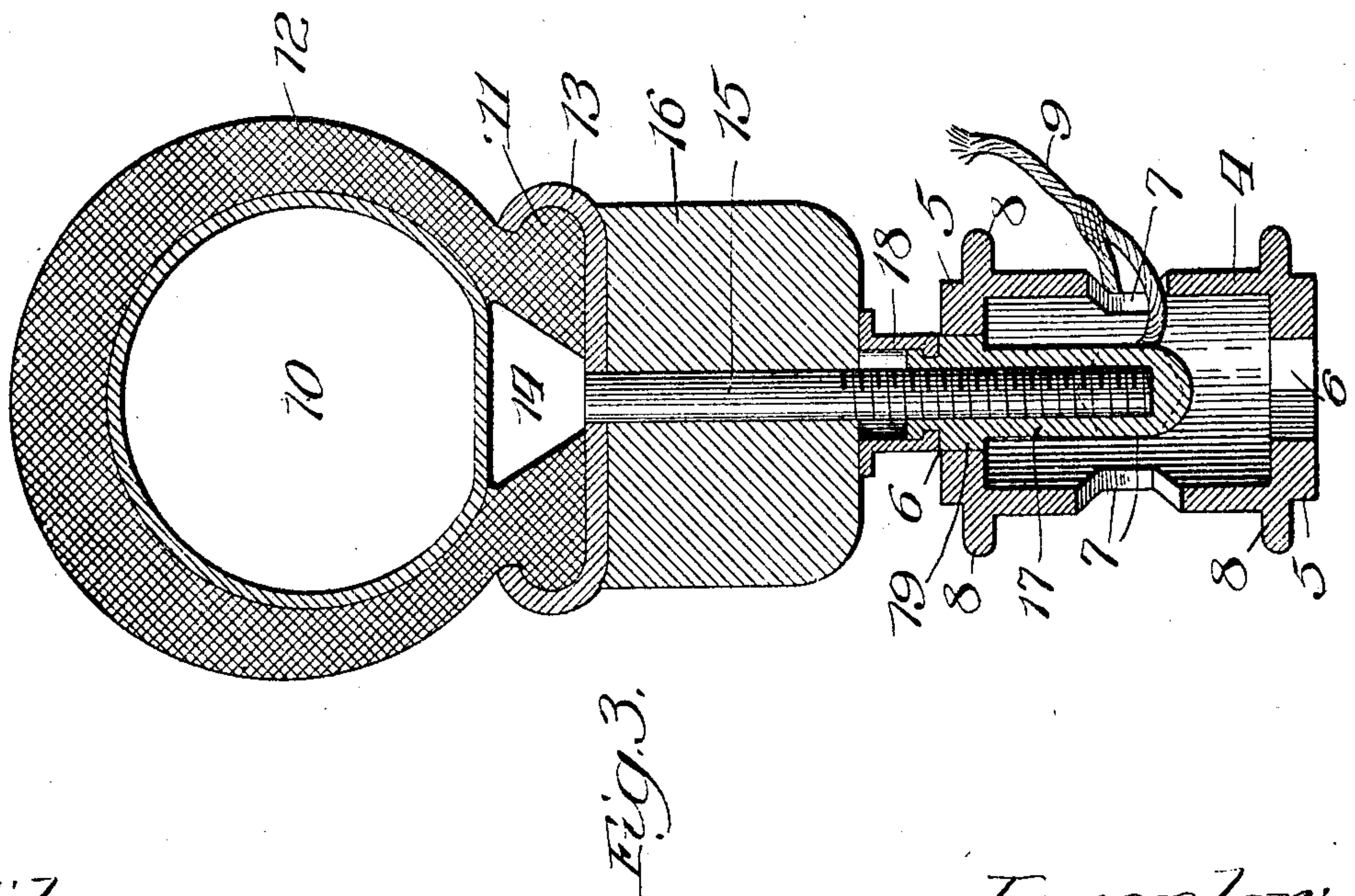
