

No. 699,085.

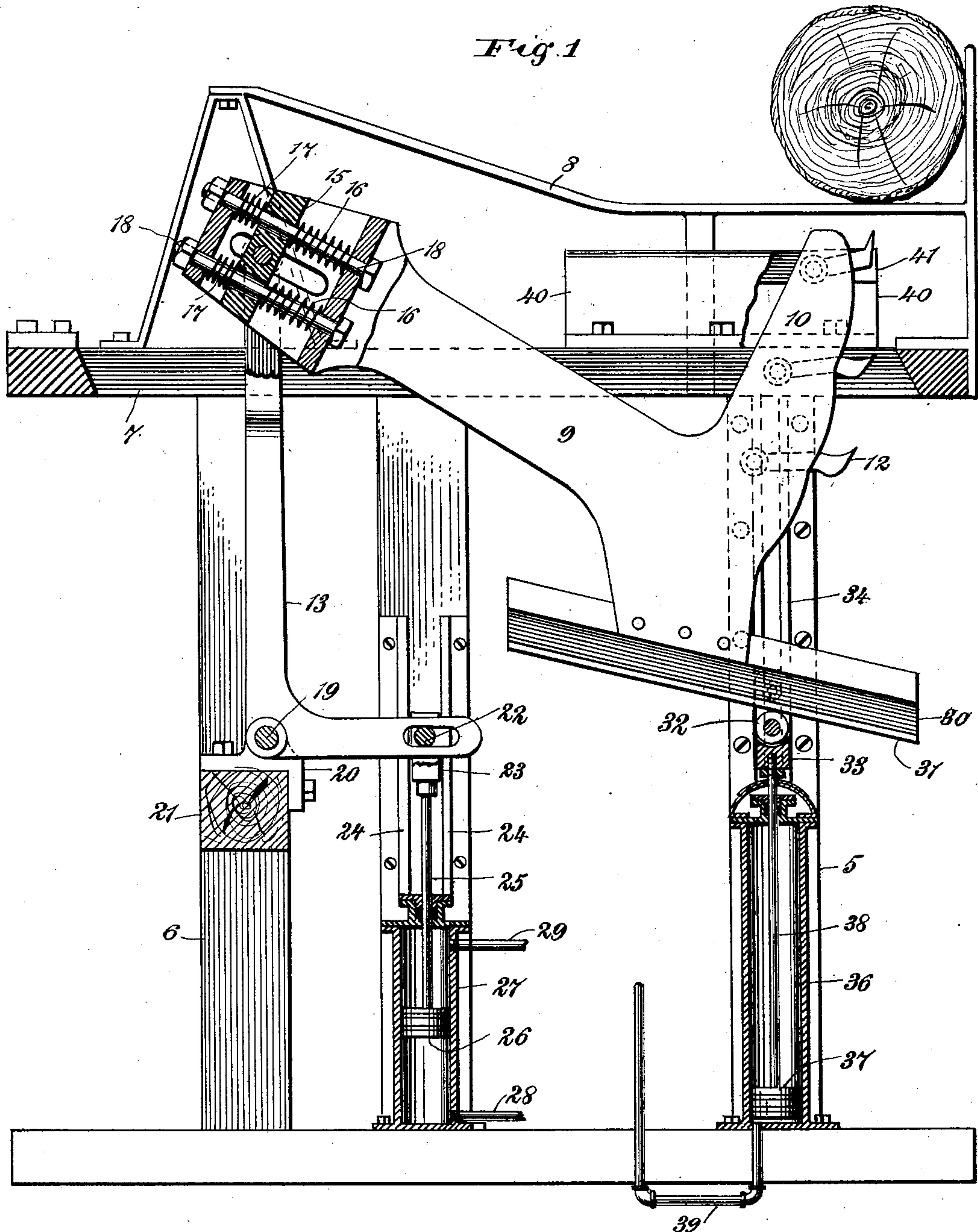
Patented Apr. 29, 1902.

T. H. DILLON.
LOG TURNER.

(Application filed Oct. 11, 1901.)

