

No. 786,990.

PATENTED APR. 11, 1905.

C. W. PHILLIPS.
SCREW CUTTING TOOL.
APPLICATION FILED APR. 25, 1904.

Fig. 1.

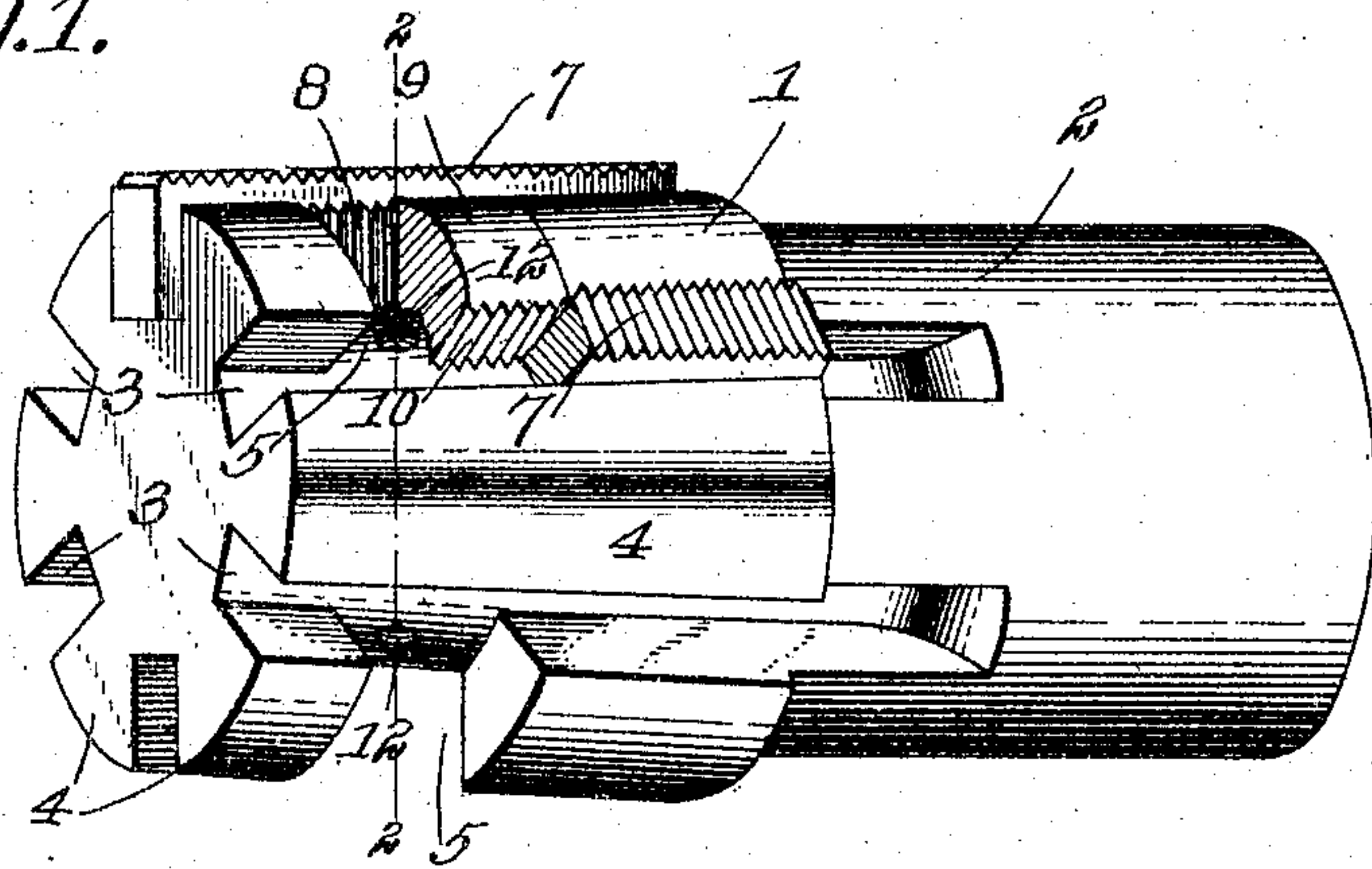


Fig. 2.

