

(No Model.)

J. A. SEELY
FUSE PLUG.

No. 424,229.

Patented Mar. 25, 1890.

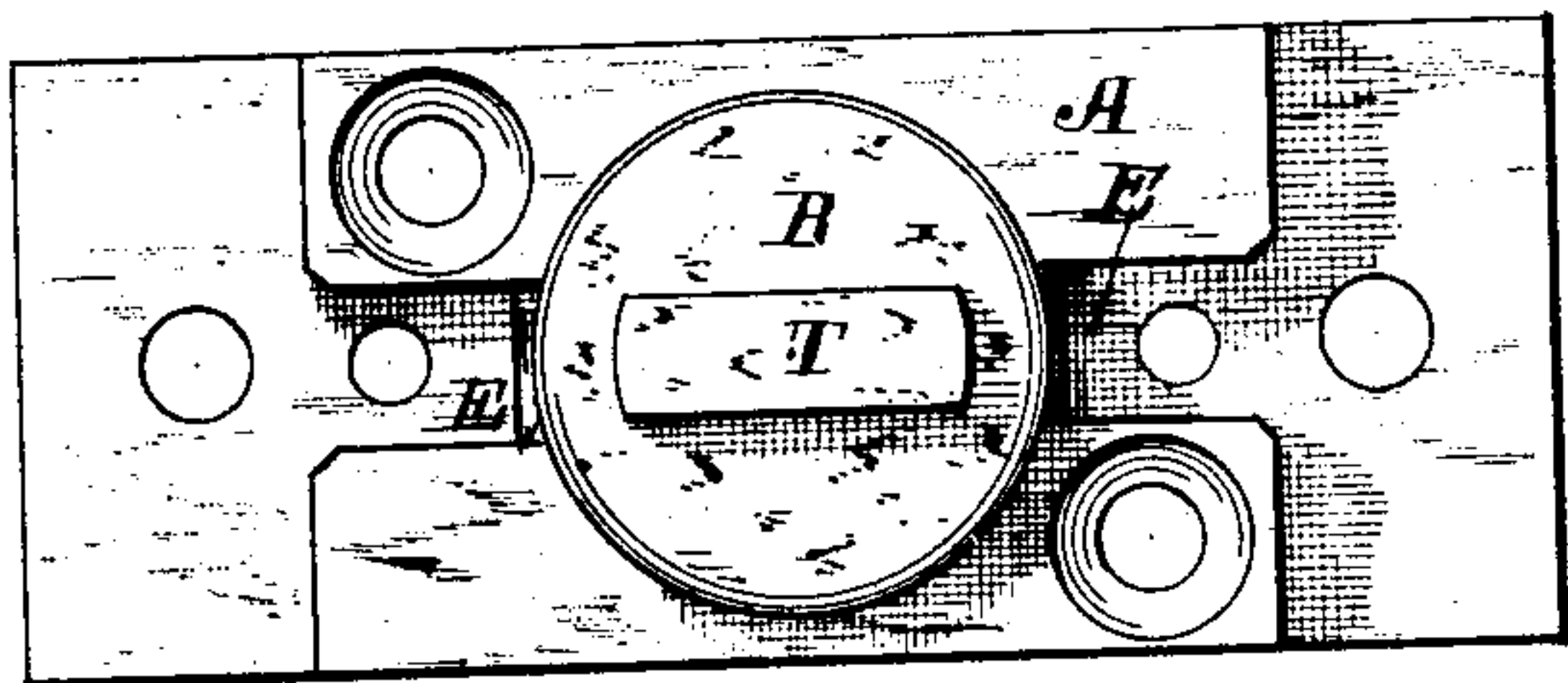


Fig. 1.

