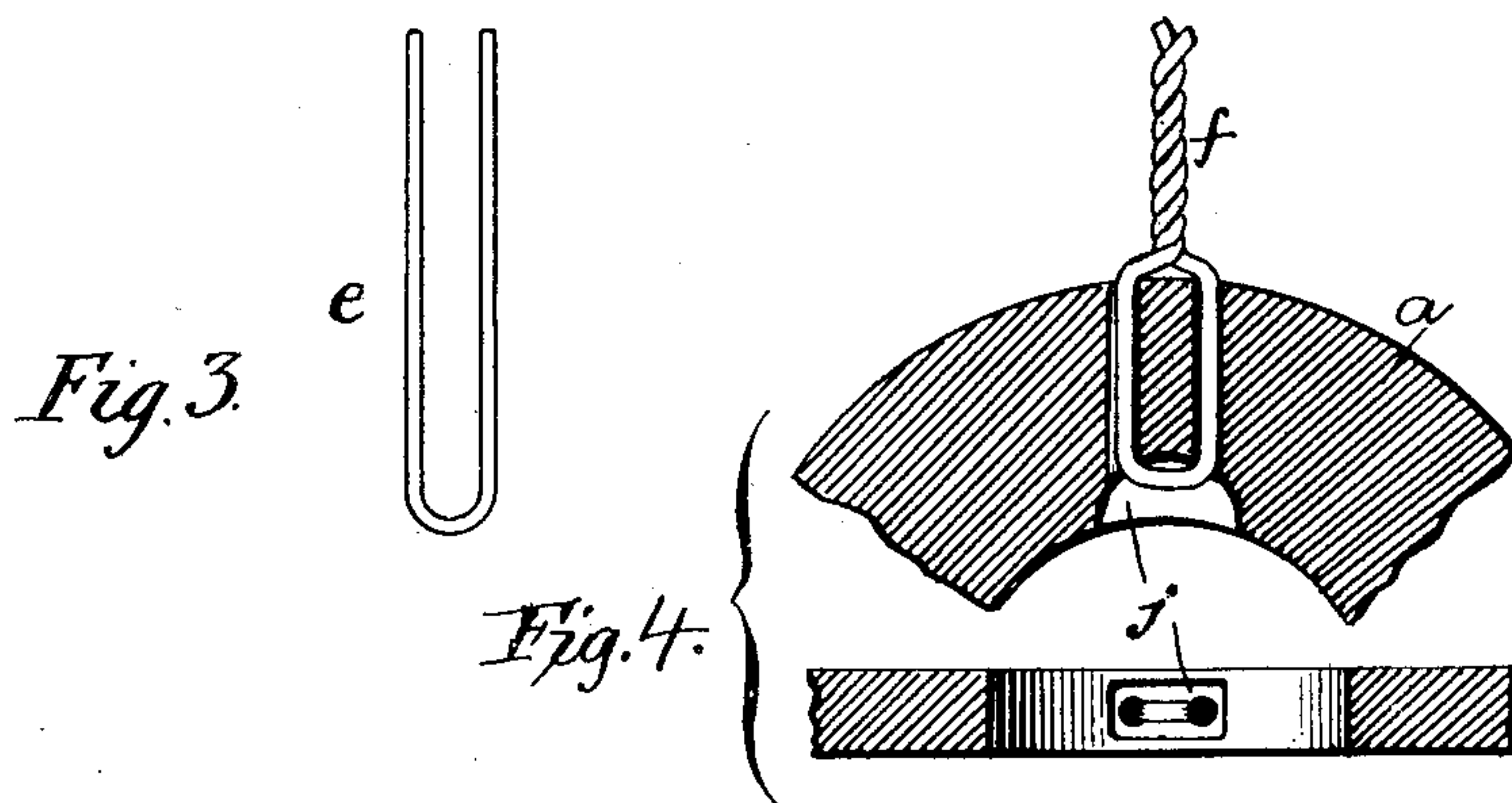
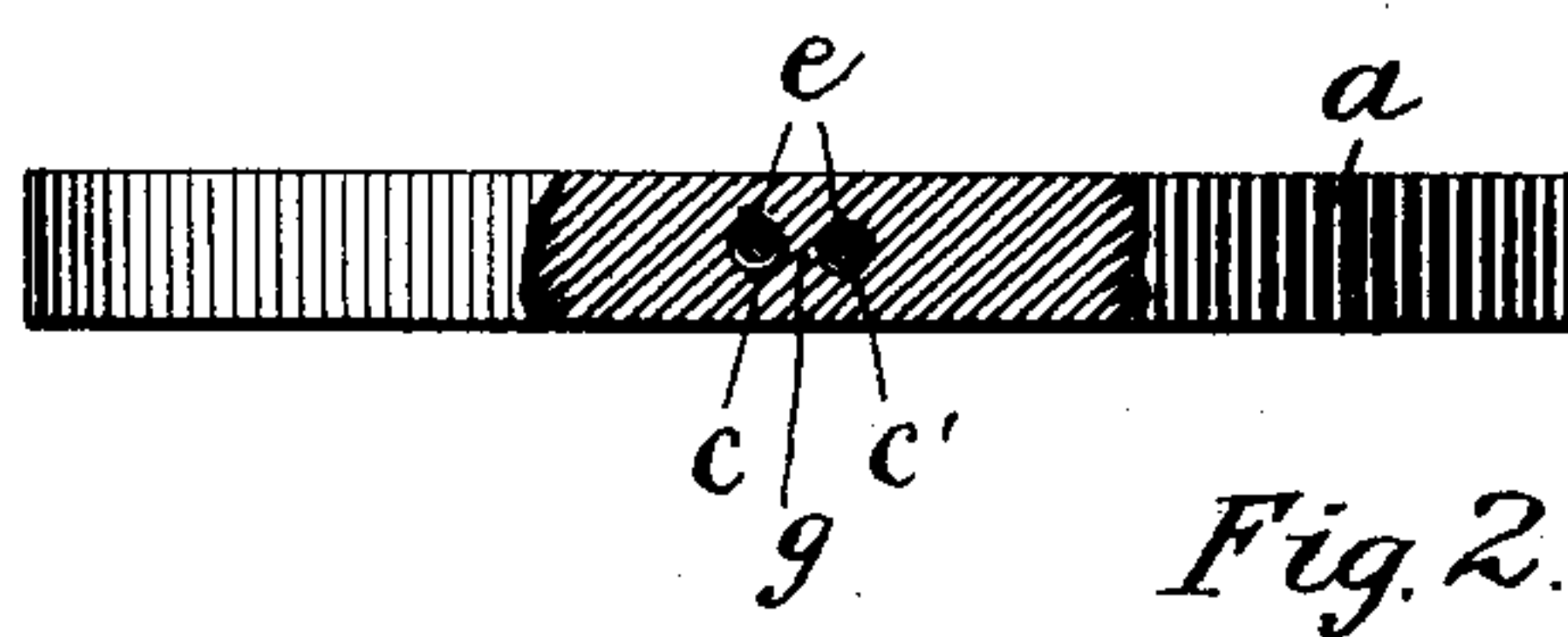
