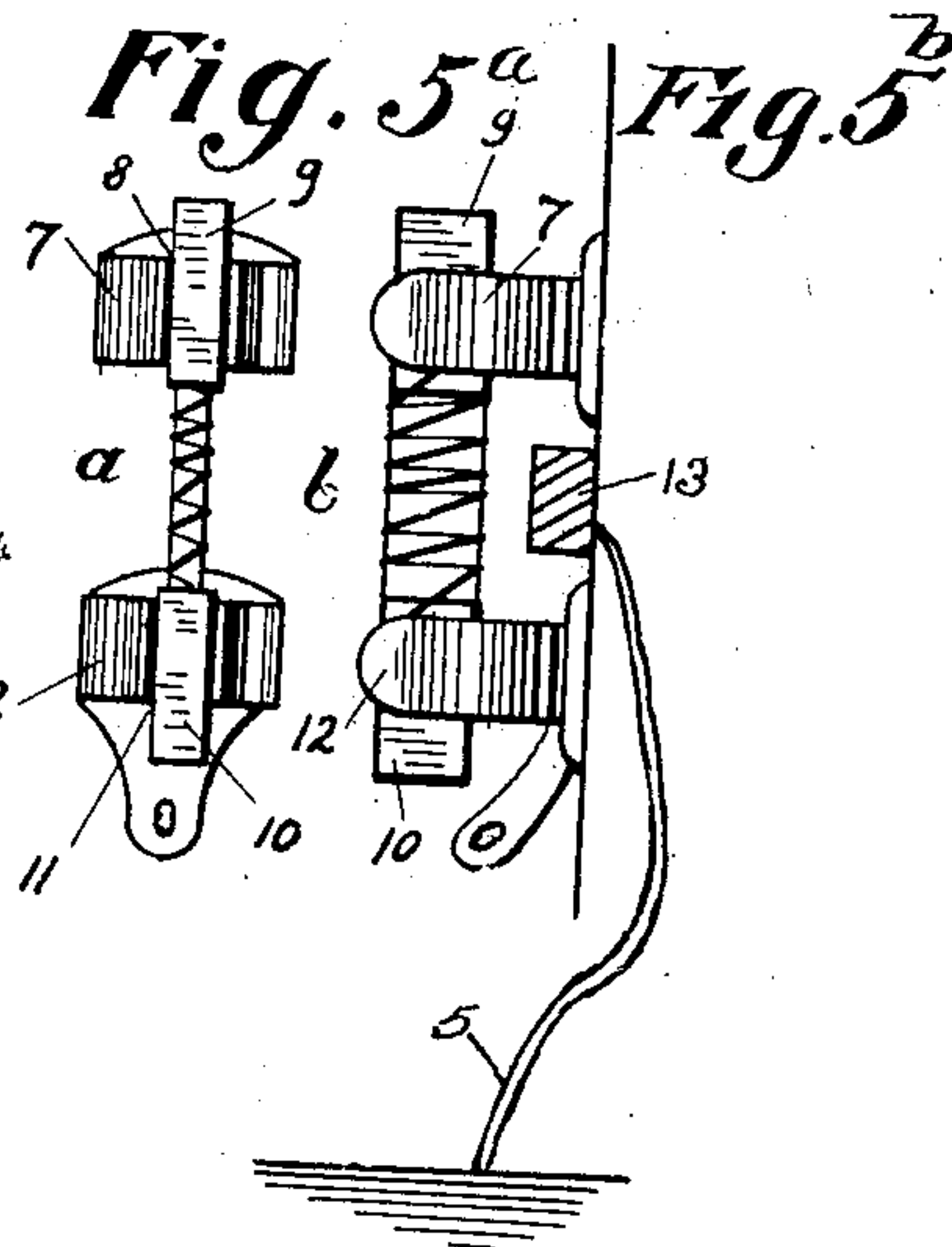
