

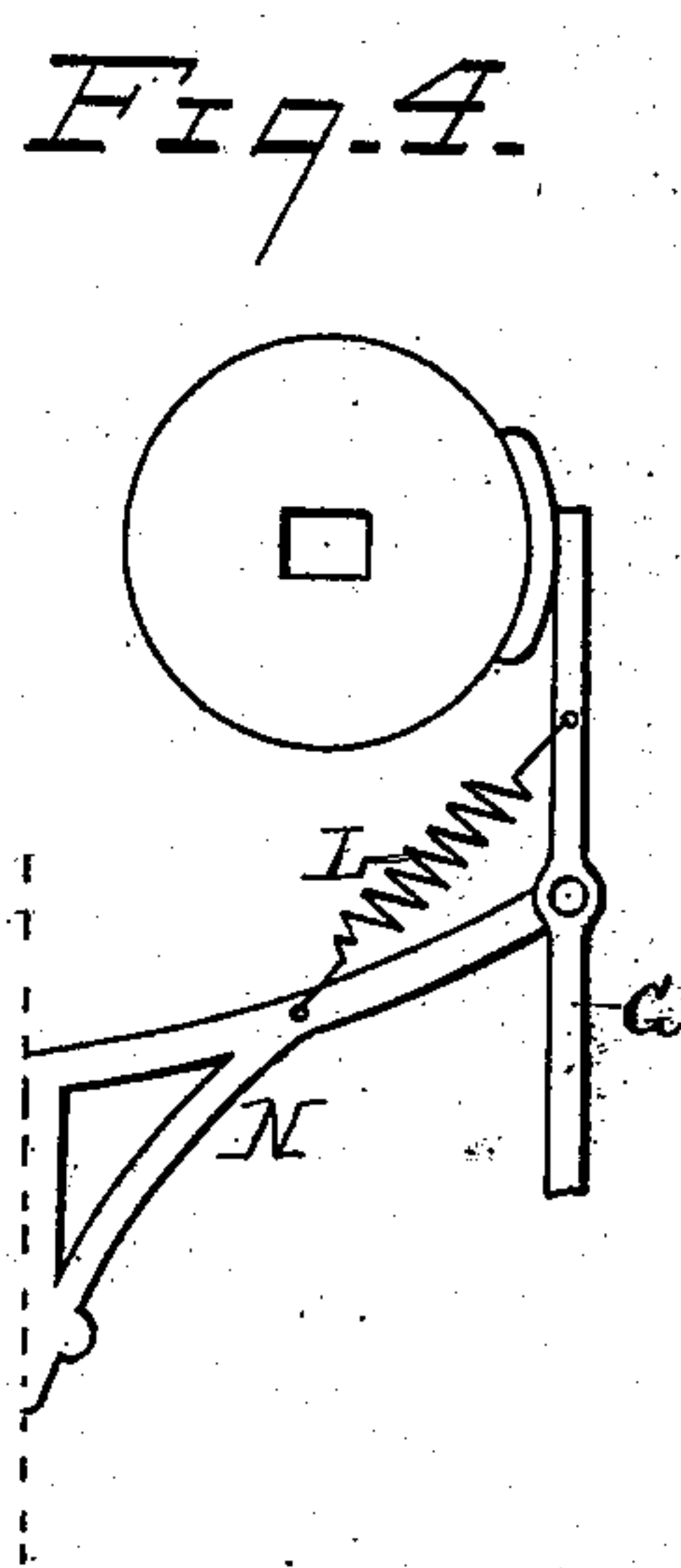
