

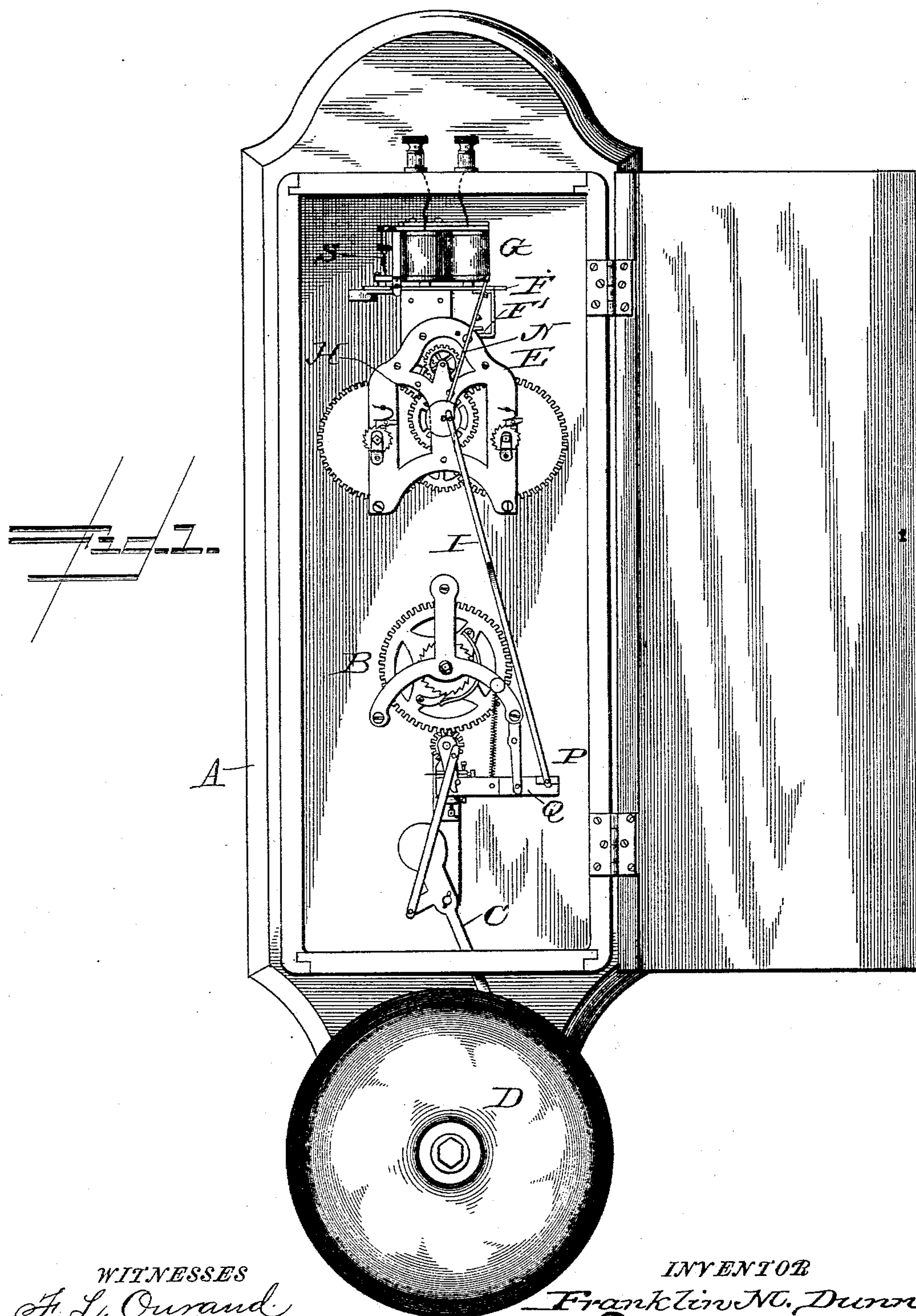
(No Model.)

2 Sheets—Sheet 1.

F. M. DUNN.
ELECTRO MECHANICAL GONG.

No. 504,827.

Patented Sept. 12, 1893.



