

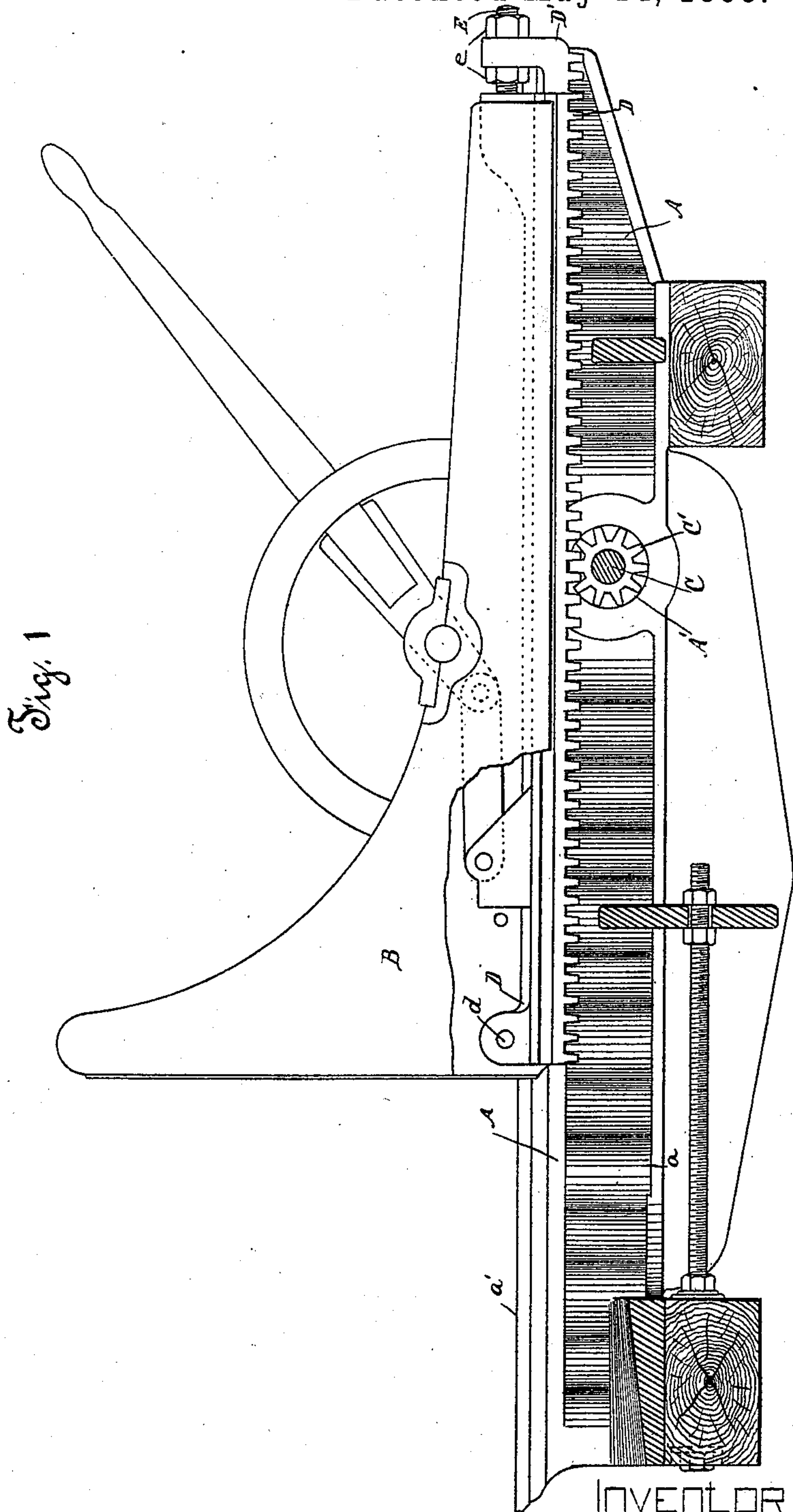
(No Model.)

