

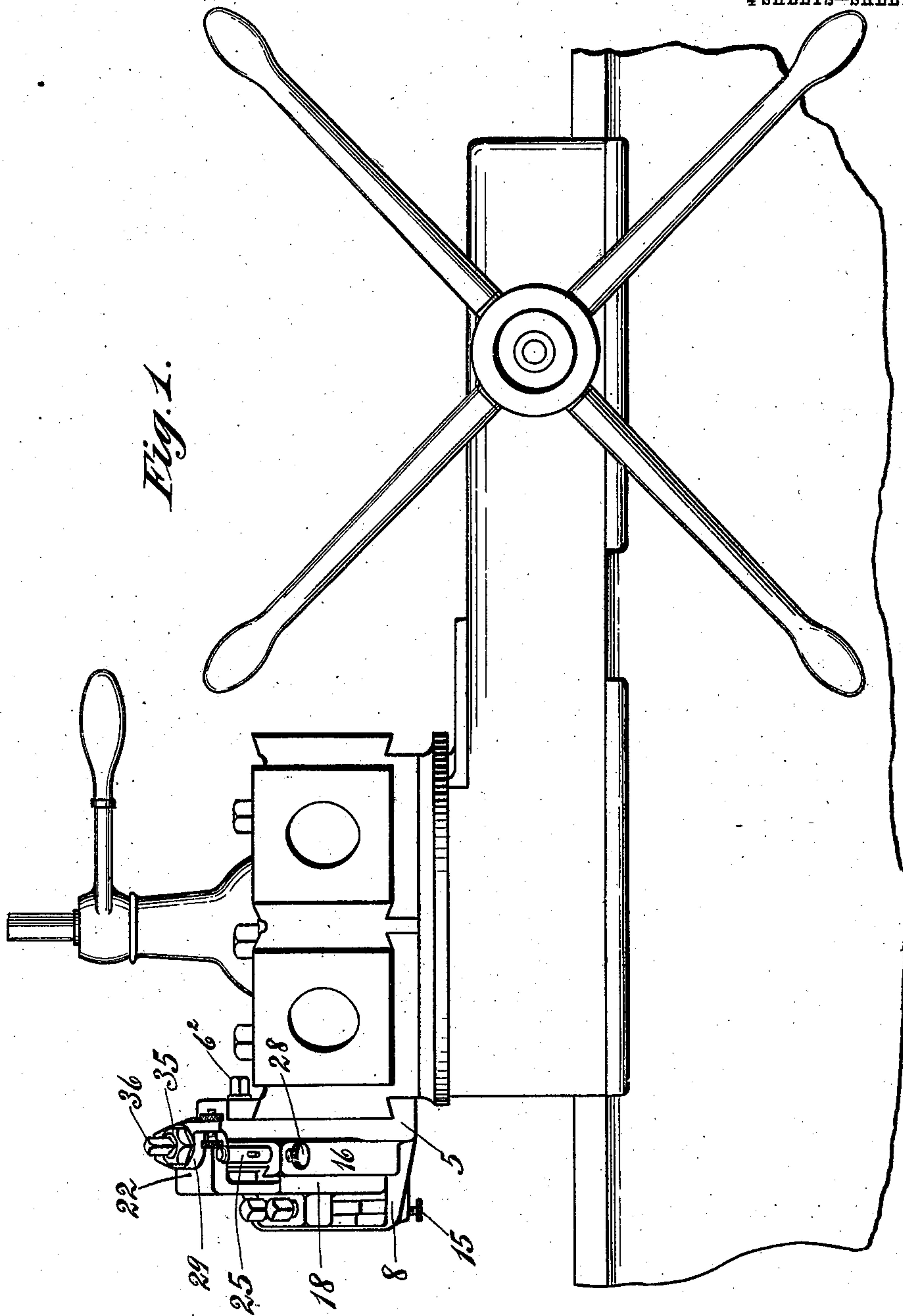
No. 847,527.

PATENTED MAR. 19, 1907.

A. E. THAYER.
TURNING ATTACHMENT FOR LATHES.

APPLICATION FILED MAY 31, 1904.

4 SHEETS—SHEET 1.



Witnesses:

F. C. Anderson.

Frances E. Blaggett.

