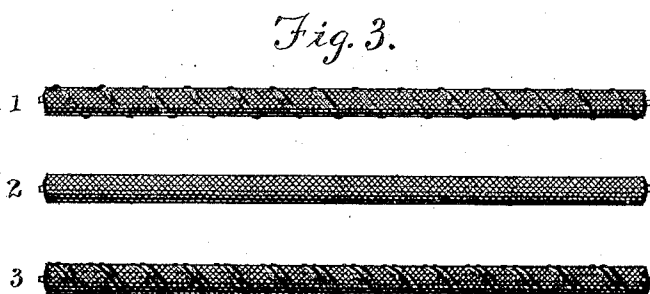
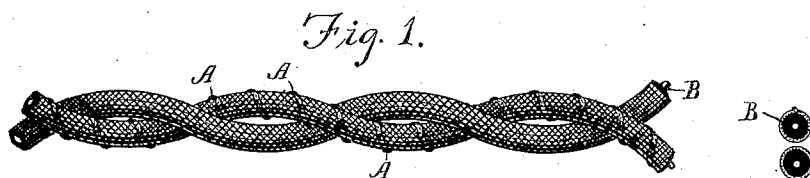


(No Model.)

H. T. RICHARDS.
ELECTRIC CONDUCTOR.

No. 575,170.

Patented Jan. 12, 1897.



WITNESSES:

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HERBERT T. RICHARDS, OF BROOKLYN, NEW YORK.

ELECTRIC CONDUCTOR.

SPECIFICATION forming part of Letters Patent No. 575,170, dated January 12, 1897.

Application filed November 20, 1896. Serial No. 612,808. (No model.)

To all whom it may concern:

Be it known that I, HERBERT T. RICHARDS, a citizen of the United States, residing in the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Electric Conductors, of which the following is a specification.

The object of my invention is to permit twin or multiple conductors leading to translating devices, such as electric lamps, electric motors, telephones, annunciators, gas-lighting apparatus, signal-transmitters, or other electrical devices to be distinguished from one another, so that their several identities may be readily determined when necessary.

A further object is to permit such conductors to be uniformly shaded to harmonize with the color of walls or woodwork over which they are trained and still have distinguishing characteristics which will serve to determine their individual identity.

In carrying out the invention I provide the insulating coating or covering of the conductor or conductors which are to be identified with a marker occurring periodically or continuously throughout its length, and I preferably render the marker distinguishable to the touch as well as to the eye by raising it above the level of the other parts of the insulating-covering. The marker may be formed in the insulating material itself when the wire is not surrounded by a braided covering, but when the latter is braided said marker is formed in and as a part of the braiding by using on one or more of the braiding-bobbins a heavier thread or cord than those used on the other bobbins of the braiding-machine, thus causing a ridge or other distinguishing characteristic, running spirally about the conductor, which is easily noticeable to the touch, even though the conductor be painted or otherwise coated.

In the accompanying drawings, illustrating my invention, Figure 1 is an enlarged side elevation of twin conductors, one of which is marked according to my invention, the detached view showing the conductors in end elevation. Fig. 2 is an end view of a pair of

unbraided conductors provided with a marker in accordance with my invention. Fig. 3 represents a group of three conductors, each of which is capable of identification.

Referring first to Fig. 1, one thread A of the braiding is heavier than the others and is interwoven by the action of the braiding mechanism with the texture of the conductor-covering, thus becoming a permanent part of the same. By reason of its greater thickness it forms ridges A A A, periodically cropping out of the texture and following a spiral direction about the insulating-coating B of the conductor. Such a pair of conductors may be painted, waterproofed, or otherwise coated without interfering with the ability to distinguish them, so that an operator or workman may instantly determine to which side of a circuit they respectively belong, which is often necessary for purposes of testing or when new instruments are interposed in a circuit.

In some cases the diameter of the thread A may be of the same size as the others used on the braiding-machine. In such a case the other threads may be of uniform tint or coloring and the single thread of a different tint. Thus a distinguishing characteristic is provided which is not noticeable except on close inspection, and the color harmony of the conductors with the walls or woodwork is not interfered with.

In the case of wires not braided one of the conductors may be provided with a ridge, formed thereon in course of manufacture, the companion conductor being without such ridge, as seen in Fig. 2 at C. Such a ridge may be formed, for example, by means of a nick or groove in the die through which the insulating material is forced to surround the conductor. When more than two conductors are employed, as, for example, in three-wire systems or in polyphase alternating-current systems, the markers themselves may be distinguished from one another by being made single, double, triple, &c. For example, as shown in Fig. 3, the heavy thread may be single in conductor 1 and double in conductor 3, the two parallel heavy threads of the latter lying side by side.

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

1. An insulated conductor provided with
5 a marker occurring at periodic intervals throughout its length and projecting from the surface by which its identity may be recognized.

2. A conductor provided with a braided covering, one of the threads of the braiding being
10 thicker than the others to serve as a distinguishing marker when used with other conductors.

3. Twin or multiple insulated conductors
15 having one wire provided with a marker or

markers occurring at periodic intervals in the length of the conductors to distinguish them from one another.

4. Twin or multiple insulated conductors having distinguishable mechanical projections forming part of the covering to serve for
20 identification of the several conductors.

In testimony whereof I have hereunto subscribed my name this 19th day of November, A. D. 1896.

HERBERT T. RICHARDS.

Witnesses:

ROBT. H. READ,

ALICK G. MACANDREW.