

(No Model.)

2 Sheets—Sheet 1.

S. H. BARTLETT & H. E. WAITE.

TRANSMITTER FOR TELEPHONES.

No. 253,665.

Patented Feb. 14, 1882.

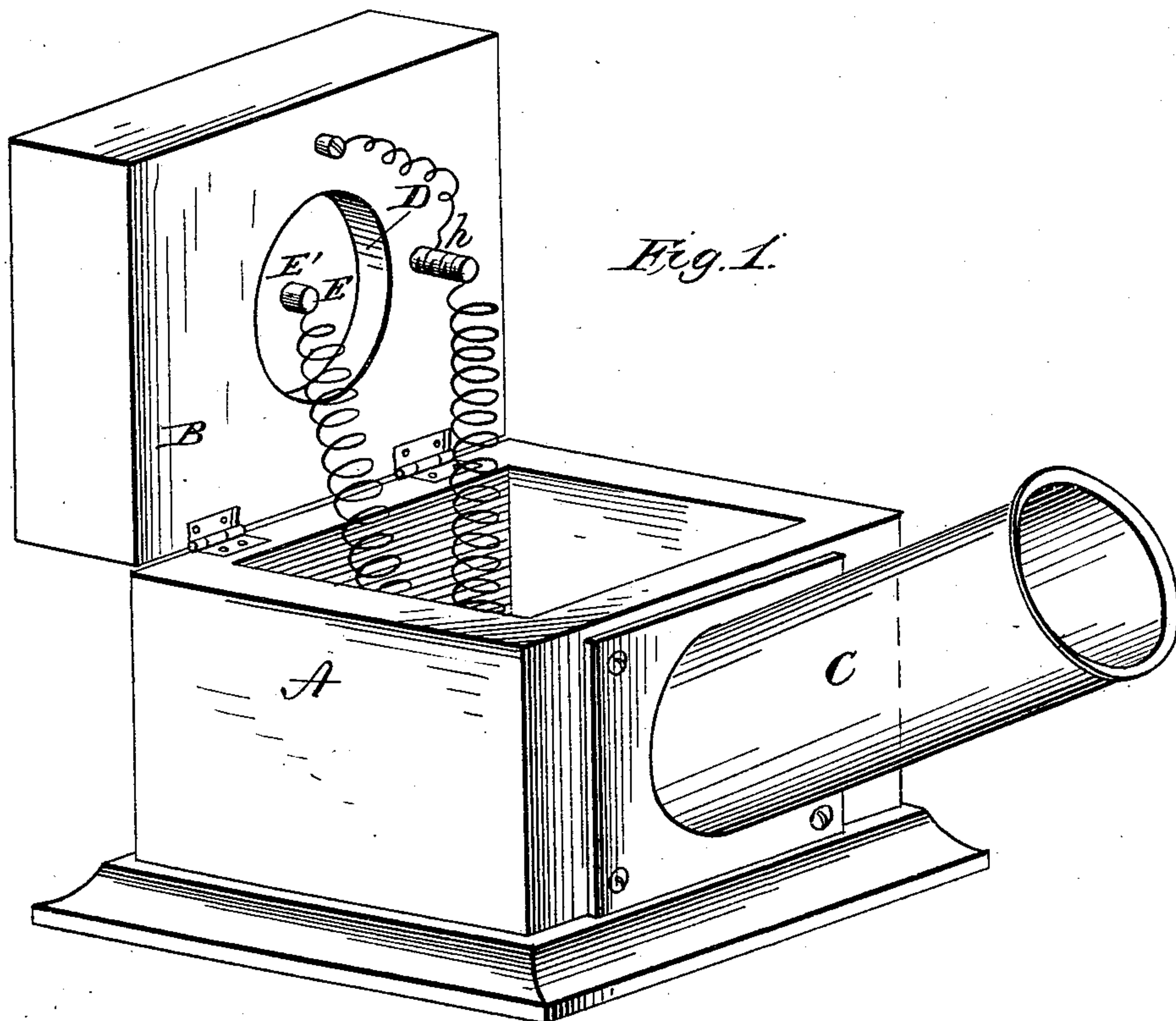


Fig. 1.

