

No. 641,554.

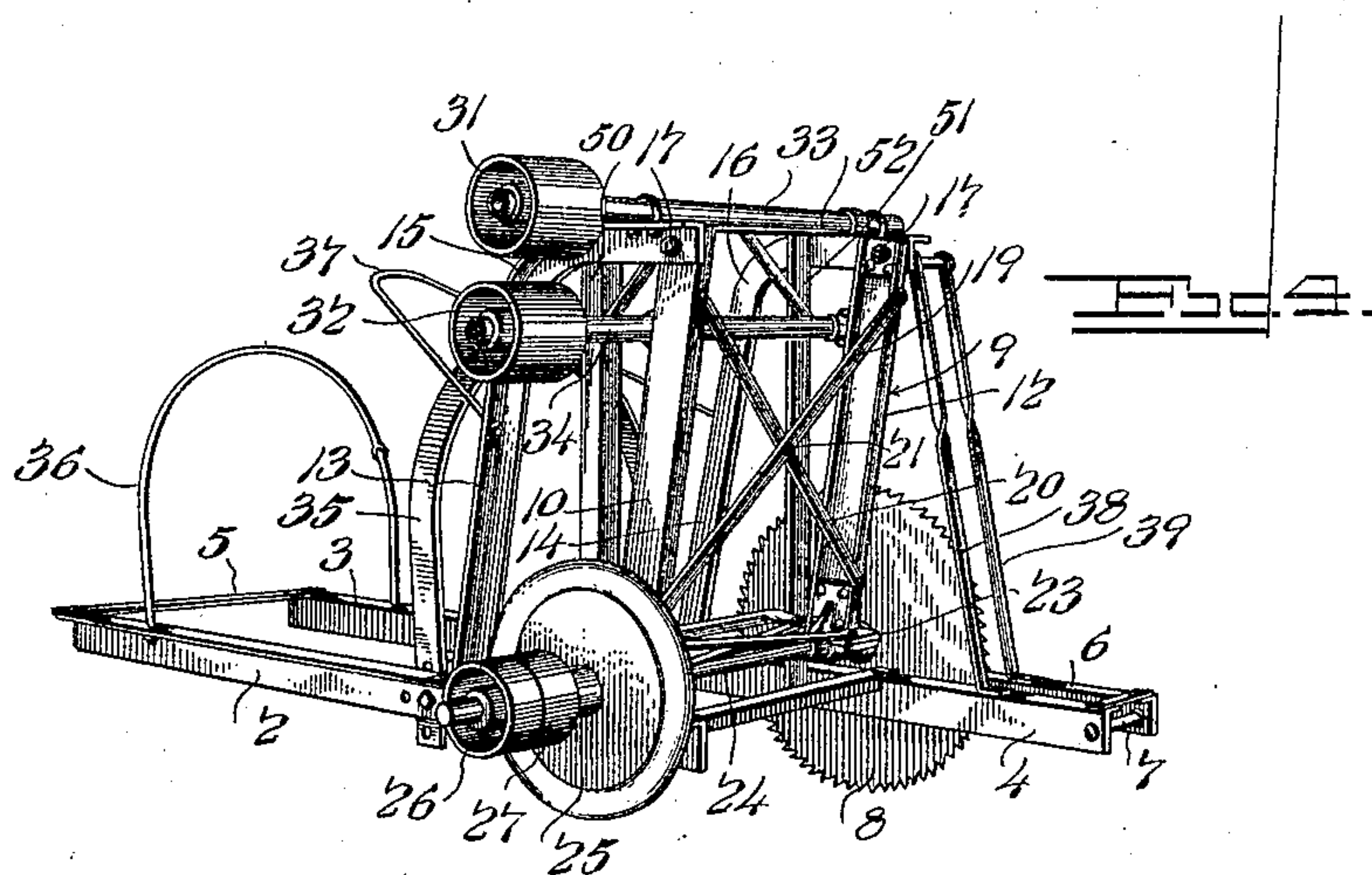
