

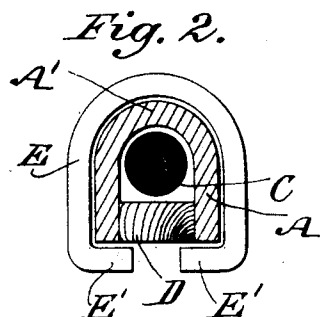
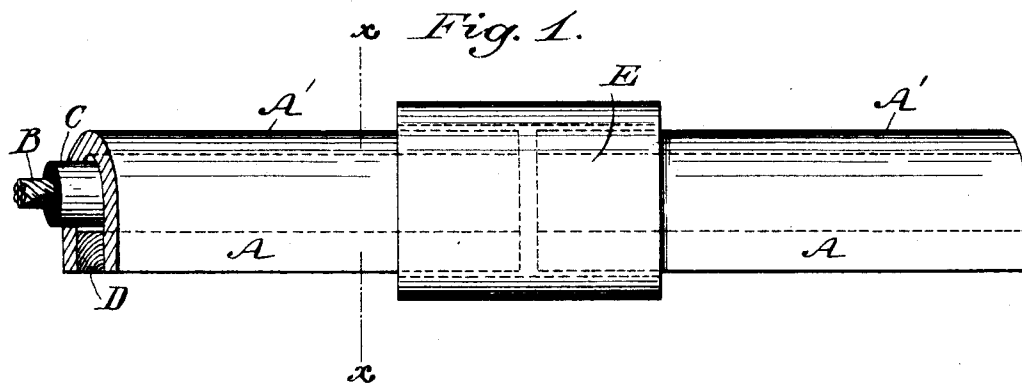
(No Model.)

J. A. KINGDON.

PROTECTOR CASING FOR UNDERGROUND ELECTRIC CONDUCTORS.

No. 541,552.

Patented June 25, 1895.



WITNESSES:
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UNITED STATES PATENT OFFICE.

JOHN A. KINGDON, OF LONDON, ENGLAND.

PROTECTOR-CASING FOR UNDERGROUND ELECTRIC CONDUCTORS.

SPECIFICATION forming part of Letters Patent No. 541,552, dated June 25, 1895.

Application filed August 9, 1894. Serial No. 519,812. (No model.)

To all whom it may concern:

Be it known that I, JOHN AUGUSTINE KINGDON, a subject of the Queen of Great Britain, and a resident of London, in the county of Middlesex, England, have invented certain new and useful Improvements in Protector-Casings for Underground Electric Conductors, of which the following is a specification.

This invention relates to protectors for underground electrical conductors, such as are employed for the distribution of electricity to be used for light and power, or for telegraphic and telephone systems. Such conductors are usually insulated with india rubber or similarly frail material, liable to damage not only from stones or workmen's tools while being laid, but also by rotting when buried under ground.

The object of my invention is to provide means for protecting such conductors from mechanical injury, and further to provide such a protector as may be rolled or otherwise cheaply manufactured as well as means for preventing access of moisture or the like into the body of the protector.

My invention consists in the novel inventive construction and arrangement of parts by which the above-mentioned and other desirable results are attained, and hereinafter fully described.

In the accompanying drawings, Figure 1 is a side elevation of a portion of a device embodying my invention and having an insulated electrical conductor therein. Fig. 2 is a transverse vertical section of the same, taken upon the line *xx*, Fig. 1.

In the practice of my invention I construct a plurality of longitudinal sections A, of channel iron, steel, or other metal, preferably by rolling, the same being exactly U-shaped in cross section. The conductors B are first arranged together and surrounded by a casing of rubber C or other material as ordinarily. The sections A are then placed upon the conductor in number according to the length thereof, and the roof A' of the said sections being circular, both externally and internally, the same will fit closely upon the upper casing C, in which the conductors are embedded.

At the bottom or mouth of the sections A, I secure a longitudinal strip D, preferably of wood, which is forced between the edges of

the channel and maintained therein frictionally, or the said strip may be further secured by suitable fastenings. The strip D may be of such depth as to extend from the bottom or mouth of the channel to the under surface of the casing C, but as the conductors and the casings thereon will vary considerably in diameter I prefer to construct the strip D of a uniform depth, and if it be desired to cause the conductor to fit tightly and immovably within the channel, the strip D may be forced upwardly against the casing C by driving the same farther therein. The strip is usually formed in sections, whose junctions are preferably intermediate of those of the channel sections A.

The sections A may be welded together at their junctions, but where such is impracticable or is not desired, I form a sleeve E, of such size and shape as to fit upon or outside of the sections A, the ends E' of the said sleeve also projecting below the level of the channel section, these ends being bent at right angles to bear upon the under surface of the channel, and the strip D, as best shown in Fig. 2.

I claim it as a prominent advantage of my invention that the protectors are constructed of sectionally U-shaped channel iron or similar metal, since the same will conform to the shape of the conductor casing, and further may be cast, or preferably rolled, as cheaply as any other known article of metallic construction.

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

1. The combination, with an insulated underground electrical conductor, of a longitudinal metallic protector casing comprising a plurality of metallic sectional U-shaped troughs or sections resting upon the top of said conductor and projecting downwardly beneath the same to incase said conductor and protect the same from mechanical injury, and a longitudinal continuous strip of wood inserted between the lower ends of the channel and forced upwardly into the same to bear against and support the conductor, the channel sections being secured together at their adjoining ends, substantially as shown and described.

2. The combination, with an insulated un-

derground electrical conductor, of a longitudinal metallic channel comprising a plurality of sectionally U-shaped troughs or sections resting upon the top of said conductor and
5 shaped interiorly to closely fit the same, and having its ends or side edges projecting downwardly beyond said conductor, whereby the same is protected from mechanical injury, a continuous longitudinal strip of wood inserted
10 between the said ends or edges of the channel at the bottom thereof beneath the conductor and forced upwardly against said conductor to support the same and to close the channel,

rigid metallic sleeves secured around the joints of the sections, and having projecting 15 ends extending beneath the same to secure said sections together, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 19th day of July, 1894. 20

J. A. KINGDON.

Witnesses:

R. F. FOULKES,
P. KINGDON.