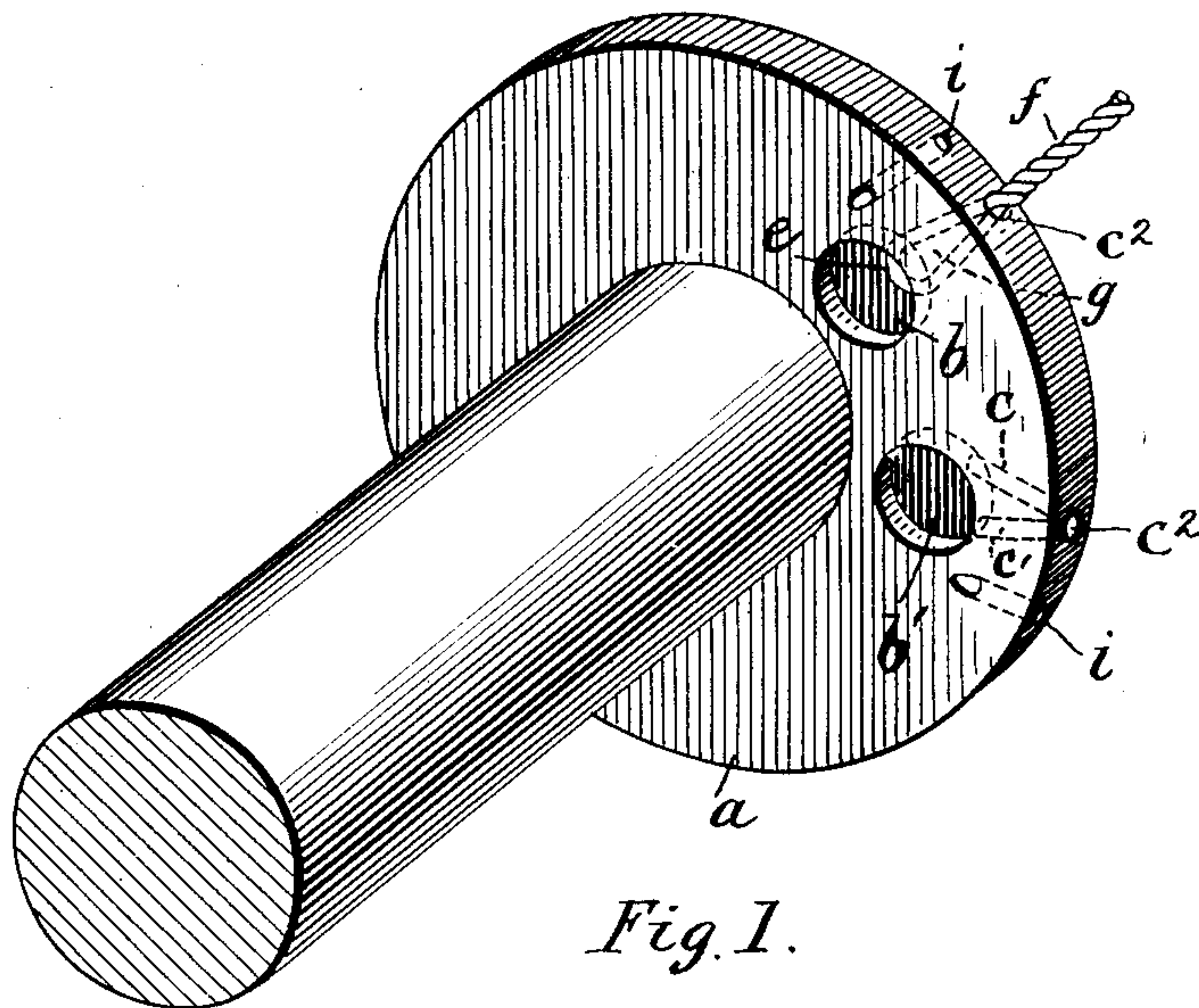


