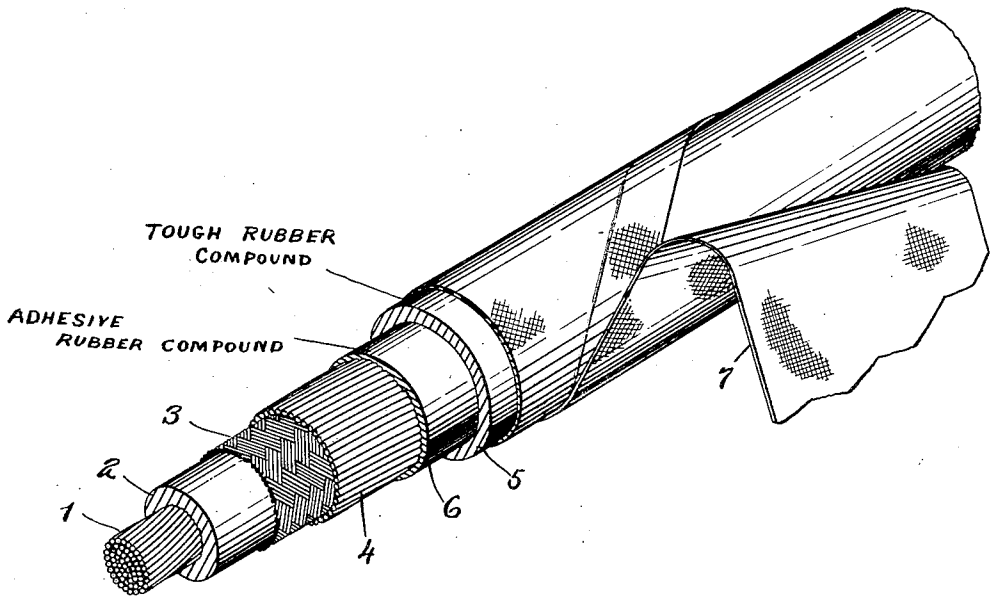
C. R. EVANS.

ELECTRICAL CONDUCTOR.

APPLICATION FILED MAR. 12, 1917.

1,287,658. Patented Dec. 17, 1918.



INVENTOR.
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ELECTRICAL CONDUCTOR.

1,287,658. Specification of Letters Patent. Patented Dec. 17, 1918.

Application filed March 12, 1917. Serial No. 154,118.

To all whom it may concern:

Be it known that I, CHARLES R. EVANS, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Electrical Conductors, of which the following is a specification.

This invention relates to double-conductor electric cables of the type used in mines for conducting current through a considerable distance to and from an electric motor operating a mining machine. Prior to my invention, such cables have been provided with a covering of rubber compound surrounded by several concentric layers or sheaths composed of braided fabric threads, and owing to the great amount of abrasion to which the covering is subjected in dragging the heavy cable from place to place through the mine, this covering wears out very rapidly and exposes the wires composing the tubular outer conductor. The object of my invention is to provide a more durable and satisfactory wearing layer or covering for cables of this type.

The accompanying drawing represents a perspective view of an electric cable embodying my invention, with successive layers broken away to show the interior construction.

1 is the inner metallic conductor composed of a large number of wire strands twisted or cabled together. 2 is a tubular layer surrounding the same and composed of the ordinary rubber insulating compound, and 3 is a braided textile sheath surrounding this insulation. 4 is the outer metallic conductor composed of wires forming a twisted tubular sheath or layer surrounding the braided covering of the inner insulated conductor. Up to this point the structure is of the usual type.

5 is a tubular wearing layer of high-grade, tough, rubber compound substantially on the exterior of the cable, and 6 is a tubular layer of lower-grade rubber compound, having greater adhesiveness than the wearing layer, interposed between the latter and the wires composing the outer conductor 6, for uniting the two and preventing the tendency of the wearing layer to peel off in long strips when it has received a cut or similar injury. The outer wrapping 7 of bias-cut rubber-frictioned, helically-wound tape 7, in which it is preferred to vulcanize the cable, may be left in place to save the trouble and expense of removing it, and then affords a slight added amount of protection, but of course it soon wears away when the cable is subjected to the abrasion of normal use, and is not relied upon as a primary wear-resisting cover.

I claim:

A double-conductor, flexible, electric mining cable comprising an inner metallic conductor, a tubular layer of insulating material surrounding the same, a tubular layer of conducting wires surrounding said layer of insulating material, a tubular wearing layer of tough rubber compound substantially on the exterior of said cable, and a tubular layer of rubber compound of greater adhesiveness than said wearing layer, interposed between the latter and said layer of conducting wires, for uniting the two.

In testimony whereof I have hereunto set my hand this 10th day of March, 1917.

CHARLES R. EVANS.