

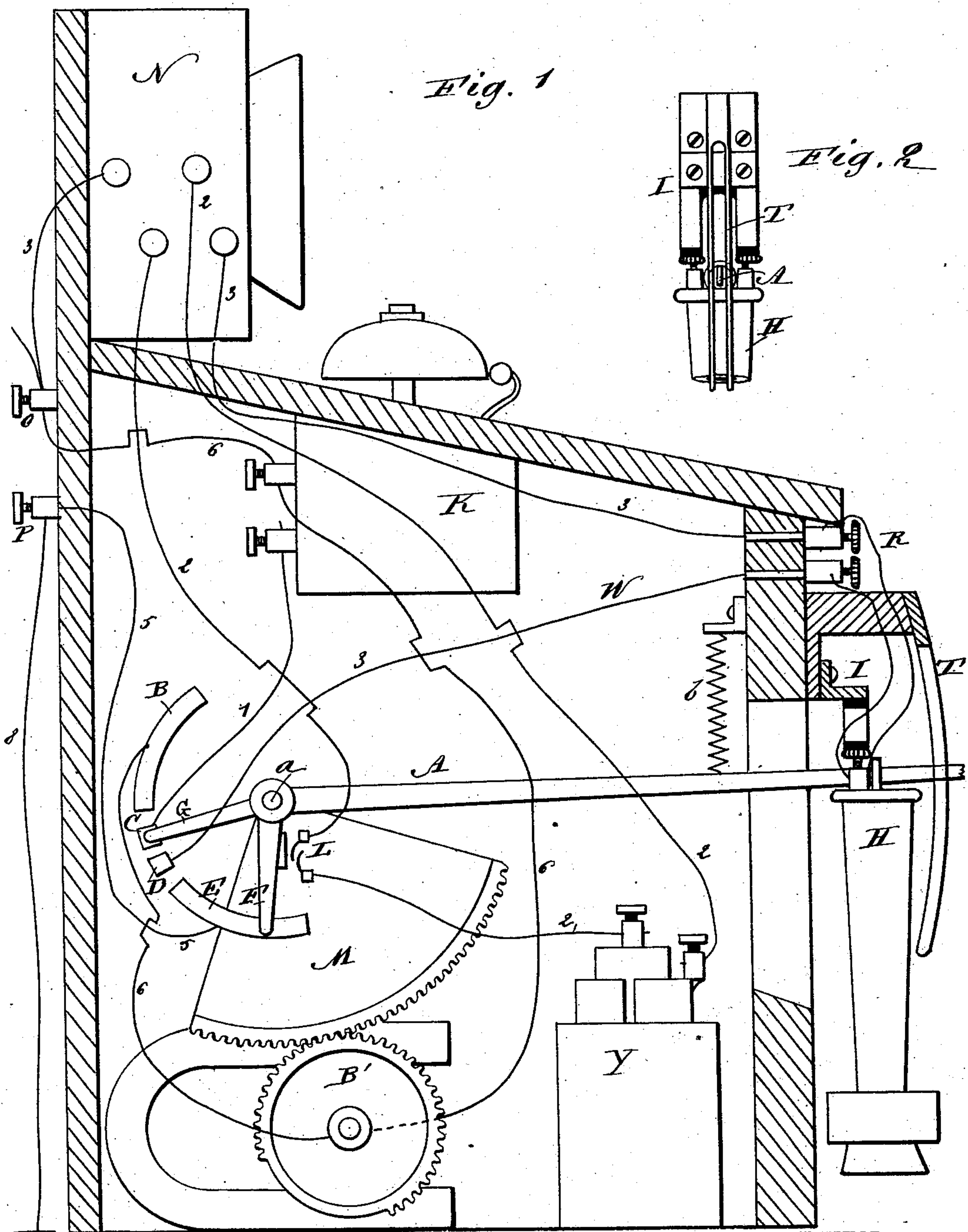
(No Model.)

2 Sheets—Sheet 1.

J. M. ORAM, H. M. SUTTON & H. GARRETT.  
TELEPHONE CALL BOX.

No. 292,570.

Patented Jan. 29, 1884.



WITNESSES:

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*C. Sedgwick*

INVENTOR:

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ATTORNEYS.

(No Model.)

