H. KNOWLTON.

Log-Turner.

No. 167,261. Patented Aug. 31, 1875.

Fig. 1

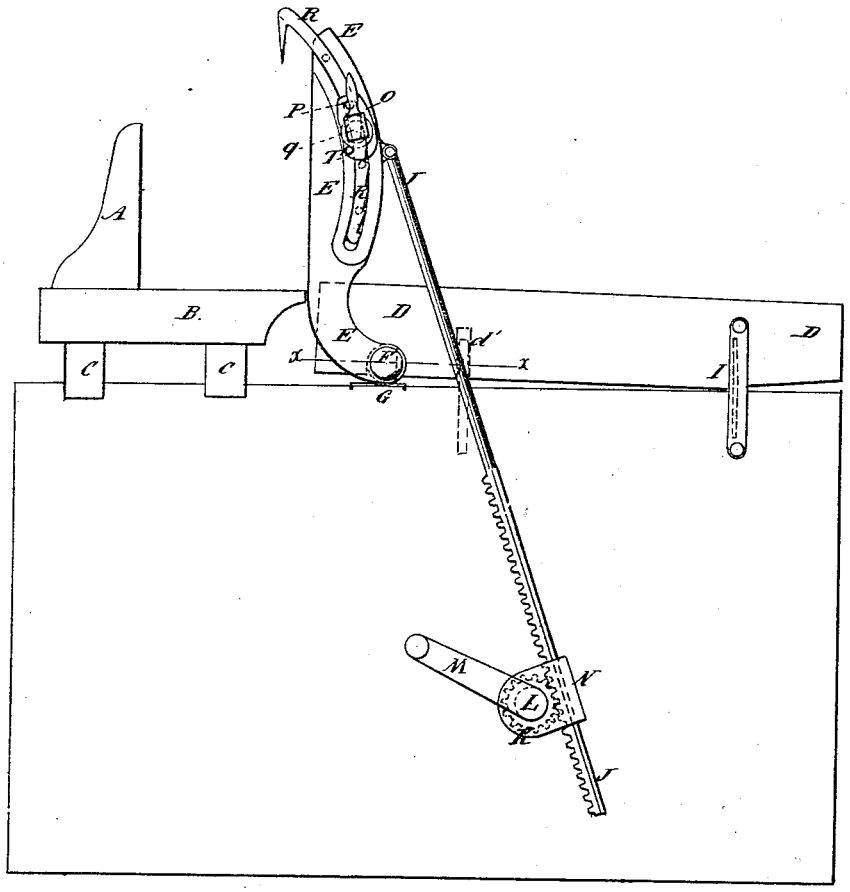


Fig. 2

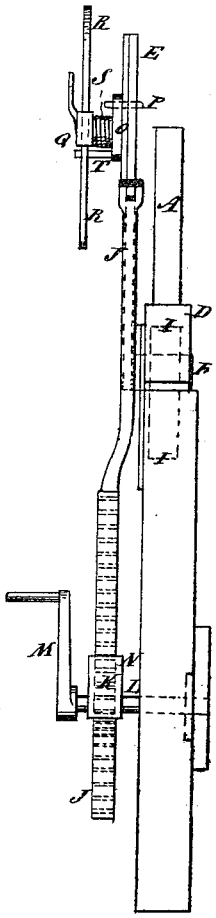


Fig. 3

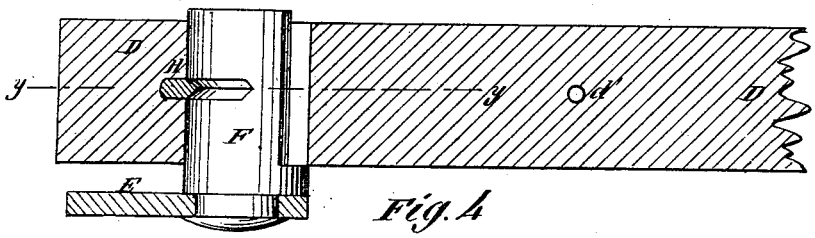
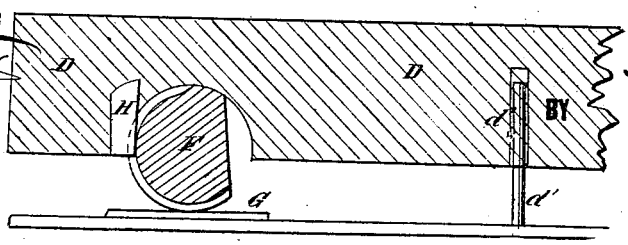


Fig. 4



WITNESSES:

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UNITED STATES PATENT OFFICE.