3 Sheets—Sheet 1.

W. M. WILKIN.  
SAWMILL HEAD BLOCK.

No. 539,319.

Patented May 14, 1895.



WITNESSES

W. M. Wilkin, Jr.  
Jesse H. Haddock

INVENTOR

W. M. Wilkin  
by Haddock & Lord  
his Atty

(No Model.)

3 Sheets—Sheet 2.

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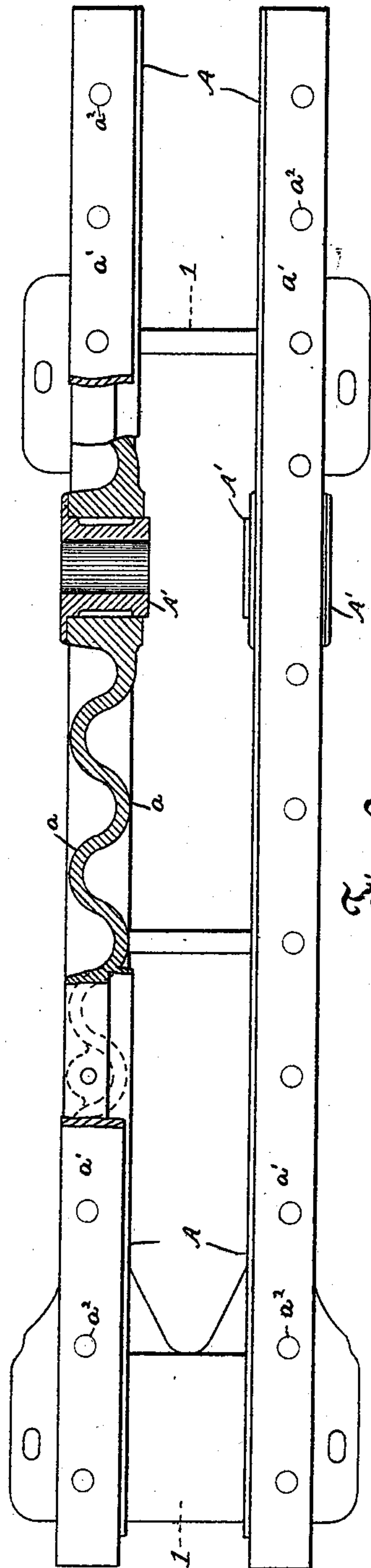


