

No. 775,916.

PATENTED NOV. 29, 1904.

W. A. FIRSTBROOK.  
CROSSCUT TABLE SAW.

APPLICATION FILED APR. 3, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

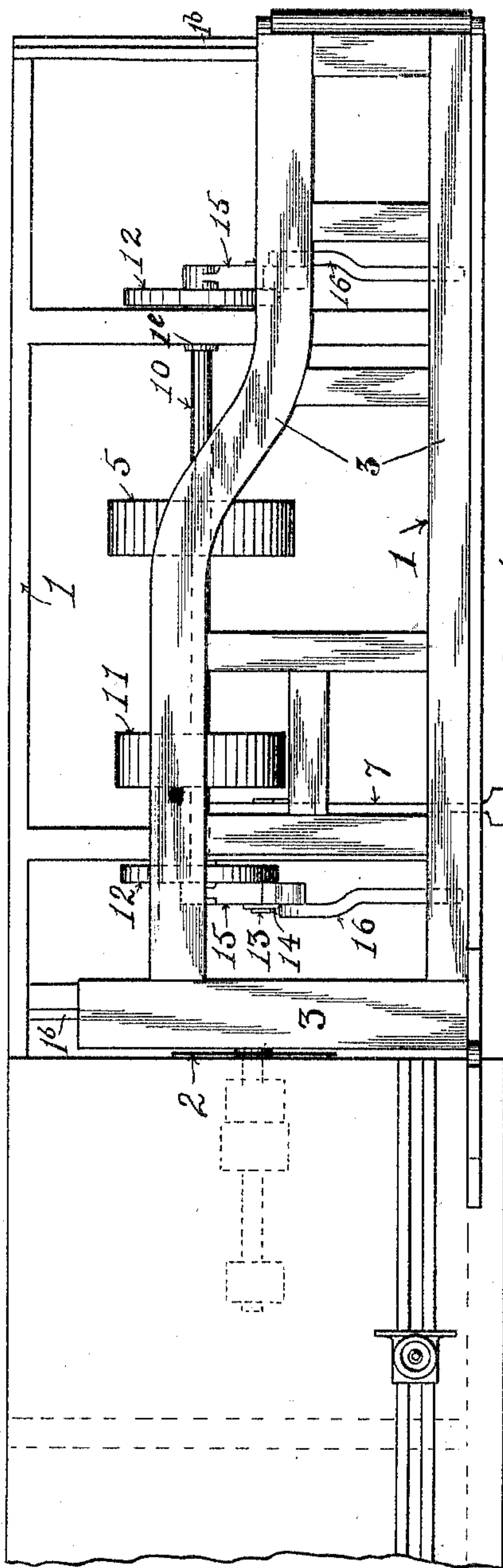


Fig. 1.

