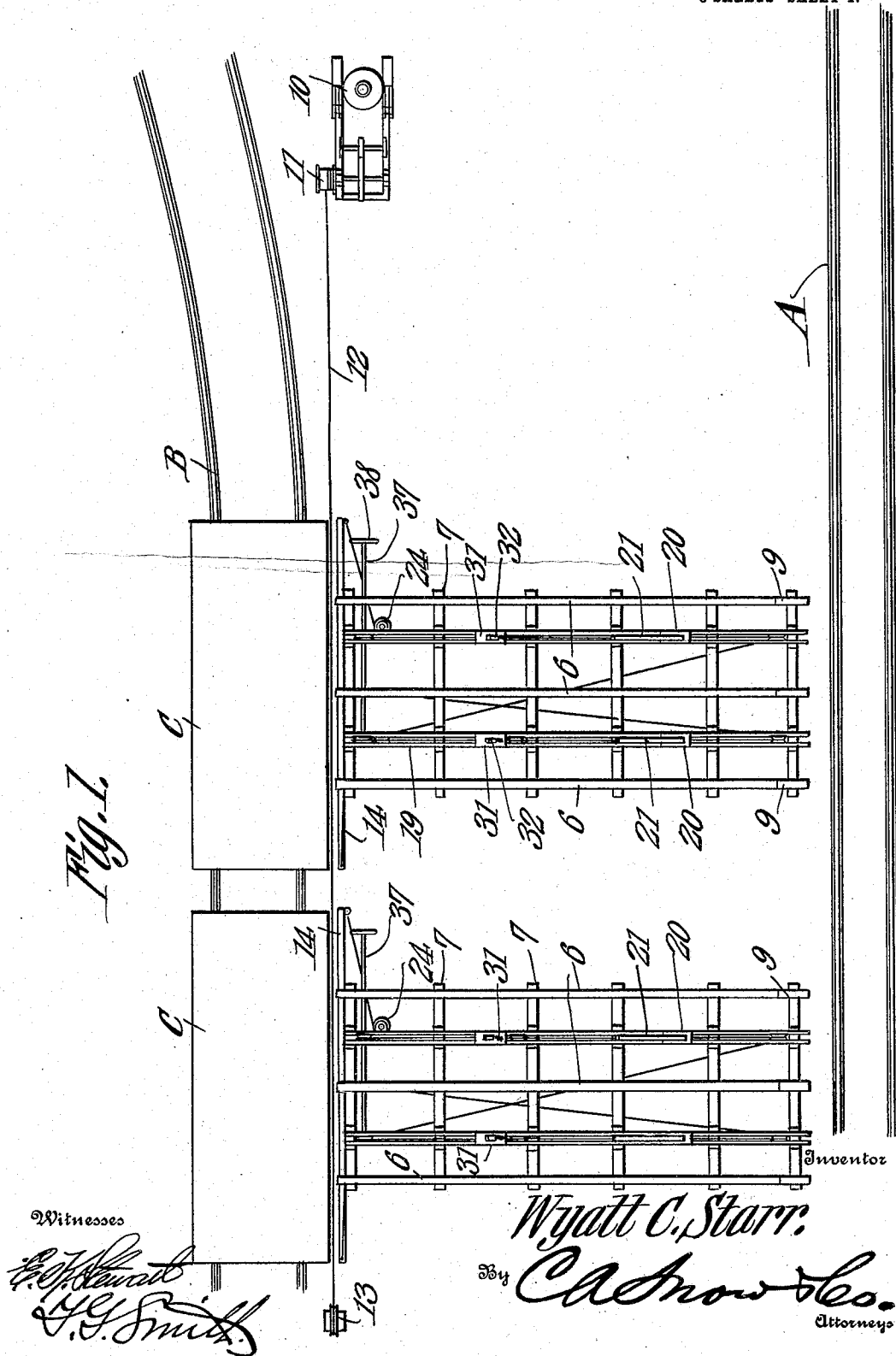


937,192.

W. C. STARR.
LUMBER LOADER.
APPLICATION FILED MAR. 25, 1909.

Patented Oct. 19, 1909.

3 SHEETS—SHEET 1.



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Fig. 2.