Fig. 2

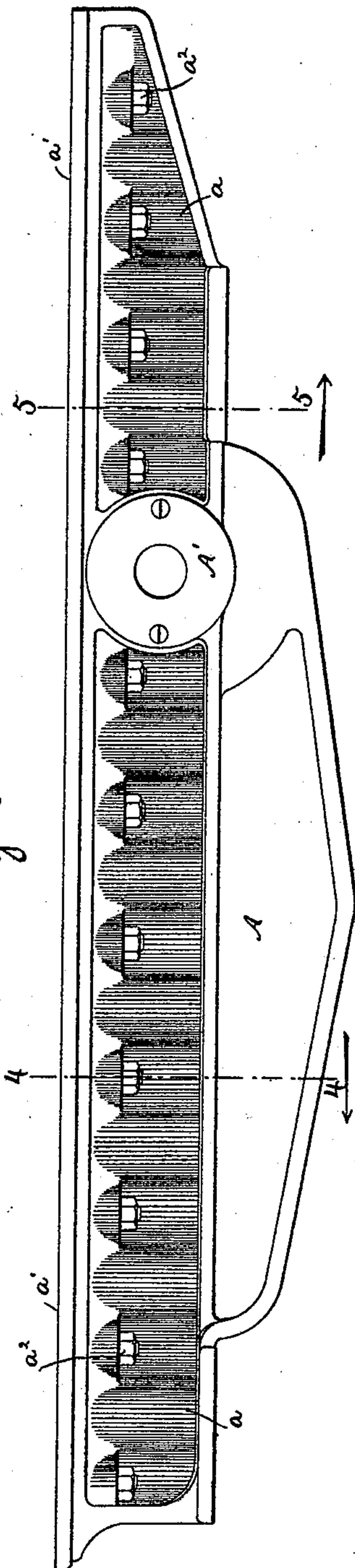


Fig. 3

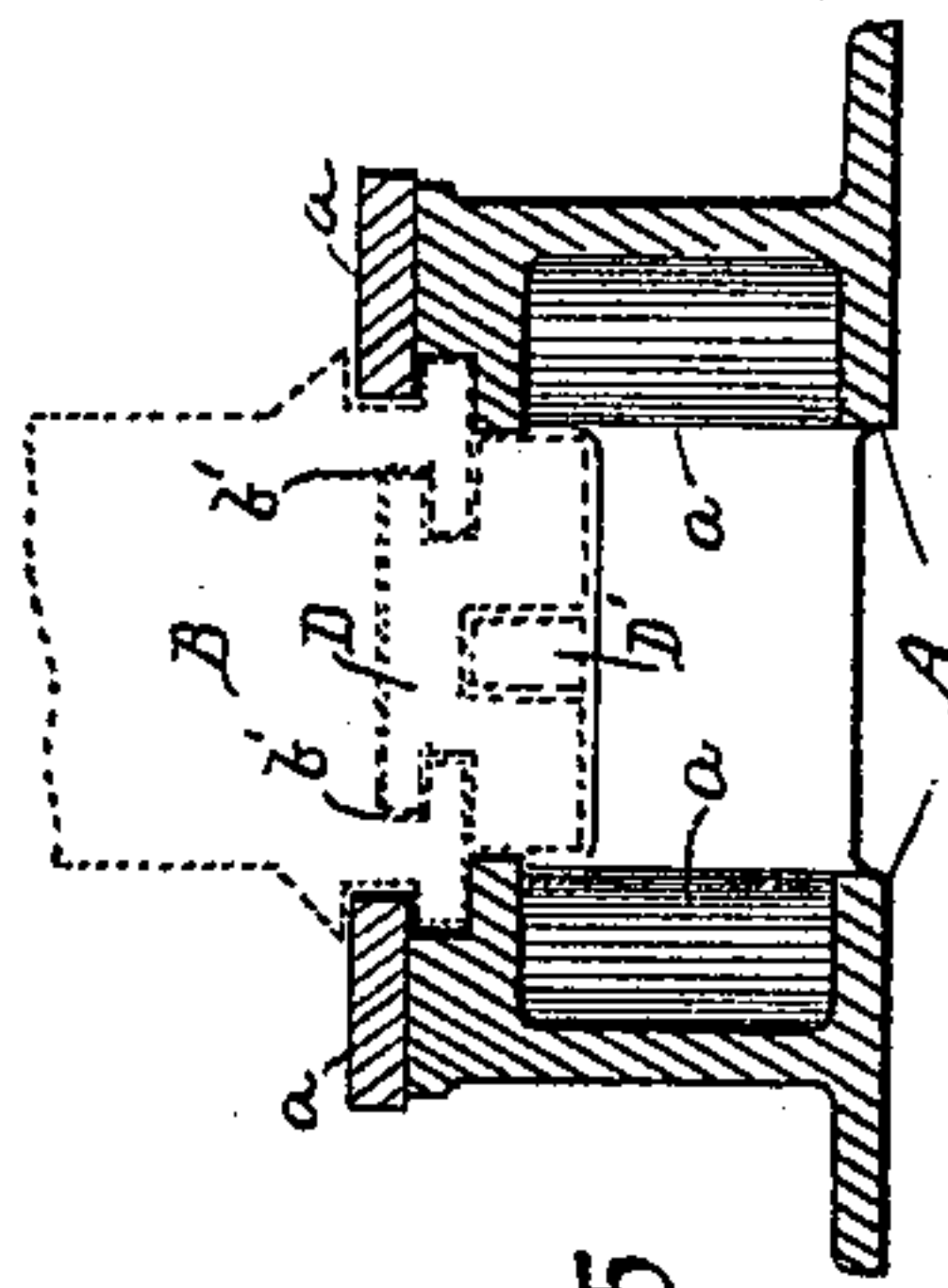


Fig. 5

