

(No Model.)

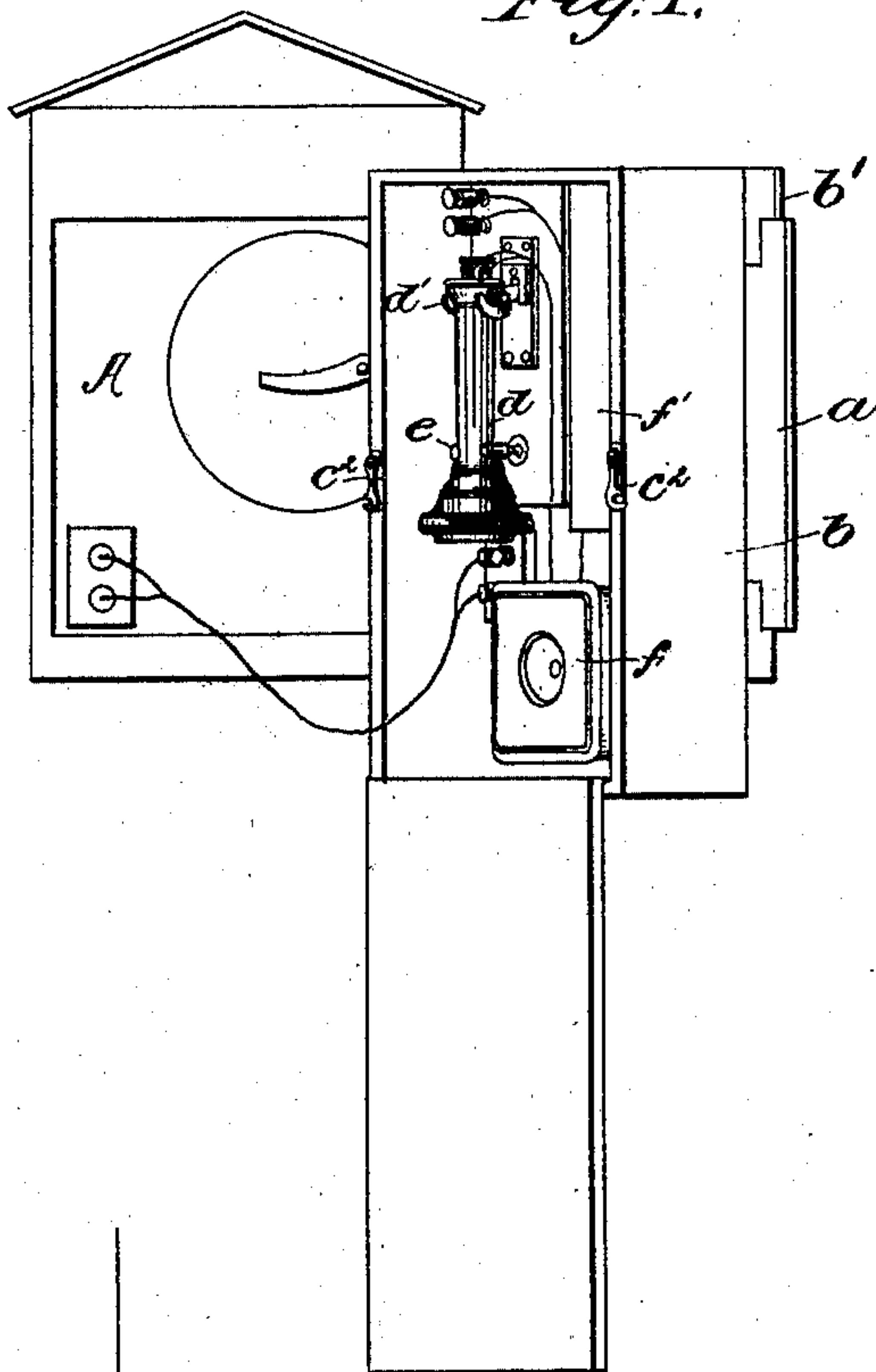
2 Sheets—Sheet 1.