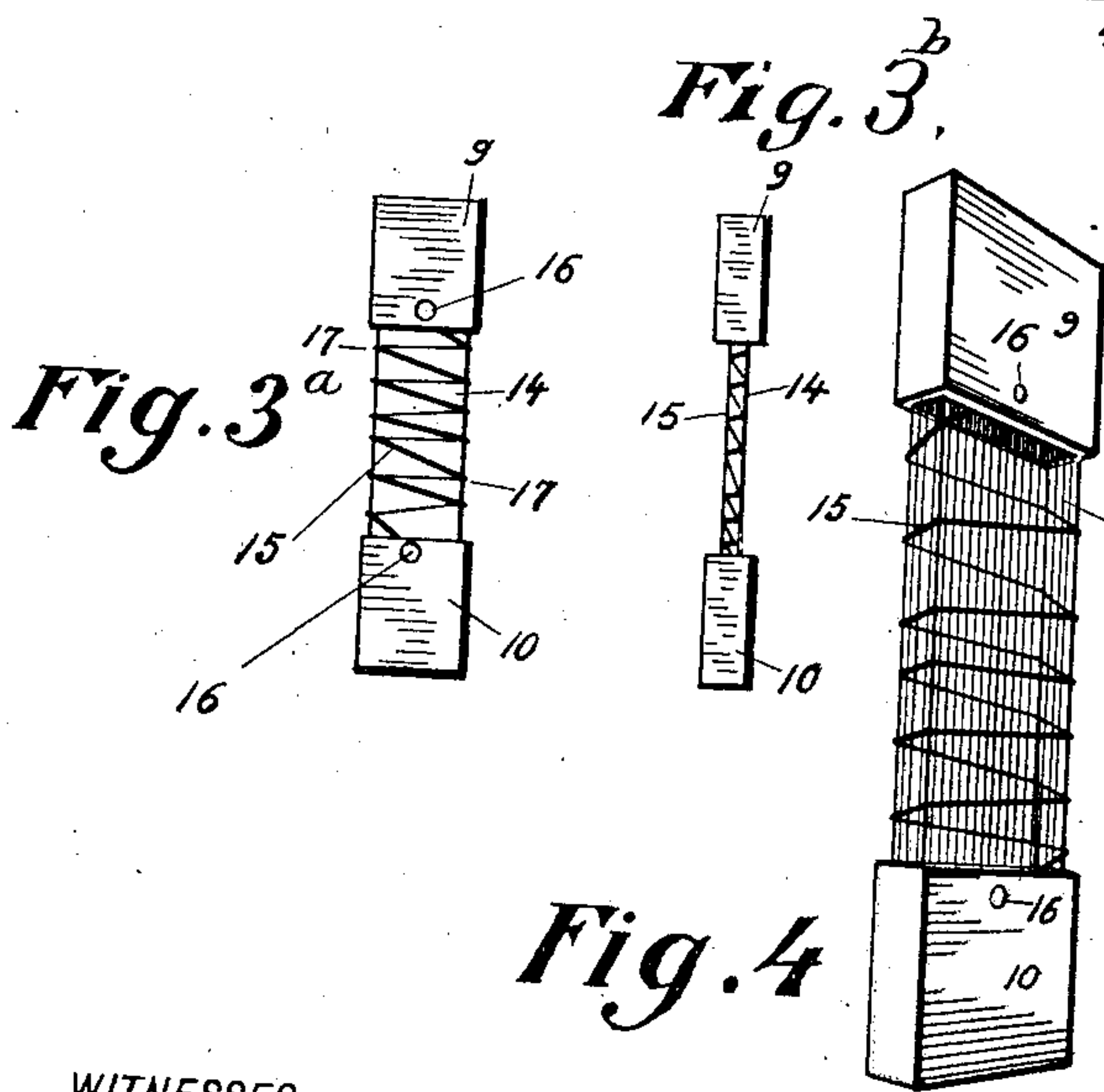
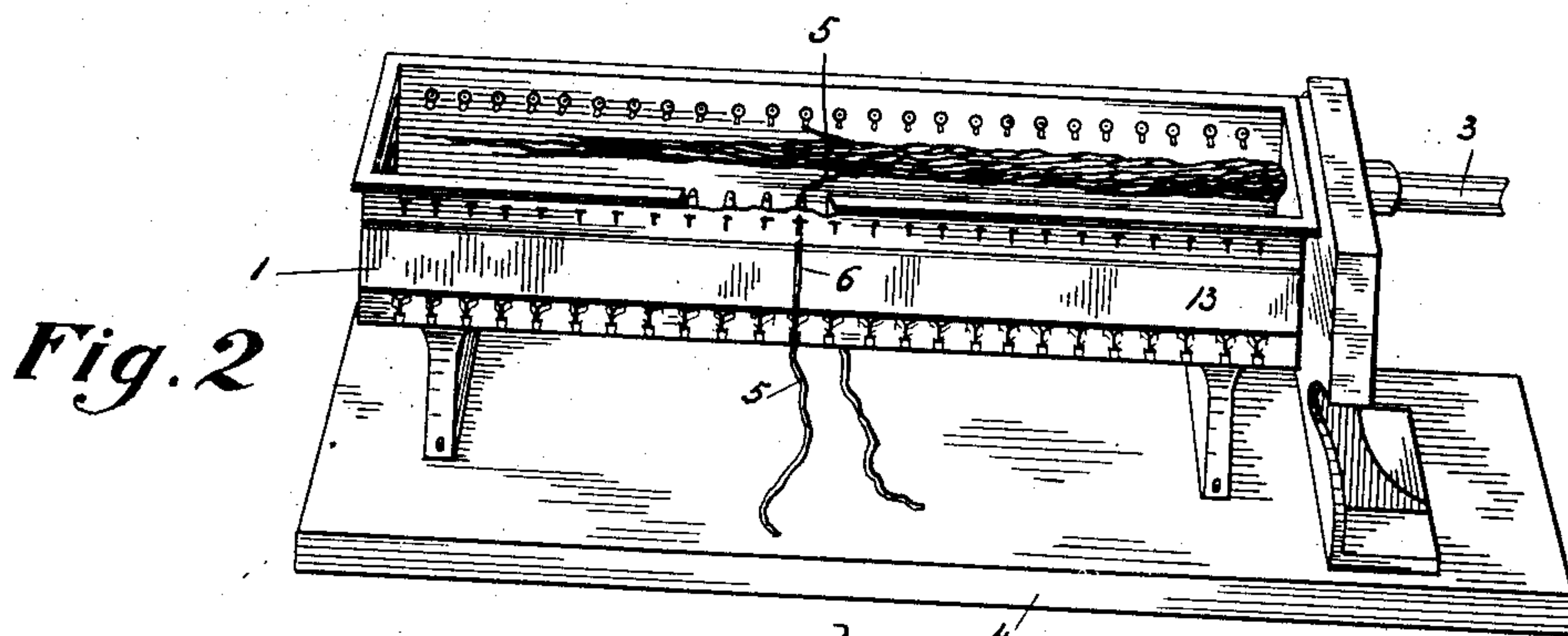
