(No Model.) 2 Sheets—Sheet 1.

E. J. FULGHUM.

LOG LOADER.

No. 484,788. Patented Oct. 25, 1892.

FIG. 1.

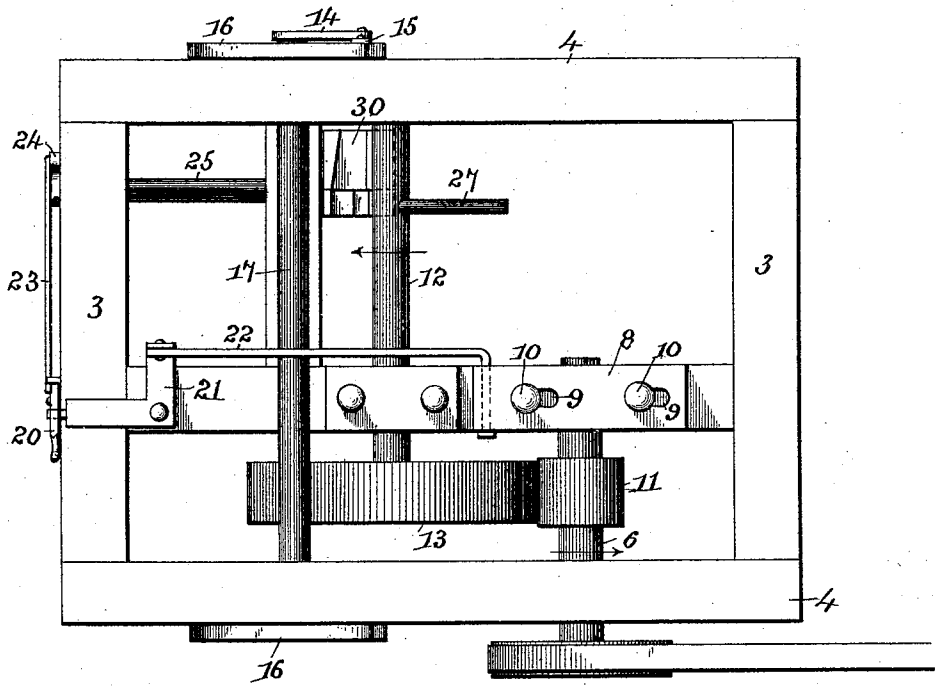
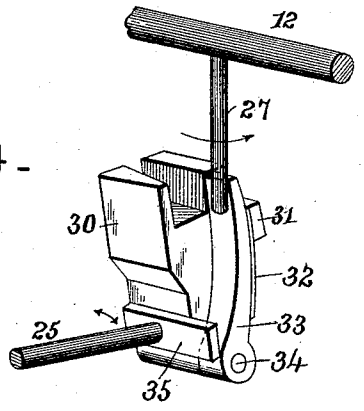


FIG. 4.



Witnesses

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N. L. Bollamer.

Inventor

Elisha J. Fulghum

By his Attorneys,

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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LOG LOADER.

No. 484,788. Patented Oct. 25, 1892.

FIG. 2.