Inventor:

Arthur E. Thayer
By his Attorney,

Wm. H. Blaggett

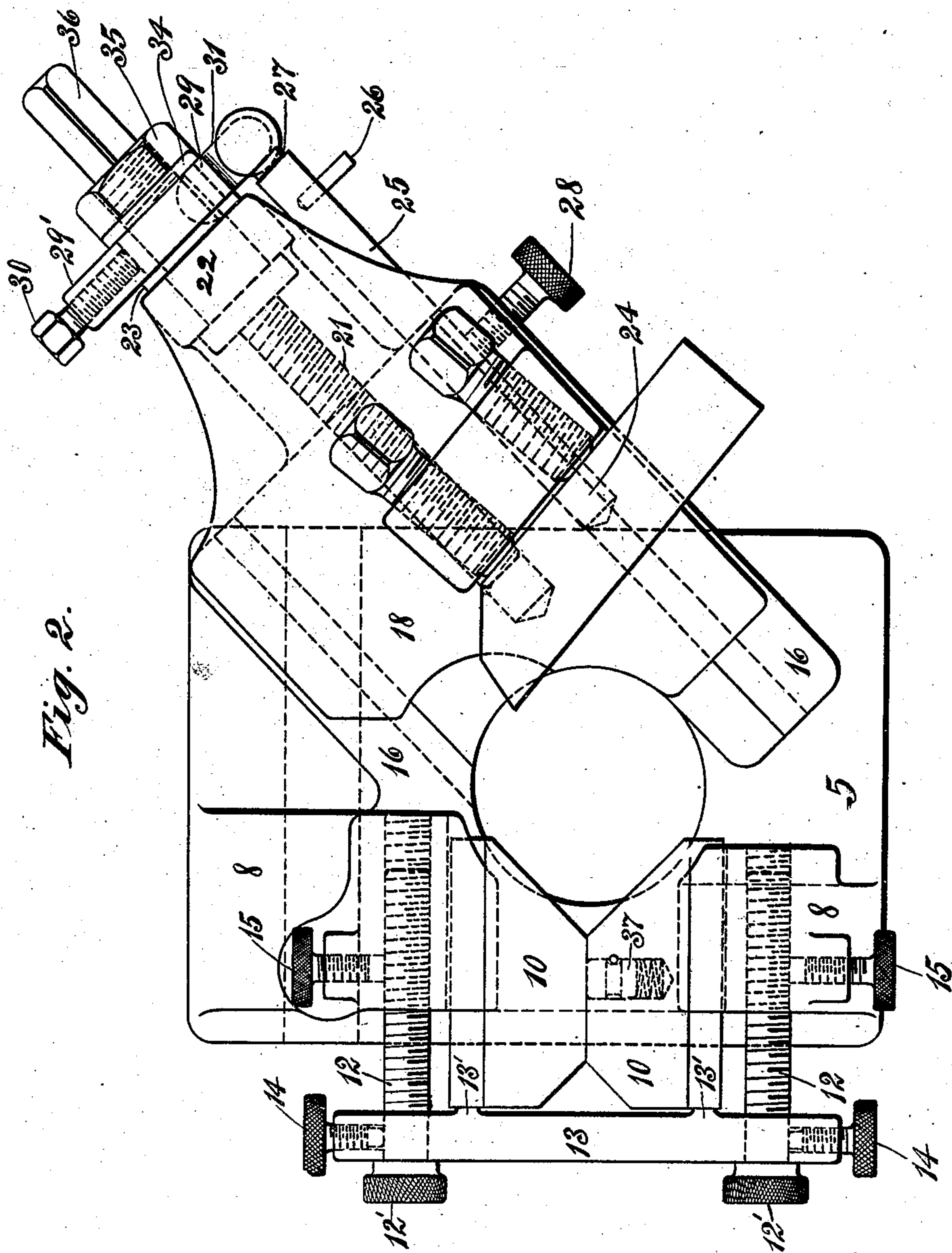
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4 SHEETS—SHEET 2.



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4 SHEETS—SHEET 3.

Fig. 3.

