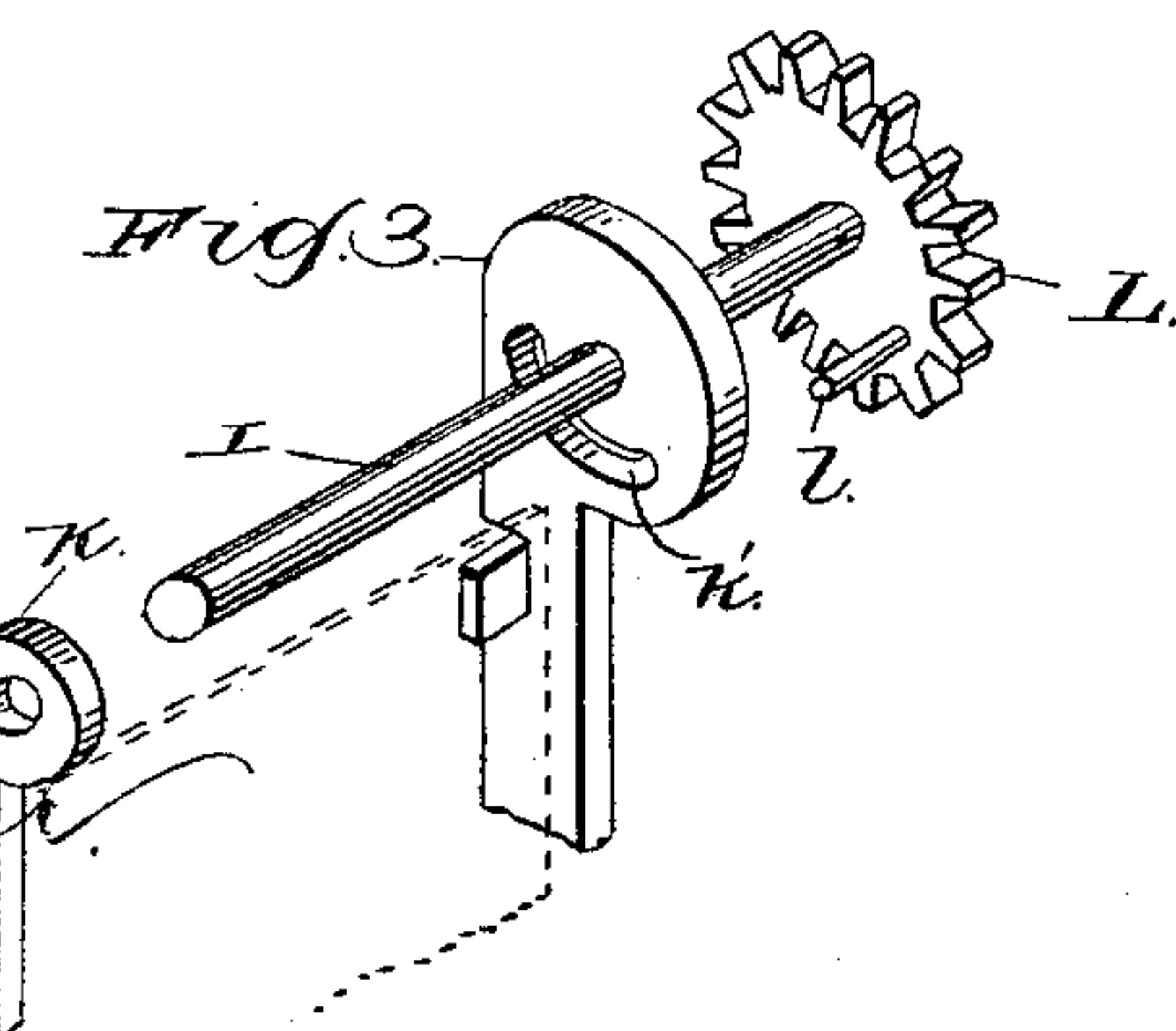
