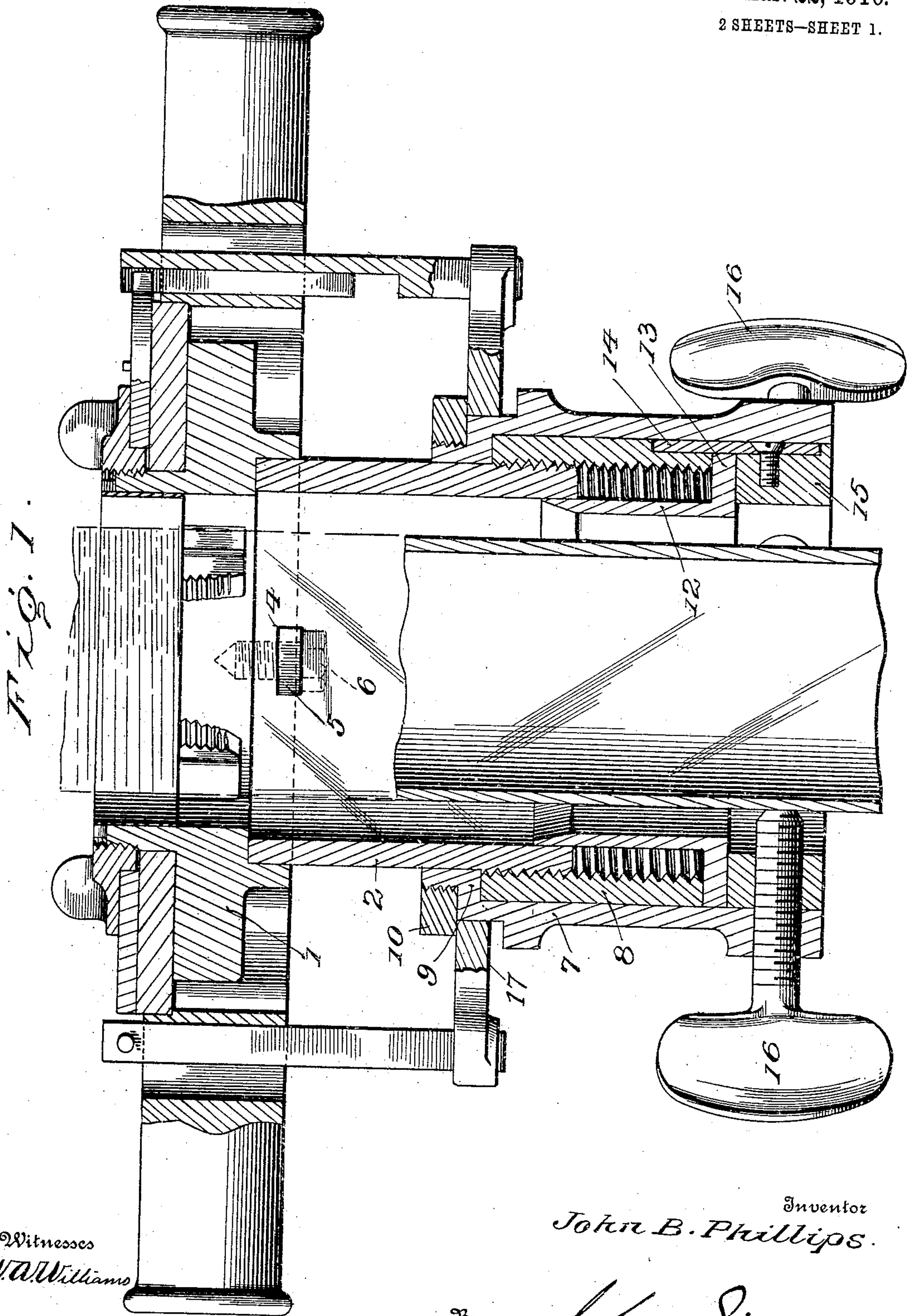


J. B. PHILLIPS.
PIPE THREADING TOOL.
APPLICATION FILED NOV. 25, 1908.

952,629.

Patented Mar. 22, 1910.

2 SHEETS—SHEET 1.



Witnesses
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By

[Signature]

Attorney

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2 SHEETS—SHEET 2.

Fig. 2.

