

(No Model.)

E. OLSEN.  
SIGNAL BELL.

No. 397,245.

Patented Feb. 5, 1889.

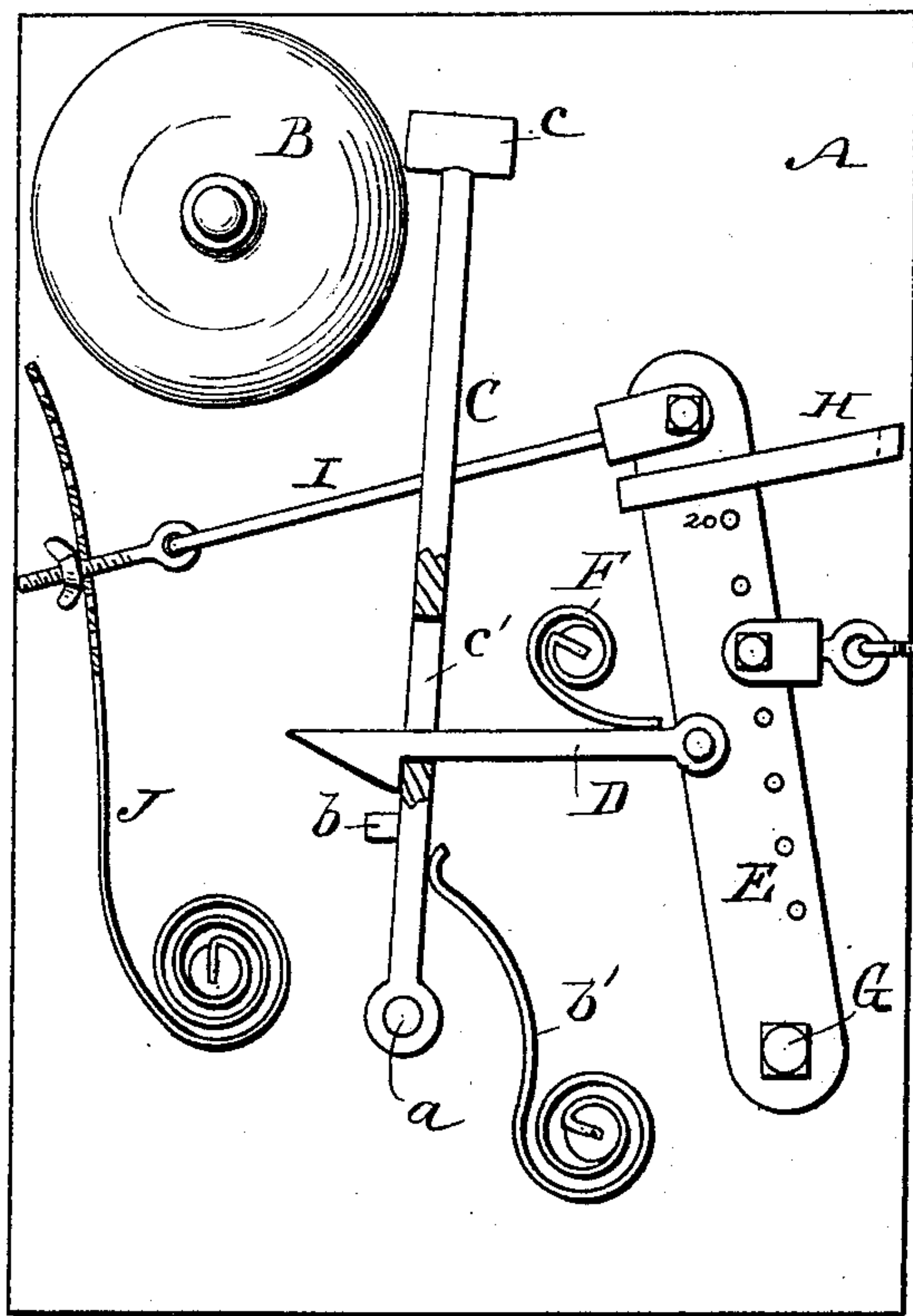


Fig. 1.

