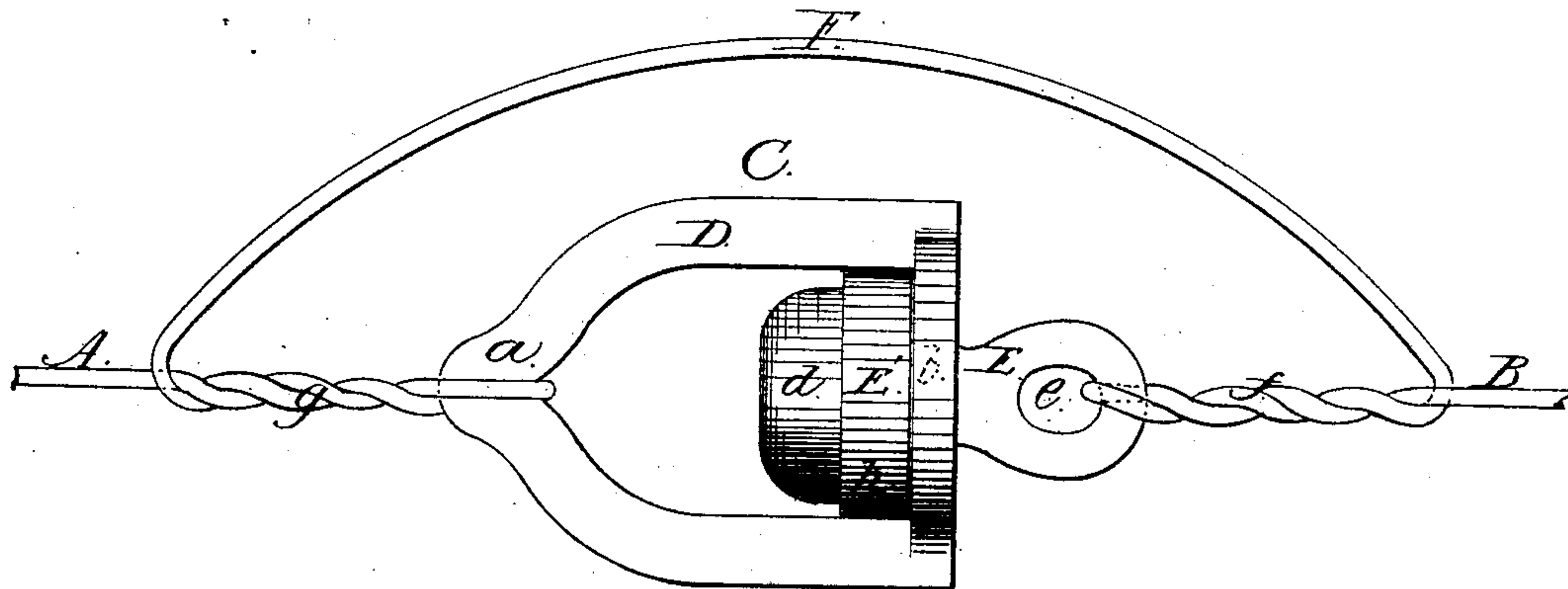


E. H. CLARK.  
Device for Deadenning Sound-Vibrations in  
Telegraph-Wires.

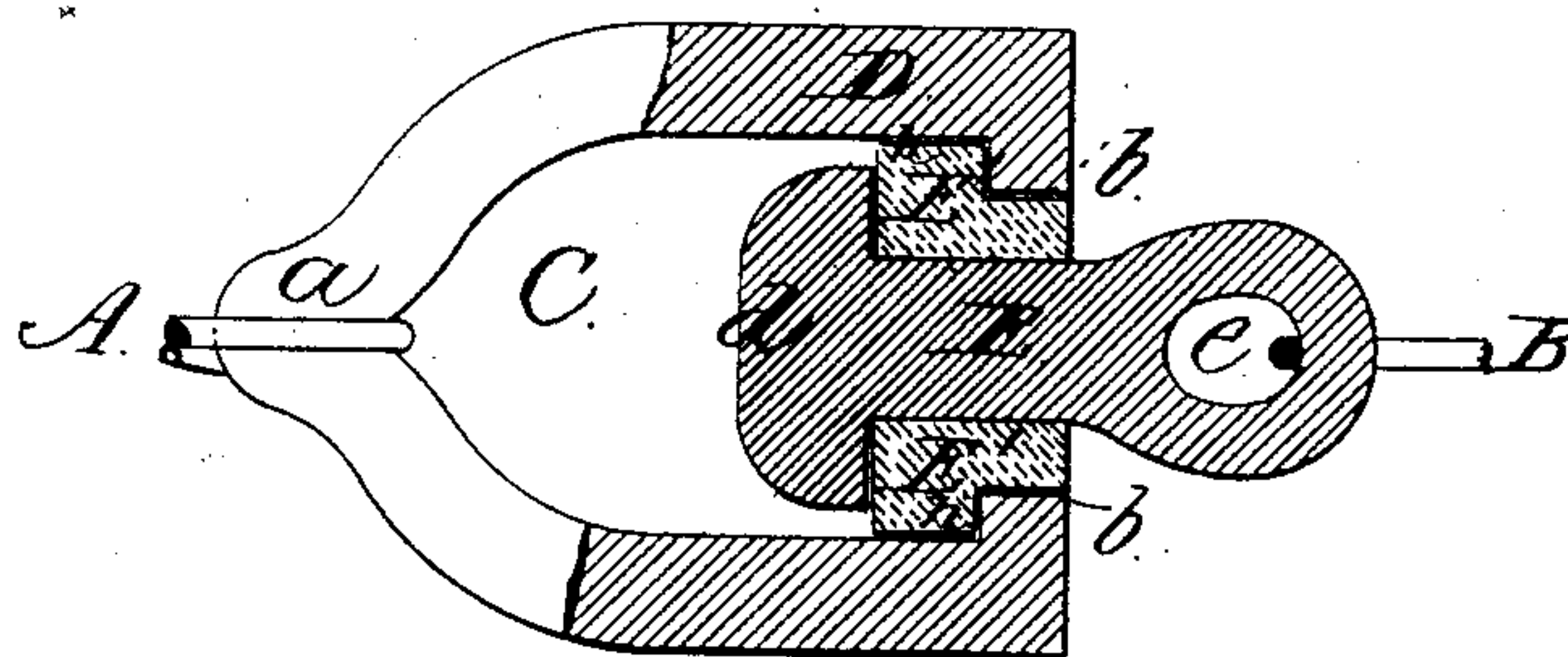
No. 227,095.

Patented May 4, 1880.

*Fig: 1.*



*Fig: 2.*



*Witnesses:*  
*John C. Dunbridge.*  
*Harry M. Turk.*

*Inventor:*  
*Edmund H. Clark*  
*by his attorney*  
*A. V. Briesen*

# UNITED STATES PATENT OFFICE.

EDMUND H. CLARK, OF LONG BRANCH, NEW JERSEY, ASSIGNOR TO EDMUND H. CLARK, OF SAME PLACE, AND HENRY VAN HOEVENBERG, OF NEW YORK, N. Y.

## DEVICE FOR DEADENING SOUND-VIBRATIONS IN TELEGRAPH-WIRES.

SPECIFICATION forming part of Letters Patent No. 227,095, dated May 4, 1880.

Application filed February 21, 1880.

*To all whom it may concern:*

Be it known that I, EDMUND H. CLARK, of Long Branch, in the county of Monmouth and State of New Jersey, have invented a new and  
5 Improved Device for Deadenning Sound-Vibrations in Telegraph-Wires, of which the following is a specification.

My invention relates to a device for deadening or checking the sound-vibrations of telegraph-wires; and the invention consists in inserting in the wires at any convenient or desired point a piece of non-resonant material.

The invention also consists in an arrangement for connecting the wires on both sides  
15 of the non-resonant material when the same is a non-conductor of electricity, so as to avoid interference with the electric current.