B. S. FLANDERS.  
PORTABLE TELEPHONE.

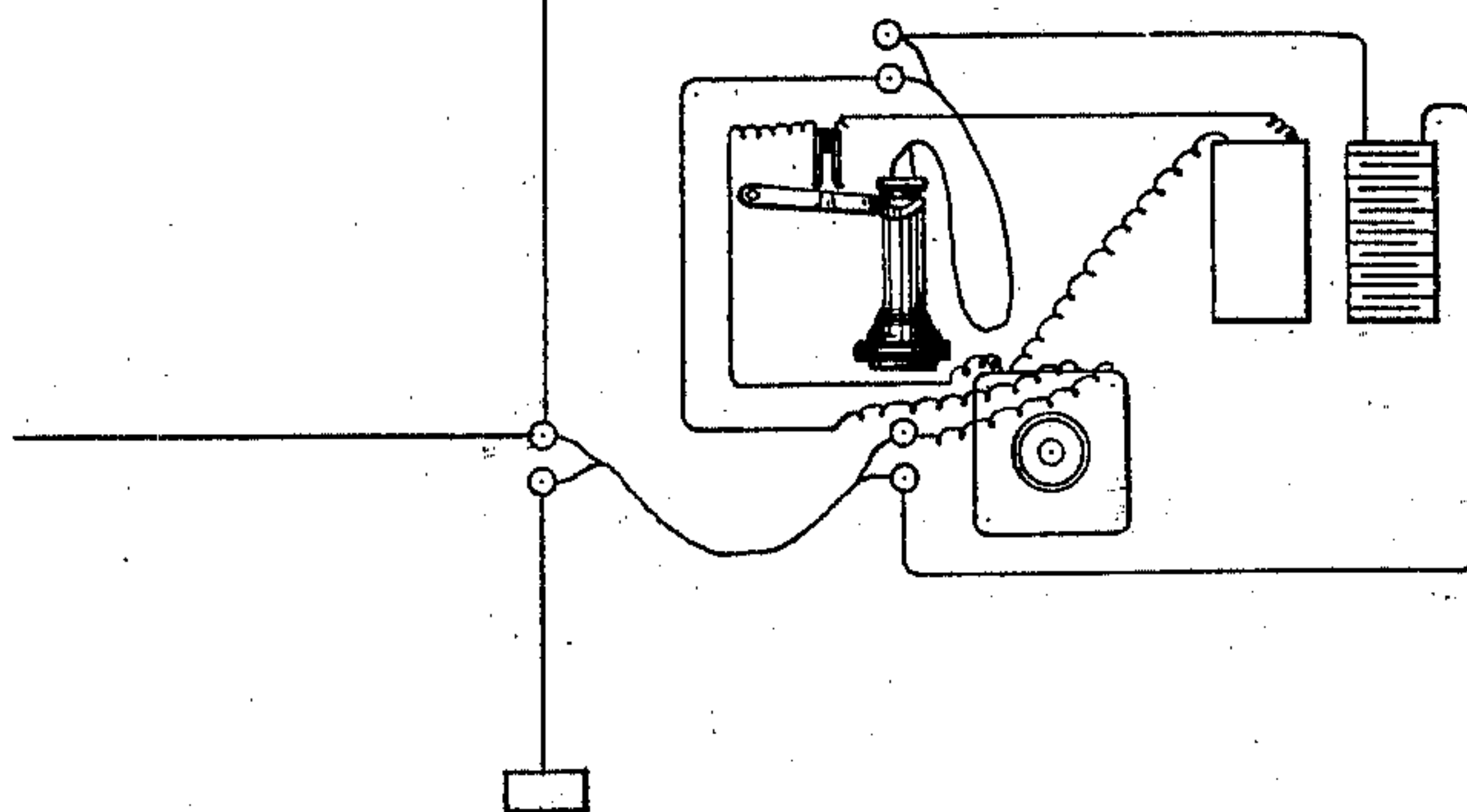
No. 502,398.

Patented Aug. 1, 1893.

*Fig. 1.*



*Fig. 2.*



Witnesses.

Fred S. Gumbel.  
Edward F. Allen

Inventor.

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by Lemby & Gregory attys.