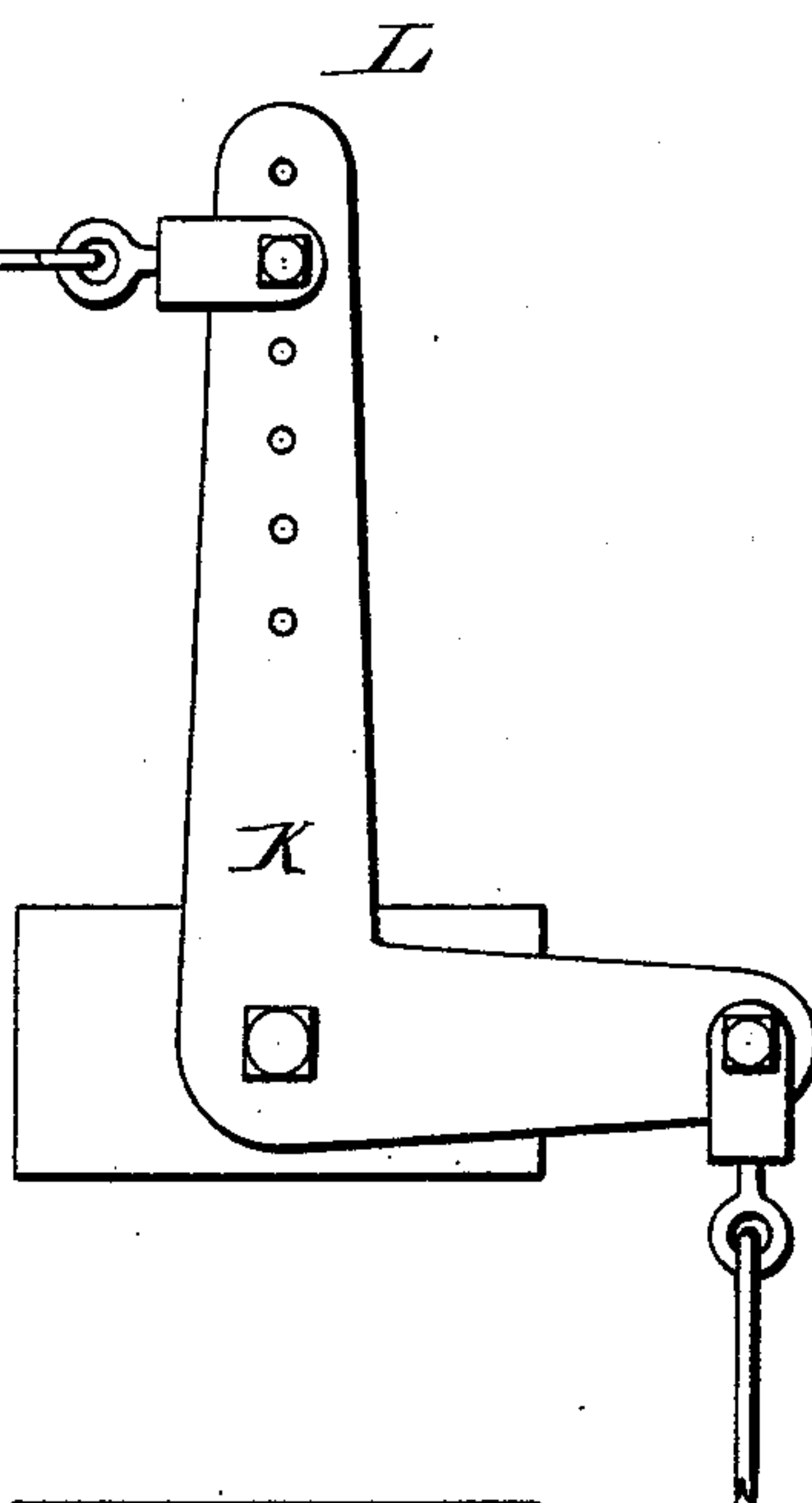
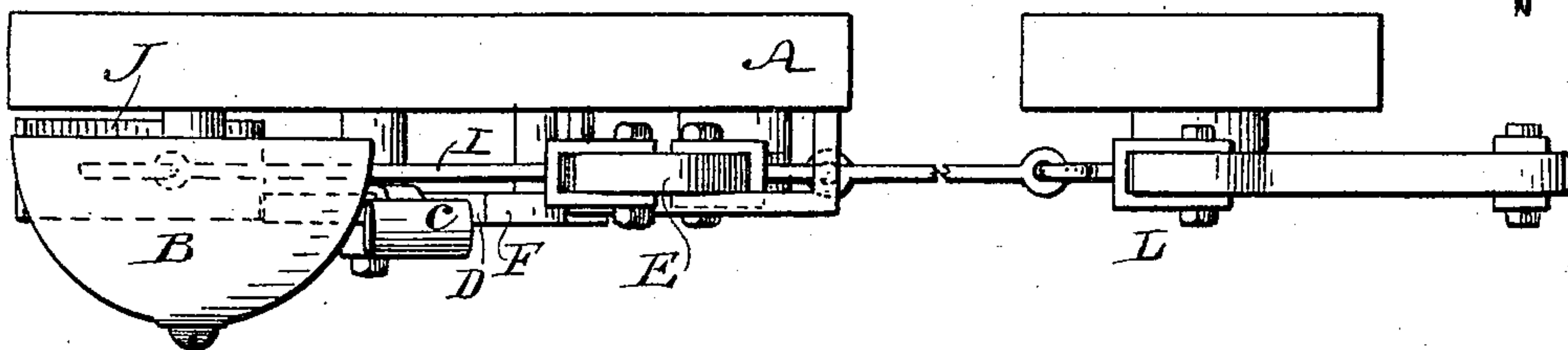


