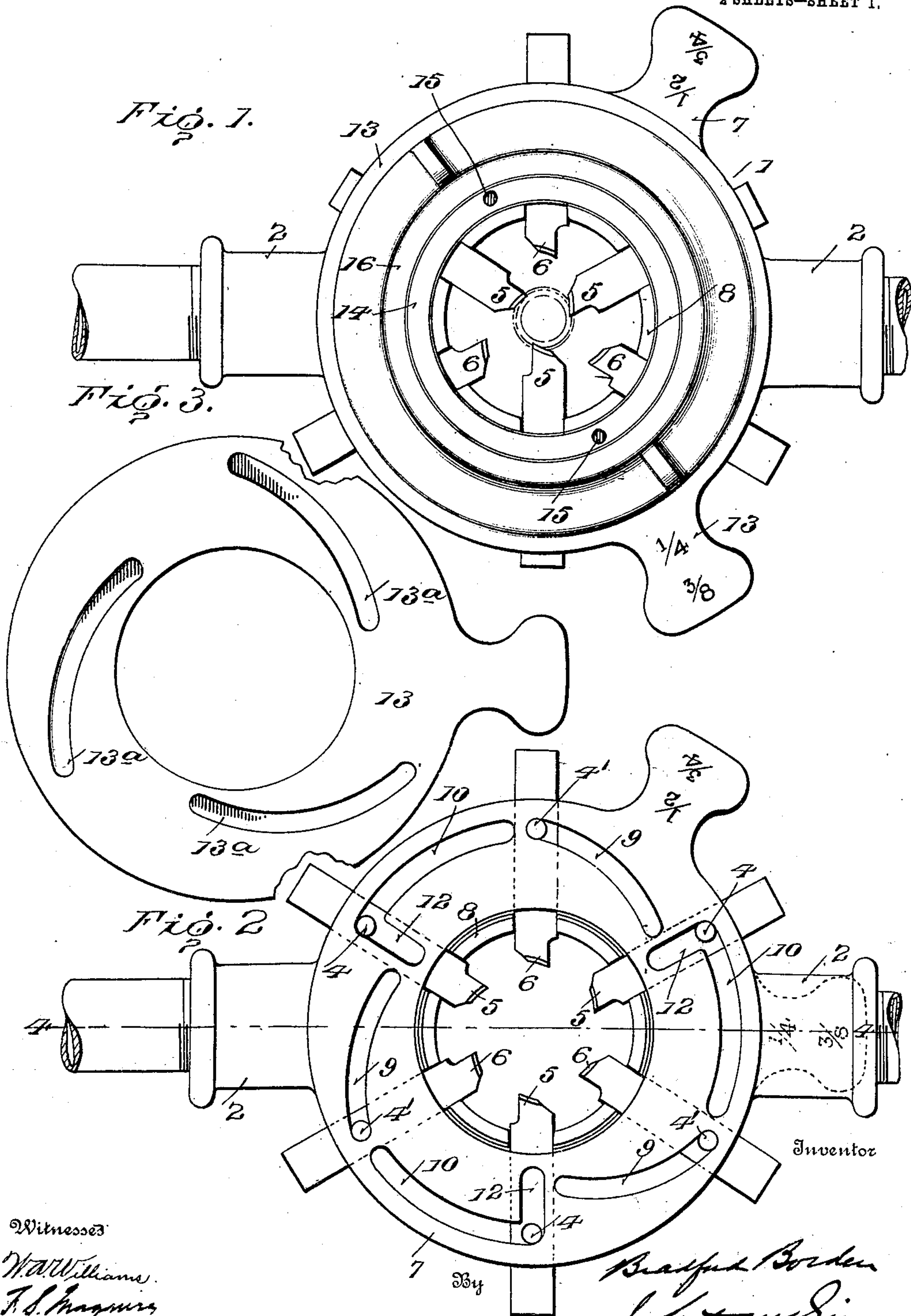


B. BORDEN.
PIPE THREADING TOOL.
APPLICATION FILED APR. 12, 1907.

924,963.

Patented June 15, 1909.

2 SHEETS—SHEET 1.



Witnessed
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Fig. 4.

