

No. 617,845.

Patented Jan. 17, 1899.

T. S. WILKIN.
LOG TURNER AND LOADER.

(Application filed Apr. 9, 1898.)

(No Model.)

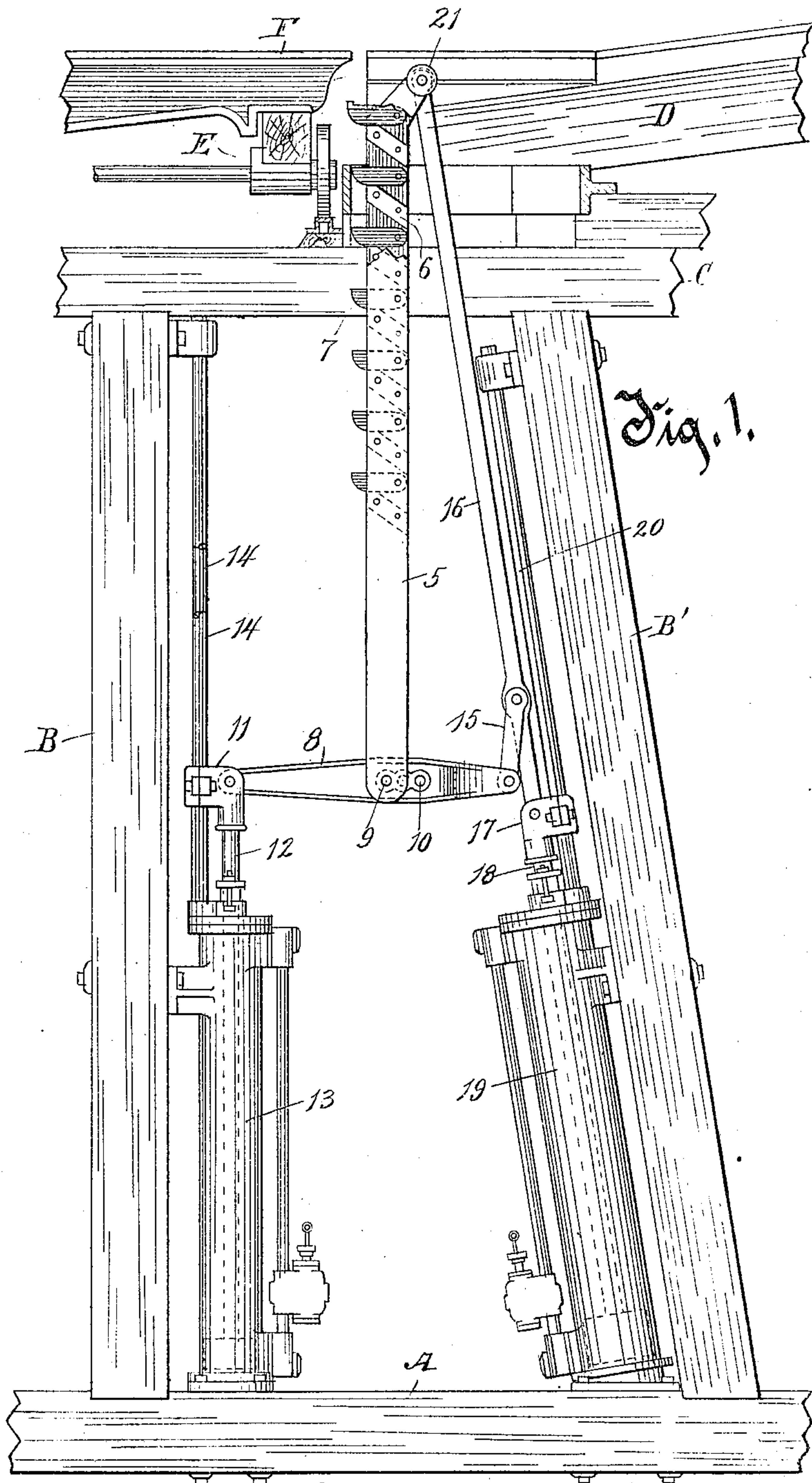


Fig. 1.

