

UNITED STATES PATENT OFFICE.

CHARLES E. EVANS, OF PADUCAH, KENTUCKY.

LOG-LOADER.

SPECIFICATION forming part of Letters Patent No. 724,831, dated April 7, 1903.

Application filed August 2, 1902. Serial No. 118,120. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. EVANS, a citizen of the United States, residing at Paducah, in the county of McCracken and State of Kentucky, have invented a new and useful Log-Loader, of which the following is a specification.

The invention relates to improvements in log-loaders.

10 The object of the present invention is to improve the construction of devices for loading logs on sawmill-carriages and to provide a simple, inexpensive, and efficient device designed to be arranged at the end of a log chute or skid and adapted to be readily operated to roll a log from the skid to a sawmill-carriage.

20 A further object of this invention is to provide a log-loader of this character in which the log-engaging devices will readily pass beneath a log when they are moved backward and which will be capable of automatically engaging a log when they are moved forward against the same.

25 The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended.

30 In the drawings, Figure 1 is a side elevation, partly in section, of a log-loader constructed in accordance with this invention. Fig. 2 is a transverse sectional view. Fig. 3 is a detail view illustrating the arrangement of the frictional gearing for operating the log-loader.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

40 1 1 designate sides of a frame designed to receive the logs preparatory to loading the same on a sawmill-carriage and forming a part of a log skid or chute and provided with longitudinal openings 2 for the reception of log-engaging devices 3, which operate in the openings 2 and which are adapted to move a log longitudinally of the skid to carry the same to a sawmill-carriage 4. The sides 1 may be constructed in any suitable manner and are preferably mounted on a floor or platform 5, and the log-engaging devices,

which extend entirely through the openings 2, are mounted on the front ends of bars 6, which are adapted to be reciprocated longitudinally of the skid or chute by the means 55 hereinafter described.

Each log-engaging device consists of an upright bar or standard composed of upper and lower sections or members 7 and 8, hinged together at 9 at the front edges of the sections or members and normally held in alignment, with the upper section or member vertical, by a spring 10. The spring 10 is arranged at the front of the log-engaging device and is preferably secured at its lower end to the lower section or member, and its upper end is free and bears against the front edge of the upper section or member and is adapted to be swung outward by the same. When the upper section or member of the log-engaging device is subjected to pressure from the front, as illustrated in full lines in Fig. 1 of the drawings, the upper section or member is held rigidly against the lower section or member by such pressure or resistance, as the said upper section or member cannot swing rearward from a vertical position; but when the log-engaging device is carried backward by the means hereinafter described it is adapted to have its upper section swung backward, as illustrated in dotted lines in Fig. 1 of the drawings, to enable it to pass beneath a log. When, however, the log-engaging device passes backward beyond the log, the spring will automatically throw the upper section into a vertical position for engaging the back of the log. The upper end 11 of the upper section or member of the log-engaging device is bifurcated and has pivotally mounted within it an antifriction-wheel 12, arranged to engage the log and adapted to rotate as the log is rolled forward, thereby reducing the friction resulting from the engagement of the device and the log to a minimum and facilitating the forward movement of the log. 95

The bar 6 is provided with a pair of upwardly-extending arms 13, arranged near its ends, and these arms extend upward into the opening of the adjacent side 1 and are provided with antifriction-wheels 14, located at opposite sides of the arms and arranged with-

in grooves or ways 15 of the walls of the opening 2. By this construction the bars 6 are suspended from the sides 1 and are adapted to move freely longitudinally thereof. Each
5 bar 6 is provided at its lower face with a rack 16, meshing with a pinion 17 of a shaft 18, journaled in suitable bearings 19 and extending transversely of the skid and provided at one end with a bevel friction-wheel 20. The
10 friction-wheel 20 is arranged between a pair of oppositely-disposed bevel friction-wheels 21 and 22, suitably connected together and keyed or otherwise slidably connected with a shaft 23. The friction-wheels 21 and 22 are
15 adapted to be operated by a shifting-lever 24, whereby either of them may be carried into engagement with the friction-wheel 20 to rotate the shaft 18 in the desired direction. The shaft is adapted to be rotated for moving
20 the log-engaging devices forwardly to carry a log onto the sawmill-carriage, and the rotation of the shaft may be quickly changed to move the log-engaging devices backward for engaging another log.
25 It will be seen that the log-engaging devices are adapted to be readily moved backward and forward and that when they are moved backward they are adapted to pass readily
30 versed and moved forward they will engage

a log and carry the same forward over the sides of the frame onto a sawmill-carriage.

What I claim is—

A log-loader comprising a frame having sides provided with longitudinal openings, 35 said sides being also provided in the walls of the openings with longitudinal grooves, longitudinal rack-bars located beneath the frame and provided with arms extending upward in the said openings and having oppositely- 40 disposed antifriction devices operating in the said grooves, said arms forming hangers for suspending the rack-bars from the frame, standards mounted on the rack-bars at the front ends thereof and extending upward 45 therefrom through the openings of the sides of the frame and composed of upper and lower sections hinged together at the front and provided at the hinge-joint with shoulders, leaf-springs engaging the sections for holding 50 the same normally in an upright position, and reversible gearing for operating the rack-bars, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in 55 the presence of two witnesses.

CHARLES E. EVANS.

Witnesses:

ROBT. A. CUMMINS,
S. W. ARNOLD.