

July 27, 1943.

A. MAZZELLA

2,325,261

METHOD OF PRODUCING HOISTING SLINGS

Filed Sept. 26, 1942

2 Sheets-Sheet 1

Fig. 1.

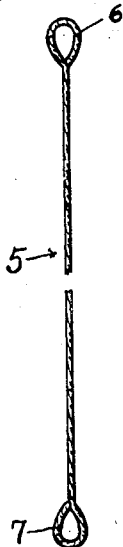


Fig. 2.

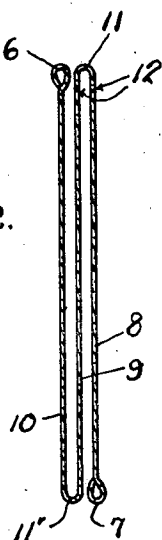


Fig. 3.

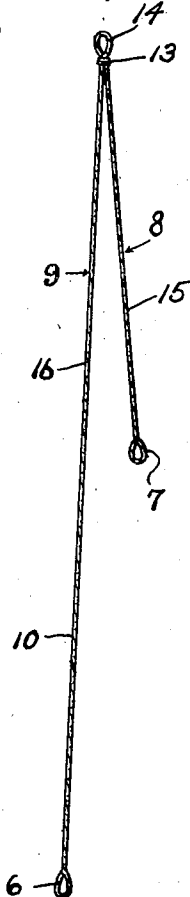


Fig. 4.



Fig. 5.

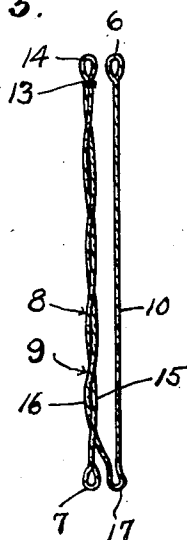


Fig. 6.

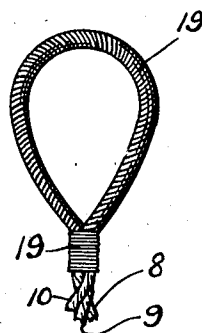
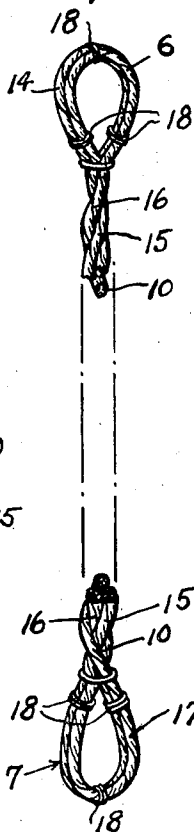


Fig. 7.

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2 Sheets-Sheet 2

Fig. 8.

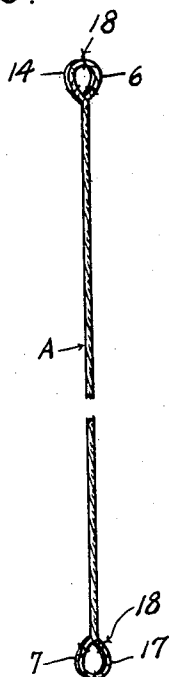


Fig. 9.

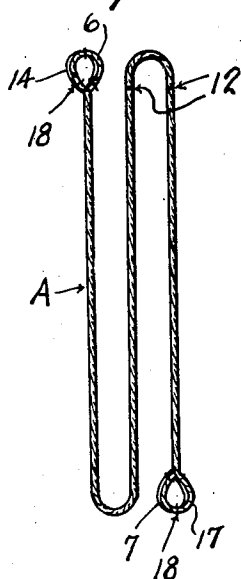


Fig. 10.

