

(No Model.)

W. A. ANTHONY.  
FUSE PLUG.

No. 427,823.

Patented May 13, 1890.

Fig. 1.

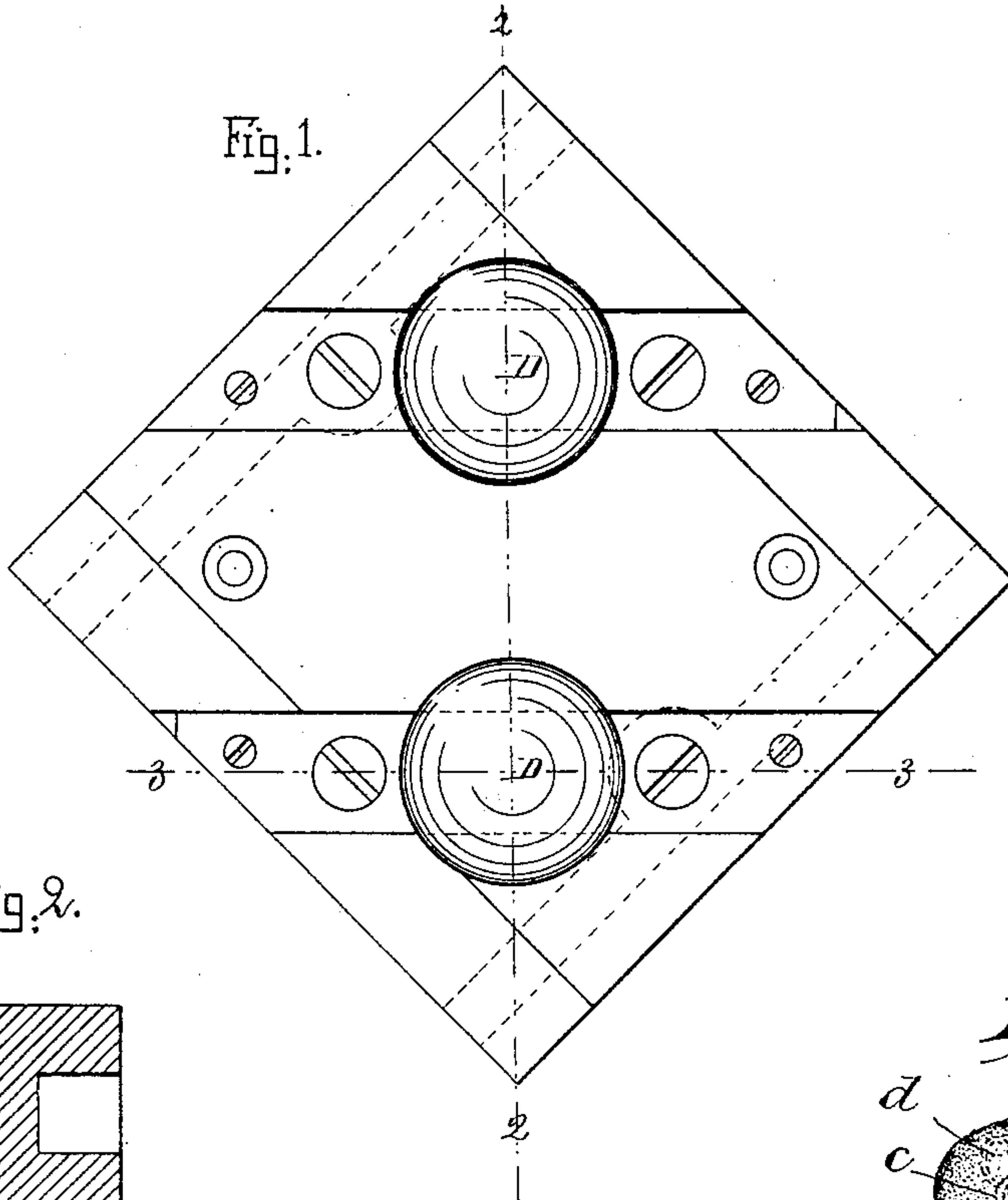


Fig. 2.

