

S. J. CONRAD.
INSULATOR FOR ELECTRICALLY CHARGED WIRES.
APPLICATION FILED JULY 17, 1908.

912,364.

Patented Feb. 16, 1909.

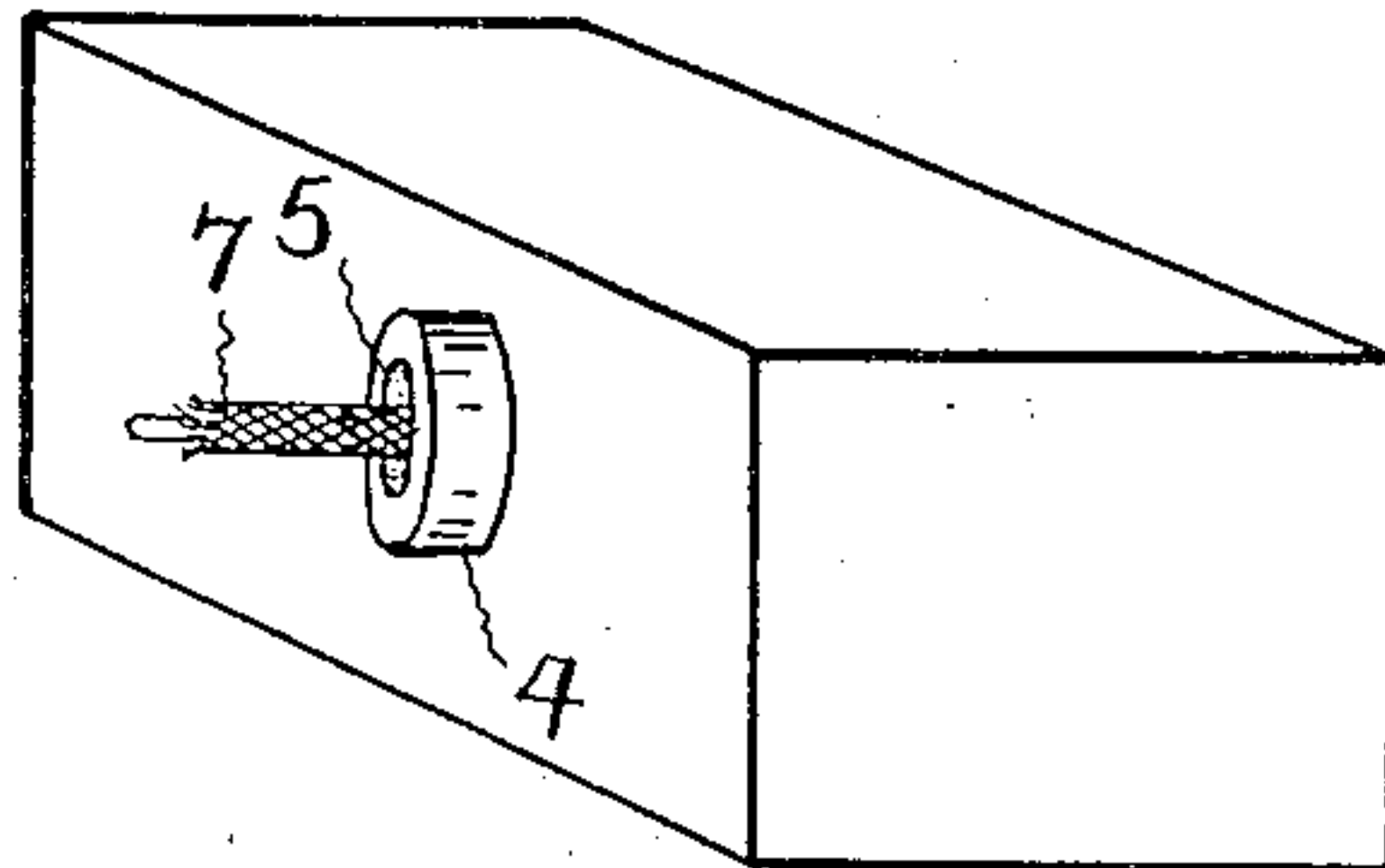


FIG. 1.