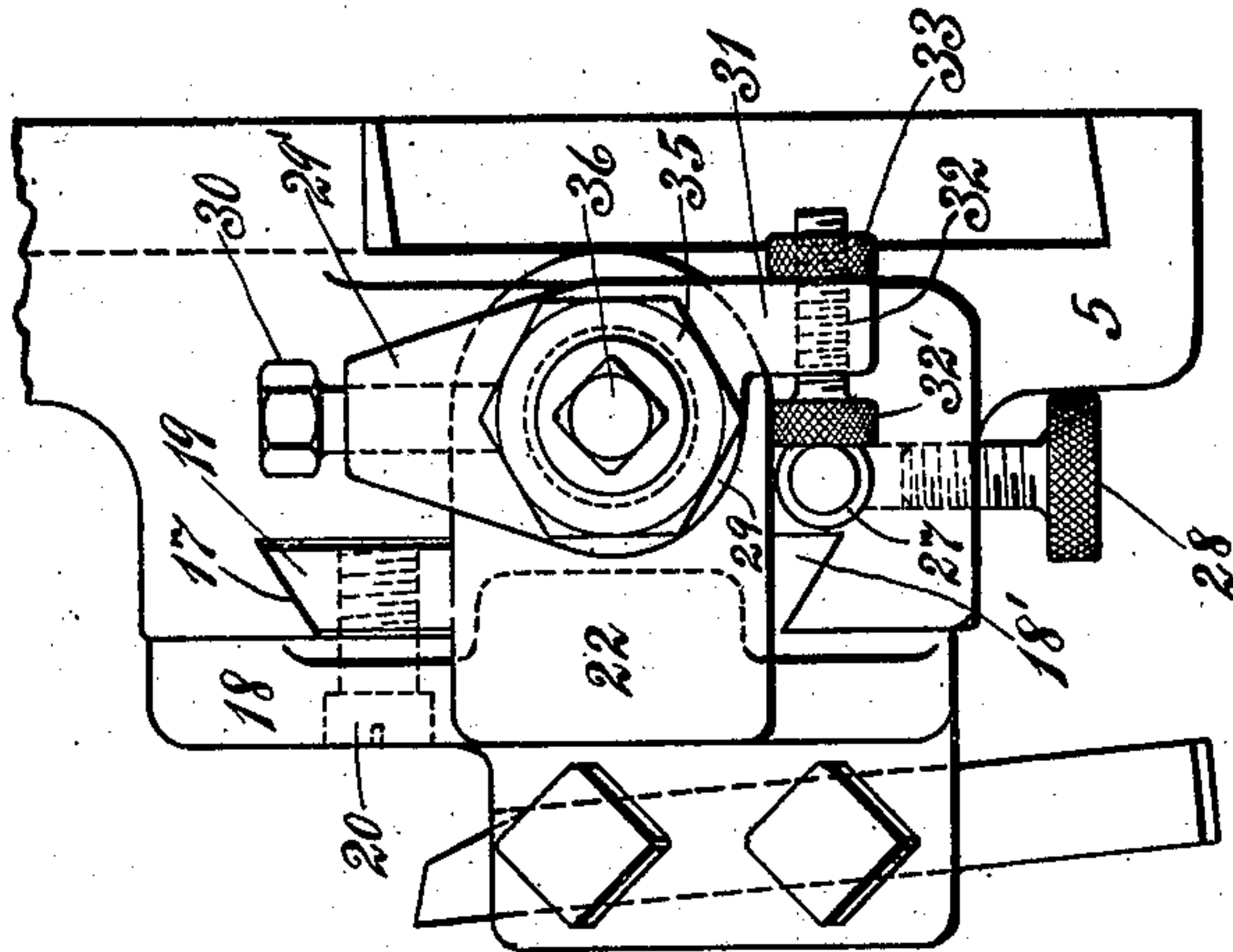