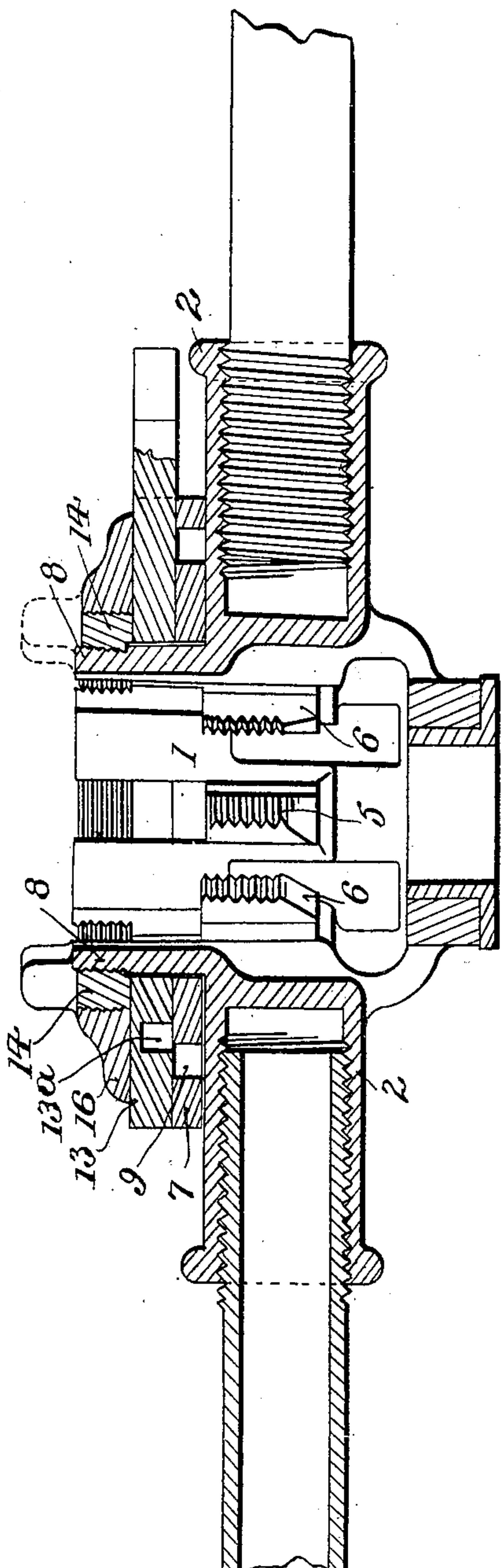


Fig. 6.

