

(No Model.)

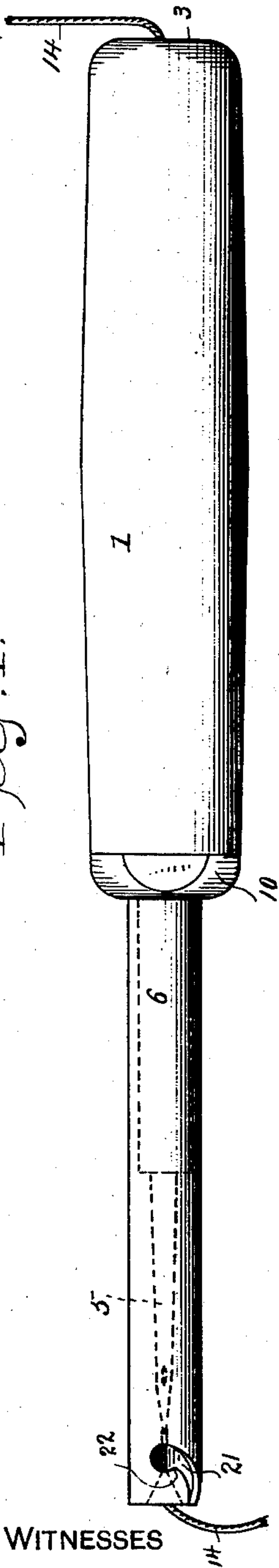
2 Sheets—Sheet 1.

F. M. JOHNSON.
TAGGING NEEDLE.

No. 604,759.

Patented May 31, 1898.

Fig. 1.



WITNESSES
H. F. Lundy
S. W. Haley

Fig. 2.

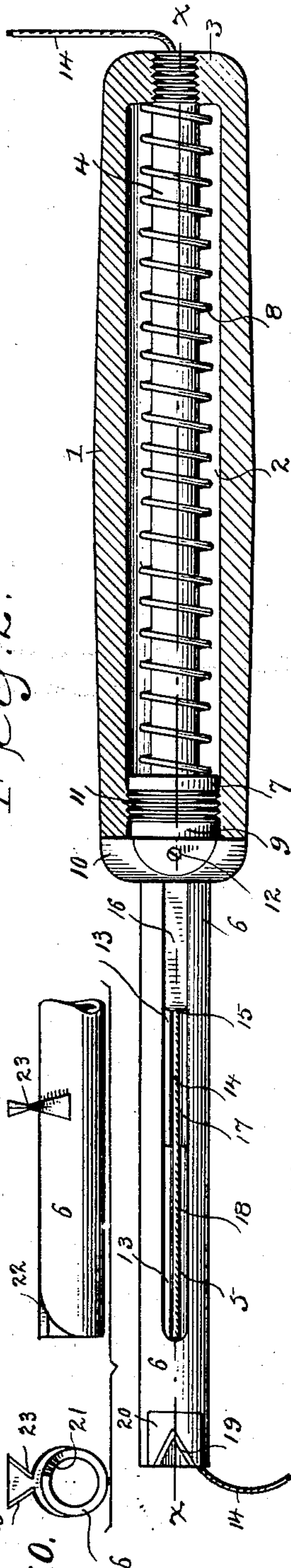


Fig. 10.

Fig. 3.