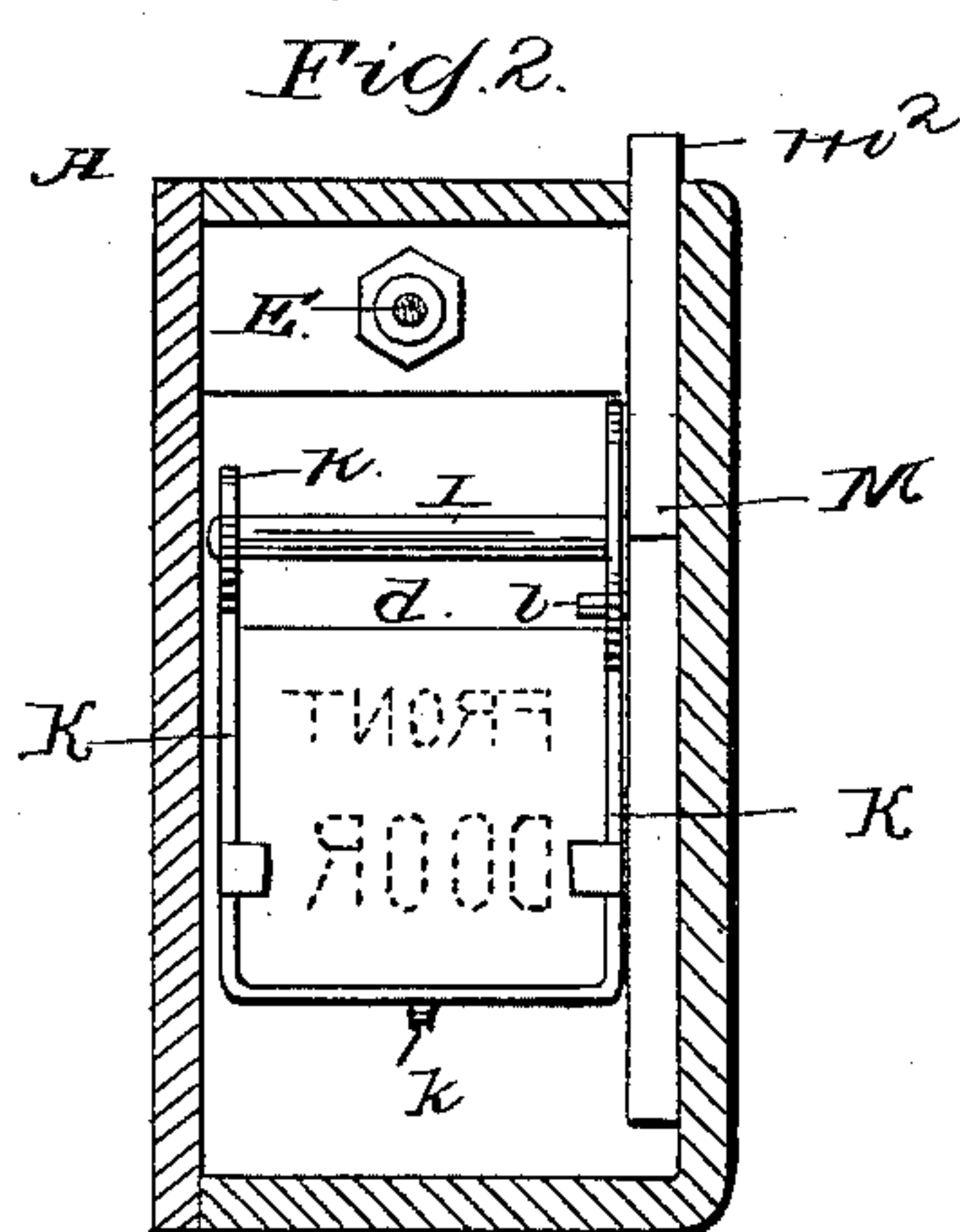
