

I. N. LANDAUER.
DISPLAY COUNTER.

APPLICATION FILED SEPT. 8, 1902.

NO MODEL.

FIG. 1.

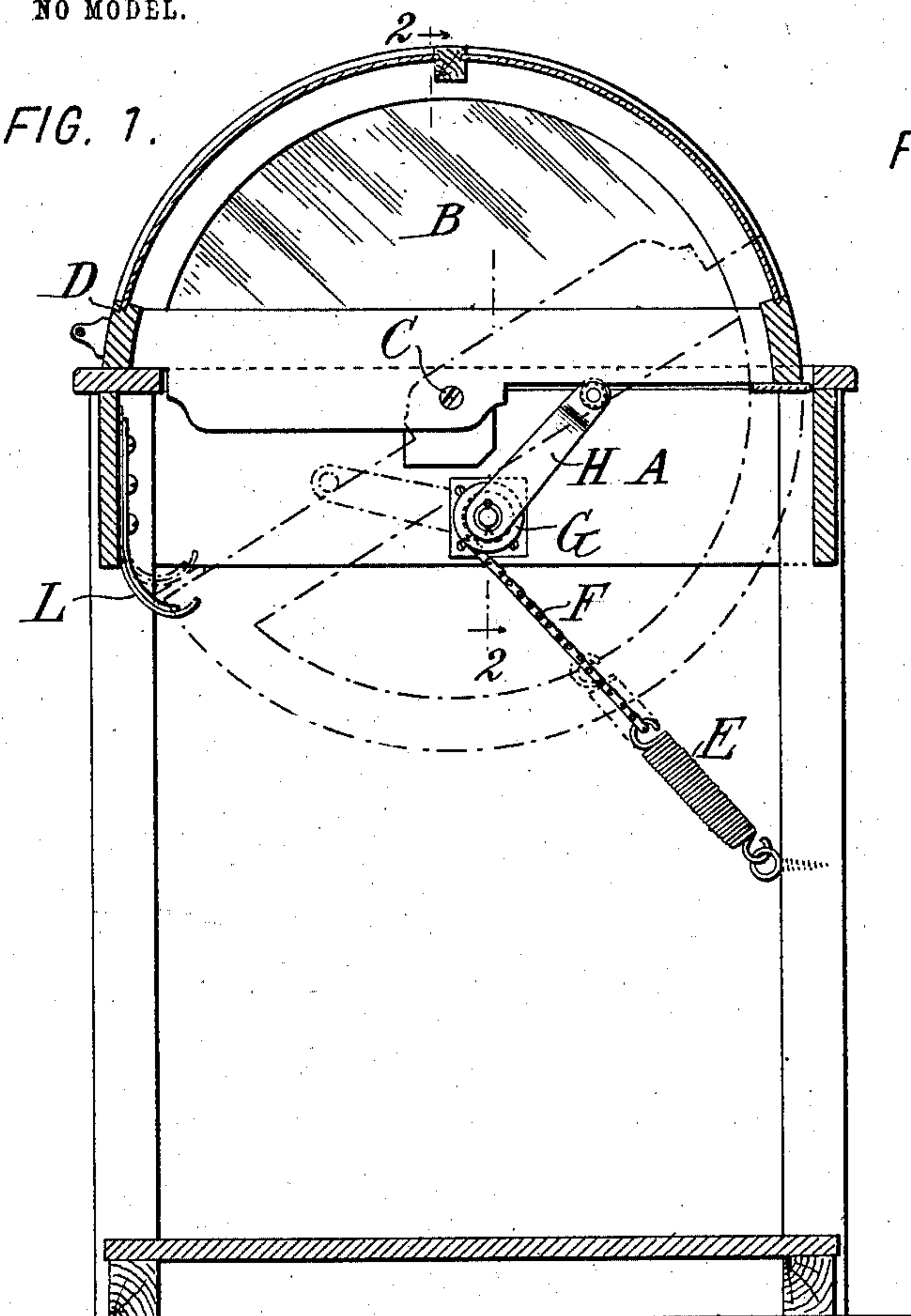


FIG. 2.

