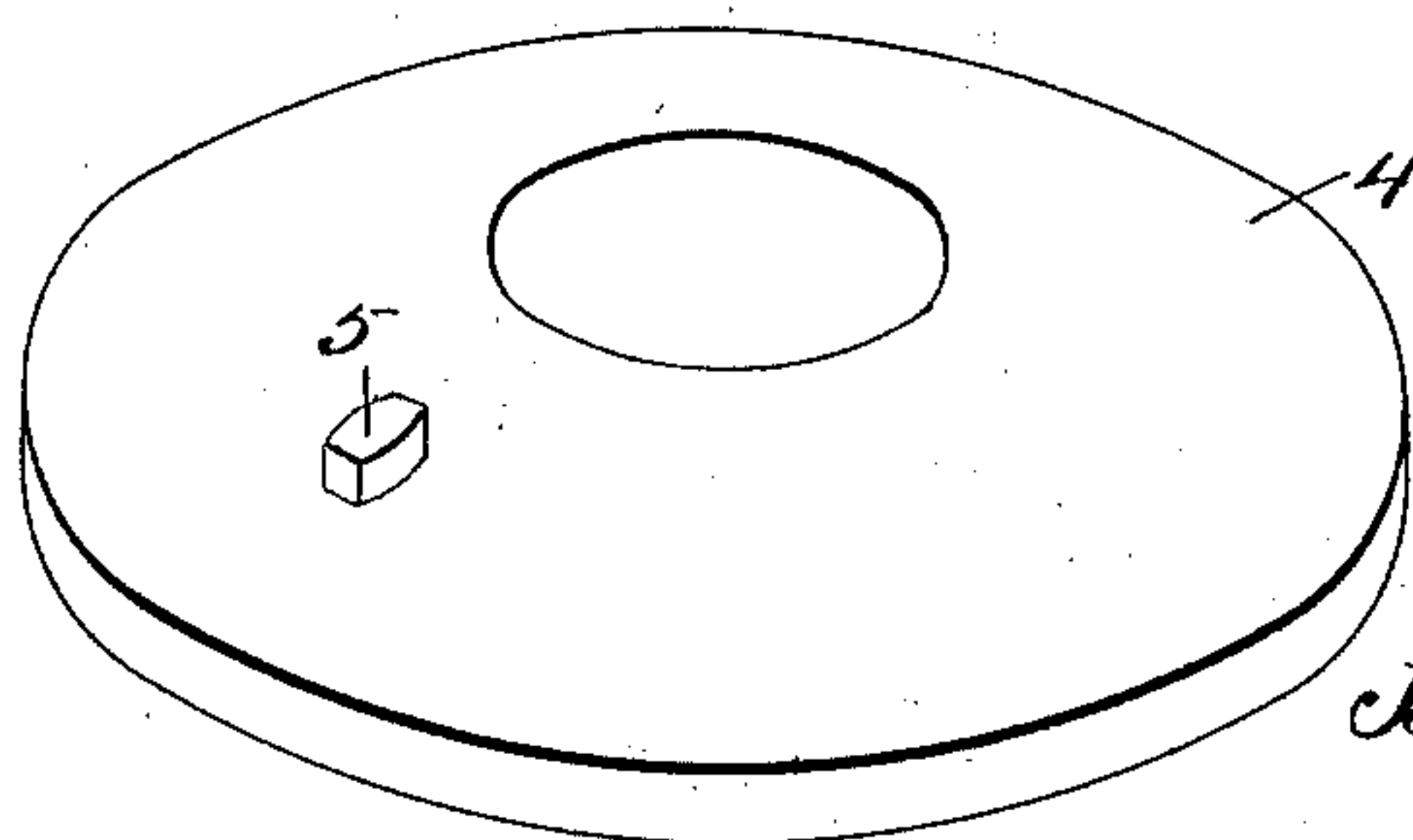
