

No. 758,649.

PATENTED MAY 3, 1904.

J. A. HEANY.  
ELECTRIC SAFETY FUSE OR CUT-OUT.

APPLICATION FILED OCT. 14, 1903.

NO MODEL.

Fig. 1.

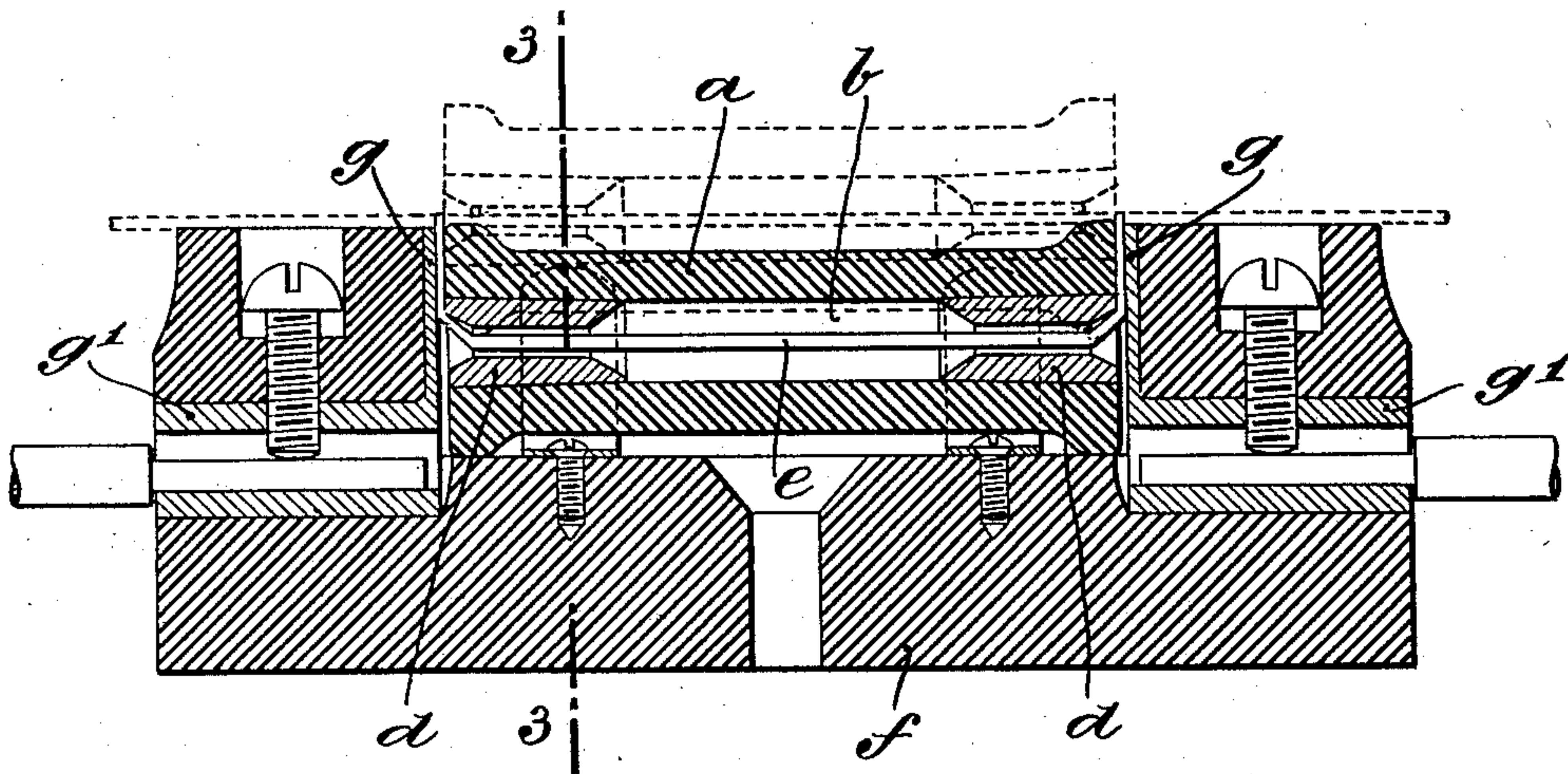


Fig. 2.

