2 Sheets--Sheet 1.

G. B. SCOTT.

Electric-Annunciators.

No. 155,392. Patented Sept. 29, 1874.

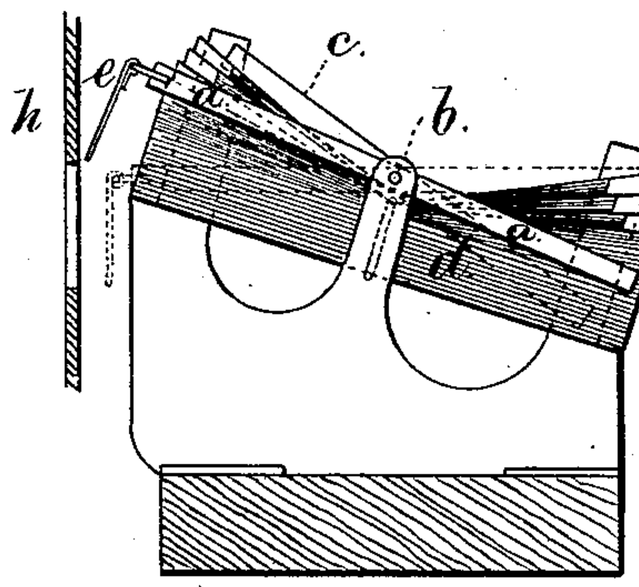


Fig. 2

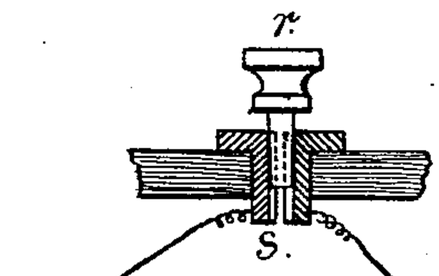
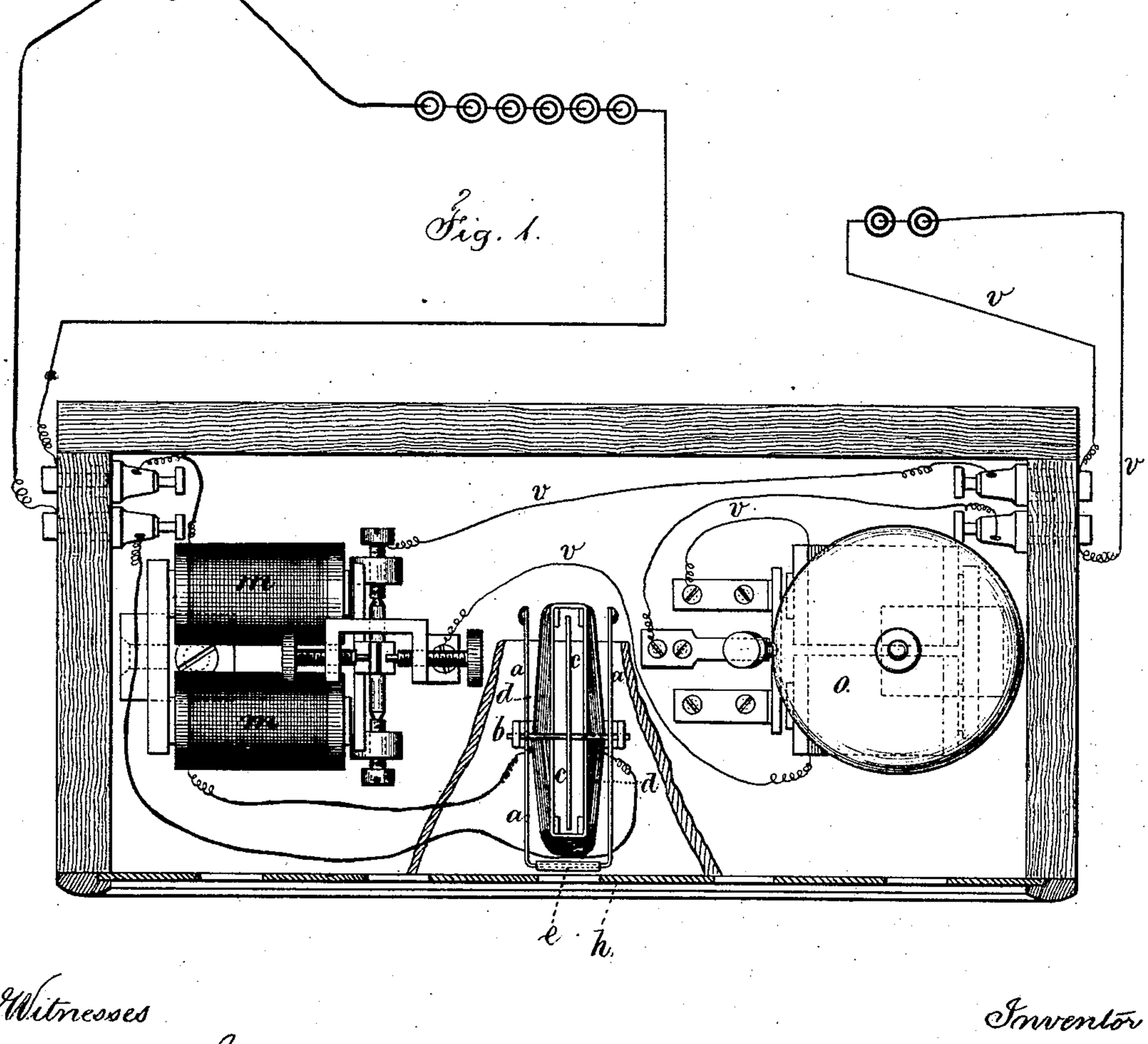