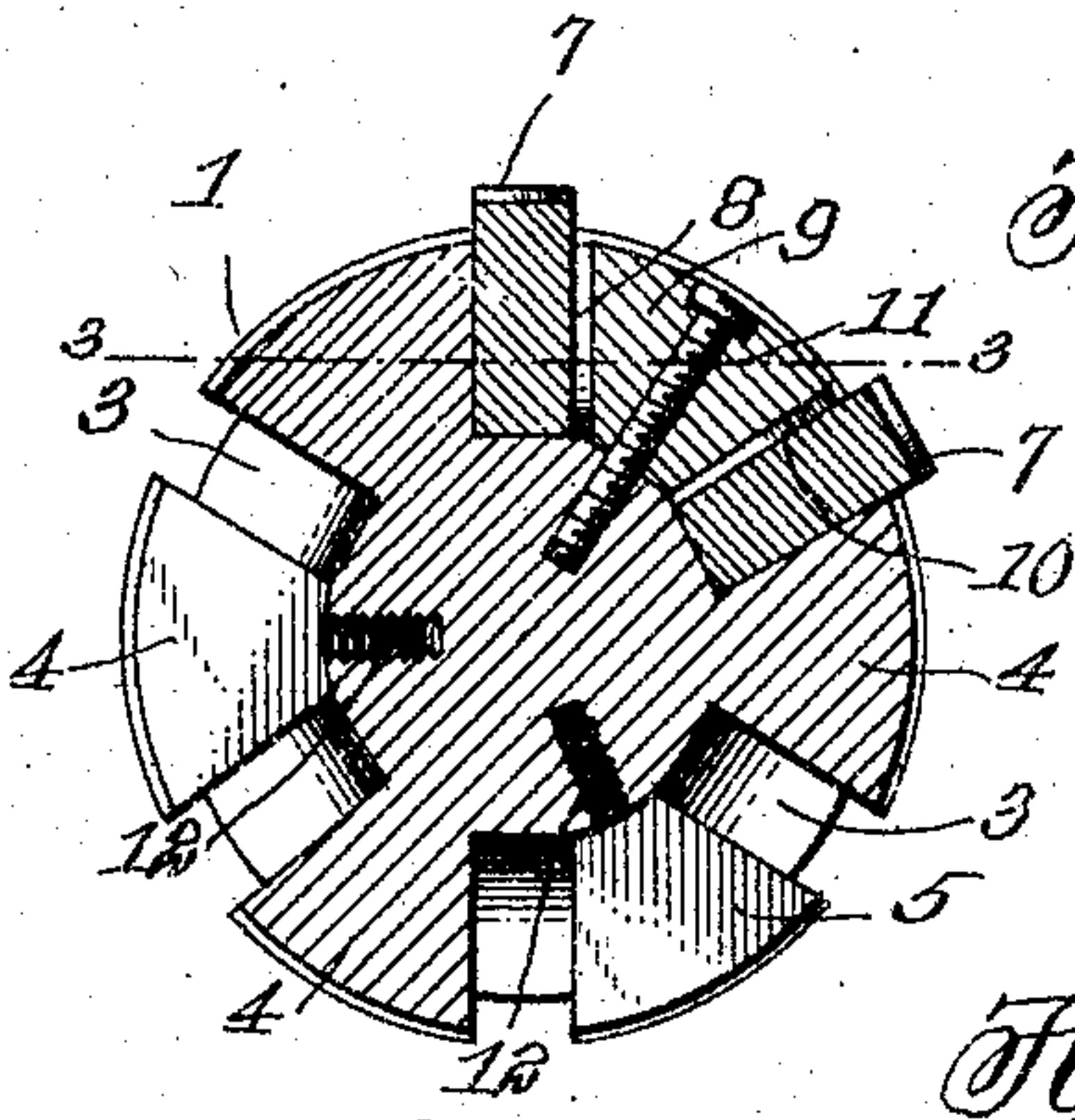


Fig. 3.

