(No Model.)

H. M. LOUD.

LOG FEEDER AND TURNER.

No. 257,032. Patented Apr. 25, 1882.

Fig. 1.

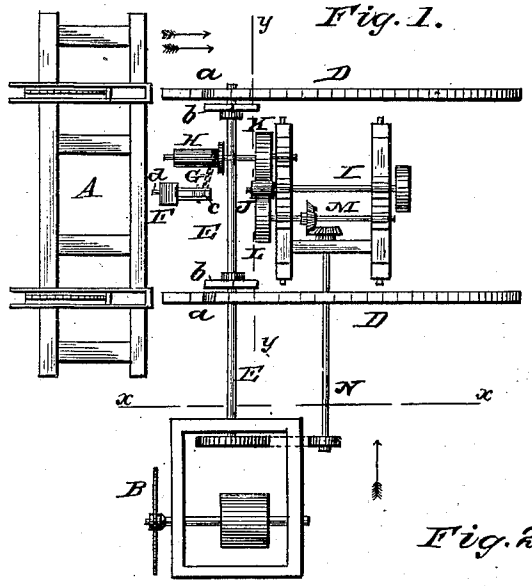


Fig. 2.

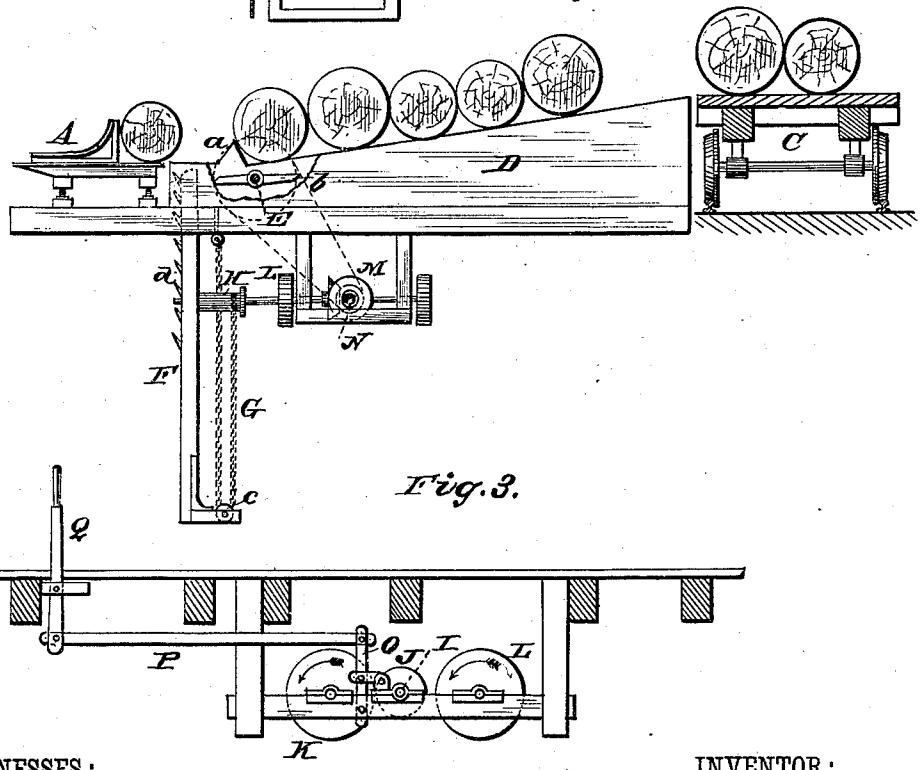


Fig. 3.

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LOG FEEDER AND TURNER.

SPECIFICATION forming part of Letters Patent No. 257,032, dated April 25, 1882.

Application filed January 20, 1882. (No model.)

To all whom it may concern:

Be it known that I, HENRY M. LOUD, of Oscoda, in the county of Iosco and State of Michigan, have invented a new and Improved Log Feeder and Turner; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view. Fig. 2 is a side elevation, partly in section, through the line *x x* of Fig. 1, looking in the direction of the single arrow. Fig. 3 is a sectional view taken through line *y y* of Fig. 1, looking in the direction of the double arrows.

