

No. 672,416.

Patented Apr. 16, 1901.

G. B. N. DOW.

FASTENER FOR SHADES, SASHES, &c.

(Application filed July 23, 1900. Renewed Mar. 1, 1901.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

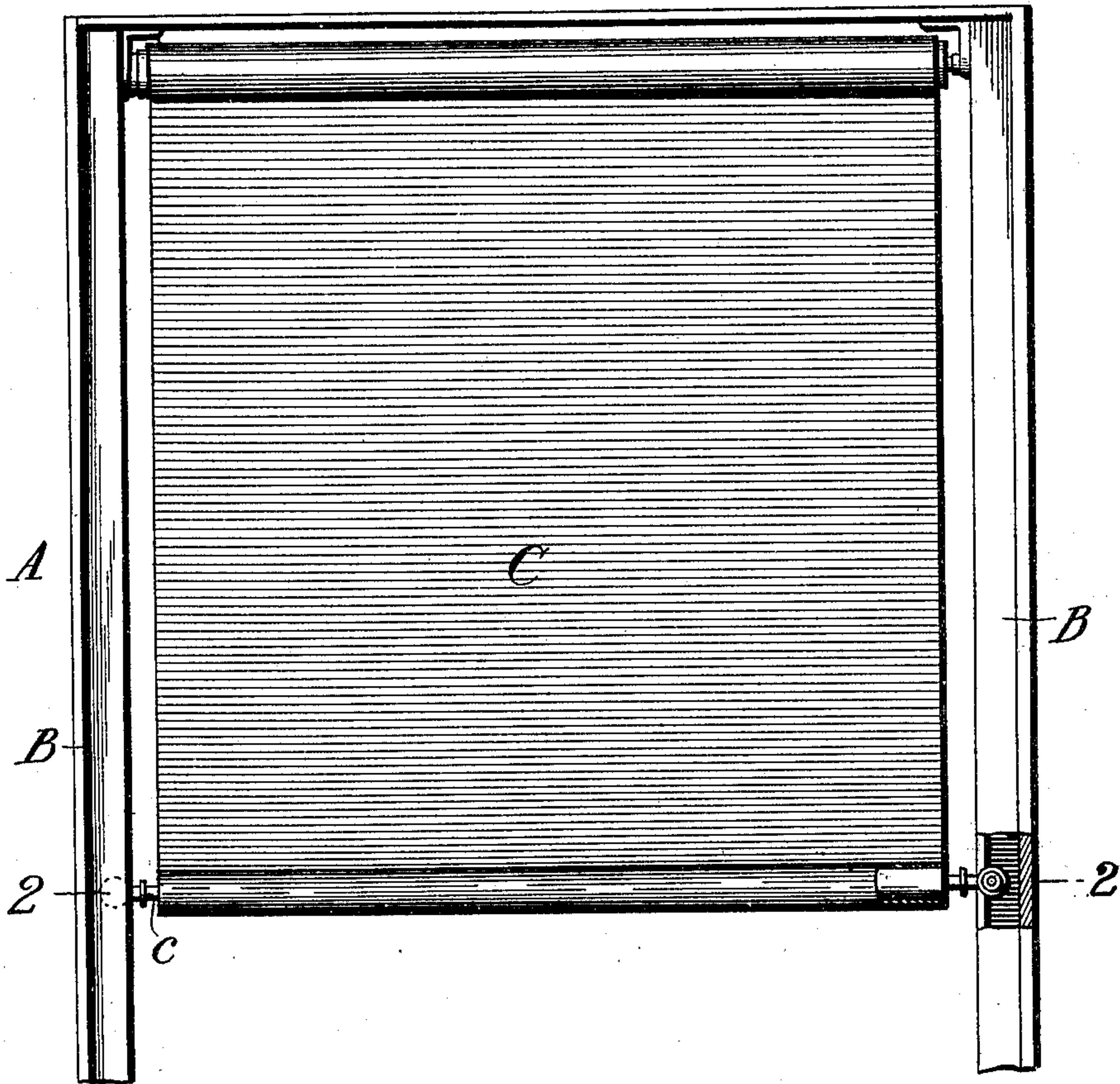


Fig. 2.

