

(No Model.)

3 Sheets—Sheet 1.

W. F. PARISH.  
TWO-SAW TRIMMER.

No. 369,026.

Patented Aug. 30, 1887.

Fig. 1.

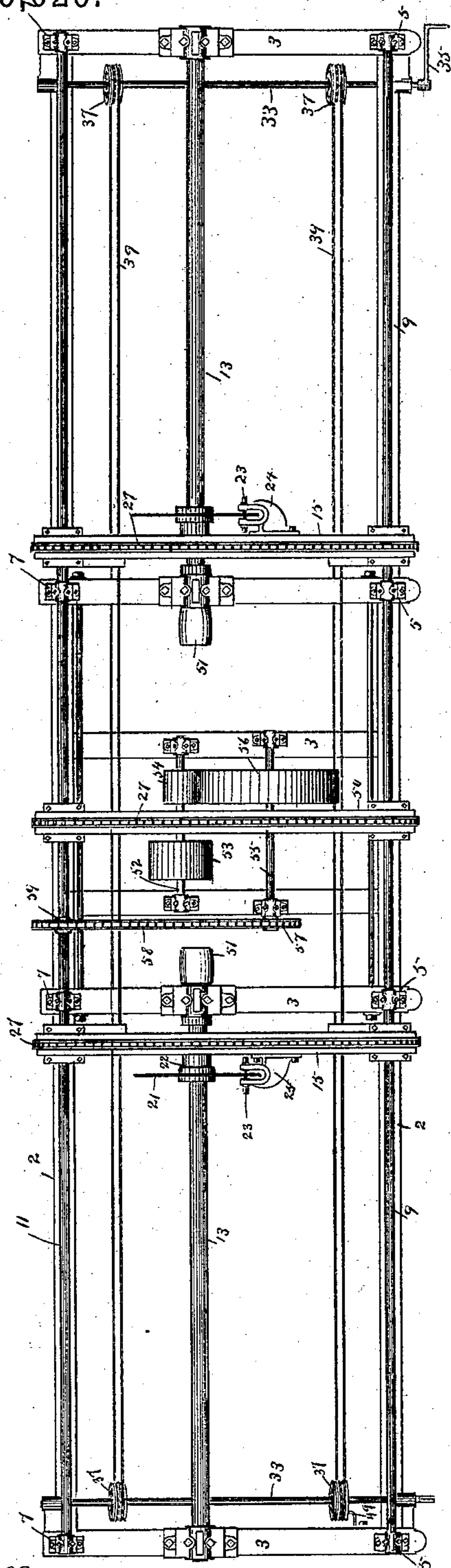
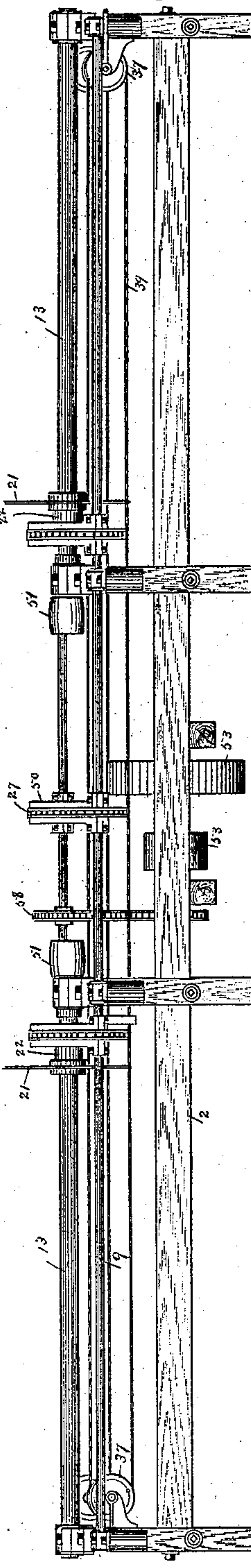


Fig. 2.



