

(No Model.)

D. B. HAYWARD.
ELECTRICAL CONDUCTOR.

No. 514,460.

Patented Feb. 13, 1894.

Fig. 1.



Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

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ELECTRICAL CONDUCTOR.

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To all whom it may concern:

Be it known that I, DALLAS B. HAYWARD, of Easton, in the county of Talbot and State of Maryland, have invented certain new and useful Improvements in Electrical Conductors; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification.

This invention has for its object to provide an improved conductor for electrical purposes which will be cheap and capable of withstanding great heat without deterioration, further objects being to provide a conductor of this character which will have an exceedingly large radiating surface thus adapting it for resistance conductors, especially when the resistance is introduced for the purpose of generating heat which is utilized, but I do not wish to be confined to such use, as it may be used for many purposes where an ordinary conductor is now used.

It is a well known fact that asbestos fiber which is practically indestructible by heat, may be coated with a conducting substance, such as plumbago for instance, and thus rendered conductive, and this substance has heretofore been employed in masses, confined in suitable receptacles as a resistance medium, the fact that the conductivity may be varied within very wide limits by simply compressing or relieving the pressure in the mass, making it especially desirable for rheostats. This principle of the coated asbestos fiber I utilize in carrying out my present invention enabling me to produce a conductor of any desired conductivity, within certain limits. Now, I have discovered that coated asbestos fiber may be converted into self sustaining conductors having many of the most valuable qualifications, by twisting or weaving the long coated fibers into ropes, cords or fabric.

In forming a conductor in accordance with my invention, I take asbestos or equivalent fiber capable of withstanding great heat without deterioration, coat the same with a conductor (as graphite) and after thoroughly coated, form the fibers into a cord, rope, tape or fabric by twisting, weaving, plaiting or

other well known process, it only being necessary to bear in mind that the fibers should be condensed into compact cords in order to give the best results.

In the accompanying drawings, I have shown in Figure 1, a conductor formed like an ordinary cord or rope and in Fig. 2, a woven conductor.

The conductor shown in Fig. 1, is a simple cord or rope formed of coated asbestos fiber twisted tightly so as to increase the conductivity of the cord to the desired point, it being possible by varying the compactness of the cord, to vary its conductivity within very wide limits.

The woven conductor shown in Fig. 2 is formed by the process of weaving and hence needs no description herein. This conductor being flat in cross section gives a somewhat more extended radiating surface, thereby adapting it more especially for use in many situations where the heat due to the resistance of the conductor is to be utilized.

It will be understood that while this conductor is more especially designed for resistance conductors its use is not to be so restricted inasmuch as by forming tightly woven cords or webs the conductivity is greatly increased and the conductor may then be used in lieu of the ordinary conductors in many situations, armatures of dynamos, for instance, which are liable to heat, and be destroyed, but which with my improved conductor would not be damaged at all by heating.

Having thus described my invention, what I claim as new is—

1. An electrical conductor formed of asbestos or equivalent fiber coated with a conductor and united into a compact cord or web relatively small in cross sectional area; substantially as described.

2. An electrical conductor formed of twisted or woven graphite coated asbestos fiber; substantially as described.

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Witnesses:

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