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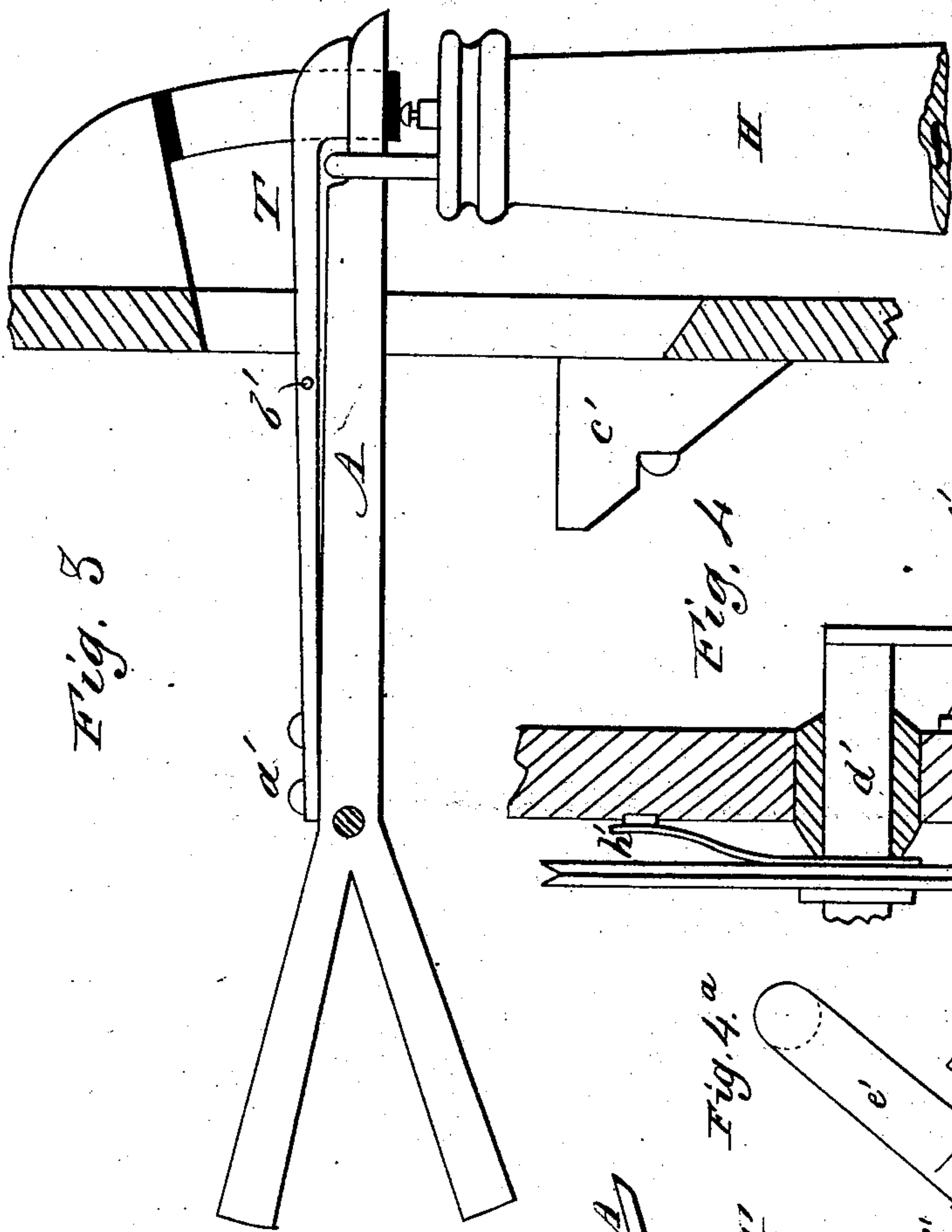