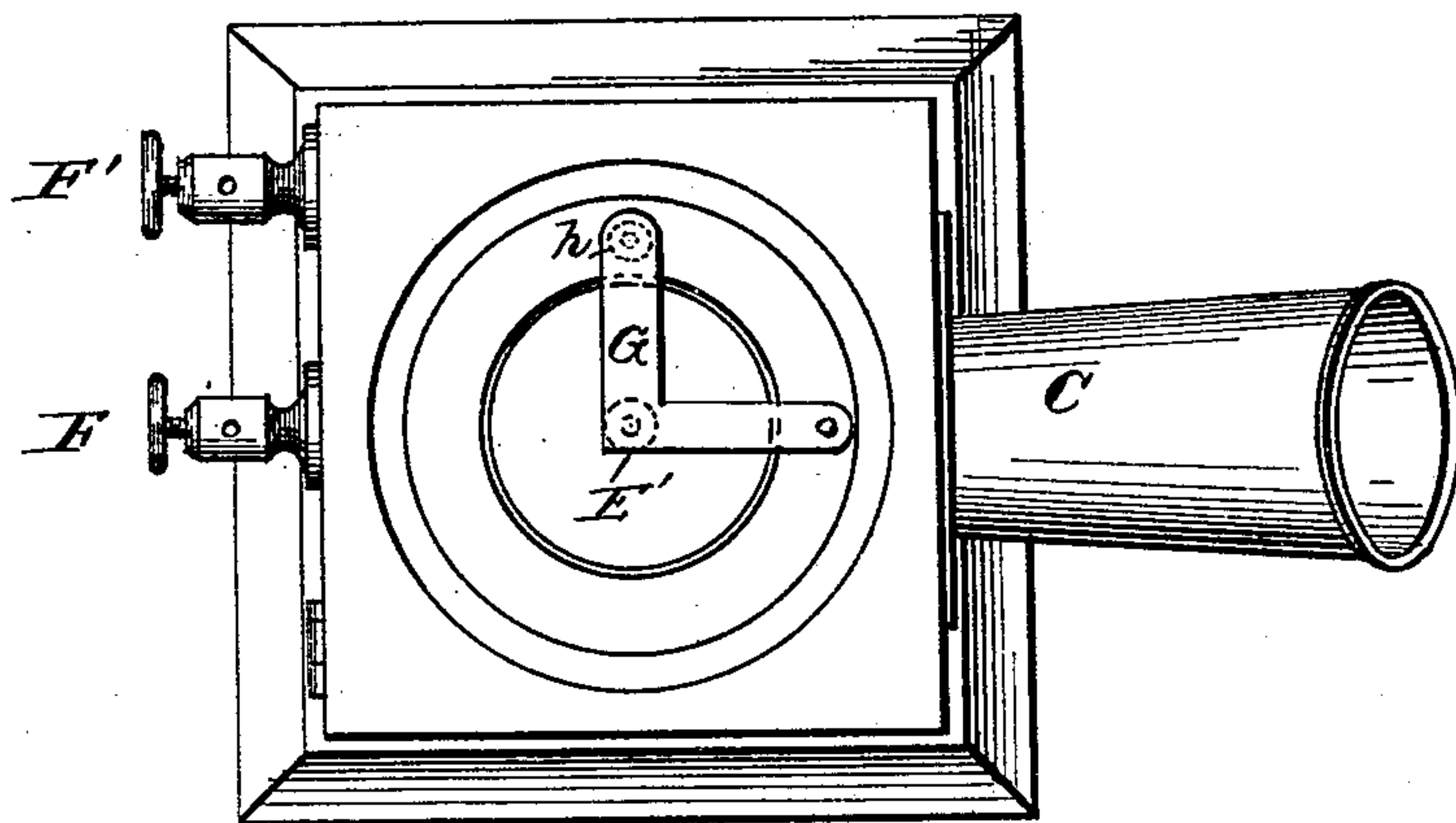


Fig. 2.