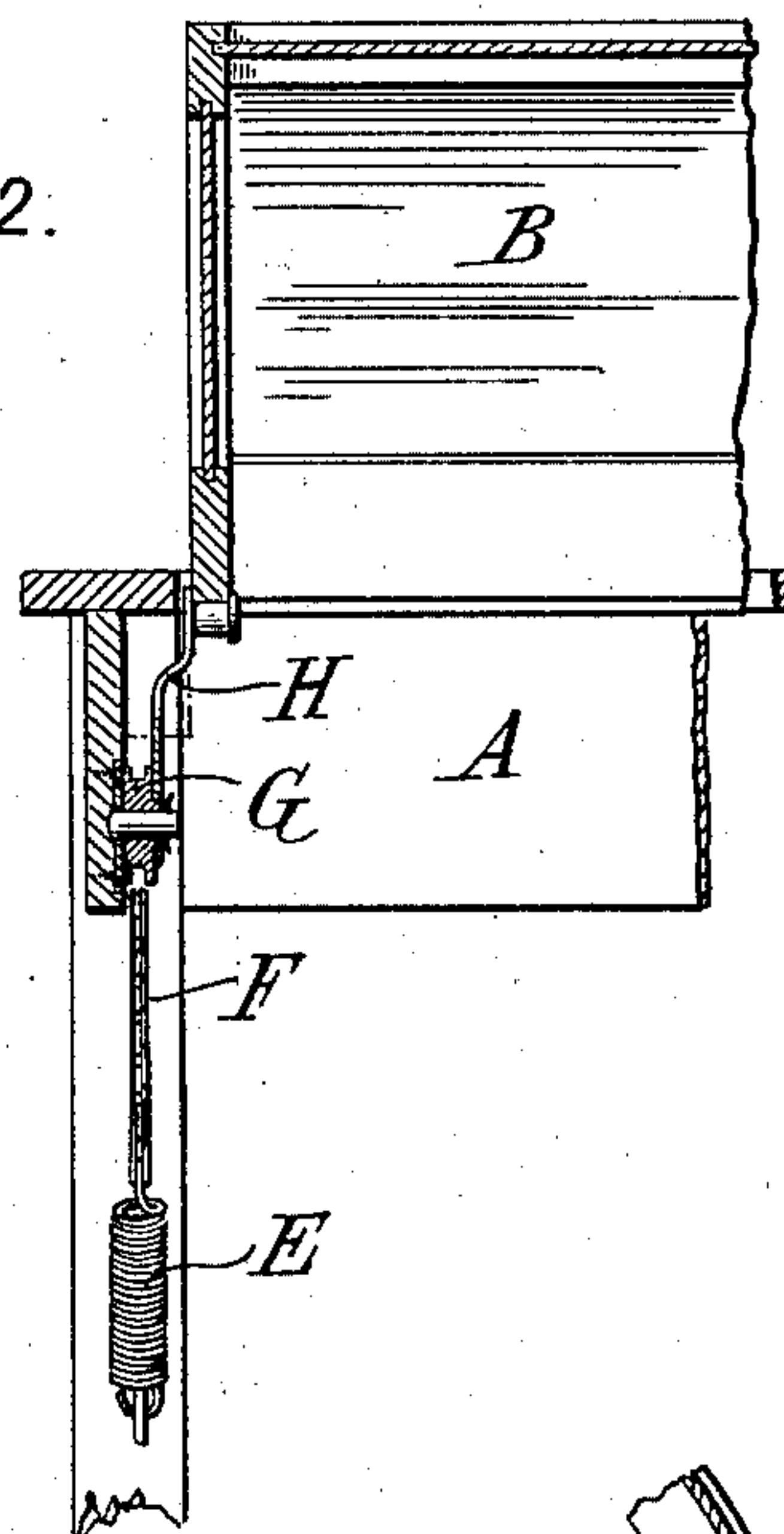


FIG. 5.