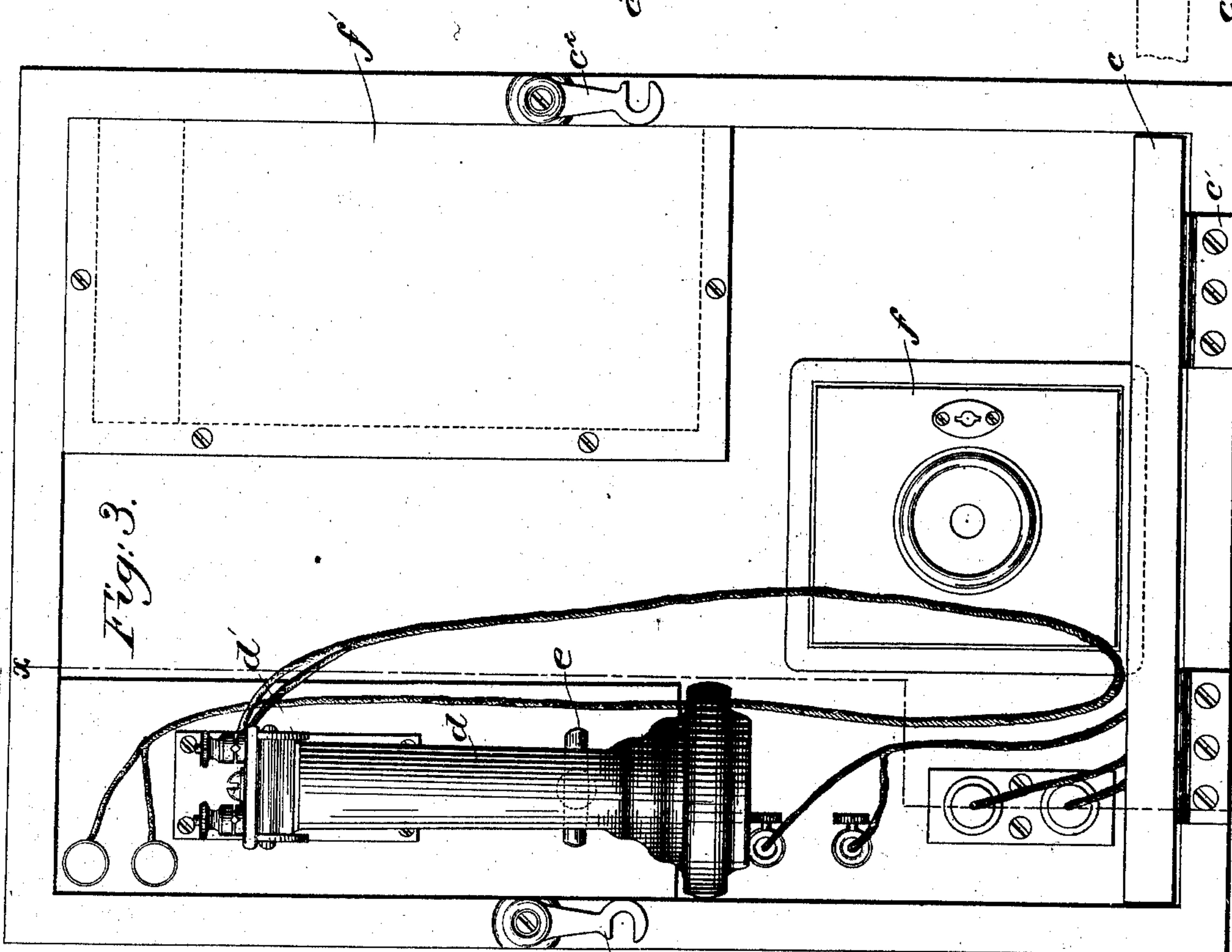
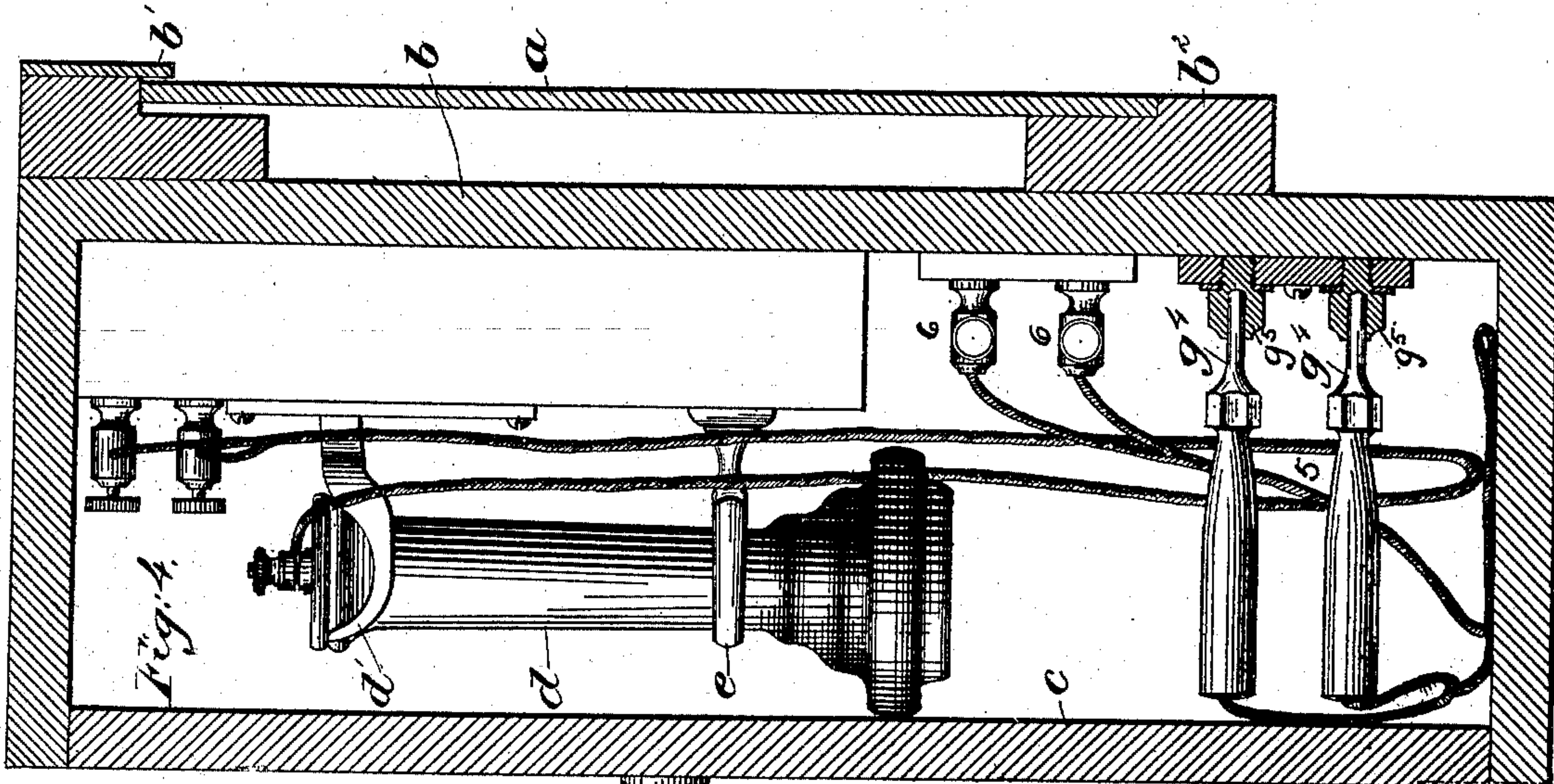
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Witnesses.  
Fred S. Green of  
Edward F. Allen.