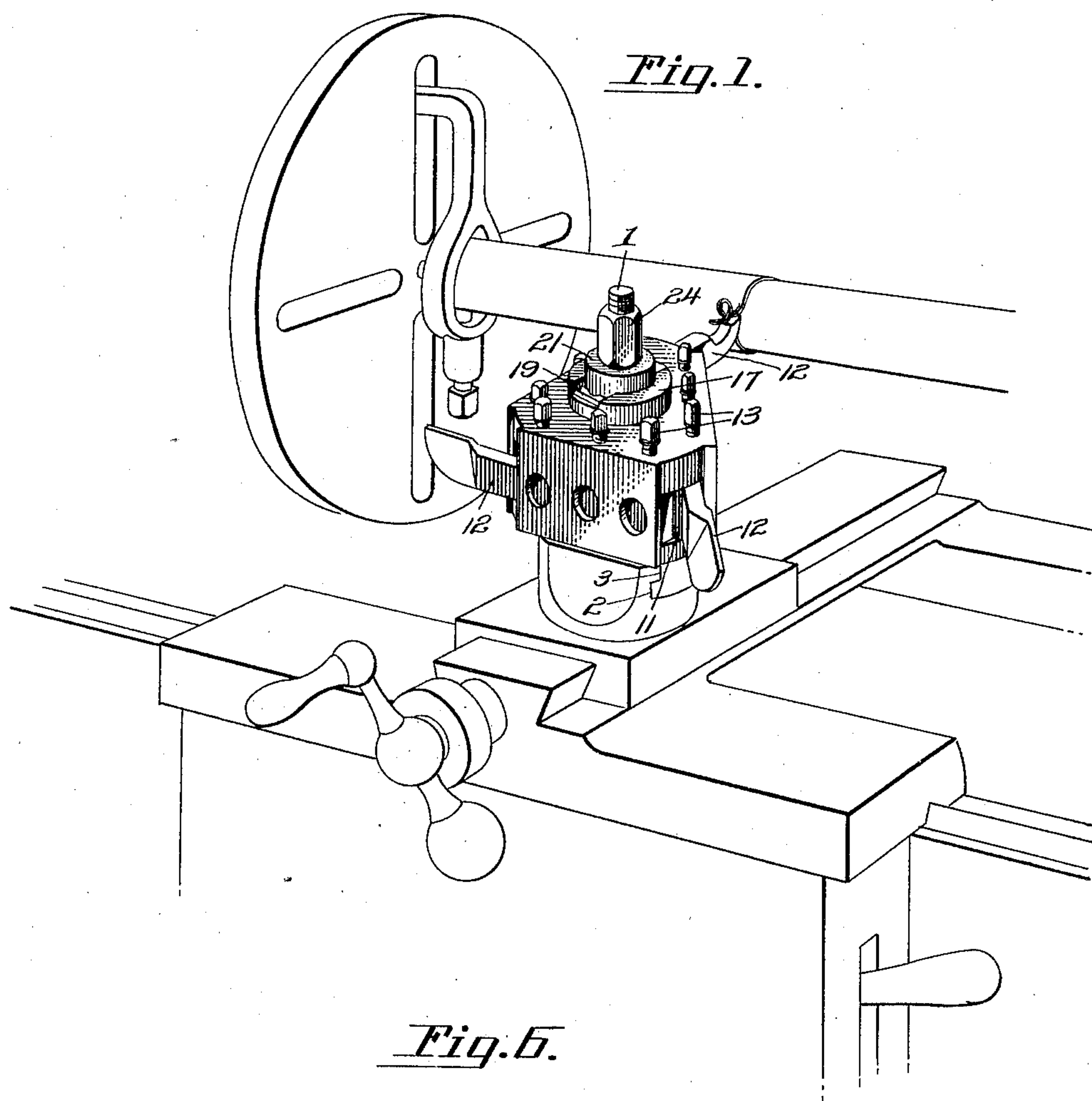