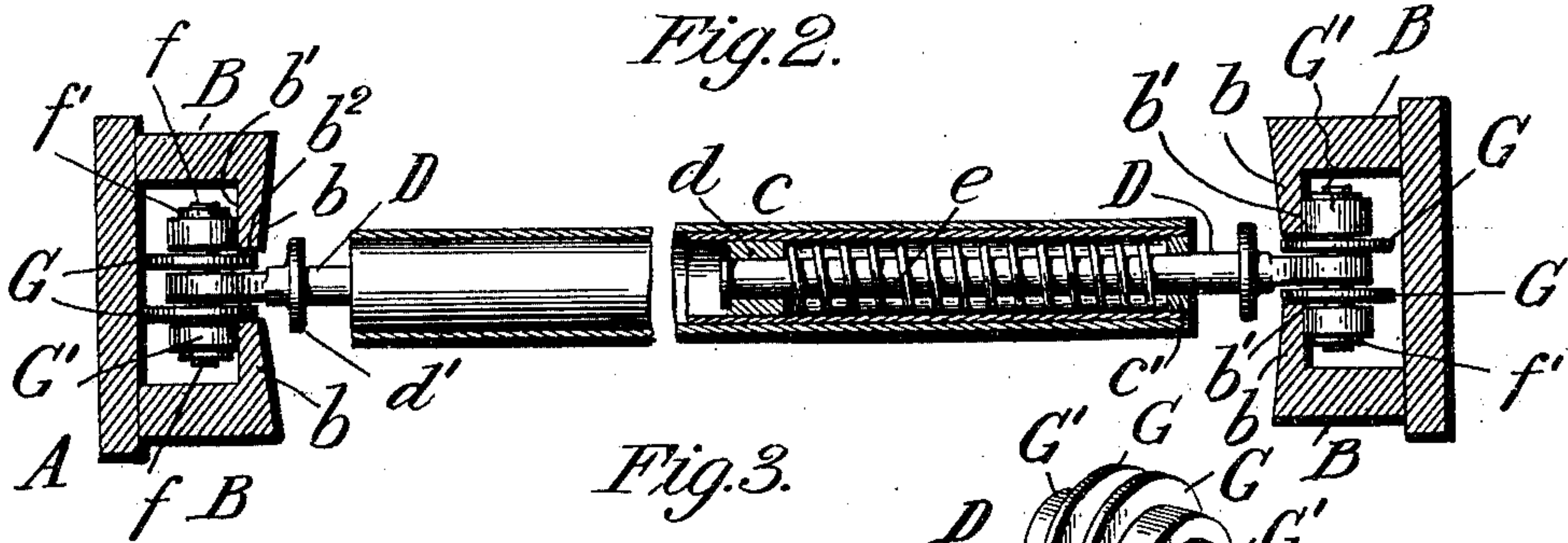
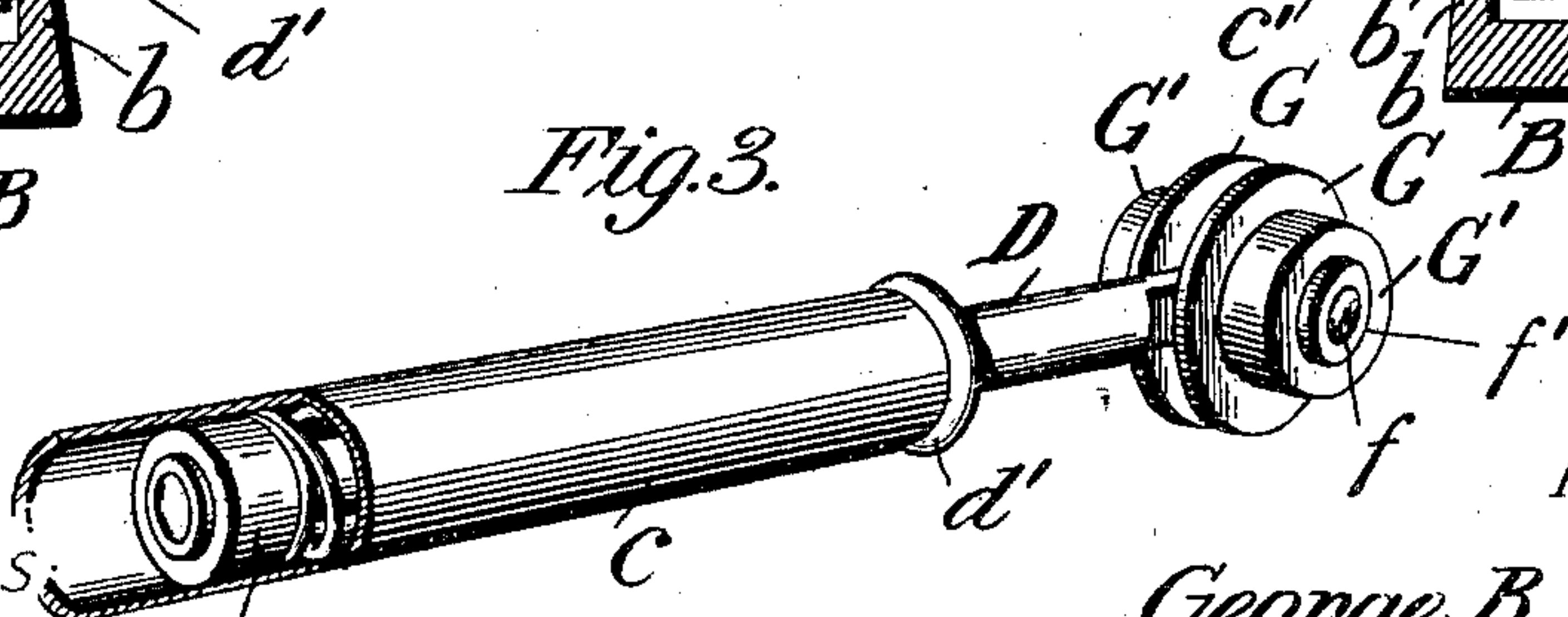