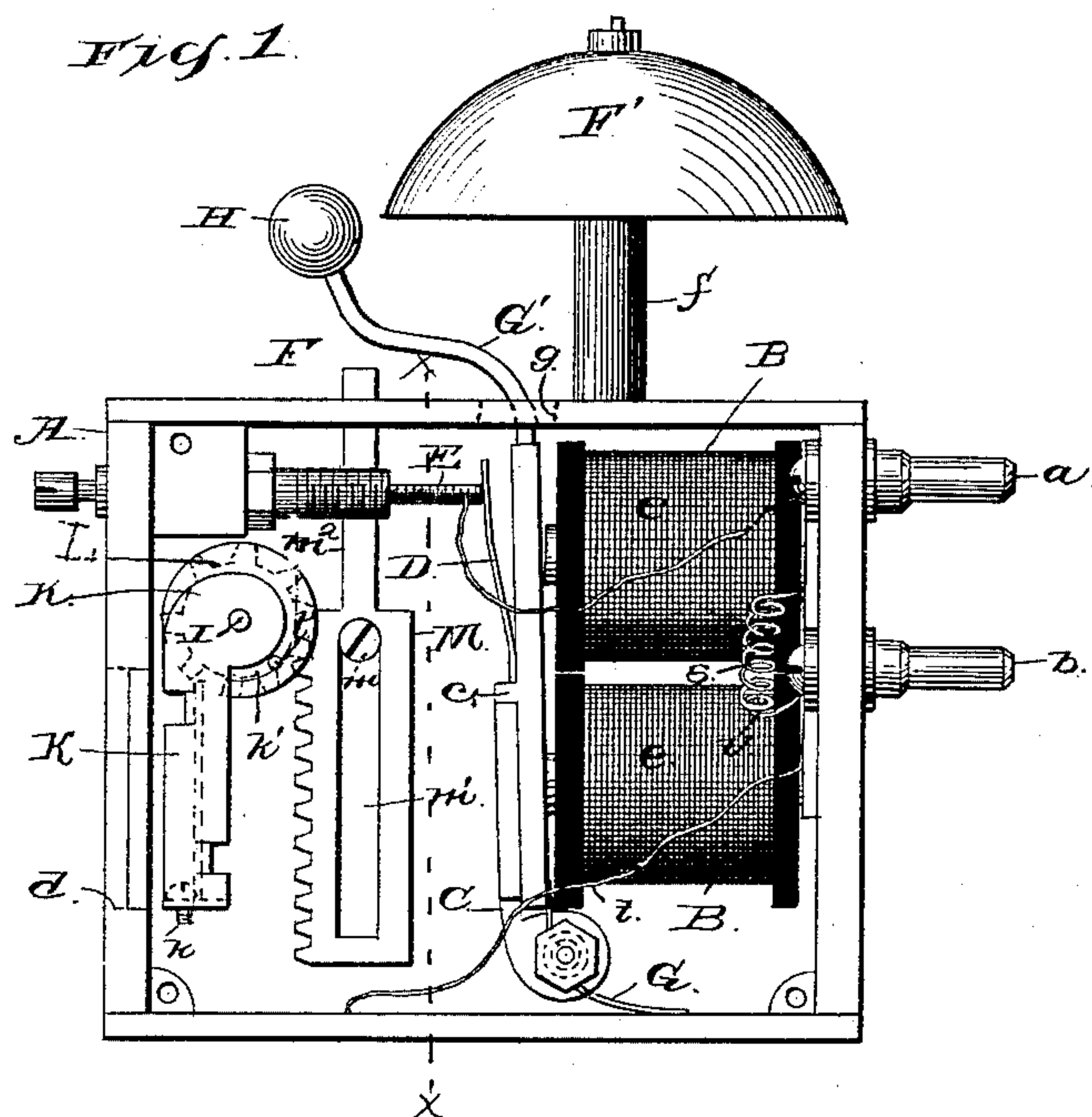


