April 21, 1925. 1,534,926

J. E. DOBLE

NEEDLE

Filed July 16, 1923

Fig. 1.

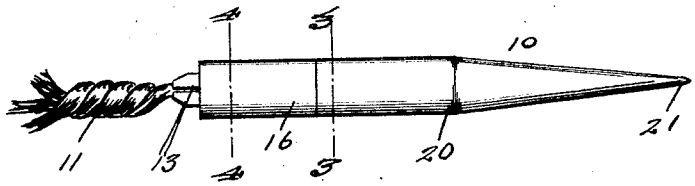


Fig. 2.

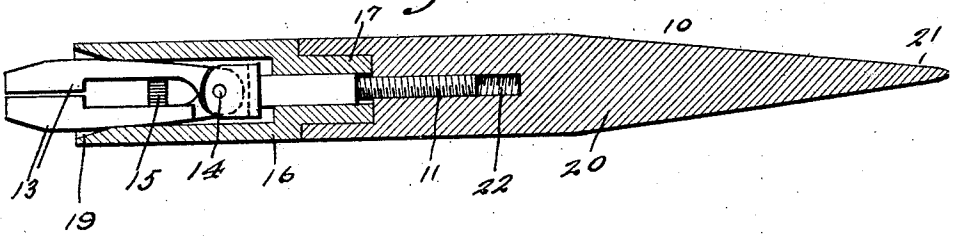


Fig. 3.

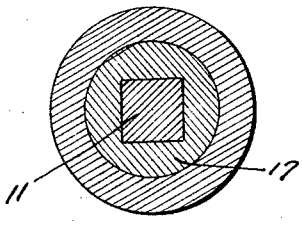


Fig. 4.

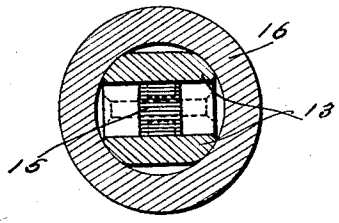
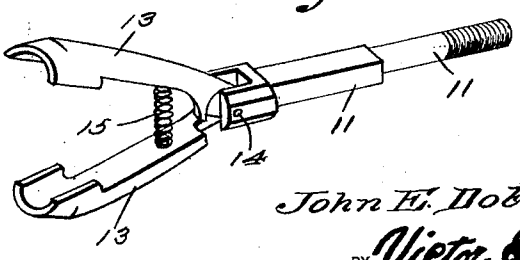


Fig. 5



R. A. Thomas
P. C. Gannon.

WITNESSES

John E. Doble INVENTOR

BY Victor J. Evans

ATTORNEY

Patented Apr. 21, 1925. 1,534,926

UNITED STATES PATENT OFFICE.

JOHN E. DOBLE, OF MILO, MAINE.

NEEDLE.

Application filed July 16, 1923. Serial No. 651,864.

To all whom it may concern:

Be it known that I, JOHN E. DOBLE, a citizen of the United States, residing at Milo, in the county of Piscataquis and State of Maine, have invented new and useful Improvements in Needles, of which the following is a specification.

This invention relates to improvements in needles especially adapted for use as a marline spike to facilitate the splicing of ropes or cables.

An object of the present invention is the provision of a needle of this character which may be readily secured to and which will tightly grip the end of a rope strand in a manner to prevent the latter from becoming untwisted or loose, and which will further provide convenient means whereby the strand may be easily and readily inserted or tucked during the operation of splicing.

With the above and other objects in view, the invention further includes the following novel features and details of construction, to be hereinafter more fully described, illustrated in the accompanying drawings and pointed out in the appended claims.

In the drawings:—

Figure 1 is an elevation of the invention attached to a strand of rope.

Figure 2 is an enlarged longitudinal sectional view of the same.

Figure 3 is a section on the line 3—3 of Figure 1.

Figure 4 is a similar view on the line 4—4 of Figure 1.

Figure 5 is a detail perspective view of the shank and gripping jaws with the latter open.

Referring in detail to the drawings, wherein like characters of reference denote corresponding parts, the improved needle is designated in its entirety by the reference character 10 and is shown as attached to the end of a rope strand 11 preparatory to being inserted or tucked between the strands of a rope or cable for the operation of splicing.