WITNESSES
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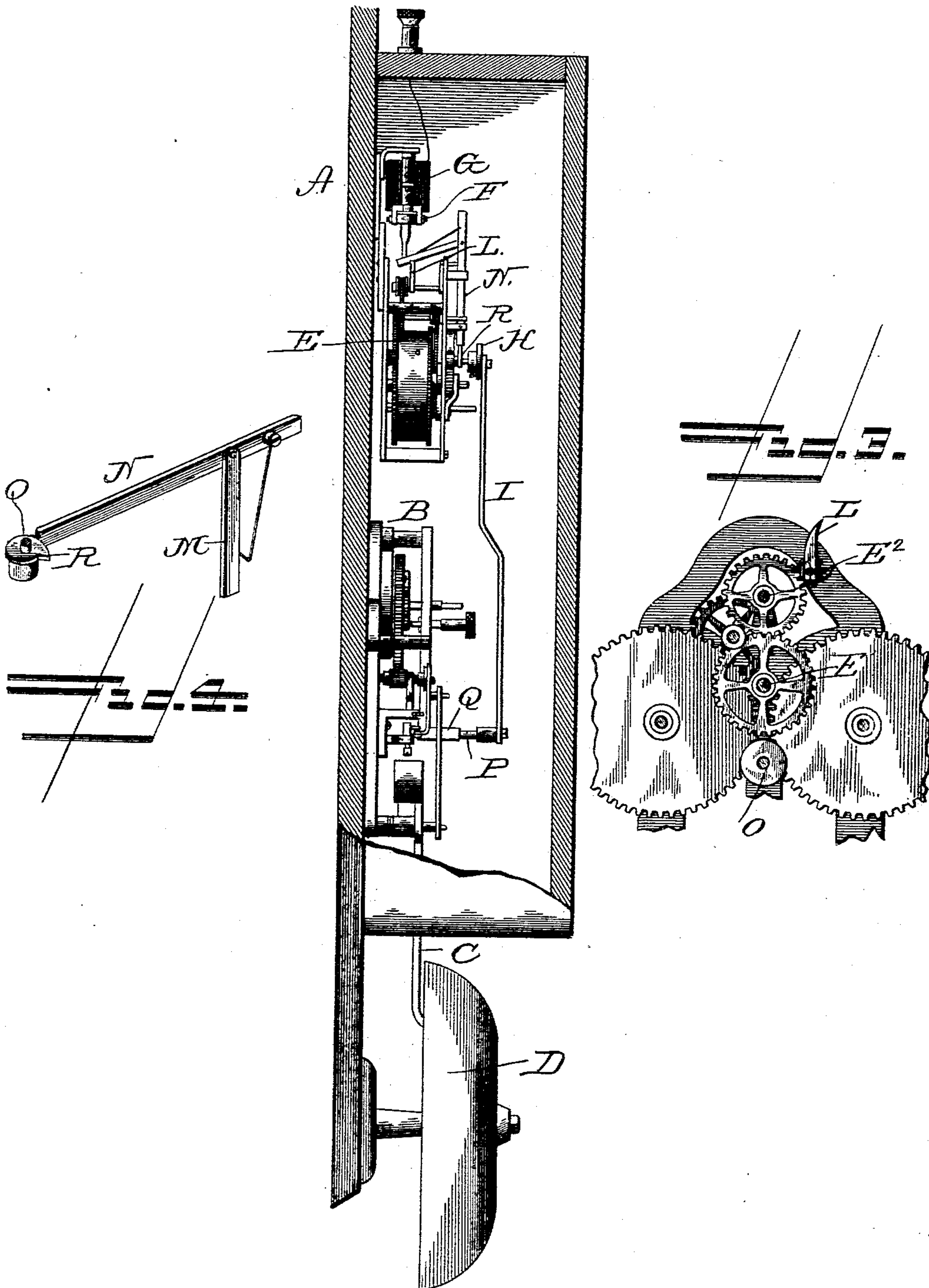
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UNITED STATES PATENT OFFICE.

FRANKLIN M. DUNN, OF BALTIMORE, MARYLAND.

ELECTRO-MECHANICAL GONG.

SPECIFICATION forming part of Letters Patent No. 504,827, dated September 12, 1893.