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 TOOL HOLDER.  
 APPLICATION FILED FEB. 4, 1910.

997,121.

Patented July 4, 1911.

3 SHEETS—SHEET 1.



Witnesses

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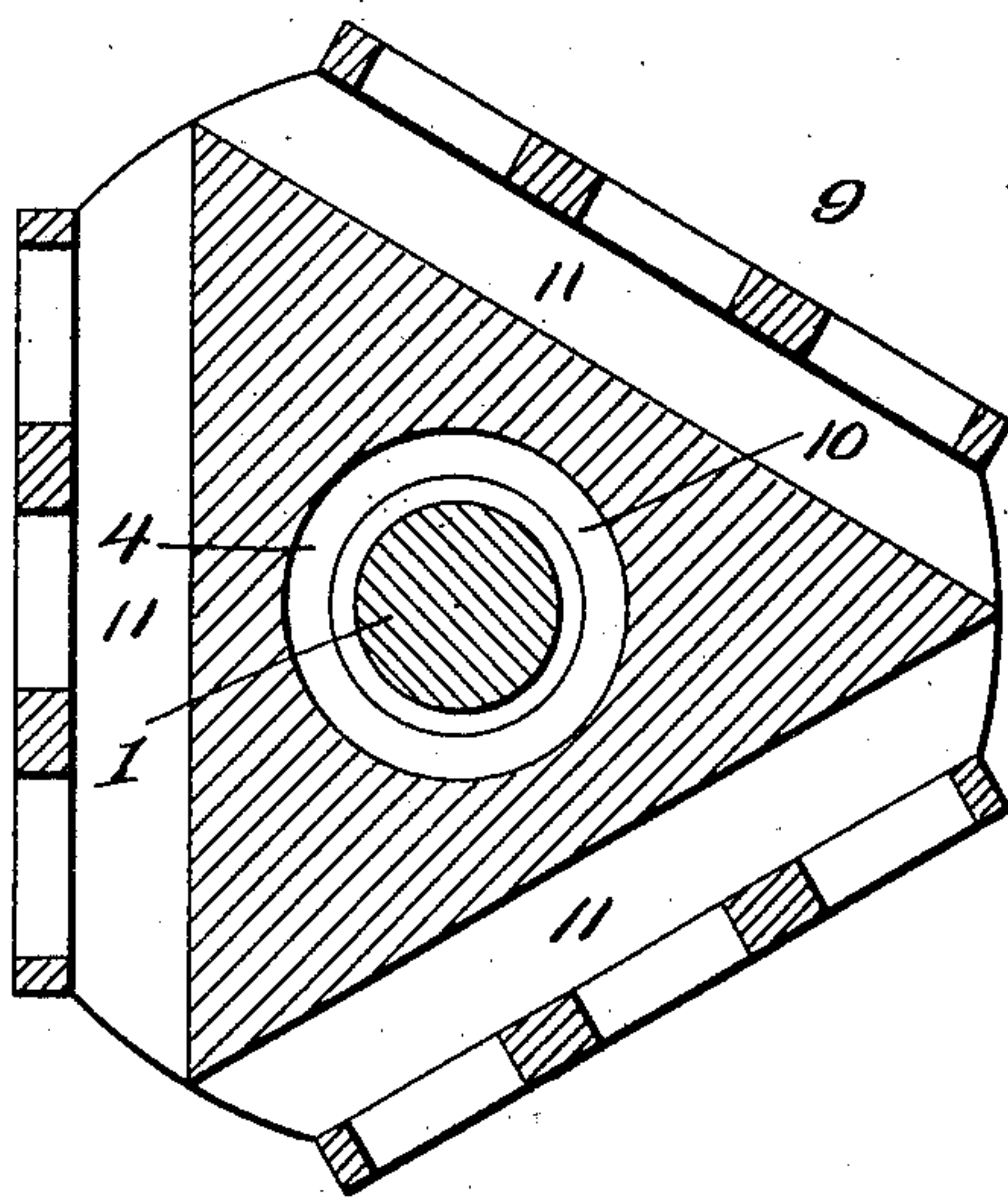
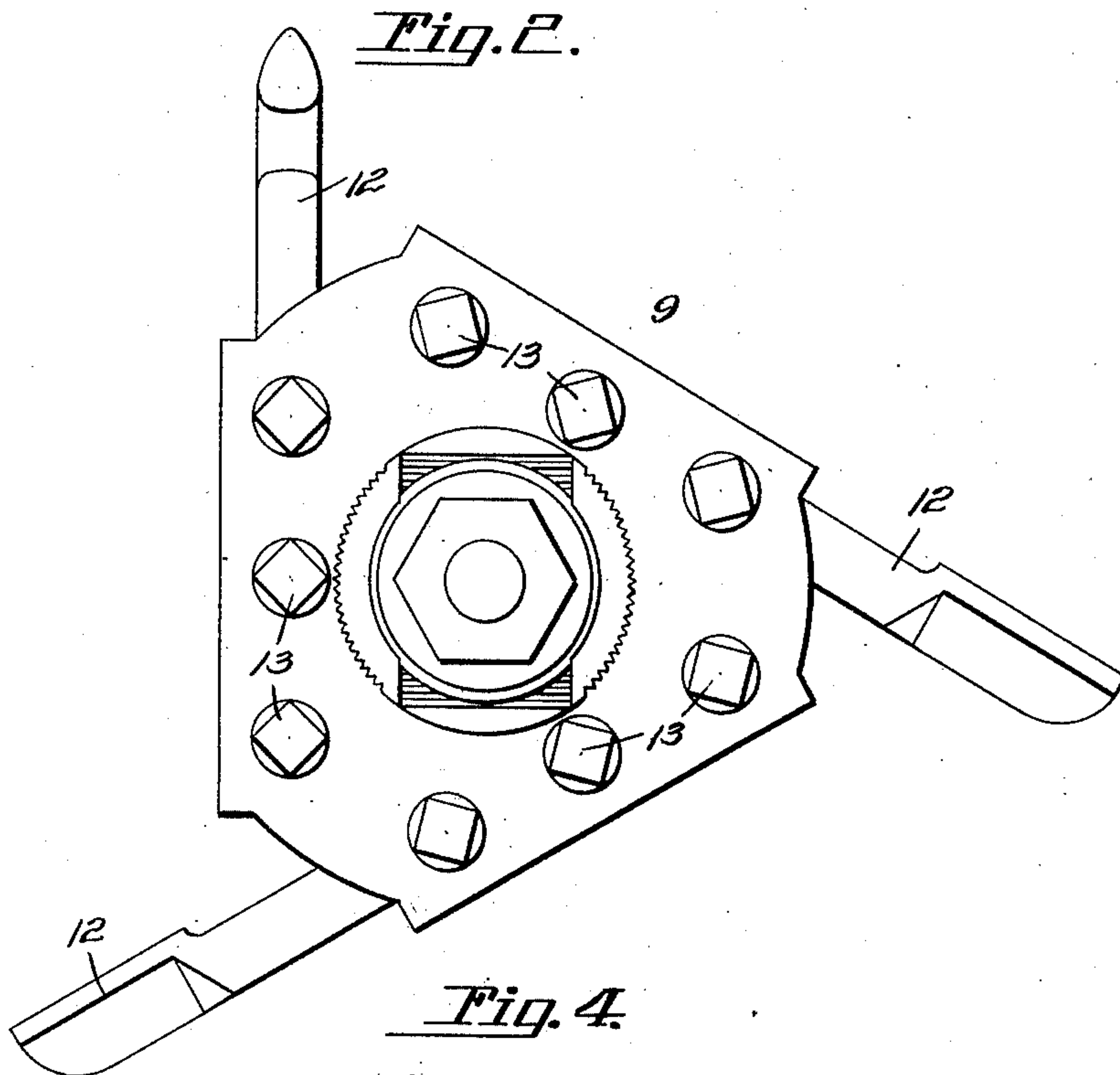
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3 SHEETS—SHEET 2.