Witnesses  
A. M. Gaskell  
A. C. Paine

Inventor  
William F. Parish

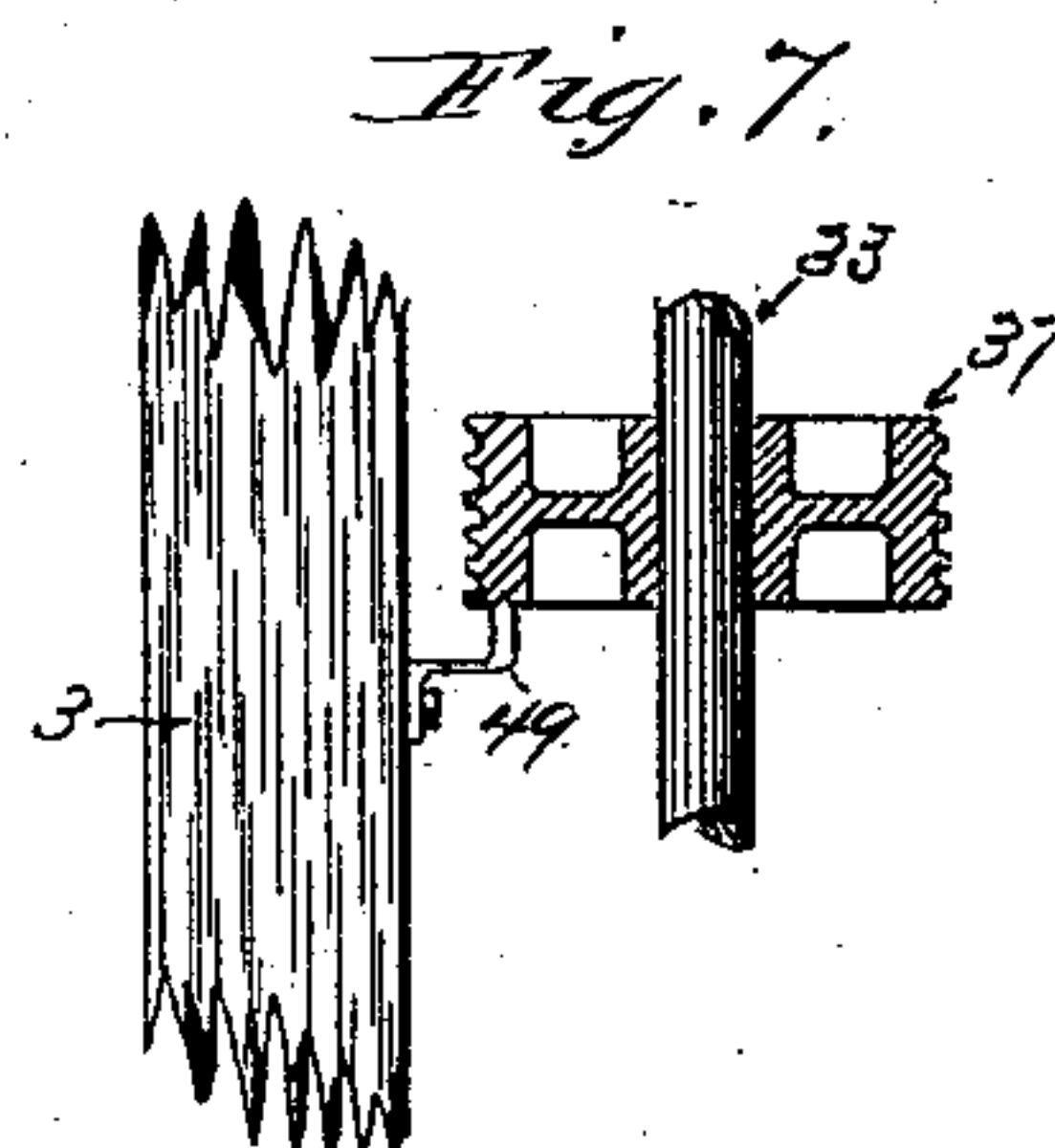