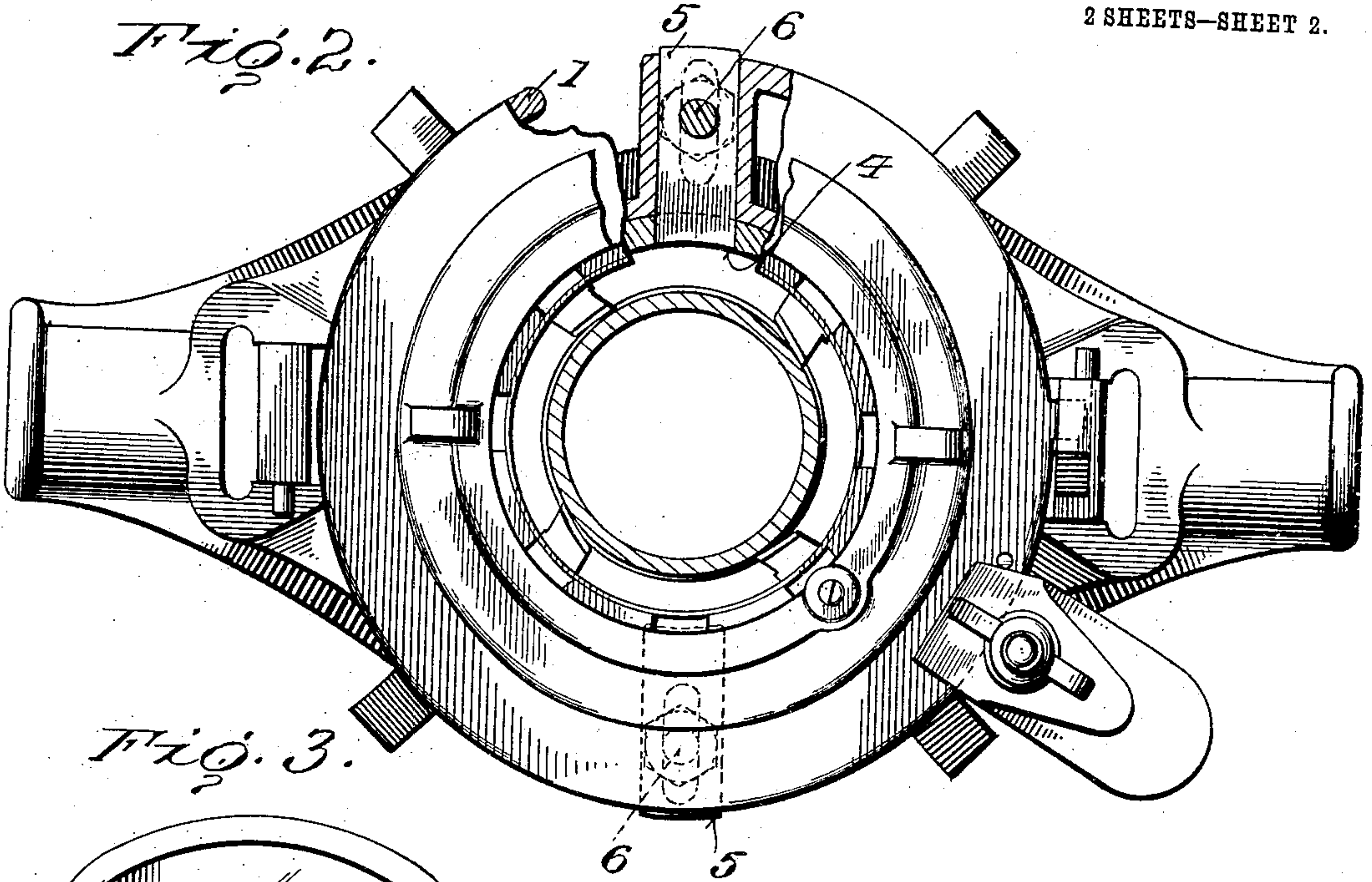


Fig. 3.