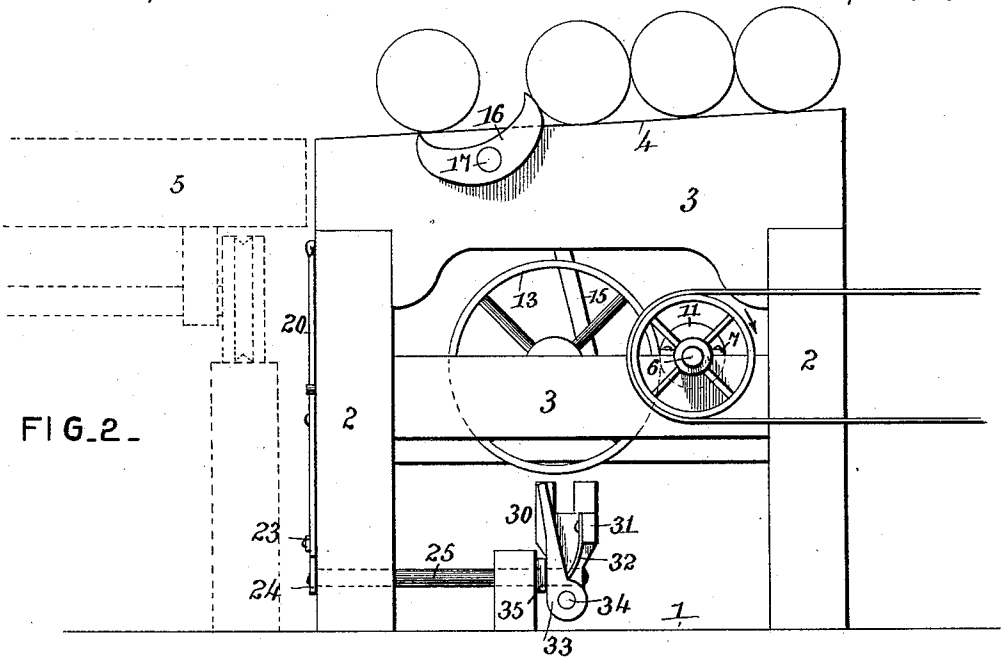
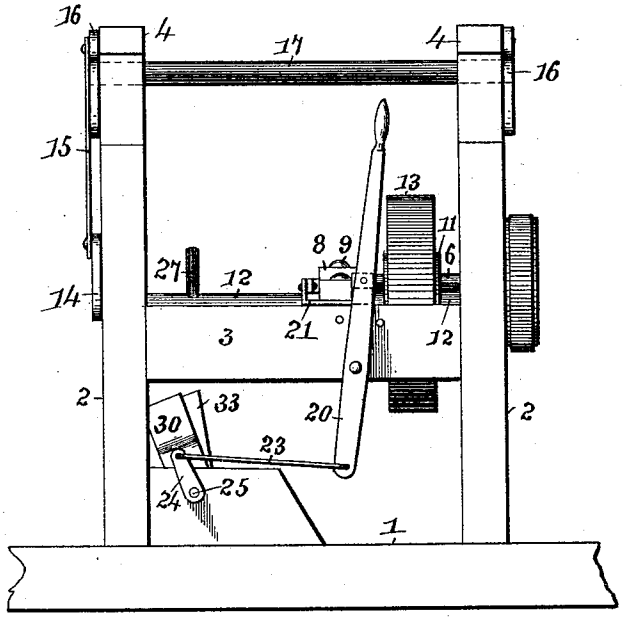


FIG. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

ELISHA J. FULGHUM, OF TRAVERSE CITY, MICHIGAN, ASSIGNOR OF ONE-HALF TO LORIN ROBERTS, OF SAME PLACE.

LOG-LOADER.

SPECIFICATION forming part of Letters Patent No. 484,788, dated October 25, 1892.

Application filed November 25, 1891. Serial No. 413,090. (No model.)

To all whom it may concern:

Be it known that I, ELISHA J. FULGHUM, a citizen of the United States, residing at Traverse City, in the county of Grand Traverse and State of Michigan, have invented a new and useful Log-Loader, of which the following is a specification.

This invention relates to wood-sawing, and more especially to sawmill-carriages; and the object of the same is to provide a feed device for such carriages, whereby logs may be automatically delivered thereto one at a time whenever desired.

To this end the invention consists in the construction hereinafter more fully described and claimed, and as illustrated on the accompanying two sheets of drawings, wherein—

Figure 1 is a plan view of this improved device. Fig. 2 is a front elevation thereof, showing the device in the operation of passing one log to the carriage. Fig. 3 is an elevation of the lower end of the device. Fig. 4 is an enlarged perspective detail of the trigger and the pin which engages the same.

Referring to the said drawings, 1 designates a suitable pair of sills or other base, from which rises uprights 2, connected by bars 3, forming bearings for the various devices hereinafter mentioned, and having at their upper edges tracks 4, which incline gently toward the sawmill-carriage 5, designated in the present case only by dotted outline.

6 is the driving-shaft constantly rotated in the direction of the arrow by belting from any suitable source. This shaft passes loosely through a box 7 and into a box 8, which has slots 9 moving over screws or pins 10, and on the shaft is a small friction-wheel 11.

12 is another shaft, having a large friction-wheel 13 adapted to be engaged by the small friction-wheel 11 when the shaft 6 is moved, and this shaft 12 has a crank 14 connected by a pitman-rod 15 with one of the dogs 16 on an oscillating shaft 17, journaled in the bars 3, just below the tracks 4. Thus when the shaft 12 revolves the dogs 16 are rocked, and as each dog is approximately crescent-shaped, a log rolls over its curved face and against its lower point, and when the upper point rises it prevents the succeeding logs from rolling down the tracks and forces the aforesaid log onto the carriage, as seen in Fig. 2.