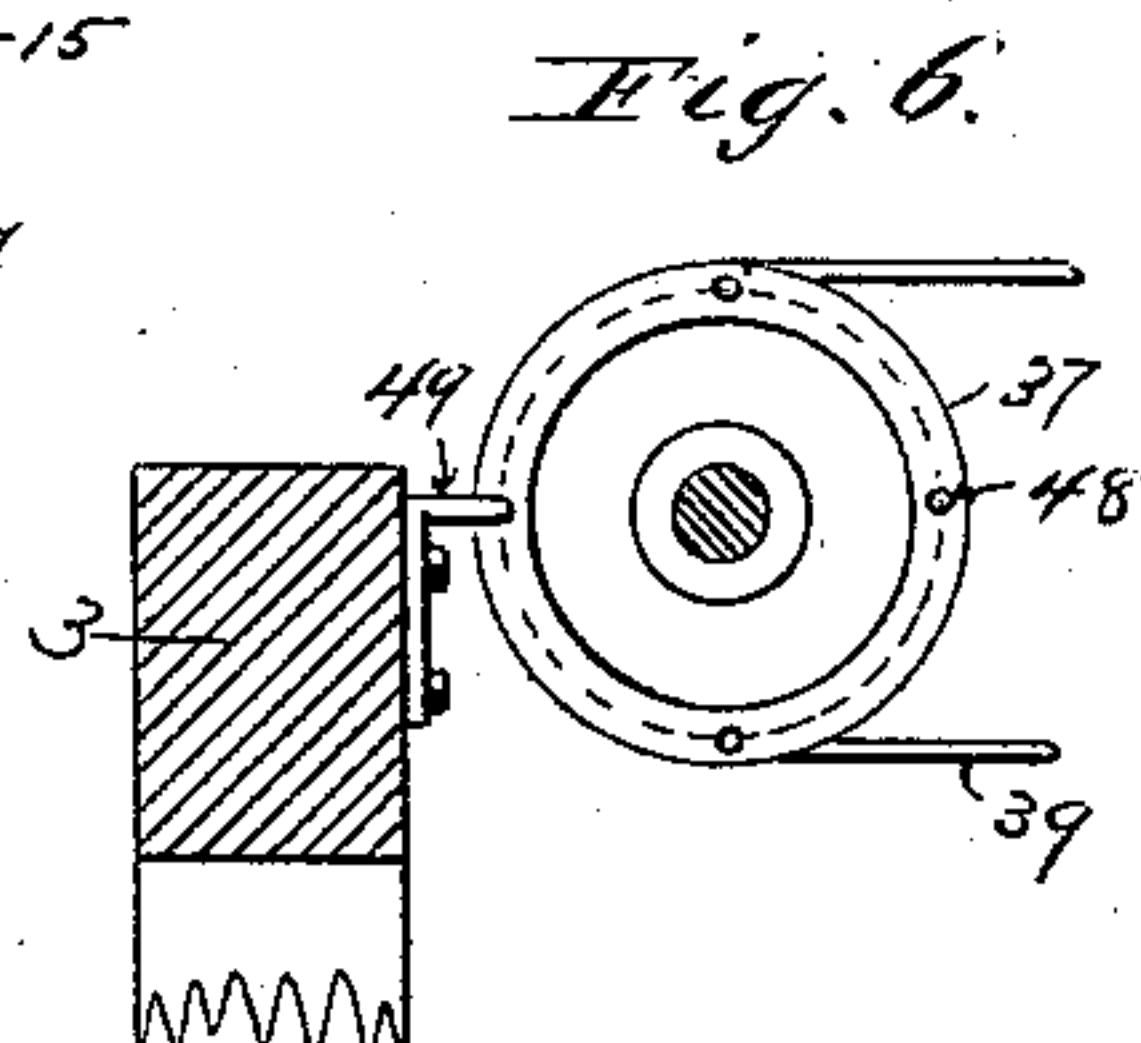
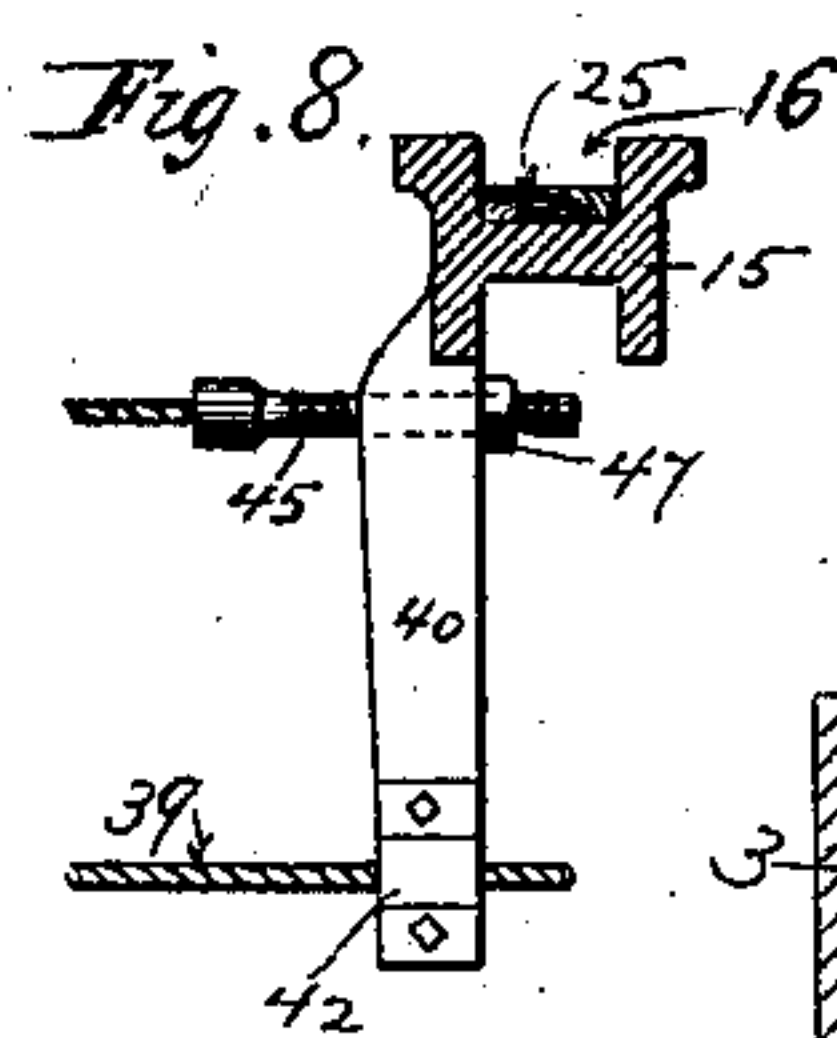
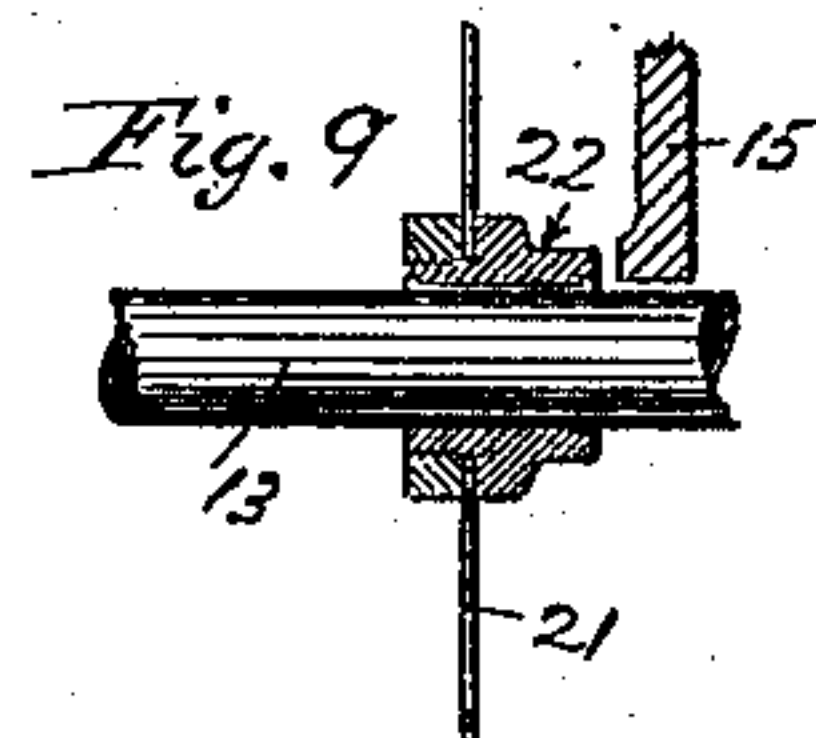
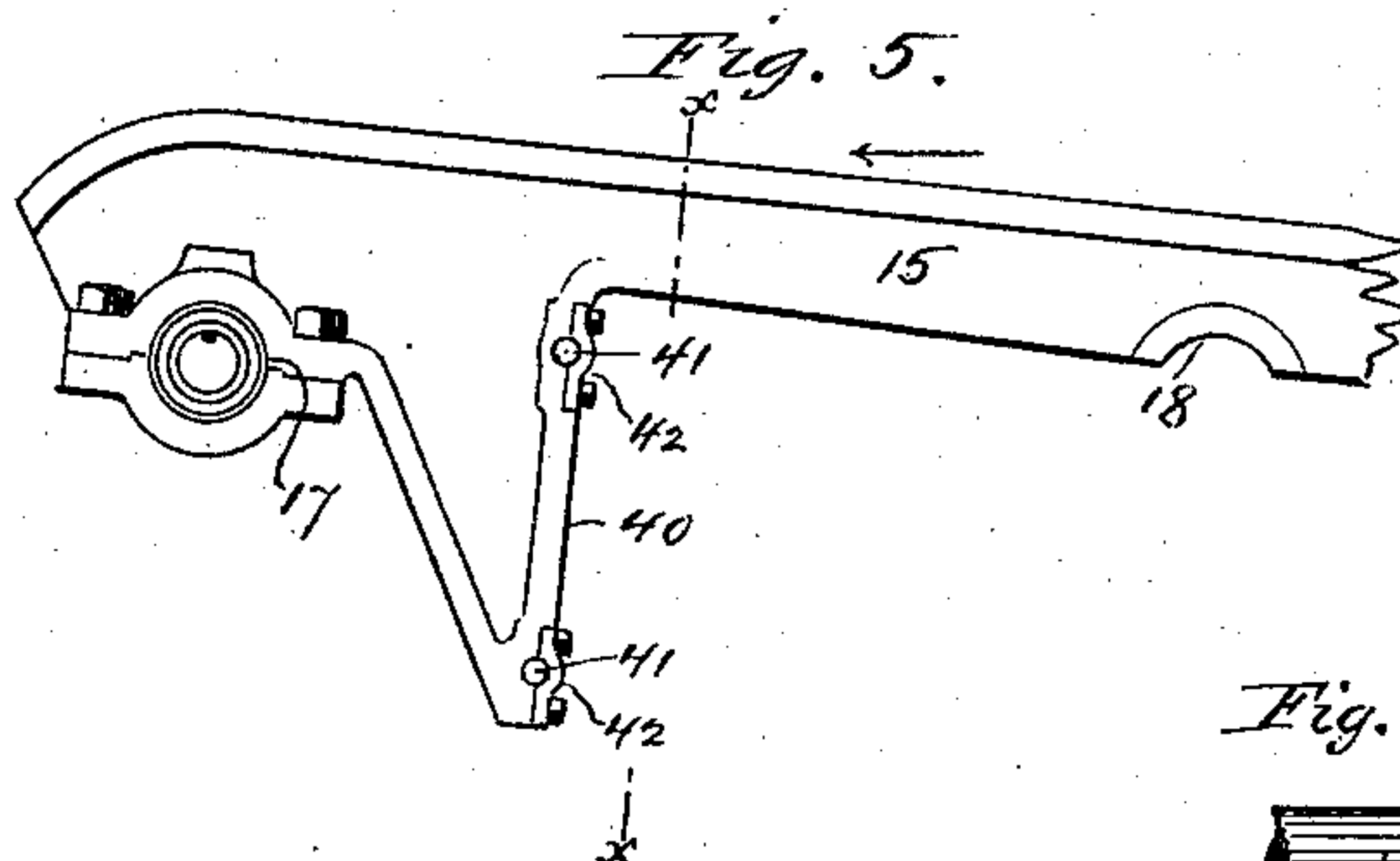
