

(No Model.)

M. GARLAND.

LOG LOADER.

No. 305,170.

Patented Sept. 16, 1884.

Fig. 1.

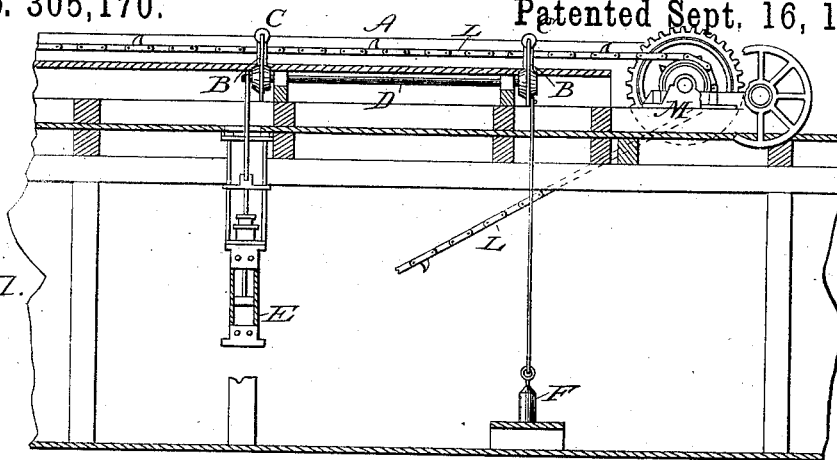


Fig. 2.

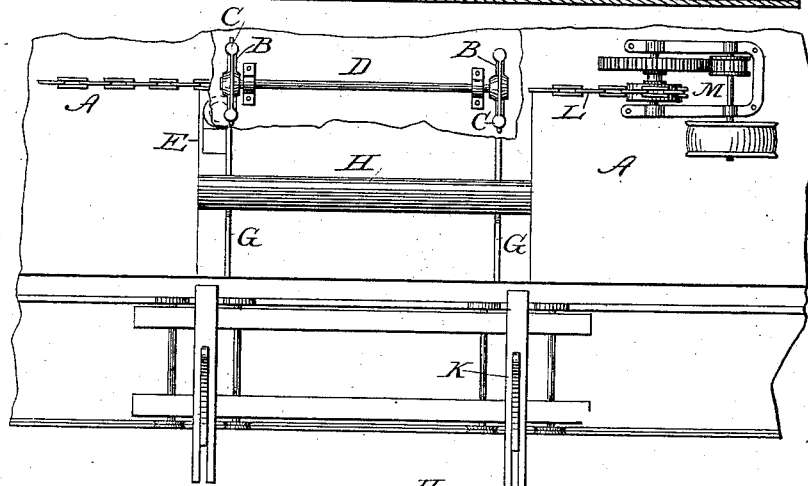
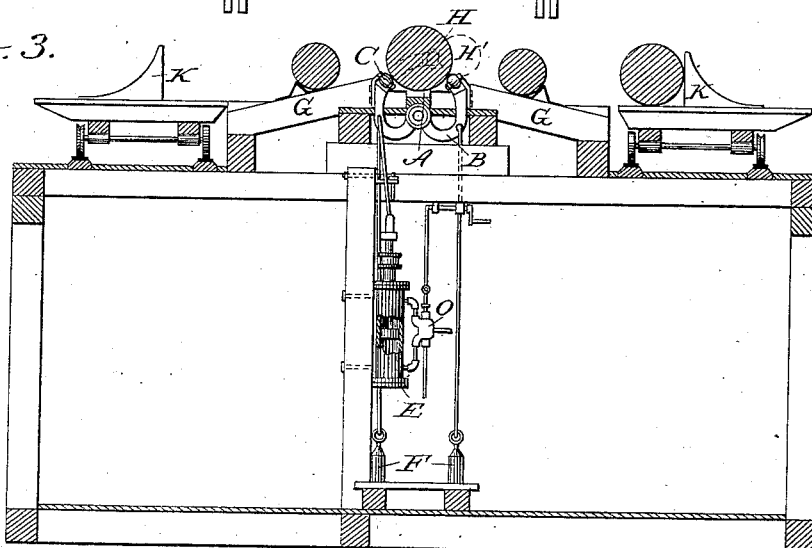


Fig. 3.



Witnesses:

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# UNITED STATES PATENT OFFICE.

MICHAEL GARLAND, OF BAY CITY, MICH., ASSIGNOR OF THREE-FIFTHS TO JOHN G. EMERY, SR., OF SAME PLACE, AND JOHN G. EMERY, JR., OF MINNEAPOLIS, MINNESOTA.

## LOG-LOADER.

SPECIFICATION forming part of Letters Patent No. 305,170, dated September 16, 1884.