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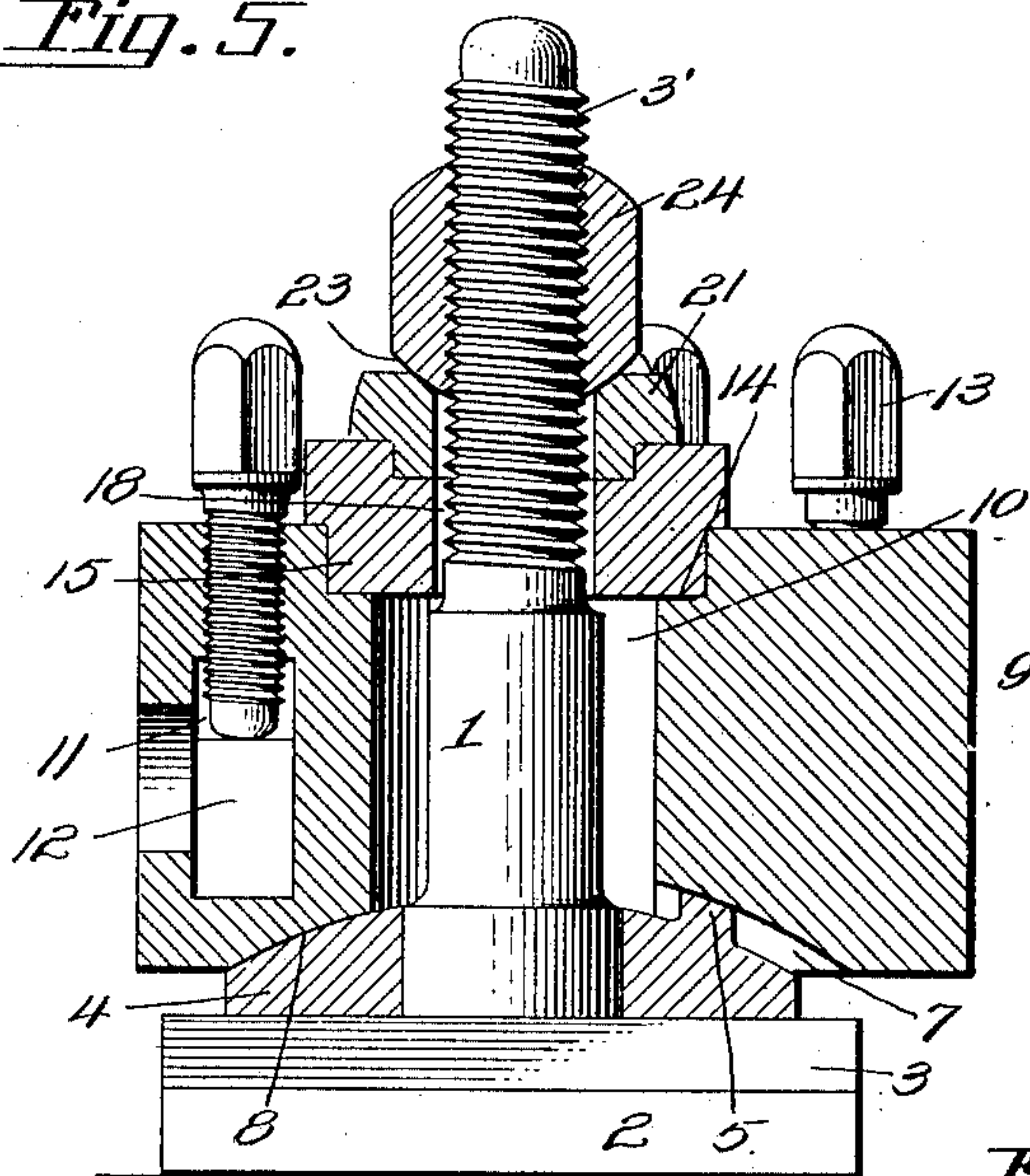
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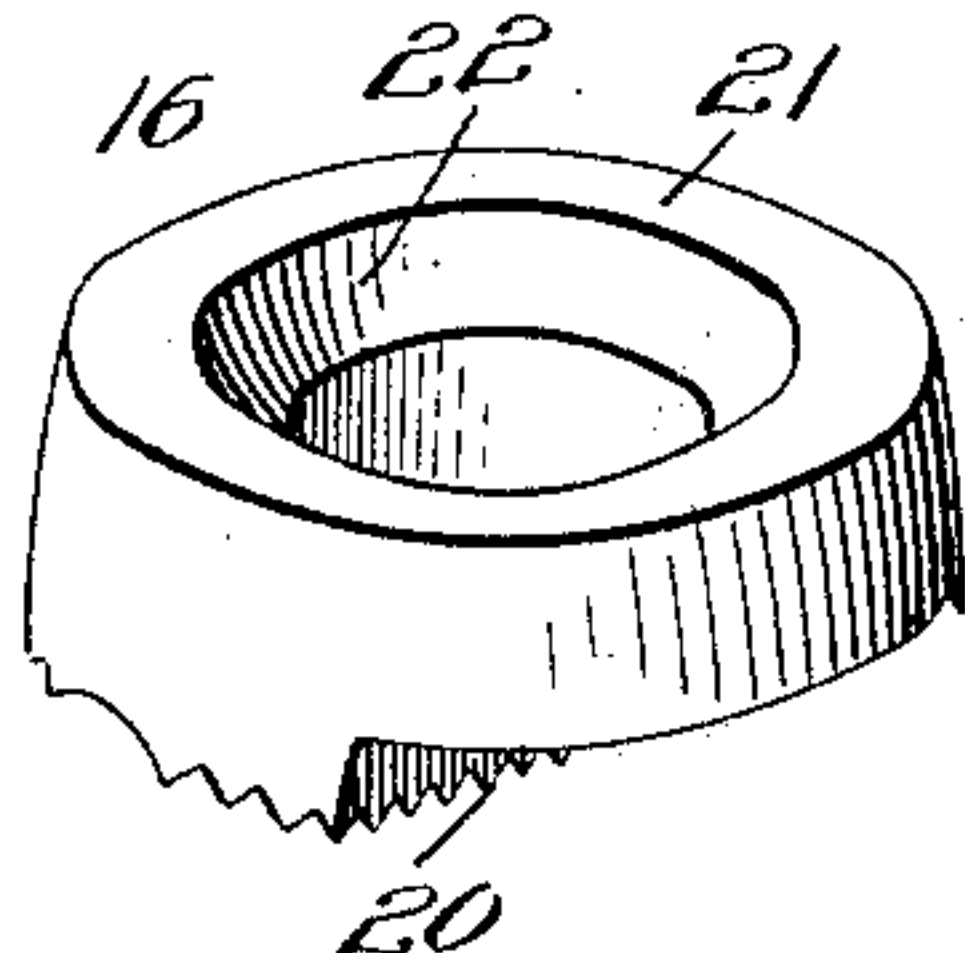
Patented July 4, 1911.