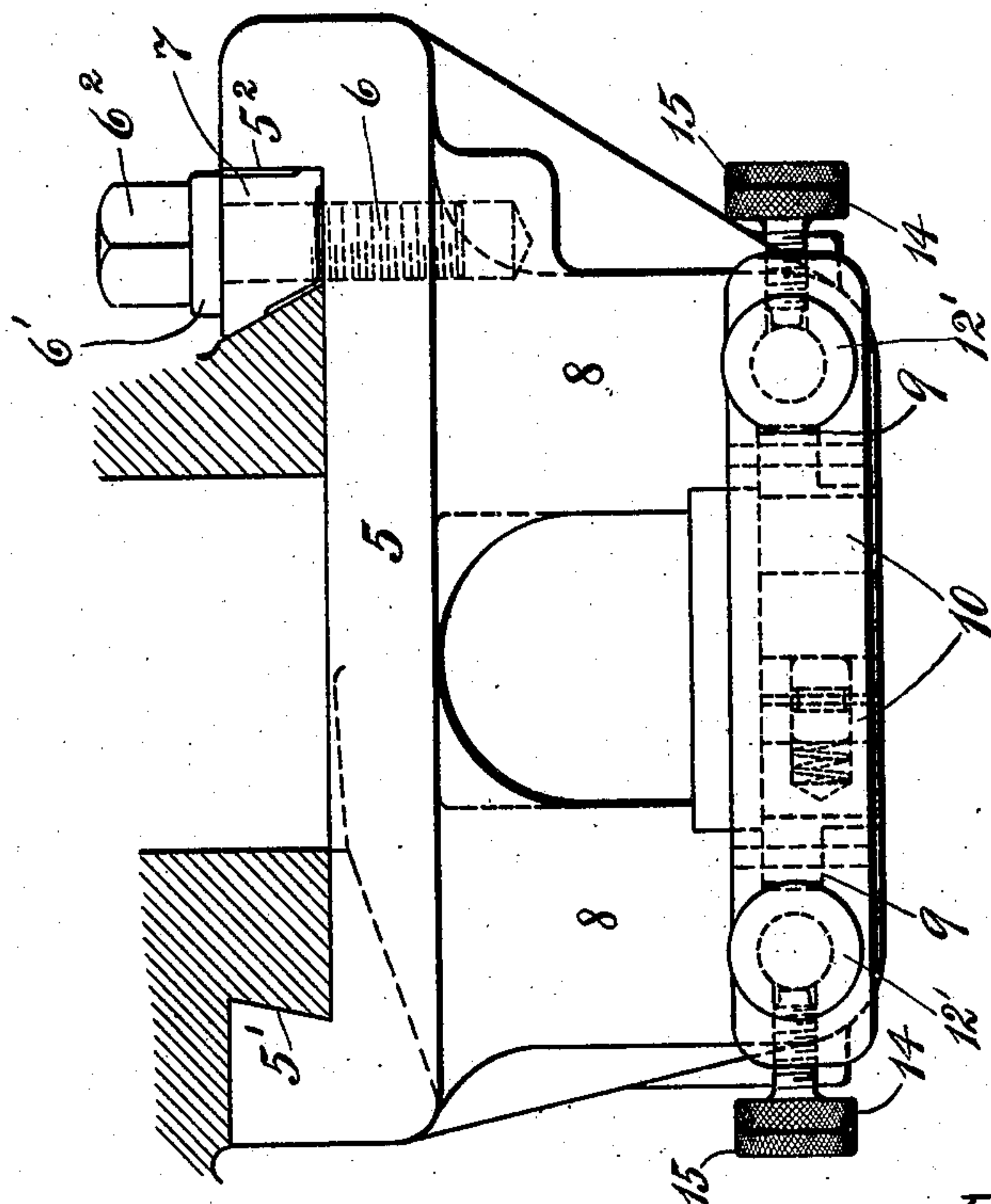