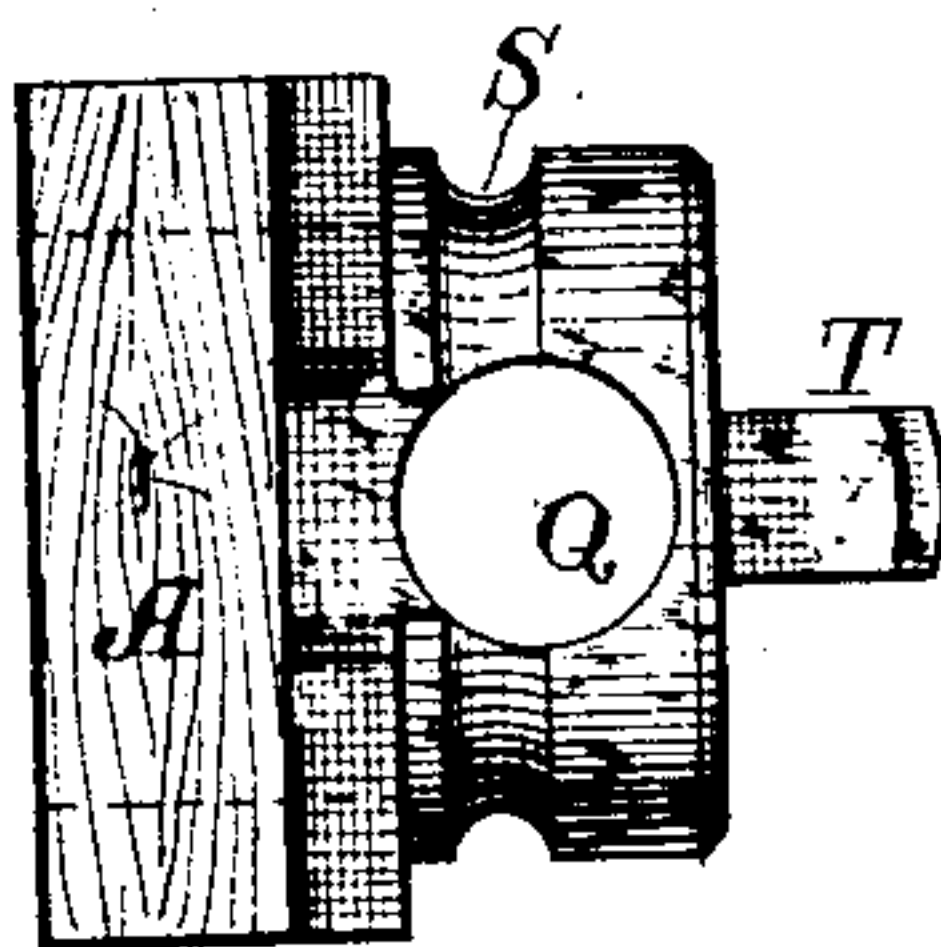


Fig. 2.