3 SHEETS—SHEET 3.

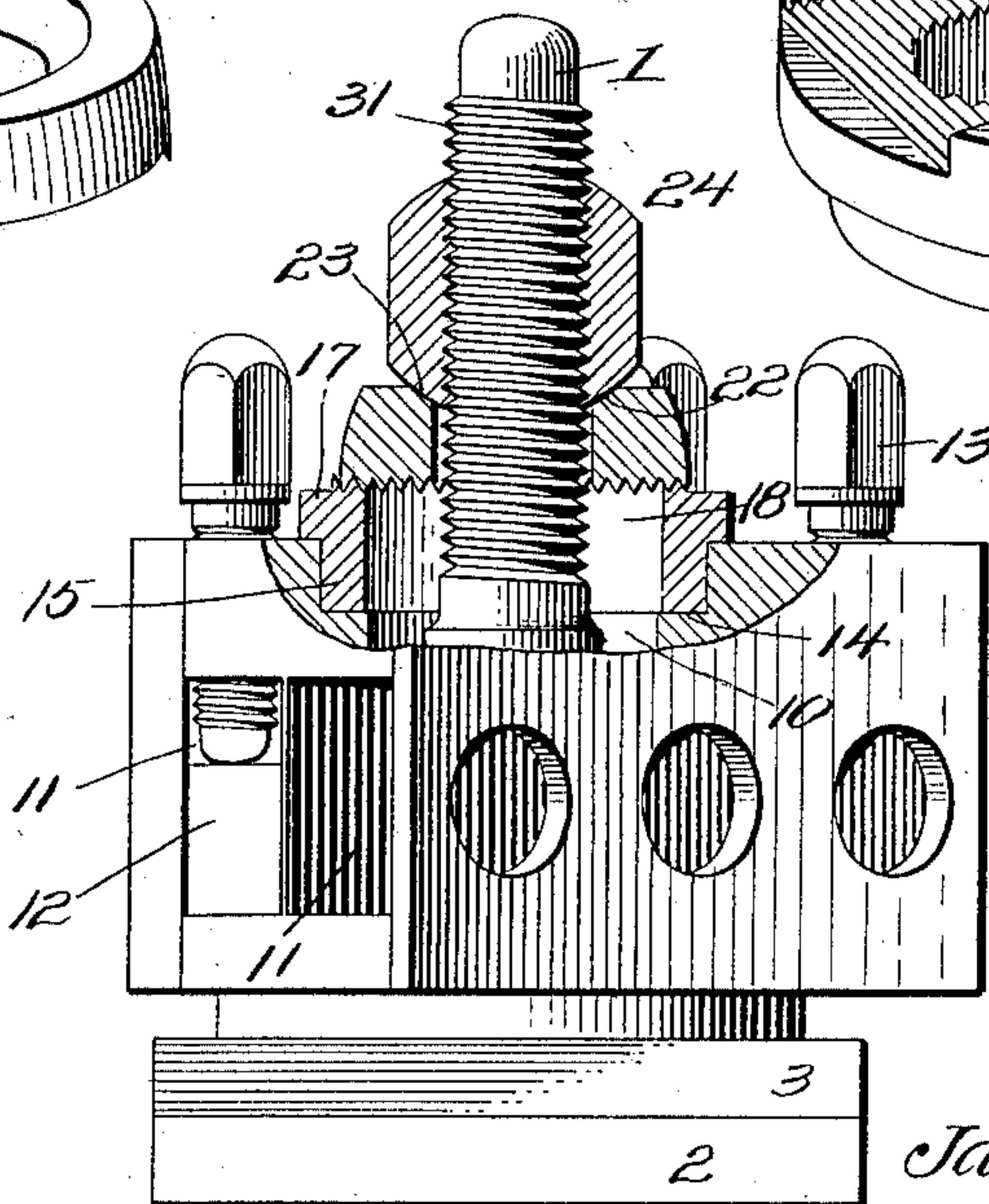
*Fig. 5.*



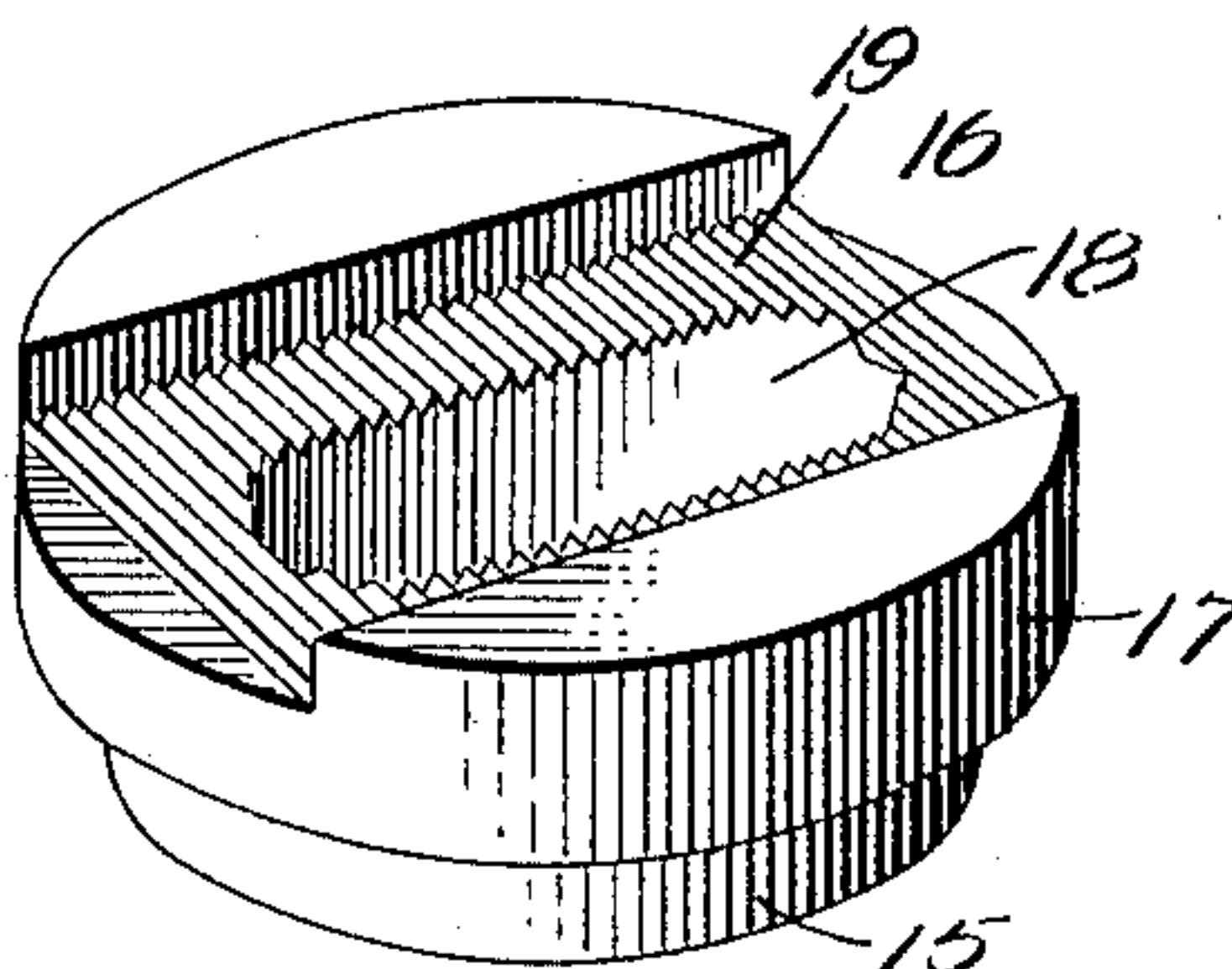
*Fig. 6.*



*Fig. 3.*



*Fig. 7.*



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# UNITED STATES PATENT OFFICE.

JAMES EDWARD EMLEY, OF MIDDLEPORT, OHIO.

## TOOL-HOLDER.

997,121.

Specification of Letters Patent.

Patented July 4, 1911.

Application filed February 4, 1910. Serial No. 542,126.

*To all whom it may concern:*

Be it known that I, JAMES EDWARD EMLEY, a citizen of the United States, residing at Middleport, in the county of Meigs and State of Ohio, have invented new and useful Improvements in Tool-Holders, of which the following is a specification.

This invention relates to tool holders, and the object of the invention is to provide a device for holding cutting tools used in lathe or planer work, one that is particularly adapted to meet all the requirements of such a tool, and to this end the invention consists in the combination of the post or shank with the rotary tool head and clamping means, and it further consists in the several parts making up the device as a whole, as will be more particularly hereinafter described and claimed.

In the accompanying drawings there has been illustrated a simple and preferred embodiment of the improvement and in which drawings,

Figure 1 is a perspective view of the device showing the same in applied position upon a lathe. Fig. 2 is a top plan view of a tool holder constructed in accordance with the present invention. Fig. 3 is a side elevation of the same. Fig. 4 is a horizontal section. Fig. 5 is a central sectional view of the same. Fig. 6 is a perspective view of the ball seat. Fig. 7 is a perspective view of the lower member of the eccentric washer. Fig. 8 is a similar view of the top member of the eccentric washer.

In the accompanying drawings the numeral 1 designates the post of the device. This post has its lower extremity provided with a rectangular member 2 having its sides provided with offsets 3, whereby the same may be positioned within the slotted head of a lathe or planer. The post has its upper extremity threaded as indicated by the numeral 3' and as clearly illustrated in the several figures of the drawings.