20 is a lever pivoted to the lower edge of the frame, and 21 is a bell-crank lever pivoted at its angle to the frame, one end of this lever being connected with the operating-lever 20 and the other end being connected by a rod 22 with the sliding box 8. Hence when the operating-lever is drawn toward the operator the friction-wheels are thrown into contact with each other and the crank-shaft 12 is caused to revolve.

In order to prevent the crank-shaft making more than a single revolution, which would result in delivering more than one log to the carriage, I make use of the following devices: 23 is a rod connecting the lower end of the operating-lever 20 with a crank 24 on a shaft 25, and this shaft carries a trigger at its inner end, which is adapted to be engaged by a pin 27, that projects from the crank-shaft 12. The said trigger comprises a U-shaped body 30, whose opening stands transverse to the shaft 25, a lug 31, a spring 32, secured to said lug, and a finger 33, pivoted at 34 to the body and borne by the spring 32 normally against a shoulder 35. When the crank-shaft has made a complete revolution, the pin 27 strikes the finger 33 of the trigger and bears it against the force of the spring 32 away from the shoulder 35 and against the lug 31, as seen in Fig. 4. At this time the finger is positively prevented from going farther, and hence the pin can turn no farther. The only way in which the pin can be disengaged and allowed to move on is by swinging the operating-lever 20 so as to rock the trigger-shaft and move the body of the trigger. The tip of the pin then passes into said body, at which time the pin, and hence the crank-shaft and the oscillating shaft, cannot turn at all in either direction. A second movement of the operating-lever, this time in the opposite direction, moves the body of the trigger off the tip of the pin and the latter passes out behind the finger which was borne out of the way by its spring when the operating-lever was first moved. Thus it will be seen that after the crank-shaft has made one revolution and one log has been delivered to the carriage two movements of the operating-lever are necessary before another log can be

delivered, the first of such movements throwing the friction-wheels out of contact and moving the trigger astride the pin and the second of such movements having the opposite effect. Obviously between the two movements enough time elapses to permit the log to be sawed as desired on the carriage and discharged therefrom to make room for the next succeeding log, and during this time the fact that the pin stands in the trigger positively prevents the oscillating shaft from moving, whereby another log might be accidentally fed to the carriage to the destruction of the latter or of the saw and the possible injury of the workman.

What is claimed as new is—

1. In a log-loader, the combination, with inclined tracks, an oscillating shaft journaled across them, and crescent-shaped dogs or stops mounted on said shaft with their points uppermost, of a crank-shaft, a pitman connecting its crank with one of said feeders, means for rotating this shaft frictionally in one direction, a transversely-movable trigger having a finger, and a pin in the crank-shaft adapted to normally engage said finger, as and for the purpose set forth.

2. In a log-loader, the combination, with inclined tracks, an oscillating shaft journaled across them, and dogs or stops mounted on said shaft, of a crank-shaft, a pitman connecting its crank with said oscillating shaft, a pin in the crank-shaft, means for turning this shaft frictionally in one direction, a transversely-movable trigger having at one edge a shoulder and a lug, a finger pivoted to the body of the trigger, and a spring secured to the lug and bearing the finger normally against the shoulder, over which latter the tip of the pin is adapted to pass, as and for the purpose set forth.

3. In a log-loader, the combination, with inclined tracks, an oscillating shaft journaled across them, dogs or stops mounted on said shaft, a crank-shaft connected with said oscillating shaft, a pin in this crank-shaft, and a friction-wheel thereon, of a swinging power-shaft having a friction-wheel, an operating-lever connected with said swinging shaft, an oscillating trigger-shaft also connected with said operating-lever, and a trigger on said trigger-shaft adapted to be borne astride the tip of said pin when the friction-wheels are out of contact, as and for the purpose set forth.

4. In a log-loader, the combination, with the tracks, the feeders, a shaft having a friction-wheel and connected with said dogs or stops, a pin in this shaft, a swinging power-shaft having a friction-wheel, an operating-lever, and connections between this lever and the power-shaft, of an oscillating trigger-shaft having a crank, a rod connecting this crank with the operating-lever, a trigger on said shaft having a slotted body adapted to pass astride the tip of said pin, and a spring-actuated finger pivoted to said body, the whole constructed and operating substantially as and in the manner hereinbefore set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ELISHA J. FULGHUM.

Witnesses:
LORIN ROBERTS,
ALICE B. LINDLEY.