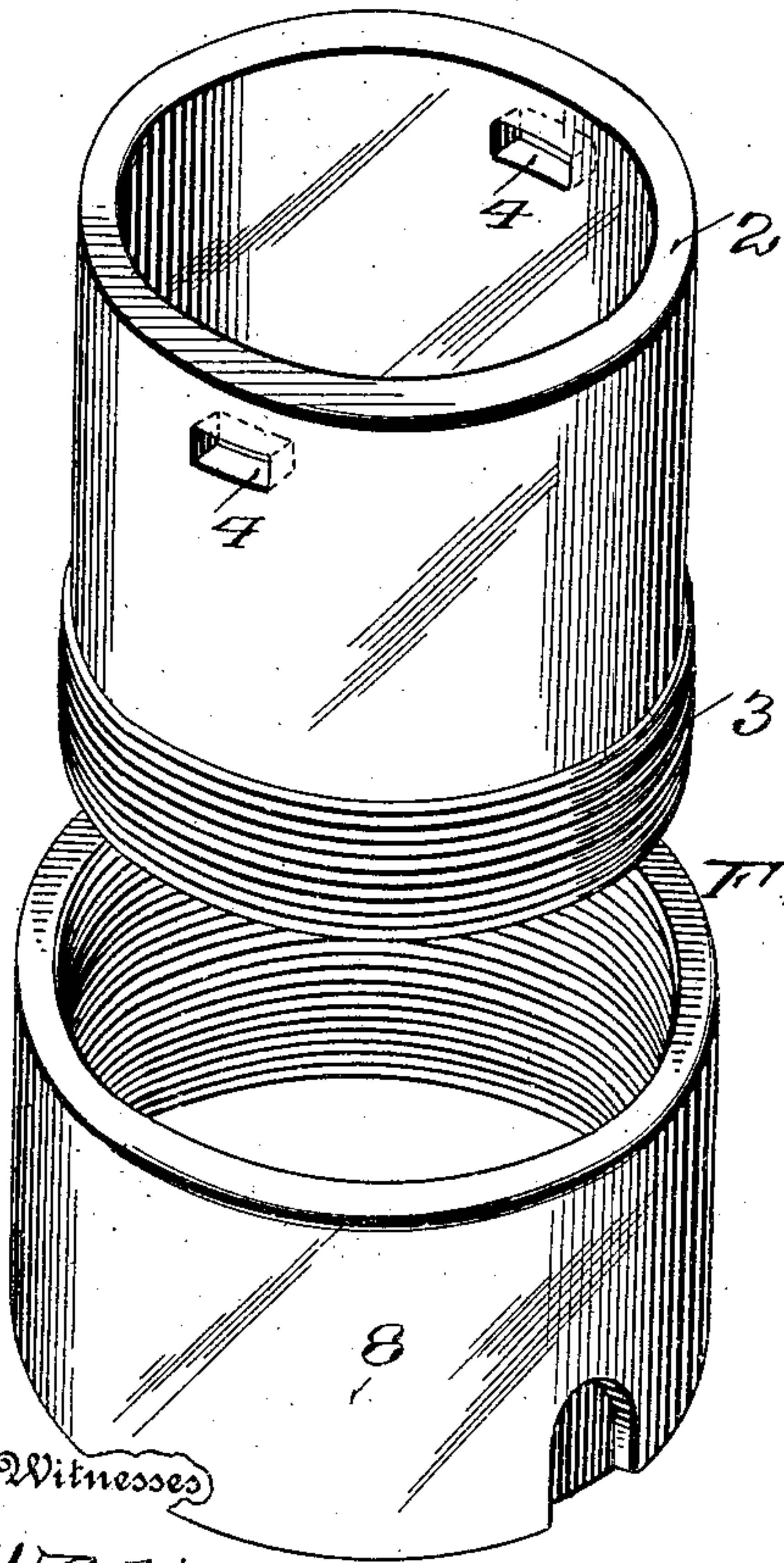


Fig. 5.