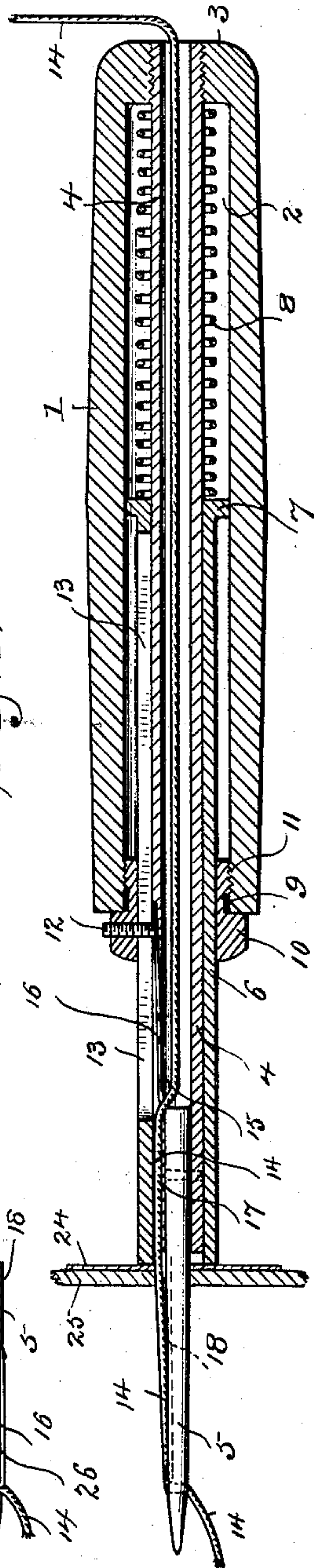
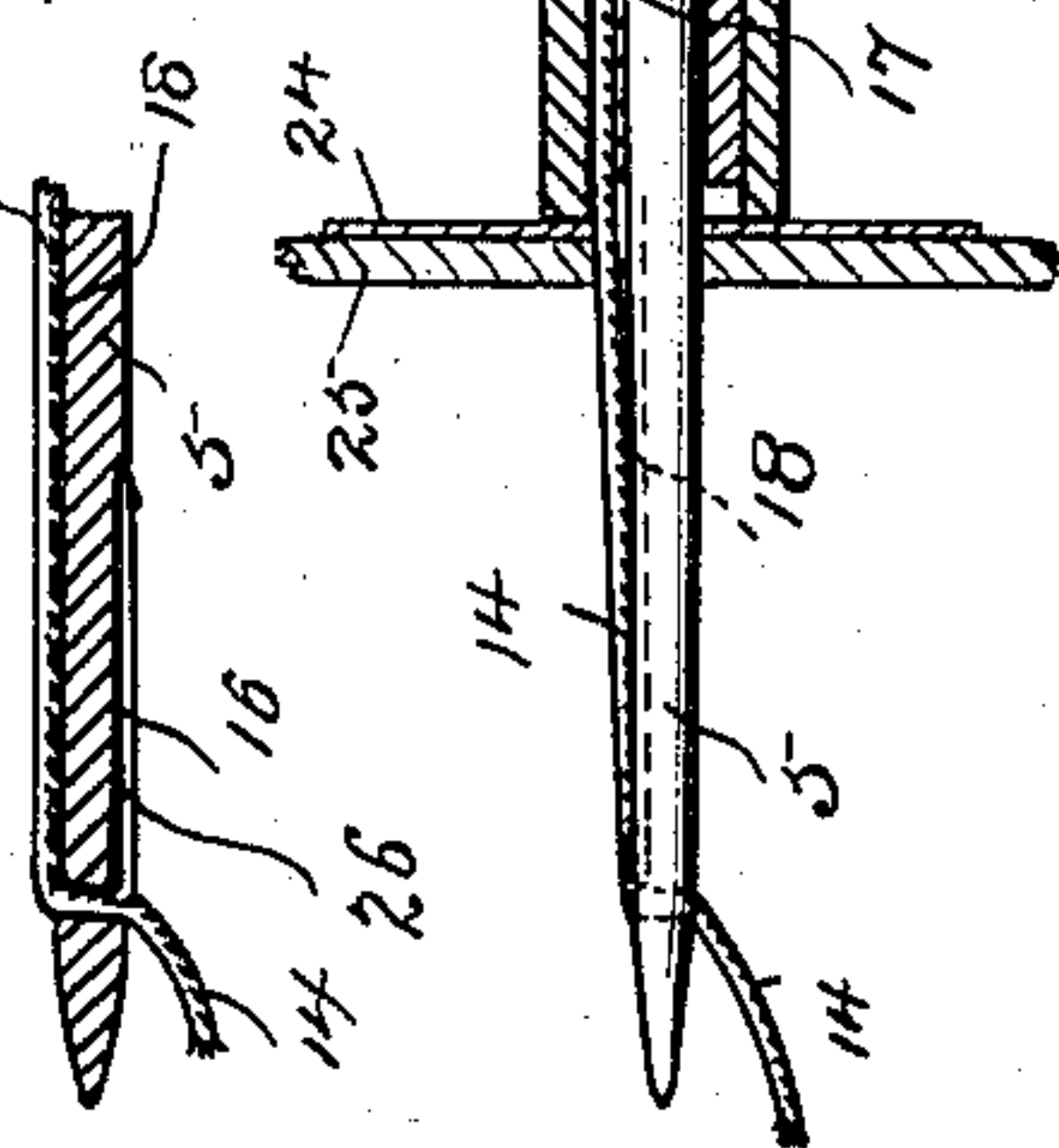


Fig. 11.