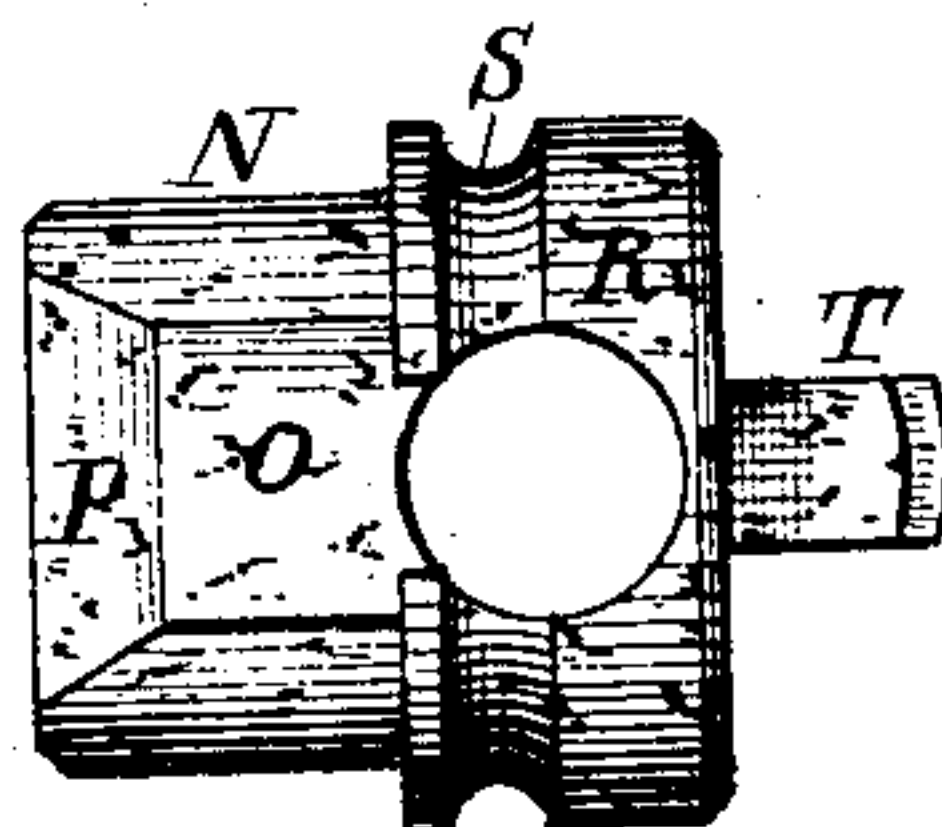


Fig. 3.

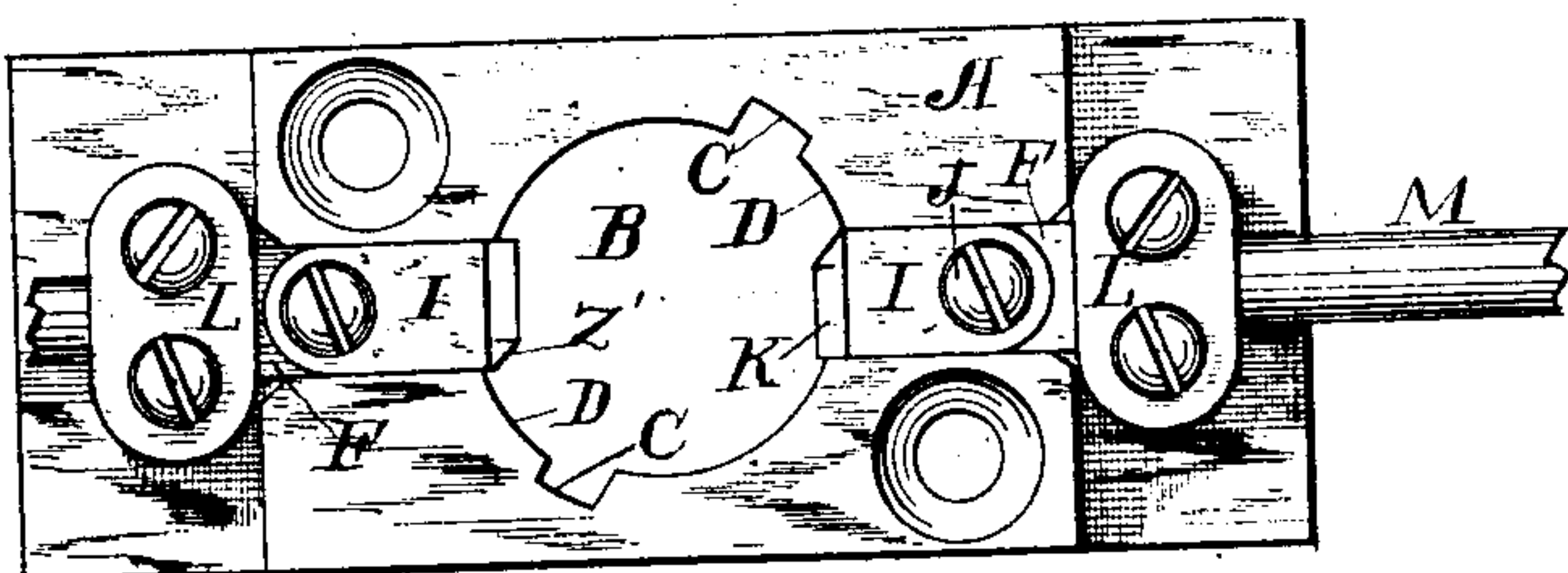


Fig. 4.