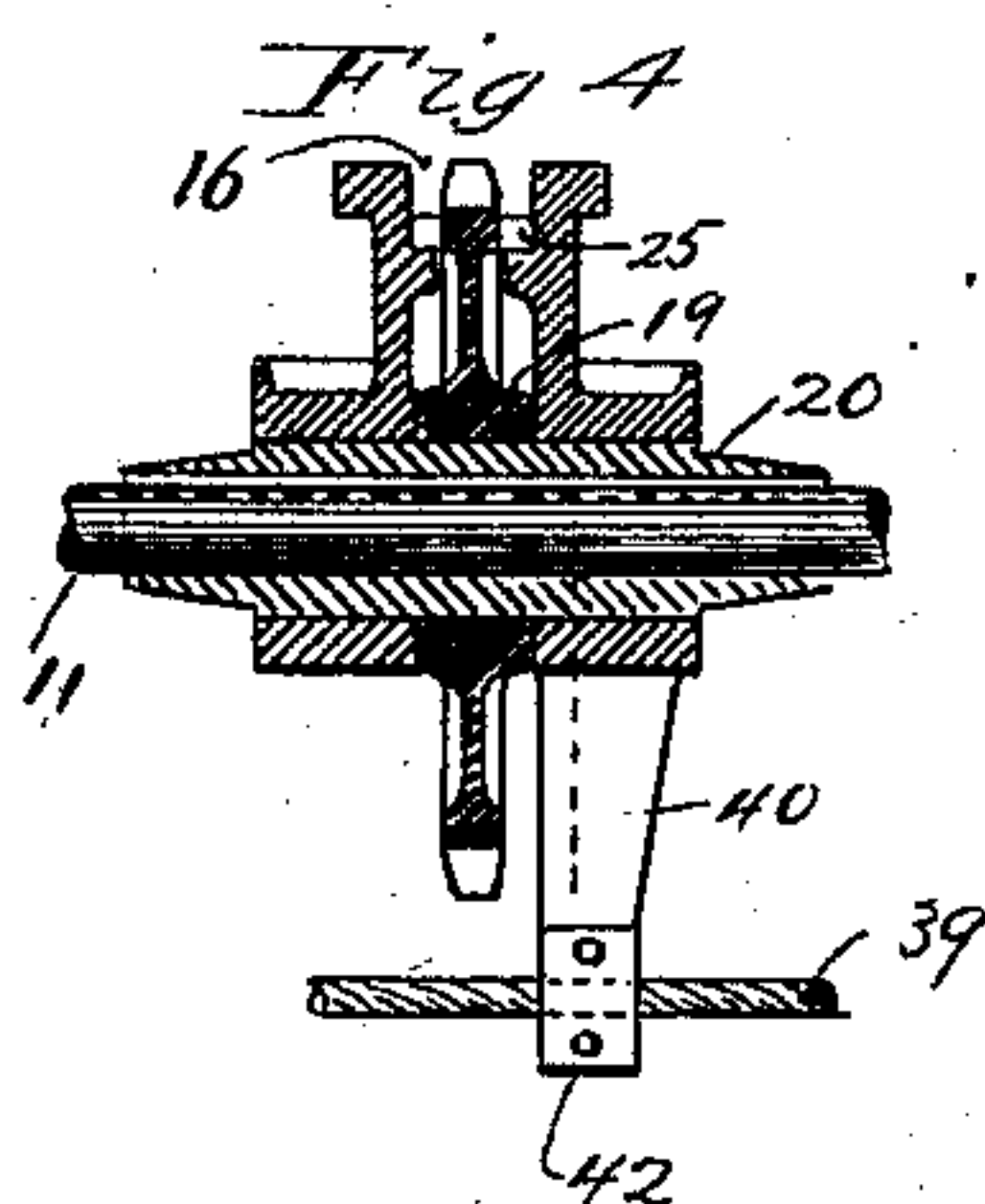
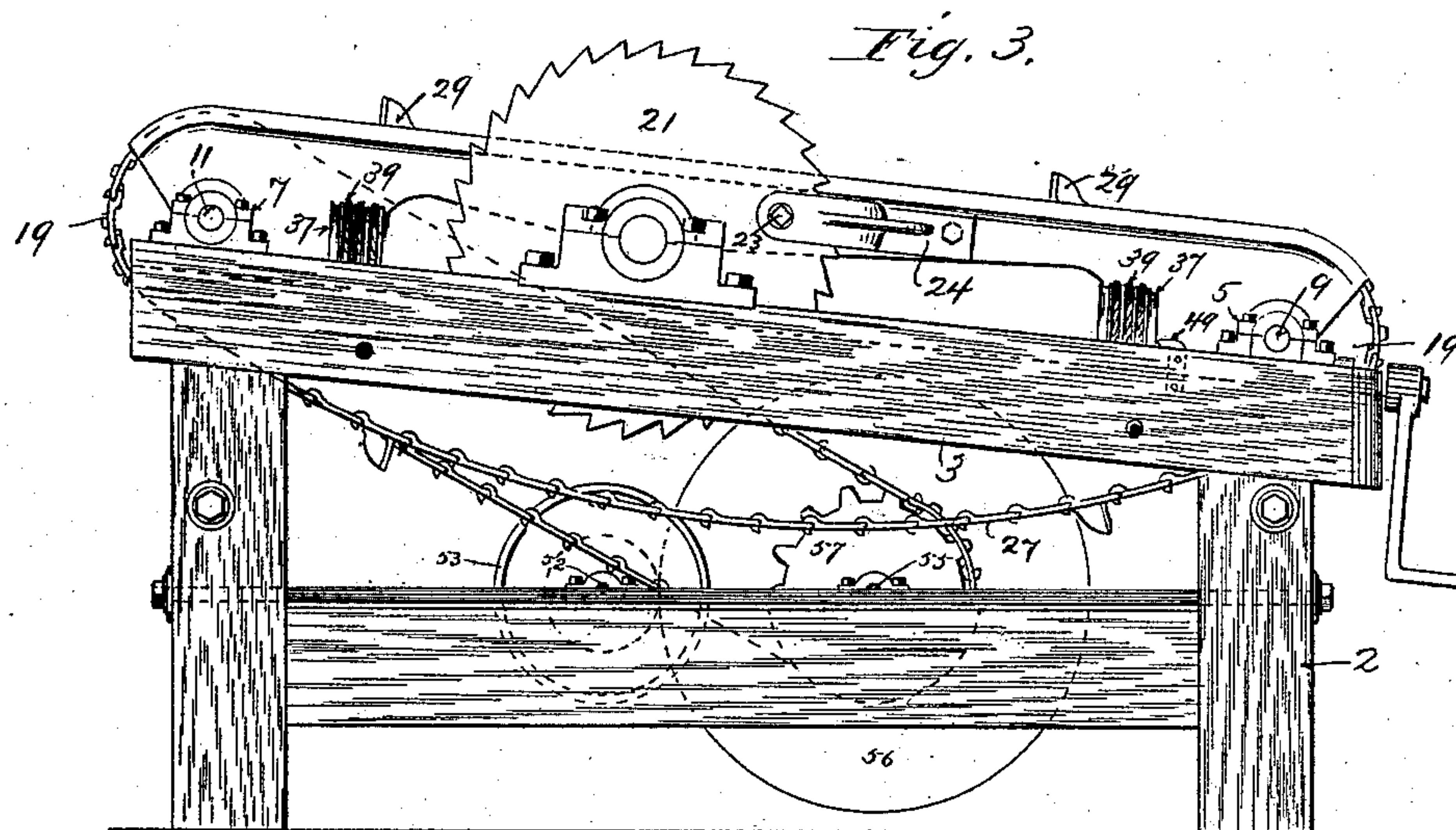
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W. F. PARISH.  
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Witnesses  
A. M. Gaskell  
A. Paul