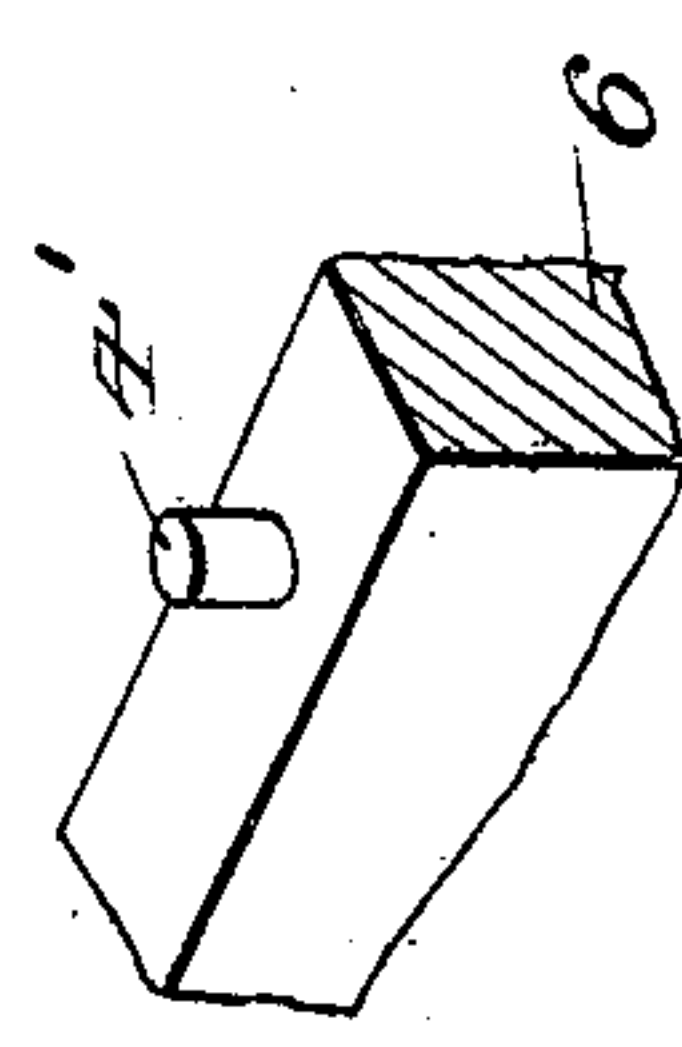
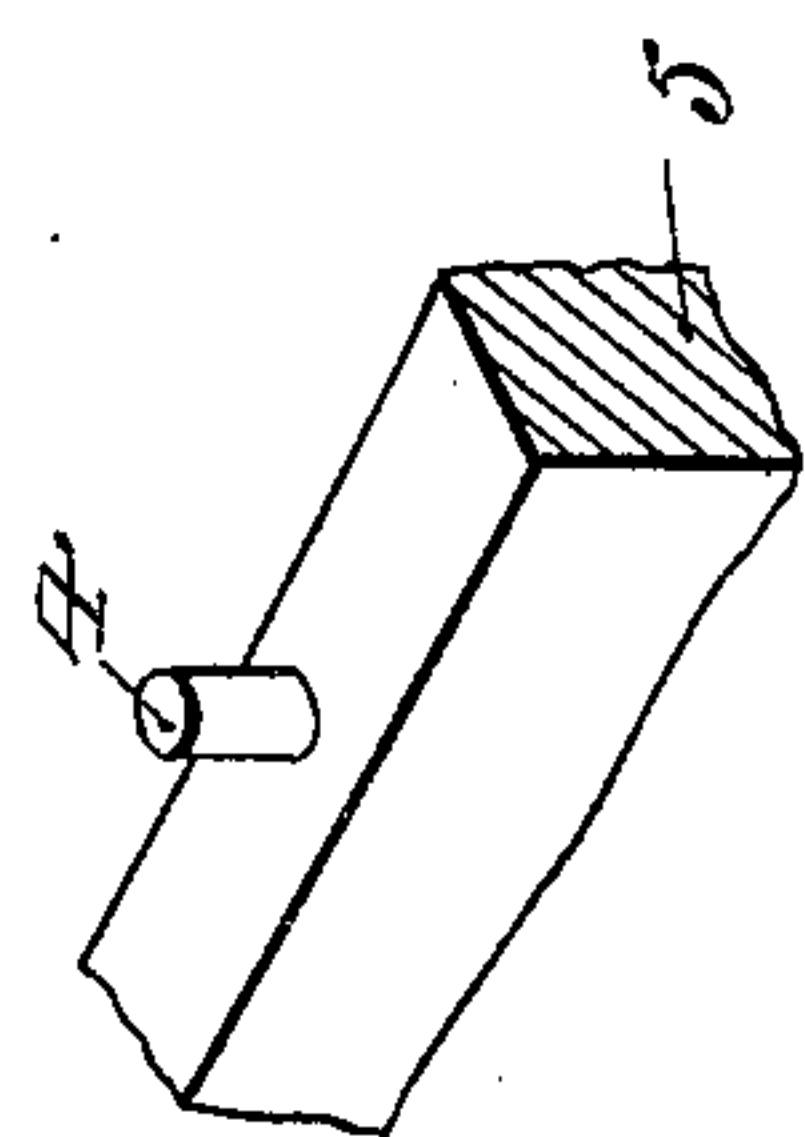


Fig. 5.



Witnesses

Pro Invenit
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UNITED STATES PATENT OFFICE.

BRADFORD BORDEN, OF WARREN, OHIO, ASSIGNOR TO THE BORDEN COMPANY, OF WARREN, OHIO, A CORPORATION OF OHIO.

PIPE-THREADING TOOL.

No. 924,963.

Specification of Letters Patent.

Patented June 15, 1909.

Application filed April 12, 1907. Serial No. 367,738.

To all whom it may concern:

Be it known that I, BRADFORD BORDEN, of Warren, in the county of Trumbull and State of Ohio, have invented certain new and useful Improvements in Pipe-Threading 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 appertains to make and use the same.

The object of this invention is to provide a threading tool capable of forming threads of different pitches on pipes, bolts and the like, of various sizes.

The invention comprehends, in a single die stock, a plurality of sets of chasers, the chasers of one set being held out of the way while the chasers of the other set are in operation.

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

In the accompanying drawings, Figure 1 is a plan view. Fig. 2 is a similar view, with one of the chaser-adjusting plates removed. Fig. 3 is a bottom face view of such plate. Fig. 4 is a section on line 4—4, Fig. 2. Figs. 5 and 6 are detail views.

Referring to the drawings, 1 designates the housing which I have shown as formed with the usual sockets 2 for the manipulating handles, and with radial guideways for the chasers. I have shown six chasers, three to a set, but preferably I employ sets of four. All the chasers of the two sets are on a common plane. Each chaser carries a lug projecting beyond the face of the housing, the lugs 4 of the chasers of the set 5 being of greater length than the lugs 4' of the chasers of the set 6.

