C. O. BURTON.

JOINT INSULATOR.

APPLICATION FILED MAR. 5, 1915.

1,159,567.

Patented Nov. 9, 1915.

2 SHEETS—SHEET 1.

Fig. 1

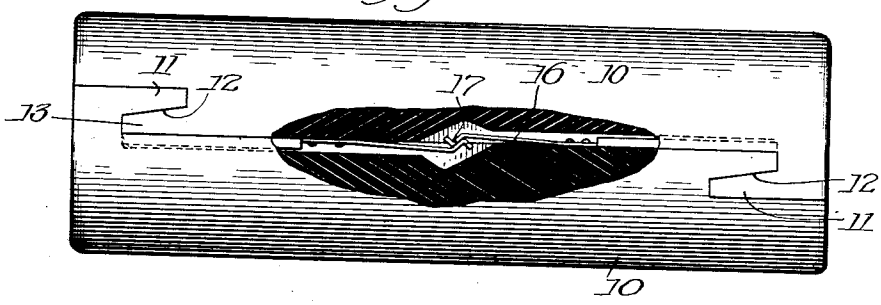


Fig. 2

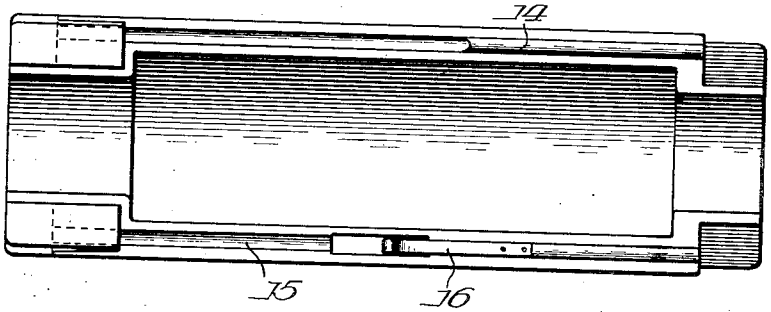


Fig. 3

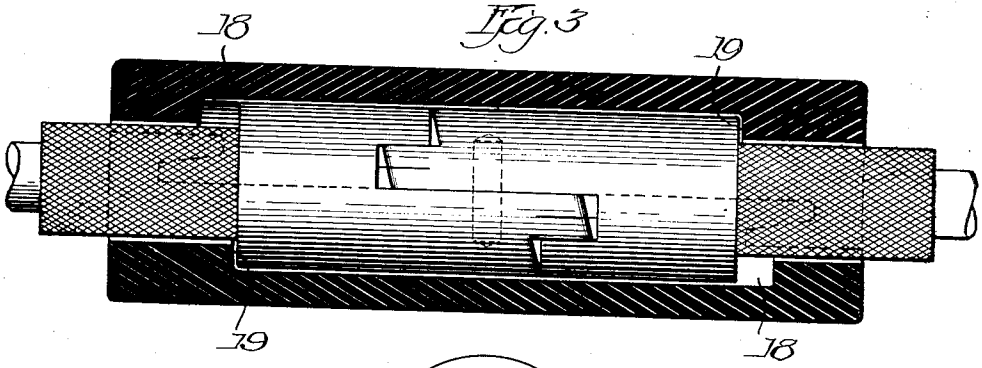
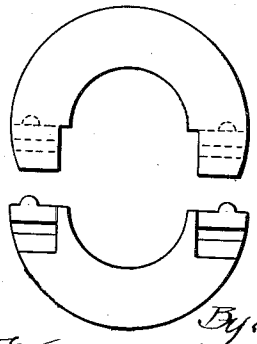


Fig. 4



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2 SHEETS—SHEET 2.

Fig. 5.

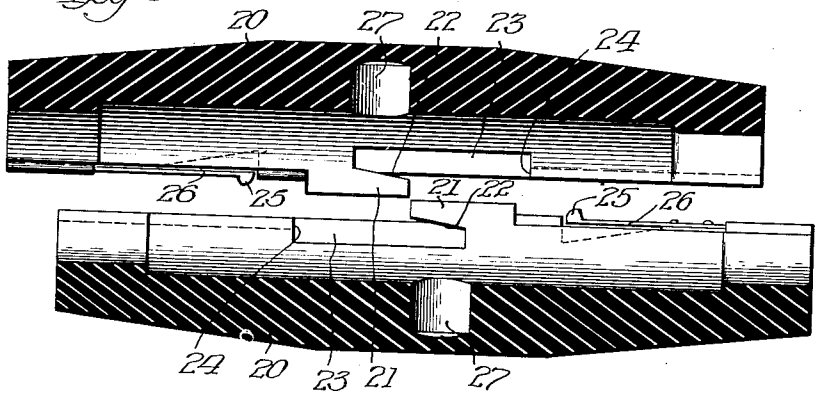


Fig. 6.