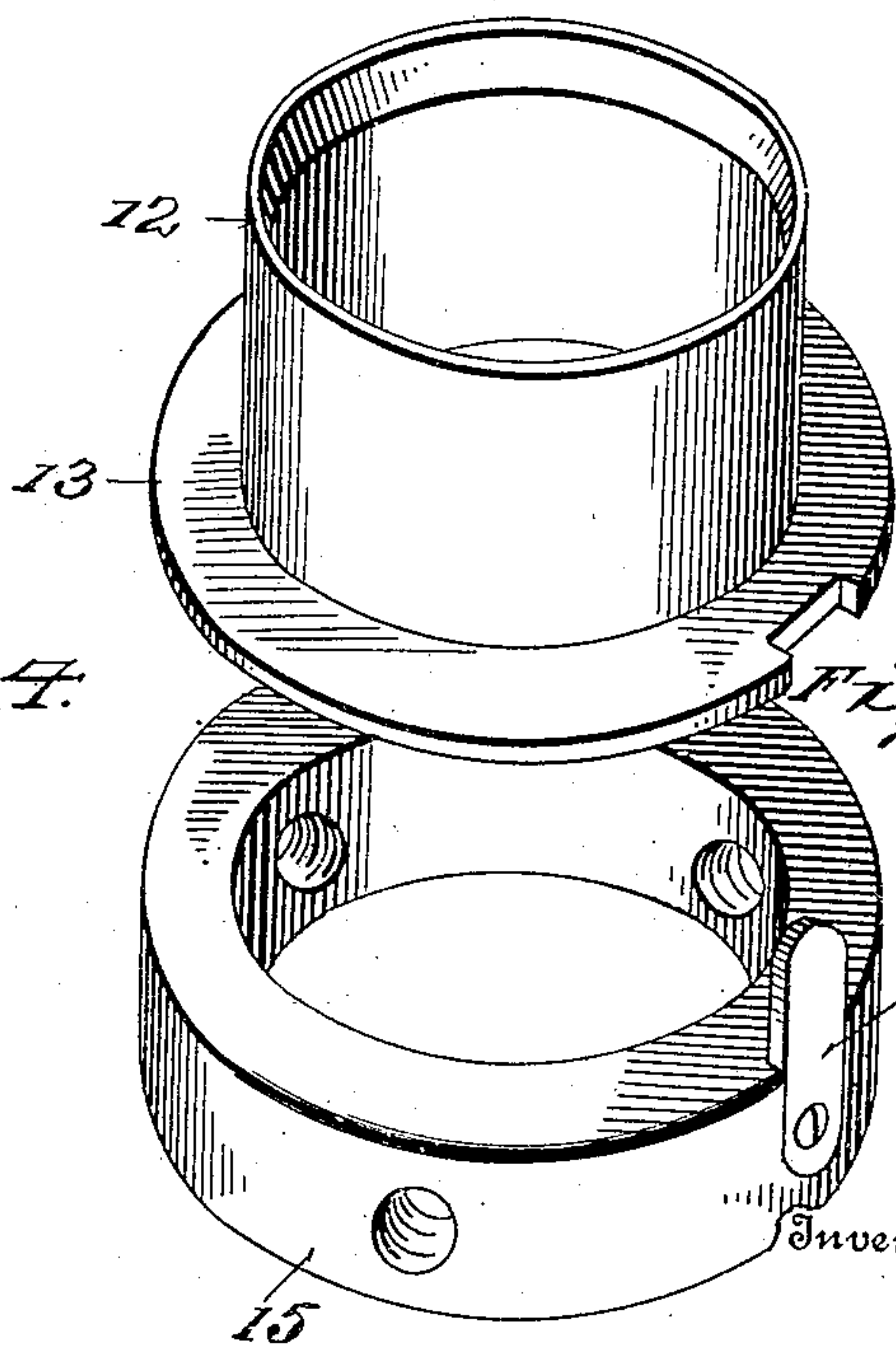


Fig. 4.

Fig. 6.

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UNITED STATES PATENT OFFICE.

JOHN B. PHILLIPS, OF WARREN, OHIO, ASSIGNOR TO THE BORDEN COMPANY, OF WARREN, OHIO, A CORPORATION OF OHIO.

PIPE-THREADING TOOL.

952,629.

Specification of Letters Patent. Patented Mar. 22, 1910.

Application filed November 25, 1908. Serial No. 464,351.

To all whom it may concern:

Be it known that I, JOHN B. PHILLIPS, of Warren, in the county of Trumbull and State of Ohio, have invented certain new and useful Improvements in Pipe-Thread-
5 ing Tools; 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 apper-
10 tains to make and use the same.

In the class of tools now in general use for cutting threads on pipes or bolts lead screws are almost invariably necessary for ease in starting and to insure the proper
15 pitch and proportioning of the thread. The use of lead screws has heretofore been open to serious objection because grit and pipe cuttings strip the threads or cause the stock to bind. Then again, the presence of any
20 foreign substance results in the premature wear of the threads.