(No Model.)

C. HENZEL.  
ELECTRIC SIGNAL BELL.

No. 318,472.

Patented May 26, 1885.



WITNESSES

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# UNITED STATES PATENT OFFICE.

CHARLES HENZEL, OF NEW YORK, N. Y.

## ELECTRIC-SIGNAL BELL.

SPECIFICATION forming part of Letters Patent No. 318,472, dated May 26, 1885.

Application filed March 16, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES HENZEL, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a new and useful Improvement in Electro-Vibrating Call or Signal Bells, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to electro-vibrating call or signal bells; and it has for its object such improvements on the devices of this character now in use as will render the bell capable of indicating from what point the call or alarm is sounded; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claim.

15 In the accompanying drawings, which illustrate my invention, Figure 1 is an elevation of my improved apparatus, one side of the inclosing-case being removed so as to disclose the interior mechanism. Fig. 2 is a transverse vertical sectional view taken on the line *xx* of Fig. 1. Fig. 3 is a detailed perspective view.

A represents an inclosing-case, to which are secured the insulated binding-posts *a* *b* and the electro-magnets B.

30 C represents a vibrating armature, which operates in front of the cores of the electro-magnets in the usual manner. This armature has on one side a projecting stud, *c*. A contact-spring, D, is secured to the armature, and forms one side of the circuit-breaker, the other side of which is formed by the point of the screw E, which passes through an insulating-bushing, F, that is secured to the case.

40 G represents a spring, that bears against the armature for the purpose of keeping the contact-spring D normally in contact with the point of the screw E. The lower end of this spring bears against the bottom of the box, which, as here shown, is made of metal.

45 A gong, F', is carried by a post, *f*, that rises from the upper side of the box, and to the upper end of the armature is secured an arm, G', that extends up through a slotted opening, *g*, that is made in the upper side of the box, and terminates in a hammer, H, which strikes the gong when the armature is at-

tracted. In the front side of the box is made an opening, *d*, that is closed by a pane of glass. A shaft, I, extends transversely through the sides of the box, in rear of and above the opening *d*, and on this shaft or rod is hinged a rectangular frame, K, which depends behind the opening *d*, and in which frame is placed a card on which is inscribed the number or name of the door or place with which the apparatus is in circuit. A screw, *k*, passes through the lower side of the frame K, and projects slightly beyond the frame, as shown.

Loosely mounted on one end of the shaft or rod I, and in contact with one side of the frame K, is a spurred pinion, L, from the inner side of which projects a stud, *l*, that enters a quarter-circular slot, *k'*, that is made in one side of the frame K. A rack-bar, M, has its lower portion slotted and secured to one side of the box by a screw, *m*, that passes through the slot *m'*. The upper end of the rack-bar is reduced, as at *m*<sup>2</sup>, and passes through an opening that is made in the upper side of the box. This rack-bar meshes with the pinion L. When the rack-bar is raised vertically, the pinion is partly rotated, and its stud *l* bears against one end of the slot *k'* and raises the frame K to a horizontal position, and the frame is retained in this position by the screw *k*, the point of which rests upon the stud *c* of the armature. When the armature is attracted, the gong is sounded and the frame K dropped to a vertical position, and the name or number of the place or door with which the apparatus is in circuit shows through the opening *d*. The circuit is as follows: From binding-post *a* through wire *s* to coils *e*; thence by wire *t* to bottom of box, and thence through spring G, armature C, and contact-spring D to screw E, and from thence through wire *v* to binding-post *b*. If desired, the bell may be discarded, and only the frame carrying the numbered or lettered card used.

95 Having thus described my invention, I claim—

In electric-bell apparatus, the combination of a case inclosing and carrying the same, and having an opening in one of its sides, the armature having a projecting stud or shoulder, the hinged frame having the quarter-circular



slot, the loose pinion journaled in line with  
the hinged end of the frame and having a stud  
that enters the slot in the hinged frame, and  
the rack-bar that meshes with the loose pin-  
5 ion for the purpose set forth, substantially as  
described.

In testimony that I claim the foregoing as

my own I have hereto affixed my signature in  
the presence of two witnesses.

CHARLES HENZEL.

Witnesses:

HUGHES J. SMALLON,  
EDWARD A. DAVIS, Jr.