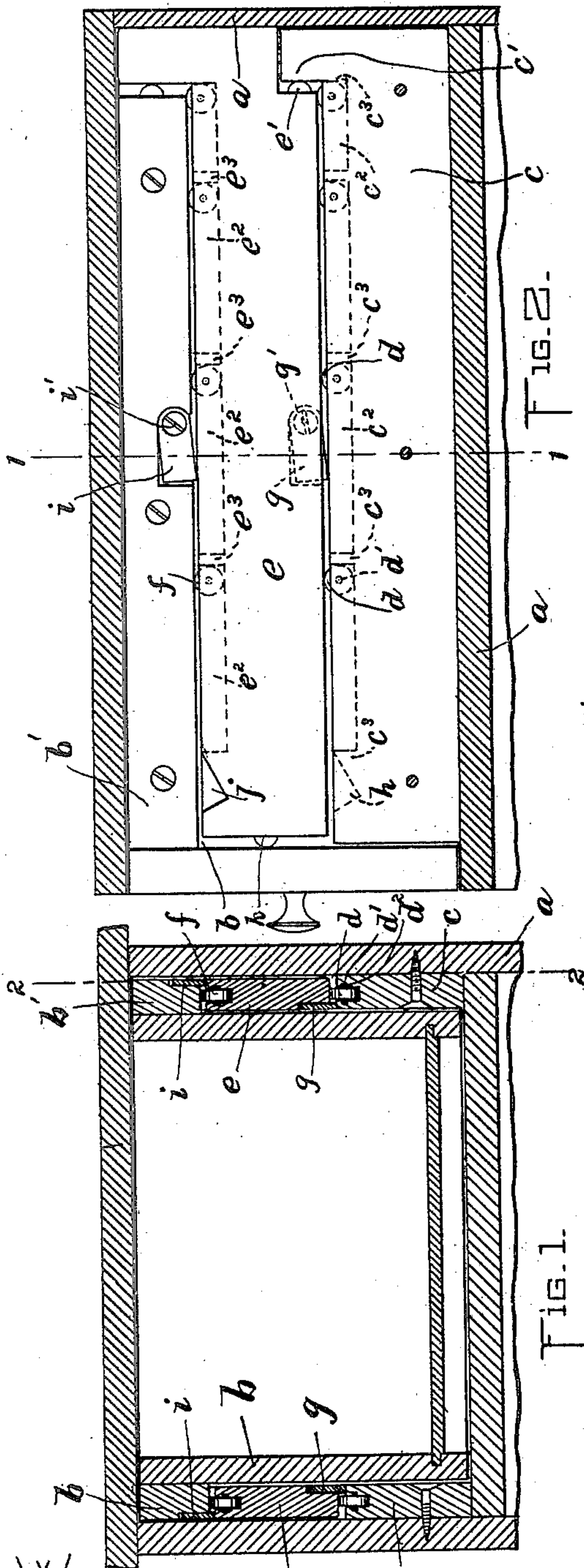


FIG. 1.