The primary object of my invention is to provide improved means for obviating all the difficulties above recited, and thus pro-
25 long the life of a tool, increase its range of efficiency, and reduce the cost of replacing injured parts.

The invention will be hereinafter fully set forth and particularly pointed out in the
30 claims.

In the accompanying drawings, Figure 1 is a vertical longitudinal sectional view of a threading tool equipped with my improve-
35 ment. Fig. 2 is an end view, parts being broken away. Fig. 3 is a view of the lead screw detached. Fig. 4 is a view of the co-operating threaded member of the work-
holder. Fig. 5 is a view of the inner guard band. Fig. 6 is a view of the locking ring.

Referring to the drawings, 1 designates the housing which has on its rear face a circular seat for one end of a sleeve 2, the exterior of which is smooth save for lead-
45 screw threads 3 extending a short distance inwardly from the free end. I have shown this sleeve as having in its wall opposite slots 4 at right angles to its axis for receiving the ends of plates 5 which are held by bolts 6 to the rear face of the housing, such
50 bolts being passed through slots in such plates. By this means the lead screw sleeve is rendered detachable from the housing, it being necessary to only loosen bolts 6 and slide plates 5 outwardly. Thus a new lead

screw, or one differently threaded, may be 55 readily substituted.

The work-holder comprises a cylindrical barrel 7 and an interiorly threaded collar 8 in which the thread of the lead screw works. The collar 8 fits within barrel 7 and
60 seats against an inwardly extended flange 9 of the barrel, the prolongation of this flanged portion fitting against the smooth or unthreaded portion of sleeve 2, while its exterior is threaded to receive a retaining
65 nut or ring 10.

12 designates an inner guard band carried by the work-holder and extending into the bore of sleeve 2 by which it is telescoped. This band at its outer end has a flange 13
70 which serves to retain collar 8 in position, and it is locked thereto by a key plate 14 carried by a locking ring 15 held within the end of barrel 7 by the ordinary pipe centering screws 16. In this way the
75 several parts constituting the work-holder are fixedly held together. The flanged or reduced portion of barrel 7 prevents any foreign substance entering from without the thread of the lead screw, while the
80 flanged band 12 effectively excludes entrance from within, protecting alike the thread of the lead screw and the thread of the collar.

As is well known, threading tools are centered on the pipe to be threaded, and as
85 the operation progresses the housing, together with the lead screw, travels toward the work-holder. As the lead screw works in collar 8 it further telescopes the inner guard band 12 and the outer barrel 7, both
90 of which being in close contact with the sleeve of the lead screw effectively exclude foreign substances.

It is manifest that my present improvements are adaptable to various styles of
95 threading tools and machines. I have shown them applied to a well known form of threading tool in which the radially arranged chasers are caused to recede by the axial rotation of a chaser-engaging plate,
100 which rotation is effected by means mounted on the work-holder, the support for such means, in the present instance, being shown as a band 17 held on the work-holder by
105 nut 10.

The advantages of my invention will be apparent to those skilled in the art to which it relates. It will be observed that by pro-

protecting the lead screw as well as the co-operating member of the work-holder all danger of the threads being injured by pipe cuttings etc. is obviated, and the life of
5 such threads is prolonged.

I claim as my invention:—

1. In a pipe threading tool, in combination, a housing, a sleeve extending therefrom threaded at one end, a barrel telescoping
10 said sleeve and having an inwardly extended flange at its inner end forming a circular shoulder, an interiorly threaded collar within said barrel held against said
15 shoulder, said collar engaging the thread of said sleeve, a guard band fitted within said sleeve and having an outwardly-extended flange bearing against the outer edge of said
20 collar, a locking ring, means for securing the latter to said barrel, and a key for uniting said ring, guard band and collar.

2. In a pipe threading tool, in combination, a housing, a sleeve extending therefrom

threaded at one end, a barrel telescoping said sleeve and having an inwardly extended flange at its inner end forming a circular
25 shoulder, an interiorly threaded collar within said barrel held against said shoulder, said collar engaging the thread of said sleeve, a guard band fitted within said sleeve and having an outwardly-extended
30 flange bearing against the outer edge of said collar, said flange and collar having coincident grooves, a locking ring detachably held within the outer end of said barrel, and a key-plate secured to said ring
35 and fitted in said grooves.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

JOHN B. PHILLIPS.

Witnesses:

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GRANDON MORAN.