Fig. 3.



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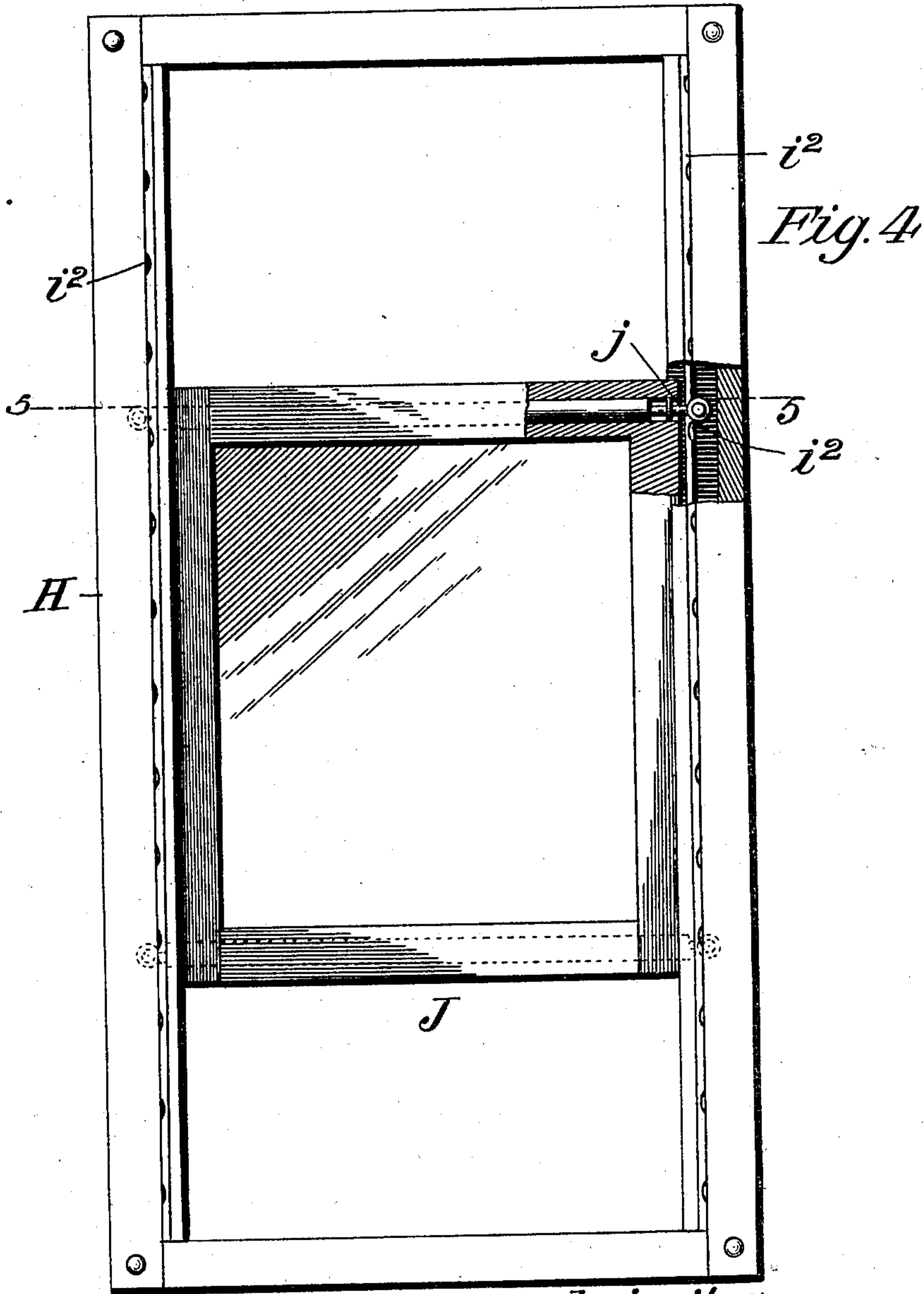