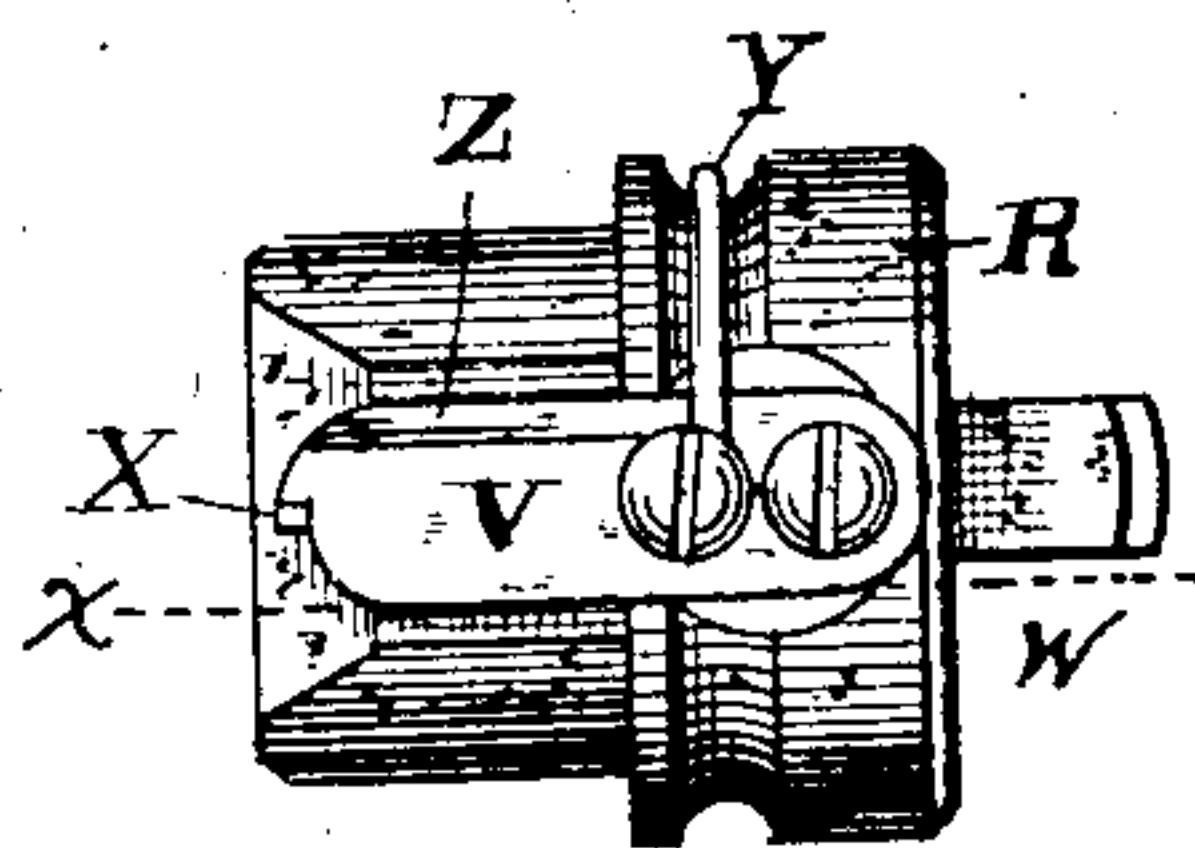


Fig. 5.

