

No. 726,117.

PATENTED APR. 21, 1903.

F. W. TOBEY.
DOOR EQUALIZING DEVICE.
APPLICATION FILED SEPT. 7, 1900.

NO MODEL.

Fig. 1.

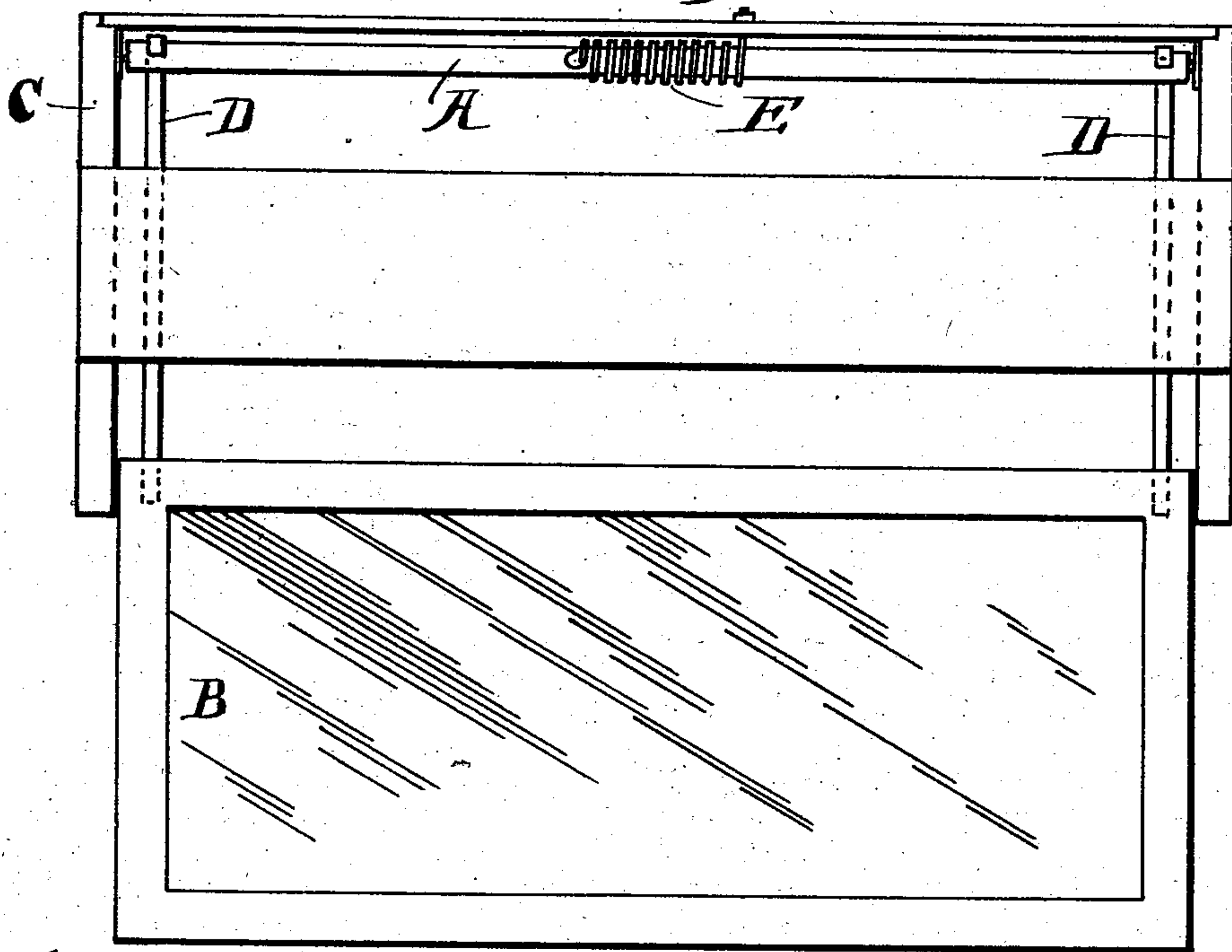


Fig. 2.