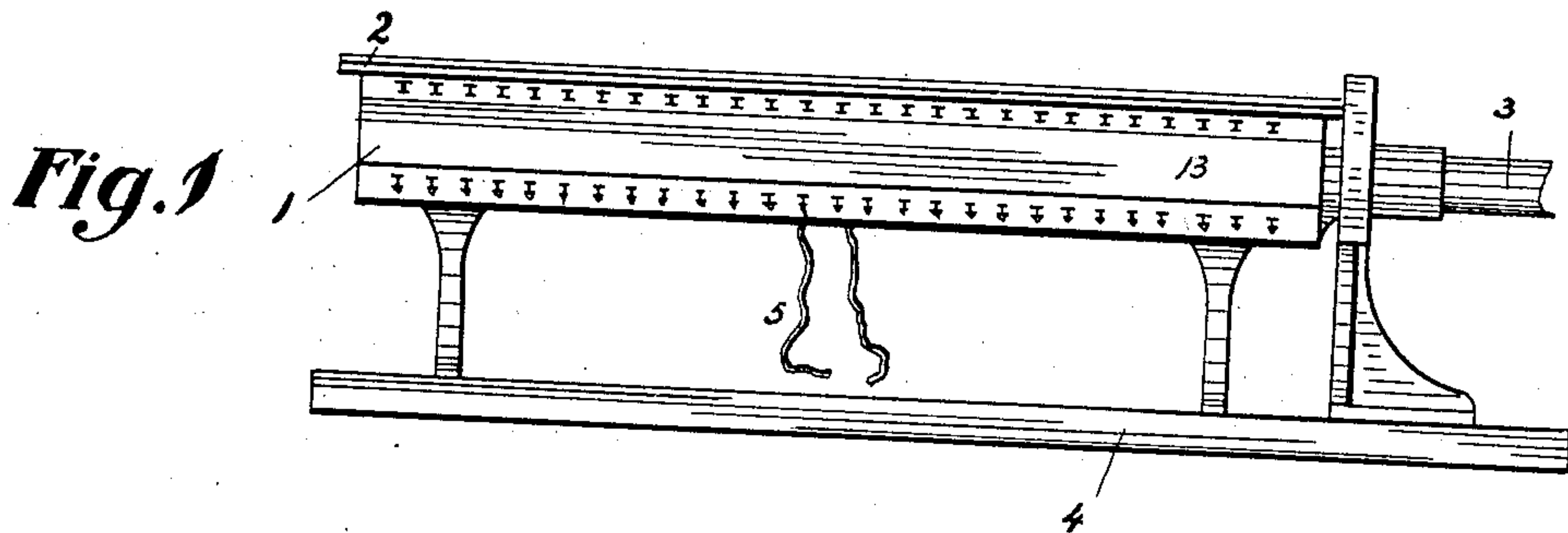


