

T. GORE.
WIRE ROPE OR CABLE.
APPLICATION FILED JUNE 22, 1910.

986,817.

Patented Mar. 14, 1911.

Fig. 1.

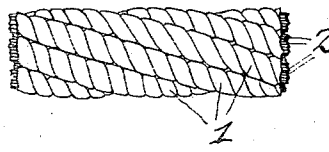


Fig. 2.

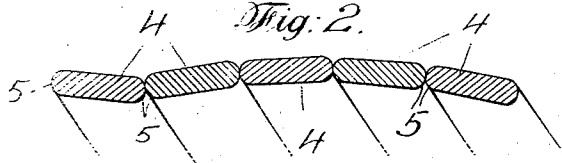
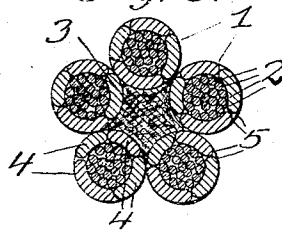


Fig. 3.



Witnesses:
L. B. Anselmi
L. W. Shannon

Inventor
Thomas Gore
By his Attorneys
Rock Beckenhuith

UNITED STATES PATENT OFFICE.

THOMAS GORE, OF BROOKLYN, NEW YORK.

WIRE ROPE OR CABLE.

986,817.

Specification of Letters Patent.

Patented Mar. 14, 1911.

Application filed June 22, 1910. Serial No. 568,345.

To all whom it may concern:

Be it known that I, THOMAS GORE, a citizen of the United States, and a resident of the borough of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Wire Ropes or Cables, of which the following is a specification.

The present invention relates to wire ropes or cables for hoisting, haulage and other purposes, and has more particularly reference to a protective covering for such ropes. Ropes of this character are generally composed of a plurality of strands, each strand comprising a plurality of wires, twisted together around a fibrous or metallic core. Surrounding each strand is a covering. The strands are designed to take all the strain to which the rope is subjected, and the covering is merely for the purpose of protecting the strands from exposure and wear or abrasion in passing over sheaves, &c. Heretofore it has been customary to serve the strands with round wire. This is shown in British Patent No. 10346 of 1886. This construction is objectionable because it makes the complete rope very bulky owing to the thickness of the wire covering. If thin wire is used to reduce the bulkiness of the rope, the abrasion to which the rope is subjected will wear the wire covering out in a short time. Furthermore the thin round wire covering will tend to wear into the wires comprising the strand and will ultimately sever them. Besides the round wire covering is expensive, as a great deal of wire necessarily has to be used. It has also been customary in the prior art to use flat strips of sheet steel as a covering for the strands. This is shown in British Patent No. 5696 of 1886. This is objectionable because the flat strips of sheet steel, being slit from larger sheets, have square edges. When the rope is bent, as in passing over a sheave, the square edges of adjacent windings of the covering will be separated on one side and will be crowded together on the other side. Consequently at the point where the windings are crowded together the adjacent edges will "chafe" and wear out, besides digging into the wires of the strand. Sometimes a fibrous thread or wire is interposed between adjacent windings. This is not a success because if a fibrous thread is used, it will soon wear out and leave the inner strands exposed and sub-

ject to the "chafing" action of the sheet steel. If a wire is interposed between adjacent windings it will wear out by the action of the raw edges of the sheet steel and will also tend to be crowded into the wires of the inner strands. Moreover, these flat strips are of short length and have to be pieced together.

The object of my invention is to obviate all these defects, and to that end I use a covering, for the strands of the rope, which is made of flat wire with rounded edges.

The invention is illustrated in the accompanying drawings in which—

Figure 1 is a general view of the rope in elevation. Fig. 2 is a diagrammatic view showing adjacent windings of the flat wire covering which surrounds each strand of the rope. Fig. 3 is a transverse sectional view through the complete rope, the covering for the strands being somewhat exaggerated in thickness to more clearly illustrate the invention.

Similar characters of reference indicate corresponding parts in the different views.

The rope is, in the present instance, composed of a plurality of strands 1, each strand consisting of a plurality of individual wires 2, the strands being twisted together around a core 3 which is here shown as fibrous material, but which may be of metal or other material in accordance with well known shop practices. Similarly each strand may have a central core of fibrous or other material. Each strand is served with one or more flat wires 4 having rounded or convex edges 5. This flat wire is made by rolling cold drawn wire of round section into a flat wire with rounded edges. This flat wire can be rolled in lengths up to 15,000 feet and may be of copper, brass, iron or steel and galvanized if preferred. Preferably this wire is of a much lower breaking strain per square inch than the wires generally used in the manufacture of metal ropes. Owing to the fact that the wire 4 is flat it will not cut into the inner strands as would a round wire, nor will it make the rope too bulky. Furthermore it is cheaper as less wire is required than if round wire is used. The rounded edges 5, moreover, will abut and form joints between adjacent windings, permitting the rope to be bent without "chafing" and without digging into the inner strands. As shown particularly in Fig. 2, when the rope is bent, the rounded edges 5

will ride freely one upon the other without "chafing". In this way the life of the rope, and of the sheaves over which the rope passes, is increased and the rope is made more flexible.

What is claimed, is:

1. As a new article of manufacture, a wire rope composed of a plurality of strands, each strand comprising a plurality of wires, twisted together around a core, and each strand being wound with flat metal wire having rounded edges which abut and form joints between adjacent windings.

2. As a new article of manufacture, a wire rope composed of a plurality of strands, each strand comprising a plurality of wires, twisted together around a core, and each strand being wound with flat metal wire having convex edges which abut and form joints between adjacent windings.

3. As a new article of manufacture, a wire rope composed of a plurality of strands, each strand comprising a plurality of wires, twisted together around a core, and each strand being wound with cold drawn wire rolled into flat wire with rounded edges which abut and form joints between adjacent windings.

4. As a new article of manufacture, a wire

rope composed of a plurality of strands, each strand comprising a plurality of wires, twisted together around a core, and each strand being wound with cold drawn wire rolled into flat wire with convex edges which abut and form joints between adjacent windings.

5. As a new article of manufacture, a wire rope composed of a plurality of strands, each strand comprising a plurality of wires twisted together, and each strand being wound with flat metal wire having rounded edges which abut and form joints between adjacent convolutions of the wire.

6. A protective covering for a stranded wire rope comprising flat metal wire wound spirally around the strands of the rope, the said wire having a flat surface bearing on the rope and rounded edges which abut and form joints between adjacent convolutions of the wire.

Signed at New York city in the county of New York and State of New York this 18th day of June A. D. 1910.

THOMAS GORE.

Witnesses:

LAURA E. SMITH,
AXEL V. BEEREN.