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Fig. 3

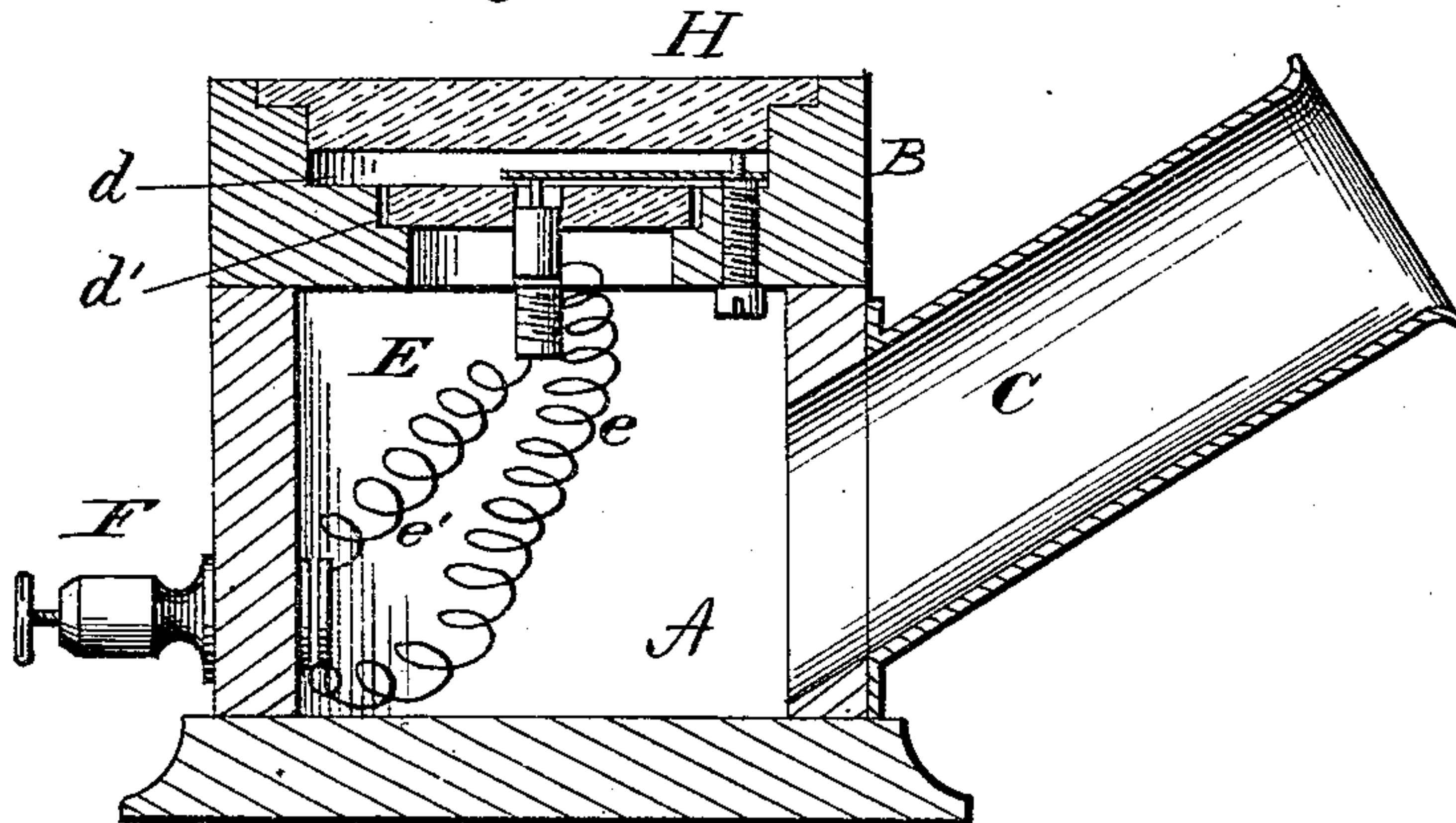


Fig. 6.