No. 742,626.

PATENTED OCT. 27, 1903.

A. C. GILGEN.
ELECTRICAL DIVERTER.
APPLICATION FILED JULY 19, 1902.

NO MODEL.



WITNESSES:
Charles E. Letcher.

INVENTOR:
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BY
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UNITED STATES PATENT OFFICE.

ADOLPH C. GILGEN, OF ST. LOUIS, MISSOURI, ASSIGNOR TO CENTRAL TELEPHONE & ELECTRIC COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF MISSOURI.

ELECTRICAL DIVERTER.

SPECIFICATION forming part of Letters Patent No. 742,626, dated October 27, 1903.

Application filed July 19, 1902. Serial No. 116,180. (No model.)

To all whom it may concern:

Be it known that I, ADOLPH C. GILGEN, a citizen of the United States, residing at the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Electrical Diverters, of which the following is a specification.

This invention is designed to produce greater certainty in the action of electrical fuses by providing a device in which the electrical current is diverted, and thus cut off instead of being shut off by fusible material burning out, as is common.

In the drawings, Figure 1 is a side elevation of a cable terminal head. Fig. 2 is a perspective view of the same with the cover of the box removed. Fig. 3^a is a top plan view of my improved fuse. Fig. 3^b is a side view of the same. Fig. 4 is a perspective view, on an enlarged scale, of my improved fuse. Fig. 5^a is a front view showing my improved fuse in its position in the terminal head as seen in Fig. 2. Fig. 5^b is a view at right angles to the last-mentioned view.

My improved diverter diverts lightning and high-tension currents and serves all the purposes of diverters now in use by protecting cables, switchboard apparatus, and instruments, but in a more efficient and in a novel manner.

One of the objections to the diverters now in use is that when placed in a position where they are exposed to the atmosphere they naturally oxidize, thus forming oxid of lead, and in this and other ways they lose their fusible character and become capable of carrying a higher tension-current than it is desired should be transmitted through the diverter. These conditions require that ordinary diverters should be frequently inspected in order to insure that they will act in the desired manner at the necessary moment.

It will be obvious that my improved diverter can be used in any position where diverters are now employed; but in the drawings I have illustrated it in position in a cable terminal head for a telephone-exchange.

1 indicates the box; 2, its cover; 3, the cable,

and 4 the frame for attaching same to the wall of the building in which it is located.

5 is an individual wire leading to a particular instrument. (Not shown.)