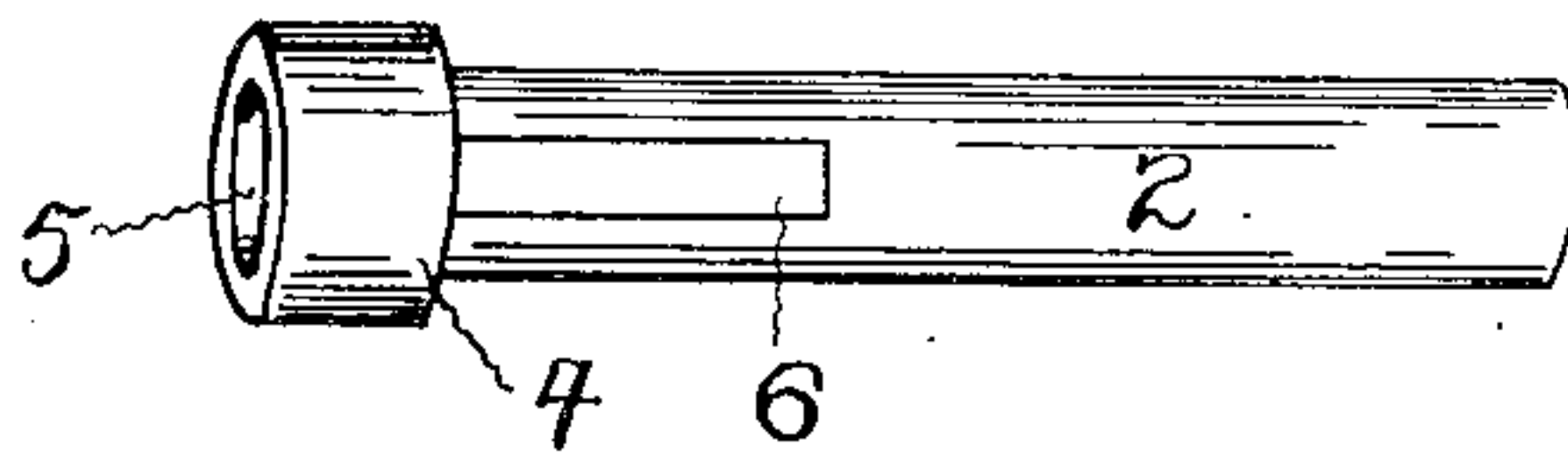


FIG. 2.

FIG. 3.