William F. Parish Inventor

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3 Sheets—Sheet 3.

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Fig. 10.

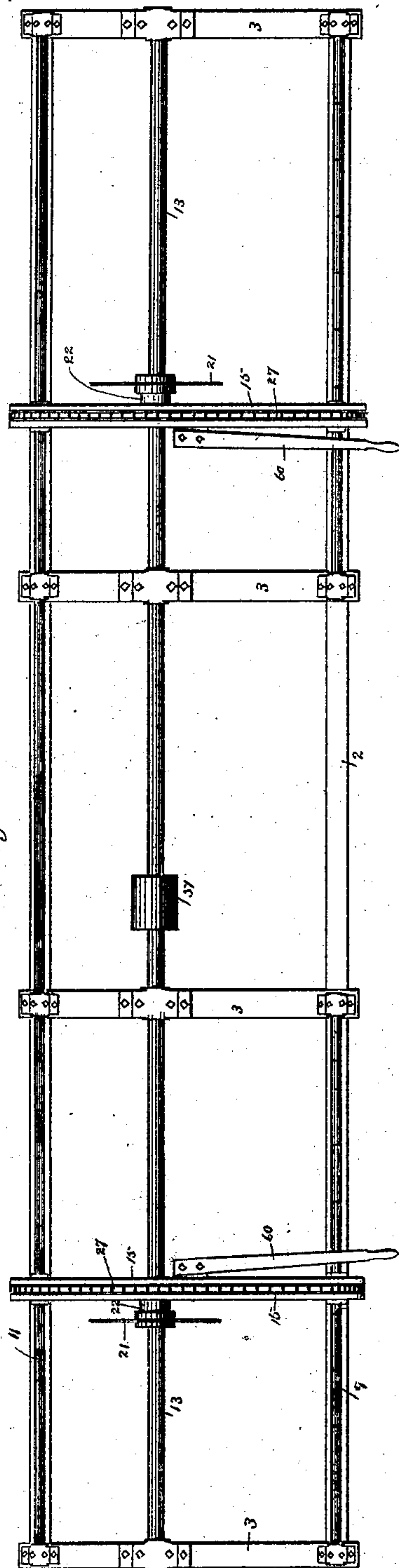
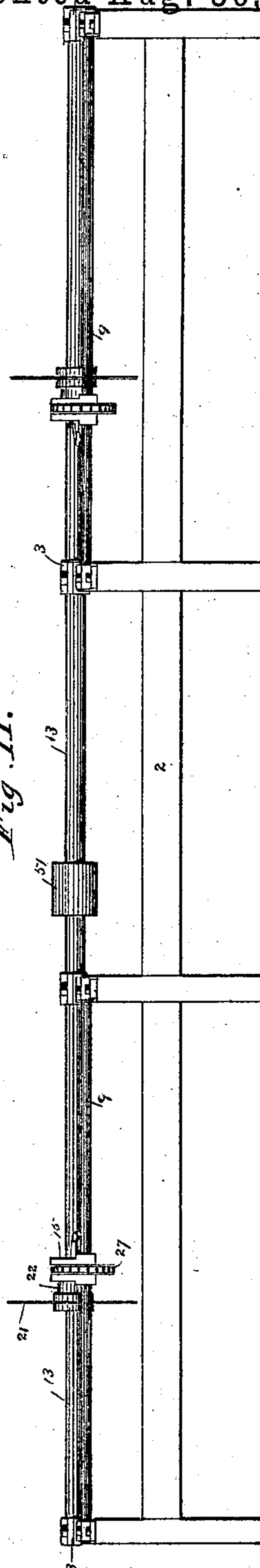