Inventor,  
Brown S. Flanders.  
by Crosby & Gregory Attys.



# UNITED STATES PATENT OFFICE.

BROWN S. FLANDERS, OF BOSTON, MASSACHUSETTS.

## PORTABLE TELEPHONE.

SPECIFICATION forming part of Letters Patent No. 502,398, dated August 1, 1893.

Application filed January 31, 1891. Serial No. 379,755. (No model.)

*To all whom it may concern:*

Be it known that I, BROWN S. FLANDERS, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Portable Telephonic Transmitting and Receiving Apparatus for Signal Systems, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

Fire alarm systems as now generally in use comprise signal boxes arranged along the streets at different points, and a central receiving station with which said signal boxes are electrically connected, and at which all the signals are received.

In addition to the usual automatic signal transmitter, each signal box is usually provided with a telegraphic key by which signals may be manually transmitted when desired, and it is quite customary at a large fire to send telegraphic dispatches to the central station, and it frequently happens that the operator is inexperienced and thereby incompetent and unable, to transmit such dispatches or to interpret the dispatches which are received upon the call bell with which said boxes are also usually provided. In some signal boxes, as for instance, police signal boxes, telephones are utilized for carrying out this result, but the expense attending their use is very large.

This invention has for its object to construct a portable telephonic transmitting and receiving apparatus, which may be carried about and hung upon the door of any one of the signal boxes, and electrically connected with the circuit, so as to be utilized to carry on telephonic communication between said signal boxes and the central station.

The apparatus is intended to be carried on the wagon of the chief, or any other person having the proper authority, and hence in going to a fire it is severely shaken.

The apparatus consists of the box or case so constructed as to be rigidly hung upon the door of any one of the signal boxes, and is provided with a suitable door, and contained within said box or case is a telephonic transmitter, a local battery therefor, a telephonic receiver, and support therefor, and a switch for the local battery circuit, controlled by said

support, and a condenser, said transmitter, receiver and condenser being electrically connected in series in the order stated. A holder is also provided for the receiver, which embraces it adjacent to its enlarged end, operating to hold said receiver with the local battery circuit switch open, and the door of the box or case when closed acts to hold said receiver in the holder. Yet in lieu of said particular way of securing the receiver so that it shall remain immovable or substantially so when the door is closed, and the apparatus is being carried from place to place, any other suitable means may be employed, whereby the aforesaid switch will be held open when the door is closed. Two switch plugs are also provided which are connected with the instrument within the box by flexible electric connections, so that when the door of the signal box is open, and the telephonic transmitting and receiving apparatus supported thereon, said switch plugs may be inserted in suitable sockets made to receive them in the signal boxes, thereby connecting the said apparatus with the signaling circuit. Also contained within said box or case are two switch-plug holders adapted to receive said switch-plugs when not in use, and said holders are so located with relation to the door of the box that when the switch-plugs are placed therein, and the door closed they cannot be withdrawn or removed.

Figure 1 shows in front elevation a signal box with its door open, and the portable telephonic transmitting and receiving apparatus hung on said door in position for use; Fig. 2, a diagram of the circuit; Fig. 3, a front elevation of the portable telephonic transmitting and receiving apparatus shown on a larger scale, and Fig. 4, a vertical section of the portable telephonic transmitting and receiving apparatus shown in Fig. 3, taken on the dotted line  $x-x$ , looking toward the left.

The signal box A is of any usual or suitable construction having a door  $a$ , and containing an automatic signal transmitter.

The portable telephonic transmitting and receiving apparatus comprises the box or case  $b$ , having on its rear side at its upper end an over-hanging lip or projection  $b'$ , adapted to overlap the top of the door  $a$ , and having near its lower end a rest  $b^2$ , for said door, yet it is obvious that the said box or case  $b$ , may



be otherwise supported on the door *a*. The box or case *b*, has a door *c*, herein represented as hinged at its lower end, as at *c'*, and suitable hooks as *c*<sup>2</sup>, are provided for holding the door closed.

A telephonic transmitter *f*, of usual construction is contained within the box or case, and concealed in one corner of said box or case is a battery and a condenser, said battery serving as a local battery for the transmitter *f*. A telephonic receiver *d*, is also contained in said box or case, it being hung upon the forked support, or gravity hook *d'*, in usual manner. A switch is provided for the local battery circuit which is controlled by said gravity hook *d'*, and when the receiver *d* is hung on said hook it remains open. A fork *e*, is secured to the rearside of the box, which is adapted to embrace the receiver at a point just above its enlarged end, and said fork in conjunction with the closed door *c*, holds the receiver *d*, securely in position, that the gravity switch may always remain open when the door is closed, irrespective of the position of the box. This feature is important because if said switch is allowed to close the local battery will be consumed in a short time, yet in lieu of this form of retaining mechanism for the receiver namely:—the fork *e*, and closed door *c*, it is obvious that I may employ some other mechanism adapted to accomplish the same result, and furthermore instead of holding the said battery circuit open by means of the rigidly held receiver, it may be otherwise held open when the door is closed.