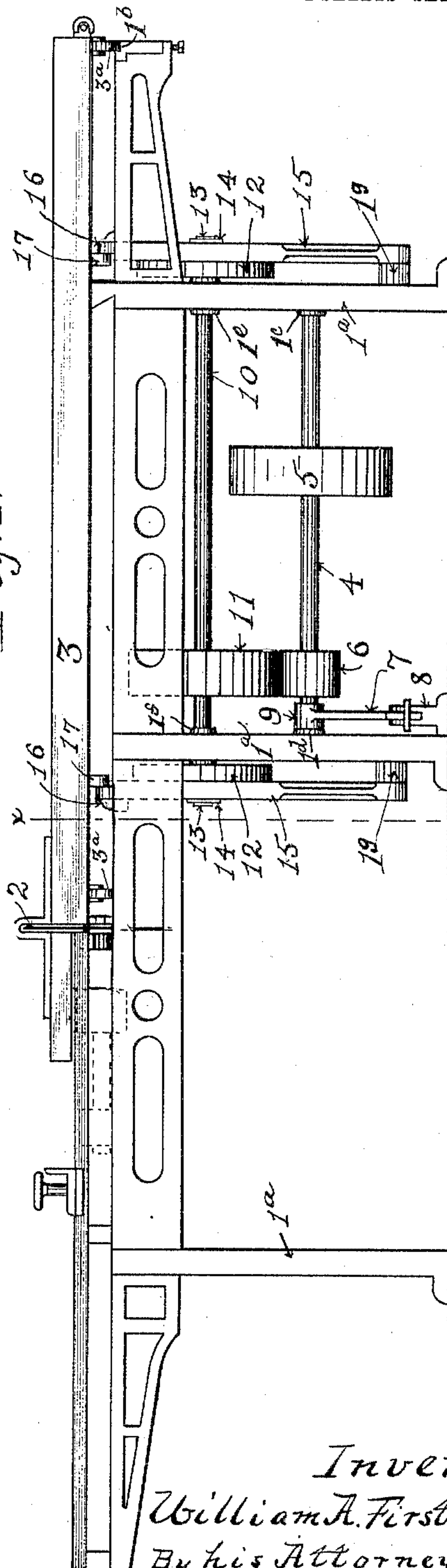


Fig. 2.

Witnesses:  
Mary E. Callan.  
Geo. B. Hager

Inventor.  
William A. Firstbrook.  
By his Attorneys,  
Macomber & Ellis

No. 775,916.

PATENTED NOV. 29, 1904.

W. A. FIRSTBROOK.  
CROSSCUT TABLE SAW.

APPLICATION FILED APR. 3, 1903.

NO MODEL.