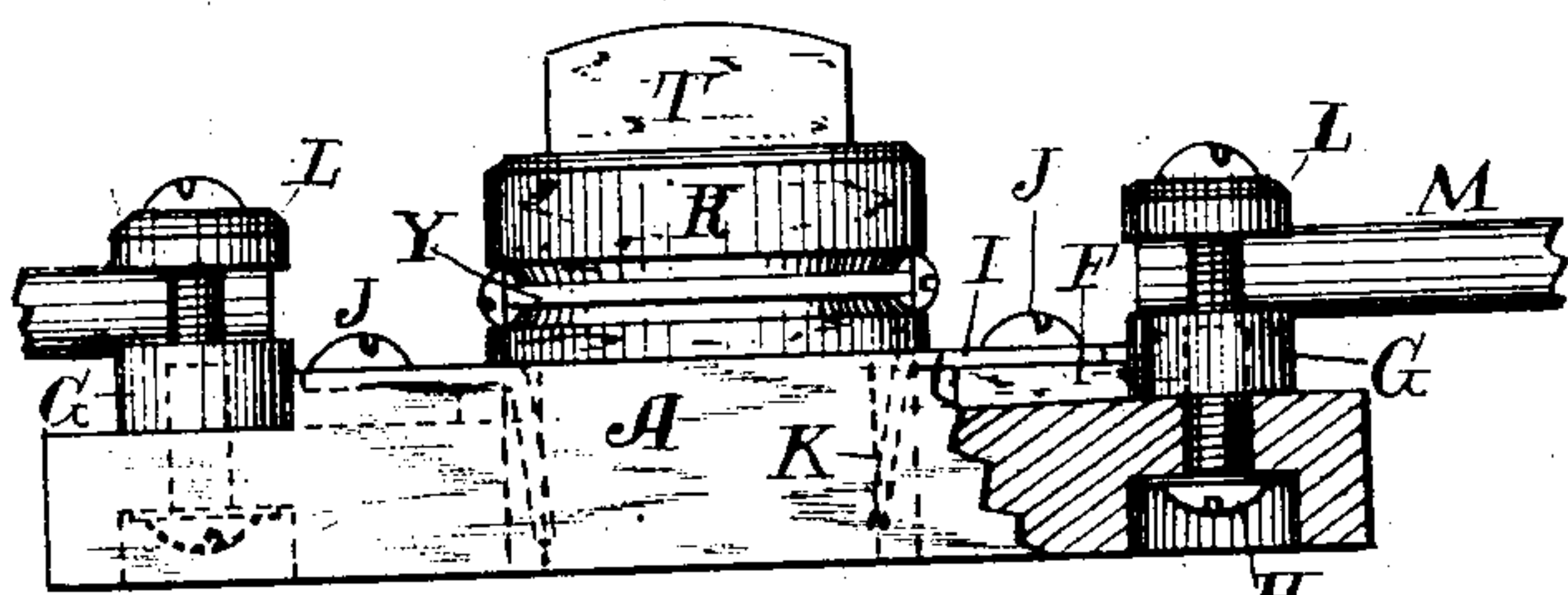


Fig. 6.