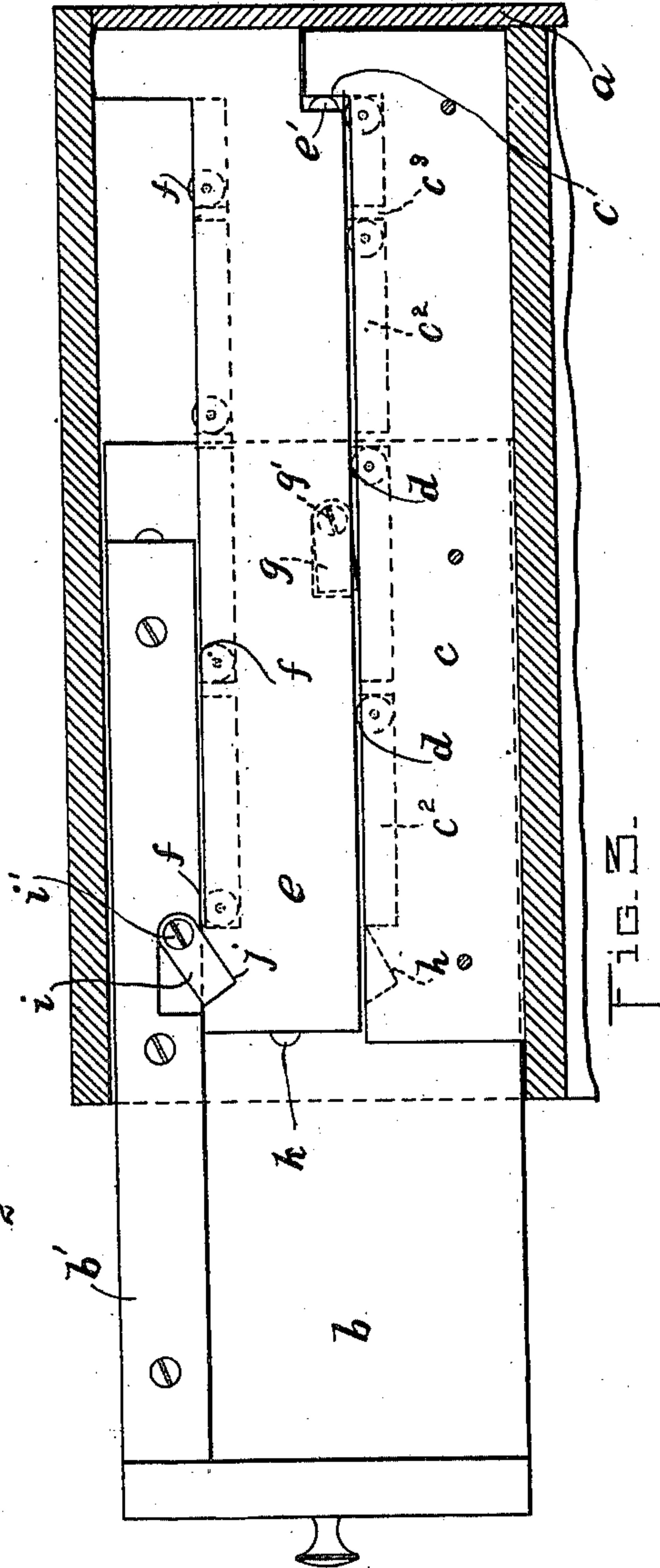


FIG. 2.

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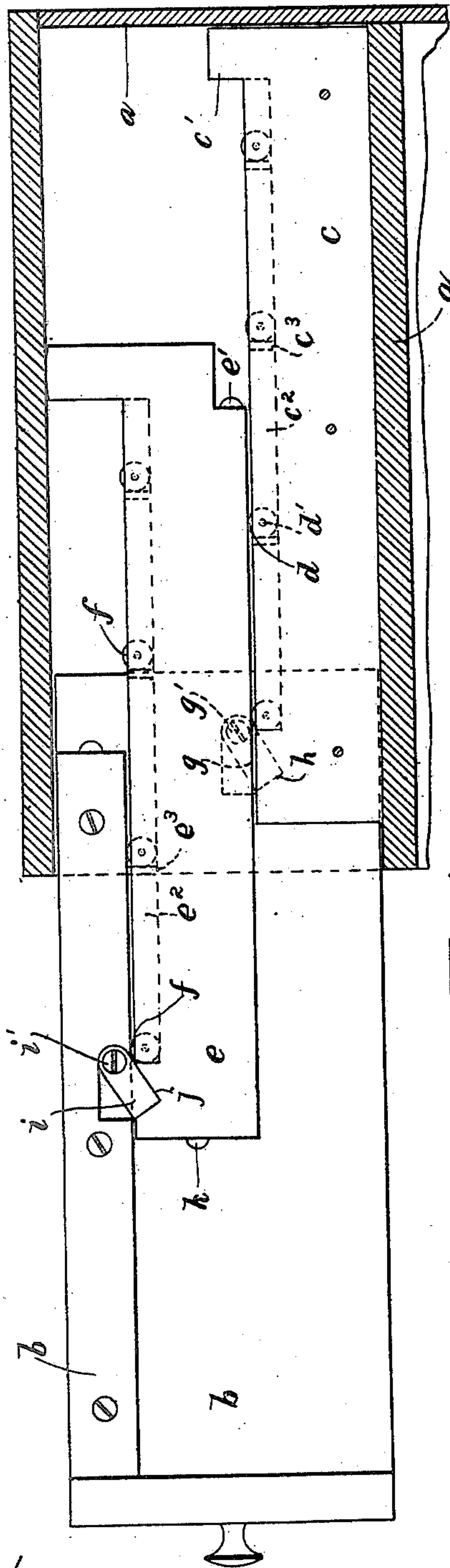


FIG. 4.