The numeral 4 designates what I term a ball seat which is provided with a central opening adapted to engage the non-threaded portion of the post 1 and to rest upon the member 2. The upper or convex portion of the ball member 4 is provided with a stud 5, the latter being adapted for the reception within an elongated slot 7 provided upon the concaved lower face 8 of the head 9. The stud 5 together with the slot 7 adapted for the reception thereof are not absolutely

necessary requirements of the device. The stud 5, however, when engaged within the recess 7, sustains the members 4 and 9 at all times one in position upon the other at a direct point, so that when the head 9 is rotated the stud 5 will cause the member 4 to be likewise rotated. The head 9 is provided with a central bore 10 of a larger diameter than the post 7 which it is adapted to surround. The head 9, as illustrated in the several figures of the drawings is of a substantially triangular shape and has its sides provided with suitable pockets 11 adapted for the reception of tools 12. The top portion of the head 9 above the said pockets 11 is provided with threaded orifices communicating with the said pockets 11. These orifices, preferably three in number, are adapted for the reception of the threaded adjusting screws 13 whereby the tools 12 are effectively retained in adjusted position in relation to the head. The upper portion of the head 9 is depressed to provide an annular shoulder 14, communicating with the upper portion of the central bore of the head, and adapted to be received upon this shoulder is an annular reduced portion 15 of a member 16. This member, as clearly illustrated in the several figures of the drawings is constructed of a pair of sections, the lower section designated by the numeral 17 is provided with the reduced portion 15 upon its lower face and has its upper face cut away longitudinally to provide a rectangular channel, and the lower longitudinal wall of this channel, designated by the numeral 18, is adapted to surround the threaded portion of the post 1. The horizontal faces provided by the channel 18 is provided with a plurality of transversely arranged serrations or teeth 19, and the said teeth are adapted to co-act with similar teeth 20 provided upon the under face of the upper section designated by the numeral 21. The upper section 21 of the member is cut away adjacent its opposite edges to provide the longitudinally extending shoulders, the same being adapted to contact with the shoulders provided by the longitudinal channel lower member. The upper member is also centrally disked as at 22 and adapted to engage with this disked portion is a rounded face 23 provided upon the locking nut 24.

From the above description, taken in connection with the accompanying drawings, the simplicity and advantages of the device will



be apparent to those skilled in the art to which the invention appertains, it being noted that while the post 1 is always retained in the perpendicular or vertical position in relation to the machine upon which it is positioned, the head 9 may be adjusted in any desired angular relation to the said post. It will be noted that while the ball seat 4 is a separate member from the head and the member 2, the same is free to be rotated around the post 1, but upon the tightening of the nut 24 the frictional engagement of the ball seat 4 between the members 2 and 9 will effectively prevent the rotation of the said seat. The same frictional contact serves to retain the head at any desired adjusted position in relation to the seat 4. It will be further noted that by providing the post with the member 17 having an elongated opening 18 and the teeth 19 and being free to rotate upon as well as being carried by the head 9, and in connection with the member 16 having the disked cutaway portion 22 whereby the rounded face of the nut 24 receives a firm bearing, danger of the accidental movement of the parts when adjusted is entirely obviated. It is to be understood, of course, that the member 17 moves with the head 19 and that the member 16 is at all times retained upon the post 1.

Having thus fully described the invention, what I claim as new is:—

1. In combination with a post and a tool receiving head, of an eccentric washer connected with the head and surrounding the post, said washer comprising a pair of sections, one having an elongated opening, a second section engaging the first washer and being provided with a circular opening surrounding the post, means for retaining the upper section of the washer in engagement with the lower section of the washer, and means for retaining the tools upon the head.

2. A post, a ball seat revolubly mounted upon the post, an offset upon the seat, a tool head having a concaved under face and being provided with a depression adapted to engage the offset of the seat, said tool holder

being provided with a central bore of a greater diameter than the post, a member upon the post and head, said member comprising a pair of sections, one of said sections being provided with an elongated opening, the second of said sections being provided with a reduced annular opening surrounding the post, means for retaining the second section in adjusted engagement with the first member, tools for the tool head and retaining elements for the tools.

3. A substantially rectangular member having its longitudinal edges offset, a post having its upper portion threaded and positioned upon the said member, a seat surrounding the post and bearing upon the member, said seat having its upper face convex, the said face being formed with an upstanding lug, a head, the said head being formed with a central bore of a greater area than the area of the post, the lower face of the head being concave and also provided with an elongated depression, the said concave portion of the head adapted to engage the convex face of the seat, the longitudinal depression of the head being also adapted to engage the lug of the seat, an eccentric pair of sections surrounding the post, one of said sections contacting the head, this section being provided with an elongated opening and a longitudinally extending channel adjacent the side walls provided by the opening, the horizontal face of the channel being serrated, the said second section being formed with a reduced portion having teeth adapted to engage with the serrations of the first section, and a nut engaging the threaded extremity of the post to contact the upper or second section of the eccentrics to force the latter tightly into engagement with the head.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES EDWARD EMLEY.

Witnesses:

F. G. DAVIS,

PAUL MCBRIAR.