

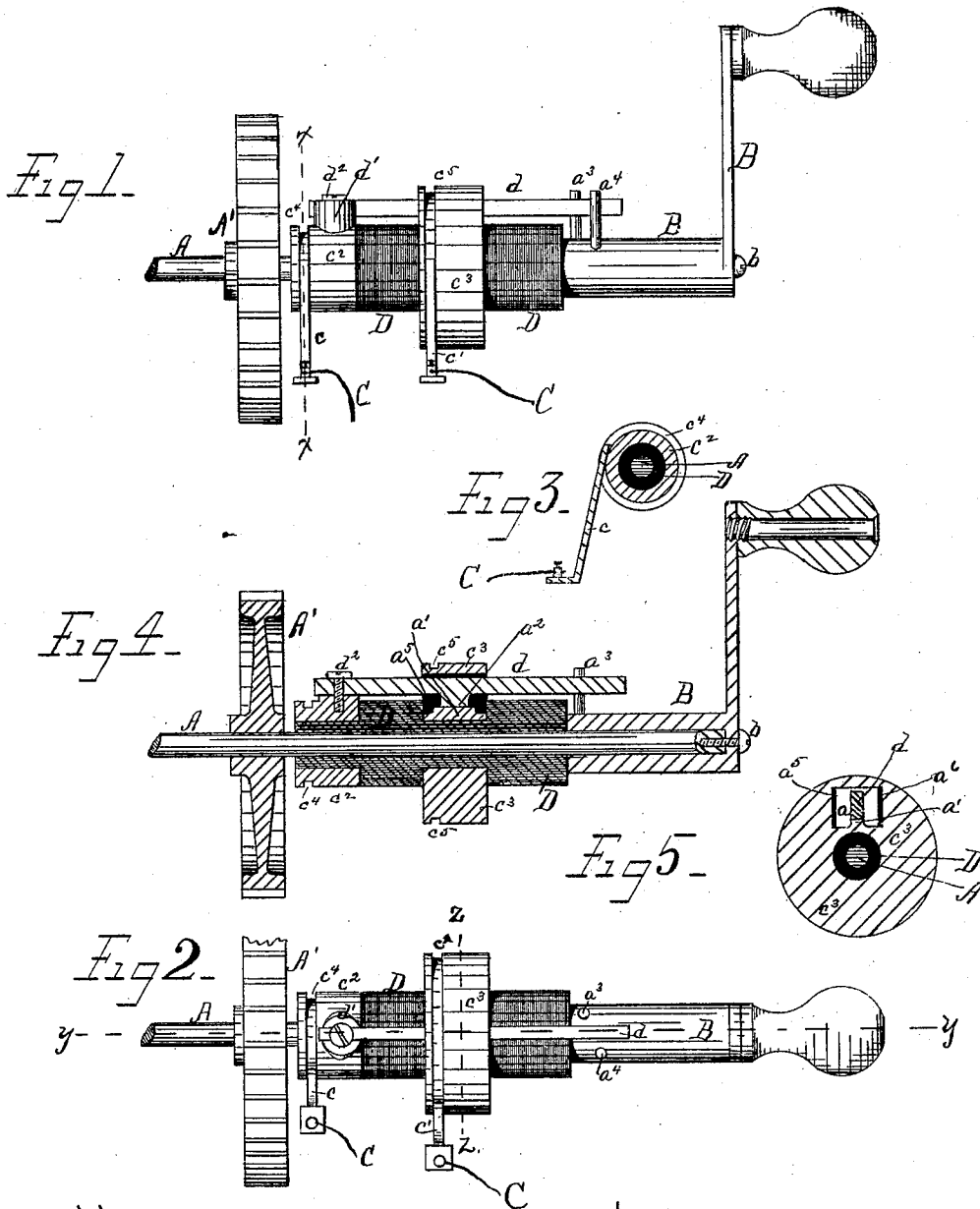
(No Model.)

J. B. ODELL.

MAGNETO SIGNAL GENERATOR.

No. 251,128.

Patented Dec. 20, 1881.



WITNESSES—  
J. Everett Brown  
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per Munday Evans & Adcock.  
his Attys.

# UNITED STATES PATENT OFFICE.

JOHN B. ODELL, OF CHICAGO, ILLINOIS.

## MAGNETO-SIGNAL GENERATOR.

SPECIFICATION forming part of Letters Patent No. 251,128, dated December 20, 1881.

Application filed July 29, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. ODELL, of Chicago, Cook county, State of Illinois, have invented certain new and useful Improvements in Magneto-Signal Generators for Telephones, of which the following is a specification.