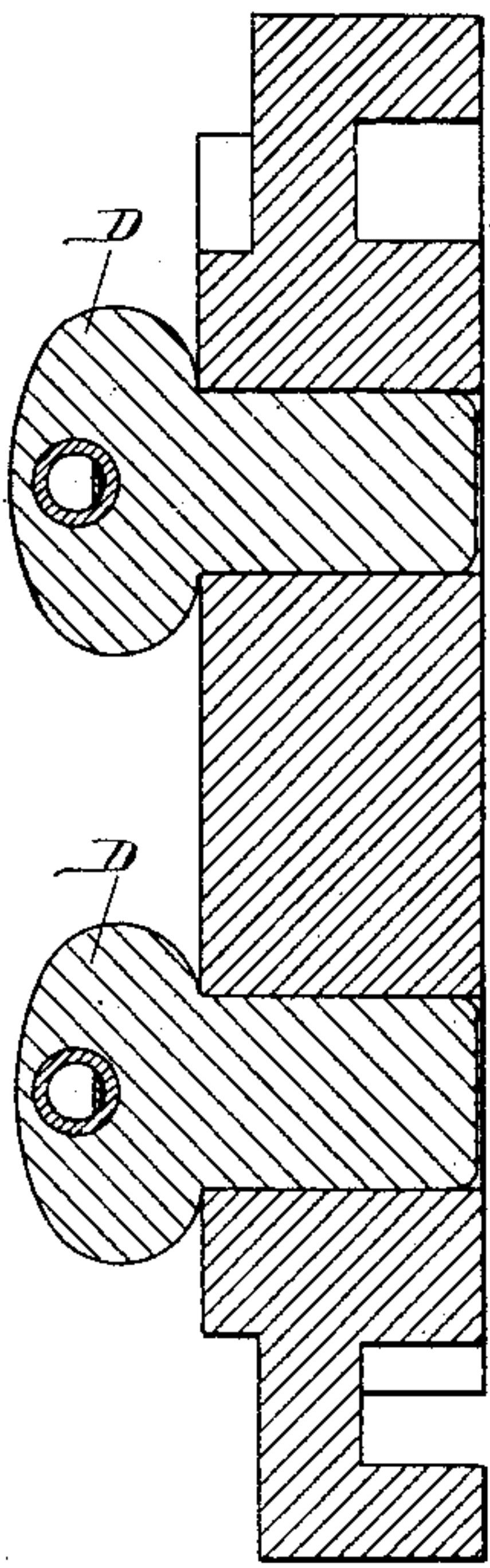


Fig. 4.

