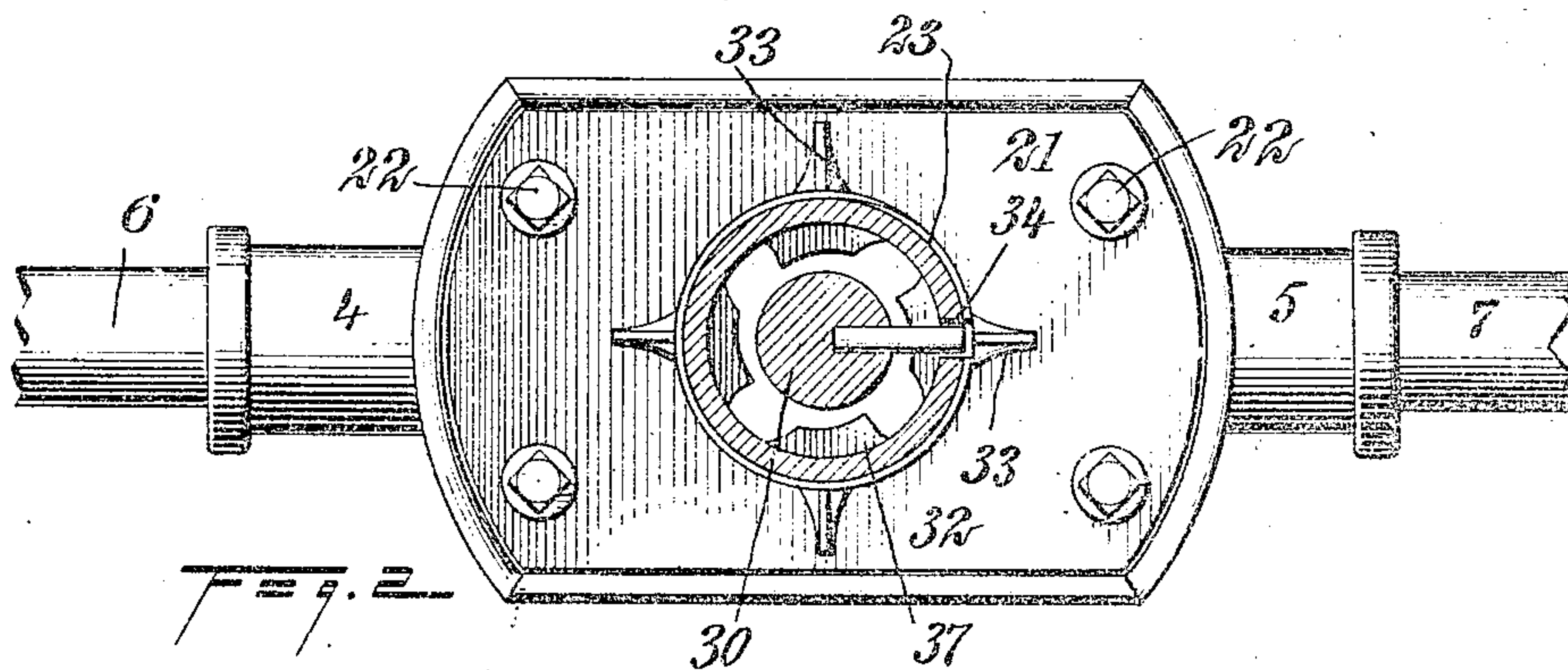
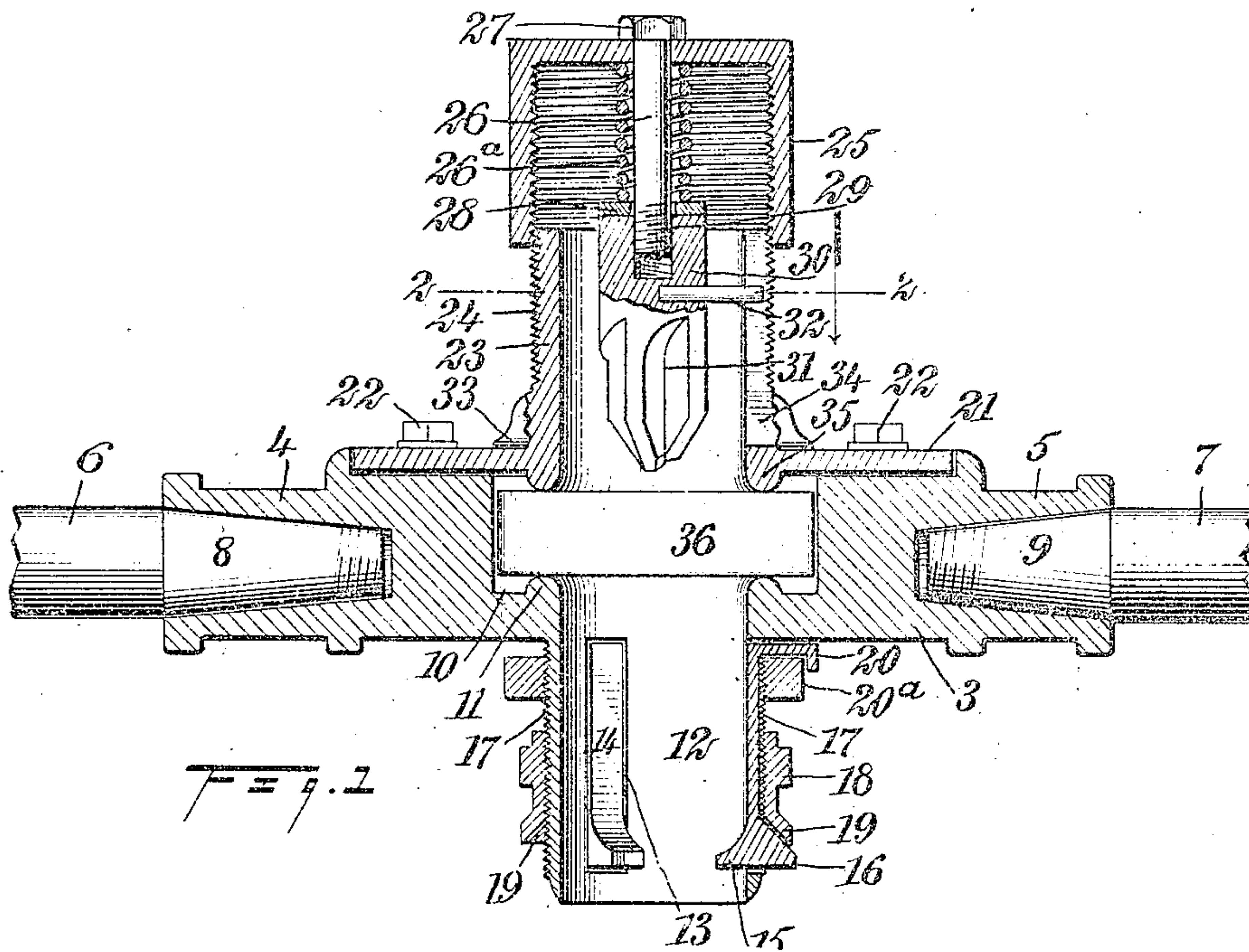


