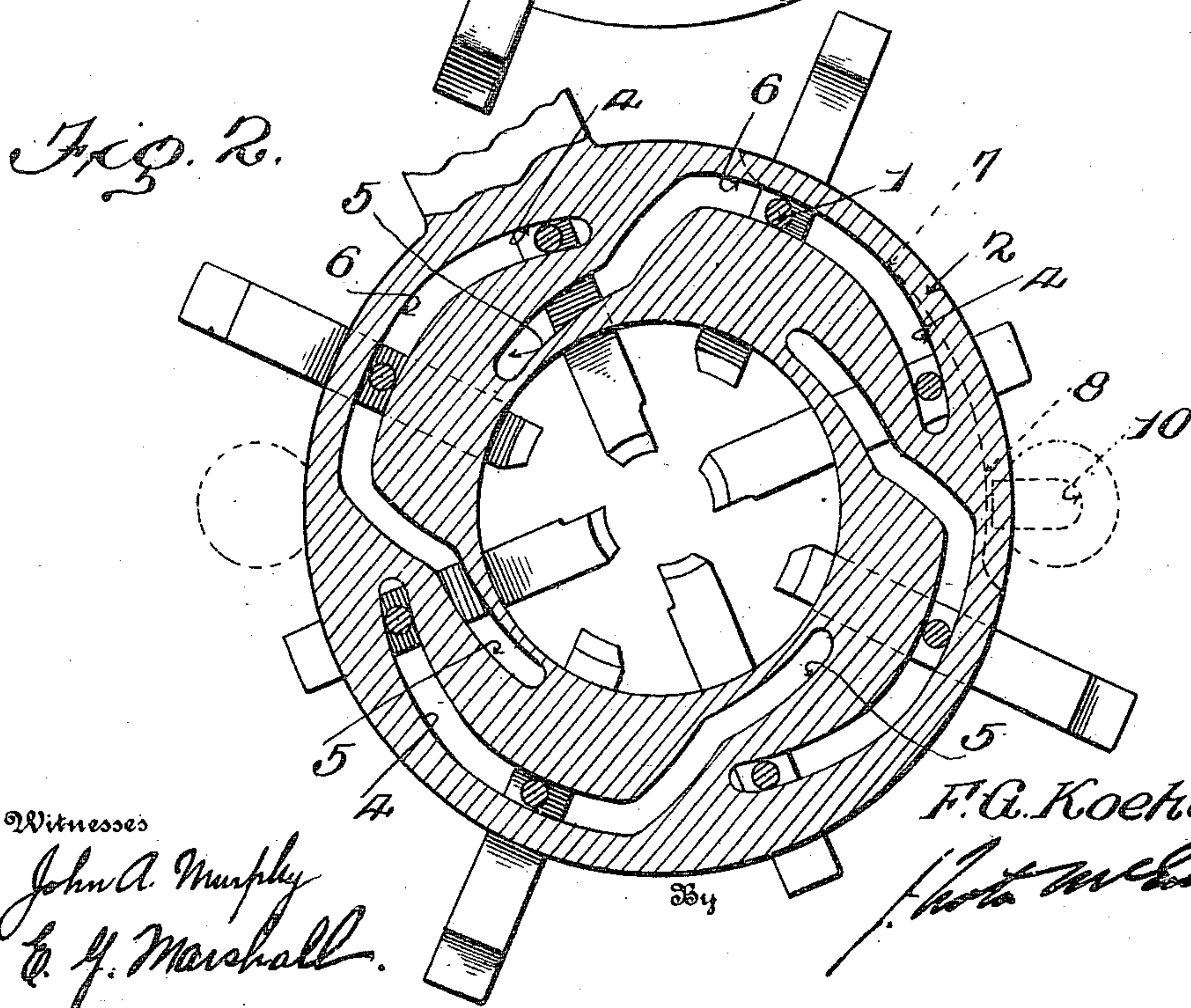