Fig. 1.



Witnesses

Chas. H. Smith

H. Harold Serrell

Inventor

George B. Scott

per Lemuel W. Serrell

Atty

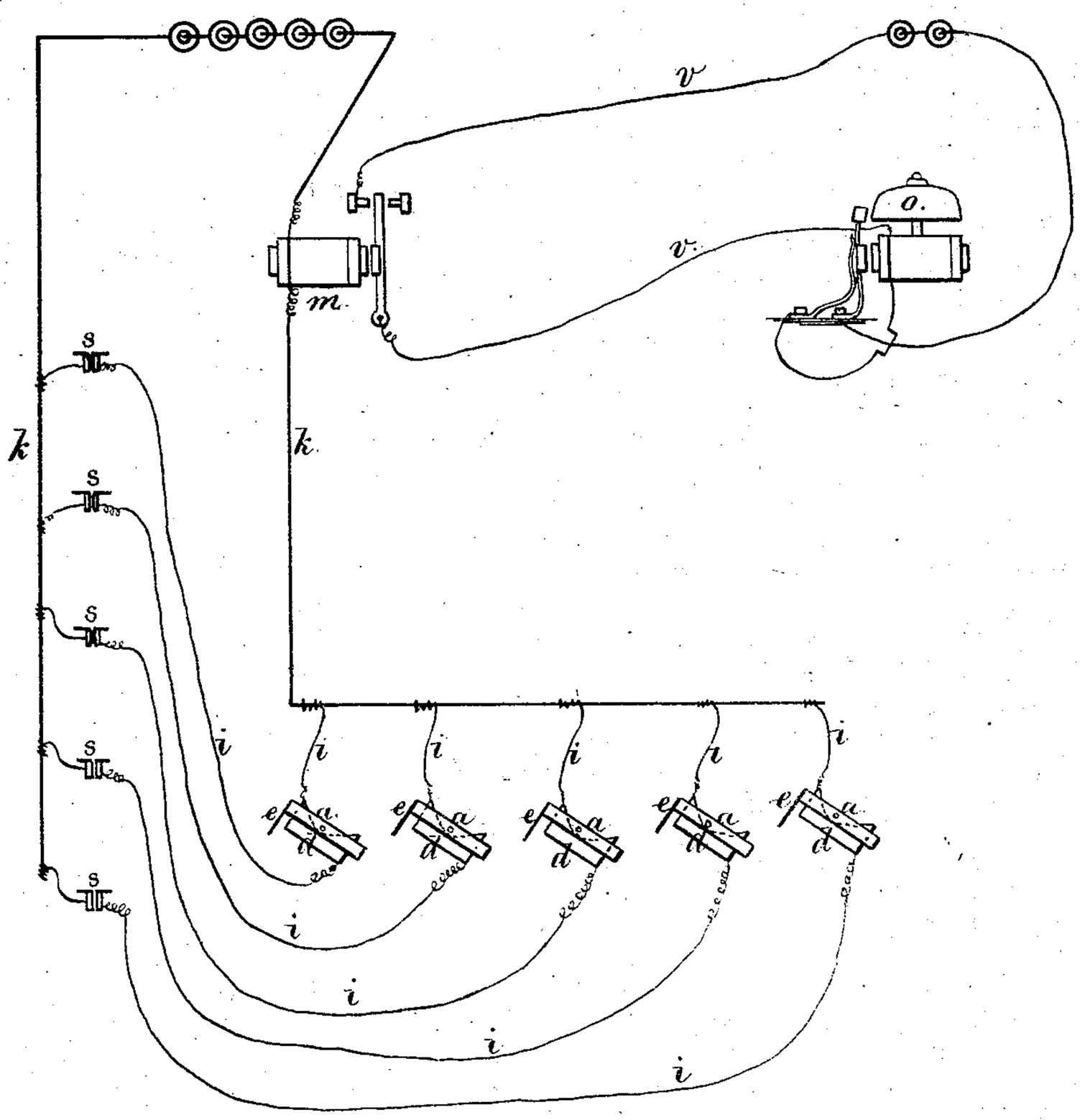
2 Sheets--Sheet 2.

