

(No Model.)

C. E. SCRIBNER.

AUTOMATIC CRANK SWITCH FOR TELEPHONE CALL BOXES.

No. 287,873.

Patented Nov. 6, 1883.

Fig. 1.

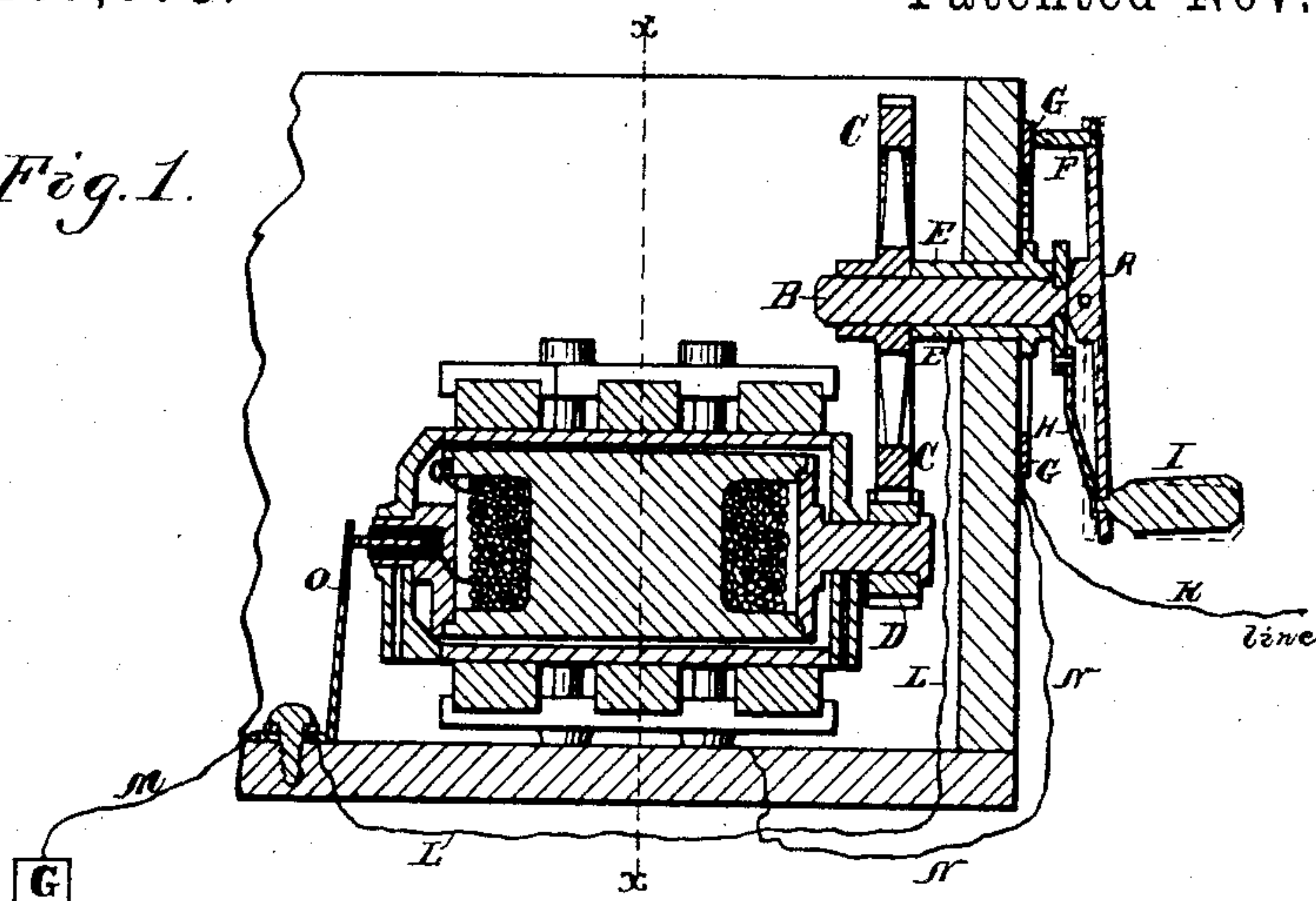


Fig. 2.