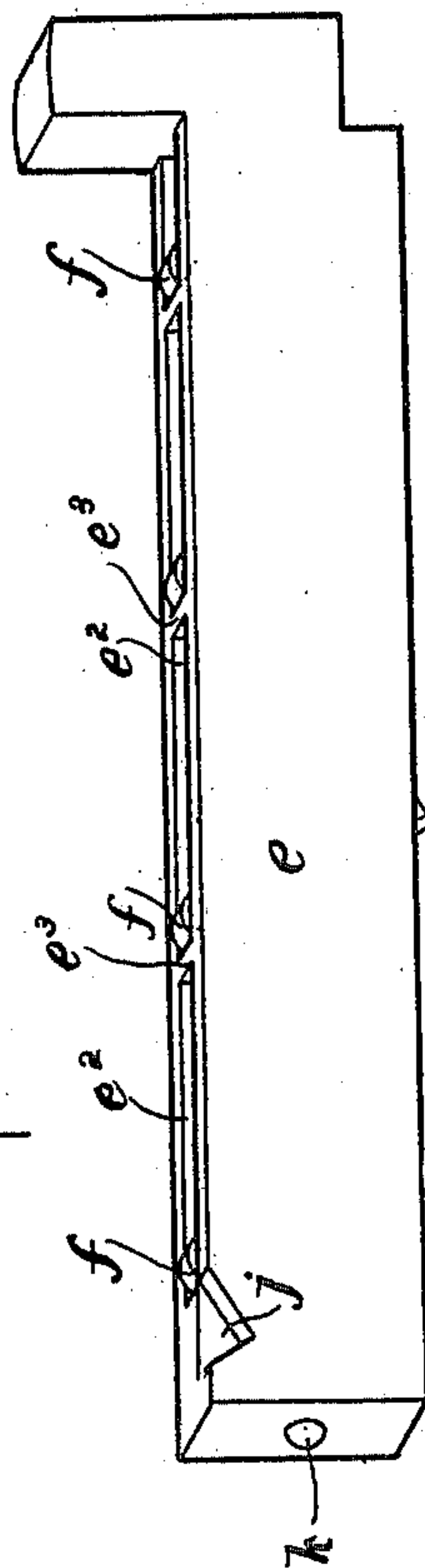


FIG. 5.