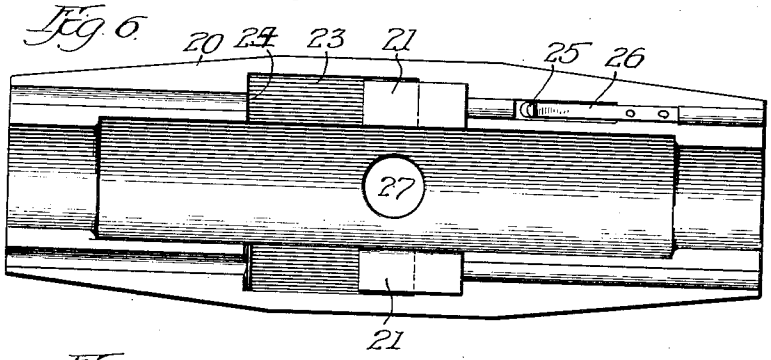


Fig. 7.

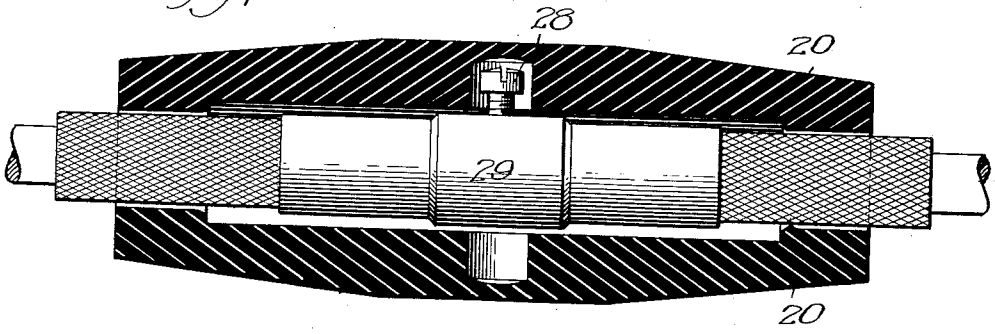
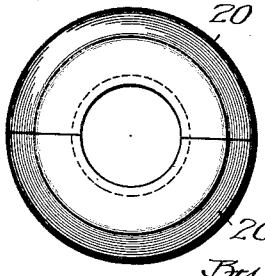


Fig. 8.



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UNITED STATES PATENT OFFICE.

CARL O. BURTON, OF DULUTH, MINNESOTA.

JOINT-INSULATOR.

1,159,567. Specification of Letters Patent. Patented Nov. 9, 1915.

Application filed March 5, 1915. Serial No. 12,292.

To all whom it may concern:

Be it known that I, CARL O. BURTON, a citizen of the United States, and resident of Duluth, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Joint-Insulators, of which the following is a specification.

My invention relates to an insulating covering, which consists of two identical halves of molded insulating material, the said identical halves separating along a surface parallel with the axis of the electrical conductor to be insulated; and the objects of my invention are: First, to provide an insulating covering which can be applied to, or removed from, a connector, terminal, or other joint in an electrical conductor without opening the joint; second, to provide an insulating covering that will furnish a cheaper, better and safer method of insulating joints than by taping; third, to provide an insulating covering consisting of two identical halves, which are interchangeable; fourth, to provide an insulating covering consisting of two identical halves, the said halves being held in position by lugs interlocking on surfaces slightly inclined to the axis of the insulator so as to give a wedging action in locking; and fifth, an insulating covering consisting of a plurality of identical parts held together by interlocking lugs and further locked in position by means of springs.