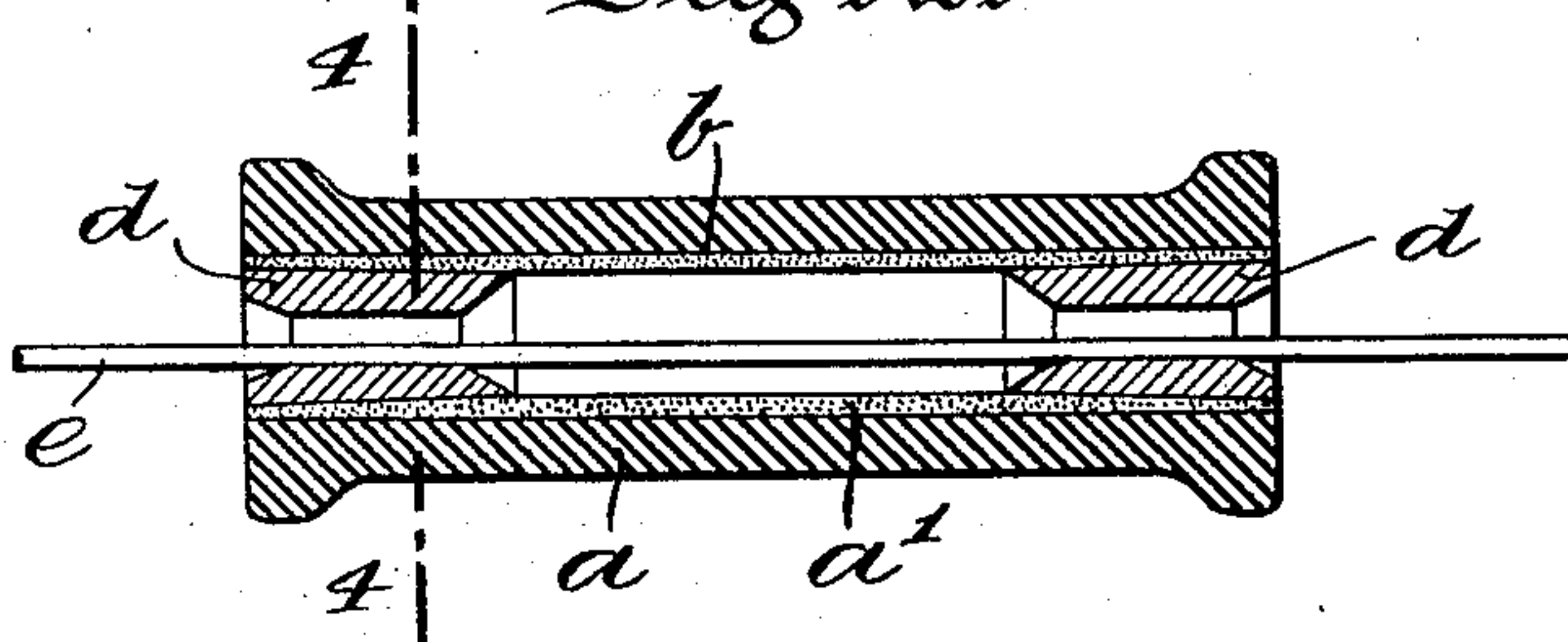


Fig. 3.