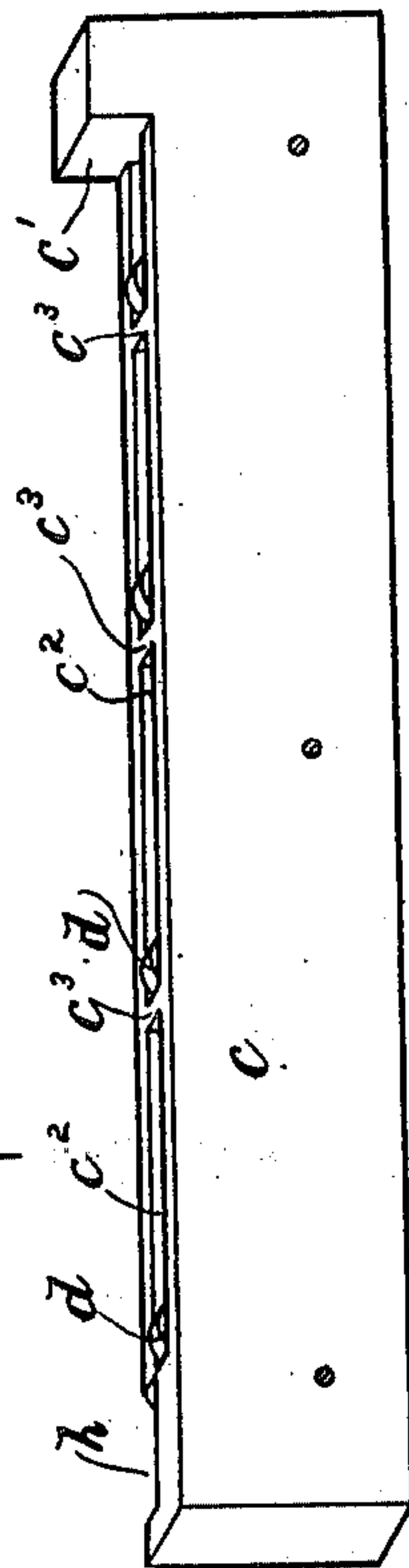


FIG. 6.

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UNITED STATES PATENT OFFICE.

HERBERT F. BAKER, OF SOMERVILLE, MASSACHUSETTS.

ANTIFRICTION DRAWER-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 668,078, dated February 12, 1901.

Application filed May 7, 1900. Serial No. 15,685. (No model.)

To all whom it may concern:

Be it known that I, HERBERT F. BAKER, of Somerville, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Antifriction Drawer-Supports, of which the following is a specification.

This invention relates to furniture-drawers which are supported by slides located at the sides of the drawer and having a limited movement in fixed supports on the drawer-casing, as in the well-known Taylor slide.

The invention has for its object to provide a simple and effective antifrictional drawer-supporting device comprising slides movable on guides on the casing, a drawer movable independently and with the slides, and rollers interposed between the drawer and slides and between the slides and the fixed guides on the casing, the arrangement being such that the movable parts—namely, the drawer and slides—can be readily assembled and disconnected, and the friction involved in the movement of the drawer and slides may be reduced to the minimum.

The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a transverse section of a drawer, its casing, and drawer-supporting slides, embodying my invention, the plane of the section being on line 1 1 of Fig. 2. Fig. 2 represents a section on the plane of line 2 2 of Fig. 1, showing the drawer closed. Fig. 3 represents a view similar to Fig. 2, showing the drawer at the outer end of its independent movement, the slides being at the inward extreme of their movement. Fig. 4 represents a view similar to Figs. 2 and 3, showing both the drawer and the slides at the outward extreme of their movement. Fig. 5 represents a perspective view of one of the slides. Fig. 6 represents a perspective view of one of the track-bars.

The same reference characters indicate the same parts in all the figures.

In the drawings, *a* represents a casing, which may be a part of a desk or other structure, and *b* represents a drawer movable therein. To the sides of the casing are affixed guide-bars *c c*, having shoulders *c'* at

their rear ends forming stops to limit the inward movement of the slides hereinafter referred to, and a series of grooves *c²* in their upper edges, said grooves being arranged in a row and each having roller-stops *c³* at its ends.

d d d represent rollers fitted to roll freely in the grooves *c²*, and preferably retained in said grooves by means of trunnions *d'*, formed on the sides of the rollers, and entering slots *d²*, Fig. 1, formed in the sides of the grooves.

e e represent slides the lower edges of which bear upon the projecting upper portions of the rollers *d*, their inner ends being recessed to accommodate the shoulders *c'* and provided with elastic cushions or buffers *e'*. The upper edges of the slides *e* are provided with grooves *e²*, having roller-stops *e³* at their ends, rolls *f f* being fitted to roll loosely in said grooves, the form and arrangement of the grooves, stops, and rollers being preferably the same as that of the corresponding parts above described in connection with the guide-bars *c*. The sides of the drawer are provided with outwardly-projecting flanges *b'*, which rest upon the upper portions of the rollers *f*.