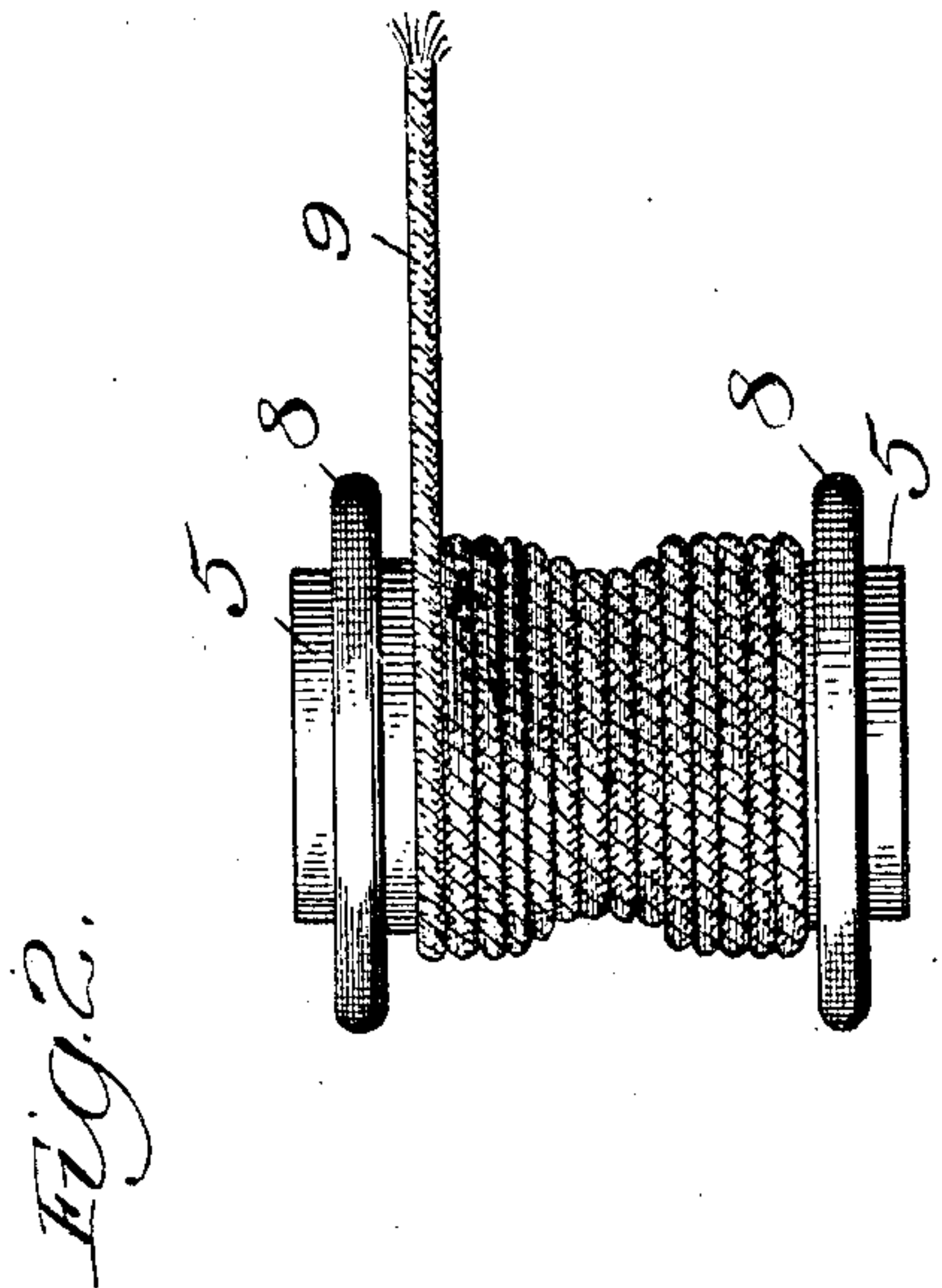