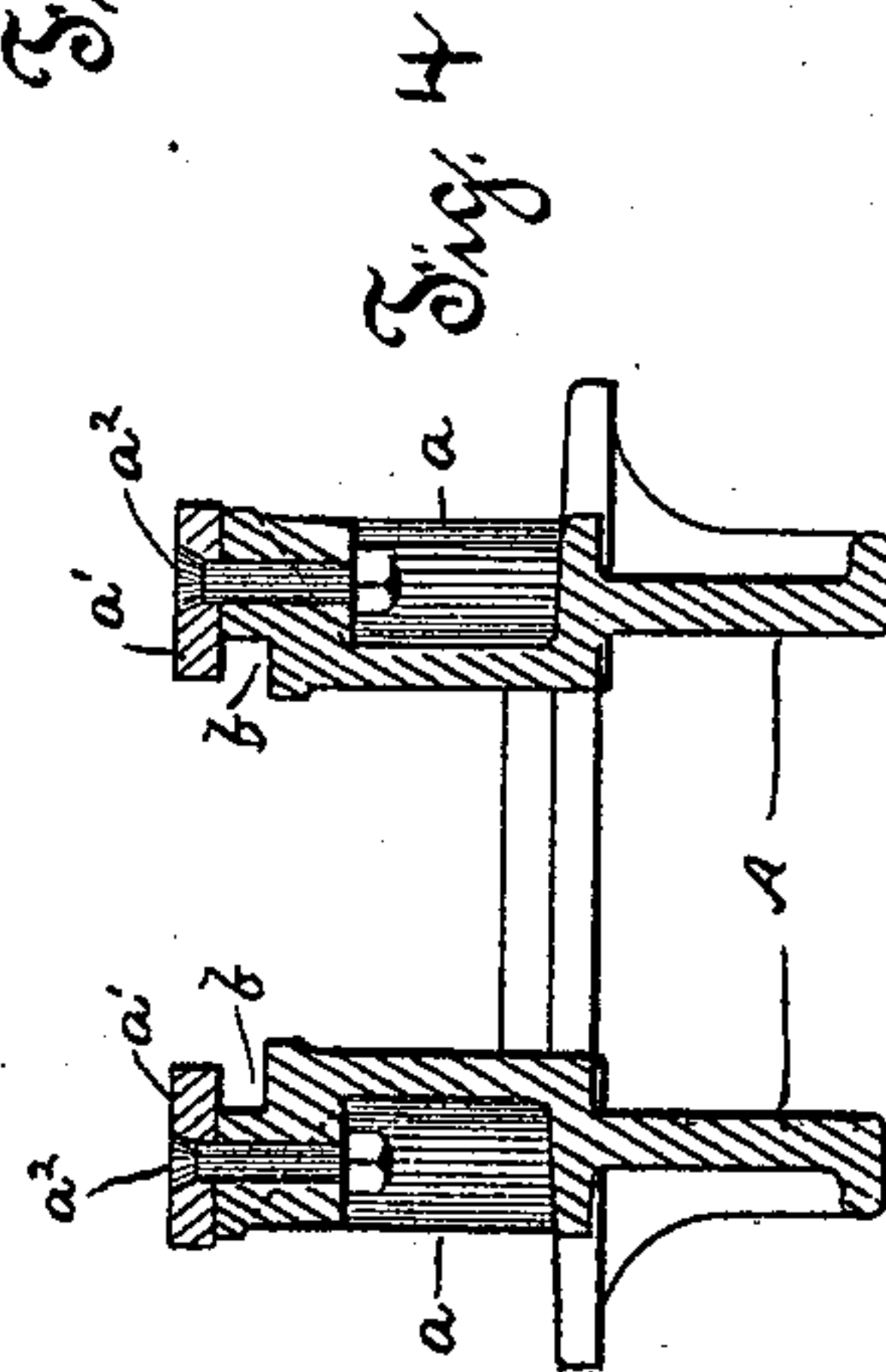


Fig. 4

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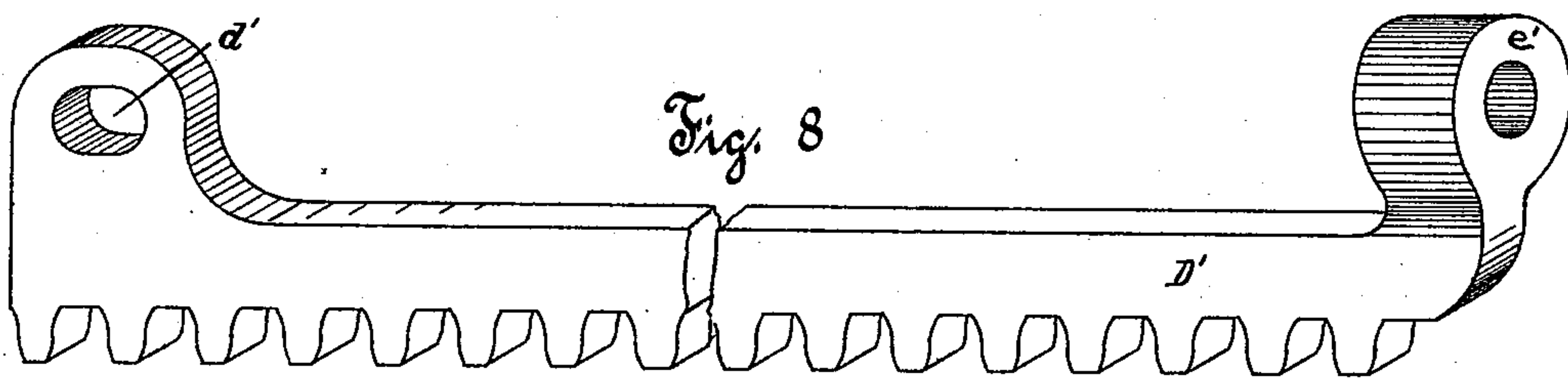