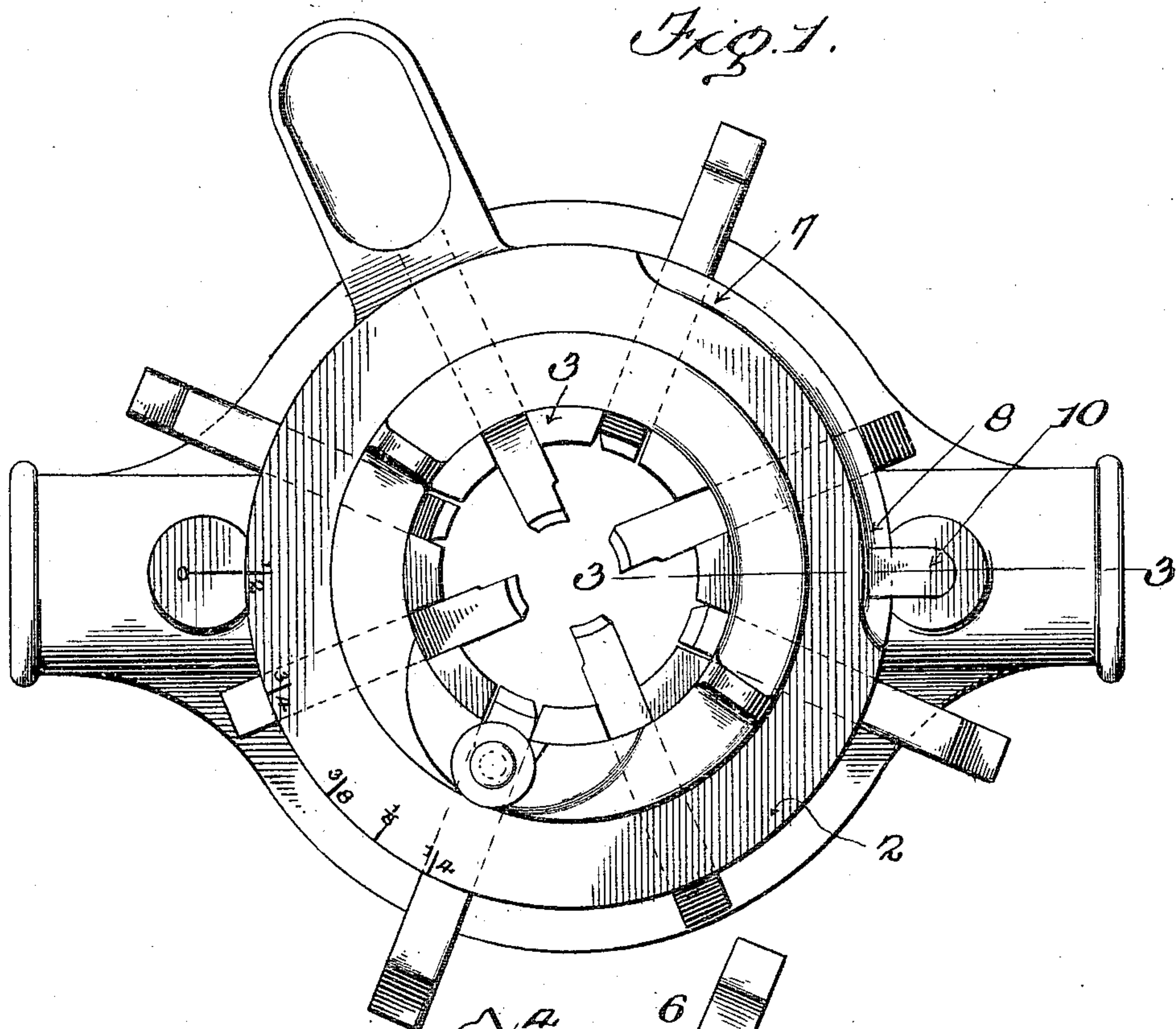