INVENTOR

Frank M. Johnson
By A. M. Wooster
Att'y.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 4.

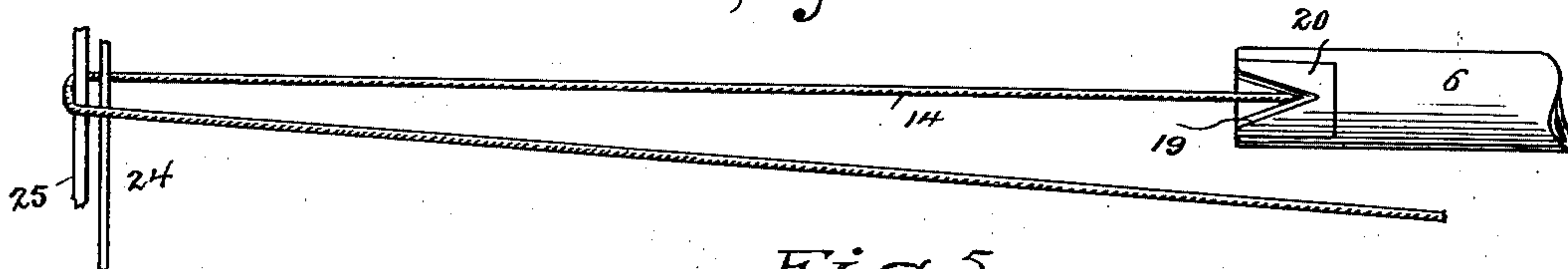


Fig. 5.

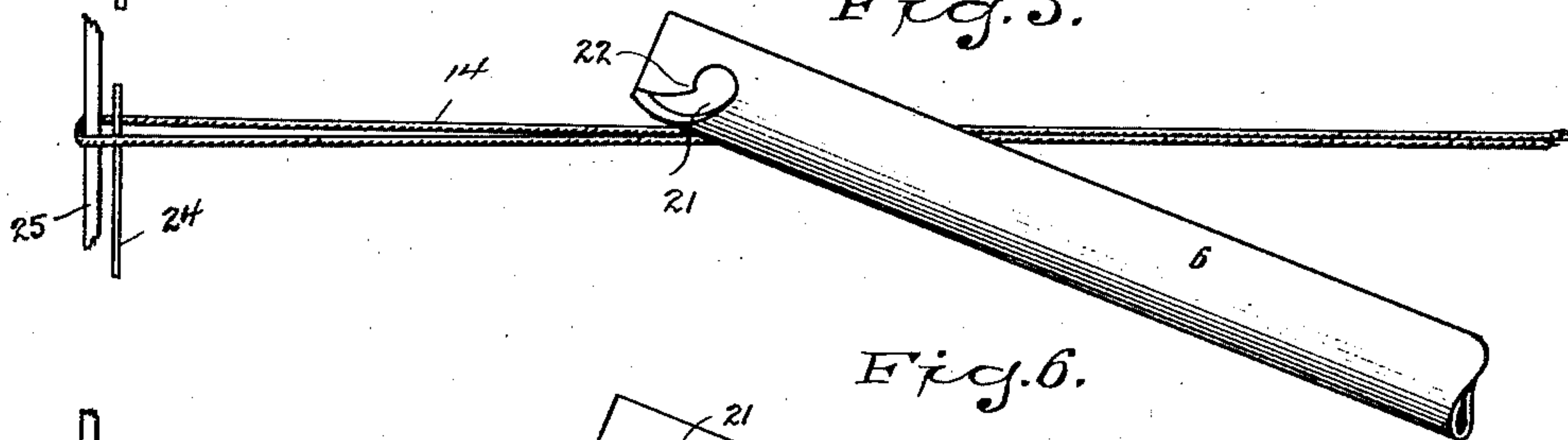


Fig. 6.