Fig. 4.



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4 SHEETS—SHEET 4.

Fig. 5.

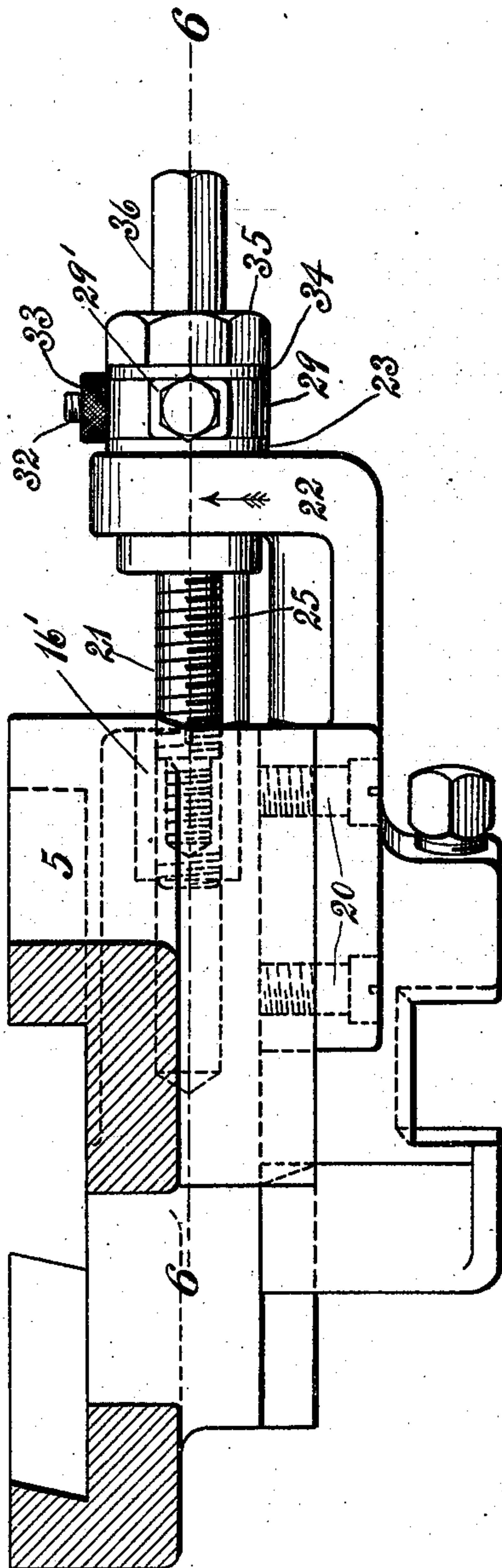
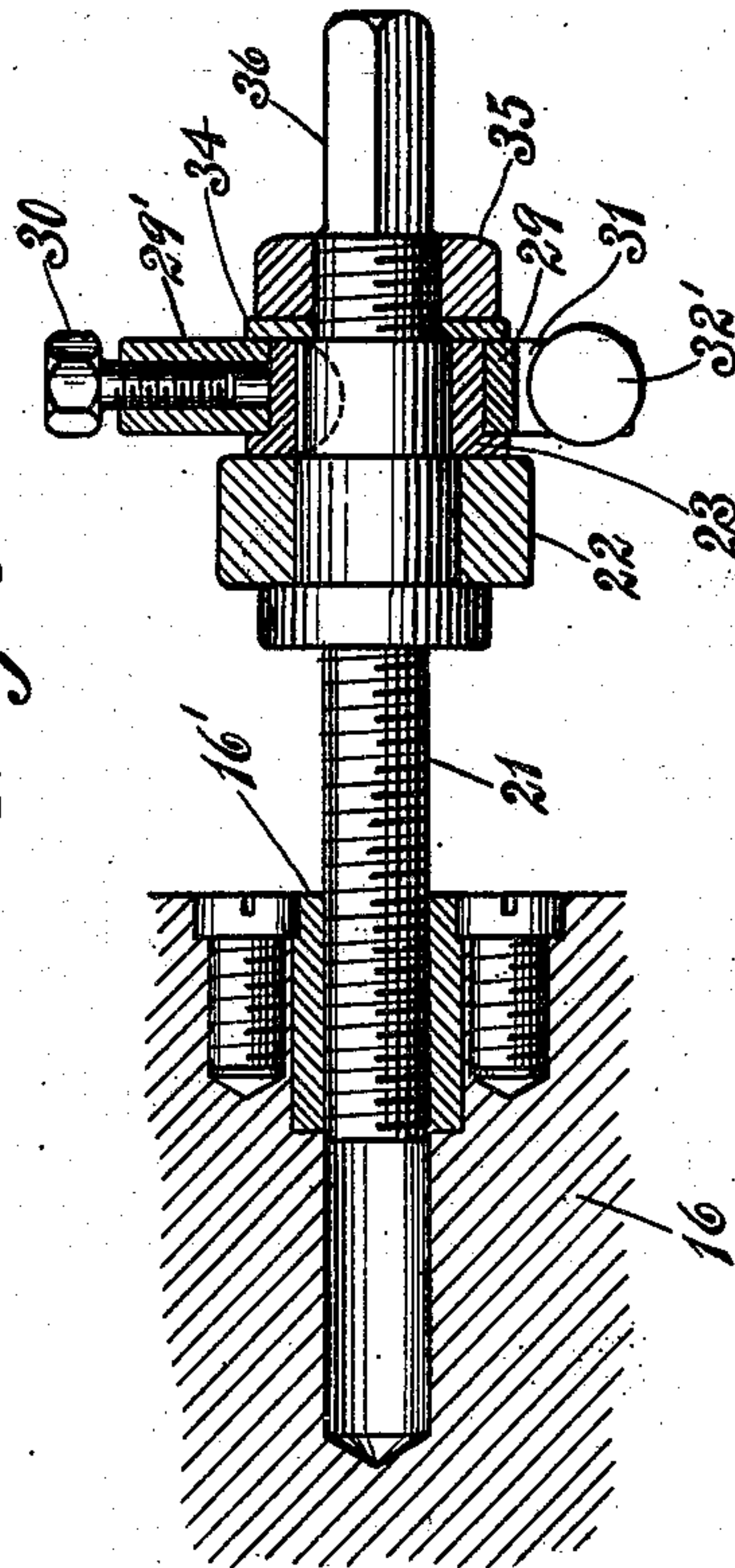