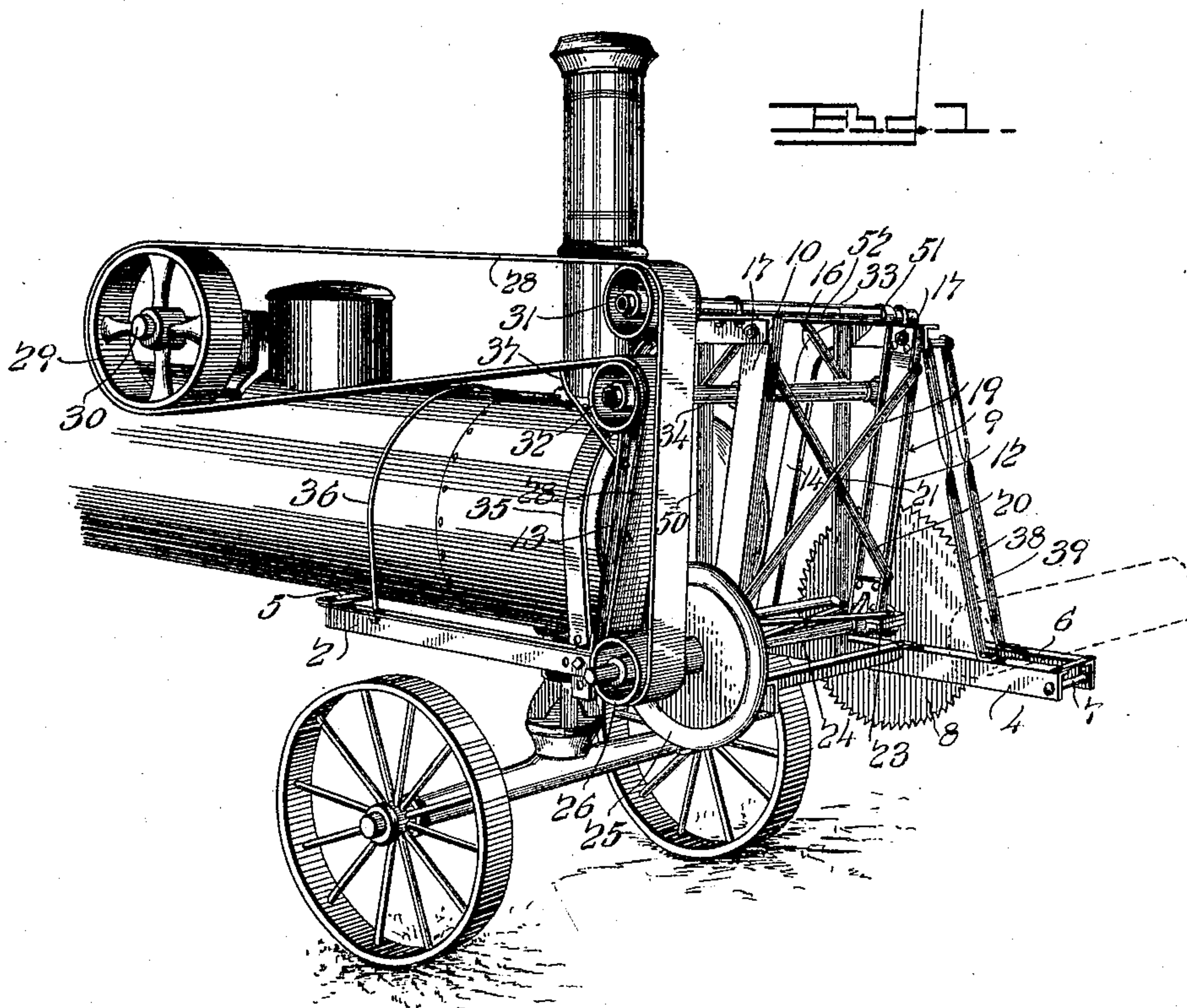
Patented Jan. 16, 1900.