My invention relates to a novel construction of apparatus for feeding logs onto the carriage of a saw-mill, in combination with a device for turning them about their longitudinal axis into the most favorable position for sawing.

The arrangement consists, first, in inclined skids or ways that descend to the level of the saw-carriage, and have each near their lower ends a stop-projection, which stop-projections hold a number of logs on the inclined skids, while beneath the lever of the skids is a revolving shaft with arms, that at the proper time lift the lowest log over the stop-projections and allow it to roll onto the carriage.

The improvements also consist in the peculiar construction and arrangement of the loader with a canter or tooth bar for turning the log about its axis after it is on the carriage, and intervening mechanism common to them both for operating them alternately, as desired.

In the drawings, A represents the saw-carriage, which is designed to run past the circular saw B to bring the log in contact therewith. C is the log-car, which brings the logs to the mill to be cut. This log-car is designed to run on a higher level than the saw-carriage, and between the two are arranged two or more strongly-braced inclined skids or ways, D D. These skids slope from the level of the log-car down to the level of the saw-carriage, and near their lower end they are provided with stop-projections *a*, which prevent the logs from rolling promiscuously onto the carriage. Just below the level of the skids at this point is journaled a horizontal rotary shaft, E, which is provided with arms *b*, which, when the shaft turns, lift the lowest log over the stop-projections and allow it to roll onto the carriage, while the logs above the one removed roll down the skids until the next of the number rests against the stop-projections. By this means it will be seen that a number of logs are held on the skids in a position for automatic feed from gravity, which feed my devices control so as to deliver the logs to the saw-carriage one by one. This method of working the logs, it will be seen, does not require special workmen for handling the logs, and saves much time, trouble, and hard labor.

After the log is delivered onto the saw-carriage it is still necessary, in most instances, to turn it so that no knots shall be downward and liable to strike the saw-collar; or, if the log is crooked, to turn it so as to bring the proper side out toward the saw; or, if a crack exists in the end, to turn the log so that the crack may be confined to as few planks as possible. For the purpose of thus turning the log a cant-bar, F, is suspended by a rope or chain, G, passing around a pulley, *c*, at the lower end of said cant-bar, and the latter is provided with teeth *d* for engagement with the log to be turned. The rope or chain G is secured at one end to the frame-timbers above, and at its other end is wound around a drum, H, so that whenever the latter is rotated the rope or chain is wound thereon and the cant-bar raised beside the log, and the latter, being engaged by the teeth of the cant-bar, is turned thereby. This particular form of canting device I do not claim as new.

For operating both the canting devices and the devices for regulating the feed of the logs a shaft, I, is arranged beneath the skids, to which power is communicated by a belt or otherwise. Upon one end of this shaft is a friction-pulley, J, which is placed between two other larger friction-pulleys, K and L, of which K is fixed upon the same shaft with the drum H, that works the cant-bar, while L is upon a shaft that connects through bevel-gears M with another shaft, N, that is belted to shaft E, which delivers the log. Now, the end of shaft I, which carries friction-pulley J, is journaled in a movable bearing that is shifted from side to side by lever O, bar P, and lever Q, Fig. 3, so that when lever Q is thrown in one direction it brings pulley J against and imparts motion to

the friction-pulley L, that operates the log-delivering devices, while when thrown in the other direction it brings pulley J against and imparts motion to the friction-pulley K, that drives the canter-bar. By having the friction-pulley J placed between the pulleys K and L and adjustable to operate both devices by the same lever the operator is enabled by use of the log-feeder to throw a log onto the saw-carriage and almost instantly place the same in position by reversing bar P.

Having thus described my invention, what I claim as new is—

1. The combination, with the saw-carriage and a set of inclined skids or ways descending to the level of the saw-carriage, and having stop-projections at their lower ends, of a rotary shaft located beneath the level of the skids near the stop-projections, and having arms for lifting the logs over said stop-projections one by one, as described.

2. The combination, with the vertically-moving canting-bar and its immediate driving-gear, and the rotary log-delivering shaft with arms and its immediate driving-gear, of an adjustable driving-gear in common to both the foregoing devices, and combined with them, substantially as shown and described, so as to operate the rotary shaft by one movement, and to be disconnected therefrom and operate the canting-bar by the other movement, as set forth.

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