No. 744,650.

PATENTED NOV. 17, 1903.

R. VARLEY.
ELECTRIC COIL TERMINAL.
APPLICATION FILED AUG. 29, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

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DUPLEX MAGNET COMPANY, A CORPORATION OF NEW JERSEY.

ELECTRIC-COIL TERMINAL.

SPECIFICATION forming part of Letters Patent No. 744,650, dated November 17, 1903.

Application filed August 29, 1903. Serial No. 171,160. (No model.)

To all whom it may concern:

Be it known that I, RICHARD VARLEY, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Electric-Coil Terminals, of which the following is a full, clear, and exact description.

In the construction of electromagnet, induction, and other electrical coils it is a common practice to permanently secure the terminals of the helix to pins or similar devices anchored in some part of the spool or frame upon which the helix is wound or mounted. Such helices are commonly wound upon a spool having heads or flanges of fiber, hard rubber, wood, or other insulating material, into which it has been customary to drive or screw two pins, to which the respective terminals of the coils are soldered in order to permanently hold and locate them. These pins have generally been inserted in the edge or periphery of the flange or head by drilling and tapping holes therein and then screwing the pins in place; but this practice has proven to be unsatisfactory on account of the fact that the material of the flange or head often splits, and in any case the pin being merely screwed in place is thus liable at any time to loosen. Furthermore, such pins are expensive, since they have to be threaded and are necessarily of considerable size.