G. B. SCOTT.

Electric-Annunciators.

No. 155,392. Patented Sept. 29, 1874.

Fig. 3.



Witnesses
Chas. H. Smith
Harold Serrell

Inventor
George B. Scott
per Lemuel W. Serrell
Atty.

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

GEORGE B. SCOTT, OF BROOKLYN, NEW YORK, ASSIGNOR TO HIMSELF AND WILLIAM H. MARKLAND, OF SAME PLACE.

IMPROVEMENT IN ELECTRIC ANNUNCIATORS.

Specification forming part of Letters Patent No. **155,392**, dated September 29, 1874; application filed December 18, 1873.

To all whom it may concern:

Be it known that I, GEORGE B. SCOTT, of Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Electric Annunciators, of which the following is a specification:

The object of this invention is to exhibit a number or letter corresponding to the room sending the signal, and to ring a bell; also, to continue the signal until the call is answered.

I make use of a galvanometer-coil and swinging needle carrying the number or letter, or a shield for a stationary number or letter, and connect the same in a branch of the main circuit, which main circuit also passes through a relay-magnet, so that when either branch of the main circuit to the respective rooms is closed the relay-magnet operates to close a local circuit and ring a bell, preferably continuously, until the branch circuit is opened and the relay demagnetized, and the number or letter signal is obscured.

By this arrangement any number of rooms can be connected by branches to a main circuit. The galvanometer of the branch will indicate the signal of that branch, and the bell will be sounded until the relay-magnet is demagnetized; hence, at the annunciator a signal will be continued until the call is answered, and the branch circuit opened by the withdrawal of the circuit-closer.

In the drawing, Figure 1 is a general plan of the annunciator. Fig. 2 is a side view of the galvanometer-signal; and Fig. 3 is a diagram of the connections.

The galvanometer-signal is made of three astatic needles, *a*, *a*, and *c*, hung upon an axis, *b*, and polarized in opposite directions. The needle *c* is between the coil *d* of covered wire, and the needles *a a* are outside the same. The coil *d* is wound so that the ends are broad, and it is contracted toward the middle, as seen in Fig. 2, in order that the broad ends of such coil may act more directly upon the needles, and the coil will not be in the way of the axis *b*.

By this construction of galvanometer the power of the needle is greatly increased without varying the battery-power, and hence it is better adapted to the rough usage to which it is exposed in an annunciator.

The signal-card *e* is attached to the needles *a a*, and contains the letter or number to be exhibited, or else the said card *e* uncovers or exposes such number or letter, if stationary; or the needle itself may give the signal.

When the number or letter is upon the card *e*, the case of the annunciator is to be provided with inspection-openings in the plate *h*.

One of these galvanometers is in each branch circuit *i*, and such circuit leads to the room with a corresponding number; thence to the main circuit *k* and battery, and in this circuit is the relay-magnet *m;* hence, when any branch circuit is closed at any room, the corresponding galvanometer-signal is deflected, and the relay-magnet closes the local circuit *v* to the magnet of the bell *o*, the connections of which are made as shown, so that the stroke of the bell breaks the circuit to its own magnet, and the return of the hammer closes it again; hence the bell continues to ring as long as the local circuit is closed by the relay-magnet.

As a convenient means for closing the branch circuit, I prefer, and use, the divided plate *s*, to which the branch-circuit wires are connected, and the movable spring metallic peg *r* is placed into the hole between the plate *s*, to close the branch circuit.

A switch might be used for the same purpose; but in either case the circuit will remain closed until the switch is moved or the peg withdrawn, thus insuring the attention of the waiter and the withdrawal by him or at his request of the circuit-closer.

It is preferable to employ astatic needles in the galvanometer, as they operate with a less battery-current; but a single galvanometer-signal needle may be used, if desired.

I am aware that electro-magnets and armatures have been employed in annunciators and alarms, but these are much more expensive than galvanometer-coils, and are more liable to derangement from residual magnetism and from inaccuracy of adjustment.

I claim as my invention—

1. The combination, with an annunciator apparatus, of a plug or switch circuit-closer, a sounding apparatus, a relay, and main and local circuits, substantially as set forth, whereby the sounding apparatus is arranged to operate until the circuit is broken at the room, as specified.

2. A galvanometer-coil and three needles, constructed and arranged substantially as specified, in combination with the signal of an annunciator, as set forth.

Signed by me this 13th day of December, A. D. 1873.

GEO. B. SCOTT.

Witnesses:
GEO. T. PINCKNEY,
CHAS. H. SMITH.