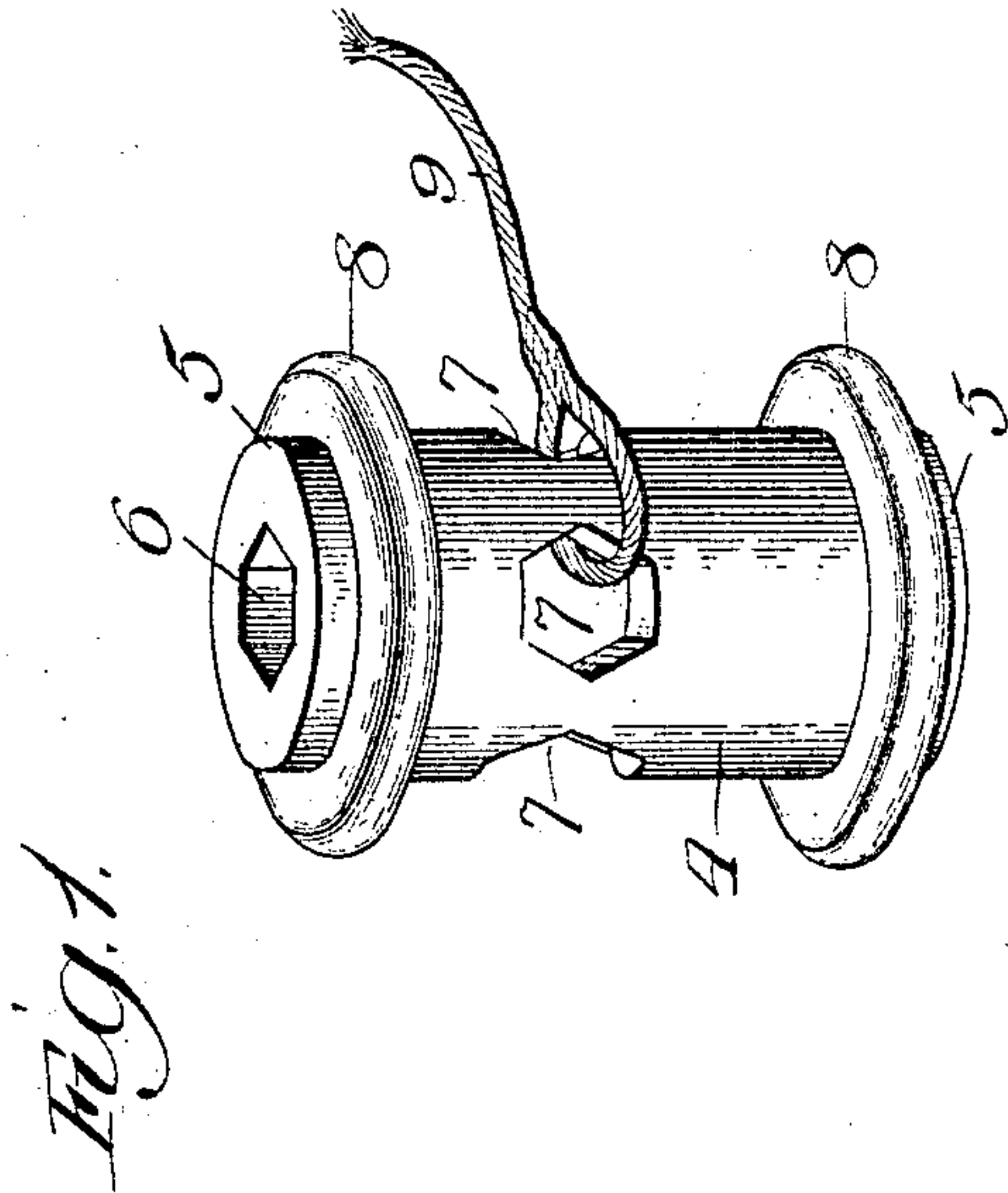