Fig. 11.



Witnesses  
A. M. Gaskell  
A. P. Paul

Inventor  
William F. Parish



# UNITED STATES PATENT OFFICE.

WILLIAM F. PARISH, OF MINNEAPOLIS, MINNESOTA.

## TWO-SAW TRIMMER.

SPECIFICATION forming part of Letters Patent No. 369,026, dated August 30, 1887.

Application filed March 4, 1887. Serial No. 229,694. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM F. PARISH, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Two-Saw Trimmers, of which the following is a specification.

This invention relates to improvements in machines for trimming the ends of lumber—such as boards, planks, dimensions, bill-stuff, or timber—and cutting them off to any desired length.

The object of my invention is to simplify and improve the construction of machines of this class, and to provide means by which the saws may be quickly and simultaneously adjusted from either end of the machine.

The invention consists, generally, in the construction and combination hereinafter described, and pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan of a machine constructed in accordance with my invention. Fig. 2 is a side elevation of the same. Fig. 3 is an end elevation. Figs. 4, 5, 6, 7, 8, and 9 are details. Fig. 10 is a plan showing a modified means for moving the saws. Fig. 11 is a side elevation of the same.

In the drawings, 2 represents the frame of the machine, which may be of any suitable size and construction. It is provided with suitable cross-bars, 3, having boxes 5 and 7, located at the front and rear of the machine. The rear of the frame 2 is preferably somewhat higher than the front, so that the top of the frame slopes from rear to front, as shown in Fig. 3.

A shaft, 9, is mounted in boxes 5, and extends longitudinally of the machine. This shaft is secured rigidly in its bearings. A shaft, 11, having a spline or feather thereon, is mounted and turns in the bearings 7 at the rear of the machine.

A shaft, 13, at each end of the machine is mounted in bearings in the cross-bars 3, each shaft having one bearing on the cross-bar at the end of the frame and another bearing on one of the central cross-bars.

A chain-carrier frame, 15, consisting of a suitable casting having a channel, 16, in its upper surface, and provided with the half-boxes 17 and 18, extends across and rests upon the three shafts 9, 11, and 13. Suitable caps

are bolted to the half-boxes and hold the chain-carrier frame upon the shafts. These frames are bifurcated at each end, so as to receive between the two parts at each end a sprocket-wheel, 19, that is secured upon a hub or sleeve, 20, and journaled in the boxes in the frame. The shaft 11 passes through this hub, as shown in detail in Fig. 4, and is splined thereto. The sprocket-wheel is thus free to slide longitudinally on the shaft, but revolves with it.

A circular saw, 21, is secured to a hub or sleeve, 22, that is splined upon the shaft 13. This hub is free to slide longitudinally on the shaft 13, but rotates therewith.

A saw-guide consisting of a bracket, 24, having a recess into which the edge of the saw projects, is secured upon the side of the chain-carrier frame, and is provided with bearing-pins 23, that are adapted to bear upon the opposite faces of the saw.

The chain-carrier frame is provided at the bottom of the groove in its upper surface with a strip of hard wood, 25, which forms a smooth bearing-surface for the chain to move on. This surface does not materially wear the chain, and is readily removed and replaced.

Each chain-carrier frame is provided with a sprocket-chain, 27, that is arranged in the groove in its upper surface and passes around the sprocket-wheels in the ends of the frame. This chain is provided with the carrying-lugs 29, that project above the carrier-frame as they pass along in the groove in its top, as shown in Fig. 3.

It will be seen that with this construction the chain-carrier frame, the sprocket-wheels, chains, saws, and saw-guides are all adapted to be moved together longitudinally on the shafts 9, 11, and 13, and that by means of the spline-shafts the saws and the chains may be driven continuously.