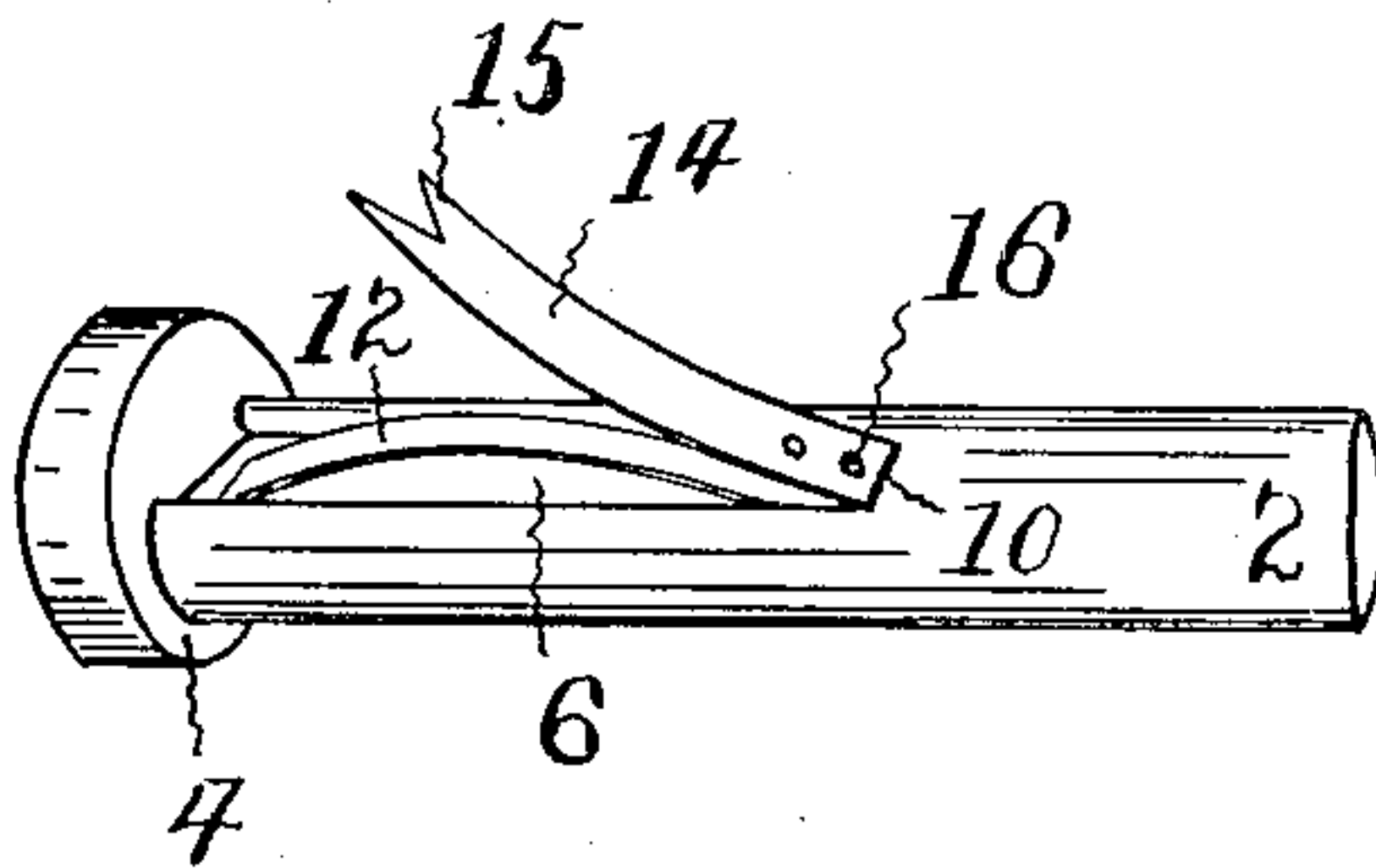
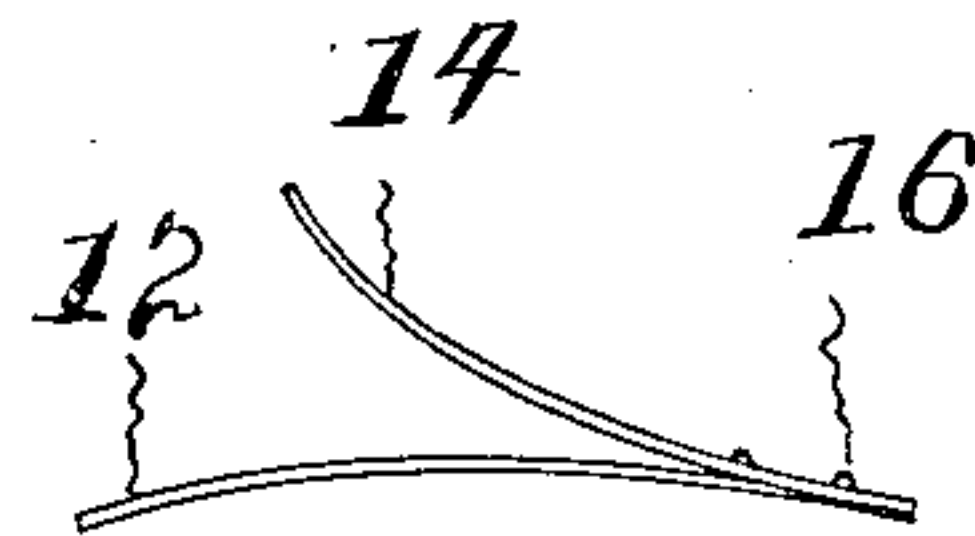


FIG. 4.



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INSULATOR FOR ELECTRICALLY-CHARGED WIRES.

No. 912,384.

Specification of Letters Patent.

Patented Feb. 16, 1909.

Application filed July 17, 1908. Serial No. 444,137.

To all whom it may concern:

Be it known that I, STONEWALL JACKSON CONRAD, a citizen of the United States, residing at Cedar Rapids, in the county of Linn and State of Iowa, have invented a new and useful Insulator for Electrically-Charged Wires, of which the following is a specification.

My invention relates to improvements in insulating devices for electrically charged wires, and the object is to provide an insulator that shall be especially adapted to be used in positions where they are surrounded by wood or other inflammable material; and the object is to form an insulator and install it in the inflammable surroundings in such a manner that there will be little or no danger from the insulator becoming loose or disengaged from the surrounding material and will keep the electric wire from coming in contact with anything except the insulator.