Fig. 2.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

ENGELBRECHT OLSEN, OF WALKERVILLE, MONTANA TERRITORY.

## SIGNAL-BELL.

SPECIFICATION forming part of Letters Patent No. 397,245, dated February 5, 1889.

Application filed June 8, 1888. Serial No. 276,462. (No model.)

*To all whom it may concern:*

Be it known that I, ENGELBRECHT OLSEN, of Walkerville, in the county of Silver Bow and Territory of Montana, have invented a new and Improved Signal-Bell, of which the following is a full, clear, and exact description.

My improvement relates more particularly to signal-bells for mines, and has for its object to provide an apparatus for striking the bell that will be easy of adjustment, of simple construction, and certainty of action.

My invention consists of a hammer-lever controlled by a spring and stop, a trip-lever acting on the hammer-lever, and a pull-lever adapted to take up the slack of the pull-cord.

My invention further consists of the construction and combination of parts, as will be hereinafter more fully described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both figures.

Figure 1 is a plan view of my improvement. Fig. 2 is a side view of the same.

In the drawings, A represents the plate or base to which the parts are attached. The bell B is secured to a post on the upper corner of the plate A.

C is the striking-lever pivoted to the base A at *a*, and having a hammer-head, *c*, at its free end, the head working in a plane coincident with the bell. The movement of the lever C is controlled by the stop *b* and pressure-spring *b'*. Just above the pivoted end of the lever C the same has an opening or slot, *c'*, for the trip-lever D to work through. The trip-lever D is secured to the lever E, and is provided with a hooked head, as shown, to engage with the edge of the slot *c'* and trip the lever C for striking the bell, and this lever D is held in engagement with the lever C by the spring F, secured to the base A. The lever E is pivoted to base A by bolt G or other suitable means, and its free end works in a keeper, H, which is secured to the base A.

I is a tension-rod attached to free end of lever E, and the other end of said rod has an eyebolt which passes through perforations in the tension-spring J. A winged nut works on said eyebolt to regulate the tension of the

spring on the lever E, through the medium of the rod I. The lever E has on its outer edge a series of perforations which are set to scale, so that the pull-cord may readily be attached to the lever E to overcome the weight of the same. For example, taking the weight of pull-cord to be upward of twenty pounds, the attachment will be at the first perforation so marked, and as the weight of cord increases the attachment will be below the first perforation. The pull-cord may be attached in any desired manner, although I have shown a clip and bolt.

If the bell is to be used for railroad-cars, where the rope runs horizontally, the connection of the pull-cord is made direct to the lever E; but if it is used for mines, where the rope runs down the shaft, an elbow-lever, K, is placed at the mouth of the shaft, the pull-cord being attached to the short arm and the connecting-cord L to long arm. The long arm of lever K has a series of perforations set to scale, the same as the lever E and for the same object.

In operation, when the pull-cord is worked, the lever E comes forward, carrying the trip-lever D with it, which in turn carries the striking-lever C forward till it stands at a certain angle, when the trip-lever D leaves the opening *c'*, releasing the lever C, the spring throwing it forward to strike the bell.

From the above it will be seen that the use of the troublesome bell-crank levers and balance-weights is dispensed with.

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

1. In a signal-bell, the combination, with a spring-pressed striking-lever, of an operating-lever having a series of perforations set to scale for the attachment of the pull-cord, a tension-spring, a rod secured to the operating-lever and tension-spring, and a spring-pressed trip-lever pivoted to the operating-lever and engaging the striking-lever, substantially as herein shown and described.

2. The combination, with the bell B, attached to a base-plate, the striking-lever C, having a slot, *c'*, and head *c*, and the trip-lever D, having a hooked end to engage with

slot *c'*, of the spring *b'*, the spring F, the lever E, tension-rod I, and spring J, substantially as shown and described.

3. The combination, with the base A, the  
5 bell B, the striking-lever C, and the spring *b'*, of the trip-lever D, operating-lever E, provided with perforations, the tension-rod I,

and the spring J, having apertures in its free end, substantially as shown and described.

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Witnesses:

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