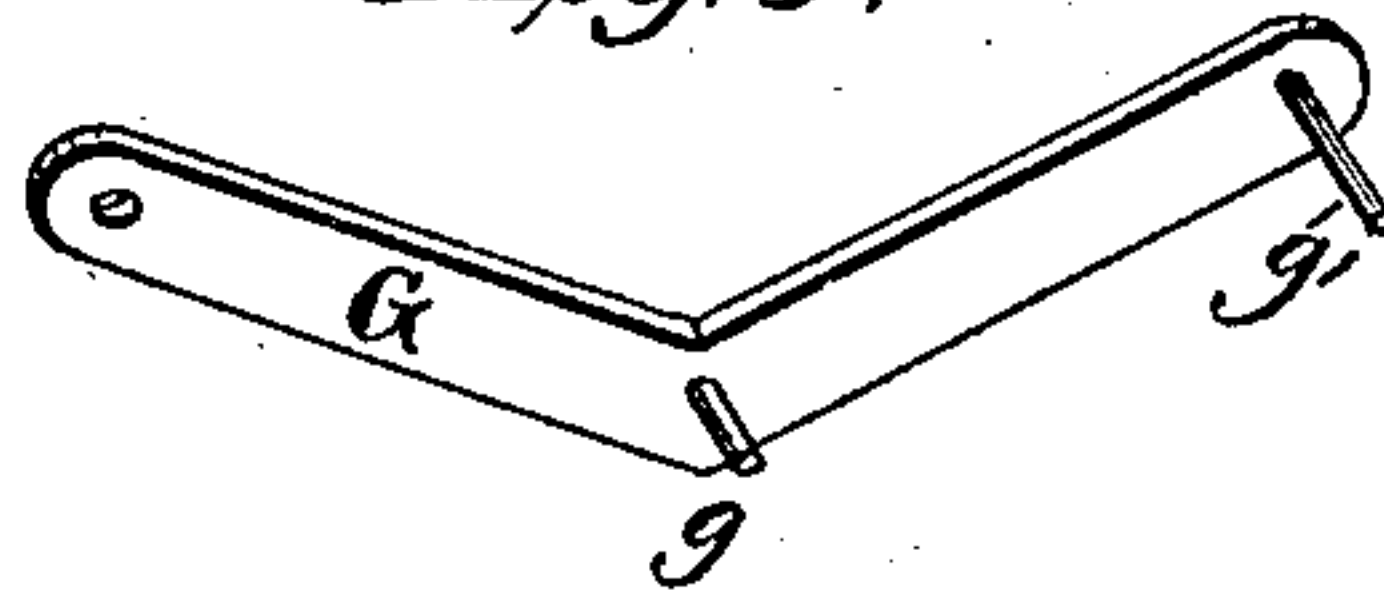


Fig. 4.

