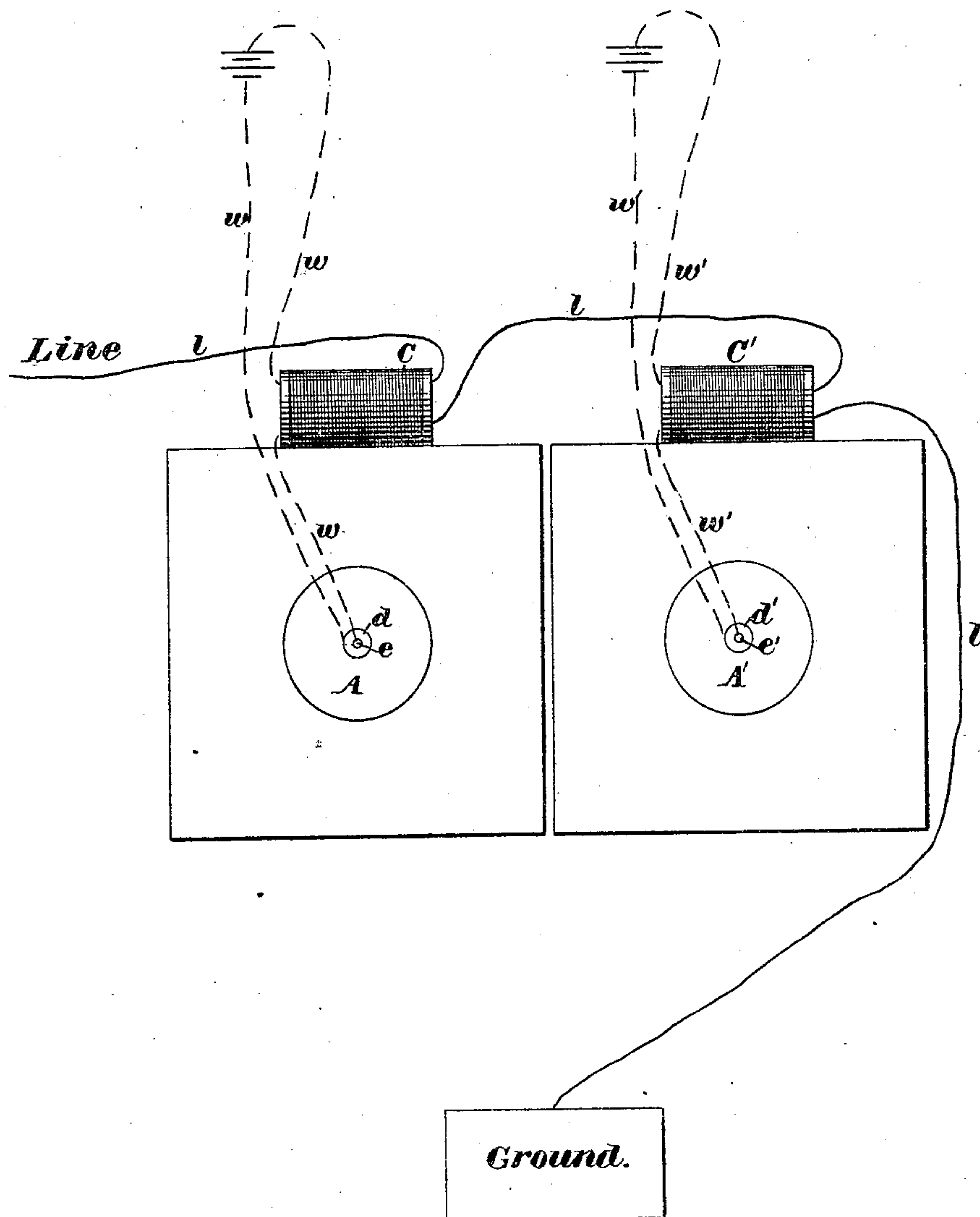


(No Model.)

F. BLAKE.
Telephone.

No. 238,558.

Patented March 8, 1881.



Witnesses:

Cornelius Smith
H. W. Swan

Inventor:

Francis Blake

UNITED STATES PATENT OFFICE.

FRANCIS BLAKE, OF WESTON, MASSACHUSETTS.

TELEPHONE.

SPECIFICATION forming part of Letters Patent No. 238,558, dated March 8, 1881.

Application filed January 15, 1881. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS BLAKE, of Weston, in the State of Massachusetts, have invented an Improvement in Speaking-Telephones, of which the following is a specification.

The object of the invention is to increase the volume and distinctness of the transmitted speech, and this I have accomplished by the use of two battery-transmitters, placing them in close proximity to each other, so that their diaphragms can be acted upon simultaneously by the same sounds, and combining with them induction-coils, so that the secondaries are in line in the main circuit, while the primaries are independent of each other.

The invention is sufficiently illustrated in the diagram presented in the annexed drawing, forming a part of this specification.

A A are the diaphragms of two ordinary transmitters, *e d* being the two electrodes of one instrument and *e' d'* the corresponding electrodes of the other. C C' are two induction-coils, one for each transmitter. The main line is marked *l*, and passes, as shown, from ground through the secondaries of the two induction-coils, one after the other. There are two local circuits, *w* and *w'*, one for each instru-

ment and independent of each other, and each provided with a battery, as shown. The electrodes *e d* of one transmitter are in the local circuit *w*, which passes through the primary of the induction-coil C, while the electrodes *e' d'* of the second transmitter are in the circuit *w'*, passing through the primary of the induction-coil C'.

Still better results are obtained by increasing the number of transmitters upon the line, placing them as closely together as possible, and putting the secondaries of the induction-coils, one after another, in the main line, while the primaries are in the independent local circuits of the respective transmitters to which the induction-coils belong.

I claim—

The combination of two or more battery-transmitters so placed as to be acted upon simultaneously by the same sounds, and each being in an independent local circuit, a part of which forms the primary of an induction-coil, while the several secondaries are in line in the main line.

FRANCIS BLAKE.

Witnesses:

W. W. SWAN,
CHAUNCEY SMITH.