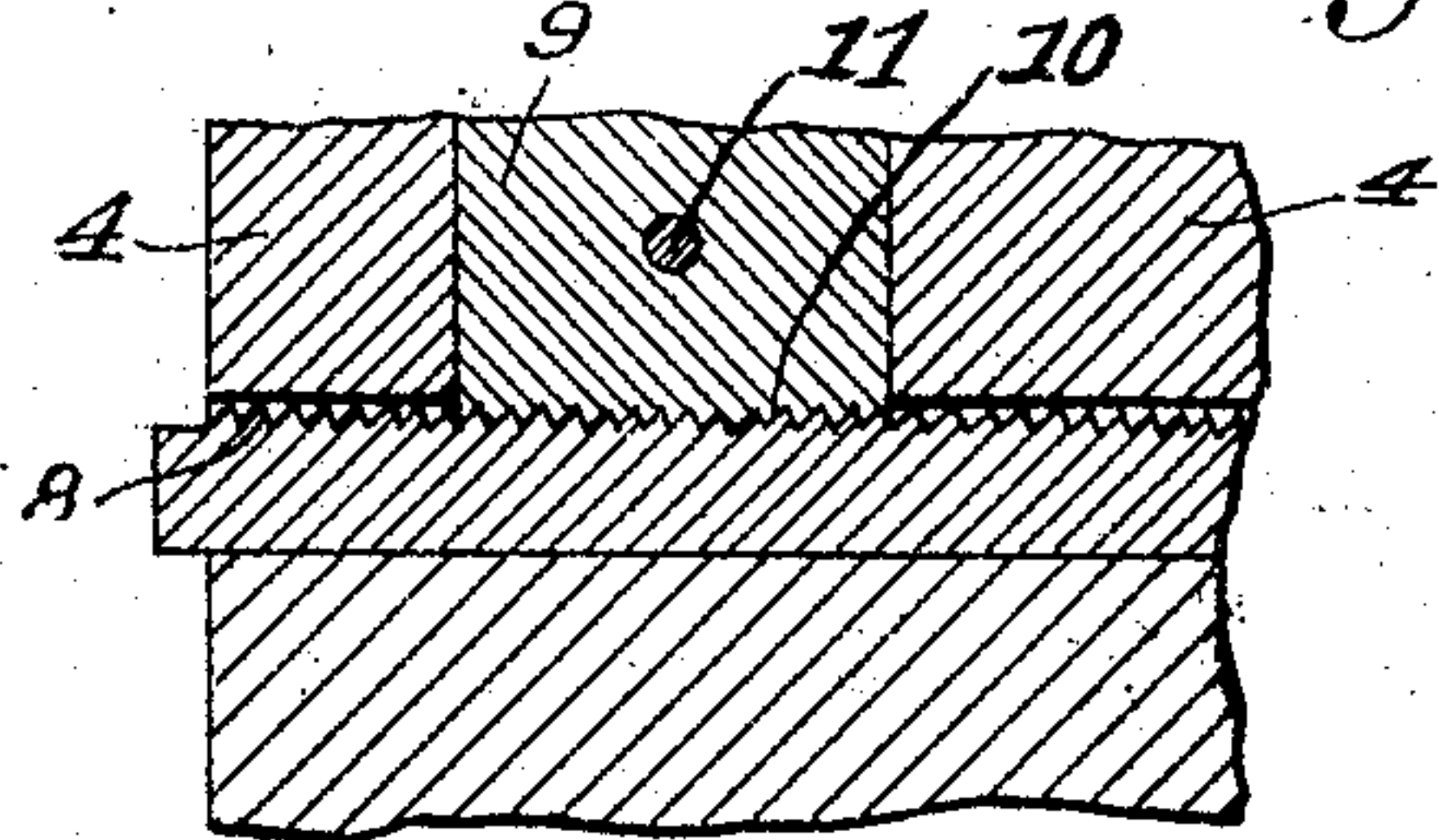


Fig. 5.



Fig. 4.