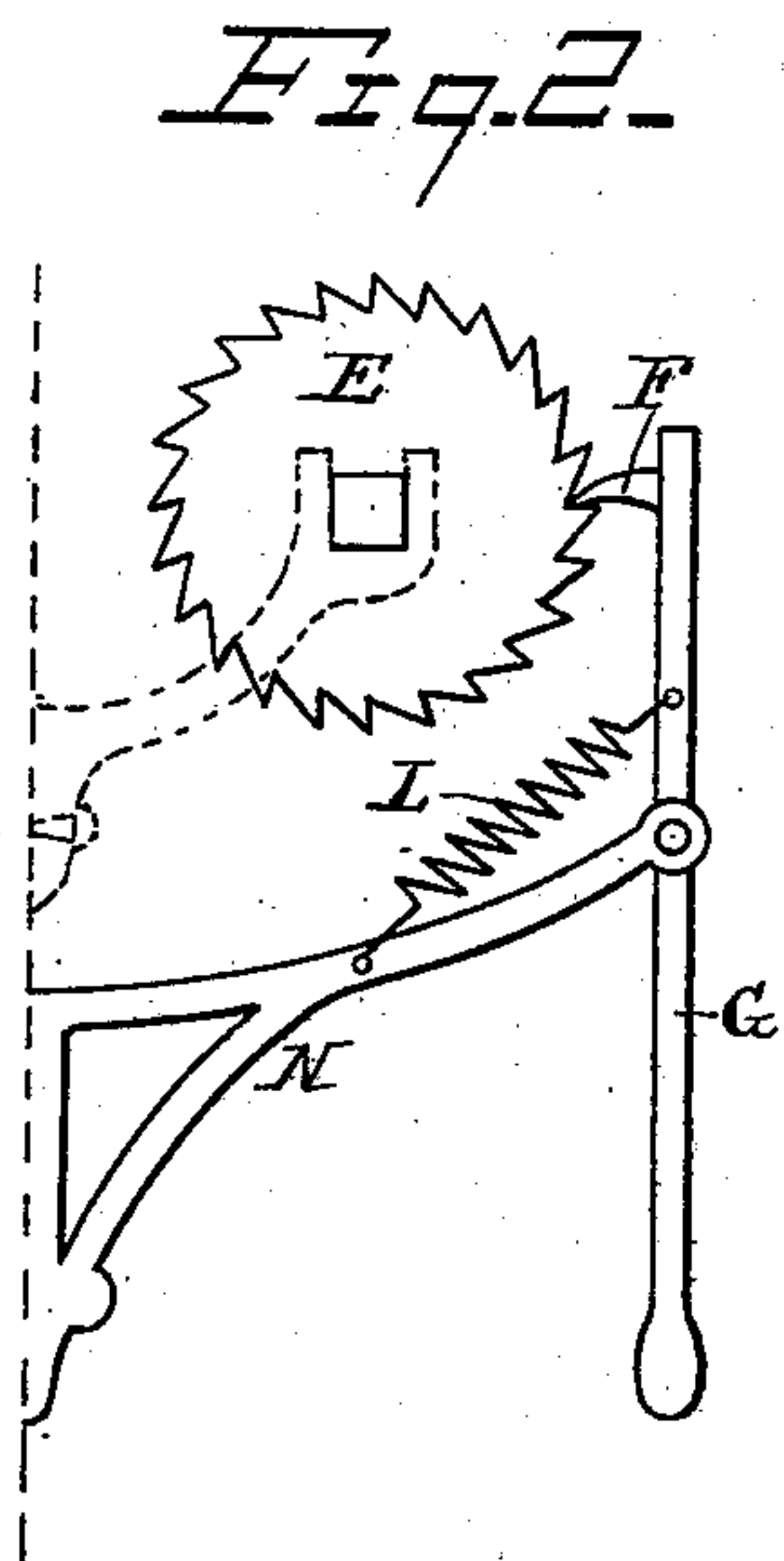