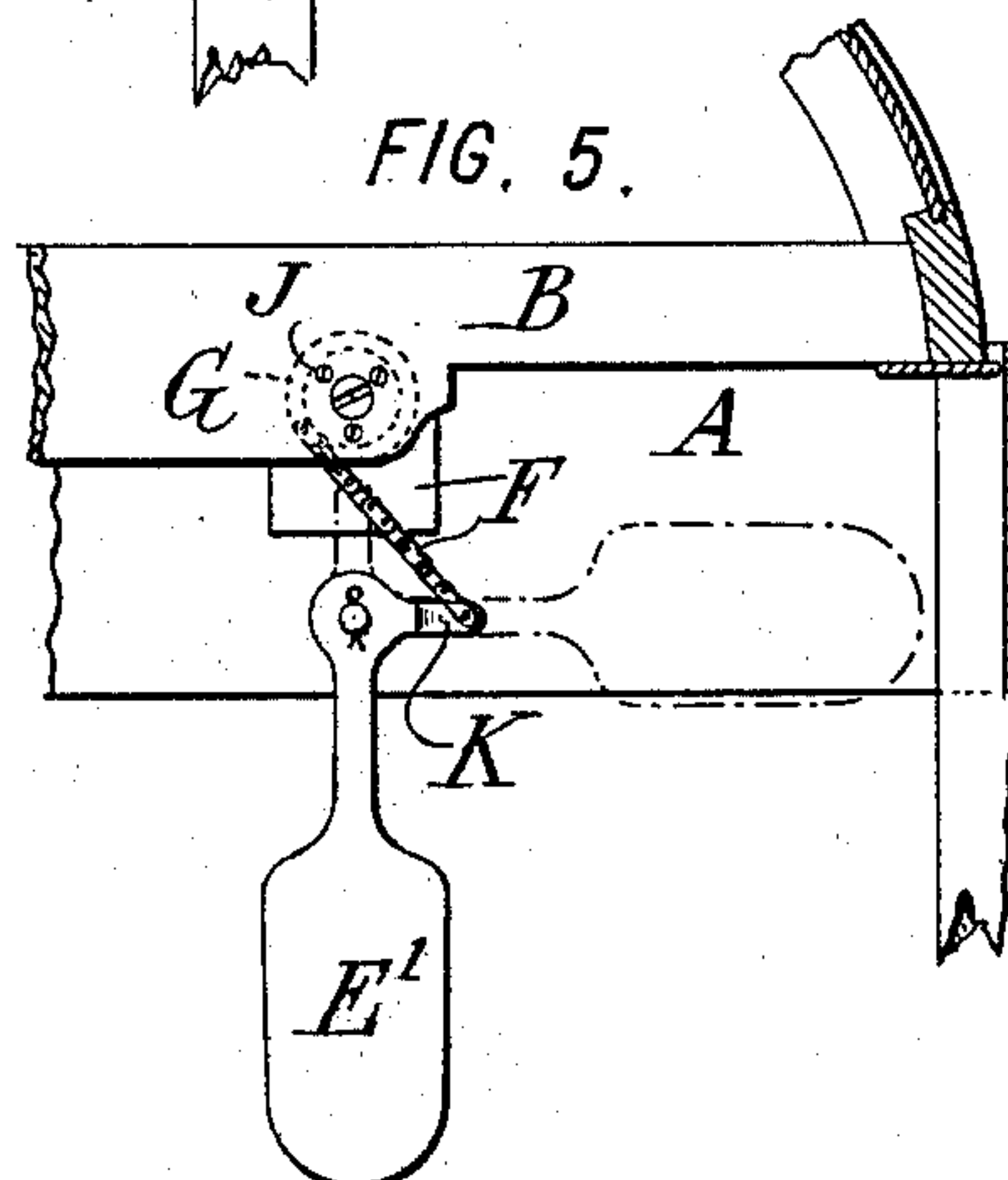


FIG. 3.