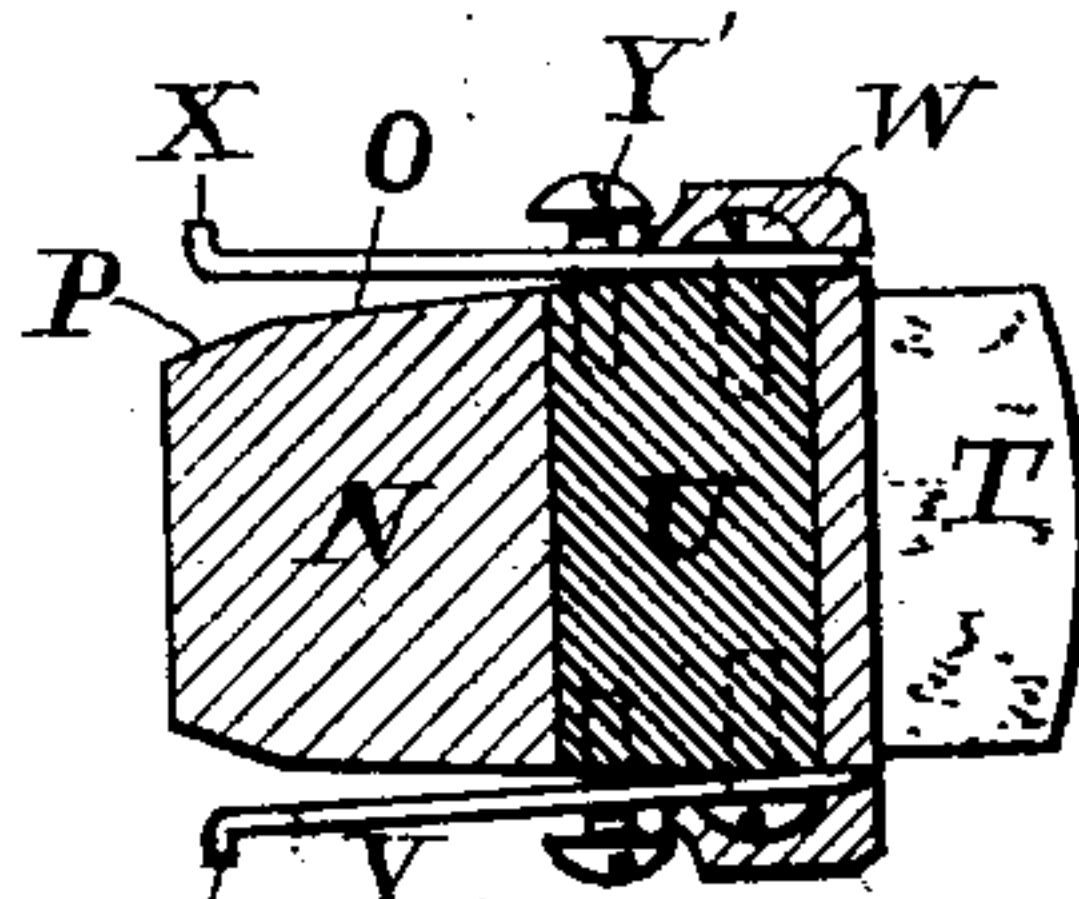


Fig. 7.