In the accompanying drawings, Figure 1 represents portions of a telegraph-wire and the device for deadening the sound-vibrations; and  
20 Fig. 2 represents a sectional view of the device, illustrating the manner of its construction.

Referring to the drawings, A represents the part of the telegraph-wire beyond the sound-deadening device and on the line side of the same, and B represents the part of the telegraph-wire which leads into the office. Between these two parts A B of the telegraph-wire the device C is interposed, for the purpose of deadening or checking the sound-vibrations of the line portion A of the wire and preventing the said vibrations from being conveyed by the part B into the office in which the wires terminate.

35 The device C is composed of a shackle, D, having a bow, *a*, at one end and an eye, *b*, at the opposite end; also, of a swivel, E, with a head, *d*, at one end, and an eye, *e*, at the opposite end. The swivel is passed through the eye of the shackle, so that the end of the swivel having the eye projects out of the shackle; but between the head *d* of the swivel and the end of the shackle is a cushion or plug, E', of rubber or other non-resonant material.  
45

As shown, the cushion E' is annular, and is passed over the shank of the swivel and fits into the eye *b* of the shackle, while its flange or face *h* bears against the part of the shackle

immediately around the eye *b*, whereby the shank and head of the swivel are completely isolated from the shackle, and whatever vibrations may be given to the shackle the cushion E' will intercept them, so that they cannot reach the swivel and the wire B beyond.  
55

F represents a piece of slack wire, which connects the two parts A and B of the wire around the device C, and furnishes a conductor for the electricity independently of the device C. This arrangement is necessary when the non-resonant cushion E' is a non-conductor of electricity; but if the cushion E' be made of a material which is at the same time non-resonant and a good conductor of electricity the slack wire F may be dispensed with.  
65

In putting up a telegraph-wire and providing it with my sound-deadening device, the part of the wire B is connected with the swivel by passing it through the eye *e*; then the wire is wrapped or twisted back on the part B, as at  
70 *f*, and a loop is left to form the wire F; then the end of the wire is passed under the bow *a* of the shackle, wrapped or twisted around a part of the slack wire, as at *g*, and then the part A is connected with the poles or other supports in the usual manner. Care must be taken to firmly fasten together the part B and the slack wire at *f*, and also the wire A and slack wire at *g*, so as to avoid slipping and the consequent tightening of the wire F.  
80

The wires A, B, and F may, however, be of separate pieces, and the positions of the wires A and B on the shackle D and swivel B reversed.

The operation of the improvement is as follows: Telegraph-wires from various causes receive a great many sound-vibrations, which they conduct to the offices, and as these act as a species of sounding-board, the sounds are considerably augmented and are very annoying to the occupants of the offices; but by inserting my device in the wires close to the offices the vibrations of the wire A are interrupted, and but little, if any, reach the offices, for the following reasons: When the wire is stretched from the office and along the poles or other supports the strain is in direct line with the wire, and consequently through  
85  
90  
95



the device C. When the wire A is vibrated, the vibrations pass to the shackle D, (as they cannot pass through the wire F on account of its slackness,) and are intercepted, checked, or  
5 deadened by the cushion E', and thereby prevented from passing to the swivel E, and thence to the wire B. If B is the line-wire, the vibrations may be received by the swivel, but will not go to the shackle.

10 Thus it will be readily seen that however much sound may reach the device C, the cushion E' will serve as a check to prevent it from reaching the office.

I do not confine myself to the use of the  
15 shackle D and swivel E for connecting the cushion E' with the wires, as other devices may be employed for the purpose.

I claim—

1. The apparatus described for deadening the sound-vibrations and taking up the strain 20 of telegraph-wires, which consists of a cushion or piece, E', of non-resonant material, placed into the interrupted line of the wire, substantially as described.

2. In combination with a telegraph-wire, A 25 B, the cushion or piece E', of non-resonant material, and the connecting devices D and E, substantially as described.

3. The combination of the parts A B of a telegraph-wire with the shackle D, the swivel 30 E, cushion E', and branch wire F, substantially as described.

EDMUND H. CLARK.

Witnesses:

WILLY G. E. SCHULTZ,  
TOMPSON B. MOSHER.