Fig. 3

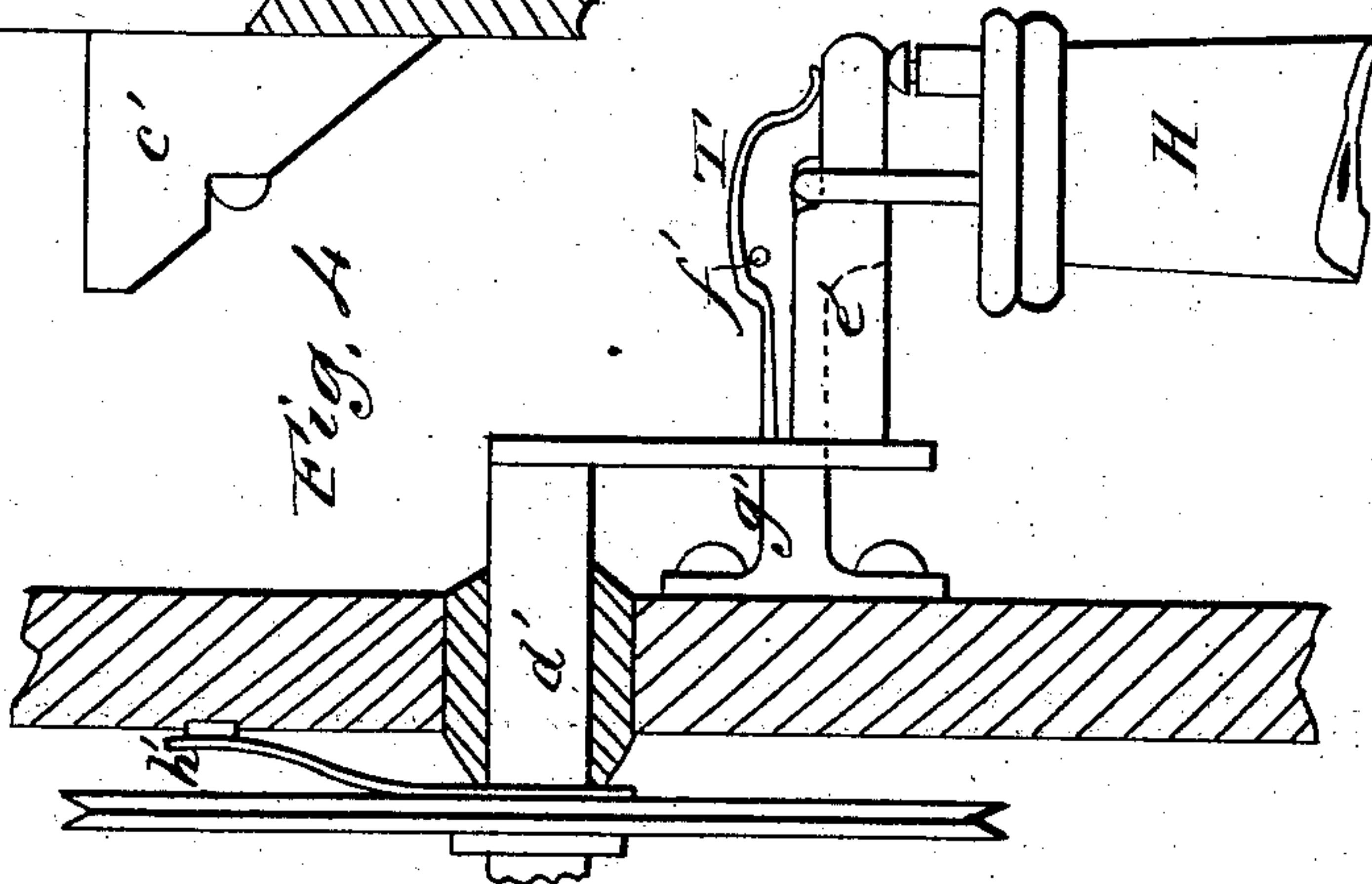


Fig. 4

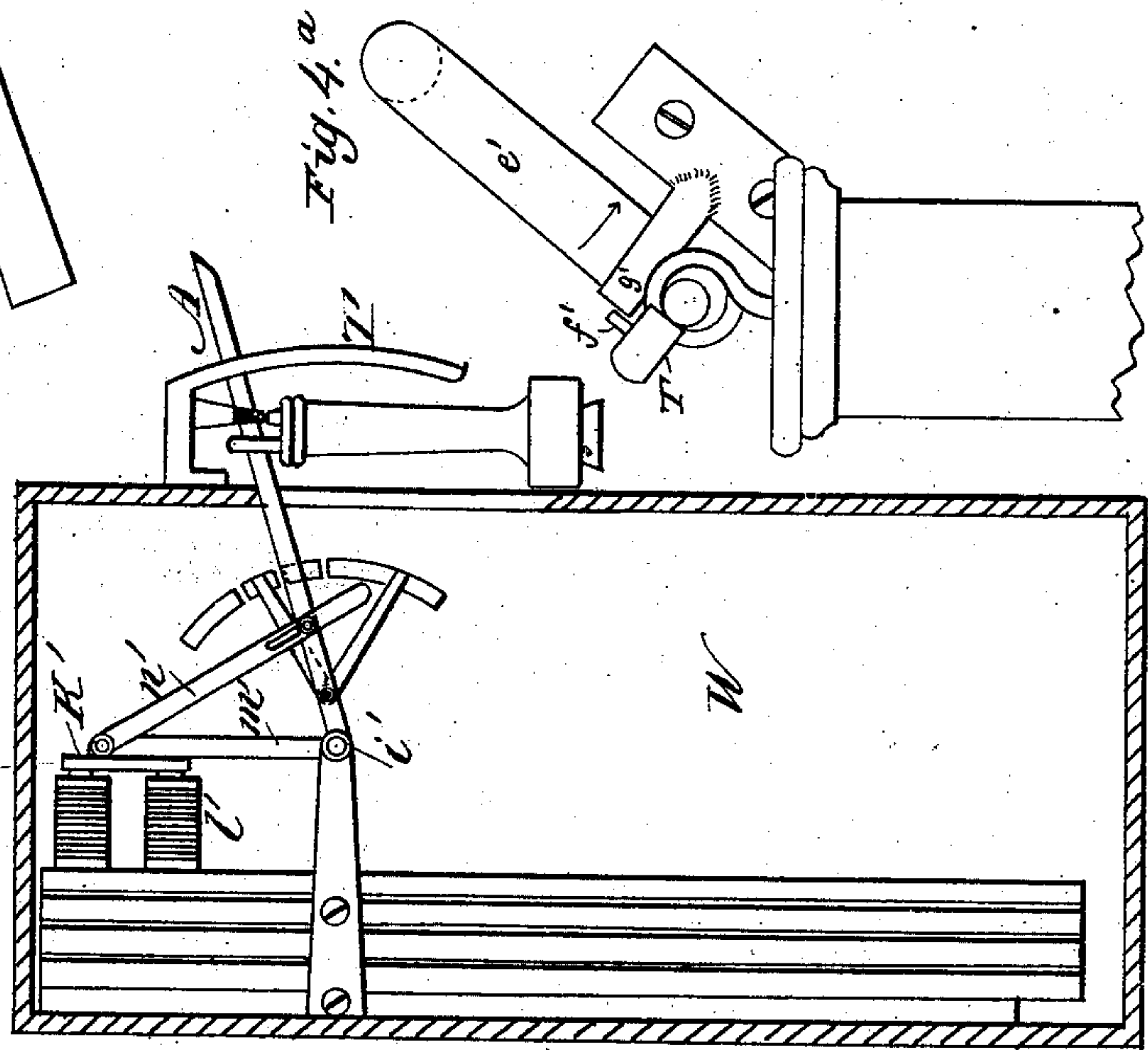


Fig. 5

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# UNITED STATES PATENT OFFICE.

JOHN M. ORAM, HENRY M. SUTTON, AND HENRY GARRETT, OF DALLAS,  
TEXAS.

## TELEPHONE CALL-BOX.

SPECIFICATION forming part of Letters Patent No. 292,570, dated January 29, 1884.

Application filed February 3, 1883. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN M. ORAM, HENRY M. SUTTON, and HENRY GARRETT, all of Dallas, in the county of Dallas and State of Texas, have invented a new and Improved Telephone Call-Box, of which the following is a full, clear, and exact description.

Our improvements may be applied to any ordinary call-box, and have the object to reduce the number of movements required for operating the line and prevent liability of mistakes or omissions.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a vertical section of a call-box with our improvements applied. Fig. 2 is a front view of certain parts; and Figs. 3, 4, and 5 represent modifications in the construction.

The box W is provided with a transmitter, N, electrical bell K, and a battery, Y.

A is a lever pivoted at *a*, and provided with two arms, F G, for contact with anvils B, C, D, and E in the movement of the lever.

M is a cogged segment, connected to the lever for movement therewith.

B' is the armature of a magneto-generator, which armature is made in the form of a circular disk with a cogged rim, engaging the segment M.

The anvils or contact-points B, C, D, and E are connected as follows: The point B connects by wires 6 to the armature B', and from thence to a binding-post, O, that receives one of the line-wires. The point C connects by wires 1 to the bell K, and thence to binding-post O. The point D is connected by wires 3 to a receiving-post at R, and from thence to the receiver H, and from that to the transmitter N and post O. The point E connects by wires 5 to a binding-post, P, and ground-wire 8. From the battery Y circuit-wires 2 extend to the transmitter N, a circuit-breaker, L, being included in the circuit. The outer end of the lever A is formed for holding the receiver H, and in front of the end of the lever is fixed a slotted guard, T, so that the receiver cannot be placed upon the lever until the latter is drawn down below the lower end of the

guard, the lever extending through the slot of the guard far enough to allow the lever to be drawn down to put the receiver in place.