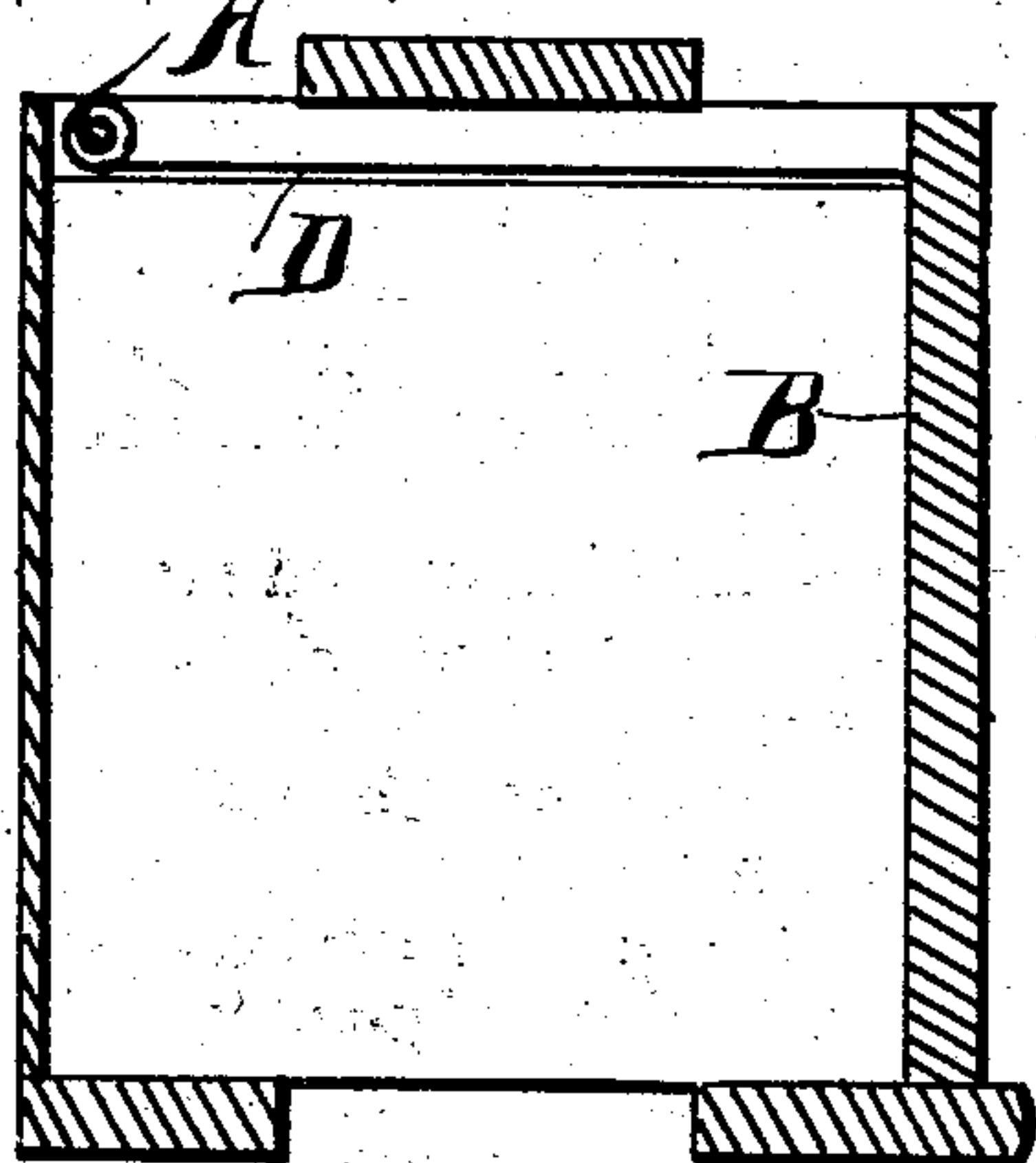
