G. H. AND J. L. CALLAGHAN.

TOWROPE.

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1,407,378.

Patented Feb. 21, 1922.

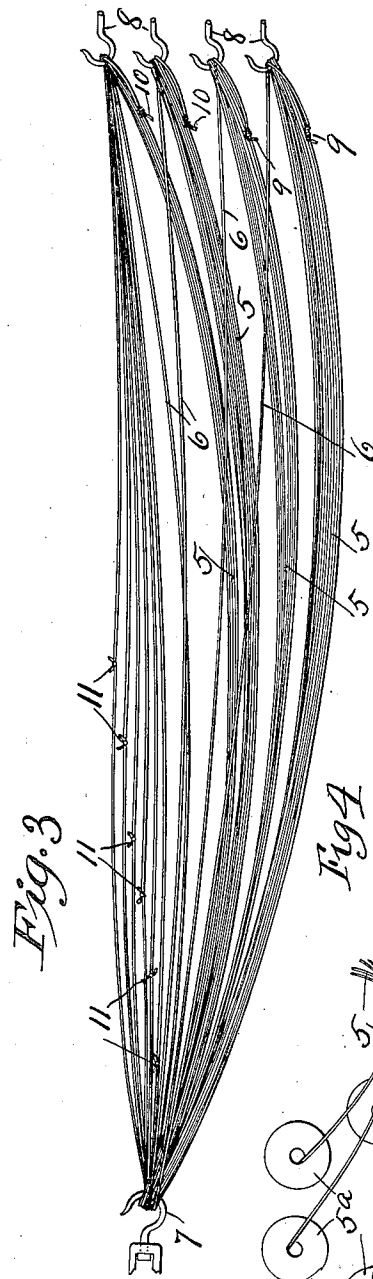


Fig. 3

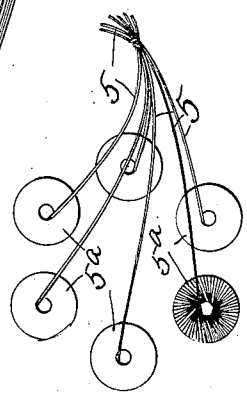


Fig 4

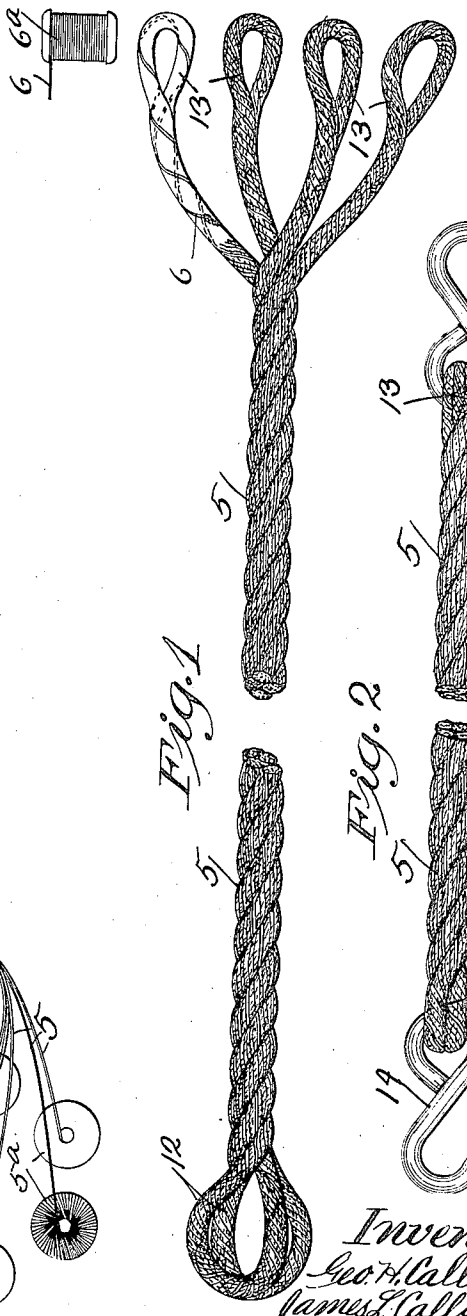


Fig. 1

Fig. 2

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TOWROPE.