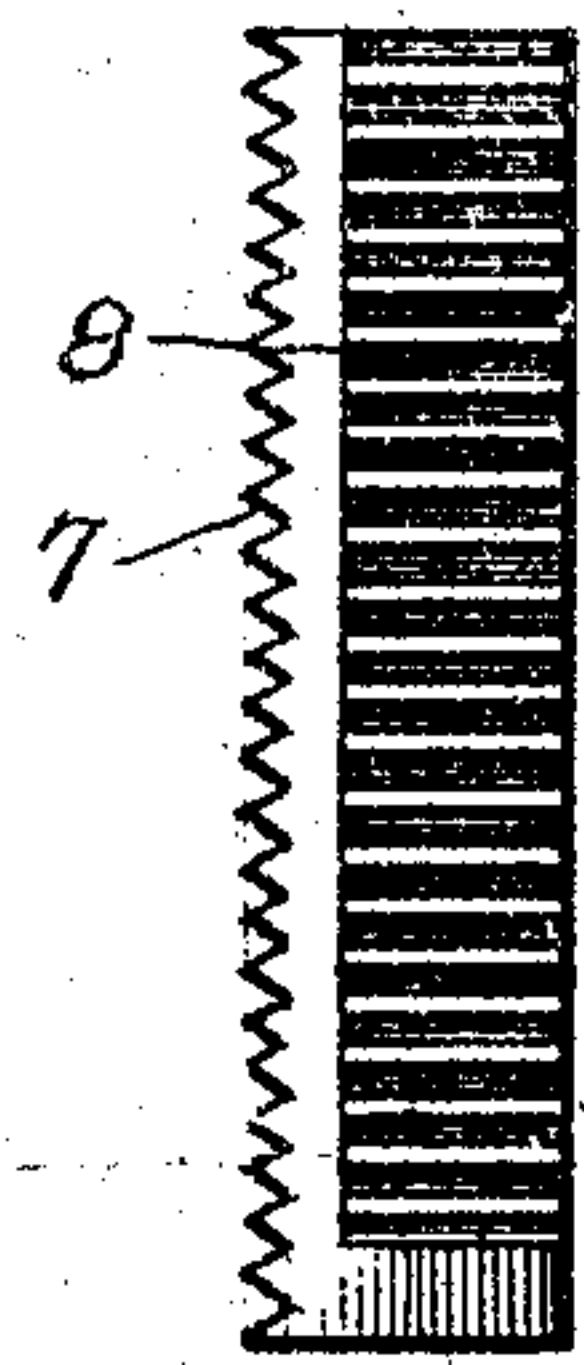


Fig. 6.

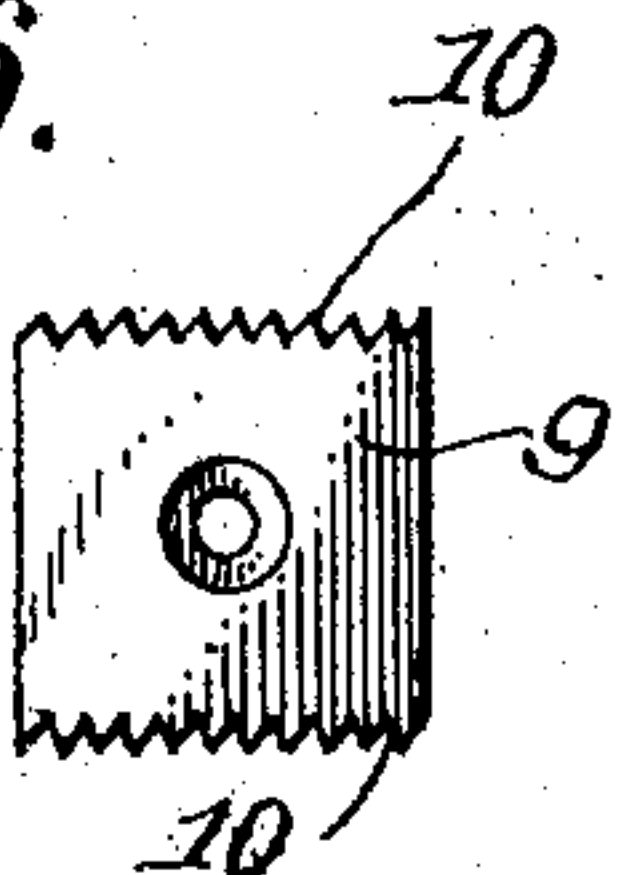
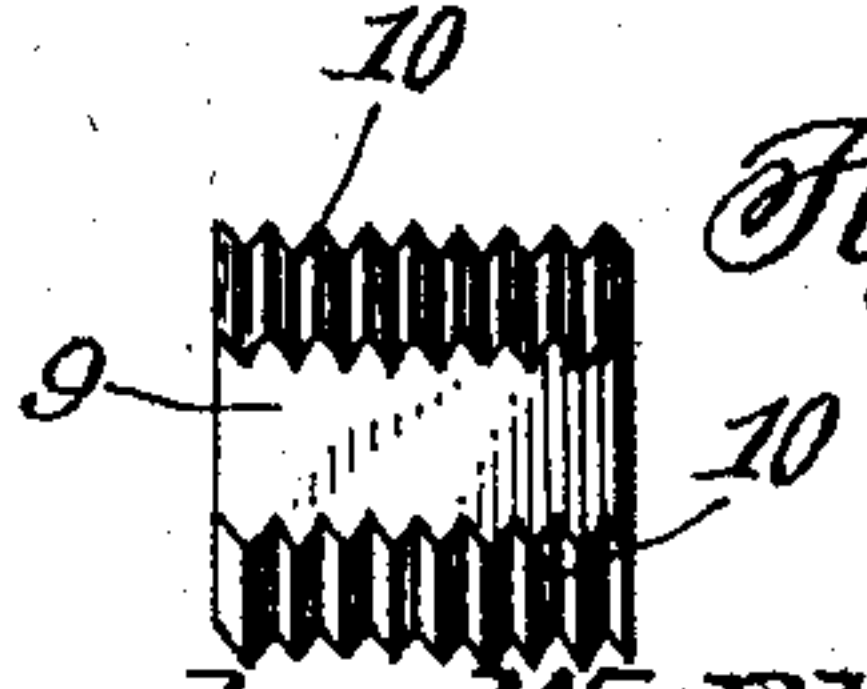