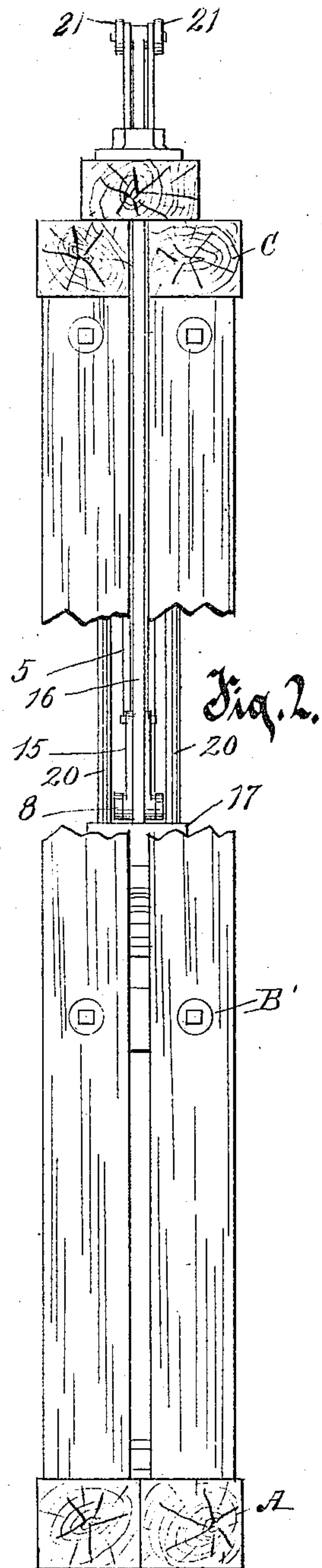


Fig. 2.

Witnesses.

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THEODORE S. WILKIN, OF BROOKVILLE, PENNSYLVANIA.

LOG TURNER AND LOADER.

SPECIFICATION forming part of Letters Patent No. 617,845, dated January 17, 1899.

Application filed April 9, 1898. Serial No. 677,076. (No model.)

To all whom it may concern:

Be it known that I, THEODORE S. WILKIN, of Brookville, in the county of Jefferson and State of Pennsylvania, have invented a new and useful Improvement in Log Turners and Loaders, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention relates to improvements in that class of log turners and loaders that are adapted to be used with power applied at a plurality of points on the log-turner either concurrently or separately.

The invention consists of the mechanism, its parts and combinations of parts, as hereinafter described and claimed, or their equivalents.

In the drawings, Figure 1 is an elevation of my improved log turner and loader in connection with the framing of a mill, showing the method of its use. Fig. 2 is a side elevation as seen from the right of Fig. 1, parts being broken away to better exhibit the construction.

The framing of the mill, in connection with which my improved log turner and loader is shown, consists, chiefly, of the ground-sills A, the posts B B', and the floor-sills C, in connection with which there is the log way or skid D and the means to support it. A log-carriage E, having a head-block F, travels on a track alongside of the skid D. The top of the skid and the top of the head-block F, as also the other head-blocks of the carriage that are not shown, are flush with each other or in the same horizontal plane, at least so far as that portion of that skid is concerned that is adjacent to the carriage.

A toothed bar 5, employed in my log-turner, is constructed advisably of two flat rails with interposed blocks 6 at equal distances apart in the upper portion of the bar, the two rails of the bar being secured together by bolts or rivets through the rails and through the blocks 6. A number of teeth 7, arranged in a series, are severally pivoted in the bar 5 between the rails thereof and between the blocks 6 in such manner that they project to the front beyond the edge of the bar and, resting on the blocks 6, are adapted to engage the log and lift it as the bar is forced upwardly, while they are

adapted to be lifted and thereby swung upwardly and inwardly into the bar as it goes downwardly past a log or other contacting article. The toothed bar 5 is substantially straight throughout its length and is adapted to be moved substantially vertically, but with such cant or rake as is provided for by means herein described.