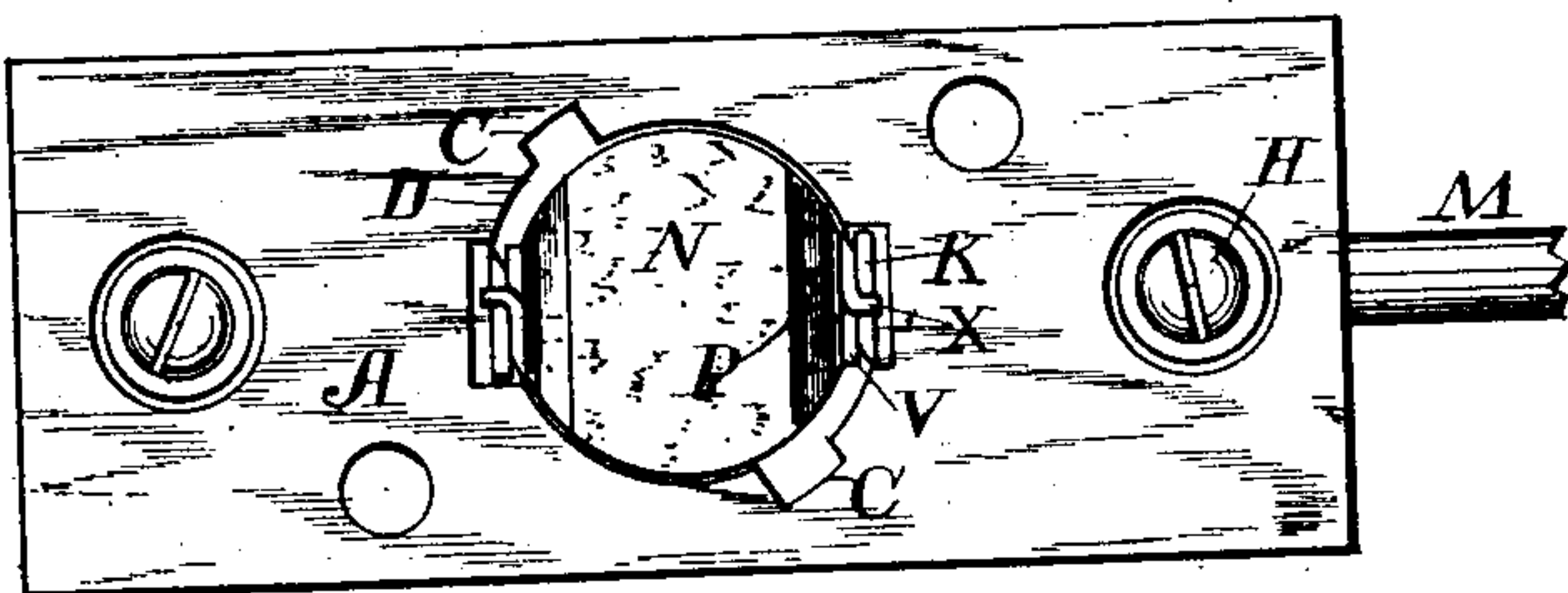


Fig. 8.

WITNESSES:

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UNITED STATES PATENT OFFICE.

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FUSE-PLUG.

SPECIFICATION forming part of Letters Patent No. 424,229, dated March 25, 1890.

Application filed November 26, 1889. Serial No. 331,676. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. SEELY, of New York, in the county of New York and State of New York, have invented a new and useful Improvement in Cut-Out Blocks and Plugs, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a top view of a cut-out block and plug without the metal furnishings; Fig. 2, an end view of the same; Fig. 3, a side view of the plug; Fig. 4, a top view of the block equipped with the metal portions; Fig. 5, a side view of the plug with the metal attachments belonging thereto; Fig. 6, a side view of the complete block and plug secured together; Fig. 7, a view of the under side of the block and plug, and Fig. 8 a longitudinal section of the plug through line *x* of Fig. 5.

The object of the present invention is to construct a cut-out block and plug for electric circuits. Heretofore cut-out plugs were constructed with metal faces or strips, which were connected by means of a fusible wire, which strips came in contact with coinciding strips secured to the block in such a manner that at the moment of inserting the plug in the block the circuit would be formed. In like manner in removing the plug the circuit would be broken by the withdrawal of the plug. In such cases there is great liability of making imperfect contacts between the strips, thus forming arcs and destroying the strips. Furthermore, the plug would invariably be destroyed whenever the current was of sufficient intensity to fuse the plug-wire, and it is sought to remedy these defects by making a cut-out block and plug so arranged that the plug cannot burn out, can be readily repaired by attaching a new wire thereto, and which, also, in its operation serves as a switch, all of which will now be set forth in detail.

In the accompanying drawings, A represents a rectangular block of any suitable thickness, both ends of which are thinner than the middle portion, having centrally a circular hole B. This hole has in its walls oppositely disposed two deep gains C and shallower gains or cut-away portions D, extending from these deep gains C to the channels E in the top face of the block A. The channels E are continuations of the cut-away por-

tions of the ends of the block and are longitudinally placed in the block, as shown. Within this channel, at each end, I place the foot F of the binding-post G, and a screw H, passing up through the block A, holds the same in position.