It consists in forming a recess or depression in the outside of an insulator preferably tubular and inserting in that recess a spring catch adapted to engage the insulator and the surrounding material and prevent the removal of the insulator.

The following specification, when taken in connection with the drawings accompanying the same and forming a part hereof, will point out in detail the manner of construction and mode of operation whereby the objects sought may be accomplished.

Figure 1 is a perspective view of an insulator in position in a block of wood. Fig. 2 is a perspective view of the insulator removed. Fig. 3 is a perspective view of the insulator removed and the spring catch placed in position. Fig. 4 is a side view of the spring catch shown in Fig. 3.

Referring to the drawings, 2 represents the body of the insulator, which is provided with a shoulder 4 and a hole 5 longitudinally therethrough, in which the electric wires 7 are located, and is preferably made of clay but may be of any electrical non-conducting material. In one side of the insulator is formed a recess 6 which for convenience extends from the inner side 8 of the shoulder 4 a short distance along the body varying according to the length of the insulator and according to the position the insulator occupies in the building. In this recess 6 is

placed a spring 10 shown in Figs. 3 and 4 which preferably consists of two members 12 and 14. The member 12 is preferably a flat-piece of spring steel of about the length, width and thickness of the recess 6 and curved slightly upward. The member 14 is also formed of spring steel and is somewhat shorter and terminates in points 15 or the points may be dispensed with and the outer end turned upward but I prefer the points. These two members 12 and 14 are united together by rivets 16.

These insulators are used in installing electric light wires in buildings for which purposes holes are bored through the joist and partitions of buildings and the insulators inserted therethrough.

The foregoing description shows my insulator as inserted through an opening in a block of wood but it is the same where used in connection with a building, joist or partition.

The mode of using this insulator is by making an opening through the joist or partition in which the electric wire is to be installed. Then the spring 10 is placed in the recess 6 with one of the ends of the member 12 nearly in contact with the shoulder 4 at 8 and the other one in engagement with the rear end of the recess. The insulator with the spring, is then inserted through the hole 20 in the joist or partition. As the hole is nearly of the same size as the diameter of the body of the insulator the member 14 of the spring will be compressed down nearly into the recess 6. The insulator is forced in until the shoulder comes against the face of the opening in the partition and the electric wire is inserted through the hole in the insulator. As soon as the insulator is inserted the member 14 will come into action and engage the inner surface of the opening in the partition and prevent any removal of the insulator. Then the electric wire may be readily inserted in the usual manner through the opening 5 in the insulator.

It will be observed that there will be no reasonable possibility of the insulator becoming loose or dislodged from the opening whereby fires are frequently caused as the engagement of the spring with the rear of the recess will keep the insulator in a given place with the shoulder in contact with the surroundings.

Having now described my invention what I claim is:—

1. In an insulator, a body formed of clay and provided with a recess in the body, and a spring in the recess, consisting of two members one member adapted to engage both ends of the recess and the other member adapted to engage the surroundings of the body of the insulator when the insulator is in position.

2. In an insulator a tubular body formed of clay, a shoulder on one end of the body, a rectangular recess extending longitudinally along in the outer surface of the body, and a flat leaf spring consisting of two members one member adapted to engage the inner ends of the recess and the other member adapted to engage the surroundings of the insulator and with the shoulder prevent the removal of the insulator in either direction.

3. In an insulator, a body formed of clay having an opening therethrough and provided with a rectangular recess extending along in the outer surface of the body, and a spring consisting of two members, one adapted to engage the ends of the recess in the body of the insulator and the other mem-

ber to engage the surroundings of the insulator and hold the same in a given position in its surroundings.

4. In an insulator, a body provided with a recess, and longitudinal opening there-through, in combination with a spring composed of two members united together, one member engaging the body of the insulator in the recess and the other member provided with a catch adapted to engage the surroundings in which the insulator is inserted and prevent the same from removal therefrom.

5. An insulator consisting of a circular body with an opening therethrough, a rectangular recess in said body, a shoulder thereon, a spring composed of two members united together, one member adapted to fit into said recess, the other member bent outwardly from the first member and having a catch thereon adapted to engage the inside of the surroundings of the insulator and prevent its removal.

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Witnesses:

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