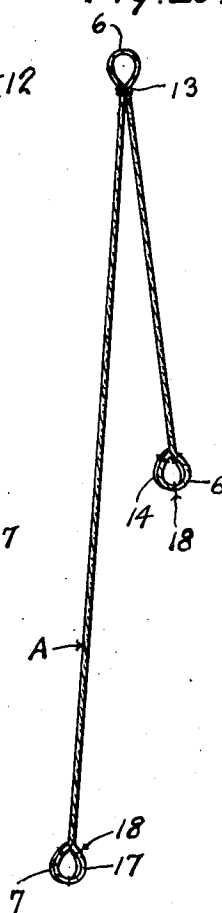


Fig. 11.

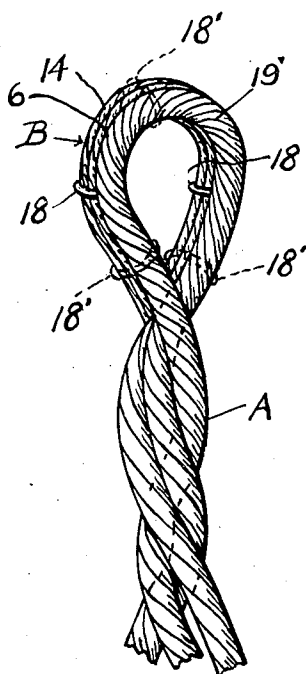
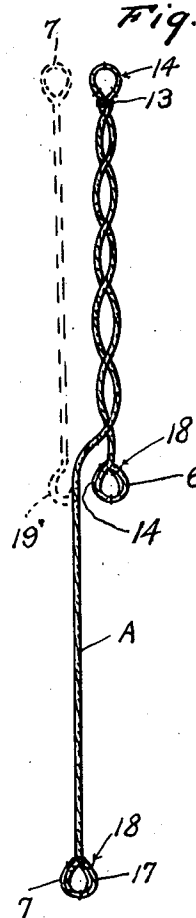


Fig. 12

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UNITED STATES PATENT OFFICE

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METHOD OF PRODUCING HOISTING
SLINGS

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Application September 26, 1942, Serial No. 459,851

2 Claims. (Cl. 57-156)

This invention relates to the official class of hoisting and pulling and more particularly a hoisting sling and method of making the same from wire rope, cable and the like.

One of the objects of this invention is to provide a hoisting sling which has a high degree of flexibility, is non-spinning, non-kinking and having a high degree of lifting capacity and tensile strength.

Another object of this invention resides in the provision of a hoisting sling formed from a single strand of twisted wire, rope and the like.

A further object of this invention resides in that method of constructing a hoisting sling from a single strand of twisted wire, rope and the like whereby the lifting capacity and tensile strength thereof is limited only by the number of steps of my method practiced in producing the same.

A still further object of this invention resides in the particular manner of forming the secondary eyes in the original and other cables produced therefrom.

In addition to the foregoing objects this invention resides in the particular manner of constructing the original cable for subsequent practice of my method in producing hoisting slings having predetermined strengths.

One of the salient features of this invention resides in the particular manner of retaining the primary and secondary eyes of the cable in registration prior to final binding thereof.

Among the paramount objects of this invention is the particular manner of finally binding the primary and secondary eyes together to form permanent loops.

With these and other objects in view this invention resides in certain novel features of construction and arrangement of elements to be hereinafter more particularly set forth in the specification, illustrated in the accompanying drawings and pointed out in the appended claims and, while this disclosure depicts my present conception of the invention, the right is reserved to resort to such changes in construction and arrangement of elements as come within the spirit of the invention.

In the accompanying drawings forming a part of this application:

Fig. 1 is a side view of the cable from which the hoisting sling is constructed.

Figs. 2 to 5 inclusive show the cable as having progressed through successive steps of my method with open twists in Fig. 4 for clarity.

Fig. 6 is a perspective view of the cable as having been constructed into a sling of the mini-

mum strength, the eyes thereof being unwrapped for clarity of illustration.

Fig. 7 is an enlarged side view of one of the eyes as wrapped and completed.

Figs. 8 to 11 inclusive are perspective views of the minimum strength sling as having progressed through successive steps of my method with open twists in Fig. 11 for clarity.

Fig. 12 is an enlarged perspective view of one end of the second size sling with the eyes thereof unwrapped.

