No. 648,175. Patented Apr. 24, 1900.

H. McDERMOTT.

LOG LOADER AND CANTER.

(Application filed Aug. 14, 1899.)

(No Model.) 3 Sheets—Sheet 1.

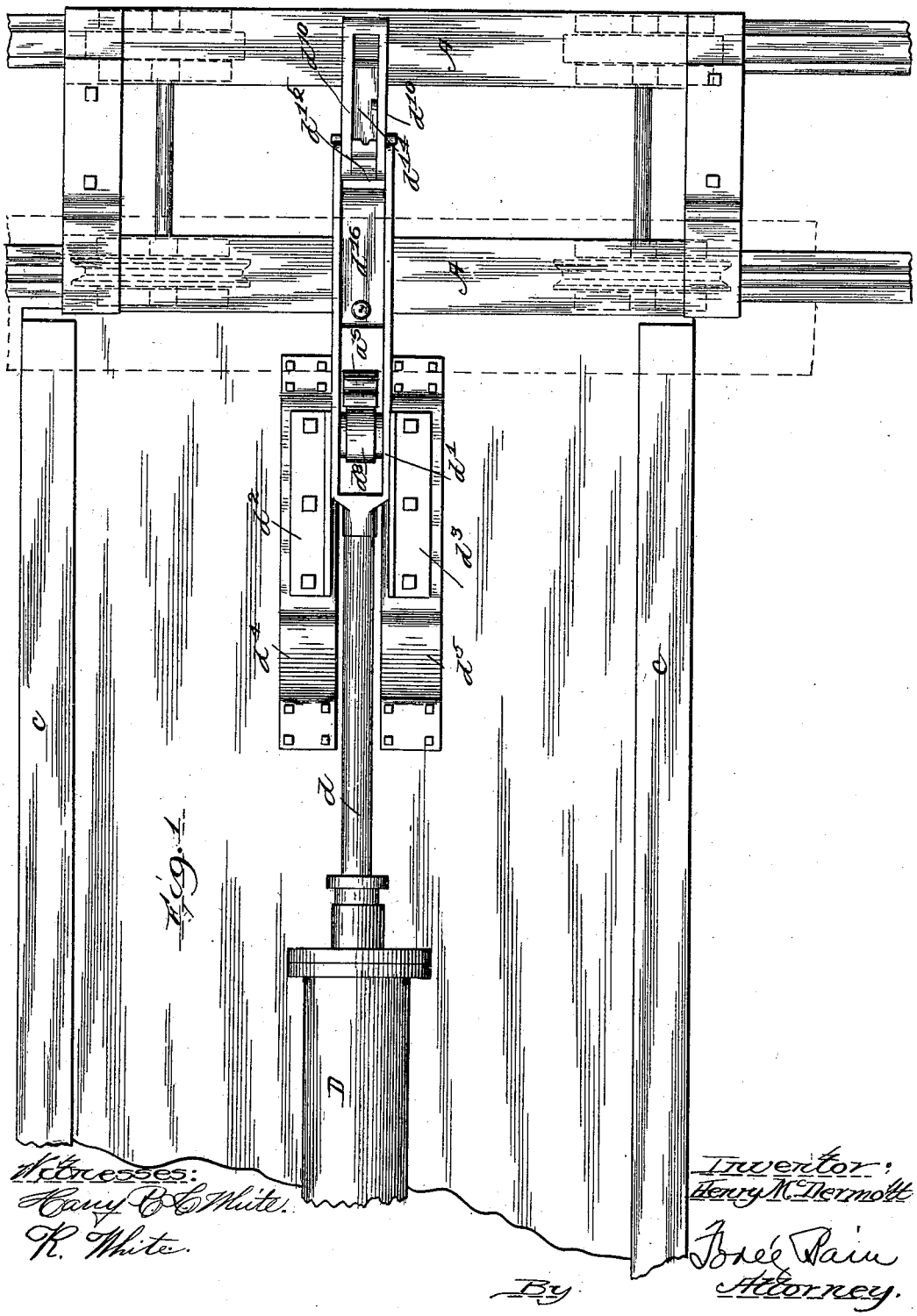

Fig. 1.

