(Model.)

T. MIDGLEY.

WIRE CABLE.

No. 432,804. Patented July 22, 1890.

Fig. 1.



A

Fig. 2.



B

Fig. 3.

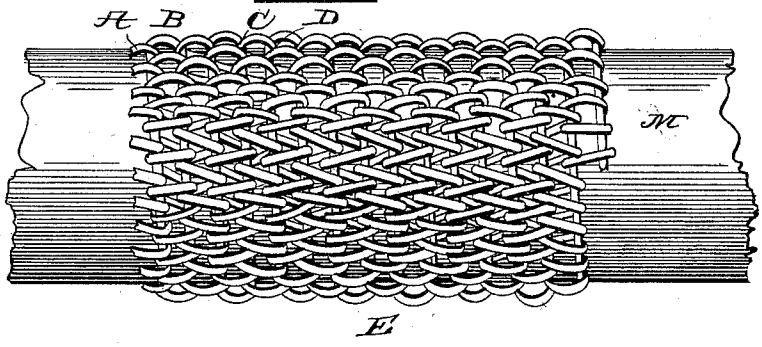
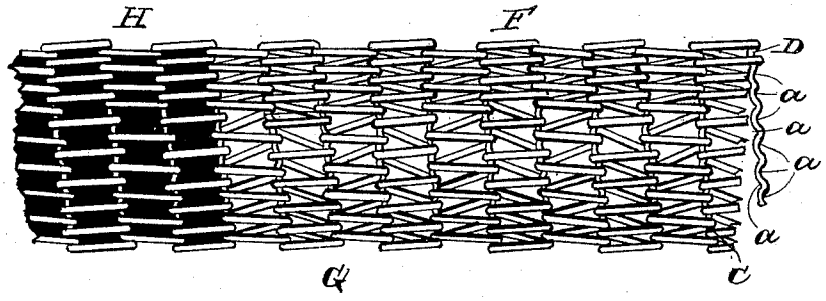


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS MIDGLEY, OF BEAVER FALLS, PENNSYLVANIA.

WIRE CABLE.

SPECIFICATION forming part of Letters Patent No. 432,804, dated July 22, 1890.

Application filed May 15, 1890. Serial No. 351 974. (Model.)

To all whom it may concern:

Be it known that I, THOMAS MIDGLEY, a citizen of the United States, residing at Beaver Falls, in the county of Beaver and State of Pennsylvania, have inverted certain new and useful Improvements in Wire Cables; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to wire cables, and has for its object certain improvements in the manufacture and construction thereof, which will be hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, which form part of this specification, Figure 1 represents a side view of a section of coiled wire having right-hand helices; Fig. 2, a similar view of left-hand helices; Fig. 3, a side view of a cable formed of coiled-wire helices, and Fig. 4 a similar view of a cable in which the helices have been elongated.

Reference being had to the drawings and the letters thereon, A indicates a section of coiled wire in which the helices are coiled right hand, and B a section of coiled wire in which the helices are coiled left hand. The sections A B of right and left hand coiled helices are wound around a mandrel M of a diameter to suit the size of cables desired, with the helices of one section projecting into the spaces between the helices of the other section, as shown, and are secured together by coils of wire C D passing through the loops formed by the intermeshing of the helices, and which extend throughout the length of the cable E. The coils C D are coiled to form a continuous spiral, and are secured into the loops of the intermeshing helices of the sections A B. The coils C D thus unite the helices of the sections A B, and the strain brought to bear upon the cable is distributed equally upon the coils and the sections. The cable thus formed is ready for use; but for some purposes it is desirable to have the stretch taken out of the cable before it is put to use, and for such purposes the cable E is passed through a suitable furnace and heated to about a "cherry-red" heat, and the helices stretched or elongated into links F, and both ends of the links seated in bends or seats *a*, formed in the coils C D, as shown in the cable G in Fig. 4.

The cable E, as it is made, is wound upon a suitable reel, and is stretched by drawing the cable through a furnace and winding the stretched cable upon another reel after it has passed through the furnace. The stretching of the helices is effected by applying power to the latter reel, and a resistance to the unwinding of the former reel—such as a friction-brake or a pair of tension-rolls—may be applied to the cable between the first reel and the furnace.

The cable G, for other purposes, is subjected to further treatment by having the interstices between the links F filled with rubber, gutta-percha, or other suitable plastic material, as shown at H in Fig. 4, the rubber being applied while soft. The cable is then heated to vulcanize the rubber. By this latter construction of the cable the wearing-surface is composed of metal and rubber, and presents a very neat and pleasing appearance.

The cable constructed as hereinbefore described may be used for any of the purposes to which cables are applied, such as inclined planes, elevators, or for transmitting power through the medium of grooved pulleys.

The method involved in my invention will form subject-matter of another application for Letters Patent.

Having thus fully described my invention, what I claim is—

1. A wire cable composed of spirally-wound and intermeshed helices secured together by continuous supplemental spiral coils in the intermeshed portions of the adjacent helices, substantially as described.

2. A wire cable composed of spirally-wound, elongated, and intermeshed helices secured together by continuous supplemental spiral coils in the intermeshed portions of the helices, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS MIDGLEY.

Witnesses:
H. W. REEVES,
J. F. MERRIMAN.