1,407,378. Specification of Letters Patent. Patented Feb. 21, 1922.

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To all whom it may concern:

Be it known that we, GEORGE H. CALLAGHAN and JAMES L. CALLAGHAN, citizens of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Towropes; and we 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 is appertains to make and use the same.

Our invention has for its object to provide an improved wire re-inforced rope, especially adapted for use as a tow rope for automobiles and the like, but adapted, nevertheless, for more general use. Generally stated, the invention consists of the novel construction and arrangement of parts hereinafter described and defined in the claims.

The improved rope is illustrated in the accompanying drawings wherein like parts are indicated by like characters throughout the several views.

Referring to the drawings:—

Fig. 1 is a plan view showing the rope with the ends of the several strands separated;

Fig. 2 is a plan view of the rope with hooks applied to the ends thereof; and

Figs. 3 and 4 are diagrammatic views illustrating the manner in which the rope is or may be made.

The construction of the rope will be made clear by following the steps by which it is preferably made. In Figs. 3 and 4, the numeral 5 indicates rope forming threads of Manila hemp, cotton or the like, shown as unwound from balls 5^a, and the numeral 6 indicates a metal wire unwound from a spool 6^a. The rope illustrated is a twelve-thread, four-strand rope, but may, of course, be otherwise formed. In making this rope, six threads 5 are unwound from the spools and are carried back and forth from a common suspending hook 7, to individual suspending hooks 8, as shown in Fig. 3, until the said threads have been assembled to form the four, twelve-thread strands.

Then the wire 6 is attached to some of the threads of each strand 9, which points 9 are considerably inward of the end of the rope and these wires are then run along each strand over the hook 7 and back over certain of the hooks 8 and back to points 10 where they are again attached to certain of the threads 5, a considerable distance from the ends of the respective strands. As preferably formed, there are two wires 6, the one being attached to the lowest strand, passed over the hook 7 and attached to the upper strand, the other wire being attached to the strand next to the bottom, passed over the hook 7 and to the next to the upper strand. The ends of the six threads 5 are preferably tied together at 11 at different points longitudinally of the rope.

Next, the four strands of the rope are independently twisted in the same direction, either simultaneously or at different times, and after they have been thus properly twisted, the rope is then completed by allowing the several twisted strands to coil themselves together, either under their natural tendency to recoil or by assisting this natural twisting action by twisting the rope in the reverse direction from that in which the several strands were twisted.

At one end of the rope, two loops 12 will be formed, and at the end of each of the four strands, loops 13 will be formed. The rope is thus formed endless, and with the re-inforcing wires terminating, not at the extremities of the loops, but in the body of the several strands, the loops are thus given complete re-inforcement. A hook 14 will preferably be applied through the end loops 12 and a similar hook 15 will be applied through the loops 13 of the four strands of the rope, thereby affording a complete tow rope, as shown in Fig. 2. Of course, the tow rope, so-called, may be made of any desired length and may be used for any purpose for which it is suitable.

What we claim is:

1. A wire reinforced rope consisting of a multiplicity of fibre strands, each strand having a reinforcing wire therein, the wire and the threads of the strands being twisted together and the several strands being twisted together to form the body of the rope, the ends of said wires being turned back and terminated in the body of the rope, remote from the ends thereof.

2. A wire reinforced rope consisting of a multiplicity of fibre strands, each strand

having a reinforcing wire therein, the wire and the threads of the strands being twisted together and the several strands being twisted together to form the body of the rope, the ends of said wires being turned back and terminated in the body of the rope, remote from the ends thereof, said strands and reinforcing wires forming loops at the ends of the rope.

In testimony whereof we affix our signatures.

GEORGE H. CALLAGHAN.
JAMES L. CALLAGHAN.