

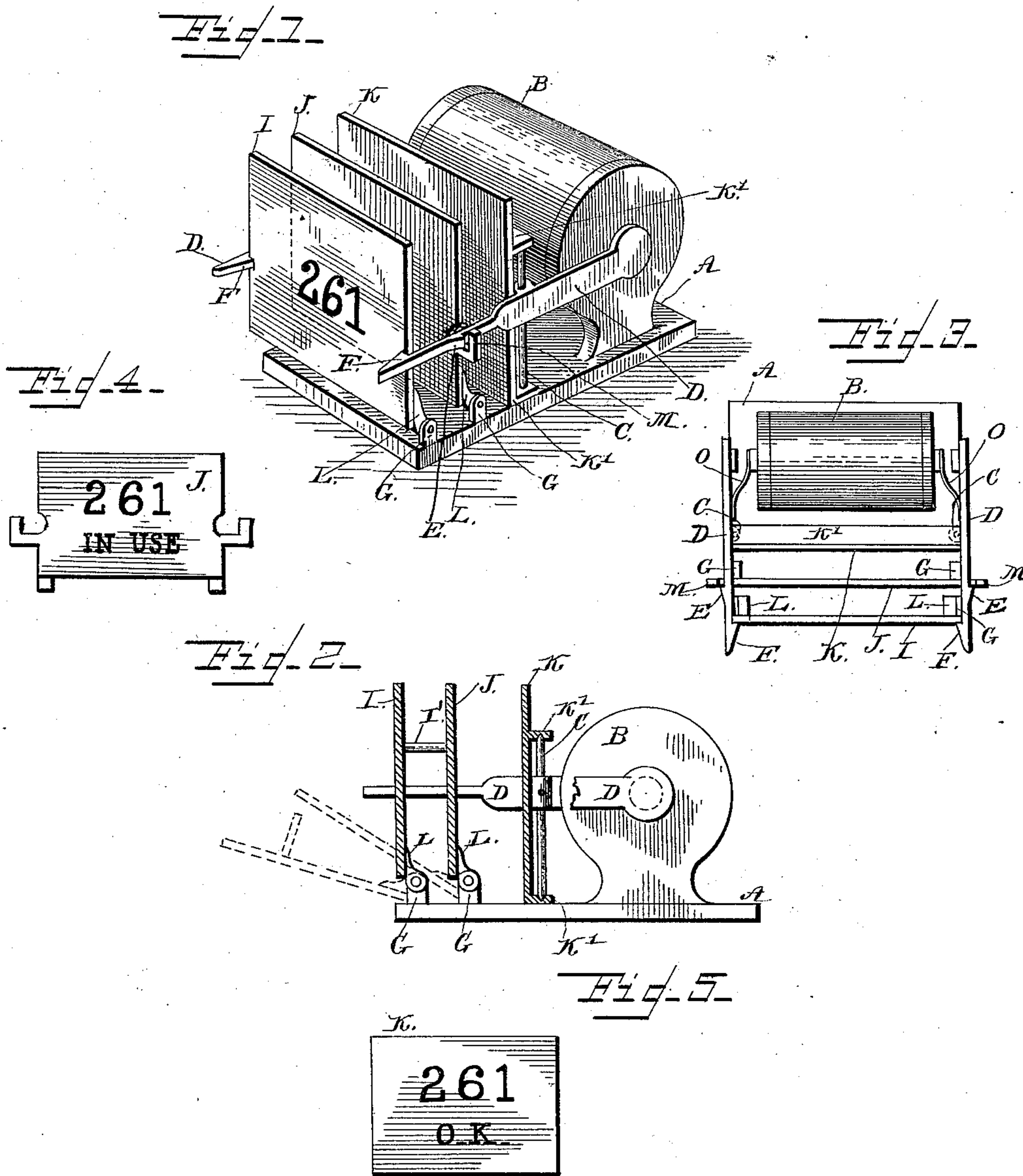
(No Model.)

F. C. WATKINS.

TELEPHONE SIGNAL.

No. 357,052.

Patented Feb. 1, 1887.



Witnesses

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TELEPHONE-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 357,052, dated February 1, 1887.