Fig. 6.



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UNITED STATES PATENT OFFICE.

ARTHUR E. THAYER, OF HARTFORD, CONNECTICUT, ASSIGNOR TO PRATT & WHITNEY COMPANY, OF HARTFORD, CONNECTICUT, A CORPORATION OF NEW JERSEY.

TURNING ATTACHMENT FOR LATHES.

No. 847,527.

Specification of Letters Patent.

Patented March 19, 1907.

Application filed May 31, 1904. Serial No. 210,482.

To all whom it may concern:

Be it known that I, ARTHUR E. THAYER, a citizen of the United States of America, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Turning Attachments for Lathes, of which the following is a specification.

My invention relates to a turning attachment for lathes, and has for its object the provision of means whereby the tool may be set to the exact position required and retained in such position to turn the stock to the desired diameter and whereby said tool may be withdrawn to turn off the face of the shoulder and then returned to its original precisionized position, as will be hereinafter described.

In the accompanying drawings, Figure 1 is a side elevation of part of a turning-lathe of the "turret" kind to which my invention is shown applied, although it is distinctly to be understood that it is not limited to any specific type of apparatus. Fig. 2 is a front elevation of the attachment. Fig. 3 is a partial view of one end of the attachment. Fig. 4 is a view, partially in section, showing the manner of securing the attachment to its support and also showing the shape of said support. Fig. 5 is a view, partially in section, hereinafter described; and Fig. 6 is a sectional view taken on line 6-6 of Fig. 5 looking in the direction of the arrow.

Like numerals designate similar parts throughout the several views.

Referring to the drawings, the numeral 5 designates a bed-block or base-plate recessed on its under side to form a beveled wall 5' and a straight wall 5². Adjacent to the straight wall said base-plate is provided with interior screw-threads for the reception of screws 6, having collars 6' bearing against a gib 7, provided with an inclined side for engaging the usual reversely-formed guide on the part of the machine to which the attachment is to be applied, said screws 6 having angular heads 6² for the reception of a wrench.

Projecting from the bed-plate 5 are posts 8, having side grooves 9 for the reception of tongues on back-rest blocks 10, as illustrated in Figs. 2 and 4. These posts are internally threaded in their top portions for the recep-

tion of screws 12, having knurled heads 12', and upon said screws, adjacent to collars beneath their heads, is fitted a cross-bar 13, having lugs 13' for engaging the ends of the back-rest blocks 10, said cross-bar being secured to the screws 12 by set-screws 14. To lock the screws 12 against movement, binding-screws 15 are tapped into the heads of the posts, their ends engaging said screws, as illustrated in Fig. 2.

Opposite the posts 8 the bed-plate is thickened or reinforced by a projection 16, extending at an angle therefrom and overhanging one side of said bed-plate, as illustrated in Fig. 2. This projection is provided with a dovetailed guideway 17 for the reception of a tool-carrying slide 18, said slide having a dovetailed projection 18' and being secured in the guideway by a gib 19 and screws 20, as illustrated in Fig. 3.