(No Model.)

3 Sheets—Sheet 1.



WITNESSES:

John Bengtson
C. R. Ferguson

INVENTOR

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Fig. 3

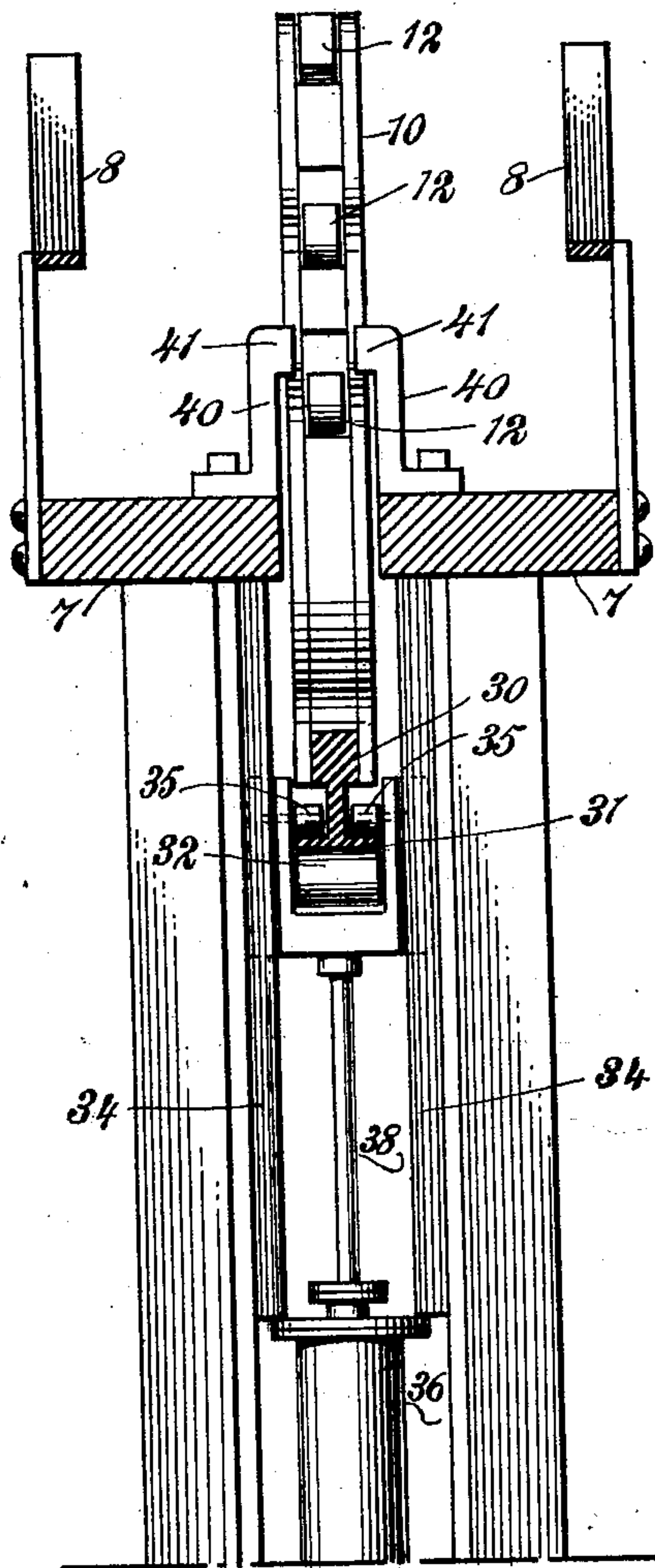
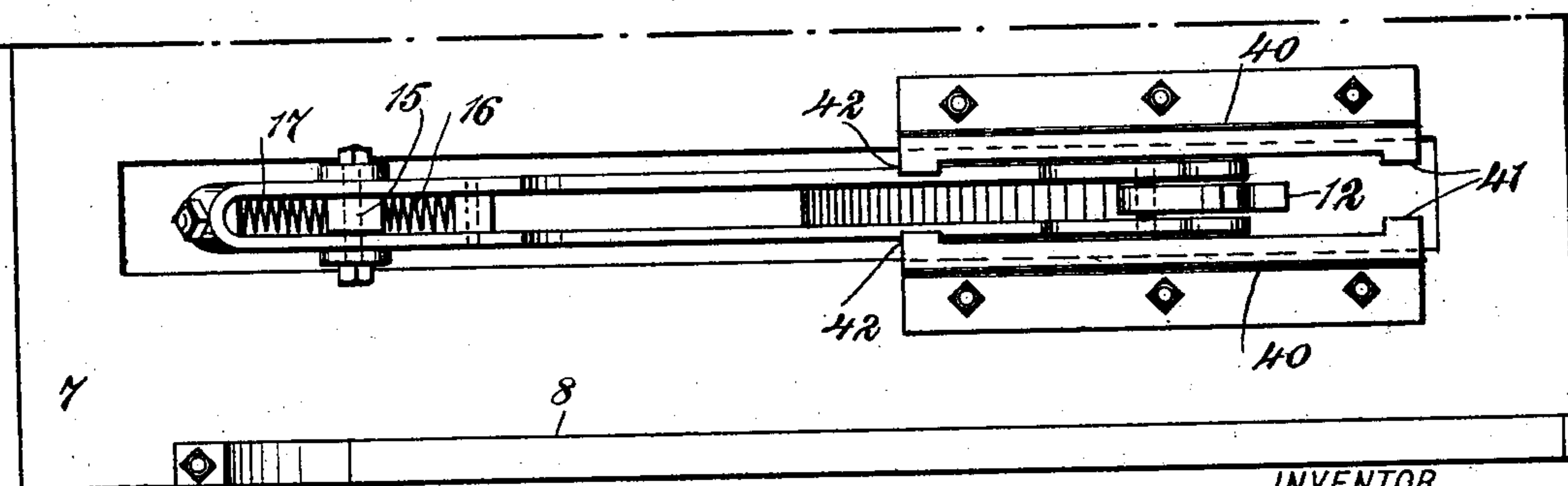
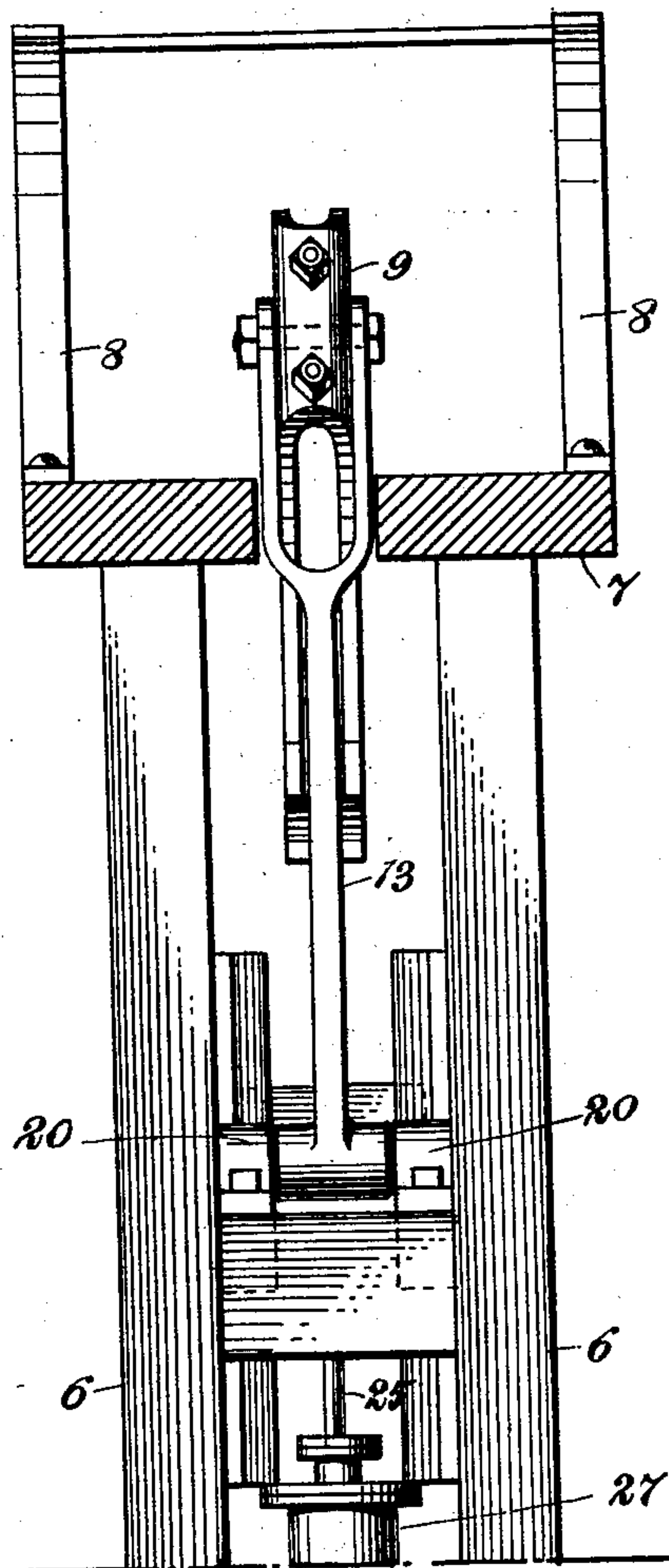


