

No. 666,407.

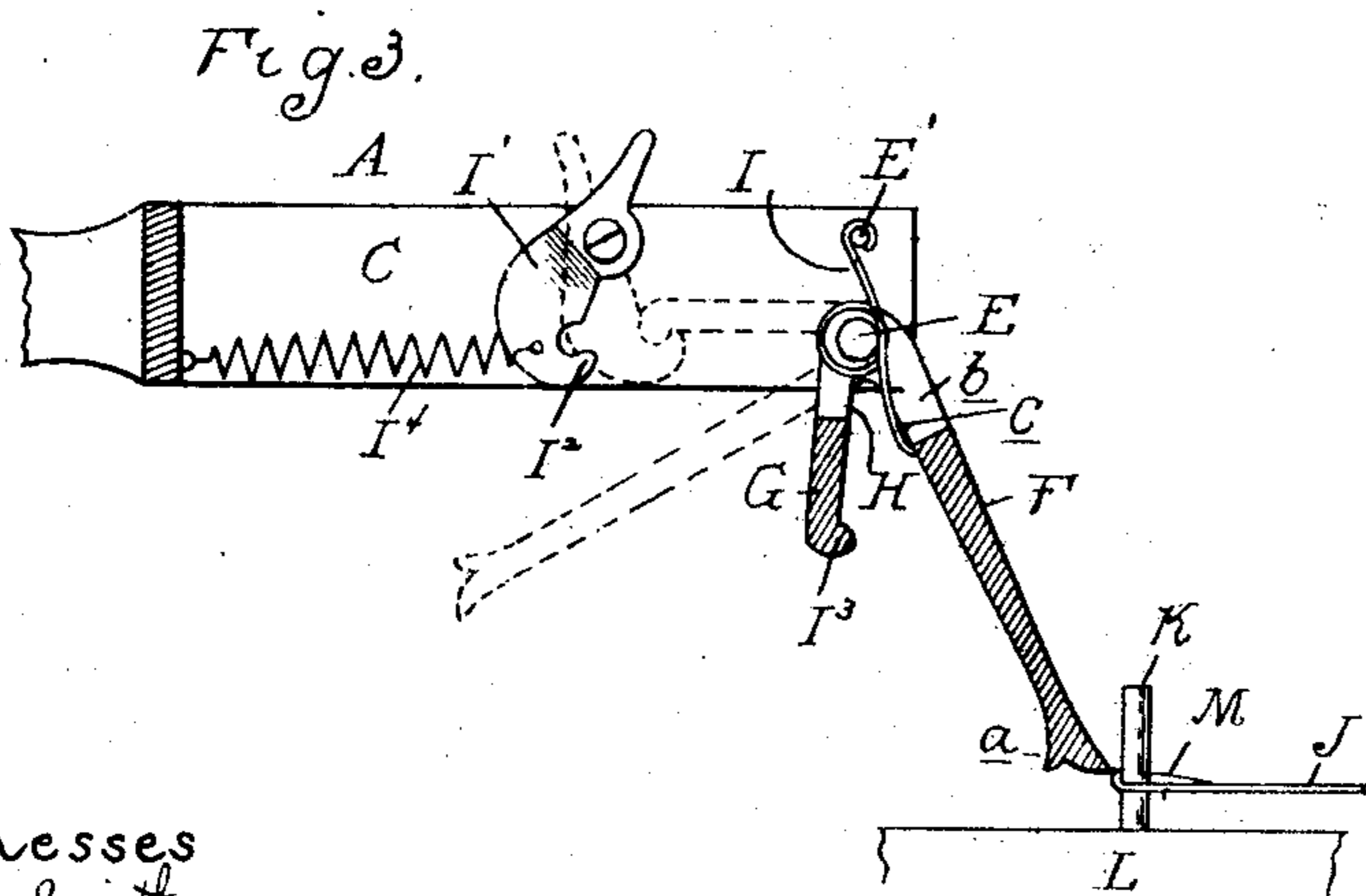
