

S. S. PARSONS, F. R. SHAW & G. N. DANIELS.
Mechanical Telephone.

No. 207,436

Patented Aug. 27, 1878.

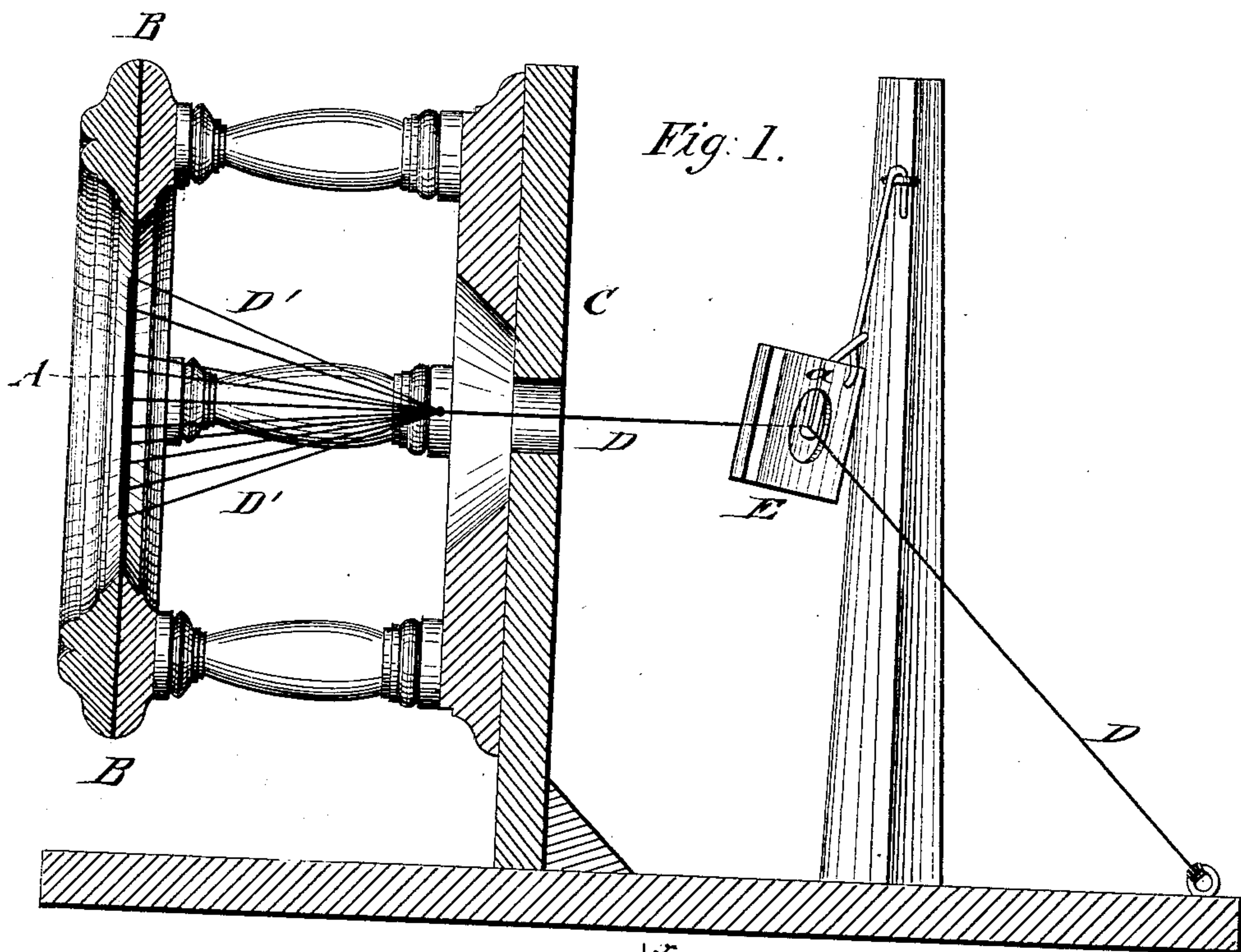


Fig. 1.