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Fig. 2.

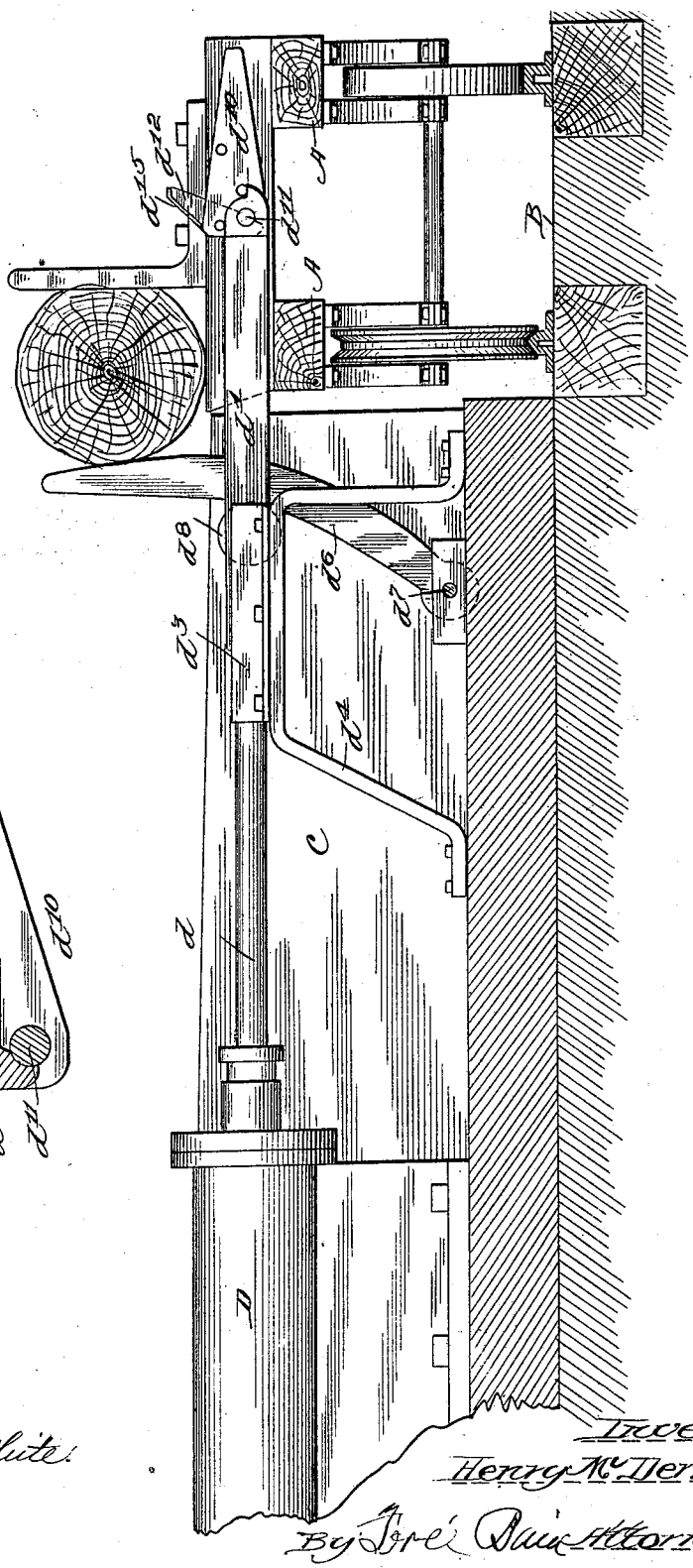
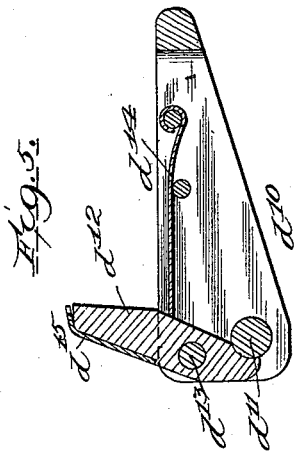


Fig. 5.