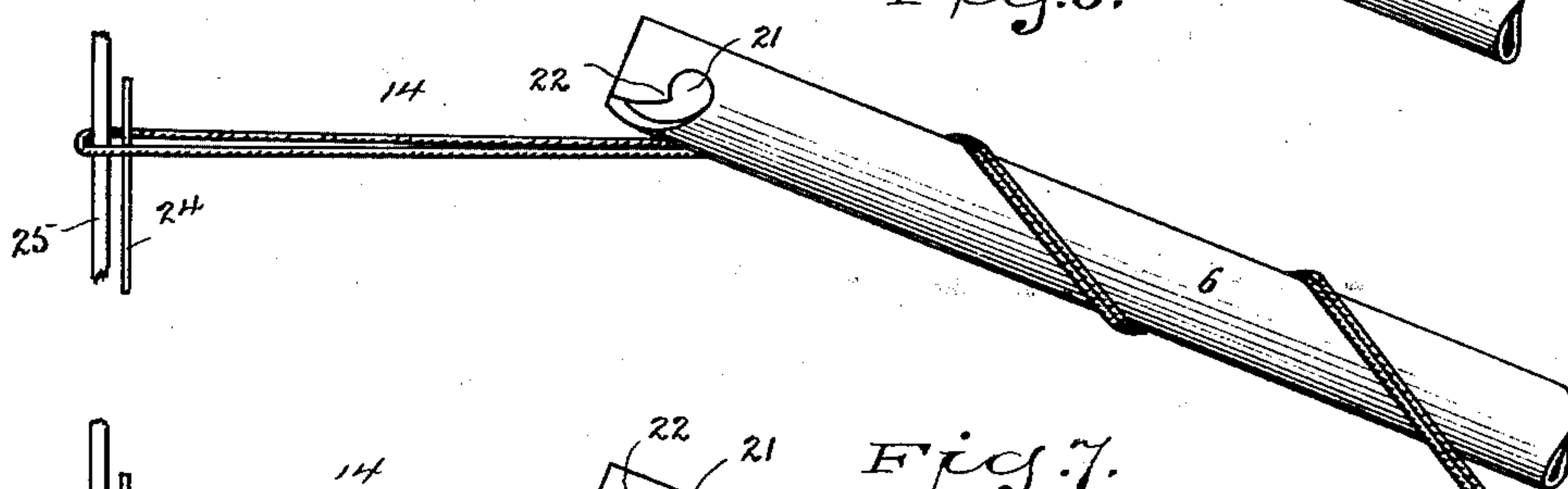


Fig. 7.

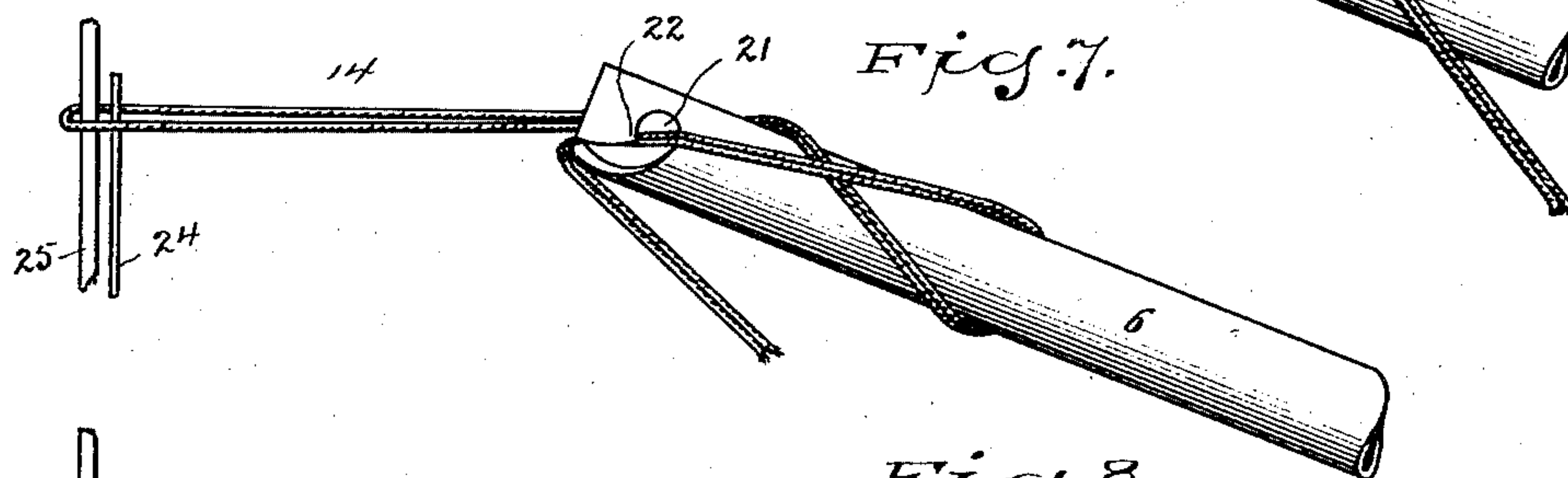


Fig. 8.