Fig. 4.

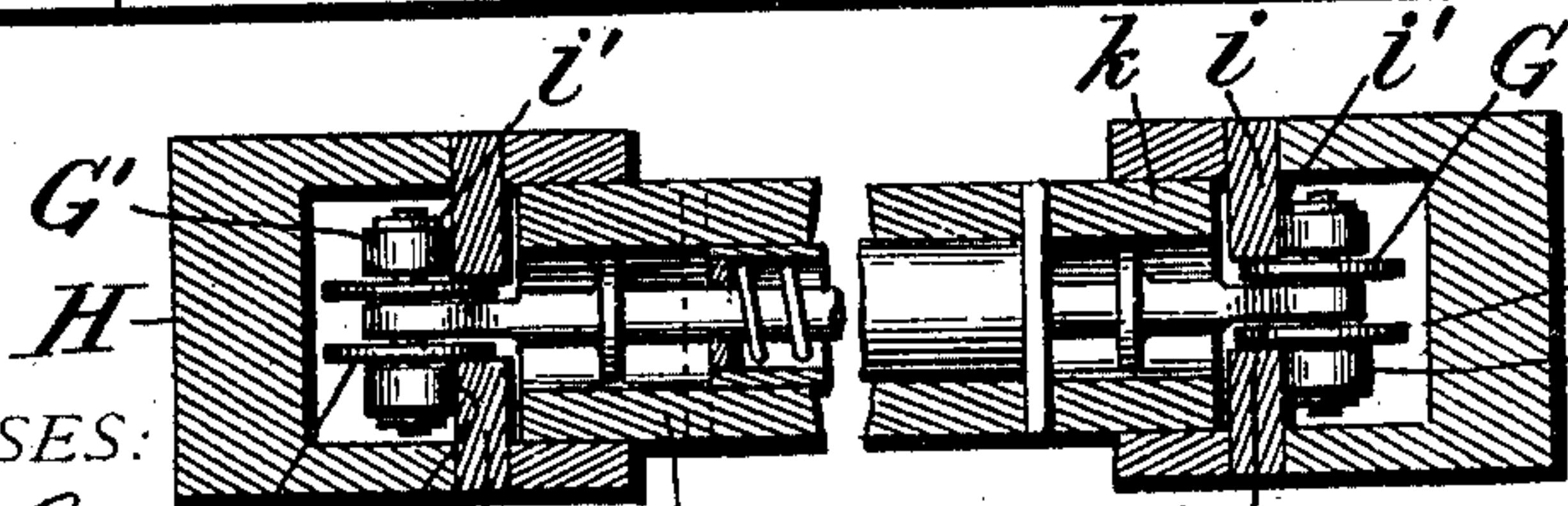


Fig. 5.

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UNITED STATES PATENT OFFICE.

GEORGE B. N. DOW, OF MANCHESTER, NEW HAMPSHIRE, ASSIGNOR OF
ONE-HALF TO GEORGE W. PRESCOTT, OF SAME PLACE.

FASTENER FOR SHADES, SASHES, &c.

SPECIFICATION forming part of Letters Patent No. 672,416, dated April 16, 1901.

Application filed July 23, 1900. Renewed March 1, 1901. Serial No. 49,489. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. N. DOW, (whose post-office address is Manchester, New Hampshire,) a citizen of the United States, residing at Manchester, in the county of Hillsboro and State of New Hampshire, have invented certain new and useful Improvements in Fasteners for Shades, Sashes, &c.; and I do declare the following to be a full, clear, and exact description of the invention, such as it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to devices for guiding and fastening window shades and sashes, and has for its object the production of an improved guide and fastener which possesses advantages in point of efficiency and economy of construction.