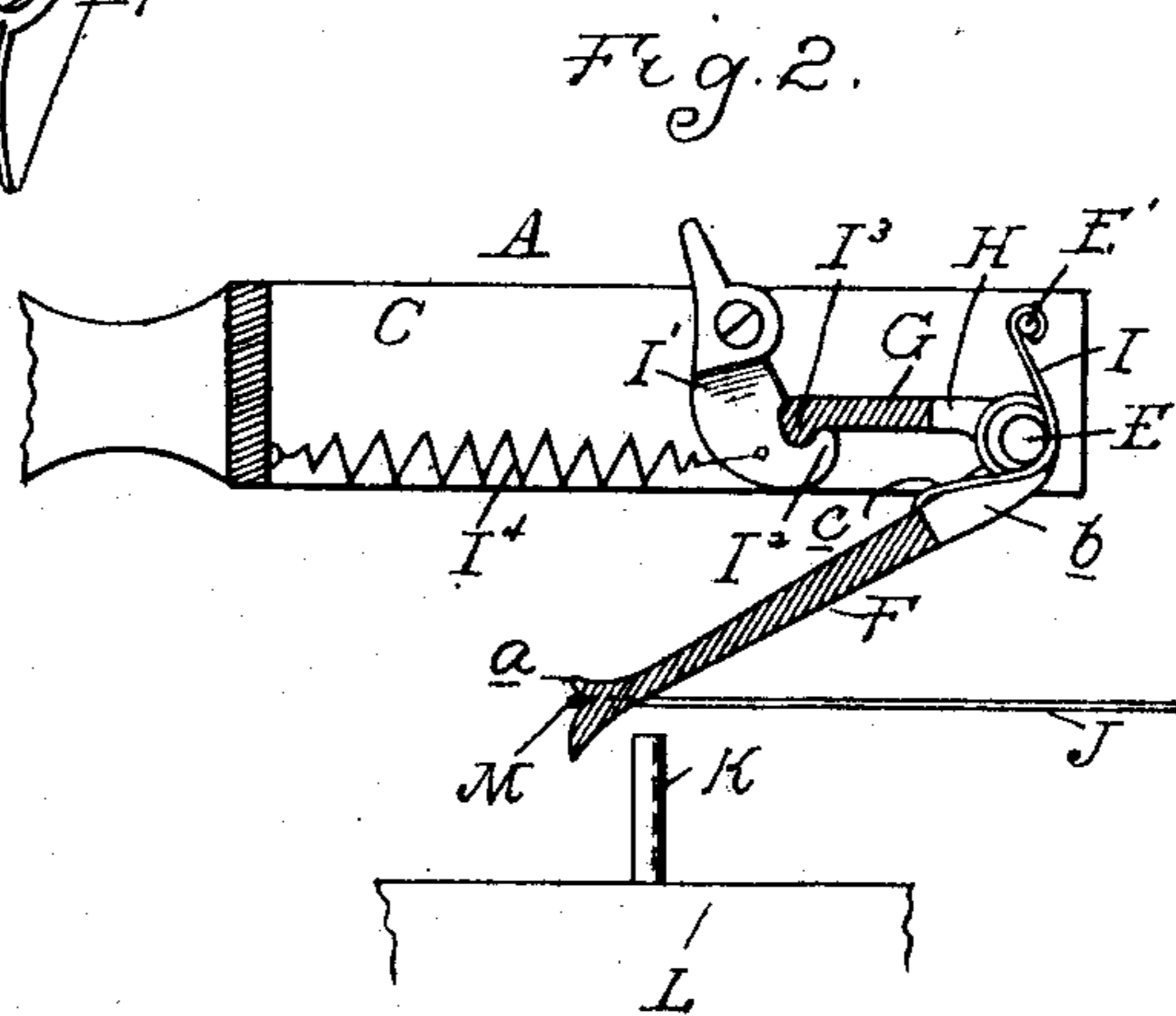