2 SHEETS—SHEET 2.

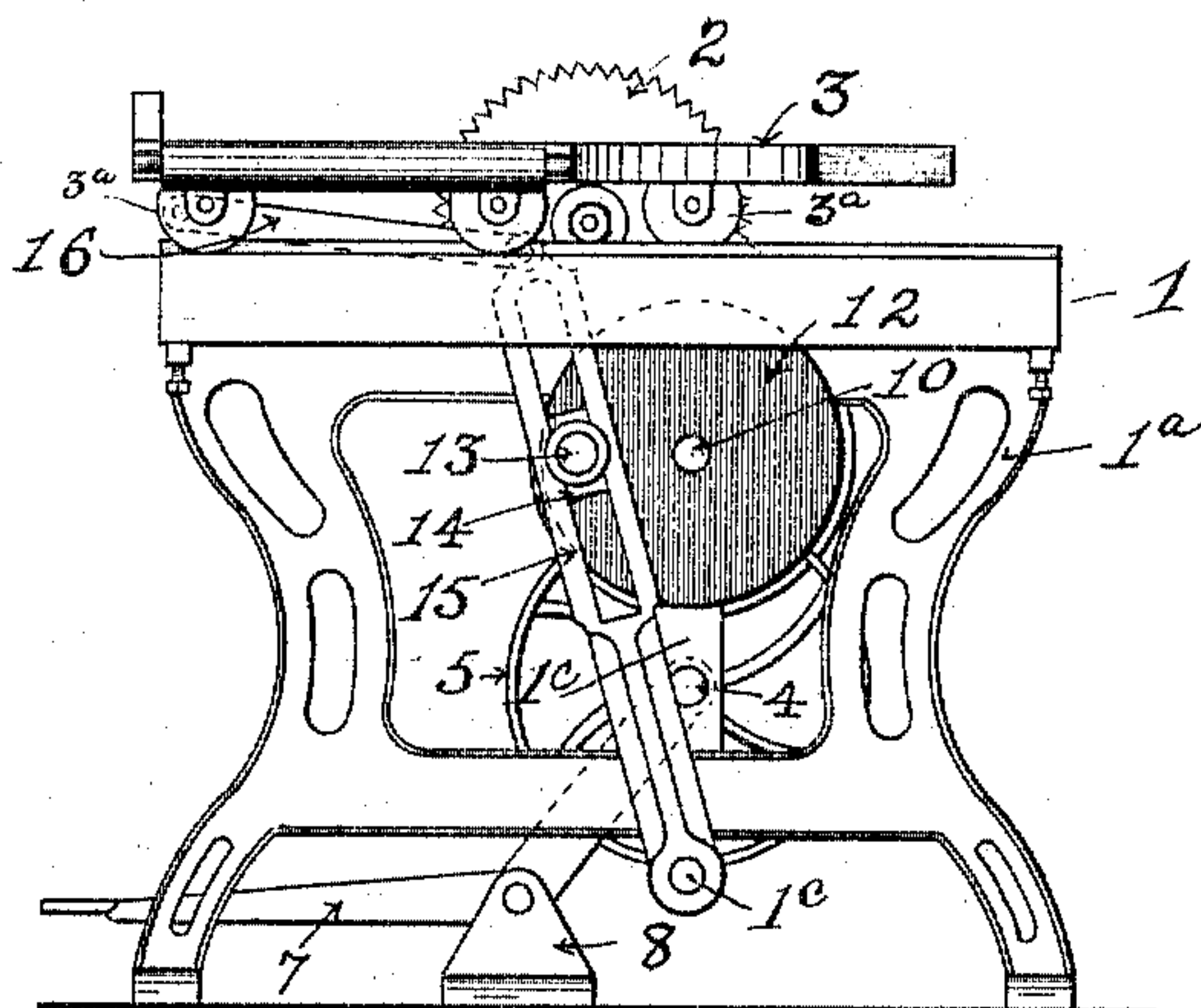


Fig. 3

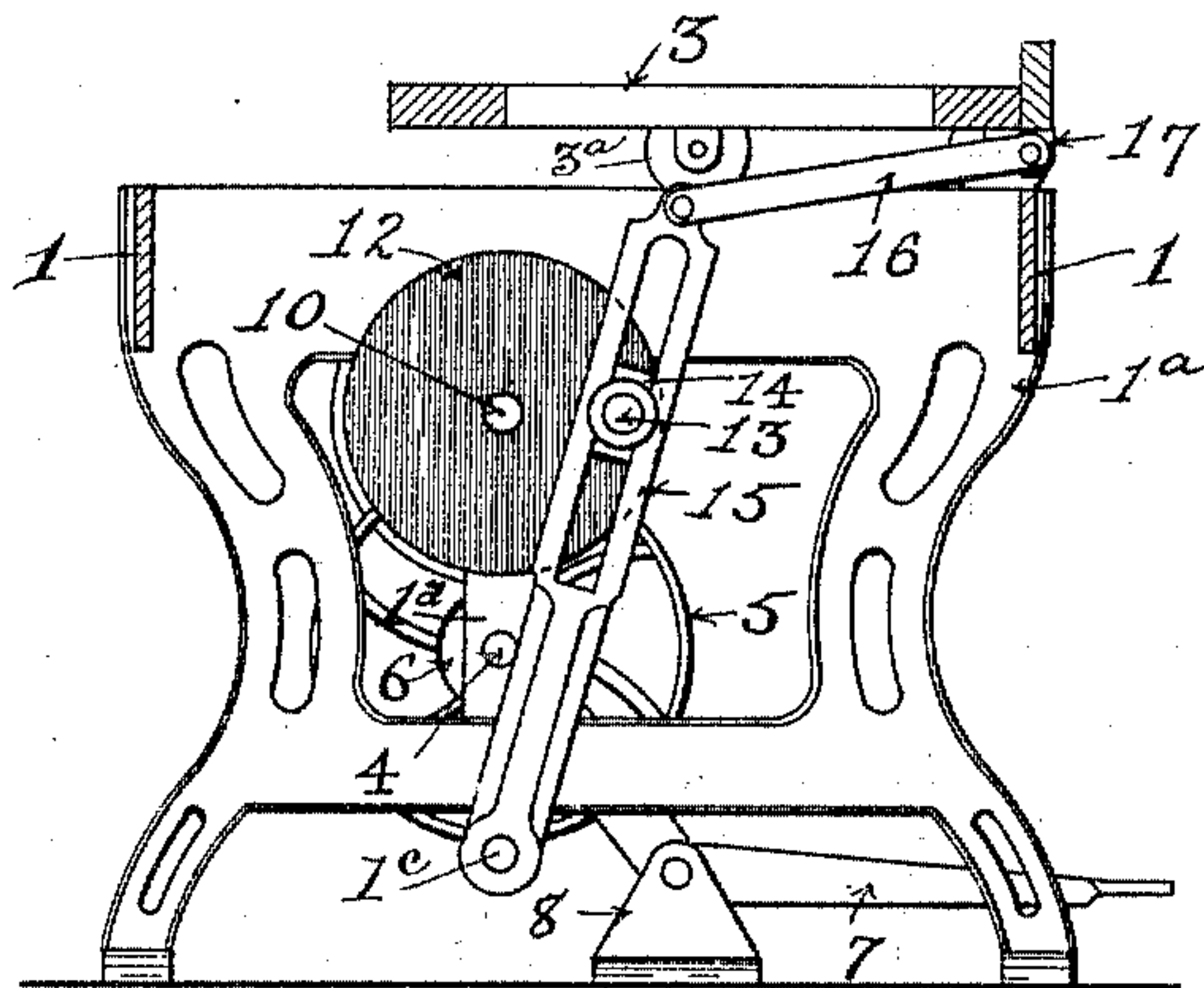


Fig. 4

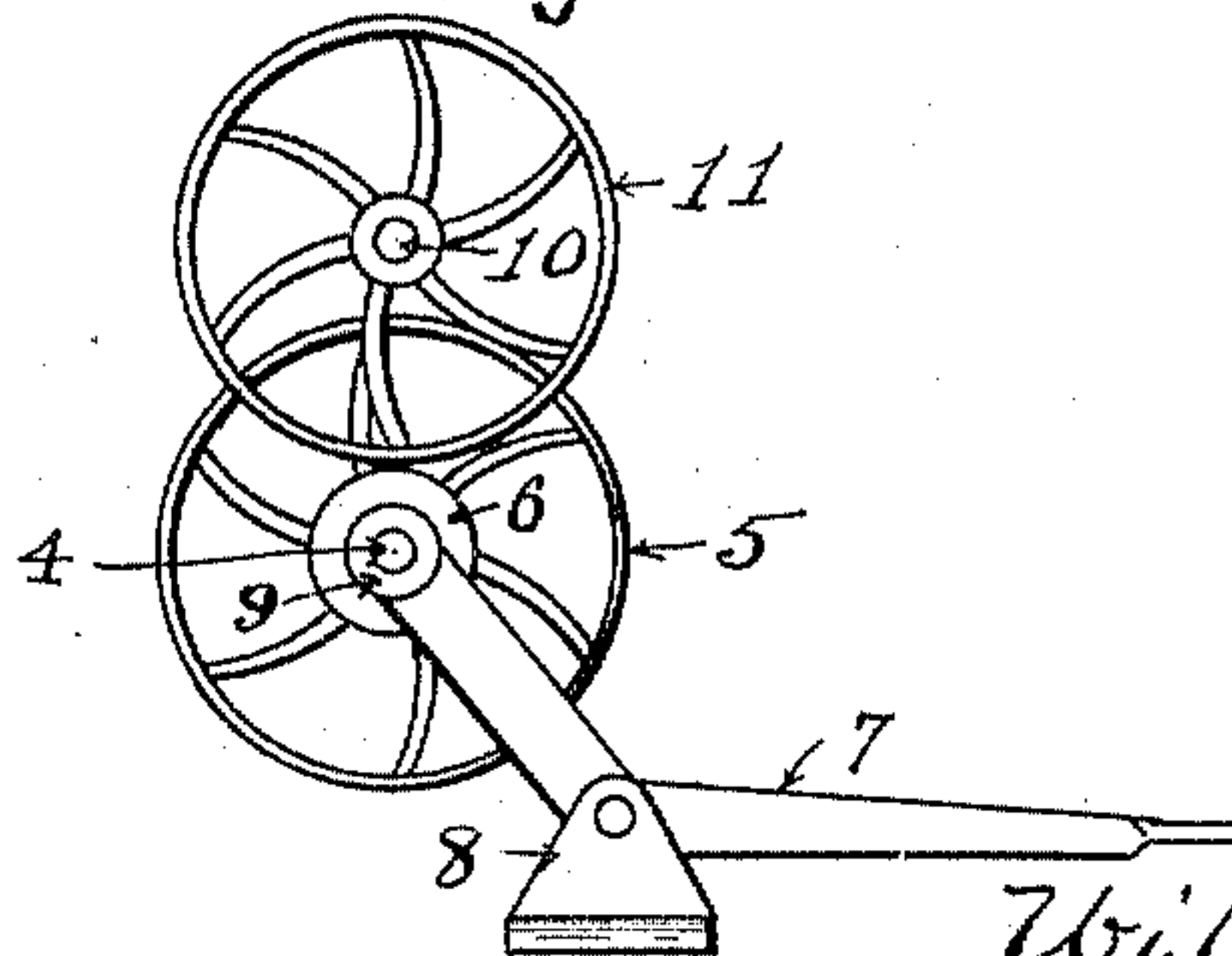


Fig. 5

Witnesses:  
Mary E. Callan  
Geo. L. Hager

Inventor:

William A. Firstbrook  
by his Attorneys,  
Macomber & Ellis



# UNITED STATES PATENT OFFICE.

WILLIAM ASHALL FIRSTBROOK, OF TORONTO, CANADA.

## CROSSCUT TABLE-SAW.

SPECIFICATION forming part of Letters Patent No. 775,916, dated November 29, 1904.

Application filed April 3, 1903. Serial No. 150,935. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM ASHALL FIRSTBROOK, a subject of the King of Great Britain, residing at Toronto, Ontario, Canada, have  
5 invented certain new and useful Improvements in Crosscut Table-Saws, of which the following is a full, clear, and exact description.

My invention relates to improvements in crosscut table-saws, and has for its main object the provision of specific means for moving the table which