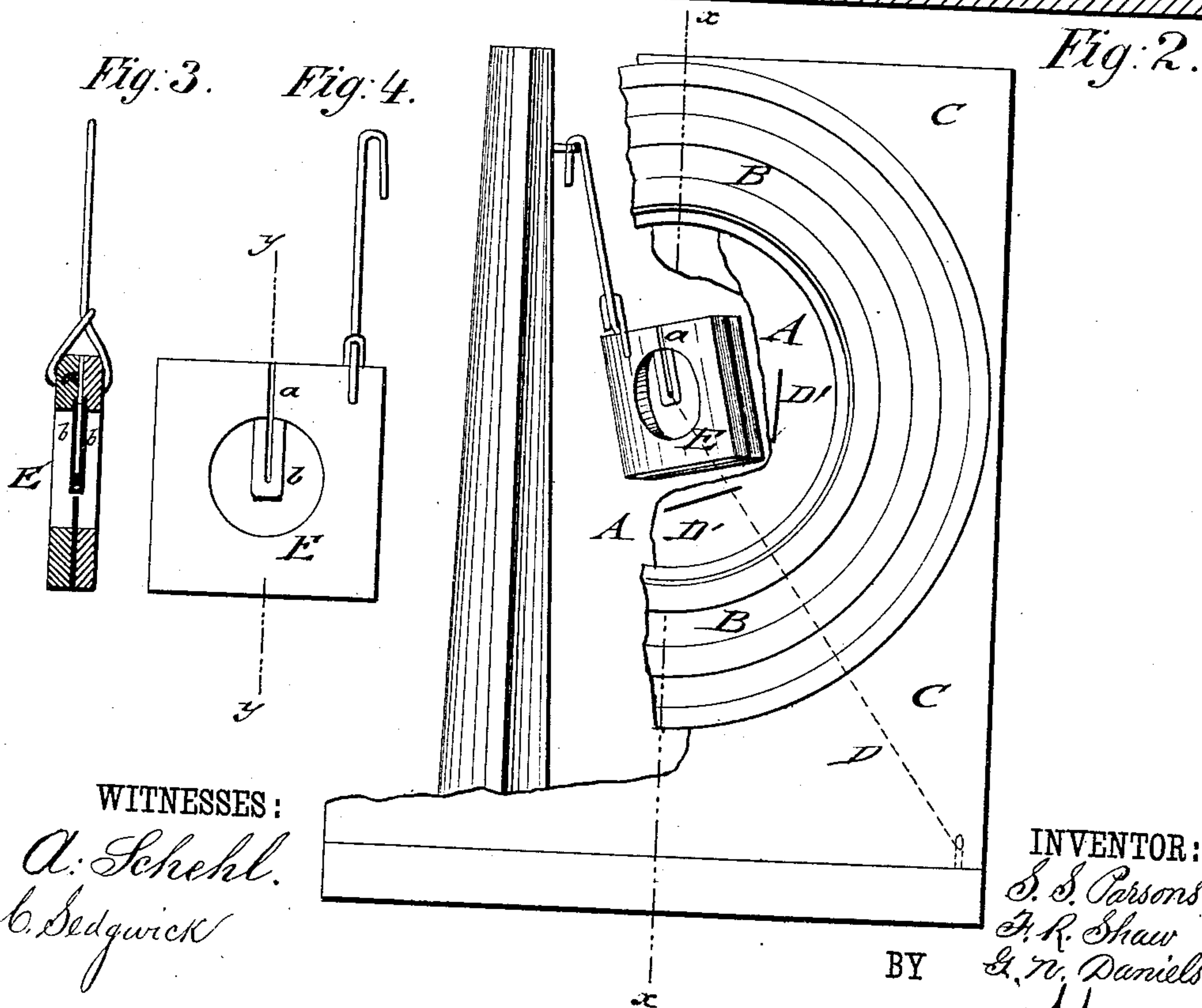


Fig. 3.