The nature of the invention will be readily comprehended, reference being had to the following detailed description and to the accompanying drawings, in which—

Figure 1 is an elevation, partly in section, of my improved guide and fastening applied to a window-shade. Fig. 2 is an enlarged sectional view on line 2 2 of Fig. 1. Fig. 3 is a perspective view of a detail. Fig. 4 is an elevation, partly in section, of the guide and fastener applied to a window-sash. Fig. 5 is an enlarged sectional view on line 5 5 of Fig. 4.

Referring first to Figs. 1, 2, and 3 of the drawings, A denotes the frame of a curtain, shade, screen, or the like, which frame is provided at its sides with guides for the lower end of the shade. The guides consist of two upright strips B B, having at their inner sides integral or secured flanges b b, whereby is formed a vertical groove of T form in horizontal section. The rod c of the shade C is tubular, and in each end is slidably mounted a stem D, having at its inner end a collar or shoulder d, between which and a shoulder c' in the tubular rod c is confined a spring e, coiled around the stem. This spring tends to move the stem inwardly relatively to the rod, the inward movement being limited by a collar or stop d' on the stem D contacting with the end of the rod c. That portion of

the stem which is housed in the tubular rod is preferably circular in cross-section; but its outer end is squared, as shown, and through said end is passed a rod, providing at each side a transversely-extending pin f. On each pin are rotatably mounted two rollers, one of which, G, is of disk form and is against the squared end of the stem, and the other, G', is of relatively smaller diameter, but wider at its periphery than the disk roller G. These two rollers together form a flanged wheel which engages the inner tread-surface b' and edge b² of its respective flange b, or, in other words, the narrow portion of the T-groove receives the disk rollers G G, while the wide portion of said groove receives the rollers G' G'. The rollers G G' are independently rotatable and may rotate differentially, thereby insuring free movement of the rod c and shade, even though the strain be in other than a direct line. Moreover, the feature of the independently-rotatable disk rollers G results in practice in minimizing the friction and wear on the flange edges b², and the rod c is efficiently guided in its movement. The springs operate to move the rollers G' G' against the tread-surfaces of the flanges b, and thereby hold the shade at the adjusted height. Rotatable washers f' f' confine the rollers G G', the ends of the pins f being upset to hold the washers to place.

Referring now to Figs. 4 and 5, H denotes the frame of a window in the sides of which are T-shaped grooves formed by beads i, which correspond to the flanges b in the above description. The tread-surface i' of each bead i is provided at intervals with depressions i² i². The window-sash J is provided, preferably at its four corners, with sockets j j, which receive tubular casings k k. These casings correspond with the tubular rod c, and each receives the stem of a spring-pressed roller constructed in accordance with the showing in Figs. 1, 2, and 3, the roller G contacting with the tread-surface i' and the disk roller G' with the bead edge i³. In practice the window is raised and lowered more or less freely the whole range of its movement; but when the rollers enter the depressions the increased resistance due to the shouldering effect is sufficient to hold the window at the adjusted height.

One advantage resulting from the application of my invention to window-sashes is that free movement of the sash is possible at all times, regardless of the effects due to climatic changes, warping, and racking. For this reason my invention is particularly adapted for use in connection with railway-car windows, where racking of the frames is most pronounced. Wherever my invention is employed, however, the result is a uniform tension at the sides of the window, shades, and the like and an easy and quick adjustment.

I claim as my invention—

1. In a device of the kind specified, the combination with a frame having a groove T-shaped in cross-section, a spring-pressed stem carried by a screen, sash or the like, pins extending transversely at each side of the stem, outer rollers mounted on said pins, said rollers having peripheral engagement with the wide portion of the groove, and inner disk

rollers on the pins having face engagement with the narrow portion of the groove.

2. In a device of the kind specified, the combination with a frame having a groove flanked by flanges, said flanges provided with depressions at intervals, a spring-pressed stem carried by a screen, sash or the like, pins extending transversely at each side of the stem, outer rollers mounted on said pins, said rollers having peripheral engagement with the inner side of the flanges and depressions, and inner disk rollers on the pins having face engagement with the edges of the flanges.

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

GEORGE B. N. DOW.

Witnesses:

GEO. W. PRESCOTT,
HERBERT S. CLOUGH.