Application filed December 28, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, MICHAEL GARLAND, of Bay City, in the county of Bay and State of Michigan, have invented a new and useful Improvement in a Steam Log-Deck for Saw-Mills; and I do declare that to the best of my knowledge and belief the invention has not been patented to myself or to others with my consent, or has ever been used in any country.

The ordinary log-deck in saw-mills consists of a raised platform in the middle of the mill, on which logs are drawn up from the boom or mill-pond by means of an endless chain with spurs thereon, to be delivered to the saw-carriages on the skids leading thereto, and heretofore the manner of delivering them from the log-deck to the skids has been by means of levers or cant-hooks in the hands of laborers.

The object of my invention is to transfer the logs from the log-deck to the skids leading to the saw-carriages on either side while they are being drawn along on the log-deck by the endless chain, without stopping the chain, by a method that will facilitate the work and save hand-labor. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents a side elevation of a section of a log-deck such as are ordinarily used in saw-mills, the side finish being left off to show my improvement. Fig. 2 is a floor plan of a log-deck with the deck broken through to show my improved device. Fig. 3 is an end elevation of a log-deck, showing skids, saw-carriages, &c.

Like letters refer to like parts in each figure.

The nature of the invention consists of the arrangement of a shaft with two or more segment-arms, and operated by a steam-cylinder, valves, and counter-weights.

In the drawings, A represents an ordinary log-deck.

B represents two or more segment-arms arranged under the log-deck, being connected by a strong shaft set firmly in boxes at each segment-arm; and the outer edges or top of deck A being open, the arms can be thrown up through, as shown by dotted lines in Fig.

3, and roll the log H to the skids G, on either side, ready to be loaded on saw-carriages K.

C C are heavy rollers in the end of each segment-arm B, to admit of a log being rolled off the deck while moving, and to prevent injury to arms when forced against a moving log.

D is a shaft to which the segment-arms are attached.

E is an ordinary steam-cylinder, made extra length, and provided with valves and connections, the piston thereof being attached to one of the segment-arms B, by which the power to roll the log H from the log-deck A to the skids G is transmitted to the shaft and other arms B B. By applying steam to lower end of cylinder E through the valve O, the piston connected with the segment-arms and shaft will be forced up, and thus roll the log H' to the skids G on the right, as shown by dotted lines. On the other hand, if steam is applied to upper end of cylinder E, the piston, arms, and shaft, with which it is connected, will be forced down, causing the arms on the right hand to come in contact with the log H and roll it to skids G on the left. This passing the log to the right or left so readily at the will of the operator enables him to assort and pass to the carriage K the log desired to be sawed thereon.

F F are counter-weights, attached by chains or otherwise, one to each end of the segment-arm on the opposite end of the shaft from the one to which the piston to cylinder E is attached. When steam is exhausted from the cylinder E, they fall and rest on platform on ground-floor, and thus adjust the piston, and also the segment-arms, ready to be operated again on either hand.

G G are the skids leading from the log-deck to the saw-carriages. H is a log as drawn along on the deck. H' represents a log being rolled off by segment-arms.

K K are the circular-saw carriages.

L is an endless chain for hauling up logs from the boom on the log-deck.

M is an endless-chain jack, connected with power for the purpose of propelling endless chain.

O represents valve to steam-cylinder.

I am aware that a steam-cylinder has been

used and connected with a cradle-like section of a log-deck, for rocking logs from the deck to the skids to be delivered to saw-carriages; am also aware that segment-arms and connecting-shaft have been operated by gears and other devices, but not in the manner I propose—by a steam-cylinder. Therefore I do not claim such a combination, broadly; but

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a log-deck, the arrangement of segment-arms of peculiar shape, firmly connected to a shaft running lengthwise under a center deck, the ends of the arms on either side of the said shaft being forced against the log on the deck by the cylinder and piston attachment, for the purpose of delivering logs to skids on either side of the deck, all substantially as shown, and for the purpose specified.

2. In a log-deck, the rollers C C in the ends of segment-arms B B, to prevent injury to said arms when they come in contact with a moving log.

3. In a log-deck, the combination and arrangement of the long upright steam-cylinder E, (which is of sufficient length to admit the piston working one-half stroke either way) with its attachments, with the segment-arms B B, rollers C C, and shaft D, all as fully set forth, and for the purposes specified.

4. In a log-deck, the counter-weights F F, one of which is attached to either end of the segment-arm, which is on the end of shaft D opposite from that to which the piston of cylinder E is attached, for the purpose of bringing the piston to the middle of the cylinder and the segment-arms back to their former position under the deck after rolling off a log, all substantially as shown, and for the purpose specified.

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Witnesses:

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