I is a metal strip having one of its ends secured to the top of the foot F by means of the screw J, while its inner end is bent down at right angles, as shown at K. These strips, having their downturned ends within the hole B, are adapted to receive the plug which completes the circuit. Each of the binding-posts has a cross-plate L, with a screw at each end, so as to receive the wire M between them. This arrangement of binding-posts permits me to use any gage of wire, and is therefore far preferable to the ordinary form of binding-post.

The plug N is composed, preferably, of porcelain or porcelain-lined material. It has on two opposite sides flattened faces O, terminating at the lower end in wedge-shaped faces P and at their upper ends at a hole Q, formed through the head R of the plug. The head of the plug has an annular groove S around it, and on its top is a projecting thumb-piece T, by means of which the plug may be turned or removed from its socket in the block.

In preparing this plug for the metal attachments I first fit a plug of hard rubber U or other insulating material in the hole Q. I then place metal strips V on the flat faces O and secure their upper ends to the plug U by means of screws W. The lower ends of these strips terminate near the lower end of the plug in outwardly-turned lugs or hooks X. The fusible wire Y is placed in the groove S and has its opposite ends secured to the oppositely-disposed plates V by means of screws Y', which screws also enter the insulating-plug U, as shown.

It will be observed that the metal strips V have one side ground off or inclined, as shown at Z, while the depending pieces K on the block have their corresponding sides Z' similarly cut away. The object of this is to prevent the strips from locking against each other when the plug is placed in its socket. It will be seen that the depending strips K have their lower ends slightly approaching each other when the plug is not in the socket,

and the strips on the plug are slightly spread apart at their lower ends. When, therefore, the plug is inserted in the socket B, the lugs X of the strips O enter the gains C, and when so placed therein the plug cannot be turned until the head of the plug comes in contact with the upper surface of the block. At the same time while the plug is in this position the plug-strips V are not in contact with the block-strips K, and in order to complete the circuit the plug must be turned, as shown in Fig. 7, so that the strips V K will rest against each other. In the process of turning the plug the inclined faces Z Z' on the strips V K, respectively, serve to force the spring-strips into place, so that positive contact will at all times be made. As shown in this latter figure, when the plug is turned to its proper position, the lugs X rest under the lower ends of the strips K, thereby preventing the plug N from being withdrawn until it is again turned so as to bring the lugs to the gains C, as before described.

As the plug is made of insulating material and not affected by the electrical current, no other damage can be done than to fuse the wire Y in the case of a surplus discharge of electricity. It is also frequently of great importance to be able to cut out the circuit at the plug, and this construction enables it to be done without removing the plug.

What I claim as new is—

1. A porcelain or porcelain-faced plug for cut-outs having therein a hard-rubber plug for holding the metal portions, substantially as herein set forth.
2. A cut-out plug composed of porcelain or

porcelain-faced material, in combination with a plug therein of hard rubber, and with spring-fingers secured to said plug and the fusible wire, substantially as herein set forth.

3. A cut-out plug having the fusible wire and spring-terminals provided with inclined faces on one side and lugs on their lower ends, in combination with the block having spring-terminals with their coinciding faces inclined for making contact with the plug-terminals when the plug is rotated and holding said plug in its socket, substantially as herein set forth.

4. A partially-rotatable cut-out plug having hooked spring-terminals provided with inclined faces on one side and the fusible wire with the block having spring-terminals in the socket, said terminals having coinciding inclined faces, the hooks or lugs of said plug-terminals resting beneath said block-terminals and locking the same when the plug is rotated in position to complete the circuit, substantially as herein set forth.

5. A cut-out block having centrally a socket and depending spring-terminals therein and suitable vertical gains in the walls of the socket, in combination with the plug having the spring-terminals provided with outwardly-projecting lugs and the fusible wire, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand, this 25th day of November, 1889, in the presence of witnesses.

JOHN A. SEELY.

Witnesses:

JAMES A. TAYLOR,
J. S. ZERBE.