F. G. KOEHLER.
ADJUSTABLE DIE STOCK.
APPLICATION FILED AUG. 28, 1909.

964,435.

Patented July 12, 1910.

2 SHEETS—SHEET 1.



Witnesses
John A. Murphy
E. F. Marshall.

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F. G. Koehler

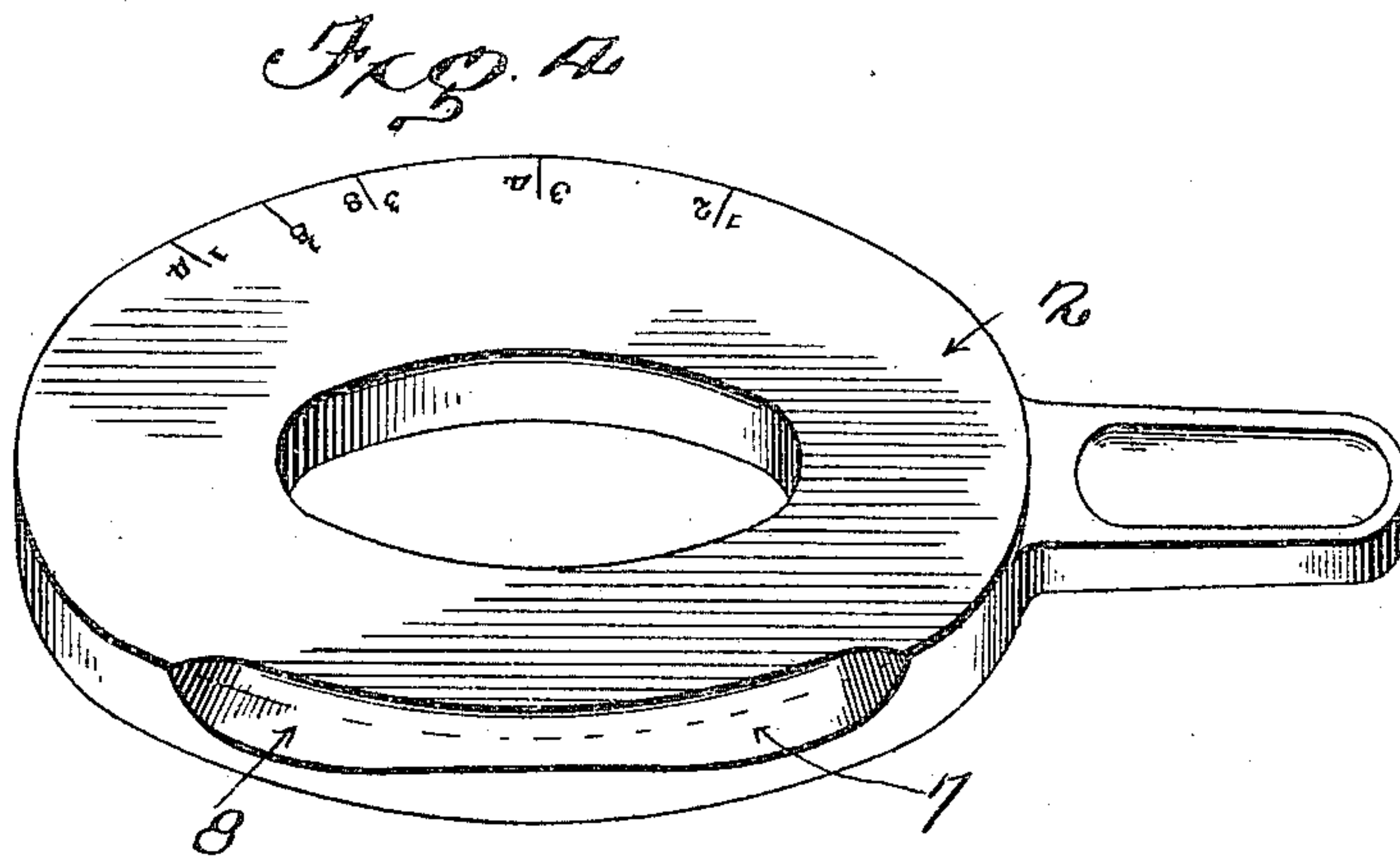
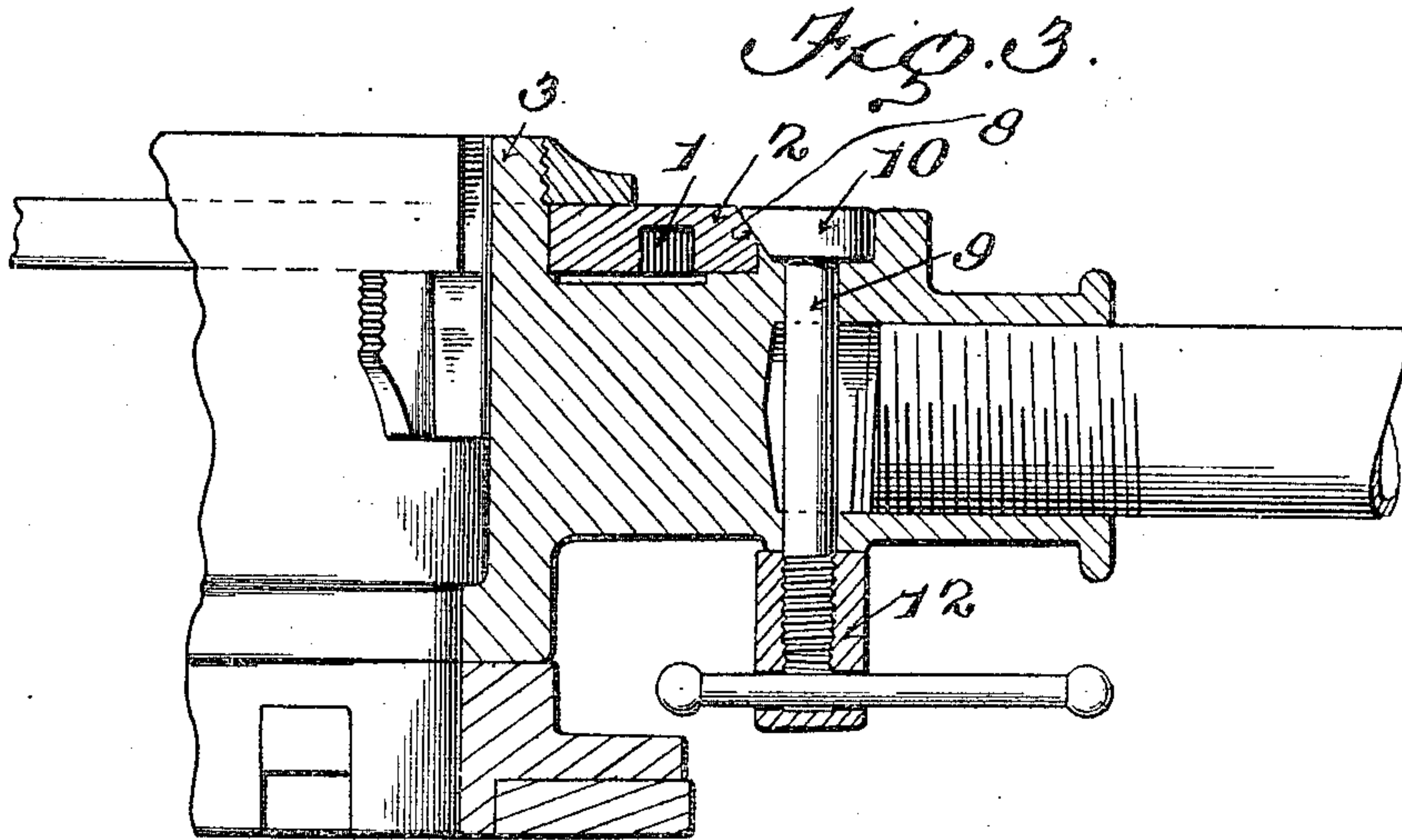
Attorney