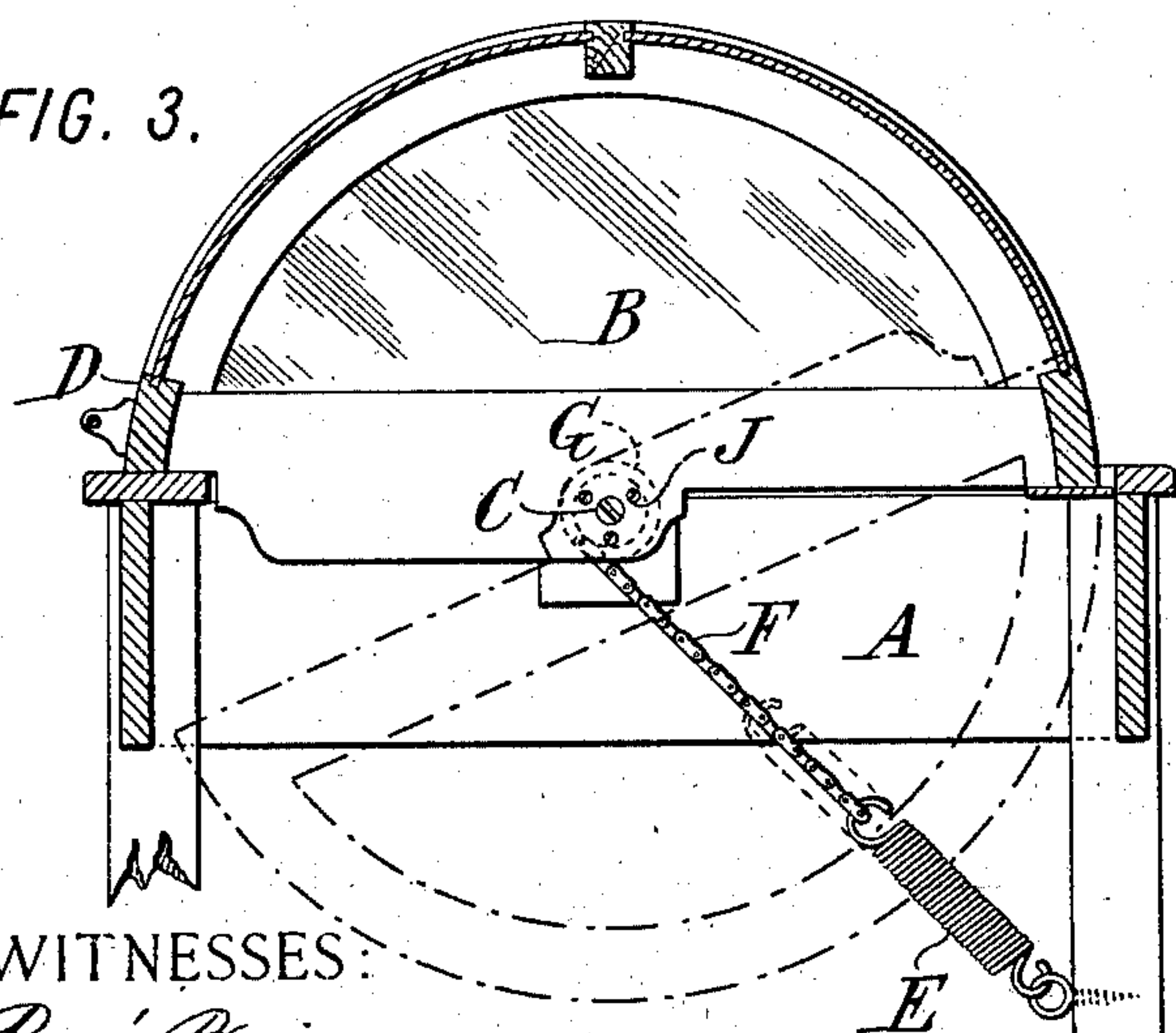
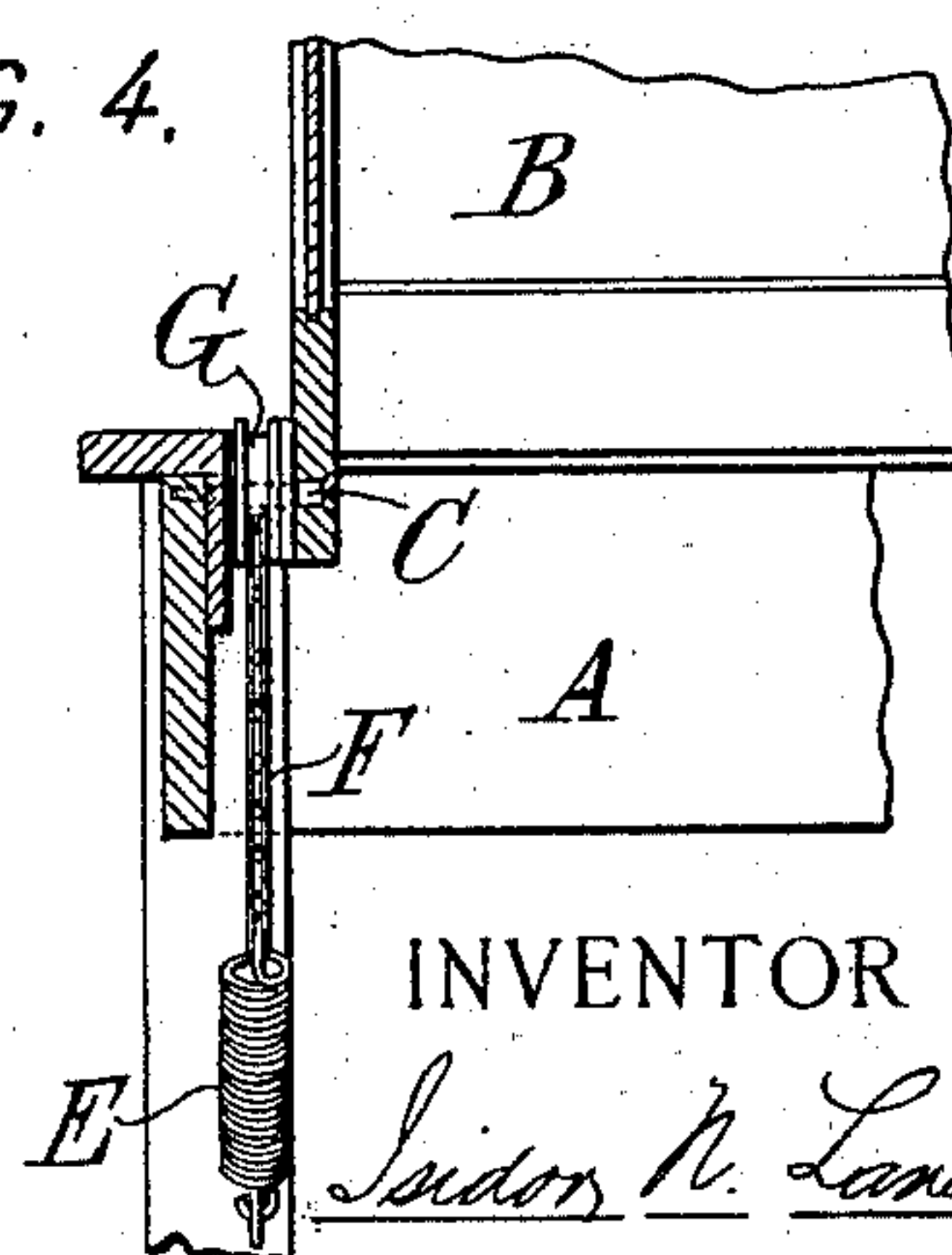