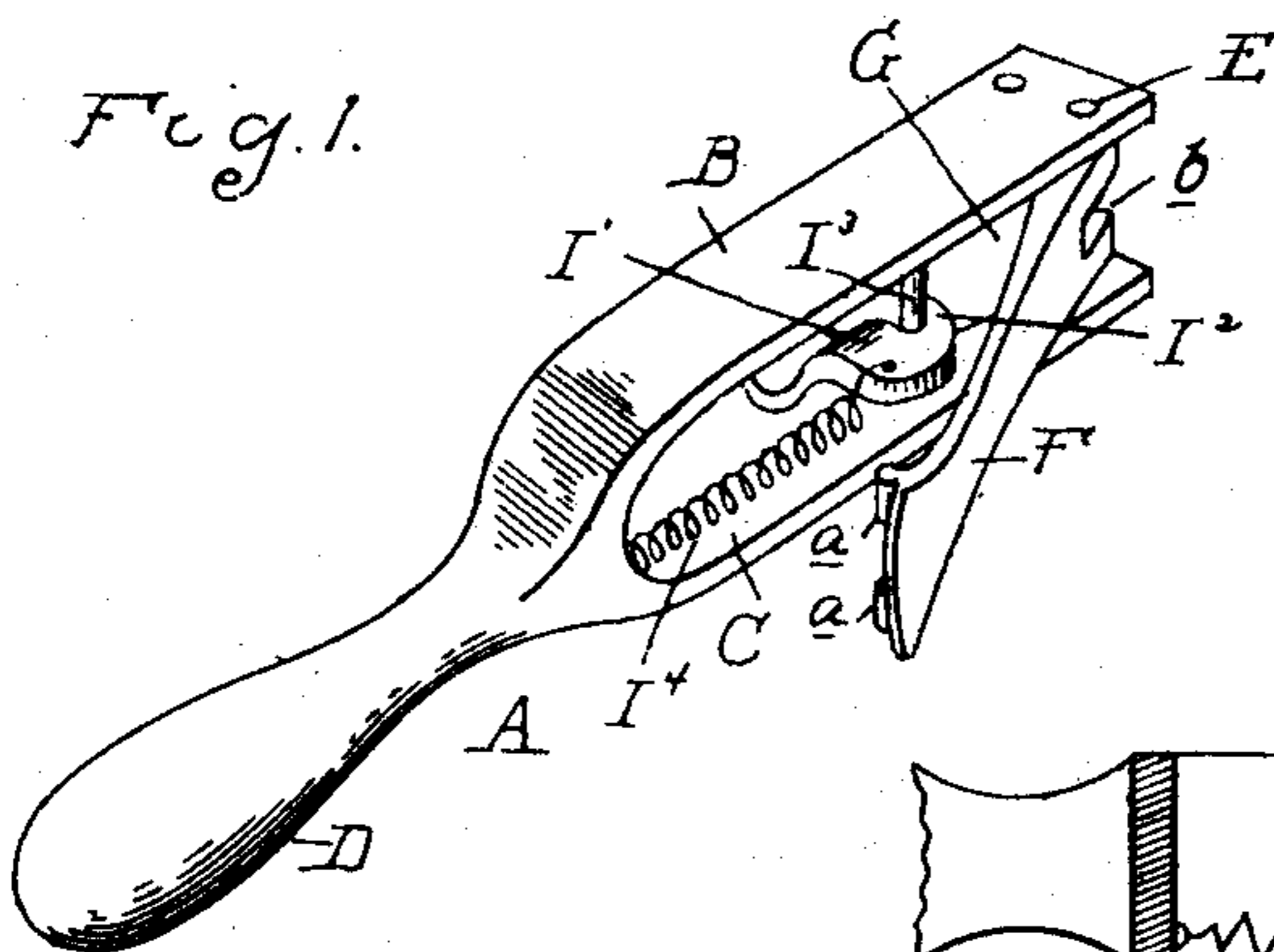
Patented Jan. 22, 1901.