The invention will be more readily understood by reference to the accompanying drawings, wherein—

Figure 1 is an elevation of a joint insulator constructed in accordance with my invention, the side being partly broken away to show the spring locking means; Fig. 2 is a plan view of one of the duplicate halves; Fig. 3 is a vertical section through the insulator with a conductor and joint of a well known type in place; Fig. 4 is an end view of the two halves separated; Fig. 5 is a vertical section of two separated halves of a slightly modified form of the construction; Fig. 6 is a plan view of one of the halves illustrated in Fig. 5; Fig. 7 is a vertical section through the insulator with a joint of a well known type in place, and, Fig. 8 is an end view of the construction shown in Fig. 7.

Referring particularly to the construction shown in Figs. 1 to 4, it will be seen that I provide two duplicate halves 10. The advantage of providing halves which are duplicates of each other and therefore interchangeable is an important one. The cost of construction is much less, and no care need be taken in selecting the requisite number of right and left hand segments in order to make a specified number of complete connections. Each half is provided at one end with an inwardly projecting lug 11, having a wedge-shaped surface 12, and likewise each half is provided with an outwardly projecting lug 13, having a wedge-shaped surface corresponding to the surface 12, on the lug 11. Along the edges, as best shown in Fig. 2, the halves are provided with tongues and grooves 14, 15, oppositely disposed and arranged to seal the edges of the joint. On the side of each of the halves I provide a spring tongue 16, having a hump 17, near the end thereof, the humps on the tongues being so located as to require that they pass each other during the assembling movement of the two halves. Thus a considerable force is required to be exerted to separate the halves from each other. Internally of the joint insulator I provide an enlarged recess, the recess in each half, as indicated at 18, extending nearer the end in that half than the recess in the corresponding half when the parts are assembled. Such an arrangement accommodates a joint such as the well known Westinghouse segment pin type, the recess providing shoulders 19, against which the connector may abut but permitting the sliding of either half to disengage the same from the other.

The construction shown in Figs. 5 to 8 inclusive, is substantially the same as that heretofore described excepting that it is adapted for a connector of the Crocker-Wheeler type. In that construction the insulator consists of duplicate halves 20, each half being provided with a single lug 21, having a wedge-shaped surface 22. The recess 23, in each half, accommodates the lug 21, when the parts are in assembled relation and provides an abutment 24, with which a hook 25, coöperates, this hook being carried on a spring tongue 26. Each half is provided with a transverse recess 27, within which the screw 28, of the connector 29, may be accommodated. To assemble the insulator on the connection I locate the upper half of the insulator, as shown in Fig. 7, in place at the joint with the screw 28, in the recess, then slide the other half into

place the hooks 25, dropping behind the cooperating abutments and holding the parts in proper position against accidental removal.

The insulator may be readily adapted to other forms of connection, the two shown being typical of the well known forms of connections.

One of the important objects which I seek to attain is the production of an insulator consisting of duplicate halves and provided with a spring interlock. The halves may be made of molded rubber or porcelain as desired.

I claim:

1. A longitudinally split joint insulator consisting of duplicate halves, and means carried in the walls of each half for securing the interlocking engagement of the parts, substantially as described.

2. A joint insulator comprising in combination a plurality of duplicate parts of substantially semi-cylindrical form, the walls of said parts being provided with recesses within which a joint is accommodated, and interlocking means in said recesses, substantially as described.

3. A joint insulator comprising in combination, a plurality of duplicate portions each thereof carrying wedge-shaped interlocking devices, and provided with recesses within which a joint is accommodated, substantially as described.

4. A joint insulator comprising duplicate halves, each half provided with recesses in the walls thereof, spring catches in said recesses, said halves adapted to engage by longitudinal movement of one half on the other, and to be held in engagement by said springs, substantially as described.

5. In a joint insulator, the combination of a plurality of duplicate longitudinal segments adapted to form a cylindrical body, said segments provided with registering lugs and recesses, the walls of said segments provided with slots, and spring catches in said slots for removably holding the segments in engagement, substantially as described.

6. In a joint insulator, the combination of a plurality of duplicate segments, wedge-shaped lugs and recesses on each segment, and a spring tongue carried by each segment and adapted to hold the parts in removable engagement, substantially as described.

7. In a joint insulator, the combination of a plurality of duplicate longitudinal segments adapted to form a cylindrical body inclosing a cavity adapted to receive a joint, the segments having registering lugs and recesses, and adapted for engagement by longitudinal movement of the segments relatively to one another, substantially as described.

Signed at Duluth, Minnesota, this 2nd day of March, 1915.

CARL O. BURTON.

Witnesses:
ALEX M. GOW,
P. R. CANNEY.