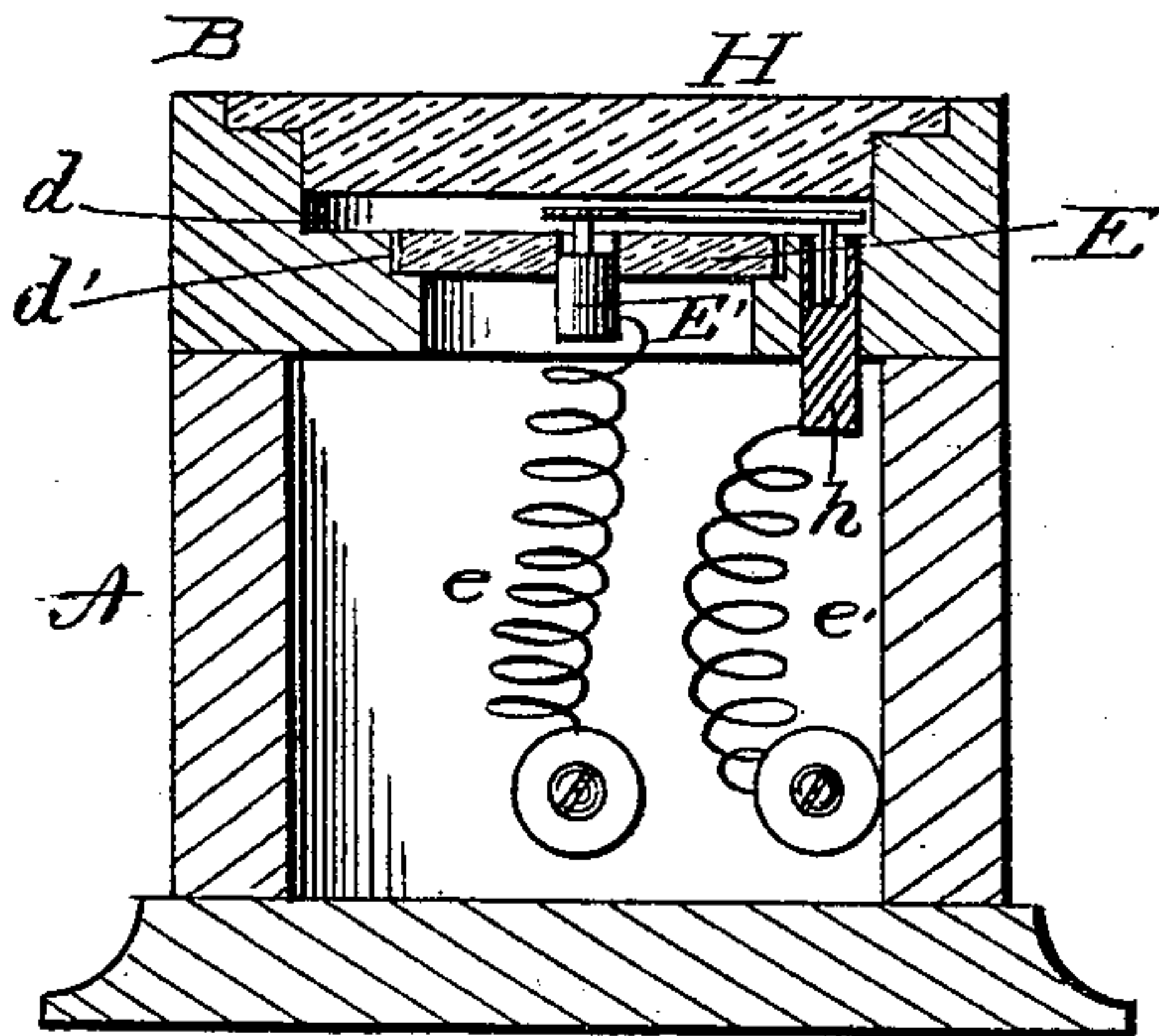
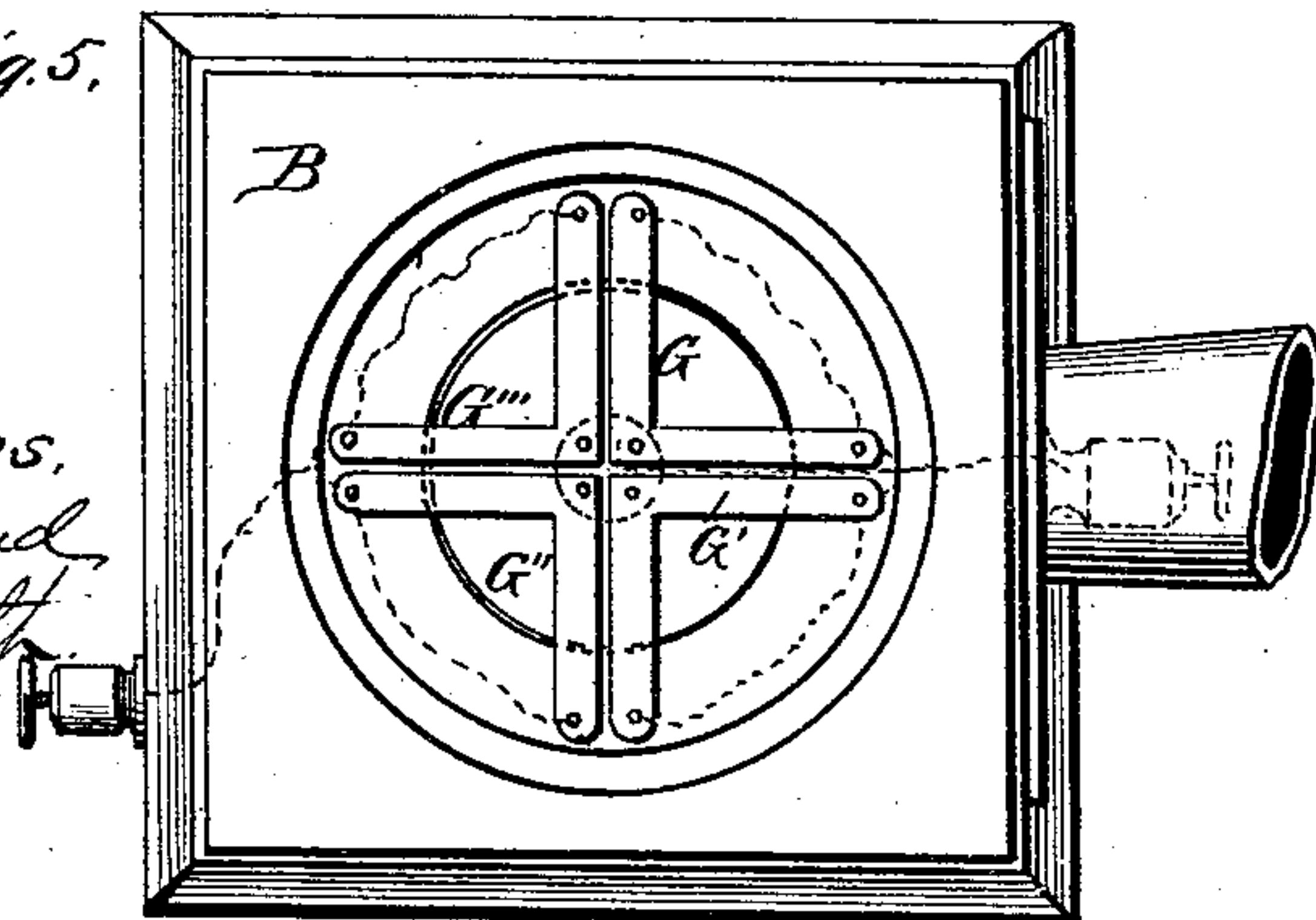