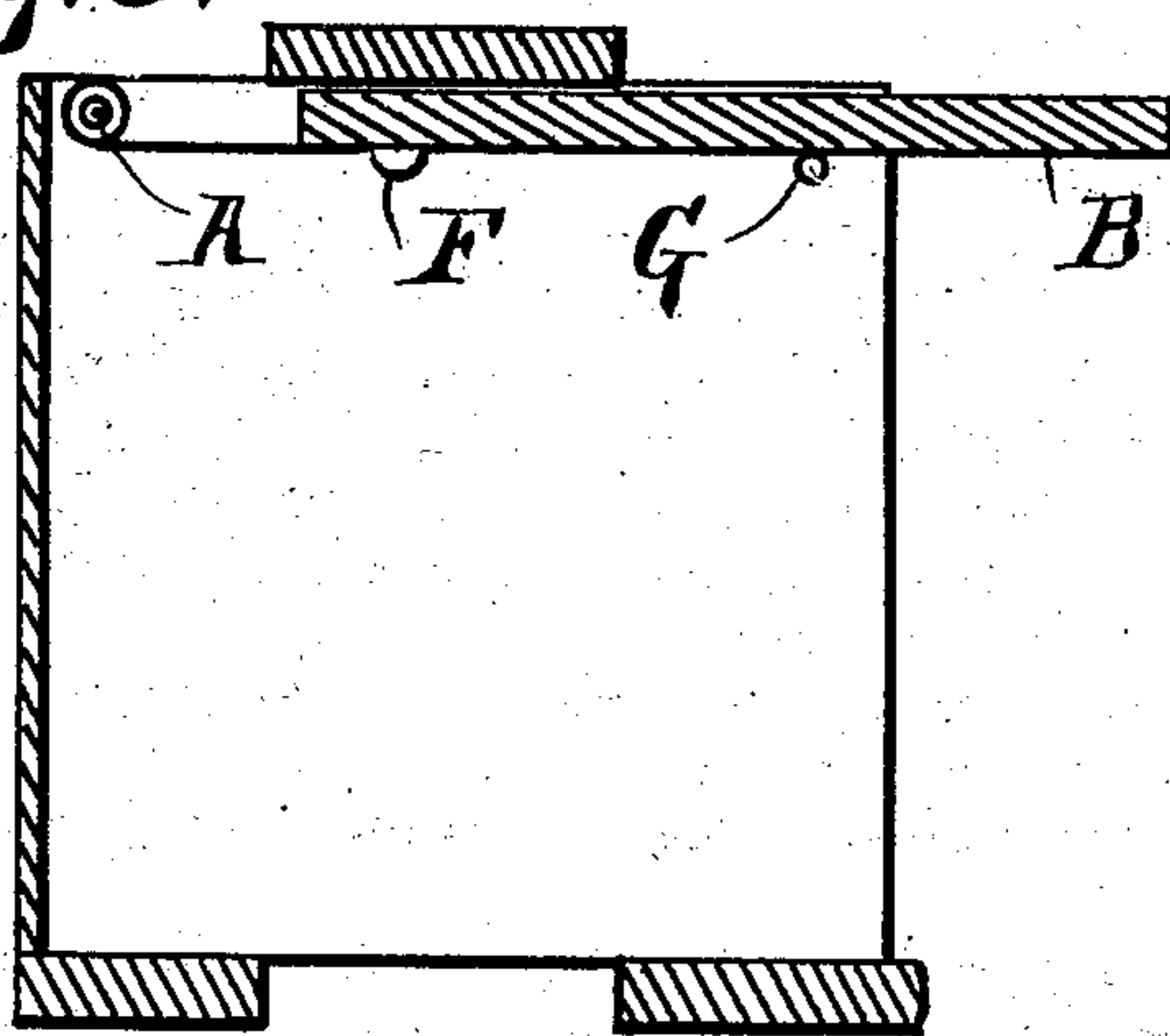