No. 816,304.

PATENTED MAR. 27, 1906.

J. J. DELEHANT.  
COMBINED REAMER AND DIE STOCK.

APPLICATION FILED MAR. 7, 1905



WITNESSES:

*John J. Kittle*  
*Walton Harrison*

INVENTOR

*John J. Delehant*

BY

*Wm. W. Delehant*

ATTORNEYS



# UNITED STATES PATENT OFFICE.

JOHN J. DELEHANT, OF CHICAGO, ILLINOIS.

## COMBINED REAMER AND DIE-STOCK.

No. 816,304.

Specification of Letters Patent.

Patented March 27, 1906.

Application filed March 7, 1905. Serial No. 248,891.

*To all whom it may concern:*

Be it known that I, JOHN J. DELEHANT, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Combined Reamer and Die-Stock, of which the following is a full, clear, and exact description.

My invention relates to mechanism for threading and reaming pipes, and more particularly to a reamer to be connected with a die-stock in such manner as to accomplish both the threading and the reaming at a single operation. Any ordinary die-stock may be employed in this relation.

My invention further relates to certain adjusting mechanism and other constructional details in apparatus of the character stated, all as described below, and pointed out in the accompanying claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the figures.

Figure 1 is a fragmentary longitudinal section through a die-stock made in accordance with my invention, and Fig. 2 is a horizontal section through the same upon the line 2-2 of Fig. 1 looking in the direction of the arrow.