The telephonic transmitter receiver and condenser, are connected by wire 5, which terminates at the two binding posts 6, and two switch plugs *g*<sup>4</sup>, *g*<sup>4</sup>, are connected with said binding posts 6, by electric wires of suitable length to permit said plugs to be inserted in suitable sockets in the signal box, made to receive them, when said portable apparatus is suspended upon or supported by the open door *a'*. When the portable apparatus is not in use the said switch-plugs *g*<sup>4</sup>, *g*<sup>4</sup> are inserted in socketed studs or holders *g*<sup>5</sup>, *g*<sup>5</sup>, which are secured to the interior of the back of the box, directly opposite the door *c*, and said switch plugs are made quite long, so that when inserted in their holders, and the door *c*, closed, they cannot be withdrawn or removed. One of the switch-plugs is adapted to electrically connect the telephonic apparatus with the signaling circuit, and the other through the condenser with a ground tap, or return wire, as shown in Figs. 1 and 2. This portable apparatus is a valuable adjunct to a fire alarm system, as it may be carried about without injury to any of the parts, and may be kept in good order at a trifling expense.

I claim—

1. A signal box containing a signal transmitter, two switch plug receiving sockets, one of which is electrically connected with the signaling circuit, and the other with an open ground tap, or return circuit, and a hinged

door, as *a*, combined with the portable telephonic transmitting and receiving apparatus herein described, consisting of the box or case *b*, having at its rear side an over-hanging lip or projection *b'*, and a rest *b*<sup>2</sup>, whereby it may be supported upon said hinged door *a*, the door *c* for said box or case, the transmitter *f*, local battery therefor, the receiver *d*, and support therefor, a switch for said local battery circuit controlled by said support, the condenser and wire 5, connected to the two binding posts 6, and including said transmitter, receiver, and condenser, and two switch plugs *g*<sup>4</sup>, *g*<sup>4</sup>, connected with said binding posts 6, by flexible electric connections, whereby said switch plugs may be placed in their receiving sockets when the door *a*, of the signal box is open, and the apparatus supported thereon, substantially as described.

2. The signal box containing a signal transmitter, two switch-plug receiving sockets one of which is electrically connected with the signaling circuit, and the other with an open ground tap or return circuit, and a hinged door as *a*, combined with the portable telephonic transmitting and receiving apparatus herein described consisting of the box or case *b*, adapted to be supported on said door *a*, and having a door *c*, transmitter *f*, local battery therefor, receiver *d*, and support therefor, a switch for said local battery circuit controlled by said support, a condenser, and wire 5, connected to the two binding posts 6, and including said transmitter, receiver, and condenser, and two switch plugs *g*<sup>4</sup>, *g*<sup>4</sup>, connected with said binding posts 6, by flexible electric connections, whereby said switch plugs may be placed in their receiving sockets in the signal box when the door *a*, is open and the apparatus supported thereon, and the switch plug holders *g*<sup>5</sup>, *g*<sup>5</sup>, in said box *b*, opposite the door *c*, substantially as described.

3. The portable telephonic receiving and transmitting apparatus herein described, adapted to be hung upon the door of a signal box, consisting of the box or case *b*, having a door *c*, and containing the receiver *d*, transmitter *f*, local battery therefor, and condenser, and switch for the circuit of said battery, and means for locking said switch open, controlled by said door *c*, substantially as described.

4. The portable telephonic receiving and transmitting apparatus herein described, adapted to be hung upon the door of a signal box consisting of a box or case *b*, having a door *c*, and containing the transmitter *f*, local battery therefor, receiver *d*, and support therefor, and switch for the circuit of said local battery controlled by said support, the holder *e*, for said receiver *d*, which co-operating with the said closed door *c*, holds said switch open, substantially as described.

5. The portable telephonic receiving and transmitting apparatus herein described, adapted to be hung upon the door of a signal box, consisting of a box or case *b*, having a



door *c*, and containing the transmitter *f*, local battery therefor, receiver *d*, having an enlarged end, a support therefor, and switch for the circuit of said local battery controlled by said support, the holder *e*, embracing the receiver *d*, adjacent to its enlarged end, holding it with said switch open, substantially as described.

6. The portable telephonic receiving and transmitting apparatus herein described, adapted to be hung on the door of a signal box, consisting of the box or case *b*, door *c*, receiver *d*, transmitter *f*, local battery, and con-

denser, and wire 5, connected to the binding posts 6, and including the said transmitter 15 receiver, and condenser in the order stated, whereby the said transmitter and receiver are interposed between the signaling circuit and the condenser, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

BROWN S. FLANDERS.

Witnesses:

BERNICE J. NOYES,  
EDWARD F. ALLEN.