7 designates a circular plate extending over the face of the housing and having a central opening to accommodate the central tubular portion 8 of the housing. The radial guideways also extend through the tubular portion. This plate 7 is formed with a series of eccentric slots 9 which take in the lugs 4' of the chasers of the set 6, so that by turning such plate axially the chasers will be moved radially, the extent of their adjustment being regulated according to the size of the pipe or bolt to be threaded. This plate also has a second set or series of slots 10 which are concentric to its axis. These latter slots take in

the lugs 4 of the chasers of the set 5, and have each at one end a branch or reëntrant slot 12. When the chasers of the set 5 are moved radially so that their respective lugs are within the end slots 12, the adjusting plate 7 and the chasers of the set 6 are locked; while when the plate 7 is turned axially to move the chasers of the set 6 radially the chasers of the set 5 are locked by the concentric walls of the slots 10. 13 designates a second circular plate, likewise having a central opening to accommodate the tubular portion 8, and formed on its under face with a series of eccentric slots or grooves 13^a for taking in the elongated lugs 4 of the chasers of the set 5. By turning this second plate 13 axially the chasers of the set 5 will be moved radially and at the same time the chasers of the set 6 are held locked by the locking of their adjusting plate 7. When it is desired to employ the chasers of the set 6 the chasers of the set 5 are thrown outwardly so as to position their lugs at the points of conjunction of slots 12 and the concentric slots 10, by the turning of plate 13, thereby permitting plate 7 to be turned to effect the shifting of the chasers of the set 6, and at the same time lock the chasers of the set 5.

14 designates a nut screwed onto the threaded end of the tubular portion 8, such nut serving to hold all of the parts to their seats, and at the same time allow of the free manipulation of either of the plates 7. This nut is preferably locked by a screw 15. A lock nut 16 screws on the exterior of nut 14, and is designed to bind the two adjusting plates and chasers in any position into which they may be set.

In practice, the chasers of one set are cut for forming a thread of less pitch than that formed by the chasers of the other set.

I claim as my invention:

1. A threading tool, comprising a housing, two sets of chasers, all on a common plane, adjustably mounted in said housing, means for adjusting each set of chasers, and means for automatically locking either set of chasers by the movement of the adjusting means of the other set of chasers.

2. A threading tool, comprising a housing, two sets of chasers adjustably mounted in said housing, separate adjusting plates for interlocking with and actuating said chasers, and means for automatically locking either

set of chasers and its adjusting plate by the movement of the adjusting plate of the other set of chasers.

3. A threading tool, comprising a housing,
5 two sets of chasers adjustably mounted in said housing, adjusting plates for the chasers, and means carried by one of the adjusting plates for locking the chasers of the other adjusting plate when the first mentioned adjusting plate and its chasers are free to be
10 moved.

4. A threading tool, comprising a housing, two sets of chasers adjustably mounted in said housing, adjusting plates for the chasers,
15 and means carried by one of the adjusting plates whereby it will be locked by the chasers of the other adjusting plate when the latter and its chasers are free to be moved.

5. A threading tool, comprising a housing,
20 two sets of chasers adjustably mounted in said housing, and adjusting plates for the chasers, one of said plates having means for locking one set of chasers when it and its chasers are in use, and also having means
25 whereby it and its chasers will be locked by the chasers of the other adjusting plate when such latter chasers and plate are in use.

6. A threading tool, comprising a housing, two sets of chasers radially mounted in said

housing, each chaser carrying a lug, an ad- 30
justing plate having two sets of slots, one set eccentric and the other concentric, the lugs of one set of chasers projecting into said eccentric slots and the lugs of the other set of
chasers into the concentric slots, said concentric slots opening each at one end into re- 35
entrant slots, and a second adjusting plate having eccentric slots for taking in the chaser-lugs extended through the concentric slots of the first-mentioned plate. 40

7. A threading tool comprising a housing having a central tubular portion integral therewith and radial guideways formed in the housing and said tubular portion, two
sets of chasers, all on a common plane, ad- 45
justably mounted in said guideways, each chaser having a lug, two plates on one side of said housing having each a series of eccentric slots for taking in the lugs of the chasers, and
means on said tubular portion for retaining 50
said plates.

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

BRADFORD BORDEN.

Witnesses:

FRANCIS S. MAGUIRE,
VERNON E. WEST.