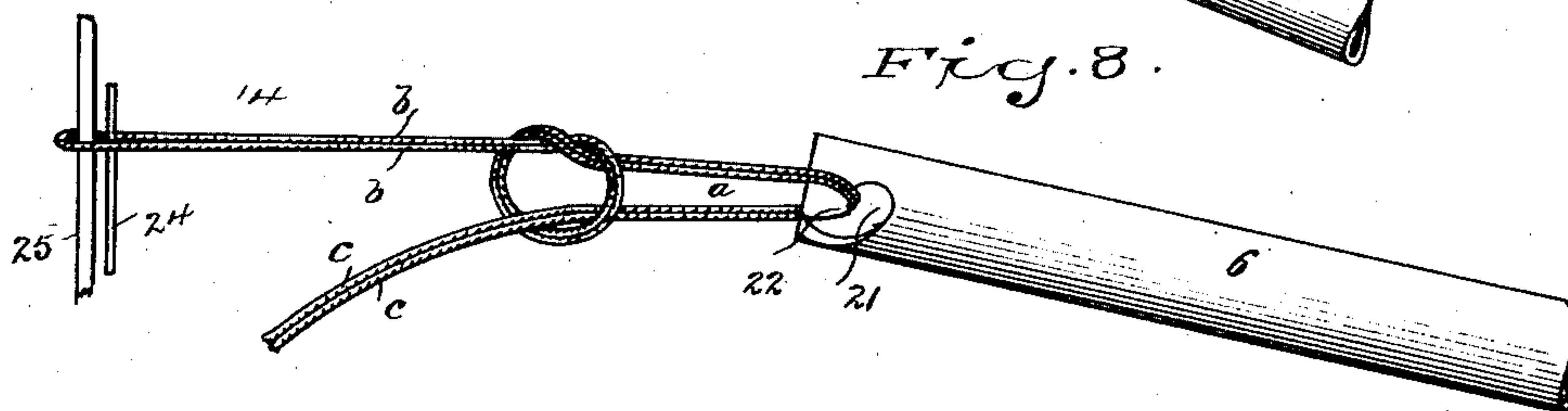
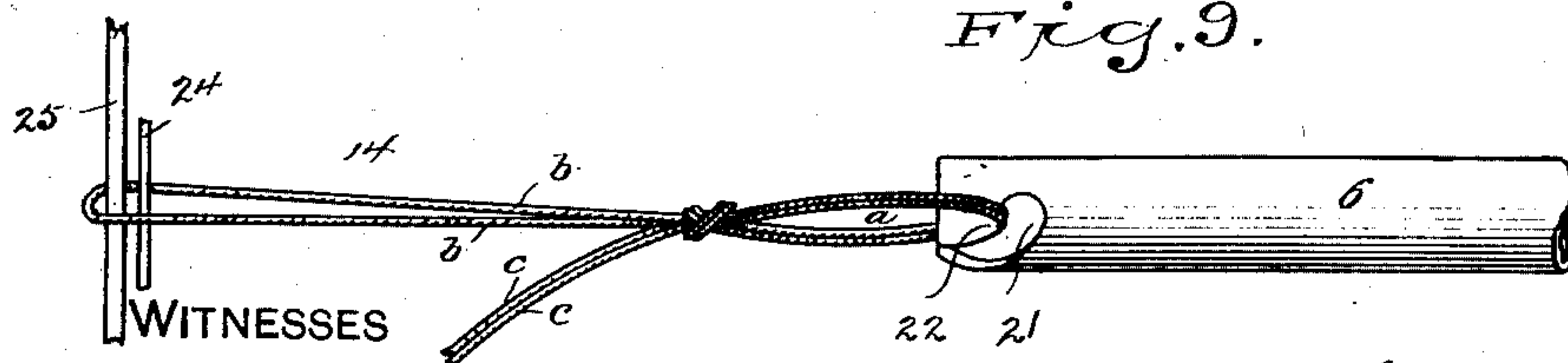


Fig. 9.