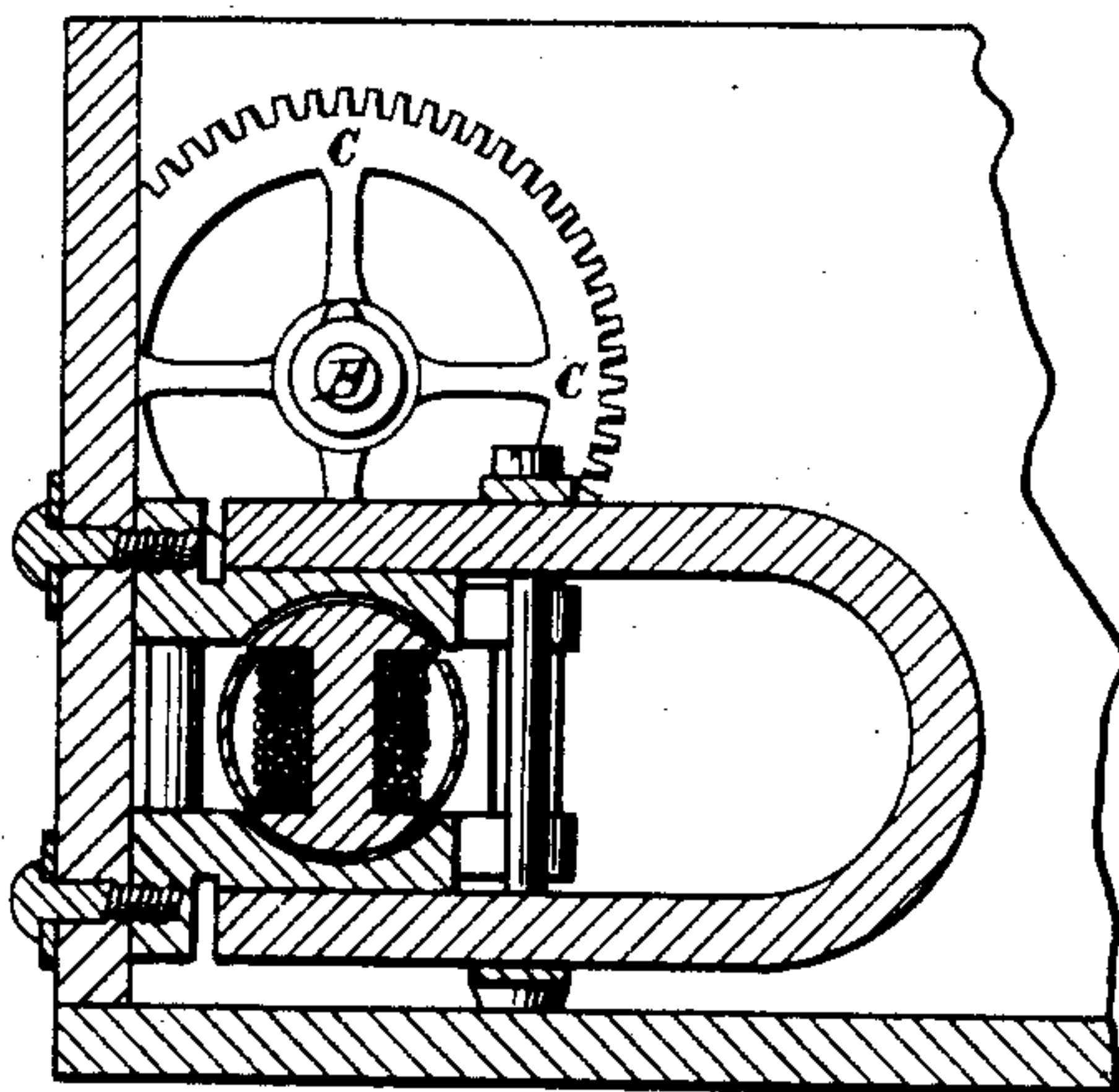
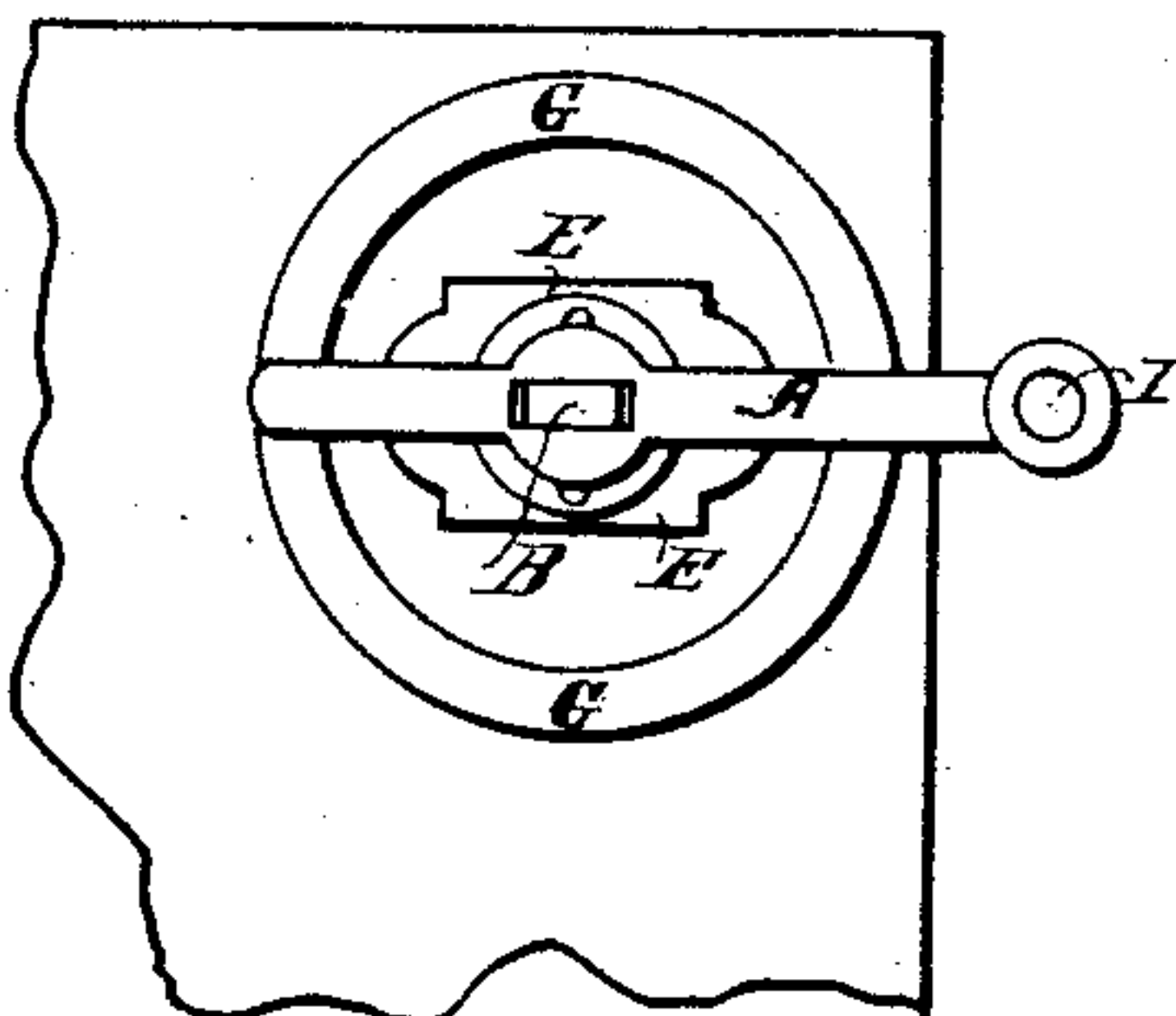