F. E. & E. L. SHORE.
WOOD SAWING MACHINE.

(Application filed Feb. 8, 1899.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

E. S. Stewart
Heath Litchfield

By their Attorneys,

Fredrick E. Shore Inventors
Edward L. Shore

C. A. Snow & Co.

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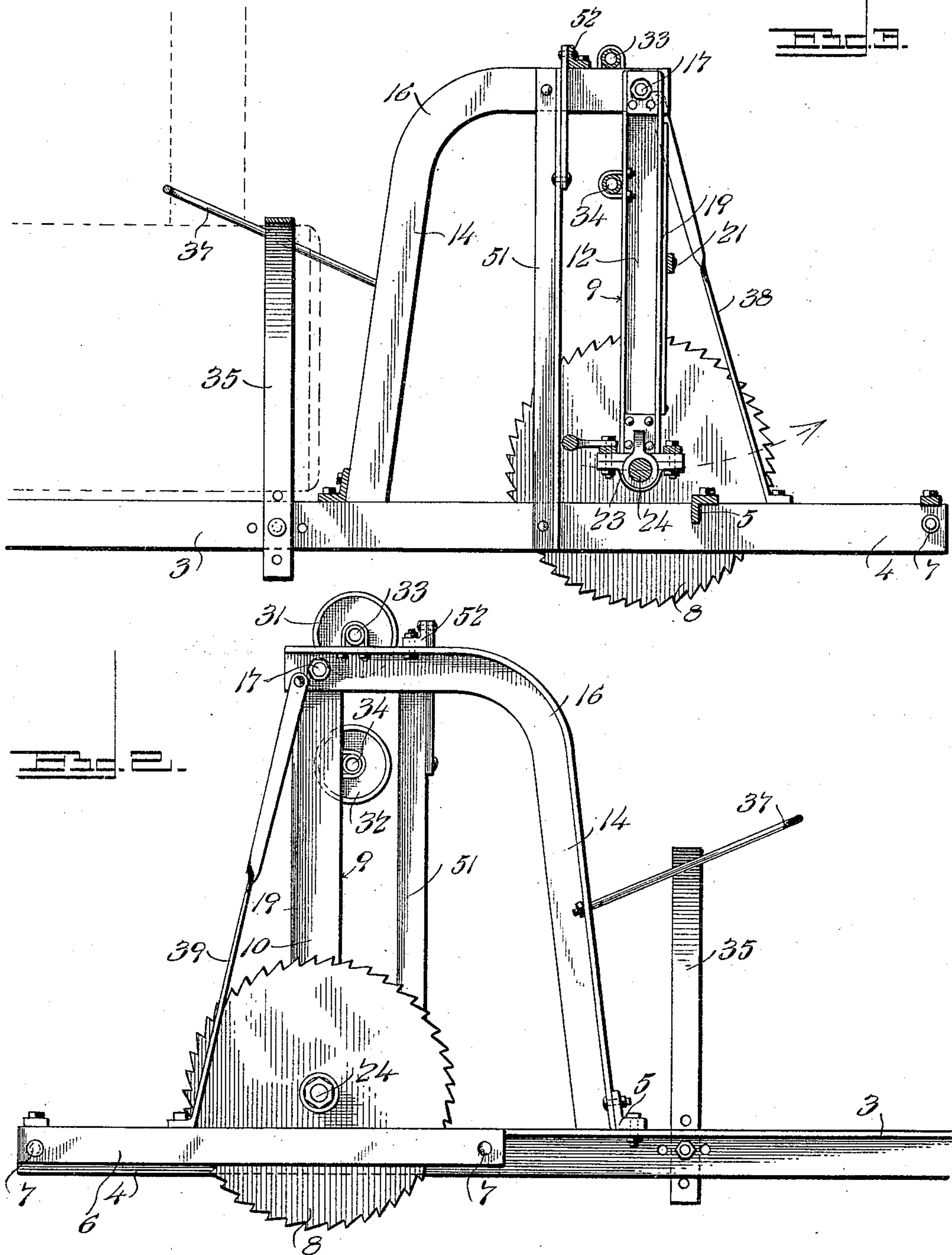
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UNITED STATES PATENT OFFICE.