Fig. 4



WITNESSES:

John A. Reynolds
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Fig. 5

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UNITED STATES PATENT OFFICE.

THOMAS HINGSTONE DILLON, OF LEESVILLE, LOUISIANA.

LOG-TURNER.

SPECIFICATION forming part of Letters Patent No. 699,085, dated April 29, 1902.

Application filed October 11, 1901. Serial No. 78,297. (No model.)

To all whom it may concern:

Be it known that I, THOMAS HINGSTONE DILLON, a citizen of the United States, and a resident of Leesville, in the parish of Vernon and State of Louisiana, have invented a new and Improved Log-Turner, of which the following is a full, clear, and exact description.

This invention relates to improvements in machines for turning logs on a sawmill-carriage; and the object is to provide a machine of this character that will operate rapidly without jar to turn either round or square timber and so constructed that the turner will bear evenly and yieldingly against the log.

I will describe a log-turner embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional elevation of a log-turner embodying my invention. Fig. 2 is a similar view, but showing the parts in another position. Fig. 3 is a section on the line 3-3 of Fig. 2. Fig. 4 is a rear elevation, partly in section; and Fig. 5 is a plan view.

The frame of the machine comprises front uprights 5 and rear uprights 6, and the front and rear uprights of a side are connected by top beams 7. Mounted on the top of the frame are inclined skids or runways 8 for the log. Movable in the frame is the log-turning arm 9, which has a substantially T-shaped head 10, the front surface of which is provided with depressions 11, which will receive the corners of the log or timber when the log or timber to be turned is angular in cross-section. Carried in the head 10 are the turning-dogs 12.

I have here shown three turning-dogs; but it is obvious that a greater number may be employed. These dogs are pivoted in recesses formed in the head, so that upon a downward movement of the head the dogs will swing upward and readily pass the log. The arm 9 is mounted to swing on the upwardly-extended member of an angle-lever 13. As here shown, this angle-lever at its upper end is forked, and the two members engage with opposite sides of the arm 9 and connect by means of a bolt 14 with a block 15, movable in the end of the arm. The sides of the arm are provided with

slots, so that the bolt 14 may slide back and forth with the block, and to prevent jarring motion of the arm when engaging with a log I provide cushions at opposite sides of the block 15. As here shown, these cushions consist of springs 16 and 17, arranged at opposite sides of the block and engaging around bolts 18, passed through end plates in the frame.