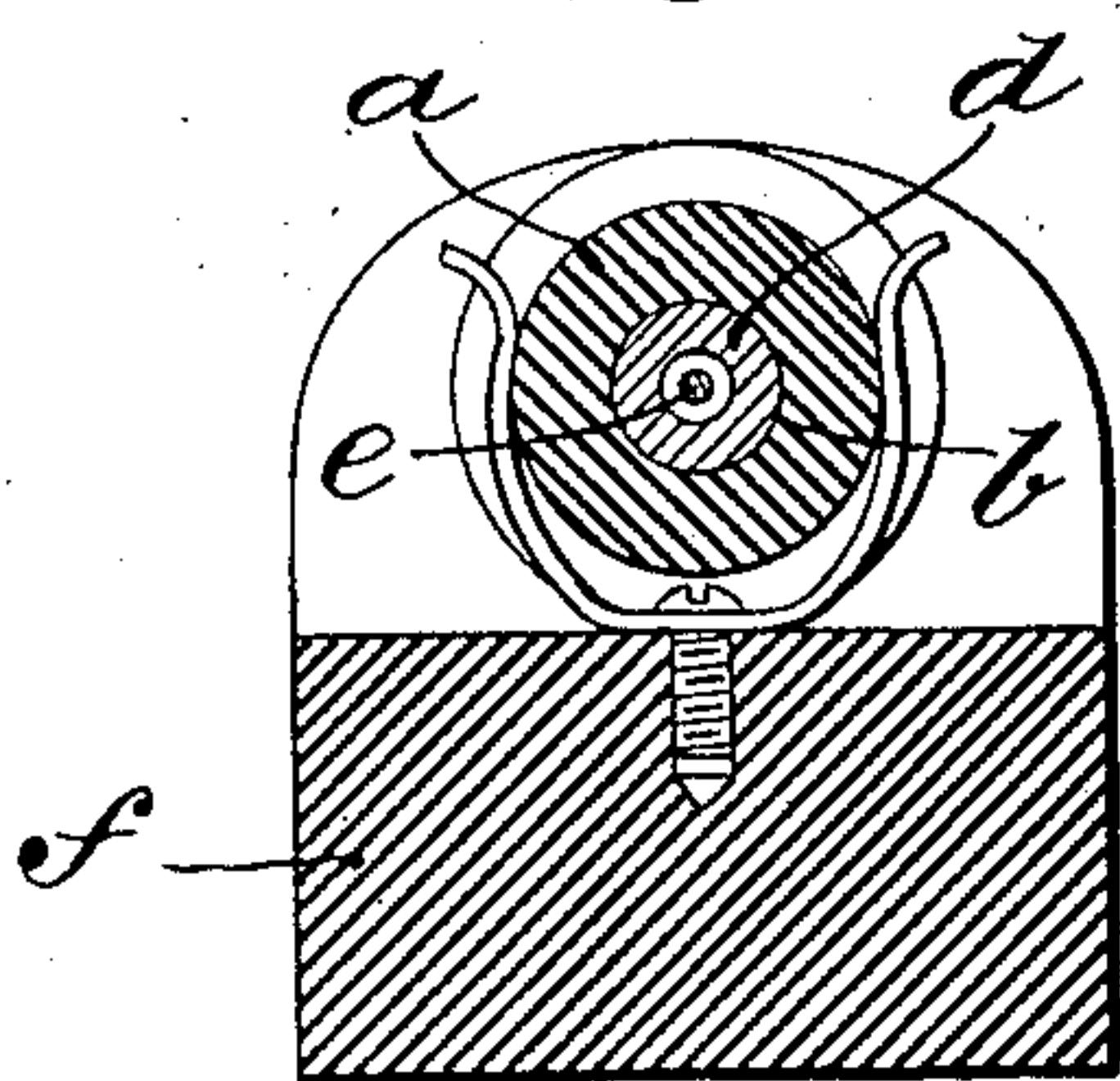
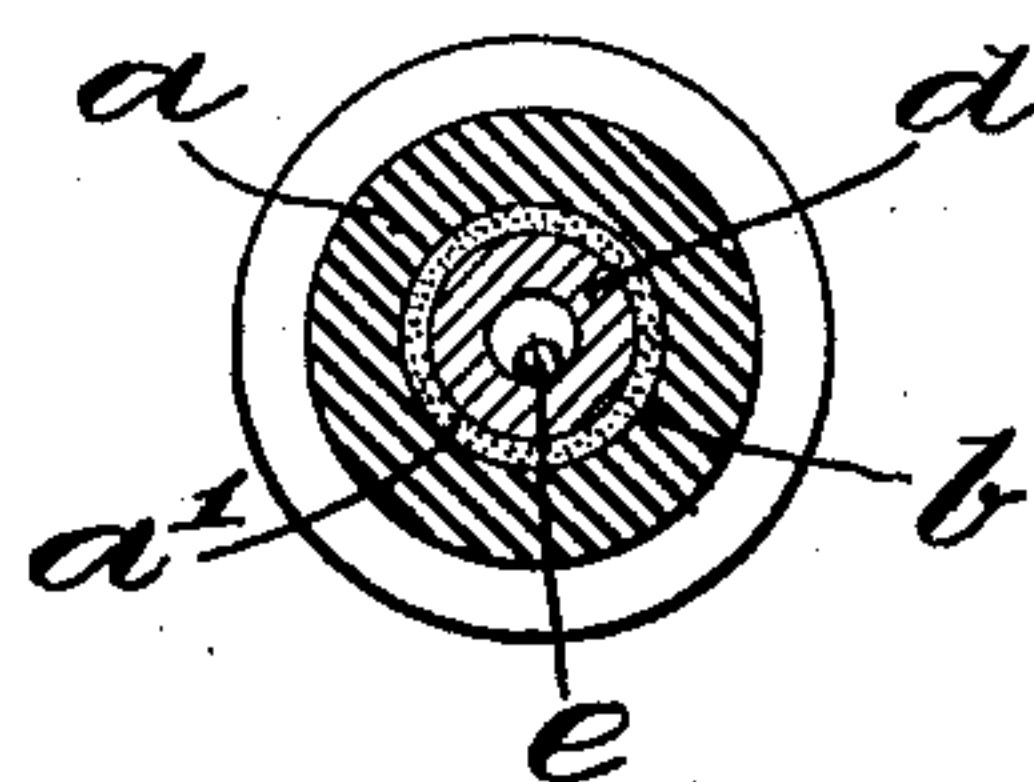


Fig. 4.



