(No Model.)

P. J. FRANSZE.

RAILWAY TRACTION CABLE.

No. 377,023. Patented Jan. 31, 1888.

Fig. 1.

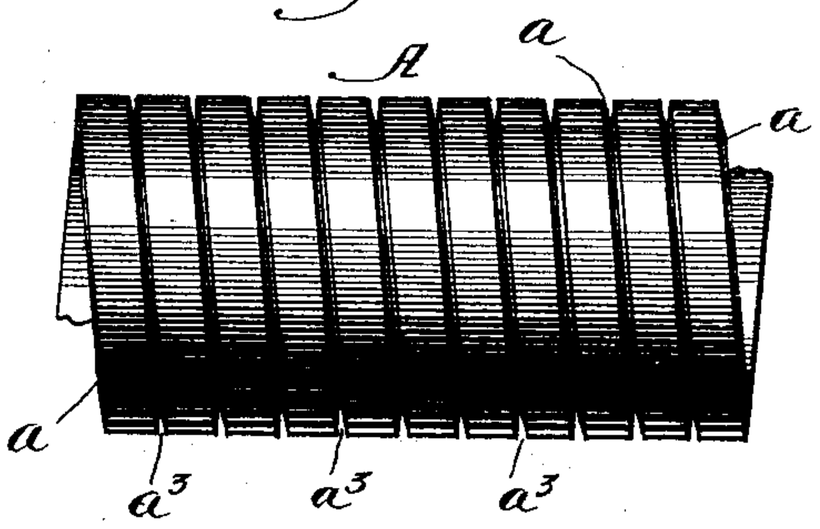


Fig. 2.

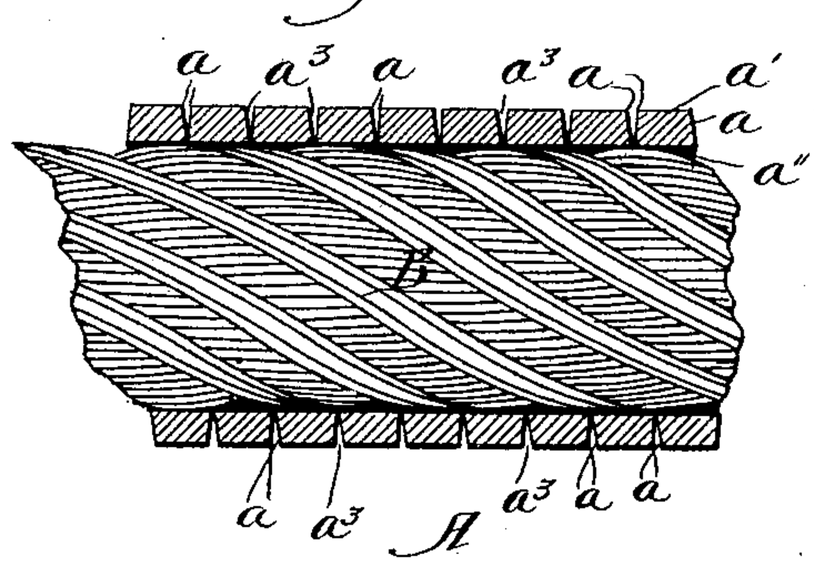


Fig. 3.

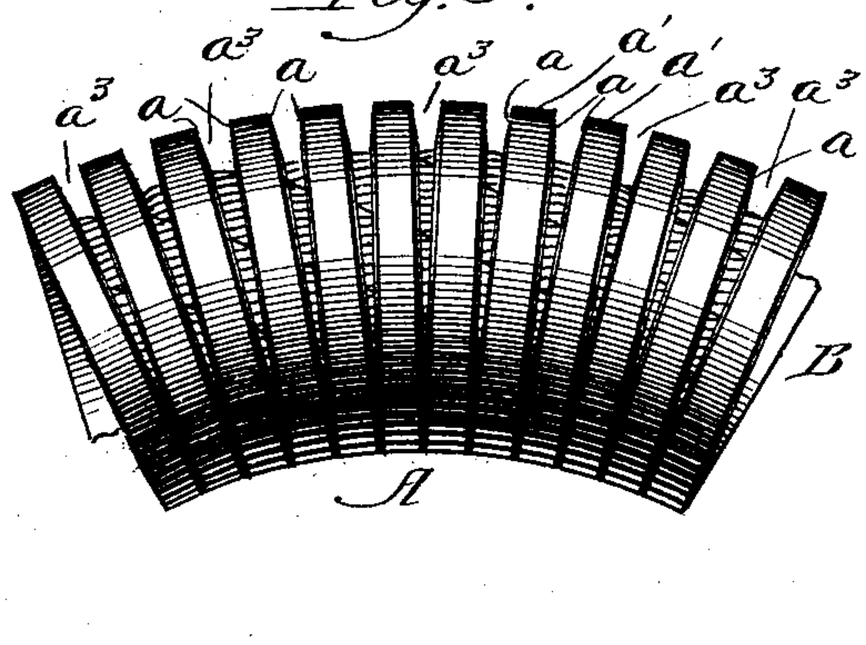
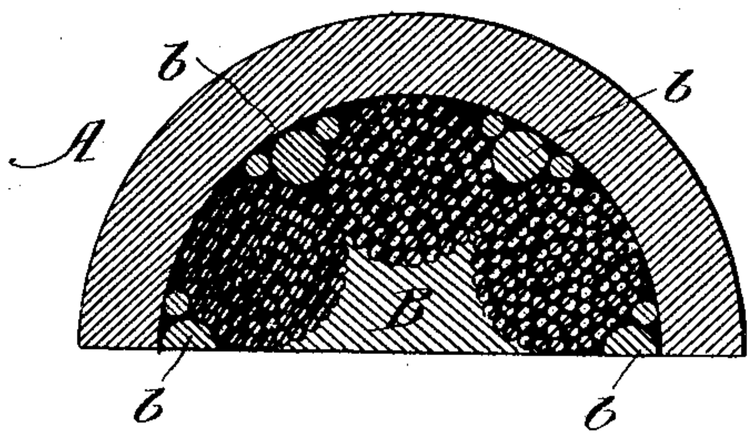