Fig. 5.



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UNITED STATES PATENT OFFICE.

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TRANSMITTER FOR TELEPHONES.

SPECIFICATION forming part of Letters Patent No. 253,665, dated February 14, 1882.

Application filed January 9, 1882. (No model.)

To all whom it may concern:

Be it known that we, SAMUEL H. BARTLETT and HENRY E. WAITE, of New York, county of New York, and State of New York, have invented new and useful Improvements in Transmitters for Telephones, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of our improved transmitter with the hinged cover raised. Fig. 2 is a plan or top view of the apparatus with the cap-plate removed. Figs. 3 and 4 are vertical sections through the apparatus or transmitter. Fig. 5 is a plan view similar to Fig. 2, showing a number of tripods; and Fig. 6 is a perspective view of one of the tripods.

Our invention relates to an improvement upon what is known as the "Reiss" transmitter, our transmitter being similar in form and in the arrangement of its parts, and varying mainly in the materials employed. In the apparatus of Reiss a flexible membrane or diaphragm was employed, susceptible of mechanical vibration under the action of the sound-waves, and dependent upon such vibration in the production of the desired result, whereas we employ a floor or plate of cork, wood, felt, or other suitable material capable of conveying the disturbance produced by the action of the sound-waves impinging upon its surface to the microphone by molecular action rather than by mechanical movement of the floor itself, said floor being loosely supported or upheld in its supporting-stand in such manner as to leave it untrammelled, and being provided with a button or plate of carbon or equivalent material, with which the point on the tripod at its angle rests in contact, the points at the ends of the arms of said tripod resting also in cups or blocks of carbon or its equivalent, in lieu of the piece of platinum and the cup of mercury employed by Reiss.

Our invention further relates to certain details of construction for giving increased efficiency to the transmitter through multiple contact, &c., as hereinafter explained.