FIG. 4.



WITNESSES:

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ISIDOR N. LANDAUER, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO
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DISPLAY-COUNTER.

SPECIFICATION forming part of Letters Patent No. 720,036, dated February 10, 1903.

Application filed September 8, 1902. Serial No. 122,475. (No model.)

To all whom it may concern:

Be it known that I, ISIDOR N. LANDAUER, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Display-Counters, of which the following is a specification.

My invention aims to provide certain improvements in counters such as are commonly used for displaying goods for sale or for similar purposes.

In my application for patent filed April 4, 1902, Serial No. 101,319, I have disclosed a counter provided with a cover arranged to swing above or below the goods, whereby to cover or uncover the same. My present application shows certain improvements applicable to such a counter or to other counters of a similar type, which improvements are directed especially to facilitating the operation of the same.

Referring to the accompanying drawings, illustrating embodiments of the invention, Figure 1 is a transverse section of a counter to which my improvement is applied. Fig. 2 is a partial section of the same approximately on the line 2 2 of Fig. 1. Figs. 3 and 4 are views similar to Figs. 1 and 2, showing another embodiment of the invention. Fig. 5 is a view similar to Fig. 1, showing a third embodiment of the invention.

My improved counter comprises a support, a cover pivoted thereon and arranged to swing above or below the goods—as, for example, in the manner described in my previous application above referred to—and, in addition, a means for counterbalancing the cover when the latter is swung to its lower position. It will be understood that in a display-counter of ordinary size the cover is quite heavy. At the beginning of the opening movement the weight of the cover is balanced at the center and its manipulation is quite easy; but as it is turned more and more toward its lower position an increasing proportion of its weight tends to pull it open, and at the same time the handles are farther away from the operator standing at the front of the counter, so that it might be a difficult thing to manage. Similarly in lifting the cover its resistance is considerable. By my present inven-

tion I provide means for counterbalancing the weight, so that it shall not move downward with such great force and shall be more easily drawn upward. The magnitude of the counterbalancing force need not be exactly equivalent to the force of the downward movement or the resistance to upward movement of the cover. It may only partly counterbalance such forces. The counterbalancing means may be any suitable reacting or power-storing device and is preferably in engagement with the cover so as to counterbalance the same in all positions of the latter, though it may be so arranged as to counterbalance the cover during any desired portion of the movement—as, for example, toward the end of the downward movement, when the difficulties referred to are greatest.