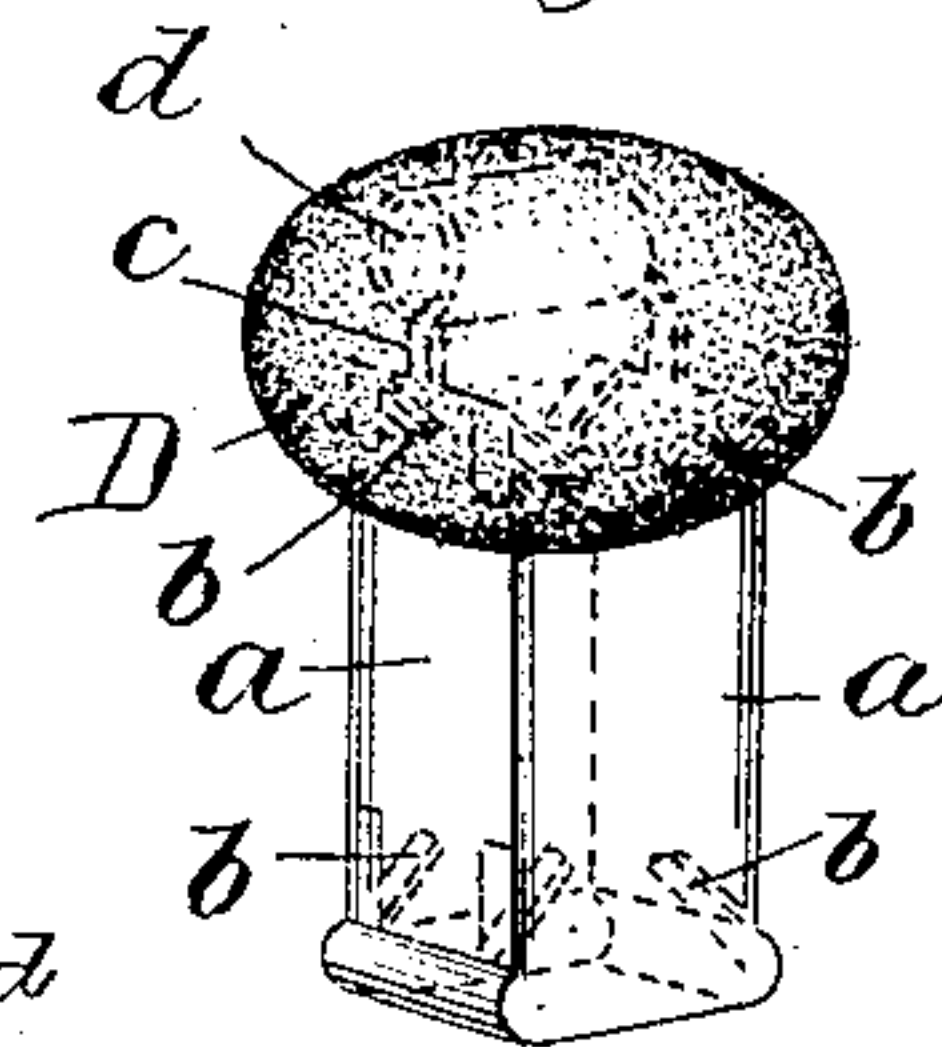
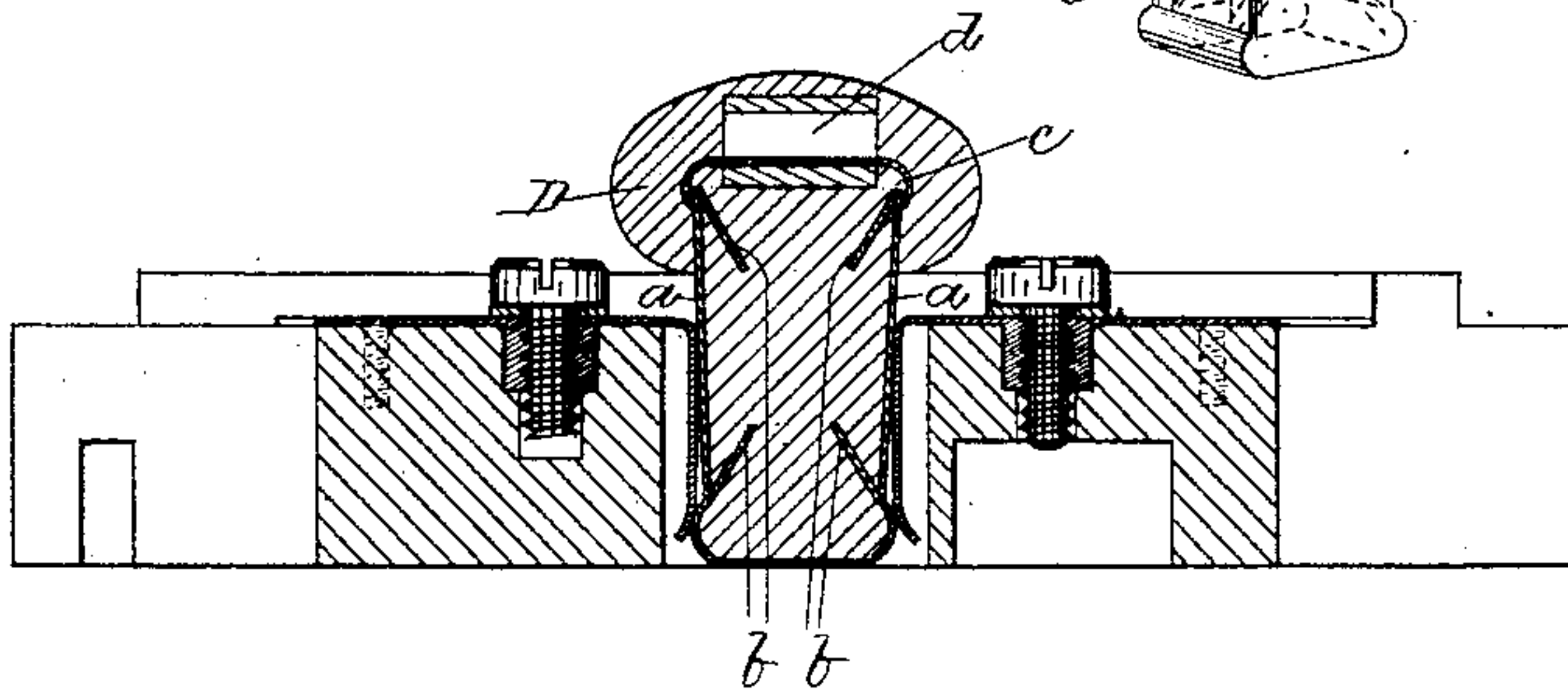


Fig. 3.