Application filed April 28, 1886. Serial No. 200,455. (No model)

To all whom it may concern:

Be it known that I, FRANK C. WATKINS, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Telephone-Signals; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention is an indicator intended to be used in connection with telephone systems to automatically show when a particular instrument is in use and when its use has been discontinued.

It consists in certain novel features herein-after fully described, and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of my device. Fig. 2 is a central vertical section. Fig. 3 is a plan view, and Figs. 4 and 5 are detail views, of the signal-cards.

Referring to the drawings, A is the base, of any suitable size and construction. At one end of the base I mount a magnet, B, and in front of this magnet I erect standards C, upon which I pivot the armatures D. The armatures D extend forward past the standards C, and are provided with beveled lugs E F, forming an integral part thereof and projecting from the opposite sides of the same. These lugs hold the signal-cards in position, as will be hereinafter fully explained.

Upon the base, at and near the front end of the same, I form the lugs G. These lugs G are placed the proper distance apart and the front and middle signal-cards are pivotally secured thereto, as will be understood from the drawings. Three signal-cards, I J K, are used. The rear card, K, is rigidly secured to the base, and in the drawings I have shown it as being provided on its back with two horizontal ribs or flanges, K' K', the lower flange being secured to the base and the standards C being secured in said ribs. It will be understood

that this construction could be readily varied, as the standards could be secured in the base and the upper flange could be dispensed with.

The middle and front signal-cards are provided with trunnions L at their lower corners, by means of which they are pivotally secured to the lugs G. The middle card is provided with hooks M on its edge, which engage the lugs E, as shown. The front signal-card is held by the lugs F engaging its edges.

The operation of my device will be readily understood. When the subscriber or other person desiring to use the telephone calls, the magnet B is energized and the armatures D are attracted thereby, as will be understood. The armatures being attracted, their back ends swing toward the magnet and their forward ends swing outward, disengaging the lugs F from the signal-card I, which will fall forward, of its own weight, being secured to the trunnions L in advance of their pivotal points, as will be understood on reference to Figs. 1 and 2. When the front ends of the armatures swing outward, the lugs E are made to engage the hooks M. When the person using the telephone has finished his conversation, the current is broken and instantly the back ends of the armatures, under the influence of spring O, swing outward, carrying the front ends inward, when the signal-card J will be released and fall forward, passing the lug F, and the device will now be in the position shown in dotted lines in Fig. 2. All the cards bear the number of the telephone to which the device is connected, and in addition the middle card bears the words "In use," and the back one the letters "O. K." Thus, when the instrument is in use and the front signal-card has fallen, as hereinbefore explained, the middle one will be exposed, displaying the words "In use." When the middle card has fallen, the rear one will be exposed, and the attendant, seeing the letters "O. K." displayed, will know that the instrument is not being used, and will return the fallen cards to their normal position by hand.

O is a spring arranged to bear on the armature and hold it in its normal position and prevent its sticking to the magnet.

Although I have shown and prefer to use two armatures, the desired results could be accomplished by using one.

To aid the attendant in returning the signal-cards to their normal position, I provide the card I with a pin, I', on its back. As the card I is swung back by the hand, the pin contacts with the card J and pushes it into position, as will be understood on reference to the dotted lines in Fig. 2.

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

1. The combination, with a magnet, of two or more indicator-drops provided with means whereby one will be released when the magnet is energized and another when the current is broken, substantially as and for the purpose set forth.

2. The combination of a suitable support, the magnet, the standards erected upon the support in front of the magnet, the signal-cards, one rigidly and the others pivotally se-

cured to the support, and the armatures pivoted upon the standards and engaging the pivoted signal-cards, substantially as described and shown. 25

3. The herein shown and described indicator for telephone systems, comprising a base, a magnet mounted at one end of the base, standards erected upon the base in front of the magnet, the armature pivoted in front of the magnet, a spring arranged to bear upon the armature and normally hold it away from the magnet, and a series of signal-cards, one rigidly and the others pivotally secured to the base, the pivoted cards being engaged by the armature, and the front card having a pin secured to its back, which contacts with the face of the next card, substantially as specified. 30 35 40

In testimony whereof I affix my signature in presence of two witnesses.

FRANK C. WATKINS.

Witnesses:

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