Projection 16 is internally provided with a nut 16' for the reception of a screw 21, and the slide 18 has a depending perforated extension 22 overhanging the projection 16 for the reception of a flanged sleeve 23, keyed to the screw. (See Fig. 6.)

Designated by 24 is a bore extending longitudinally of the projection 16, said bore being adapted to receive a stop-rod 25, having a manipulating-pin 26 and a reduced head or shoulder 27. This stop-rod may be slid back and forth in the bore 24 of the projection and secured, when adjusted to the desired position, by means of a set-screw 28. Secured to the sleeve 23 on the screw 21 is a stop device, such as, in the present instance, a yoke 29, said yoke having an extension 29', in which is fitted a screw 30 for clamping said yoke in any desired position of adjustment. At its opposite side the yoke is provided with a lug or projection 31, said projection being internally threaded for the reception of a screw 32, having a manipulating-head 32' on one side of the projection and a set or jam nut 33 on the opposite side of said projection. To secure this yoke in position upon a reduced portion of the barrel of the screw, a washer 34 and a set-nut 35, applied to an enlarged portion of the screw, are provided, and this screw has a projecting extension 36 for the application of a wrench or similar tool.

In one of the back-rest blocks 10 a spring-

controlled plunger 37 is fitted, said plunger tending to force the blocks apart and cause their tongues to fit the grooves in the sides of the posts 8 without chattering or lost motion.

In the operation of the invention the tool is first set to turn the work to the desired size. For instance, if stock is to be turned to a diameter of one inch the screw 21 is adjusted to actuate the slide 18, and thus carry the tool to the desired position, and when this has been accomplished the stop-rod 25 is slid either in or out of the bore 24, as circumstances may require, and is then clamped firmly in position by the screw 28. Screw 30 is then loosened and the yoke 29 is swung around on the sleeve 23 of the screw until the head 32' of screw 32 engages the reduced end of said stop-rod, after which the screw 30 is again tightened, and the slide 18 will now be in the required position. Should a fine adjustment of the tool-slide in either direction be found necessary at any time, this can readily be provided for by manipulating the screw 32 either in or out of its threaded seat in the yoke and then again setting said screw in position.

By turning the screw 32 outward its head will engage the end of the stop-rod and slightly rotate the screw 21 to withdraw the slide, while by turning it inward and then clamping it tightly in place the screw 21 may be rotated to impart a slight forward movement to the tool-slide until the head of the stop-screw again engages the stop-rod. After the stock in the lathe has been turned to the desired diameter the tool-slide is withdrawn and new stock is placed in position, and the screw 21 is then turned to advance the slide until the stop-screw engages the end of the stop-rod, when the tool will be in exact position required to repeat the operation. In this way different pieces of stock may be

turned each to the required exact size without the necessity of frequently calipering the stock or of adjusting the tool in its seat as in the old constructions.

Having thus described my invention, what I claim is—

1. The combination, with a bored base-block, of a slide on said base-block; a nut carried by the base-block; a screw working in the nut; a sleeve rigid with the screw, and having a shoulder; a circumferentially-adjustable yoke mounted on the sleeve and bearing against the shoulder thereof, said yoke having a projection; a device for securing the yoke to the sleeve; a stop-screw adjustable in the projection of the yoke; means for locking said stop-screw; and a stop-rod adjustable in the bore of the base-block, said bore being parallel to the screw and with the end of which rod the stop-screw is adapted to engage.

2. The combination, with a base-block having a bore, of a tool-slide on the base-block; a screw working in a nut of the base-block, said screw having a barrel portion; said nut; a yoke fitted upon the barrel portion of the screw and against a shoulder thereof, said yoke having a projection; a screw for securing the yoke in place; a headed stop-screw adjustable in the projection of the yoke; a jam-nut on the end of said screw; and a stop-rod adjustable in a bore of the base-block, parallel with the screw, and having a reduced outer end with which the head of the stop-screw is adapted to engage, said longitudinally-adjustable stop being located parallel to the screw.

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

ARTHUR E. THAYER.

Witnesses:

B. M. W. HANSON,
H. E. BAILEY.