carries the lumber to be sawed sidewise from front to rear or vice versa of the frame across the face of the rotary saw in contradistinction to moving the  
15 table endwise, as in previous machines, toward and from the edge of the rotary saw.

Another object of my invention is to provide a practical form of power-feed having a treadle-operating device located transversely  
20 of the machine in a convenient position with relation to the saw and table, so as to be readily controlled by the operator.

Another object of my invention is to so locate the power-shaft having a friction-gear and driven shaft having a friction-pulley  
25 driven by the friction-gear with relation to each other that by slightly raising or lowering one end of the power-shaft the friction-gear is quickly brought into and withdrawn  
30 from contact with the driven pulley, so that the table can be instantly and regularly stopped at the return from each cut.

I accomplish these ends by providing the mechanism and combinations which I will now describe by reference to the accompanying  
35 drawings, in which like characters of reference indicate corresponding parts.

Figure 1 is a plan view of my invention. Fig. 2 is a side elevation. Fig. 3 is an end elevation looking to the left in Fig. 2. Fig.  
40 4 is a vertical section on the line *xx*, Fig. 2. Fig. 5 is a detail of the treadle and pulleys.

1 is the frame or bed, and 1<sup>a</sup> the transversely-arranged standards upon which the frame is supported. 2 is the saw, and 3 is the transversely-reciprocating table across the face of the saw. The saw is mounted in the usual manner and is power-driven. The table is also mounted in the usual manner on the bed  
45 on rollers 3<sup>a</sup>, which tread on tracks 1<sup>b</sup>, extend-

ing crosswise of the bed. These are the common features and are not claimed as new except in combination with the friction-feed and treadle mechanism which I will now describe.