Fig. 3.



WITNESSES.

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FRED W. TOBEY, OF CINCINNATI, OHIO, ASSIGNOR TO THE GLOBE-WERNICKE COMPANY, OF CINCINNATI, OHIO.

DOOR-EQUALIZING DEVICE.

SPECIFICATION forming part of Letters Patent No. 726,117, dated April 21, 1903.

Application filed September 7, 1900. Serial No. 29,304. (No model.)

To all whom it may concern:

Be it known that I, FRED W. TOBEY, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented new and useful Improvements in Door-Equalizing Devices, of which the following is a specification.

This invention relates to a new and improved device for equalizing the movement of a door or drawer out of and into a case; and the invention consists in combining with the sliding door or drawer a stationary roller, a spring actuating said roller, and suitable connection between the roller and sliding door, substantially as hereinafter described.

The objects of my invention are, first, to cause the door to move evenly at both ends into the case; second, to assist by means of the spring, roller, and connections the movement of the door into the case. These objects I accomplish by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of a section of the bookcase containing my door-equalizing device, the door being drawn out, but not turned down. Fig. 2 is a transverse sectional view of a bookcase-section with the door turned down to close the front opening. Fig. 3 shows a transverse sectional view with the door raised to a horizontal position and shoved mostly into the case.

Similar letters refer to similar parts throughout the several views.

C represents the case or framework of the section.

B represents a sliding door. The door turns upon a pivot or hinge at the upper part of the section.

In the example of my invention shown in the drawings, F represents a button or projection on the door, which forms a stop. When the door is drawn outwardly, the stop F comes in contact with the stud G in the case, and the door is then drawn down to the position shown in Fig. 2.

A represents a roller of wood, metal, or other suitable material. This roller is journaled in the case, as shown in Fig. 1, Fig. 1

showing a side elevation of the roller and Figs. 2 and 3 showing a sectional view of the roller. The roller A is provided with a spring E, one end of said spring being secured to said roller and the other end secured to the case.

D and D represent straps, one strap secured to each end of the roller and the upper or inner part of the door. These straps may be of leather, tape, metal, or any suitable material.

In the drawings I have shown the spring coiled around the roller; but the form of the spring or the method of applying the same may be varied without departing from the spirit of my invention.

The operation of my invention is as follows: The door B is raised to a horizontal position, and the spring now acts to revolve the roller and to wind up the straps D, thereby drawing the door B back into the case. When the door is slid back into the case, as above described, the spring resumes its normal position. The door is drawn out against the tension of the spring, contracting or winding the spring into position to again draw the door back into the case. The spring may be of sufficient strength to move the door when raised to a horizontal position, or it may have only enough strength to assist in moving the door.

Having thus described my invention, what I claim to have invented, and desire to secure by Letters Patent, is—

1. The combination with a bookcase having an open front, of a slidable door operating in the top of said case, said door when moved to horizontal position adapted to open the front of said bookcase and when brought to vertical position adapted to close the front of said bookcase, said door sliding in the top of said bookcase when brought to a horizontal position, a roller having its ends journaled in the side walls of said case near the rear end of said walls, a coiled spring mounted on said roller and having one end thereof connected to the rear wall of said case and its other end secured to said roller, and a suitable connection between said roller and door, said spring adapted to rotate the said roller and wind the said connection thereon

so as to pull the said door in the top of said case when the said door is brought to horizontal position.

2. The combination with a bookcase having an open front, of a slidable door operating in the top of said case, said door when moved to horizontal position adapted to open the front of said bookcase and when brought to vertical position adapted to close the front of said bookcase, said door sliding in the top of said bookcase when brought to a horizontal position, a roller having its ends journaled in the side walls of said case near the rear end of said walls, a coiled spring mounted on
15 said roller and having one end thereof con-

nected to the rear wall of said case and its other end secured to said roller, and a pair of straps connected at one end to said roller and at their other ends to said door, said spring adapted to rotate the said roller and
20 wind the said straps thereon so as to pull the said door in the top of said case when the said door is brought to horizontal position.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.
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FRED W. TOBEY.

Witnesses:

J. E. BLAINE, Jr.,

W. A. KREBS.