Fig. 4.

Fig. 2.

WITNESSES:

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UNITED STATES PATENT OFFICE.

SCHUYLER S. PARSONS, FRANCIS R. SHAW, AND GEORGE N. DANIELS, OF
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IMPROVEMENT IN MECHANICAL TELEPHONES.

Specification forming part of Letters Patent No. 207,436, dated August 27, 1878; application filed
June 18, 1878.

To all whom it may concern:

Be it known that we, SCHUYLER S. PARSONS, FRANCIS R. SHAW, and GEORGE N. DANIELS, of Chatham Centre, in the county of Medina and State of Ohio, have invented a new and Improved Telephone, of which the following is a specification.

In the accompanying drawings, Figure 1 represents a vertical longitudinal section of our improved telephone on line *x x*, Fig. 2. Fig. 2 is a front elevation of the same with parts broken off; and Figs. 3 and 4 are, respectively, a vertically-transverse section on line *y y*, Fig. 4, and a front view, of our improved insulator for supporting the transmitting main wire.

Similar letters of reference indicate corresponding parts.

This invention relates to improvements in acoustic telephones, so that in place of the usual muffled tone a clear sounding of the diaphragm is obtained, and the confused ringing tone in common telephones done away with; and the invention consists of a diaphragm of cloth or other textile fabric that is mounted in an open wooden case. The transmitting-wire branches out into a number of smaller wires that are jointed to the main wire and attached to the diaphragm. The main wire is hung to insulators, which are made of sheep-skin that is placed in a frame with a central opening, the frame and sheep-skin being slitted, and the latter re-enforced at the slit.

Referring to the drawings, A represents a diaphragm of silk, duck, or other textile fabric, which is tightly stretched between two circular sections of a wooden case, B, that is attached by posts to a vertical support, C, so as to be free on all sides.

The transmitting main wire D is not connected directly to diaphragm A, but is branched out into a number of smaller wires, D', that are attached at different points to the diaphragm.

The apex of the bundle or cone of small wires back of the diaphragm is jointed to the main wire, and a small quantity of melted wax dropped thereon, to prevent a jingling noise when the wires vibrate.

We prefer to use brass wires, as a clearer and better tone is obtained by the same.

The open wooden case improves the sound, as it is free on all sides and removes the muffled tone, while the cloth diaphragm and small wires destroy the confused ringing tone of the common acoustic telephones.

As the small wires are scattered over the diaphragms, they collect and transmit the vibrations of the diaphragms more perfectly than when only one wire is used in the center of diaphragm.

The transmitting-wires are hung to insulators E, especially where the main wire curves or forms an angle.

The insulators E are constructed of sheep-skin that is coated on each side with a solution of gum-shellac dissolved in alcohol, so as to stiffen it and protect it against the weather.

The sheep-skin is retained by a frame made of two thin blocks of wood, through which a round opening is cut by an auger. The frame and sheep-skin are slitted from a point of the edge to about the center of the sheep-skin, the sheep-skin being re-enforced at the slit *a* by a strap, *b*, of the same material, which is passed through a cross-slit of the sheep-skin below the lower end, and retained by the frame at both ends. The main wire D is admitted through the slit into the insulator E, and supported at the lower re-enforced end of the slit, the insulator retaining the sound in superior manner at points where the main line passes around an angle and is exposed to some strain.

For straight lines of wires common strings or cords may be used as insulators.

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

1. The combination, with the transmitting-wire D, of the radially-slitted insulator E, re-enforcing strap *b*, and the two bore-slitted blocks, as and for the purpose specified.

2. In acoustic telephones, the combination, with a vibrating diaphragm, of a textile fabric of a transmitting main wire, connected by a number of branch wires to the diaphragm, substantially as specified.

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