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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

FREDERICK G. KOEHLER, OF WARREN, OHIO, ASSIGNOR TO THE BORDEN COMPANY,
OF WARREN, OHIO, A CORPORATION OF OHIO.

ADJUSTABLE DIE-STOCK.

964,435.

Specification of Letters Patent.

Patented July 12, 1910.

Application filed August 28, 1909. Serial No. 515,061.

To all whom it may concern:

Be it known that I, FREDERICK G. KOEHLER, of Warren, in the county of Trumbull and State of Ohio, have invented certain
5 new and useful Improvements in Adjustable Die-Stocks; 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 ap-
10 pertains to make and use the same.

In that class of pipe threading tools wherein one or more sets of chasers may be adjusted to thread pipes of different sizes it is customary to employ locking means for
15 frictionally holding the chaser adjusting plate in different positions. Owing to the tendency of the chasers to turn such plates axially by the outward pressure of the pipe against the chasers during the cutting operation it has heretofore been difficult to so lock
20 the chaser adjusting plates as to guard absolutely against slipping.

The object of my invention is to provide extremely simple and yet highly efficient
25 means for preventing slipping of the chaser adjusting plate after it is locked in position.

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

30 In the accompanying drawing, Figure 1 is a plan view of an adjustable pipe threading tool equipped with my improvement. Fig. 2 is a similar view, with the housing omitted, the chaser engaging plate being
35 shown in section. Fig. 3 is an enlarged sectional view on line 3—3, Fig. 1. Fig. 4 is a view in perspective of the chaser adjusting plate.

In the drawings I have shown a threading
40 tool having the general characteristics of the tool covered by Letters Patent of the United States No. 914,503, issued to Ira W. Nonneman on March 9, 1909, but such tool is shown merely to illustrate the applica-
45 bility of my improvement, which latter is not confined to any special type of threading tool. As pointed out in that patent each chaser of two sets of chasers is provided with a lug 1 for taking in separate slots on the
50 inner face of a chaser adjusting plate 2 which is axially rotatable on housing 3. Each of the slots is formed with two eccentric portions 4 and 5 and an intermediate concentric portion 6, the eccentric portions
55 forming the actuating agencies for the re-

spective sets of chasers, being inclined in opposite directions. The outward pressure on the chasers in threading a pipe tends to constantly turn the chaser adjusting plate and cause the chasers to move outwardly. 60 To overcome this tendency and prevent any accidental rotation of the chaser adjusting plate I form that portion of the plate with which the locking agency engages with an eccentric or cam-like surface inclined in op- 65 position to the inclination of the eccentric portion of the slot of the chaser adjusting plate with the result that the latter is prevented from rotating since the passage of a thickened portion of metal beneath the 70 locking agency is impossible.

In the present instance I have shown the cam adjusting plate as formed on its periphery with two oppositely extended cam surfaces 7 and 8; and as the locking agency I 75 have shown a rod 9 passed through an opening in the housing and having a head 10 beveled to engage the cam surfaces. This rod is shown as provided with a nut 12 by which it may be tightened to lock the 80 plate to the housing. In the present instance two cam surfaces are shown, extending in opposite directions, because the eccentric portions of the slots of the chaser adjusting plate are inclined in opposite di- 85 rections. The inclination of each cam surface is in direct opposition to the inclination of the respective eccentric portion of the cam slots. In consequence when the lock has been tightened to hold either set of 90 chasers in position for threading a pipe of a given size turning of the plate under the outward thrust of the chasers is impossible for that any such turning would cause a thickened portion of the metal to 95 engage the lock.

My invention is not confined to a pipe threading tool having any special number of chasers, nor is it confined to one wherein a single cam plate controls the positions of 100 two sets of chasers. The invention may be employed in connection with any adjustable pipe threading tool wherein the outward pressure of the pipe against the chasers during the cutting operation tends to turn the 105 chaser adjusting plate axially, and according to my invention such turning is prevented by forming that portion of the chaser adjusting plate with which the lock engages eccentrically to the axis of the plate, the 110

inclination of the eccentric surface being opposite to the inclination of the actuating portion of the plate with which the chasers engage.

5 I claim as my invention:

1. In a pipe threading tool having a series of radially arranged chasers and a rotatable chaser adjusting plate having eccentric portions engaging the chasers, a lock
10 for frictionally holding said chaser adjusting plate, said plate having an eccentric surface with which said lock engages, such eccentric surface being inclined oppositely to the inclination of the said eccentric chaser
15 engaging portions.

2. In a pipe threading tool having two sets of radially movable chasers and a rotatable adjusting plate having two series of

eccentric engaging portions for said sets of chasers, said eccentric engaging portions
20 being inclined in opposite directions, a locking agency for engaging said plate, which latter has two cam surfaces inclined in opposite directions with which the locking
25 agency is designed to engage, the inclination of each cam surface being in opposite direction to the inclination of one of the eccentric chaser engaging portions.

In testimony whereof, I have signed this specification in the presence of two sub-
30 scribing witnesses.

FREDERICK G. KOEHLER.

Witnesses:

M. W. BECHTEL,

ITHIEL B. TAYLOR.