Fig. 4.



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UNITED STATES PATENT OFFICE.

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RAILWAY TRACTION-CABLE.

SPECIFICATION forming part of Letters Patent No. 377,023, dated January 31, 1888.

Application filed September 6, 1887. Serial No. 248,920. (No model.)

To all whom it may concern:

Be it known that I, PETTER J. FRANSZE, residing at Chicago, in the county of Cook and State of Illinois, and a subject of the King of Sweden, have invented a new and useful Improvement in Railway Traction-Cables, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of the covering. Fig. 2 is a sectional elevation showing the covering on the cable. Fig. 3 is a top or plan view showing the cable when running around a pulley or wheel; and Fig. 4 is a cross section of the cable and covering.

It has been found in practice that traction-cables for street-railway use become worn from the contact of the grip with the strands, so that in time the cable is useless for the purpose for which it is intended, and it has been attempted to remedy this defect in traction-cables by winding them with strips of metal; but such winding as heretofore done saves the wear on the cable at the expense of its flexibility to a degree as to render such wound cable practically useless in running around curves, wheels, or pulleys, and hence inoperative for use.

The object of this invention is to inclose the cable within a covering which will allow of perfect flexibility and bending of the cable in running around pulleys or wheels and turning corners, and for use in other places where a bending of the cable is required, and at the same time have the covering form an effectual guard or protection against the wear of the cable, and render the cable as effectual in use for the grip to act thereon as with the ordinary strand-cable; and its nature consists in providing a covering formed of a continuous coiled strip, the sides of which are beveled, so that when wound the inner face of each coil will be wider than the outer face, leaving a V-shaped opening between the coils, all as hereinafter more specifically described, and pointed out in the claims.

In the drawings, A represents a continuous coiled strip formed of steel or other suitable material and having its side faces, *a*, beveled to form an outer face, *a'*, of less width than the inner face, *a''*, and leave an opening, a^3, of a V shape between the respective coils; and B represents the cable formed of strands, as usual, and having a wire filling, *b*, between the strands, as usual, as shown in Fig. 4.

The strip from which the covering is made is formed by running it through dies or other suitable devices to form a bevel on each side face, and this strip is coiled onto the cable with the inner or wide face, *a''*, adjacent to the outer surface of the cable, as shown in Fig. 2, and when in place the coil will lie around the cable with the bottom or inner face of the coils in contact one with the other, or nearly so, so that when caught by a grip the coil will not pull apart from the strain or draw of the grip, as each coil is supported against an adjacent coil by the contact of the lower or bottom edges. The top or outer edge of the strip is open between each coil, as shown in Fig. 2, and by reason of the bevel of the side faces, *a*, this open space allows of a bending or curving of the coil and cable around a pulley or wheel, or wherever a curve in the cable is desired, as shown in Fig. 3, and this curving or bending will allow the cable to be passed around small or large wheels or pulleys without injurious effects to the covering, as the flexibility of the cable is not impaired by the covering, for the reason that the open spaces between the coils of the covering allow of a sufficient amount of yield or bend for the cable to go around the wheel or pulley, and after passing around the covering resumes its normal position, as shown in Fig. 2. This covering will protect the strands of the cable against the wear of the grip, and at the same time it furnishes a firm hold for the grip, so that the cable is fully protected against wear, which comes on the covering only, and when the covering becomes worn the cable is in good condition and can be re-covered by another coil. The coil while protecting the cable does not interfere with its flexibility, as the covering will yield to pass around a wheel or pulley or other curve without injuring its utility as a covering, and by the use of this covering a cable is protected fully, and at the same time its flexibility is in no wise impaired.

It is to be understood that the covering is

designed for use with any ordinary and well-known form of traction-cable by being coiled around such cable.

What I claim as new, and desire to secure by Letters Patent, is as follows:

1. A strip having beveled sides to form an outer and inner face, said strip being coiled to form a continuous spiral covering for the traction-cable, substantially as specified.

2. The combination, with a traction-cable, of a strip having beveled sides *a*, continuously wound in spiral coils around the cable to form a flexible covering therefor, substantially as shown and described.

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