H. D. BULLEN.


COUPLING DEVICE FOR ENGINE INDICATORS.

(Application filed June 19, 1900.)

(No Model.)



Witnesses
B. C. Smith.
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UNITED STATES PATENT OFFICE.

HERBERT D. BULLEN, OF LANSING, MICHIGAN.

COUPLING DEVICE FOR ENGINE-INDICATORS.

SPECIFICATION forming part of Letters Patent No. 666,407, dated January 22, 1901.

Application filed June 19, 1900. Serial No. 20,783. (No model.)

To all whom it may concern:

Be it known that I, HERBERT D. BULLEN, a citizen of the United States, residing at Lansing, in the county of Ingham and State of Michigan, have invented certain new and useful Improvements in Coupling Devices for Engine-Indicators, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates generally to a device for coupling an engine-indicator with a reciprocating member of the engine, whereby the indicator may be readily placed in operation without the necessity of slowing down or stopping the engine.

More particularly, my invention embraces, preferably, a portable device adapted to be held in the hands of the operator, by means of which the indicator-cord usually attached to a reducing-wheel may be engaged with the engine cross-head.

The invention consists, therefore, in the novel construction of a device of the character described and in the peculiar construction, arrangement, and combination of its various parts, as will be more fully hereinafter described, and shown in the drawings, in which—

Figure 1 is a perspective view of the coupling device. Fig. 2 is a vertical central section therethrough, showing the follower locked in operative relation to an engine cross-head. Fig. 3 is a similar sectional view illustrating the position of the follower when released.

The reference-letter A designates a supporting-frame for the various parts of the device, comprising two spaced parallel members B and C and a handle D, the latter being preferably integral with the members, as shown. In the forward part of the framework is pivoted upon a pin E the follower-arm F. This arm at its free end is provided with spaced lugs *a a*, and at its inner end in proximity to the pin is recessed, as at *b*. Preferably integral with the follower and projecting at an acute angle therefrom is a locking-arm G, which is recessed at H, as indicated in Figs. 2 and 3.

I designates a coiled spring arranged within the recesses H and *b* and wound upon the pin E. One end *c* of the spring bears against the follower, while the opposite end is looped

upon a pin E', extending through the parallel members of the frame.

Pivoted to the frame between the parallel members and at a point intermediate the handle and the follower is a trigger I', which constitutes a lock for retaining the follower in operative position. The hooked portion I² of the trigger engages over a shoulder I³ upon the locking-arm, and a coiled spring I⁴ connects the trigger with the rear portion of the frame, the spring acting normally to throw the trigger out of engagement with the locking-arm.

The parts of the device having been thus described, the operation of the same is as follows: The indicator-cord J, which is attached to the reducing-wheel, (not shown,) is looped over the end of the follower and prevented from slipping therefrom by the spaced lugs *a*. The follower is then moved upon its pivotal connection and is secured in operative position by means of the trigger I'. The coupling device, with the indicator-cord thereon, is then held in a position by the operator, as indicated in Fig. 2, where the pin K upon the usual engine cross-head L will just strike the follower at the end of the forward stroke of the engine. The slight jar will disengage the trigger from the locking-arm and allow the coiled spring I⁴ to withdraw the trigger. The follower being thus free to move, the coiled spring I will cause the follower to follow the cross-head in its return stroke and will throw the loop M of the indicator-cord over the pin K, thereby establishing a connection between the indicator and the reciprocating member of the engine.

While I have shown the device in the form which I deem most desirable for use, I do not desire to be limited to the exact construction, as it is obvious that many modifications may be made without departing in any way from the spirit of my invention.

What I claim as my invention is—

1. In a coupling device for engine-indicators, the combination with a supporting-frame, of a spring-actuated follower thereon constructed to receive the connecting member of an indicator, and means for holding the follower in an operative position against the tension of the spring.

2. In a coupling device for engine-indica-

tors, the combination with a supporting-frame, of a spring-actuated follower pivoted thereto and constructed to receive the connecting member of an indicator, a lock for
5 holding the follower in an operative position against the tension of its spring and a releasing mechanism for the lock controlled by the follower.

3. In a coupling device for engine-indica-
10 tors, the combination with a supporting-frame, of a spring-actuated follower-arm pivoted thereto, the free end of said arm being shaped to receive the looped end of the indicator-cord, and a spring-actuated trigger for
15 holding the follower-arm in an operative position against the tension of its spring.

4. In a coupling device for engine-indica-
tors, the combination with the supporting-frame comprising a handle and spaced par-
20 allel members projecting forwardly therefrom, a spring-actuated follower-arm pivoted

in the forward portion of the frame between the parallel members, a locking-arm extending at an acute angle from and secured to the follower-arm, a spring-actuated trigger adapted to engage the locking-arm to retain the
25 follower in an operative position, and means upon the end of the follower for receiving the indicator-cord.

5. In a coupling device for engine-indica-
30 tors, the combination with a support, of a follower thereon adapted to receive and carry the connecting member of the engine-indicator, and means upon the support for actuating the follower.
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In testimony whereof I affix my signature in presence of two witnesses.

HERBERT D. BULLEN.

Witnesses:

WILLIAM G. TITUS,
JASON E. NICHOLS.