The body portion of a die-stock is shown at 3 and is provided with sleeves 4 5 integral therewith, these sleeves being fitted with handles 6 7, provided with conical ends 8 9, preferably threaded and of such conformity as to fit neatly into said sleeves. The body portion 3 is further provided with a chamber 10 and with an annular clamping portion 11, concentric thereto. Extending downwardly from the body portion 3 and forming a continuation thereof is a barrel 12, provided with a number of radially-disposed slots 13, each of which accommodates an adjustable jaw 14. Each jaw is provided with a dog 15 integral therewith, and is also provided with a beveled portion 16. The exterior of the barrel 12 is provided with a thread 17, upon which is revolvably fitted a collar 18, provided with a flared portion 19. When the collar 18 is turned, it causes the dogs 15 to approach or recede from each other, as the case may be, according to the direction of rotation. Each jaw 14 terminates at its upper end in a hook 20, which rests upon an annular support 20<sup>a</sup>, the latter being threaded internally and fit-

ted upon the threaded barrel 12. A plate 21 is detachably connected by bolts 22 with the body portion 3 of the die-stock. This plate 21 is provided with a cylindrical portion 23 integral therewith and extending upwardly therefrom, this portion being provided externally with a thread 24. A cap 25, threaded internally, as shown in Fig. 1, fits upon the cylindrical portion 23 and may be adjusted upward or downward relatively thereto by turning. A bolt 26 is provided with an angular head 27 and is loosely fitted with a washer 28. This bolt is encircled by a spiral spring 26<sup>a</sup>. The lower end of the bolt 26 is provided with a thread 29. A reamer 30 is threaded internally and fitted upon the threaded end 29 of the bolt 26. The reamer 30 is provided at its lower end with cutting-surfaces 31 and is further provided with a pin 32, which projects in a lateral direction from the axis of the reamer, as indicated in Fig. 1. The cylindrical portion 23 is strengthened by means of braces 33 integral therewith and with the plate 21 and is further provided with a slot 34, into which the pin 32 projects, as shown. By rotating the head 27 the reamer 30 is raised or lowered, (according to the view shown in Fig. 1,) so that the pin 32 travels upward or downward within the slot 34. This action increases or decreases the tension of the spring 26<sup>a</sup>. The reamer 30 may therefore within certain limits be moved to any desired distance from the top of the barrel.

The plate 21 is provided with an annular clamping-plate 35, which mates the annular clamping portion 11, as will be understood from Fig. 1. Disposed intermediate of the annular clamping portions 11 and 35 is the thread-cutting die member 36, which is provided with the usual interrupted cutting edges 37.

As above indicated, my invention is used for cutting threads upon pipes and reaming these pipes during a single operation. The pipe is secured in a vise or otherwise held rigidly in position, and the barrel 12 is slipped over its end. By adjusting the member 18 the jaws 14 are drawn inwardly, so as to center the pipe. The bolt-head 27 is next turned into such position that the spring 26<sup>a</sup> has a proper degree of tension. The die-stock now being turned, the interrupted surfaces 37 cut threads upon its exterior, while the reamer forces its way slightly into the pipe. The travel of the die-stock incidental to the cut-



ting of the threads advances the reamer at a proper rate to ream the pipe. By turning the cap 25 such adjustment may be made that the same reamer can cut pipes of different diameters. For instance, a No. 1 reamer will ream from one-half inch to one inch pipe, while a No. 2 reamer will ream from one inch to two inch pipe. When the operation is completed, the die-stock is turned in the opposite direction, and thus removed from the pipe. The spring 26<sup>a</sup> is of considerable thickness, so as to exert a suitable tension upon the reamer, and thus force the same properly against the pipe.

15 Having thus described my invention, I claim as new and desire to secure by Letters Patent--

1. The combination of a die-stock provided with a barrel, said barrel having a slot, 20 a reamer mounted centrally within said barrel and provided with a pin projecting into said slot, a threaded bolt engaging said reamer for the purpose of gradually shifting the position thereof relatively to said barrel, 25 and spring mechanism for tensioning said reamer.

2. The combination of a die-stock provided with a barrel, a cap mounted upon said barrel and movable relatively thereto, a bolt connected with said cap, a spring encircling 30 said bolt, a reamer mounted within said barrel and connected with said bolt, and means for preventing rotation of said reamer relatively to said barrel.

3. The combination of a die-stock provided with a clamping member, a plate mounted upon said die-stock and provided with a second clamping member engaging the first clamping member, said plate being further provided with a barrel, a reamer mounted 40 within said barrel and adapted to engage a pipe, a spring for tensioning said reamer, means for adjusting said reamer, and a thread-cutting die engaged by said clamping members and also adapted to engage said pipe. 45

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

JOHN J. DELEHANT.

Witnesses:

GEO. W. TISCHART,  
RICHARD J. POWERS.