6, Fig. 2, is my improved diverter, which is shown as interposed between the two portions of the line 5, the wire 5 being suitably connected to a metallic bracket or clip 7 into an opening 8, in which the upper head 9 of my diverter fits. The lower end 10 of the diverter 6 is similarly inserted in the opening 11 in the clamp or bracket 12 at the other side of the box 1 and completes the circuit for the current to be conducted, the brackets 7 and 12 and the heads of the diverter 9 and 10 all being conductors. This diverter consists of an electrical current-conducting substance of no specified resistance or composition; but it is preferably formed of non-corrosive material, like copper. One of the advantages of this construction is that as it is not intended that the diverter shall be burned out it is possible to use copper as a conductor through the space occupied by the diverter. While in Fig. 2 of the drawings I have shown only one such diverter in position, yet it is obvious they may be arranged in a series along the side of the terminal head. I shall now proceed to describe the construction of this diverter in detail, having shown its general characteristics and illustration of its location, adding this, however, that the diverter must be located in juxtaposition to some conducting-surface connected with the ground—as, for instance, the metal plate 13 in Fig. 2. The diverter consists of a plate of mica 14 or other insulating substance, around which is wrapped a fine copper wire 15, which is connected to the heads 9 and 10 of the diverter by the soft-solder joints 16, which are adapted to fuse under extreme conditions to break the contact of the wire 15 with the copper heads 9 and 10. The angles 17 of the wire 15 as it is wrapped around the mica plate 14 afford angles of escape for the electrical current to be diverted.

There are numerous advantages connected with my said invention in addition to those

above specified, among which may be mentioned the fact that it will not be affected in efficiency by atmospheric variations, and it is obvious that many minor changes in the construction and arrangement of the several parts may be made without departing from the nature and spirit of my invention.

Having thus described my said invention, what I claim, and desire to secure by Letters Patent, is—

1. An electrical diverter comprising in combination a supporting-bracket having metallic clips thereon, a ground-plate mounted between said clips and in electrical connection with the earth, and a diverter mounted in the clips, said diverter comprising a body portion of insulating material, end pieces of conducting material, said end pieces being secured in said clips, a wire forming a plurality of angles disposed around the body of said diverter opposite said ground-plate, and soft-solder connections for securing the ends of the wire and the said end pieces together, substantially as described.
2. An electrical diverter comprising a ground-plate, means connecting the same with the earth, and a diverter comprising a body portion of non-corrosive insulating material, end pieces of conducting material, a conductor angularly wound around said body portion, the angular portions of the conductor being opposite to the ground-plate, and soft-solder joints connecting the conductor with the end pieces, substantially as described.
3. An electrical diverter comprising a ground-plate, connecting means between said plate and the earth, and a diverter consisting of a body portion of insulating non-corrosive material, conducting end pieces on said body, means electrically connecting said end pieces, said means having angular bends therein disposed oppositely to the ground-plate, and fus-

ble means connecting said last-named means with the end pieces, substantially as described.

4. A device of the character set forth, comprising in combination with a ground-plate having earth connection, a supporting means, a diverter mounted therein comprising an insulating non-corrosive body portion, angularly-bent conducting means adjacent to the ground-plate secured upon said body portion, and electrically-connecting end portions of said diverter, fusible connecting means between said end pieces and the said angularly-bent conducting means, substantially as described.

5. An electrical diverter comprising a ground-plate having an earth connection, a diverter consisting of an insulating non-corrosive body portion, end portions of conducting material carried by the body portion, angularly-bent conducting means secured upon the body portion, oppositely disposed and adjacent to said ground-plate, and means connecting said end pieces and the conducting means, substantially as described.

6. An electrical diverter comprising a ground-plate, means connecting the same with the earth, and a diverter consisting of a body portion of non-corrosive insulating material, end pieces of conducting material, a conductor angularly disposed on said body portion, the angular portions of the conductor being opposite to the ground-plate, and means connecting the conductor to said end pieces, substantially as described.

In testimony whereof I have affixed my signature, in presence of two witnesses, this 9th day of July, 1902.

ADOLPH C. GILGEN.

Witnesses:

ADELAIDE HENSING,
MAUD E. LETCHER.