My invention is designed to provide a simple, cheap, and effective device for the purpose named; and it consists, essentially, in passing a U-shaped wire through two small passages formed in the flange or head of the spool adjacent to each other and then twisting the free ends of the wire together and dipping them in solder. Thus the wire is looped around a solid portion of the head and becomes very securely anchored therein.

The details of the construction will be described with reference to the accompanying drawings, in which—

Figure 1 is a perspective view of a magnet-core having one head or flange attached thereto equipped with my improved terminal. Fig. 2 is an edge view of the flange with a section removed. Fig. 3 is a detail of the wire, and Fig. 4 shows two views of a modification.

a is a disk or ring forming the flange or head of a magnet or other electric spool, which may be made of fiber, hard rubber, wood, or other suitable material. On the inner face of the flange I form two cavities *b b'* either by molding, cutting, or drilling, and from each of these cavities I drill two lateral or radial passages *c* and *c'*, which lead outward through the edge of the flange and preferably converge at the edge into a single opening, as shown at *c²*. I then take a piece of wire *e*, bend it into U shape, as shown in Fig. 3, and pass its two arms through the respective passages from their inner ends outward, drawing the wire through until only the bend is visible in the cavity *b*. The two projecting ends are then grasped with a pair of pliers or otherwise and twisted to form a single pin projecting radially from the edge of the flange, as shown at *f*. To complete the terminal, I preferably dip the projecting portion into solder, which adds rigidity to it. It will thus be seen that the wire is looped around a triangular integral portion *g* of the flange and that it is therefore securely held in place. The wire, and consequently the passages, may be comparatively small. Since the helix has two terminals, I attach two of the above wires in the manner described, Fig. 1 showing only one of them in place, while the passages for the other are shown ready to receive the wire.

Adjacent to each of the anchored terminals are small passages *i i*, through which the terminals of the helix are threaded before they are attached to the anchored terminals. This attachment is made in any approved manner, usually by soldering the wire to the projecting end *f*.

Fig. 4 illustrates a modification of the invention in which the cavities *b* and *b'* are formed in the inner edge of the flange at *j* instead of in the face of the flange, and the passages lead parallel to each other from the cavity to the outer edge. The passages may also be parallel instead of converging in the construction shown in Fig. 1. It will be seen that in both forms the anchored wire is not exposed at any point in such a manner as to come in contact with the convolutions of the coil, it being buried in the solid flange of the

spool. The connection between the terminals of the helix and the anchored terminal may be in the manner described above, or it may be made with the bent portion of the wire in the cavities *b b'* or *j*. These cavities can be filled with wax, if it is so desired.

Having described my invention, I claim—

1. A coil-terminal for magnet-spools consisting of the combination of a solid portion of the spool provided with two passages, and a U-shaped wire, the arms of which pass respectively through said passages, forming a loop around the material intervening between the passages.

2. A coil-terminal for magnet-spools consisting of the combination of a solid portion of the spool provided with two passages, and a U-shaped wire, the arms of which pass respectively through said passages, forming a loop around the material intervening between the passages and the free ends of the wire being secured together.

3. A coil-terminal for magnet-spools consisting of the combination of a solid portion of the spool provided with two passages, and a U-shaped wire, the arms of which pass respectively through said passages, forming a

loop around the material intervening between the passages and the free ends of the wire being twisted together.

4. A coil-terminal for magnet-spools consisting of the combination of a solid portion of the spool provided with two converging passages, and a U-shaped wire, the arms of which pass respectively through said passages, forming a loop around the material intervening between the passages, the free ends of the wire being twisted together.

5. A coil-terminal for magnet-spools consisting of the combination of a spool flange or head having a cavity in one face and two passages leading laterally therefrom through the edge or periphery of the flange or head, and a wire passing through both passages and having both of its ends projecting from the edge of the flange or head and twisted together, substantially as described.

In witness whereof I subscribe my signature in presence of two witnesses.

RICHARD VARLEY.

Witnesses:

ELIZABETH CROSWELL,
WILLETT CHADWICK.