4 is a lower longitudinal shaft journaled to  
55 outer and inner standards 1<sup>a</sup> of the frame 1 and driven continuously by the same power that drives the saw, as by a pulley 5.

6 is a paper friction-pulley rigidly mounted upon the shaft 4. The shaft 4 is loosely mounted in a bearing 1<sup>c</sup> at its outer end and in a bearing 1<sup>d</sup> at its inner end. The bearing of the shaft 4 adjacent to the pulley 6 is made sufficiently free to permit of a slight up-and-down movement of the shaft in order that the  
65 friction-pulley may be thrown into contact, as hereinafter more fully described.

7 is a treadle of bell-crank-lever shape pivoted in a base-block 8 adjacent to the inner standard and having at its inner and upper  
70 end a sleeve 9, which takes freely over the shaft 4.

10 is an upper longitudinal shaft journaled to outer and inner standards of the frame 1 and carrying rigidly mounted thereon a pulley 11, which is capable of being acted upon by the pulley 6. The shaft 10 is mounted in bearings 1<sup>e</sup> and 1<sup>f</sup>, located over the lower bearings 1<sup>c</sup> and 1<sup>d</sup>, respectively.

12 12 are paired parallel disks rigidly  
80 mounted upon the ends of the shaft 10, which project through the standards. These disks carry crank-pins 13 13, which turn in sliding blocks 14 14, working in the paired parallel slotted arms 15 15, which slotted arms are  
85 pivoted at their lower ends to horizontal lugs 1<sup>g</sup> on outer and inner standards of the frame 1, and at their upper ends are pivoted to paired parallel connecting-bars 16 16, which at their opposite ends are pivoted to depending lugs  
90 17, secured to the under side of the table 3.

Having indicated the principal parts, I will now describe the operation. A board or other piece of lumber to be sawed being in place on the table 3 the operator presses down on the  
95 treadle 7. The sleeve 9 raises the end of the shaft 4 adjacent to the paper-pulley 6 (as it may do by reason of the free space in the journal-bearing, as above mentioned) until the pulley 6 comes in frictional contact with  
100



the pulley 11. This causes the pulley 11 to revolve, and the disks 12 12 and their crank-pins cause the arms 15 15 to swing over a distance equal to the diameter of the circle described by the crank-pins. The arms 15 15 communicate such reciprocatory movement to the table 3 through the bars 16 16. A complete revolution of the shaft 10 causes the table 3 to complete one reciprocatory movement, and thereupon the operator releases the treadle 7, allowing the pulley 6 to fall out of contact with the pulley 11 and the table 3 comes to rest.

Having thus described my invention and its method of operation, what I claim is—

A crosscut table-saw comprising frame, transversely -arranged supporting-standards having outwardly-projecting lugs at the base thereof, a shaft mounted longitudinally of the frame carrying a rotary saw transversely of the frame, a longitudinal table adapted to be moved sidewise, from front to rear or vice versa across the face of the saw parallel with the saw-shaft and having depending lugs located outside of the standards, lower and upper journal-bearings mounted on the standards, a power-shaft mounted in the lower journal-bearings with sufficient play to enable

the inner end of the shaft to be slightly raised, and lowered, and having a friction-gear at its inner end, a shaft mounted in the upper journal-bearings having ends projecting beyond the standards, and a friction-pulley located over the friction-gear, disks fixed to the projecting ends of the upper shaft, and each having a crank-pin, parallel arms pivoted to the lugs of the standards, working in unison and each having a slot in its upper part, blocks mounted on the crank-pins within the slots of the arms, connecting-bars whereby the upper ends of the arms are coupled to the depending lugs on the table, a base-block, and a bell-crank lever pivoted in the base-block having its outer arm formed with a treadle and its inner arm formed with a sleeve surrounding the inner end of the lower shaft, whereby the inner end of the power-shaft is raised to bring the friction-gear into contact with the friction-pulley.

In witness whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WILLIAM ASHALL FIRSTBROOK.

Witnesses:

JOHN FIRSTBROOK,  
J. T. STUART.