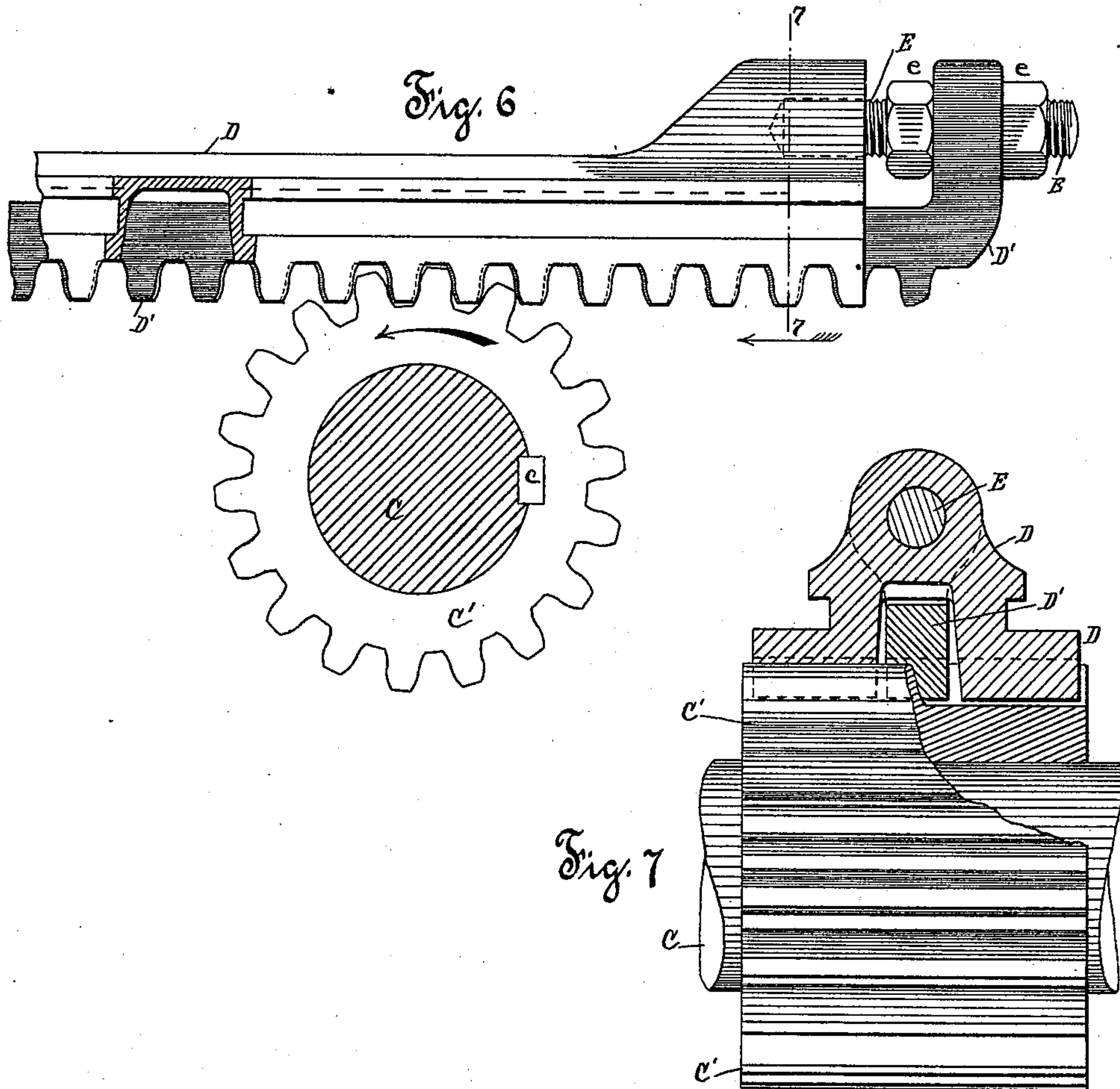
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WITNESSES.