In the accompanying drawings, A represents a box or case; B, its hinged top or cover, and

C the mouth-piece, said parts being similar in construction and arrangement to the corresponding parts of the Reiss transmitter referred to, except that, if preferred, the box may be made round, polygonal, or in any other suitable form, instead of square, as shown. The cover B has a circular opening, D, cut in it, provided with annular shoulders or rabbets d d' in its side walls, upon the lower one, d' , of which a floor or block, E, of cork, wood, felt, or other suitable material is supported, said floor being of slightly less diameter than the opening above the rabbet d' in which it rests, so as to leave it unbound at its edge or periphery and untrammelled in any direction except sufficiently to be upheld lightly. The floor is provided with one or more small buttons or disks, E', of carbon or its equivalent, forming one of the electrodes, connected by wire e with one of the binding-posts F F', through which connection is made with the line or circuit in any usual manner.

Upon the floor E is placed a tripod, bar, or plate, G, of metal, made in angular or bell-crank form and provided at the angle with a pendent spur or point, g , of platinum, carbon, or equivalent material, which rests upon the button E'. The arms of this angular bar may both be provided at their ends with similar points or spurs, g' , which rest in cups or recessed blocks h , of carbon or its equivalent, let into or penetrating the ledge or annular rabbet d , and connected by wire e' or other suitable conductor with the binding-post F', and thence with the line or circuit. In the drawings only one of the arms is shown provided with the platinum or carbon point resting in a carbon cup, the other being shown perforated and held in place by means of a pin or spur on the ledge or rabbet d . Either construction may be used, but the first named is preferred, as with pendent spurs on both arms resting in cups or recessed blocks of carbon, not only are the plates retained in proper position, but an additional point of contact is secured.

The apparatus above described, it will be seen, is similar in the arrangement of its parts to that of Reiss referred to, with the difference—viz., that the drum-head or diaphragm of membrane employed by Reiss is removed, and a

solid non-vibrating floor of cork or other suitable material provided with a contact-button or electrode of carbon or other suitable material is substituted therefor, and permanent contact-cups of carbon or its equivalent are substituted for the cup of quicksilver employed by Reiss. These changes, while producing a marked improvement in the action of the transmitter, are supplemented by the addition of other tripods or bell-crank bars, $G'G''$, limited in number only by the angle of the intersecting arms thereof, each provided at the angle with a pendent spur, g , resting on the central button, E , and at the ends of the arms with similar spurs resting in the carbon cups, the latter being connected with each other and with the binding-post F' by suitable conductors, as shown, in such manner that if for any reason any one or more of the tripods should become inoperative the transmitter will still continue to operate through the others; or, if desired, the several tripods may serve to connect each with an independent line or circuit for conveying the message to different points.

The floor E rests upon the ledge d' by its own gravity and the tripods or angular plates or bars G rest in a similar manner on said floor and the cups of carbon described, and the latter are covered in practice by a cap-plate, or cover, H , of cork or other suitable material, removed from actual contact with the upper faces of the tripods, but arranged in sufficiently close proximity thereto to prevent their displacement in handling or overturning of the ap-

paratus without interfering with their freedom of movement when in use. 35

By the construction and arrangement shown an exceedingly efficient transmitter is secured, one which is simple and cheap in manufacture and which is not liable to get out of order. Its operation will be readily understood without further description. 40

Having now described our invention, we claim—

1. In a telephone-transmitter, a floor of cork or equivalent material provided with a contact-button or electrode of carbon and loosely resting in a supporting-stand, in combination with recessed blocks of carbon or equivalent material secured to the supporting-stand, and a metallic tripod provided with pendent points resting on said button and recessed blocks, substantially as described. 45 50

2. The combination, in a telephone-transmitter, of a floor loosely upheld in its stand or support and provided with a contact-button or electrode, recessed blocks or cups of carbon or its equivalent, and a series of tripods provided with pendent points or spurs and resting by gravity on said recessed blocks or cups and button, substantially as described. 55 60

In testimony whereof we have hereunto set our hands this 7th day of January, 1882.

SAMUEL H. BARTLETT.

HENRY E. WAITE.

Witnesses:

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F. C. BARTLETT.