Witnesses.

L. W. Müller  
John Brown

Inventor.

William A. Anthony,  
by his attorney  
J. H. Maynard



# UNITED STATES PATENT OFFICE.

WILLIAM A. ANTHONY, OF HARTFORD, ASSIGNOR TO THE MATHER  
ELECTRIC COMPANY, OF MANCHESTER, CONNECTICUT.

## FUSE-PLUG.

SPECIFICATION forming part of Letters Patent No. 427,823, dated May 13, 1890.

Application filed February 23, 1889. Serial No. 300,817. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM A. ANTHONY, of Hartford, Hartford county, and State of Connecticut, have invented an Improved Cut-Out Plug, of which the following is a specification, reference being had to the accompanying drawings, forming a part hereof, in which—

Figure 1 is a plan of a cut-out block with two of my improved plugs. Fig. 2 is a section on line 2 2 of Fig. 1, and Fig. 3 a section on line 3 3 of Fig. 1. Fig. 4 is a perspective view of the cut-out plug.

Cut-out plugs consist, essentially, of a strip of fusible metal which, when the current exceeds the desired amount, is melted, thereby breaking the circuit, and my improved plug is like others in this respect. Heretofore, however, these plugs have been made of material which (when the strip of fusible metal is melted) is heated by the electric arc which is then established for a moment and gives out a gas which tends to maintain the arc, and thus continue the action of the current for a time often long enough to set fire to the material adjacent to the fused metal.

I have discovered that strips of fusible metal may be heated in the open air without danger, even when the current is very much more than they can carry without melting, for the arc which is established disappears at once without harmful results; but when some fusible metal is stretched over a wooden block or the like and covered or put through a hole bored in combustible material it will, when melted, generate gas which will maintain the arc and produce a large flame, issuing out of any little openings there may be and continuing long enough to set fire to the material.

My invention is a cut-out plug in which the fusible metal is entirely inclosed in plaster or equivalent non-combustible material, the fusible metal being surrounded by the plaster, and I have found that with such plugs the metal can be melted by a current heavier than the plug will carry and the circuit broken without producing any visible effect to the exterior to the plug, for, as there is no combustible material whatever which can be acted upon by the small arc produced, that arc at once disappears without breaking the plug or producing any effect outside of it.

In the drawings, *a a* are the usual copper terminals, with projections *b b*, which serve to anchor the terminals to the plaster-of-paris D. The projections *b* are conveniently formed by cutting the terminals, as shown in the perspective view, and bending inwardly the cut portions—that is, the projections *b*. These terminals *a a* are electrically connected in the usual way to the fusible strip *c*, which preferably is inclosed by the tube *d*. These parts are then secured in a suitable mold, which is filled with plaster, which, when dry, is properly varnished, completing the plug. The tube *d*, I prefer to make of glass, and, while I consider it desirable, I do not regard it as essential.

I do not claim, broadly, the combination of terminals and a fusible strip with a support, for such elements have before been combined in many ways; but, so far as I have any reason to believe, I am the first to combine the terminals and strip with a body D which is formed about the fusible strip and about projections from the terminals, these projections serving to anchor the terminals to the body; and my plug is in itself wholly new, in that the strip and terminals form a skeleton frame preferably with the tube *d*, about which the body D is formed in a plastic state, so that when the body D hardens the combination between it and the strips embedded in it is radically unlike that in any other cut-out plug known to me.

What I claim as my invention is—

1. The cut-out plug above described, composed of the body portion D, the terminals *a*, with anchoring-strips *b*, and the fusible strip *c*, the strips being embedded, substantially as shown, in the body portion D, all substantially as described.

2. The cut-out plug above described, composed of the body portion D, the terminals *a*, with auxiliary strips *b*, the fusible strip *c*, and tube *d*, the strips and tube being embedded, substantially as shown, in the body portion D, all substantially as described.

WILLIAM A. ANTHONY.

Witnesses:

ALFRED P. CLARK,  
E. E. SEGAR.