My invention relates to improvements in automatic switches for establishing communication with the telephone call-bell or ringer when the crank of the generator is being turned, and of shunting or short-circuiting the ringer when the said crank remains at rest.

Heretofore devices have been made which would operate to break the shunt-circuit and put the ringer in communication when the crank of the generator is turned in one direction, but not when turned in the other. By the present invention the ringer is put in communication in whichever direction said crank may be turned, so that it is impossible for the person operating to make a mistake, however unskilled and little acquainted he may be with the use of telephones.

In the accompanying drawings, which form a part of this specification, and in which similar letters of reference indicate like parts, Figure 1 is a side elevation of a device embodying my invention; Fig. 2, a plan view of the same; Fig. 3, a cross-section on line *xx* of Fig. 1; Fig. 4, a longitudinal section on line *yy* of Fig. 2, and Fig. 5 a cross-section on line *zz* of Fig. 2.

In said drawings, A represents the driving-shaft of the generator, and A' the main driving-gear.

B is the crank, having a hollow shell or socket fitting loosely over the end of the shaft A, and secured thereto by a set-screw, *b*, in such manner that the crank may turn on said shaft.

The wires O C, which form part of the short circuit by which the ringer is shunted or cut out when the crank of the generator is at rest, are connected by spring strips or contacts *c c'* with two insulated metallic collars *c<sup>2</sup> c<sup>3</sup>* on the generator-shaft.

The collars *c<sup>2</sup>* and *c<sup>3</sup>* are insulated from the shaft and from each other by the shell D, made of vulcanite or other insulating material, surrounding said shaft. The collars *c<sup>2</sup>* and *c<sup>3</sup>*, which are preferably made of brass, are pro-

vided with guide-grooves *c<sup>4</sup>* and *c<sup>5</sup>* for the end of the strips *c* and *c'*, respectively.

*d* is a spring-bar, secured to a slotted projection, *d'*, on the collar *c<sup>2</sup>* by means of a screw, *d<sup>2</sup>*. The collar *c<sup>3</sup>* is provided with a transverse slot or recess, *a*, having a central projection or contact-point, *a'*, and the bar *d* is provided with a corresponding projection or contact-point, *a<sup>2</sup>*, on its under side, which presses against the contact-point *a'* when the bar *d* is in its straight or normal position. The free end of the bar *d* projects between a couple of pins or lugs, *a<sup>3</sup> a<sup>4</sup>*, on the crank B, so that in whichever direction the crank is turned the first result is to swing or move the bar *d* to the one side or other until the projection *a<sup>2</sup>* comes in contact with one end of the recess *a*, when the shaft of the generator then, of course, turns with the crank. Little blocks of vulcanite or other insulating material, *a<sup>5</sup> a<sup>6</sup>*, are inserted in the ends of the recess *a*, so that the connection between the bar *d* and collar *c<sup>3</sup>* will be broken at this time.

Instead of inserting the insulating-blocks *a<sup>5</sup> a<sup>6</sup>* in the recess *a* to form a stop or bearing for the bar *d*, lugs or pins similar to the pins *a<sup>3</sup> a<sup>4</sup>* may be provided on the insulating-shell D, in which case, of course, the relative position of these lugs should be such that the contact-point *a<sup>2</sup>* cannot touch the end of the recess *a*; or, if preferred, a short transverse slot may be cut in the crank, through which projects a pin from the generator-shaft. When the operator lets go the crank the spring-bar *d* at once springs back into its normal position, thus forming a connection between the points *a'* and *a<sup>2</sup>*, thereby completing the short circuit and cutting out the ringer; which circuit is broken at the points *a'* and *a<sup>2</sup>* the moment the operator begins to turn the crank in either direction, thereby putting the ringer in communication whenever the generator is being operated.

I have not thought it necessary to a full understanding of the present invention to show or describe other parts of the magneto-electric generator or call-bell and telephone apparatus to which my invention is applied, as the construction thereof is well known.

I claim—

1. The combination, with the generator-shaft, of a crank adapted to turn thereon in either direction within certain limits, a spring switch-bar secured at one end to collar  $c^2$ , mounted on  
5 an insulating-shell surrounding said shaft, and arranged to make and break connection with collar  $c^3$ , also mounted on said insulating-shell, and pins or projections  $a^3 a^4$ , secured to said  
10 crank for operating the switch-bar when the crank is turned in either direction, substantially as specified.

2. The combination of generator-shaft A, crank B, provided with pins  $a^3 a^4$ , insulating-shell D, collars  $c^2$ , bar  $d$ , provided with contact-point  $a^2$ , collar  $c^3$ , provided with contact-  
15 point  $a'$ , and stops  $a^5 a^6$ , substantially as specified.

JOHN P. ODELL.

Witnesses:

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