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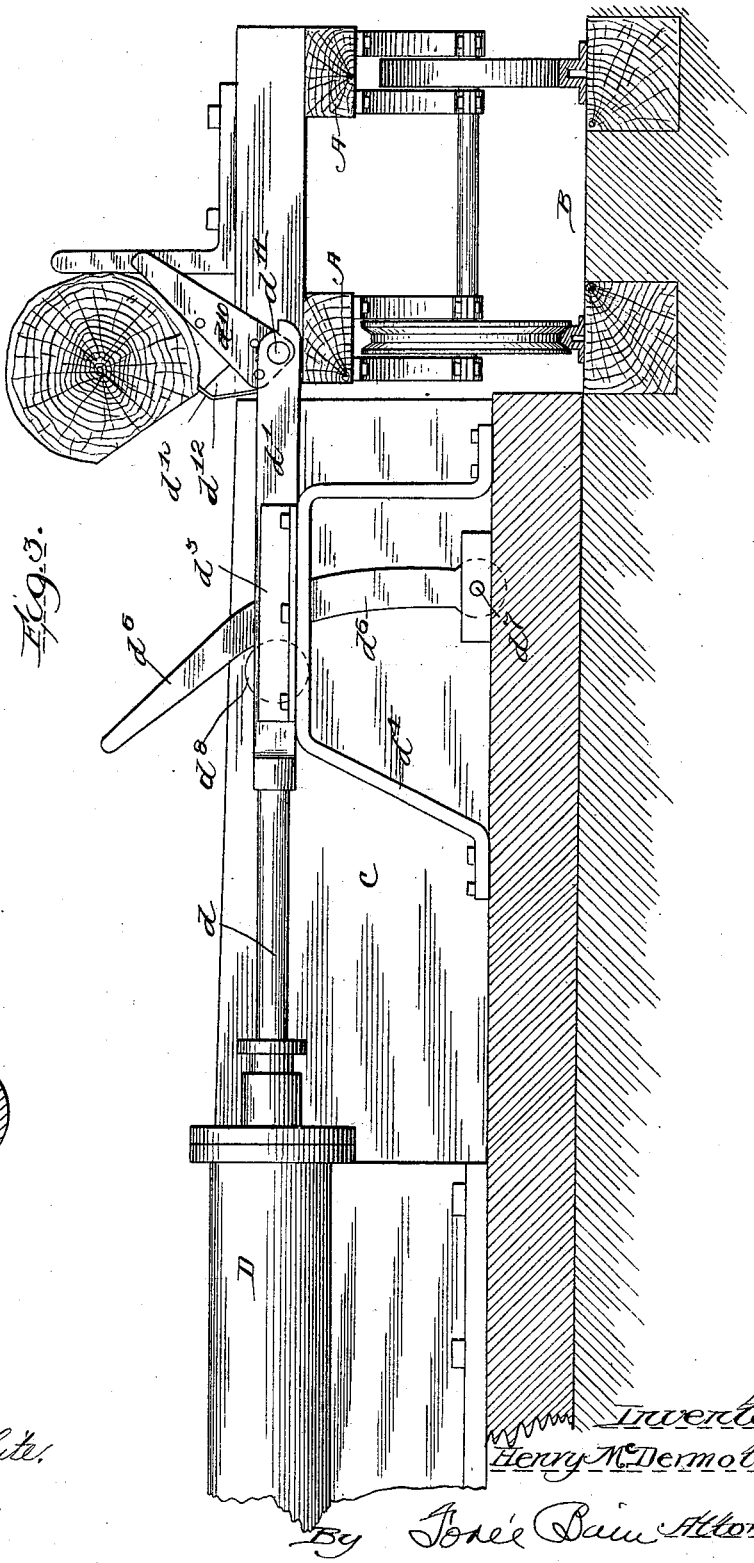

Fig. 3.