To the inner sides of the slides *e* are pivoted at *g'* gravitating dogs *g*, which rest upon the upper edges of the fixed guide-bars *c*, between the inner sides of said guide-bars and the rows of grooves *c²* formed therein.

h h represent recesses formed in the inner sides of the fixed guide-bars *c* to receive the dogs *g* when the slides reach the outer ends of their movement, as shown in Fig. 4, the said dogs and recesses constituting complementary stop members which prevent the withdrawal of the slides from the casing, the dogs being exposed on the inner walls of the drawer-receiving space when the drawer is removed, so that they may be readily disengaged from the guide-bars *c* to permit the removal of the slides.

i i represent gravitating dogs pivoted at *i'* to the outer sides of the drawer-flanges *b'*, said dogs being out of alinement with the grooves in the slides and resting on the upper edges of the slides between the said grooves and the outer surfaces of the slides.

j j represent recesses formed in the outer sides of the slides, at the outer portions thereof, in position to engage the dogs *i* when the

drawer has been pulled partly out, as indicated in Fig. 3, the dogs *i* and recesses *j* constituting complementary coupling or connecting members, whereby the drawer is engaged with the slides by the downward-swinging movement of the dogs during the outward movement of the drawer, so that the slides are caused to move outwardly with the drawer until the outward movement of the slides and drawer is arrested by the engagement of the dogs *g* with the notches *h*, as shown in Fig. 4. When the drawer is moved inwardly, the dogs are swung upwardly.

The dogs *i* are arranged so that when the drawer is pulled out, as shown in Fig. 4, the dogs are exposed on the outer sides of the drawer and can be readily disengaged from the recesses *j* to permit the removal of the drawer from the slides and casing, it being necessary only to raise the dogs out of engagement with the recesses *j* to accomplish this result.

In assembling the parts above described the slides are first inserted into position on the guide-bars *c*, and the drawer is then inserted into position on the slides, the dogs *i* yielding while they are being pushed over the outer ends of the slides. In separating the parts the drawer is pulled out, then disengaged from the slides by lifting the dogs, and then entirely withdrawn, thus exposing the slides, which are now readily accessible at the sides of the drawer-receiving space, so that they can be readily removed.

By locating each set of rollers in a row of grooves having roller-stops at their ends, there being one groove for each roller, I am enabled to keep the rollers properly distributed to support the weight upon them to the best advantage, the length of the grooves being proportioned to the diameter of the rollers and to the extent of movement of the slides and drawer, so that the rollers will travel substantially the length of movement of the parts supported by them in passing from end to end of their containing-groove.

The outer ends of the slides *e* are provided with rubber buffers *k*, against which the ends of the front piece of the drawer abut when the drawer is pushed in, as shown in Fig. 2.

The rollers *f* and *d* may be inserted in the grooves of the slides and guide-bars by making the said grooves continuous from end to end of the said slides and bars, then inserting the rollers in the outer ends of the grooves

and moving them along to the desired points, and then inserting in the grooves the pieces which form the stops *e*³ and *c*³, said pieces being secured by glue or otherwise.

I claim—

1. In a drawer-support, the combination of a drawer-casing, track-bars affixed thereto at opposite sides of the drawer-space, slides movable longitudinally over said track-bars, a drawer provided with flanges projecting over said slides, the upper edges of the track-bars and the upper edges of the slides being provided with grooves, rollers movable in said grooves, the rollers in the grooves of the track-bars supporting the slides, while the rollers in the slides support the flanges of the drawer, gravitating locking-dogs on the drawer and notches in the slides, whereby the drawer is engaged with the slides when the drawer is pulled partially out, and gravitating locking-dogs on the slides and notches in the guides, whereby the outward movement of the slides and drawer is limited, the last-mentioned locking-dogs being on the inner sides of the slides, so that they are accessible from the drawer-receiving space when the drawer is removed.

2. In a drawer-support, the combination of a drawer-casing, track-bars affixed thereto at opposite sides of the drawer-space, slides movable longitudinally over said track-bars, a drawer provided with flanges projecting over the slides, the upper edge of each track-bar and the upper edge of each slide being provided with a row of roller-receiving grooves and roller-stops between the grooves of each row, each groove having a roller which is shiftable between the ends of the groove, the inner sides of the track-bars and the outer sides of the slides being provided with dog-engaging recesses, while the inner sides of the slides and the outer sides of the drawer-flanges are provided with gravitating dogs, the dogs on the flanges being arranged to drop into the notches in the slides when the drawer is pulled partly out, while the dogs on the slides are adapted to drop into the notches in the track-bars to limit the outward movement of the slides and drawer.

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

HERBERT F. BAKER.

Witnesses:

R. L. BAKER,

C. F. BROWN.