Referring to the embodiments shown in the drawings, and especially in Figs. 1 and 2, A is a framework or support designed to carry the goods on a tray or other device, as shown in my previous application above referred to, but omitted from the present application for the sake of clearness, and B is a cover, preferably glazed and of semicylindrical shape, as shown, and pivoted at C, so that it may swing, as shown by dotted lines in Fig. 1, above or below the top of the support. In the upper position of the cover it is balanced in unstable equilibrium about its pivot-point C. As soon as the front D of the cover is lifted the cover tends to move downward with a constantly-increasing force, due to the increased weight which is thrown to the rear of the pivot C and due also to the acceleration acquired. In order to neutralize or reduce this force, a reacting device, such as a spring E, is connected, by means of a chain or similar flexible connection F, with a pulley G, so that the flexible connection is wound on the pulley and the spring is distorted in proportion as the cover is swung to its lower position. The spring may be fixed at one end to an upright member of the support A, as shown. The pulley G may be mounted on a fixed portion of the support A, as shown in Fig. 1, and provided with an arm H, the end of which is in the path of a portion of the cover B, so as to produce the desired rotation of the pulley as the cover swings down,

or the pulley G, Figs. 3 and 4, may be fastened directly on the cover B, as by means of screws J. The construction shown in Fig. 1 is well adapted for application to counters built originally without counterbalancing means. The construction of Fig. 3 is simpler and is thought preferable in the building of new counters.

Instead of using a spring E any other reacting or power-storing device may be used—such, for example, as the weight E', Fig. 5, which is pivoted on the frame A and which hangs normally in a dead position, but which, by means of the pulley G, flexible connection F, and arm K, is moved upward to oppose a gradually-increasing reaction against the downward movement of the cover until in the final position of the cover it stands in approximately the position shown in dotted lines, in which its power is greatest.

The reacting device may be so arranged as to assist in closing the cover without retarding its opening movement or even with assistance to the opening movement, my invention covering generically means for counterbalancing the cover either during its entire opening-and-closing movement or during any part of such movement. The reacting device may be of such strength as to entirely stop the downward movement of the cover, as indicated by the dotted-line position of the parts in Fig. 3, or I may provide in addition to the principal counterbalancing device a spring L, Fig. 1, in position to engage the cover in the latter part of its downward movement and to assist the principal counterbalancing means in stopping the movement at a desired point.

Though I have described with great particularity of detail certain embodiments of my invention, yet it is to be understood that the invention is not limited to the specific embodiments disclosed. Various modifica-

tions of the same are possible to those skilled in the art without departure from the invention.

What I claim, therefore, is—

1. In a display-counter, the combination of a support, a cover pivoted thereon and arranged to swing above or below the same, and means for counterbalancing said cover when the latter is open.

2. In a display-counter, the combination of a support, a cover pivoted thereon and arranged to swing above or below the same, and a reacting device in engagement with said cover and arranged to react with an increasing force as said cover is swung to its lower position, so as to counterbalance said cover.

3. In a display-counter, the combination of a support, a cover pivoted thereon and arranged to swing above or below the same, a pulley turning with said cover, a spring fixed at one end, and a flexible connection between said pulley and the other end of said spring, said parts being so arranged that said flexible connection is wound on said pulley and said spring is distorted in proportion as said cover is swung to its lower position, so as to counterbalance said cover.

4. In a display-counter, the combination of a support, a cover pivoted thereon and arranged to swing above or below the same, a principal means for counterbalancing said cover when the latter is open, and a spring in position to engage the cover in the latter part of its downward movement and to assist said principal counterbalancing means in stopping the movement at a desired point.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

ISIDOR N. LANDAUER.

Witnesses:

HENRY A. CRISTE,
ROBT. G. SJORTROM.