Fig. 3.



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AUTOMATIC CRANK-SWITCH FOR TELEPHONE CALL-BOXES.

SPECIFICATION forming part of Letters Patent No. 287,873, dated November 6, 1883.

Application filed March 14, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. SCRIBNER, of Chicago, Illinois, have discovered certain new and useful Improvements in Automatic Crank-Switches for Telephone Call-Boxes, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention is designed for the ordinary magneto-telephone signal-box; and it consists of mechanism whereby the shunt-wire of the revolving armature-coil is automatically broken when the crank is set in motion. Heretofore this work has been done by pressing upon a push-key which was attached to the box, but independent of the crank. By the use of my improvement I am enabled to open the shunt by pressing against the crank before the generator begins to revolve. The shunt-circuit may thus, at the will of the operator, be held open, as described, by the same hand that turns the crank. Automatic means have also been used for holding open the short circuit around the armature during the operation of the box.

In the drawings, Figure 1 is a vertical section of such portion of a magneto call-box as relates to my invention. Fig. 2 is a section thereof upon dotted line *xx* of Fig. 1. Fig. 3 is a detail view of the automatic crank-switch attached to the side of the box.

The crank A is attached to the shaft B of the wheel C, which is in engagement with the pinion D of the revolving armature. The shaft revolves within the metallic sleeve E. The lever, instead of being attached to the shaft rigidly, as heretofore, is pivoted, as shown, so that the contact-point F will be held normally against the metallic ring G by the spring H. On taking hold of the rubber handle I the caller naturally crowds the handle I toward the box. The resistance of the spring H is thus overcome and the contact-point F lifted from ring G while the crank is in motion.

By including the contact-point F and the ring G in the circuit of the shunt-wire, it is

obvious that said shunt-wire will be held open while the caller is sending his signal, but will remain closed at all other times. The object of the shunt-wire is to short-circuit the generator-coil, in order that the said coil may not retard voice-currents of the telephone or other currents that may pass through the box.

The ring and contact-point may be connected into the circuit of the shunt-wire in any suitable manner, as shown in Fig. 1. The circuit of the shunt-wire may be traced as follows: from the line K to the ring G, thence through contact-point F, lever A, shaft B, and sleeve E, to the shunt-wire L, thence to the ground-wire M. The circuit is thus completed through the box without passing through the generator-coil. When the crank is set in motion, the connection is broken between ring G and contact-point F, and the circuit may then be traced as follows: from line K to ring G, thence by wire N to the metallic frame of the generator, thence through the generator-coil and contact-spring O to ground. The contact-point F, it will be seen, may come to rest at any point on the ring G.

I claim—

1. The combination of crank A, contact-point F, ring G, and spring H, with circuits, substantially as shown.

2. The combination, in a hand magneto signal-box, of a main line including the coils of the revolving armature, a short circuit around said armature, contact-points included in said short circuit, which are adapted to be held normally closed by the tension of a spring, so as to shunt out the said coils, and a crank attached to the driving-shaft of the armature, said crank being adapted to be turned by the hand and at the same time, at the will of the operator, pressed positively against the force of the said spring, whereby the said contact-points may be separated and the current of the generator sent to line.

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Witnesses:

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