At its lower extremity the bar 5 is pivoted medially to a cross-head 8, the two rails of the bar 5 straddling the cross-head and being secured thereto by a removable pin 9. By means of this construction the lower extremity of the bar 5 can be adjusted laterally on the cross-head 8, the pin 9 therefor being adapted to be inserted in any one of a series of apertures 10 in the cross-head 8. The cross-head 8 is pivoted at one extremity to a head-block 11, which head-block is fixed on the piston-stem 12, the stem being provided with a piston that reciprocates in the vertically-disposed cylinder 13. The head-block 11 is also secured movably to and reciprocates on the fixed vertically-disposed guide-rods 14 14. The other extremity of the cross-head 8 is provided with a link 15, by which it is connected to the push-rod 16, which is pivoted at its lower end in the head-block 17 and at its upper end is pivoted to the laterally-projecting extremities of the rails of the toothed bar 5. The head-block 17 is fixed on a piston-stem 18, the piston-stem being provided with a piston that reciprocates in the obliquely-disposed cylinder 19. The head-block 17 is also secured movably to the guide-rods 20 20, that are fixed in an oblique position parallel with the prolongation of the axis of the obliquely-disposed cylinder 19. The position of the cylinder 19 is such that a prolongation of its axis upwardly would intersect the axis or line of motion of the toothed bar 5 near its upper extremity when in its lowest position, which is shown in Fig. 1 of the drawings.

The cylinders 13 and 19 are adapted for the use therein of steam or any other fluid medium for applying power to the pistons therein. These cylinders 13 and 19 and the guide-rods 14 and 20 are severally secured in fixed position by being attached to the framing of the mill in any suitable manner. Two anti-friction-rollers 21 21 are preferably mounted

on the upper extremity of the toothed bar 5 for relieving the frictional contact of the toothed bar with a log or other article contacted thereby.

5 It will be understood that by movement of the push-rod 16 upward or downward the bar 5 can be raised or lowered somewhat and at the same time tilted or canted, as desired, and that by the raising and lowering of the head-
10 blocks 11 and 17 concurrently the cross-bar 5 may be raised or lowered either vertically or in such raking position as it shall have been adjusted to by first raising or lowering the head-block 17. It will also be seen that
15 the rake of the toothed bar 5 may be varied by shifting the lower end of the toothed bar from one to the other of the apertures 10 in the cross-head, at the same time thereby changing the leverage on the toothed bar to
20 a corresponding extent with relation to its support on the head 11 or the head 17.

What I claim as my invention is—

1. In a log-turner, the combination of a substantially straight and upwardly and downwardly moving toothed bar, a cross-head to
25 which the foot of the toothed bar is pivoted medially, means for elevating and lowering the respective ends of the cross-head either separately or concurrently and means connected to the upper extremity of the tooth-
30 bar for raising, lowering and guiding it.

2. In a log-turner, the combination of an upwardly and downwardly movable toothed bar, a cross-head to which the foot of the
35 toothed bar is secured pivotally, means for moving one end of the cross-head vertically, and other means connected with the other extremity of the cross-head and with the up-

per end of the toothed bar for concurrently raising or lowering the upper extremity of
40 the toothed bar and an end of the cross-head.

3. The combination of an upwardly and downwardly movable toothed bar, a cross-head pivoted medially to the lower extremity of the toothed bar, a vertically-movable block
45 pivoted to and carrying one end of the cross-head, an obliquely-movable block, a push-rod pivoted to the obliquely-movable block and to the upper end of the toothed bar, and a link connecting the otherwise free end of the
50 cross-head to the push-rod medially.

4. The combination with an upwardly and downwardly movable toothed bar, of a cross-head, means securing the toothed bar to the cross-head adjustable laterally, a head-block
55 to which one extremity of the cross-head is connected, a vertically-disposed power-medium cylinder provided with a reciprocating piston carrying said head-block, a guide on which said head-block travels vertically, a
60 push-rod connected to the upper extremity of the toothed bar, and to a head-block, said head-block, a guide for said last-mentioned head-block, a cylinder having a reciprocating
65 piston carrying said head-block, said last-mentioned guide and cylinder being oblique to the toothed bar, and a link connecting the push-rod to the otherwise free end of the cross-head.

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

THEODORE S. WILKIN.

Witnesses:

BEN M. CLARK,
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