In the present illustration of this invention the numeral 5 designates, in general, a flexible cable constructed of twisted wire or other suitable material, the same having its opposite ends looped and suitably fastened to the body portion of the cable to form, what is herein termed, primary eyes 6 and 7.

The next step in my method is practiced by folding the cable 5 thus formed into three members 8, 9 and 10 as illustrated in Fig. 2 of the drawings for the purpose of measurement, it being important that the extreme ends 11 and 11' of the looped portions thereof terminate at the extreme ends of the eyes. Subsequent to so measuring the cable, the looped portion 11 thereof adjacent the eye 6 is marked as indicated by the numeral 12 and pinched or otherwise fastened together as indicated by the numeral 13 to form a secondary eye 14 from which then extend sections 8, 9 and 10. With the cable constructed as aforesaid the members 15 and 16 are helically twisted together as illustrated in Fig. 4 but by tight winding as illustrated in Fig. 5, the winding thereof necessarily being continued in the same direction that the individual strands of the cable lay, however, the winding may be either right or left.

With the inner portion of the longer member 16 and shorter member 15 twisted together as above mentioned, the loop portion 11' is formed into a secondary eye 17 and secured by suitable means, indicated by the numeral 18, to the primary eye 7 whereupon the then outer portion of the member 16 is helically twisted around the first mentioned twisted members in such manner that it lies within the channels formed by the initial twisting step, subsequent to which the eye 6 is registered with the secondary eye 11 and secured thereto by any suitable means.

Upon completing the aforesaid steps in my method, the eyes so formed at the extremities of the then twisted cable may be wrapped by suitable material 19 as indicated in Fig. 7 of the drawings to form a three part sling, however,

where a sling of greater strength is desired, wrapping of the eyes of the sling thus formed and the aforesaid steps of my method are repeated with the exception that the free portion A of the partially completed sling, indicated in Fig. 11 of the drawings, is wound in the channels thereof so the strands forming the original cable extend in a direction opposite to those of said previously wound members, subsequent to which operation, the eyes such as indicated by the letter B in Fig. 12 of the drawings are formed and wrapped by suitable material 19 however, conventional thimbles, not shown, may be inserted therein to obviate wear thereon.

Through practice of my method, it is apparent a high degree of strength and flexibility is obtained from hoisting slings so constructed while the disadvantages of kinking thereof are entirely obviated and, due to use of a single cable in building up slings of predetermined strength, waste is eliminated and thus the cost of production thereof reduced to the minimum.

Having thus described my invention what I claim and desire to protect by Letters Patent is:

1. That method of constructing a hoisting sling consisting of forming primary eyes in a single length of cable, forming a secondary eye in a certain portion of the cable, helically twisting a certain portion of the cable together beyond the secondary eye, forming another secondary eye in the cable at the extremity of the twisted portions thereof disposing the same against a certain primary eye in registration

therewith and securing the same together, twisting the free portion of the cable on the aforesaid twisted portions thereof in the channels of the same and with its strands extending in the same direction as those of the original cables, disposing the primary eye on the free end of the cable against and in registration with the first mentioned secondary eye and securing the same together, and wrapping those registered primary and secondary eyes at the ends of the twisted portions of the cable.

2. That method of constructing a hoisting sling consisting of forming primary eyes at the ends of a cable, forming a secondary eye in a certain portion of the cable, helically twisting certain portions of the cable together beyond the secondary eye, forming another secondary eye at the extremity of said twisted portions of the cable and securing the same to the adjacent primary eye, twisting the free portions of the cable on the aforesaid twisted portions thereof in the channels of the same and with its strands extending in the same direction as those of the original cable, securing the primary eye on the free end of the cable to the first mentioned secondary eye in registration therewith, subjecting the aforesaid partially completed hoisting sling to a repetition of said steps with that portion thereof finally twisted so the strands thereof extend in a direction opposite those of the original cable, and wrapping the registered primary and secondary eyes at opposite ends of the sling.

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