Witnesses  
Jas C. Wolensmith  
Henry E. Ewing

Inventor  
John A. Heany  
By J. Walter Dwyer  
Attorney



# UNITED STATES PATENT OFFICE.

JOHN A. HEANY, OF YORK, PENNSYLVANIA, ASSIGNOR TO THE TETER-  
HEANY DEVELOPING COMPANY, OF CHARLESTON, WEST VIRGINIA, A  
CORPORATION OF WEST VIRGINIA.

## ELECTRIC SAFETY-FUSE OR CUT-OUT.

SPECIFICATION forming part of Letters Patent No. 758,649, dated May 3, 1904.

Application filed October 14, 1903. Serial No. 176,966. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN ALLEN HEANY, a citizen of the United States, residing at York, in the county of York and State of Pennsylvania, have invented certain new and useful Improvements in Electric Safety-Fuses or Cut-Outs, of which the following is a specification.

My invention has relation to a safety-fuse or cut-out of the type wherein a fuse-wire is inclosed in a casing or tube of dielectric material and is used to bridge the terminals of an electric current, and in such connection it relates to the construction and arrangement of such a fuse or cut-out.

The principal object of my invention is to provide a safety-fuse or cut-out of simple construction so arranged that the fuse-wire may be readily inserted in or removed from a casing or tube of dielectric material, and when so inserted in the tube or casing the wire is adapted when burned out by an excess of current to part at a point intermediate of its ends.

The nature and scope of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, in which—

Figure 1 is a longitudinal sectional view of a fuse embodying main features of my invention and of a block for supporting the same between the terminals of the current. Fig. 2 is a longitudinal view of a modified form of fuse. Fig. 3 is a cross-sectional view taken on the line 3 3 of Fig. 1, and Fig. 4 is a similar view taken on the line 4 4 of Fig. 2.

Referring to Figs. 1 and 3 of the drawings, *a* represents a tube or casing of dielectric material, such as porcelain. In the longitudinal bore *b* of the tube *a* at each end of the tube are inserted the metallic tubular plugs *d d*, the bore of which is smaller than the bore *b* of the casing *a*. The fuse-wire *e* is inserted in the plugs *d* and casing *a* and has ends projecting beyond the ends of said casing. The casing *a*, with the wire *e*, is inserted in a fuse-

block *f*, of dielectric material, between two metallic plates *g g*, forming a continuation of the terminals *g' g'* of the current, which terminals *g'* enter the ends of the block *f*. When so inserted, the plates *g g* form closures for the respective ends of the casing *a* as well as a clamping means to bend down and hold the ends of the wire *e* between the contact-plates *g* and the ends of the casing *a*, as clearly illustrated in Fig. 1.

In the form of fuse illustrated in Figs. 2 and 4 the bore *b* of the casing *a* is lined with a protective coating *a'* of mica or similar non-conducting and insulating material. There is thus formed in both arrangements of the fuse a simple construction which permits the ready insertion or removal of a fuse-wire from the casing, and by using the metallic plugs *d d* the ends of the wire *e* are prevented from burning out and fusing of the wire is permitted only at a point between the plugs within the enlarged bore *b* of the casing.

Having thus described the nature and object of my invention, what I claim as new, and desire to secure by Letters Patent, is—

A safety-fuse or cut-out, comprising a tube or casing of dielectric material lined with a protective layer of non-conductive material, two tubular metallic plugs arranged wholly within the tube or casing and a fuse-wire traversing the tube and plugs combined with a fuse-block of dielectric material, two metallic plates arranged at either end of said block and separated to receive the tube or casing, said plates constituting a closure for the ends of the tube or casing, and a means for clamping the wire to the plugs and tube or casing, and terminals for the current connected respectively with said metallic plates.

In testimony whereof I have hereunto set my signature in the presence of two subscribing witnesses.

JOHN A. HEANY.

Witnesses:

J. WALTER DOUGLASS,  
THOMAS M. SMITH.