Application filed June 23, 1892. Renewed June 9, 1893. Serial No. 477,118. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN M. DUNN, a citizen of the United States, and a resident of Baltimore, in the State of Maryland, have invented new and useful Improvements in Magneto-Electric Mechanical Gongs; and I do hereby declare the following to be a full, clear, and exact description of said invention, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to an improved device for mechanically operating electric currents, whereby the manipulation of a magneto call box at one station establishes electric communication between such station and any other along the line of a given circuit upon which both are located, and whereby the electric current so established serves to operate an armature to release a train of gearing, which in its turn actuates a trip mechanism to set in motion the mechanism of a gong or tower striker to indicate the number of the station sending in the alarm, or for transmitting distinctive signals, all as will be hereinafter fully described and specifically designated in the claims.

In the accompanying drawings, Figure 1 represents a front elevation of a magneto-electric mechanical gong, embodying the salient features of my invention; Fig. 2, a side elevation of the same; and Figs. 3 and 4, detail views of the tripping mechanism.

Similar letters of reference occurring on the several figures of the drawings indicate corresponding parts.

In carrying out my invention, I provide a suitable inclosing frame or box A, within the lower part of which is secured any preferred style of spring-actuated gearing B, which, when in operation, communicates motion to the striking hammer C; said hammer projecting through an opening in the bottom of the frame or box A for contact with the gong D. Within the upper part of the inclosing frame or box is secured a suitable train of spring-actuated gearing E, which has connection with an armature F, (arranged directly above the same,) through a trip mechanism of novel construction, whereby, when the said armature is attracted to the magnets G, by a magneto-electric current from a call box or

station, the said trip mechanism allows the gearing to revolve and actuate an eccentric H, which imparts motion to a rod I pivotally secured thereto at its upper end and connected at its lower end to a releasing device, which forms a part of the mechanism which actuates the striking hammer, and whereby the number of a station sending in an alarm may be indicated, or other distinctive signals transmitted, as will be hereinafter more fully alluded to.

The spring-actuated gearing E consists, preferably, of two cylinders driven by coiled springs within the same and which impart their motion to the central shaft E', near the upper end of the mechanism; said shaft in its turn imparting motion to the shaft E², which carries a catch pin or lug L, the free end of the same projecting in the path of the gravity drop M secured at its outer end to the vertically sliding rod N, in such manner that, when the armature F is attracted to the magnets G, a hook-shaped projection F' on said armature lifts said gravity drop M out of the path of the catch pin or lug L and allows the train of gearing to revolve and impart its motion to a shaft O directly below the central shaft E'. Upon the outer end of the shaft O is affixed an eccentric H, to which is pivoted the upper end of the rod I, the lower end of the same being pivoted to an extension P upon an arm Q, which constitutes the releasing device for setting in motion the spring-actuated gearing B which operates the striking hammer C. Upon the shaft O, and to the rear of the eccentric H, is secured a cam R, upon which rests the lower end of the vertically sliding rod N, whereby, when a signal is sent in, thus attracting the armature F to the magnets G, the train of gearing is set in motion and, as the shaft O revolves, the base of the rod N travels around upon the smallest circumference of the cam R, while the signal is being sounded on the gong, until the base of the rod connects with the largest circumference of the said cam, thereby lifting said rod and allowing the inner end of the gravity rod M to drop down in the path of the catch pin or lug L to stop the mechanism until another distinctive signal is sent in. The pivoted end of the armature F is provided with a suitable spring S, to throw said

armature away from the magnets when the circuit is broken.

I do not confine myself to the particular style of mechanism shown for actuating the gong or tower striker, as my improved device may be readily adapted and adjusted in operative position with any of the well-known forms of electro-mechanical gongs, without departing from the spirit of my invention. The magnets and armature usually connected with the mechanism of the gong or tower striker are dispensed with, the connecting rod I between the upper and lower trains of gearing serving to furnish a more positive and reliable result than heretofore attained by other devices.

Having thus described my invention, I claim as new and useful—

1. The herein described device for mechanically operating electro-mechanical gongs, consisting of the spring-actuated trains of gear-

ing B and E, the eccentric H and rod I connecting the same, the vertical sliding rod N, gravity rod M, cam R and catch pin L, and the armature F, and magnets G, all substantially as and for the purpose specified.

2. In a magneto-electrical gong, the spring-actuated gearing E, provided with the armature F, having hook-shaped projection F', magnets G, catch pin L, vertically sliding rod N, gravity rod M, and the shaft O, provided with the eccentric H and cam R, in combination with the vertical rod I and gong striking mechanism B, all substantially as and for the purpose specified.

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

FRANKLIN M. DUNN.

Witnesses:

A. W. BRADFORD,
LEE PURCELL.