WITNESSES

H. A. Lamb
S. V. Heby

INVENTOR

Frank M. Johnson
By A. M. Wooster
Att'y.

UNITED STATES PATENT OFFICE.

FRANK M. JOHNSON, OF UNION CITY, CONNECTICUT, ASSIGNOR OF ONE-HALF TO RICHARD C. WARNER, OF NAUGATUCK, CONNECTICUT.

TAGGING-NEEDLE.

SPECIFICATION forming part of Letters Patent No. 604,759, dated May 31, 1898.

Application filed August 30, 1897. Serial No. 649,952. (No model.)

To all whom it may concern:

Be it known that I, FRANK M. JOHNSON, a citizen of the United States, residing at Union City, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Tagging-Needles; and I 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 it appertains to make and use the same.

My invention has for its object to provide a device which may be manipulated to pass a thread or cord through two or more articles—as, for example, in attaching tags to merchandise or in attaching pairs of rubbers or shoes together—may then be manipulated to cut off the cord, and then manipulated to tie a knot in the cord. This knot may or may not be a bow-knot, as preferred.

With these ends in view I have devised a simple and novel hand-tool which I have termed a “tagging-needle” and which I will now proceed to describe, referring by numerals to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a view of my novel tagging-needle, the sheath being at its normal position; Fig. 2, a similar view, the tool having been given a half-turn to show the reverse side of the sheath, the handle being in section; Fig. 3, a section on the line $x x$ in Fig. 2, showing the position of the parts after the needle has been passed through the articles to be attached together, the sheath being still at the retracted position; Fig. 4, a view of the end of the sheath at its normal position, cord having been drawn through the tube and the cutter being in position to cut the cord. Figs. 5, 6, 7, 8, and 9 are views illustrating the operation of tying a knot in the cord; Fig. 10, (see Sheet 1,) a side and end view of the sheath, illustrating another form of cutter; and Fig. 11 is a detail sectional view illustrating a form of needle in which a tension-spring is placed in the needle itself.

1 denotes a handle; 2, a recess therein closed at the base of the handle by a head 3; 4, a tube which passes through the head and extends the entire length of the handle, the other end extending beyond the handle, as clearly shown in Fig. 3; 5, a needle rigidly

secured in the end of the tube which extends beyond the handle; 6, a sheath which incloses the tube and in its normal position incloses the needle and is provided at its inner end with a head 7, and 8 a spring lying in recess 2, the ends of which bear, respectively, against head 3 and head 7 and the action of which is to retain the sheath at its normal position, as in Figs. 1 and 2. At the opposite end of the handle from head 3 is a sleeve 9, which I have shown as provided with a flange 10, conforming to the shape of the handle and through which the sheath slides freely. This sleeve is threaded to engage a corresponding thread on the handle, as at 11. The sheath is held against rotation by the engagement of a screw-pin 12 with a recess 13 (which may be either a groove or slot) in the sheath, and the outward movement of the sheath is limited by the engagement of head 7 with the inner end of sleeve 9, as clearly shown in Fig. 2.

14 denotes a cord which passes into the tube at the base of the handle and out therefrom through an opening 15. 16 denotes a tension-spring lying in said opening, the free end of which engages the cord and places a slight amount of tension thereon and prevents the cord from slipping backward under any circumstances. After passing out of the tube the cord lies in a groove 17 in the outer side thereof, which is in alinement with the usual long groove 18 of the needle. At the outer end of the sheath I form in one side a cutting-notch 19. This notch is shown in Figs. 2 and 4 as outwardly beveled, and in practice may be formed in the sheath itself or in a piece of steel 20, which is set into the metal of the sheath. Opposite to the cutting-notch I form a recess 21, at one side of which is a hook-shaped projection 22, which I shall refer to as a “hook.”

In Fig. 10 I have shown a modified form, in which cutting-notch 19 in the end of the sheath is dispensed with, and in lieu thereof I provide a double-edged V-shaped cutter upon the outer side of the sheath. This cutter I place a sufficient distance from the end of the sheath, so that it will not interfere with the tying of a knot. 24 and 25 denote articles connected by a cord to illustrate the manner in which the device is used.