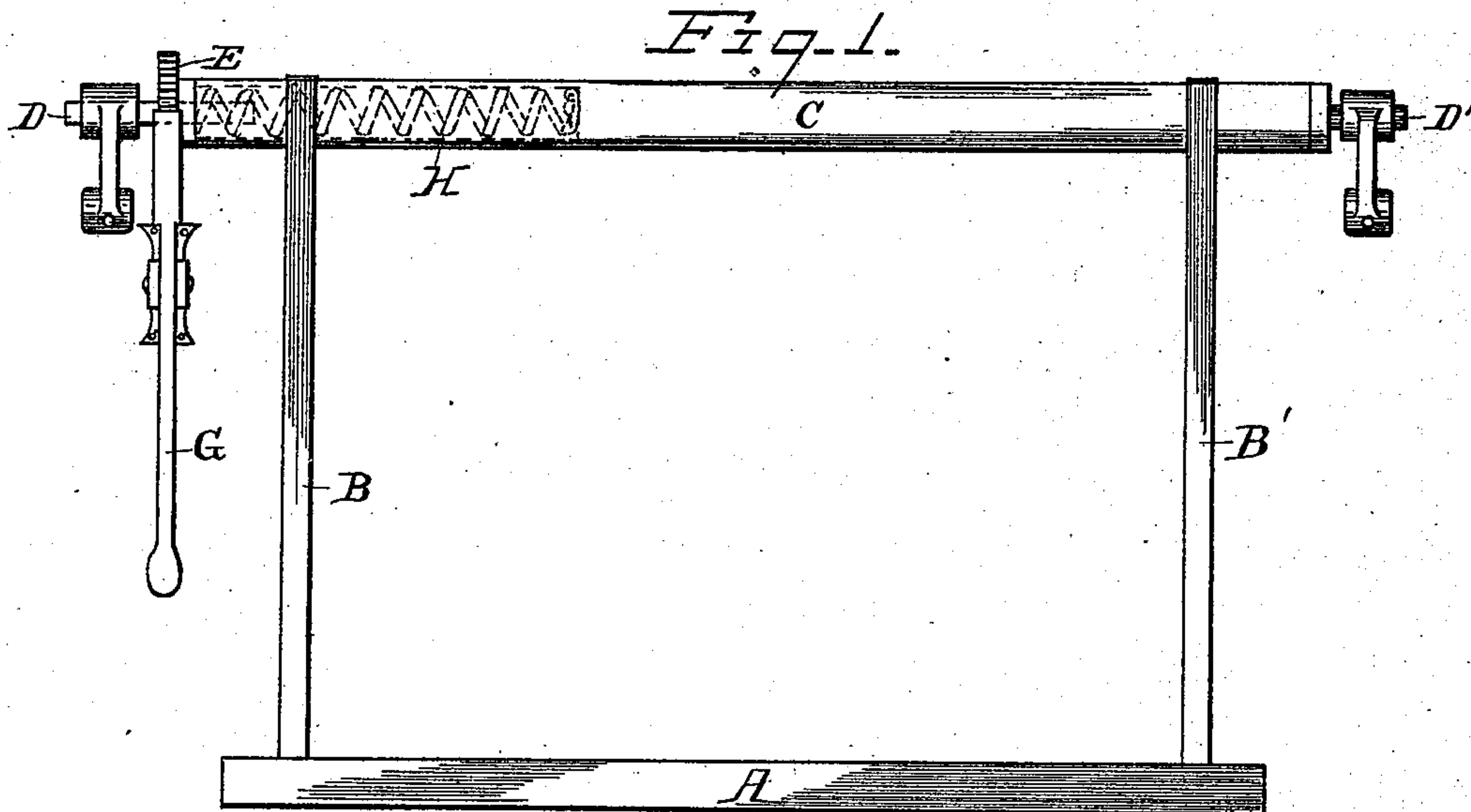
(No Model.)