FREDRICK E. SHORE AND EDWARD L. SHORE, OF ELDON, IOWA.

WOOD-SAWING MACHINE.

SPECIFICATION forming part of Letters Patent No. 641,554, dated January 16, 1900.

Application filed February 8, 1899. Serial No. 704,932. (No model.)

To all whom it may concern:

Be it known that we, FREDRICK E. SHORE and EDWARD L. SHORE, citizens of the United States, residing at Eldon, in the county of Wapello and State of Iowa, have invented a new and useful Wood-Sawing Machine, of which the following is a specification.

This invention relates to wood-sawing machines of that class adapted for attachment to portable and stationary steam-engines and involving a circular or analogous saw adapted to be operated by a power derived from the engine; and one of the objects of the invention is to construct a simple and light machine-frame adapted to be located in advance of the engine and to carry a swinging frame upon which the saw is supported, the last-mentioned frame being preferably manually reciprocative, whereby the saw can be advanced through the stock or wood, the latter being held stationary.

An apparatus constructed as aforesaid can be manufactured at a low cost, and it and the engine can be operated to accomplish a large amount of work by a small number of operatives.

The improved apparatus consists in certain novel features and details of construction and disposition of coöperating parts, as fully set forth in this specification, illustrated in the drawings, and pointed out in the claim.

In the drawings accompanying and forming part of this specification, Figure 1 is a perspective view of the front portion of the traction-engine of ordinary construction provided with my improved sawing-machine. Fig. 2 is a sectional elevation of the same. Fig. 3 is a side elevation. Fig. 4 is a perspective view of the wood-sawing machine removed from the traction-engine.

Similar characters refer to like parts in all the figures of the drawings.

The sawing apparatus involves in its construction two side-stiles or bars 2 and 3, preferably angular in cross-section and secured in some suitable manner to the framework of the traction-engine at a point near the front end of the boiler, the side bar 3 being somewhat longer than its companion and parallel therewith, the two parts being held in fixed relation by a series of cross-bars 5, secured at suitable intervals thereto by some convenient

form of fastening devices. The extended or lengthened portion 4 constitutes a part of a rest or support for the stock to be sawed, the complementary member being designated by 6 and being parallel with such lengthened portion, and the saw, hereinafter alluded to, is reciprocative between these two parts, which are held in juxtaposition by bolts 7. The stock to be sawed is laid upon the extended end 4 of the side bar 3 and the bar 6, while the saw (designated by 8) advances to cut through the same. The saw mechanism is carried, preferably, upon a vibratory or reciprocatory frame 9, consisting of the two side pieces 10 and 12, and any convenient means may be employed for sustaining said vibratory frame. For this purpose we have illustrated risers or uprights 13 and 14, curved at their upper ends, as at 15 and 16, to form overhanging portions constituting bearings for the swinging saw-frame, and said risers are fixed to the horizontal side stiles 2 and 3, respectively. The side pieces 10 and 12 of the saw-frame are pivoted, as at 17, to the extreme outer ends of the overhanging portions of the uprights 13 and 14 and are disposed in parallelism and are connected together for movement in unison by the crossed rods 19 and 20, secured at their opposite ends, respectively, near the upper and lower extremities of the side pieces 10 and 12, the two rods being connected together at their point of intersection by a bolt or other fastening device 21. The said side pieces carry at their lower ends bearings, as 23, for the transverse shaft 24, to one end of which the saw 8, hereinbefore alluded to, is keyed, said shaft carrying near its opposite end the fly-wheel 25 and the fixed and loose pulleys 26 and 27, respectively, said pulleys being connected with a band-wheel on the engine for the purpose of rotating the shaft, although it is evident that some other form of mechanism could be employed for driving the saw. The driving-belt is designated by 28, and it passes around the pulley 29 on the driving-shaft 30, supported at a suitable place upon the traction-engine, said belt also traveling in contact with the superposed idler-pulleys 31 and 32, carried by the shafts 33 and 34, sustained by bearings, respectively, upon the side pieces 10 and 12 of the saw-frame and the overhanging or curved