No. 871,415.

PATENTED NOV. 19, 1907.

J. KELLY.
WRENCH.

APPLICATION FILED AUG. 12, 1907.



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UNITED STATES PATENT OFFICE.

JOHN KELLY, OF CHICAGO, ILLINOIS.

WRENCH.

No. 871,415.

Specification of Letters Patent.

Patented Nov. 19, 1907.

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To all whom it may concern:

Be it known that I, JOHN KELLY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have
5 invented a new and useful Improvement in Wrenches, of which the following is a specification.

The primary object of my invention is to provide a novel construction of wrench
10 which shall afford to it the advantages in use hereinafter pointed out.

In the accompanying drawing, Figure 1 is a perspective view of my improved wrench; Fig. 2, a view of the same in side elevation
15 with a cord wound about its barrel by which to operate it, and Fig. 3, a view in sectional elevation showing my improved wrench operatively applied to a particular purpose hereinafter described, for which, and analogous
20 purposes, I have more especially devised the tool.

The wrench consists, essentially, of an elongated body 4, preferably tubular and of the cylindrical or barrel shape illustrated,
25 with a head 5 on one end, or on each end as shown, containing a nut-shaped socket or opening 6, co-axial with the body, the openings, when provided in both ends, being of different sizes to render them nut-sockets to
30 fit nuts correspondingly varying in size; and the barrel is provided with a plurality of thumb-and-finger gripping points, preferably in a series about the barrel. The most desirable form of these grips is that represented
35 of openings, and whatever their form they may be shaped to constitute nut-sockets 7 of varying sizes to fit different-sized nuts.

As shown, my improved device affords a
40 multiple wrench in the form of a spool provided with the similar end-flanges 8 about the bases of the heads 5. The tubular body 4, whether of the circular cross-sectional shape represented or of other shape in cross-
45 section, adapts it to have wound about it a cord 9, or other suitable flexible medium, such as a chain, to afford a medium through which to readily apply sufficient force for quickly and continuously unscrewing a tight
50 nut or for screwing a nut into place.

The more important advantages of my invention are demonstrable by the showing in Fig. 3. This showing presents one of many conditions unfavorable, because inconvenient to the use of the ordinary handle-

equipped form of wrench in presenting obstructions to the application thereof, for continuous turning, that is turning without requiring that the tool be applied to a nut for partially turning the latter, then, to
60 avoid an obstruction, removed and reapplied, to perform another partial turn until the handle again encounters the obstruction, and that these performances be repeated until the nut is completely turned, or sufficiently
65 loosened (in unscrewing it) to enable the operator to complete the turning by working the nut with his thumb and a finger or fingers. The showing referred to is that of a pneumatic tire 10 of the so-called "clencher"
70 type, having the beaded edges 11 of its outer covering 12 spread outwardly into and keyed in the socket-like lateral edges of the wheel-rim 13 through the medium of wedge-shaped heads, of which a number are employed,
75 suitably spaced apart, each head being like that represented at 14 and having a stem 15 passing through the rim and the felly 16, beyond which its threaded end projects between the wheel-spokes (not shown) forming
80 the aforementioned obstructions. A nipple 17, having its inner end rotatably confined in a tubular flanged washer 18, has formed upon it adjacent to the washer a nut 19. While this tire-construction is well known,
85 the foregoing detailed description thereof will facilitate explanation of the use of my improved tool, which is applied as follows: The particular wrench-socket 6 that will fit a nut 19 is applied thereto over the nipple 17,
90 and the operator may then, with his thumb and fingers finding purchase in the gripping-places 7, turn the nut to unscrew or screw the nipple for releasing or tightening the head 14; or he may, before applying the
95 tool, wind the cord 9 about it, and after adjusting the wrench, turn it by exerting a pull on the cord to unwind it with the effect of forcibly and continuously turning it and the result of completely working the nipple
100 off or upon the stem 15, depending on the direction of rotating the wrench according to the function it is required to perform. In instances it may be desirable to apply a socket 7, in the body 4, to a nut 19, when the
105 cord 9, which is shown to have one end permanently fastened to the wrench-body through a socket 7, may be wound, for the described use, endwise about the tool.

As will be seen, my improved construction 110

of wrench, when applied to a nut, adapts it to be turned, in either manner described, without hindrance from any obstruction, such as a spoke in the example specified, that
5 would be encountered by the handle of the ordinary form of wrench referred to, besides facilitating the application of the tool to a nut in any situation. Obviously, also, if desired, or when required, for turning the
10 wrench, a rod or other suitable form of handle may be inserted through openings affording the nut-sockets, as a lever-afford-
ing medium for turning the tool.

What I claim as new and desire to secure
15 by Letters Patent, is—

1. As a new article of manufacture, a wrench comprising a tubular body having about it a plurality of nut-sockets forming gripping-points, and provided with end-
20 flanges and heads on its ends containing nut-sockets and a cord, or the like, on the barrel.

2. In combination, a wrench comprising a barrel provided with an end nut-socket co-axial therewith, and a cord, or the like, on 25 the barrel, for the purpose set forth.

3. In combination, a wrench comprising a barrel provided with an end nut-socket co-axial therewith, and having nut-sockets about it forming gripping-points, and a cord, 30 or the like, on the barrel, for the purpose set forth.

4. In combination, a wrench comprising a cylindrical body provided with a head containing a nut-socket co-axial with said body, 35 and a circumferential series of openings forming nut-sockets and gripping-points, and a cord, or the like, secured to the barrel, for the purpose set forth.

JOHN KELLY.

In presence of—

J. H. LANDES,
W. T. JONES.