The means that I prefer to use for moving the chain-carrier frames and the parts carried by or connected with them is as follows: A transverse shaft, 33, is journaled in bearings at each end of the frame of the machine, and each shaft is provided with a crank, 35, and with two spirally-grooved pulleys, 37, located near the ends of the shaft. A wire rope or cable, 39, passes over each pulley and extends substantially the full length of the machine, as shown in Figs. 1 and 2. Each movable



chain carrier has a downwardly projecting arm, 40, provided with recesses 41 and caps 42, that may be secured to the arm by bolts 43. The upper strand of each cable is passed through the upper recesses of one carrier and is clamped thereto by the cap-plates 42, while the lower strand passes freely through the lower recess. The lower strand of each cable is secured to the arm 40 of the other chain-carrier frame by being passed through the other recess and under the other cap, 42, and the upper strand passes loosely through the upper recess, 41. Each cable is preferably secured to one of the carrier-frames by means of a threaded bolt and nut, 45 and 47, (see Fig. 8,) by means of which the slack in the rope may be taken up. One of the pulleys, 37, is provided with four holes or notches, 48, in its side, and a spring, 49, is secured upon the frame and arranged to bear upon the face of the pulley. As the shaft is turned, the point of the spring drops into these holes. The spring will hold the shaft and keep it from accidentally turning, but can be drawn out when power is applied to the crank-arm.

To separate the saws or draw them together, power is applied to one of the shafts through the crank-arm. The chain-carrier frames, and with them the chains and the saws, are thereby simultaneously moved in opposite directions, so as to separate the saws or bring them nearer together. The pulleys are preferably of such diameter that a full revolution of the shaft 33 moves each saw two feet, thereby lessening or increasing the distance between them four feet. A half-revolution moves each saw one foot, and a quarter-revolution moves each saw six inches. When the attendant is turning the crank on the shaft 33, he will hear and feel the spring 49 as it drops into each of the holes 48, and he will thus be enabled to determine exactly the distance that the saws have moved.

A stationary chain-carrier frame, 50, is preferably arranged between the two movable frames, as shown in Figs. 1 and 2, and has a chain similar to that on the other frames and operated by sprocket-wheels in a similar manner for the purpose of aiding in moving the material to the saws. A stationary saw may be mounted midway between the other saws, if preferred, for the purpose of cutting the lumber in the center. Each of the shafts 13 may be provided with a driving-pulley, 51, through which power may be applied to drive the saws. The sprockets for moving the chains may be driven by any suitable means.

I have shown a shaft, 52, journaled in bearings in the frame of the machine and provided with a driving-pulley, 53, and a friction-pulley, 54. A shaft, 55, is also journaled in bearings in the frame, and is provided with a rag-wheel, 56, that is driven by the friction-pulley 54. The shaft 55 is also provided with a sprocket-wheel, 57, and a chain, 58, extends around this wheel and around a sprocket-

wheel, 59, on the shaft 11. Power being applied to the pulley 53, and through this pulley and the mechanism shown to the shaft 11, the chains are thereby driven, and the lumber that is moved onto the top of the frame is thereby carried to the saws.

The saws may be quickly and accurately adjusted to trim or cut the lumber to any desired lengths, and this adjustment may be made from either end of the machine. Any suitable drive may be used for the shaft 11.

In Figs. 10 and 11 I have shown the saw-shafts 13 coupled together and adapted to be driven by a single pulley. I have also in these figures shown the movable chain-carriers as separately adjustable, each being provided with a lever, 60, and the shaft 9 being provided with notches upon its upper surface, with any one of which the lever 60 is adapted to engage. By grasping the lever and first raising it from the notch in the shaft 9, with which it is in engagement, the carrier-frame, and with it the saw and chain, can be moved to any desired point. The lever being allowed to engage another of the notches, the frame will be held in that position until the lever is again raised. By means of these notches the attendant can determine accurately the distance which each saw is moved.

In Figs. 10 and 11 I have shown no means for driving the shaft 11. The same device that is shown in the other figures may be used; or, if preferred, a different feed device may be employed.

I claim as my invention—

1. The combination, in a machine of the class described, with the shafts 9, 11, and 13, of the carrier-frame mounted on said shafts, and having a chain-receiving groove in its top and a wooden covering over the bottom of said groove, and the carrier-chain arranged as described on said frame, for the purpose set forth.

2. The combination, in a machine of the class described, with the movable carrier-frames and the saws connected with said frames, of the shafts 33, arranged at the ends of the machine and provided with pulleys 37, and the cables passing over said pulleys, and each having one strand connected to one of said frames and the other strand connected to the other of said frames, whereby said frames may be moved simultaneously in opposite directions by operating either of said shafts 33, substantially as described.

3. The combination, in a machine of the class described, with the movable saws, of the carrier-frames having the depending arms 40, provided with recesses 41 and caps 42, and the cables 39, passing freely through one of said recesses and clamped in the other, substantially as described.

4. The combination, in a machine of the class described, with the movable carrier-frames and saws, of the shafts 33 at each end of the machine, the pulleys 37 upon said shafts, one of said pulleys being provided with recesses 48,



the cables 39, arranged upon said pulleys, and each having one strand secured to one of said frames and the other strand secured to the other frame, and a spring, 49, adapted to engage in  
5 said recesses 48 on one of said pulleys, whereby said frames may be moved simultaneously in either direction by turning either of said shafts, and may be held in any desired position.

In testimony whereof I have hereunto set my hand this 24th day of February, 1887.

WILLIAM F. PARISH.

In presence of—  
R. H. SANFORD,  
A. C. PAUL.