

(No Model.)

S. R. MATHEWSON.

LINK CABLE FOR STREET RAILWAYS.

No. 342,803.

Patented June 1, 1886.

Fig. 1.

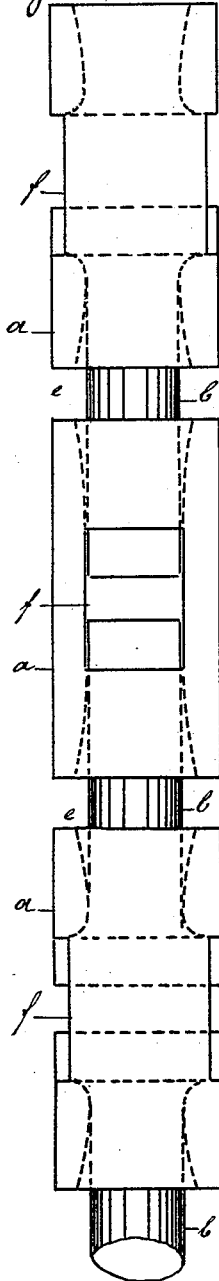


Fig. 2.

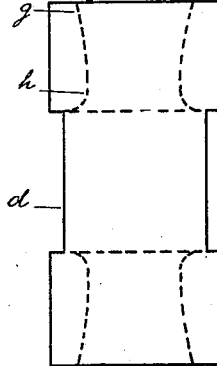


Fig. 3.

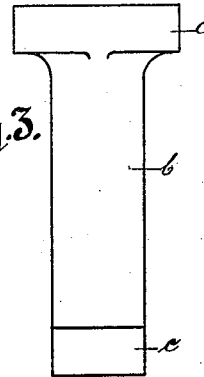


Fig. 4.

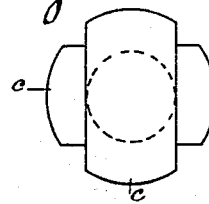


Fig. 5.

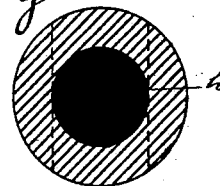
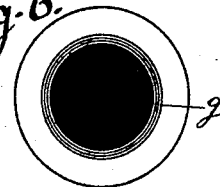


Fig. 6.



Witnesses:

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UNITED STATES PATENT OFFICE.

SEBRA R. MATHEWSON, OF PORTERSVILLE, CALIFORNIA, ASSIGNOR OF
ONE-HALF TO JAMES E. KINKADE, OF SAME PLACE.

LINK CABLE FOR STREET-RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 342,803, dated June 1, 1886.

Application filed July 31, 1885. Serial No. 173,176. (No model.)

To all whom it may concern:

Be it known that I, SEBRA R. MATHEWSON, a resident of Portersville, county of Tulare, State of California, have invented a new and useful Link Cable for Street-Railways; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings.

My invention relates to the construction of a steel cable composed of links, which will pass freely over pulleys adapted for use on street-railways.

The following description fully explains the nature of my said invention, and the manner in which I proceed to construct, apply, and operate the same, the accompanying drawings being referred to by figures and letters.

Figure 1 represents an elevation of the cable, showing three links with connections. Fig. 2 represents an elevation of three bushes, showing by dotted lines the cavity for reception of the steel rods. Fig. 3 represents an elevation of one of the steel rods. Fig. 4 is an end view of the same. Fig. 5 represents a section of one of the bushes, showing the least diameter of the cavity. Fig. 6 is an end view of the same, showing the greatest diameter of the cavity.

Referring to Fig. 1, links *a* of the cable are shown connected. Each link consists of a central round steel rod, *b*, and a bush or shell, *d*. The rod is annealed, steel swaged, with a head, *c*, on each end, each head being formed at a right angle to the other, Figs. 3, 4. The bush or shell is also of steel, and is cast over the rod, a false core being used to produce a difference in the diameter of the cavity. The links are connected by the heads of the steel rod, which are caught and held by the surrounding bush. A space, *f*, is left in the cavity in the bush between the heads of the steel rod, and a space, *e*, between the bushes, disclosing the steel rod, the space *f* showing the point between the links. Having formed the link in this manner, I proceed to construct my cable, link by link, of any desired length.

The cavity in the bush in which the steel rod is held has an increasing diameter at a point, *h*, tending from the center of the bush, where the head of the rod is caught, to the end of the bush *g*, where the diameter is greatest. (See Figs. 1, 2, 5, 6.)

The links are made of a suitable length, and the spaces *ef* of a suitable width to correspond with the diameter of the pulleys over which the cable passes.

In the operation of my link-cable the difference in the diameter of the cavity in the bush, of the space *e* between the bushes, and the space *f* between the links in the bush, imparts the required flexibility to the cable to permit it to pass over the pulleys. The cable will be so constructed as regards the length of link, the differential diameter of the cavity in the bush, and the width of the spaces between the bushes and between the links in each bush, as to permit it to pass freely over a pulley of suitable diameter.

From the manner in which I construct my link cable with links formed of a central steel rod of great ductility, the heads of which are caught and held in a surrounding steel bush or shell, it will enable my chain to resist a greater strain than the wire cables employed in street-railways; and, further, the cost of construction per mile will be less, repairs easier and less expensive, and the chain will last much longer.

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

A link cable for street-railways, formed of links *a*, consisting of a round swaged steel rod, *b*, having heads *c c*, and a bush or shell, *d*, cast around the steel rod and attached to it, in the manner substantially as described and set forth.

In testimony whereof I have hereunto set my hand and seal.

SEBRA R. MATHEWSON. [L. S.]

Witnesses:

A. B. SMITH,
FERDINAND IMHORST.