At its angle portion the angle-lever 13 has trunnions 19, which have bearings 20, attached to a cross-beam 21 of the frame. The lower or horizontal member of the angle-lever is provided with a slot through which a pin 22, carried by a cross-head 23, passes. This cross-head is movable vertically in guides 24 and is connected to a piston-rod 25, said piston-rod being extended from a piston 26, operating in a cylinder 27, and with this cylinder steam inlet and exhaust pipes 28, 29 communicate.

Attached to the forward end of the arm at the lower side is an inclined runner or rail 30. This runner or rail has on its lower edge a flange 31, which rests upon a roller 32, carried by a cross-head 33, movable in guides 34, and also attached to the cross-head are rollers 35, which bear upon the upper surface of the flange and keep the track or rail in close connection with the roller 32.

Movable in a steam-cylinder 36 is a piston 37, from which a rod 38 extends to a connection with a cross-head 33, and steam is admitted to the under side of the piston 37 through a pipe 39.

The upper portion of the head 10 is guided between plates 40 on the upper side of the machine-frame, and at the forward ends these plates have stop-blocks 41, and at the rear ends are stop-blocks 42. These stop-blocks limit the movement of the arm 9 in both its forward and backward movements.

In operation when a log is to be turned steam is admitted to the cylinder 36, and the upward movement of the piston will cause an upward movement of the log-turning arm, and during this upward movement it will have a slight rearward movement, so that the dogs 12 will engage with the log and turn it. To cause a quick rearward movement of the turning-arm, steam may be admitted to the cylinder 27, forcing the piston 26 upward, consequently rocking the angle-lever 13 and

drawing the turning-arm rearward. As the steam is exhausted from the cylinder 36, the turning-arm will fall by gravity to the position indicated in Fig. 1.

5 The depressions in the head 10, as before stated, permit the turning of a square log or timber, and this without using power in the cylinder 27. As the head moves upward the stick turns, and one corner passes into a re-
10 cess in the head.

The cushion-springs before mentioned will prevent undue jar of the mill-carriage when the turning-arm comes in contact with the log and pushes it up to the knees, and the springs
15 will also permit the arm to yield somewhat while turning a square timber against the same without aid from the angle-lever.

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

1. In a log-turner, a turning-arm, dogs carried in the forward end of said arm, an angle-lever with which the rear end of the arm has swinging and cushioned connection, a piston
25 for rocking said angle-lever, and a piston for moving the forward end of the arm upward, substantially as specified.

2. A log-turner, comprising an arm having a head provided in its front surface with de-
30 pressions or recesses, swinging dogs carried by the head and means for causing a vertical swinging motion of said arm, substantially as specified.

3. A log-turner, comprising a turning-arm,
35 dogs carried by said arm, a runner secured to said arm at its free end, a cross-head, a roller carried by the cross-head and on which said runner rests, a cylinder, and a piston in said cylinder having connection with the cross-
40 head, substantially as specified.

4. A log-turner, comprising a turning-arm, dogs carried by the forward end of said arm, an angle-lever pivoted in the frame of the machine, a block arranged to slide in said turning-arm, a connection between said block
45 and the angle-lever, springs arranged in the arm at opposite sides of said block, and means for rocking the angle-lever, substantially as specified.

5. A log-turner, comprising a frame, a turn-
50 ing-arm mounted to swing in the frame, dogs carried by said arm, a runner or track secured to the lower side of the free end of said arm and arranged at an angle to the length of the arm, a cross-head movable in guideways, a
55 roller mounted in the cross-head and upon which said runner or track rests, rollers carried by the cross-head for engaging with the runner or track above the first-named roller, a cylinder, and a piston in the cylinder hav-
60 ing connection with the cross-head, substantially as specified.

6. In a log-turner, a frame, a turning-arm mounted to swing in the frame, an angle-lever mounted to rock in the frame, a swinging
65 and cushioned connection between the upper portion of said lever and the arm, a cross-head movable in guides and with which the lower member of said angle-lever engages, a cylinder, and a piston in the cylinder con-
70 necting with said cross-head, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOS. HINGSTONE DILLON.

Witnesses:

JAMES G. PALMER,
W. L. FORD.