Fig. 7.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES W. PHILLIPS, OF MILWAUKEE, WISCONSIN, ASSIGNOR OF ONE-HALF TO EUGENE F. JEWELL, OF MILWAUKEE, WISCONSIN.

SCREW-CUTTING TOOL.

SPECIFICATION forming part of Letters Patent No. 786,990, dated April 11, 1905.

Application filed April 25, 1904. Serial No. 204,847.

To all whom it may concern:

Be it known that I, CHARLES W. PHILLIPS, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Screw-Cutting Tools; and I do 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.

My invention relates to improvements in tools for cutting screw-threads in pipes, pipe-fittings, and the like; and it consists in certain novel features of construction, combination, and arrangement of parts hereinafter fully described and claimed.

The objects of my invention are to provide a simple and effective means for holding removable cutters or chasers in a tap, reamer, or similar tool-head, to permit them to be readily and accurately adjusted as they wear down, and to permit them to be quickly removed and replaced by new ones when worn out.

With these and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be more fully described, and particularly pointed out in the appended claim.

In the accompanying drawings, Figure 1 is a perspective view of my improved screw-cutting tool. Fig. 2 is a transverse sectional view through the same, taken on the line 2 2 of Fig. 1. Fig. 3 is a detail sectional view taken on the line 3 3 of Fig. 2. Fig. 4 is a side elevation of one of the cutters or chasers. Fig. 5 is an end elevation of the same. Fig. 6 is a top plan view of one of the clamping-blocks. Fig. 7 is a bottom plan view of the same.

Referring to the drawings by numeral, 1 denotes a frusto-conical body or head tapering from its rear to its front end and formed at its rear end with a reduced end or shank 2. Said head 1 is formed with a radially-disposed series of longitudinally-extending grooves 3, which form segmental-shaped ribs

4. Each alternate rib 4 is formed with a recess 5, which opens into two adjacent grooves 3. Said grooves 3 are adapted to receive cutters or chasers formed upon their outer projecting faces with screw-cutting teeth 7 and upon their side face which is disposed adjacent to said recess 5 with notches 8. The recesses 5 are adapted to receive segmental-shaped clamping-blocks 9, which are formed upon opposite sides with notches 10, adapted to engage said notches 8 upon two adjacent cutters or chasers to clamp them in said grooves 3 and to hold them at any adjusted position, as will be readily understood. Said clamping-blocks may be secured in said recess in any suitable manner, but preferably by screws 11, which pass through openings in said block and into screw-threaded recesses 12, formed in the head 1, as shown in Fig. 2 of the drawings. The heads of said screws 11 enter enlarged portions of the apertures in said blocks and lie flush with the outer surface of said head 1.

The use and operation of the tool will be readily seen. After the cutters or chasers have been placed in the grooves 3 the clamping-blocks 9 are inserted between them in the recess 5, and the screws 11 are then tightened to clamp said cutters or chasers in position. The engagement of the notches of the clamping-block with the notches 8 on two adjacent cutters or chasers will permit the latter to be quickly and accurately adjusted as their cutting-teeth wear away.

Owing to the taper of the head 1 it will be seen that the tool acts as a combined reamer and tap and when rotated in the usual manner will effectively cut an internal thread in a pipe, coupling, or the like.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

5 In a combined reamer and tap, the combination of a tapering head having a series of longitudinal grooves forming intermediate segmental ribs and having transverse recesses formed in each alternate one of said ribs, said
10 recesses communicating with said grooves, chasers seated in said grooves and having screw-cutting teeth upon their outer faces and notches in their side faces adjacent to
15 said recesses, said notches extending from the lower edge of the chasers to near the cutting-teeth, clamping-blocks in said recesses,

said blocks having notches upon their opposite faces to engage the notches in two adjacent chasers and screws passed through said blocks and into said head to secure the block in the recesses and the chasers in the 20 longitudinal grooves whereby the chasers are longitudinally adjustable, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses. 25

CHARLES W. PHILLIPS.

Witnesses:

EUGENE JEWELL,
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