portions 15 and 16 of the stationary or main frame of the apparatus, and it will be evident that when motion is imparted to the driving-pulley 29 it will be transmitted by the driving-belt 28 to the fixed pulley 26, thereby to rotate the saw 8. By shipping the belt to the loose pulley 27 the rotation of the saw will be stopped.

As a means for reducing the jar of the machine when in operation we prefer to secure the same to the boiler of the engine by a pair of bails or hoops, as 35 and 36, secured at their lower ends to the said stiles 2 and 3 and located, respectively, to the front and rear of the stack and engaging said boiler, a third bail 37 being provided and having its opposite ends secured to the uprights 13 and 14 and passing behind and in engagement with the stack at a point adjacent to the boiler, such an organization preventing any movement of the sawing apparatus when in operation.

For the purpose of increasing the stability of the framework we connect the stile 3 or lengthened end 4 thereof and the complementary bar 6 with the upright 14 by straps 38 and 39, secured at their opposite ends to said parts by some suitable fastening devices and spaced apart, said straps serving as a saw-guard.

To operate the apparatus, motion will be imparted to the driving mechanism hereinbefore described, thereby to rotate the saw 8, and an operator being in the space between the side bars 2 and 3 will grasp the swinging frame 9 at a convenient place and will thrust the same forward, thereby advancing the saw to and through the work, and when the cut has been made the frame will be returned to its initial position, and the operation will be repeated.

Various modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages, and the frame may be made of any suitable material and in different sizes to suit different classes of traction-engines.

In the drawings we have shown only one of the bearings 23 which sustain the transverse shaft 24, and this bearing is illustrated as carried by the side piece 12 at the lower end, it being understood that the side piece 10 carries a similar bearing at its lower end.

For the purpose of strengthening the risers or uprights 13 and 14 which carry the saw-frame we provide the upright angle-bars 50 and 51, respectively, riveted, respectively, at their opposite extremities to the overhanging portions 15 and 16 of the two uprights and to the horizontal side stiles 2 and 3, and these uprights are braced laterally by the angle-iron 52, riveted at its ends to the upper side of the overhanging portions 15 and 16 of said uprights.

Having described the invention, we claim—

In a sawing apparatus adapted for attachment to a traction-engine, the combination with two side bars, each consisting of a beam, L-shaped in cross-section and having the flanges thereof disposed outwardly, one of said beams extending beyond the other to receive a body to be sawed, a supplemental similar beam connected with the extended beam at the outer side thereof and having its flange disposed inwardly, parallel uprights secured to the flanges of the first-named beams and consisting of irons L-shaped in cross-section and having their upper ends curved forwardly over their respective first-named beams, additional uprights, similar in cross-section, connected with the forwardly-extending portions of the first-named uprights and with their respective supporting-beams, a saw-frame comprising parallel channel-irons pivotally connected with the first-named uprights at their outer extremities, a saw mounted in said frame and adapted to swing and rotate intermediate the extended beam and the supplemental beam, and guard-braces connected with the flanges of the last-named beams at both sides of the saw and with the upper ends of the adjacent first-named uprights and separated by an interspace adapted to receive the saw when cutting, said braces lying in the path of the saw-shaft to prevent engagement of the saw-frame with the body to be sawed.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

FREDRICK E. SHORE.
EDWARD L. SHORE.

Witnesses:

GEORGE W. STUTZ,
GEO. W. FRIEND.