HENRY KNOWLTON, OF OTTER LAKE, MICHIGAN.

IMPROVEMENT IN LOG-TURNERS.

Specification forming part of Letters Patent No. **167,261**, dated August 31, 1875; application filed July 31, 1875.

To all whom it may concern:

Be it known that I, HENRY KNOWLTON, of Otter Lake, in the county of Lapeer and State of Michigan, have invented a new and useful Improvement in Log-Turner, of which the following is a specification:

Figure 1 is a side view of my improved log-turner. Fig. 2 is a rear view of the same. Fig. 3 is a detailed section taken through the line *x x*, Fig. 1. Fig. 4 is a detail section taken through the line *y y*, Fig. 3.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved device for turning logs upon the saw-mill carriage in such a way as to save the carriage from the jar when the log is turned, and which shall be simple in construction and convenient in use.

The invention consists in the combination of the adjustable plate, the socket, the hook-bar, the spring, and the stop with the pivoted incline or lever, the connecting rack-bar, the gear-wheel, and the shaft; and in the combination of the eccentric and the spring with the hinged skid, and with the incline or lever that carries the hook-bar, as hereinafter fully described.

A represents a knee, and B a head-block, of the saw-mill carriage C. D is a skid placed at right angles with the carriage C, and in line with the head-block B, when the carriage is in proper position for having the log turned. The outer end of the skid D is hinged to the frame of the mill by metal straps or other convenient means, so that the forward end of said skid may move up and down. The forward part of the skid D is kept from lateral movement, while moving up and down, by a guide-pin, *d'*, attached to the frame of the saw-mill, and which enters a hole in the said skid. E is an incline or lever, to the lower end of which is attached, or upon it is formed, a short shaft, F. The shaft F is placed in a notch in the lower side of the skid D, rests upon a plate, G, attached to a timber of the saw-mill frame, and is kept from longitudinal movement by a plate or pin, H, attached to the skid D, and which enters a ring-groove in the said shaft F. The skid D is held down by a spring, I, attached to the timbers of the saw-mill, and connected with the said skid near its rear or hinged end. To the rear edge of the upper part of the incline or lever E is pivoted the upper end of the connecting-rod J, the lower part of which has rack-teeth formed upon it, which mesh into the gear-wheel K, attached to the shaft L. The shaft L revolves in bearings attached to the frame of the saw-mill, or other suitable support, and to it is attached a crank, M, or a pulley to receive the power. The rack-bar connecting-rod J is held up against the gear-wheel K by a keeper, N, through which it passes, and which rides upon the shaft L. Upon the side of the incline or lever E is formed a curved dovetailed groove, in which is inserted a plate, O, which is secured in place adjustably by a bolt or pin, P, that passes through it, and through one or the other of several holes formed in the incline or lever E. To the middle part of the plate O is pivoted a pin, in the outer end of which is formed a socket, Q, to receive the curved bar R, upon the upper end of which is formed a sharp-pointed hook, and upon its rear edge are formed a number of notches to receive the lower edge of the socket Q. S is a coiled spring, one end of which is attached to the plate O, and its other end is attached to the socket Q, so as to hold the lower edge of said socket pressed against the notched rear edge of the hook-bar R, to serve as a pawl to prevent the said bar from being drawn out of said socket. The socket Q may be provided with a handle for convenience in turning it to release the hook-bar R. To the lower part of the plate O is attached a stop-pin, T, for the lower part of the hook-bar R to strike against to prevent it from being drawn back too far.

In using the device, the shaft L is turned to raise the incline or lever E into an erect position, with its straight edge against the flat side of the log. The bar R is then drawn over the top of the log, and its hook is driven into said log. The shaft L is then turned in the other direction, which draws the incline or lever E back, turning the log. The log is then pushed back upon the head-block and secured. The side of the shaft L upon which it rests when the incline or lever E is turned back out of the way is flattened, as shown in

Figs. 1, 3, and 4; or the said shaft is otherwise made eccentric, so that when the device is turned forward for use, the forward end of the skid D may be raised to serve as a stop to the log, and prevent it from sliding off the head-block B. The shaft L may be worked by hand or other power, as may be desired or convenient.

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

1. The combination of the adjustable plate O, the socket Q, the hook-bar R, the spring S, and the stop T with the pivoted incline or lever E, the connecting rack-bar J, the gear-wheel K, and the shaft L, substantially as herein shown and described.

2. The combination of the eccentric F and the spring I with the hinged skid D, and with the incline or lever E, that carries the hook R, substantially as herein shown and described.

HENRY KNOWLTON.

Witnesses:
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