S. L. BETTES.

RULING ATTACHMENT FOR BLACKBOARDS.

No. 377,663.

Patented Feb. 7, 1888.



Witnesses  
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# UNITED STATES PATENT OFFICE.

SEPHORA LOUISE BETTES, OF WASHINGTON, DISTRICT OF COLUMBIA.

## RULING ATTACHMENT FOR BLACKBOARDS.

SPECIFICATION forming part of Letters Patent No. 377,663, dated February 7, 1888.

Application filed July 11, 1887. Serial No. 243,990. (No model.)

*To all whom it may concern:*

Be it known that I, SEPHORA LOUISE BETTES, of Washington, in the District of Columbia, have invented an Improved Ruling Attachment for Blackboards, &c., of which the following is a specification.

In the accompanying drawings, Figure 1 is an elevation of my ruling attachment. Fig. 2 is a side view of the detent devices. Figs. 3, 4, and 5 are similar views representing modified forms of detent devices.

My invention consists of a ruling attachment especially designed for use in connection with blackboards in schools, but which, as will be obvious, is equally applicable to drawing-boards, for use in ruling lines upon paper, and in other similar connections.

A ruler, A, is suspended, by tapes or bands B B', from a roller, C, provided at its ends with journals D D', to fit in suitable sockets in brackets upon the blackboard-frame, the wall to which the blackboard is applied, or the drawing-board. One of the journals D is free to rotate in the end of the roller, and has attached thereto, as indicated in dotted lines in Fig. 1, one end of a torsional spiral spring, H, which at its other end is secured to the interior of the roller, the latter being recessed or hollowed for the reception of the spring. Journal D is squared and fits a correspondingly-shaped socket, so that when placed in the latter it will be held from rotation when the tapes are unwound from roller C in the depression of ruler A. Applied to the end of roller C is a detent-wheel, E, shown as a ratchet-wheel in Figs. 1 and 2; and a pawl or dog, F, constituting a detent engaging with said wheel, is formed on or attached to a lever, G, pivoted on a bracket, N. (See Fig. 2.) The ratchet-wheel and pawl or dog of Figs. 1 and 2 may be replaced by any equivalent devices—as, for instance, by the wheel having V-shaped teeth and detent of corresponding shape, (shown in Fig. 3,) or by the friction-wheel and friction-block or brake-shoe of Fig. 4. The detent carried by lever G is held in engagement with the wheel E by a spring, L.

In my attachment the ruler is suspended in position such as to render it conveniently accessible when it is desired to use the same.

When use thereof is to be discontinued, the detent may be thrown out of contact with the detent-wheel by application of the hand to the lever, and the roller may thus be permitted to be rotated by the action of the spring to wind up the tapes and draw the ruler up into close proximity with itself out of the way. By simply drawing down upon the ruler in the constructions shown it may be depressed to the point at which it is desired to draw a line.

The attachment is particularly serviceable in enabling truly parallel lines in one or more series of any desired number of lines each to be drawn.

The lever G is shown as a convenient form of carrier for the detent or brake. It may be replaced by any equivalent carrier—as, for instance, a spring-arm or an arm or lever acted upon by a spring—and in such case the spring-arm or spring acted arm may bear the detent or brake upward against the under side of the detent-wheel, as shown in Fig. 5, a spring-arm, G', being represented in such figure. Said arm may be operated by direct application of the hand thereto, or by means of a cord, G<sup>2</sup>, suspended therefrom, as shown.

The detent devices serve to hold the roller from turning except when the former are disengaged, so that in case the ruler is released while in use it will not change its position, and thus it may be kept in the desired place as long as desired without it being necessary to exercise any care to prevent it from shifting its position.

I am aware of the employment heretofore of spring-actuated curtain-rollers provided with detent devices adapted to hold the curtains in any desired position of adjustment. I am aware, also, of the employment heretofore of a weight connected by cords to opposite ends of a ruling device so as to tend to raise the latter; but in this case there are no detent devices for holding the ruling device from shifting out of the desired position. In my ruling attachment not only do the devices described keep the ruler in true horizontal position, hold it in any desired position while it is desired to there retain it, and when no longer in use raise it out of the way, so as to leave the blackboard free for general use, but, the

detent being hand-manipulated, the ruler may be adjusted to a nicety and with the greatest ease and convenience.

Having described my invention, I claim—

- 5 The combination, with the ruler, of the tapes, the roller, the spring for rotating the said roller to raise the ruler, the detent-wheel, the detent for engagement with said wheel to hold the ruler in adjusted position, and the

hand-manipulated spring-actuated lever carrying the said detent, substantially as described.

In testimony of which I have hereunto signed my name in the presence of two witnesses.

SEPHORA LOUISE BETTES.

Witnesses:

WM. B. GREELEY,

P. D. HASKELL.