The needle is made up of a shank 11 having a rectangular cross sectional shape and having extended from one end thereof a reduced threaded extension 12, while at its other end the said shank has pivotally connected thereto a pair of gripping jaws 13, the pivotal connection being indicated at 14. These jaws are cross sectionally curved and are slightly arched throughout their lengths. At their outer ends, the jaws are substantially semi-circular so that when brought together they provide a substantially rectangular clamping element which will securely engage the end of the strand 11. The jaws 13 are normally forced apart by means of a spring 15.

Positioned over the shank 11 and engaging the jaws 13 is a clamping sleeve 16 which is preferably cylindrical in shape and which is provided at one end with a reduced cylindrical extension 17. The bore of the sleeve 16 at the reduced end 17 is transversely rectangular and has a sliding fit upon the shank 11, so the said sleeve may move longitudinally of the shank and will be held against rotation thereon. The opposite end of the bore of the sleeve 16 is circular in cross section and the walls of this bore are adapted to engage the jaws 13 to force the latter together when the sleeve is moved in a direction toward the jaws. The mouth of the sleeve is preferably flared as shown at 19.

The needle further includes a penetrating member 20 which is pointed at one end as shown at 21 and is provided at its opposite end with a bore which receives the extension 17 of the sleeve 16. Extending inwardly from the bore of the penetrating member 20 is a reduced threaded bore 22 which is adapted to engage the threaded portion 12 of the shank 11 so as to be adjusted thereon to force the sleeve 16 in a direction to close the jaws 13. The inner end of the penetrating member 20 engages the shoulder provided at the juncture of the sleeve 16 and its reduced extension 17, the outer surface of the needle presenting a smooth cylindrical shape.

It will be seen from the foregoing description and accompanying drawings, that the invention provides a needle which is especially adapted for use as a marline spike in splicing ropes, the construction being such that the separated ends or strands of the rope may be readily tucked in place, one of the needles being secured to each of the strands utilized, while the remaining strands may be cut away, as will be readily understood.

The invention is susceptible of various changes in its form, proportions and minor details of construction and the right is herein reserved to make such changes as properly fall within the scope of the appended claims.

Having described the invention what is claimed is:—

1. A needle comprising a shank threaded at one end, a pair of gripping jaws pivotally secured to the opposite end of the shank, a clamping sleeve movable longitudinally of the shank and engaging the gripping jaws to hold the latter in position, means threadedly engaging the shank and bearing upon the clamping sleeve, whereby the latter may be adjusted and a penetrating member at one end of the shank engaging means.

2. A needle comprising a shank threaded at one end, a pair of gripping jaws pivotally secured to the opposite end of the shank, a clamping sleeve movable longitudinally of the shank and engaging the gripping jaws to hold the latter in position and a penetrating member having a threaded socket therein for engagement with the threaded end of the shank and bearing against the clamping sleeve, whereby the latter may be adjusted to control the gripping jaws.

3. A needle comprising a shank threaded at one end, a pair of gripping jaws pivotally secured to the opposite end of the shank, a clamping sleeve movable longitudinally of the shank and engaging the gripping jaws to hold the latter in position, a penetrating member having a threaded socket therein for engagement with the threaded end of the shank and a reduced extension provided upon the clamping sleeve for entrance within a relatively large bore within the end of the penetrating member to provide bearing means for said member, whereby the sleeve may be adjusted to control the gripping jaws.

4. A needle comprising a shank of rectangular cross sectional shape, a pair of transversely curved gripping jaws pivotally secured to one end of the shank, a threaded extension at the opposite end of the shank, a clamping sleeve having a transversely rectangular bore formed at one end for sliding engagement with the shank and a cylindrical portion at its opposite end for engagement with the gripping jaws, a reduced cylindrical extension projecting from the end of the sleeve having a rectangular bore, a socketed penetrating member engageable over the cylindrical extension and a threaded socket within the penetrating member for engagement with the threaded end of the shank, whereby the sleeve may be adjusted to control the gripping jaws.

In testimony whereof I affix my signature.

JOHN E. DOBLE.