In Fig. 11 I have illustrated a form of needle in which a tension-spring 16, operating precisely like the tension-spring 16 in the tube, is placed in a groove 26 in the needle directly opposite the usual long groove 18. I have found this tension-spring in the needle to work perfectly in use and that it may be used either with or without a tension-spring in the tube.

The operation of my novel tagging-needle is as follows: Having threaded the needle, the operator holds the articles to be attached firmly together, places the end of the sheath against them, and by applying pressure to the handle forces the needle through the articles, as clearly shown in Fig. 3, spring 8 yielding as the pressure is applied. While the parts are in the position illustrated in Fig. 3, the operator takes hold of the free end of the cord and pulls through as much as may be required. He then relieves the pressure upon the handle, which allows spring 8 to withdraw the needle from the articles and return the sheath to its normal position, as in Figs. 2 and 4. He then draws the tool back, allowing cord to pass through, as in Fig. 4, and then severs the cord by holding the sheath at an angle to the position indicated in Fig. 4 and drawing the cord across the edge of the cutter. The operator may then hold the two ends of the piece of cord which has been cut off with the thumb and index finger of the left hand and, holding the device in the right hand, place the sheath in substantially the position indicated in Fig. 5, recess 21 being preferably toward the operator and the sheath being between the operator and the cord. The operator, still holding the device by the handle, passes the sheath over the doubled cord, then downward under the cord, and then upward to the position shown in Fig. 6, a loop of the doubled cord being now wound about the sheath. The operator then passes the ends of the cord forward, leaving the loop around the sheath, passes both strands into recess 21, and draws the ends of the cord backward from the end of the sheath, as clearly shown in Fig. 7. The operator then allows the doubled loop of cord which has been formed about the sheath to slip off, drawing the sheath backward, but retaining both strands of the cord in engagement with the hook. The position of the partly-formed knot as the loop of cord slips off the sheath, both strands of the bow remaining in engagement with the hook, is clearly shown in Fig. 8. By holding the ends of the cord and drawing the sheath backward the operator may tighten the knot which is formed from the double loop of cord, which was first formed about the sheath and then allowed to slip off, as clearly shown in Fig. 9. The bow of the knot may be long or short, as desired. The knot thus tied cannot be untied by pulling on the bow, which I have indicated by *a*, nor upon either of the strands *b b* of the main cord, but may be untied readily by pulling upon the ends *c c*. If a hard knot is desired,

the operator simply draws ends *c c* out of the knot—*i. e.*, toward the right, as seen in Fig. 8.

Having thus described my invention, I claim—

1. A device of the character described, comprising a handle, a tube extending through and beyond the handle at one end and having an opening through which the cord passes outward, a needle at the outer end of the tube and a spring-actuated sheath which normally incloses the outer end of the tube and the needle and is adapted to be pressed backward to uncover the needle in use, said sheath having at its outer end a recess 21 provided upon one side with a hook 22, substantially as described.

2. A device of the character described, comprising a handle, a tube extending through and beyond the handle at one end and having an opening through which the cord passes outward, a needle at the outer end of the tube, a tension-spring which prevents the cord from slipping backward and a spring-actuated sheath which normally incloses the outer end of the tube and the needle and is adapted to be pressed backward to uncover the needle in use.

3. A device of the character described comprising a handle, a tube extending through and beyond the handle at one end and having an opening through which the cord passes outward, a needle at the outer end of the tube, a tension-spring recessed into the needle which prevents the cord from slipping backward and a spring-actuated sheath which normally incloses the outer end of the tube and the needle and is adapted to be pressed backward to uncover the needle in use.

4. A device of the character described, comprising a handle, a tube extending through and beyond the handle at its outer end and having an opening through which the cord passes outward, a needle at the outer end of the tube, a sheath which normally incloses the outer end of the tube and the needle and is provided with a head 7, and a spring lying within the handle and acting against head 7 to hold the sheath at its normal position.

5. A device of the character described comprising a handle, a tube extending through and beyond the handle at one end and having an opening through which the cord passes outward, a needle at the outer end of the tube, a spring-actuated sheath which normally incloses the outer end of the tube and the needle and is provided with a recess 13, a sleeve 9 in the handle through which the sheath passes freely and a screw-pin in the sleeve which engages the recess to hold the sheath against rotation.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK M. JOHNSON.

Witnesses:

W. E. BROWN,
HENRY HOAR.