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INVENTOR.

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# UNITED STATES PATENT OFFICE.

WILLIAM M. WILKIN, OF ERIE, PENNSYLVANIA.

## SAWMILL HEAD-BLOCK.

SPECIFICATION forming part of Letters Patent No. 539,319, dated May 14, 1895.

Application filed April 26, 1894. Serial No. 509,087. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM M. WILKIN, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Sawmill Head-Blocks; 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.

This invention relates to head-blocks for saw mills and consists in certain improvements in the construction thereof, as will be hereinafter fully set forth and pointed out in the claims.

The invention is illustrated in the accompanying drawings, as follows:

Figure 1 is a side view of a head-block embodying my invention, with parts broken away to show interior parts and with the base A in vertical longitudinal section on the line 1 1 in Fig. 2. Fig. 2 is a plan of the base A, with parts broken into section. Fig. 3 is a side elevation of the base A. Fig. 4 is a transverse section of the base A on the line 4 4 in Fig. 3. Fig. 5 is a like section on the line 5 5 in Fig. 3, with the knee and rack-bar shown in dotted lines. Fig. 6 is a detail view showing the construction and operation of the rack-bar. Fig. 7 is a view, partly in section and partly in elevation, from the line 7 7 in Fig. 6. Fig. 8 is a perspective view of the auxiliary rack-bar D'.

A is the base of the block; B, the knee; C, the setting shaft; C', the pinion on the shaft; D, the rack-bar carried by the knee; and D', an auxiliary rack-bar contained within the rack-bar, D.