I is a fixed device, made in two pieces, as shown most clearly in Fig. 2, and provided with rubber pads at its ends and between its two sides, which serve as bumpers, to prevent shocks in case the receiver or the lever should slip. *b* is a spring, which draws the lever A upward.

In the normal position of the parts, with the receiver hung from the lever, as shown in Fig. 1, the binding-posts of the receiver come in contact with the lower end of the bumper-piece I, and the arms F G of the lever are thereby held in contact with the anvils C E, thereby connecting the call-bell K in the main circuit through the connections 1, 5, and 8, so that a call from the central office will operate the bell.

To answer a call, the receiver is moved from the lever, which allows the lever to move upward until it strikes the upper bumper, thereby shifting the arm G into contact with the anvil D and bringing the receiver and transmitter in circuit; but in order to remove the receiver from the lever, it is necessary to pull the latter down below the lower end of the guard T. This downward movement, by rotating the armature of the magneto-machine and bringing the circuit-wires 6 into line, will have the effect to ring up the central office. The lever A, being then released, rises to its highest point, and the main circuit is established through the instrument, and in this latter position the arm F, coming into contact with the circuit-breaker L, brings the battery Y in connection with the transmitter. When the instrument is again hung on the lever, it is done by catching the ring upon the end of the lever, in order to pull the lever down, and this motion will again signal the central office and operate the "ring-off" attachment.

On account of the long leverage sufficient power is obtained to operate the armature B', and the extent of movement is sufficient to give the armature nearly two revolutions.

In the modifications shown in Fig. 3, the guard T is secured upon the lever A at its end *a'*, and is made of flexible material, to allow of its outer end being raised from the lever



for the removal of the receiver. The guard is recessed to give space to the ring of the receiver, and upon the guard is a pin or projection, *b'*, which comes in contact with a fixed block, *c'*, when the lever reaches nearly the end of its downward movement, and the guard thus raised far enough to allow the receiver to be slipped off.

For call-boxes already in use and which are provided with crank-handles, the guard may be applied as shown in Figs. 4 and 4<sup>a</sup>.

*d'* is the shaft. *e'* is the crank-handle, as usual, and *T* is the guard, attached upon the handle. The guard is provided with a pin, *f'*, which engages a stop, *g'*, sufficiently to raise it from the crank-handle just before the crank strikes the stop, thus allowing the receiver to be secured in place or removed. The shaft *d'* carries a shunt-cam, *h'*.

In Fig. 4<sup>a</sup>, which is a front view of the devices shown in Fig. 4, it will be seen that the pin *f'* of the spring-guard *T* rests upon the stop *g'*, and in removing the telephone-receiver from its support, the crank *e'* is slightly moved in the direction of the arrow.

Fig. 5 shows our guard attachment as applied to a push-button box. *A* is the lever, and *T* the fixed guard, arranged substantially as shown in Fig. 1. The lever is pivoted at *i'*, and carries an armature before the helices *l'*. The armature is carried on the lever by means of an arm, *m'*, and slotted link *n'*, which allow the lever *A* to rise after the armature hits the cores, thereby operating the shunts. The shunting devices are substantially the same as before described.

In defining our invention with greater clearness, we would state that we are aware of the arrangement of parts shown in the Patents Nos. 222,201 and 269,225, and do not claim anything shown therein.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. In a telephone call-box, the combination of the lever *A*, formed with arms *F G*, the anvils *B, C, D*, and *E*, a generator operated by the movement of the lever, and the circuit-connections, substantially as shown and described.

2. The combination, with the switch-anvils, of a switch, a movable support for the telephone-receiver attached to the switch, and a guard for preventing the receiver from being removed from its support until the switch has been adjusted to the magneto-call terminals, the said telephone-support having a range of movement from its normal position for receiving calls, first, down below the guard, to send a call and permit the dislodgment of the telephone, and then a movement to the opposite side of its normal position, to make connection with the battery telephone and transmitter, substantially as described.

3. The combination, with the switch-anvils, of a switch, a telephone-receiver support attached thereto for movement in unison therewith, a guard for preventing dislodgment of the receiver until its support is moved, and a magneto-generator connected to and arranged to be operated by the movement of the telephone-receiver support when said receiver is dislodged from its support, substantially as shown and described.

4. The slotted piece *I*, in combination with the lever *A* and receiver *H* of the circuit-connections, substantially as shown and described.

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