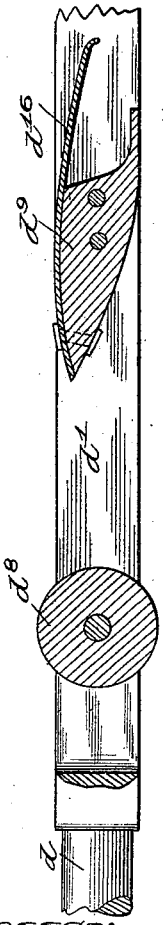

Fig. 4.

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UNITED STATES PATENT OFFICE.

HENRY McDERMOTT, OF SAGOLA, MICHIGAN.

LOG LOADER AND CANTER.

SPECIFICATION forming part of Letters Patent No. 648,175, dated April 24, 1900.

Application filed August 14, 1899. Serial No. 727,237. (No model.)

To all whom it may concern:

Be it known that I, HENRY McDERMOTT, a citizen of the United States, residing at the town of Sagola, county of Dickinson, and State of Michigan, have invented certain new and useful Improvements in Log Loaders and Canters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable persons skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in log loaders and canters, and especially to those whereby logs are loaded from a deck which is on a horizontal level with the traverse of the timber-carriage, and it relates more particularly to log-canters of that type whereby logs may be turned upon the ways ready to be secured to the head-blocks previous to sawing.

The object of my invention is to provide a timber-canter by means of which the logs or timber may be turned upon the ways for presenting the log to the saws after the log has been loaded by the same device from the deck upon the said ways of the timber-carriage.

With this and other objects in view the invention consists in the novel constructions and combinations of parts hereinafter more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a plan view of my combined loader and canter, showing a timber-carriage and the position of the various parts as shown in Fig. 2. Fig. 2 is an elevation in section, taken through line 2 of Fig. 1, showing a log on the carriage and the position of the parts at the time and just previous to "dogging" the log to retain it on the ways against the head-blocks. Fig. 3 shows the position of the parts while the log is being turned after the first cut has been made. Fig. 4 is a broken-away enlarged detail longitudinal section of the reciprocating arm. Fig. 5 is an enlarged detail of the canting-lever and nipping-dog, by means of which the log or timber is turned or revolved for presenting various surfaces to the saws.

Like letters refer to similar parts in all of the views.

A represents a timber-carriage in its simplest form adapted to run on the track B. The carriage may be propelled along the tracks in any usual manner past the saws and returned to the loading-deck.

C is the loading-deck, on which the logs are placed prior to being loaded on the timber-carriage A.

D is a steam-cylinder by which the piston-rod d is adapted to be reciprocated. On the extended end of the rod d the guided reciprocating arm d' is formed and has guided bearings within guides d^2 d^3. The latter are supported upon knee-braces d^4 d^5, which hold the reciprocating arm in line with the axis of the piston D and just below the deck C. A lever d^6 is pivoted at d^7 and is adapted to be moved forward by the pressure exerted by the reciprocating arm d' through the roller d^8 and to be brought into a position so that the free end will be below the top surface of the deck by the extended end of the spring supporting-piece d^9.

Attached to the outward end of the reciprocating arm d' a canting-lever d^{10} is loosely supported on the pivot d^{11}. A nipper-dog d^{12} is pivoted on the canting-lever d^{10} by pivot d^{13}. The lower end of the dog abuts against d^{11}. A spring d^{14} holds it in an upright position. (Shown in Fig. 5.) It may be depressed so that its top surface will come flush with the top surface of the reciprocating arm, but will be returned to the position shown by the spring d^{14}. A plate d^{15} is removably secured to the dog and forms teeth that project upward and forward. The dog d^{10} is returned to its normal longitudinal position by spring d^{16}, Fig. 4.