The first part of the invention relates to the construction of the base, and the improvements in the construction thereof are as follows:

The web, *a*, of the two sides of the base is made serpentine in horizontal section as seen clearly in Fig. 2. The object of this is, first, to give the greatest possible strength with a minimum of metal, and, second, to afford spaces for the ends of the cap holding bolts, *a*<sup>2</sup>, and the operation of the nuts thereon, as is seen in Figs. 3 and 4. The top of the base

has a horizontal flange capping the serpentine portion and this in turn is faced with steel plates, *a'*, which are held in place by countersunk bolts, *a*<sup>2</sup>, which pass through said plates and horizontal flange into a space in the serpentine sides where they are secured by nuts, and these plates form the upper lip of the knee grooves, *b*. (See Fig. 4.) The knee grooves, *b*, and the tongues on the knee that slide therein become worn, and means should be provided to take up this wear, and this is effected by the use of the face plates, *a'*, for when the parts become worn, the plates can be removed and the top surface of the base on which they rest can be planed off sufficiently, and the caps be replaced.

The sides of the base are made with shaft openings therein sufficiently large to allow the pinion, C', on the shaft to pass through them, and a bushing, A', is fitted therein to form a journal for the shaft. The object of this construction is to facilitate the putting in and taking out of the shaft. There is a journal for the shaft, C, in each side of the base, and the pinion, C', occupies nearly the entire space between the two sides, and when as heretofore made, the journal boxes were part of the base, it was very difficult to key the pinion to the shaft, but by my construction, there is no difficulty.

The operation of assembling the parts is as follows: The bases, A, are mounted on the log carriage, and secured in place, bushings in the sides of the bases that face toward the middle portion of the carriage are put in place, and the shaft, C, is then put in place. The pinions are then put on each end of the shaft and brought to place between the walls of the base and keyed by keys, *c*, and the bushings not yet in place are put in place. Thus it will be seen that by having the shaft openings in the walls of the base large enough to allow the pinions to pass through them and filling said openings with bushings, A', access can at any time be had to the keys, *c*.

My remaining improvements relate to the construction of the rack-bar in the knee, and the object thereof is to provide means for taking up wear of the cogs, and prevent lost motion.

In Fig. 6, the arrow on the pinion, C', shows



its direction of motion, when the knee is moved forward. By observing Fig. 7, it will be seen that the rack bar, D, has a central longitudinal groove in which is contained the  
5 auxiliary rack-bar, D'. By observing Fig. 8, it will be seen that the bar, D', has at its forward end a slot opening, d', and at its rear end an eye, e', at right angle to the direction of the slot, d'.  
10 When the bar, D', is in place in the bar, D, it is held at its forward end by the pin, d, (see Fig. 1,) which passes through the slot, d', and it is held at its rear end by a screw threaded pin, E, which extends from the bar, D, and  
15 passes through the eye, e', and by nuts, e e, on the pin, E, the bar, D', can be held firmly against longitudinal motion or it can be adjusted longitudinally. When the parts are new, the cog teeth on the bars, D and D',  
20 should exactly coincide, but as the teeth on these bars and on the pinion wear, and there is lost motion, the bar, D', should be moved forward by the adjusting nuts, e, so as to take up the lost motion. This throws the cogs on  
25 the two bars out of alignment, and when the pinion is moving the knee forward, it bears only on the cogs of the bar, D, and when mov-

ing the knee back it bears only on the cogs of the bar, D'.

What I claim as new is—

1. In a saw-mill head-block, the combination 30 of the base, A, having the corrugated web or side walls, a, capped with horizontal flanges; the face plates, a', on the top of said base; and the bolts, a<sup>2</sup>, passing through the face 35 plates and horizontal flanges on the base with their nuts placed in the indentations of the side walls, for attaching said plates to said base.

2. In a saw-mill head-block, the combination 40 with the knee; of the rack-bar, D, carried by said knee, and having a longitudinal central groove in its face; an auxiliary rack-bar contained within said groove; and means for adjusting the auxiliary bar longitudinally of the 45 main bar, substantially as and for the purposes set forth.

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

WILLIAM M. WILKIN.

Witnesses:

JNO. K. HALLOCK,  
C. B. HAYES.