The operation of my device is as follows: Logs to be sawed are rolled upon the deck C. The arm d' is first drawn back, so as to clear the timber-carriage. In this case the arm is reciprocated by means of a steam-cylinder D; but any other adequate means may be used for this purpose without departing from the spirit of my invention. When the arm d' has been drawn back, as described, all of the parts thereof are below the surface of the deck C, including lever d^6. A log may be rolled upon the deck until it reaches a point just ahead of the upper part of the lever d^6, when the re-

ciprocating arm d' may be propelled forward. Lever d^6 will be raised up above the surface of the deck by pressure exerted against the said lever through roller d^8, and the log will thereby be rolled upon the carriage A and held up firmly against the head-blocks by lever d^6, as shown in Fig. 2. After the log has been placed and retained by means of the dogs that are usually used for this purpose and after the log has been adjusted on the rear and forward traverse of the timber-carriage the carriage is then propelled by any suitable means toward the saws, and a slab is sawed from the log, as shown in Fig. 3. The carriage is then returned to the position shown in Fig. 3, which is in front of the deck C, so that the reciprocating arm d' may be thrust out across the path of the carriage A about midway between the wheels thereof and under the log as it lies on the traverse-ways, for it is now desirable to turn the log to a new position, usually about ninety degrees. As the arm d' passes under the log the part d^{10} of the canting-lever will clear the log, but the nipper-dog d^{12} will engage with the under side of the log, as shown in Fig. 3, and lift the log from the traverse-ways and turn it just one-quarter of a revolution, after which the lever d^6 will press the log back against the head-blocks and hold it there until it has been secured in position by the head-block dogs. After this operation the arm d' is withdrawn from under the carriage to its former position, so as to allow the carriage to move freely upon the track. As the arm is moving back out of the way the nipper-dog d^{12} will be depressed, but will again be returned to its normal position by the spring d^{14}.

The arrangement which I have shown and described for the purpose of loading and canting logs on a timber-carriage possesses several very valuable and novel features. It is cheap to construct. It performs its purpose without violent jar to the other machinery. It turns the log almost within its own radius. It turns the portion of the log to the saws that is convenient for inspection by the sawyer before the turn is made. It is simple in operation and not subject to easy derangement.

I desire it understood that I do not limit myself to the specific details of construction shown and described herein, but reserve to myself the right to make such changes in the form and arrangement of the various parts of the apparatus as will fairly come within the spirit and scope of my invention.

I have shown a steam-cylinder and piston-rod as a means for reciprocating the arm d'; but any other means may be substituted without departing from the gist of my invention.

Having thus fully described my invention, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

1. In a log loader and canter, the combination of an arm adapted to be reciprocated laterally across the path of a timber-carriage, a cant-lever carried by said arm, and a device, such as a lever, adapted to temporarily retain the log against the head-blocks of the said timber-carriage, substantially as set forth.

2. In a log loader and canter, the combination of an arm adapted to be reciprocated laterally across the path of a timber-carriage, a device operated by said arm for loading the logs on the said carriage, and a cant-lever adapted to turn the logs in position, operated by said arm independently of the loading device, substantially as set forth.

3. In a log loader and canter, the combination of an arm adapted to be reciprocated laterally across the path of a timber-carriage, a loading device such as a lever operated by said arm, adapted to hold the timber in position against the head-blocks of the said carriage, and maintained in position by said arm, and a canting device, such as a pivoted nipper-dog, for turning the timber, substantially as set forth.

4. In a log loader and canter, the combination of an arm adapted to be reciprocated laterally across the path of a timber-carriage, a log-deck practically in the same plane as the ways of the said carriage, a loading-lever pivoted below said deck and adapted to be oscillated by said arm, and a canting-lever and dog carried by the said arm, substantially as set forth.

5. In a canting device, the combination of a reciprocating arm, a canting-lever loosely pivoted to the end thereof, a nipping-dog pivoted to the said canting-lever, and a spring for holding the said nipping-dog in a practically-vertical position with reference to said canting-levers, substantially as set forth.

In testimony whereof I have signed this specification, in the presence of two subscribing witnesses, this 22d day of July, 1899.

HENRY McDERMOTT.

Witnesses:
JNO. J. FLANAGAN,
E. L. GRAHAM.