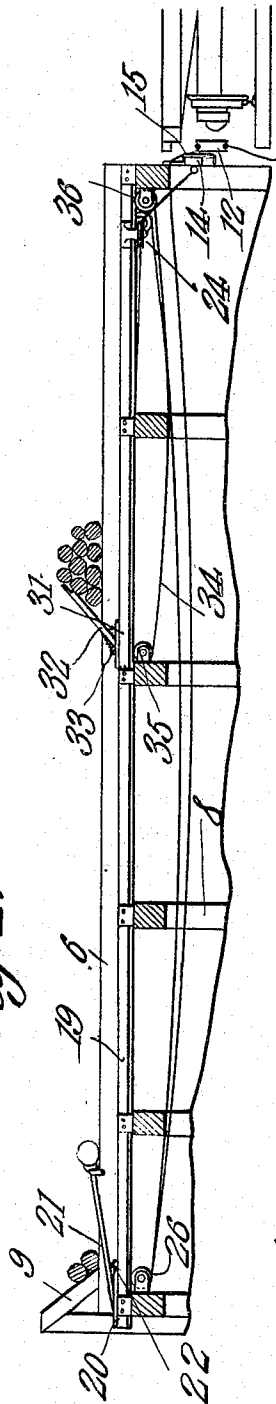


Fig. 5.

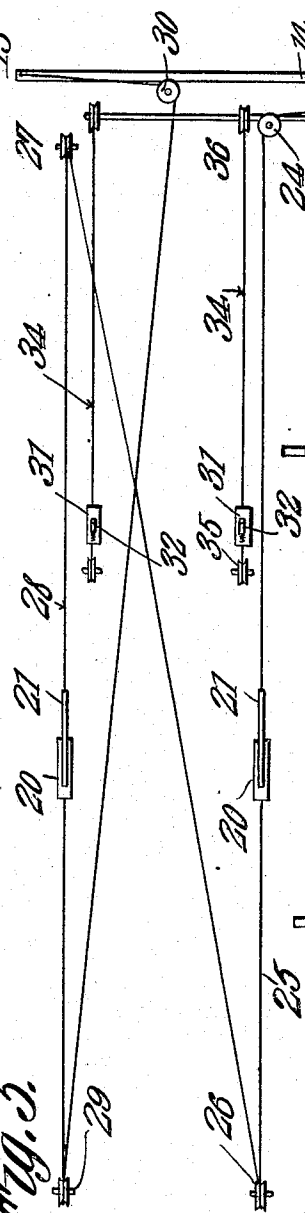
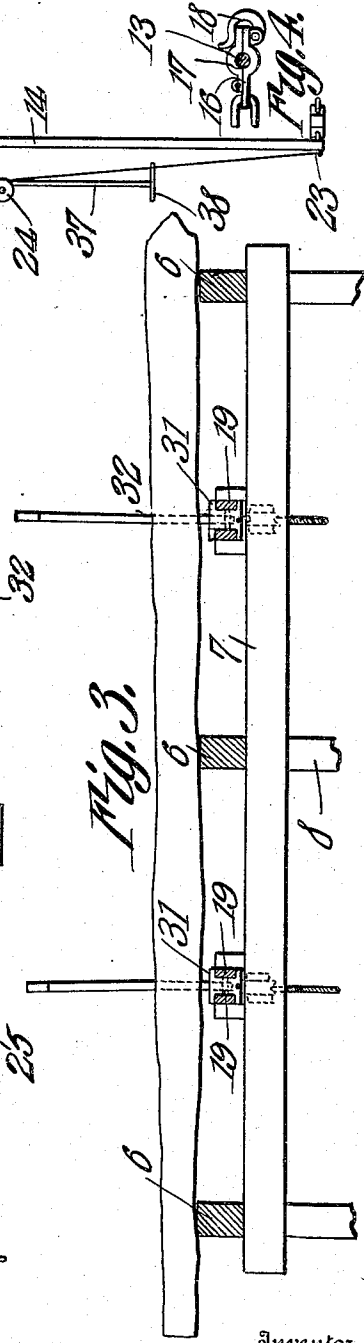


Fig. 3.



Witnesses

E. J. Stewart
J. L. Smith

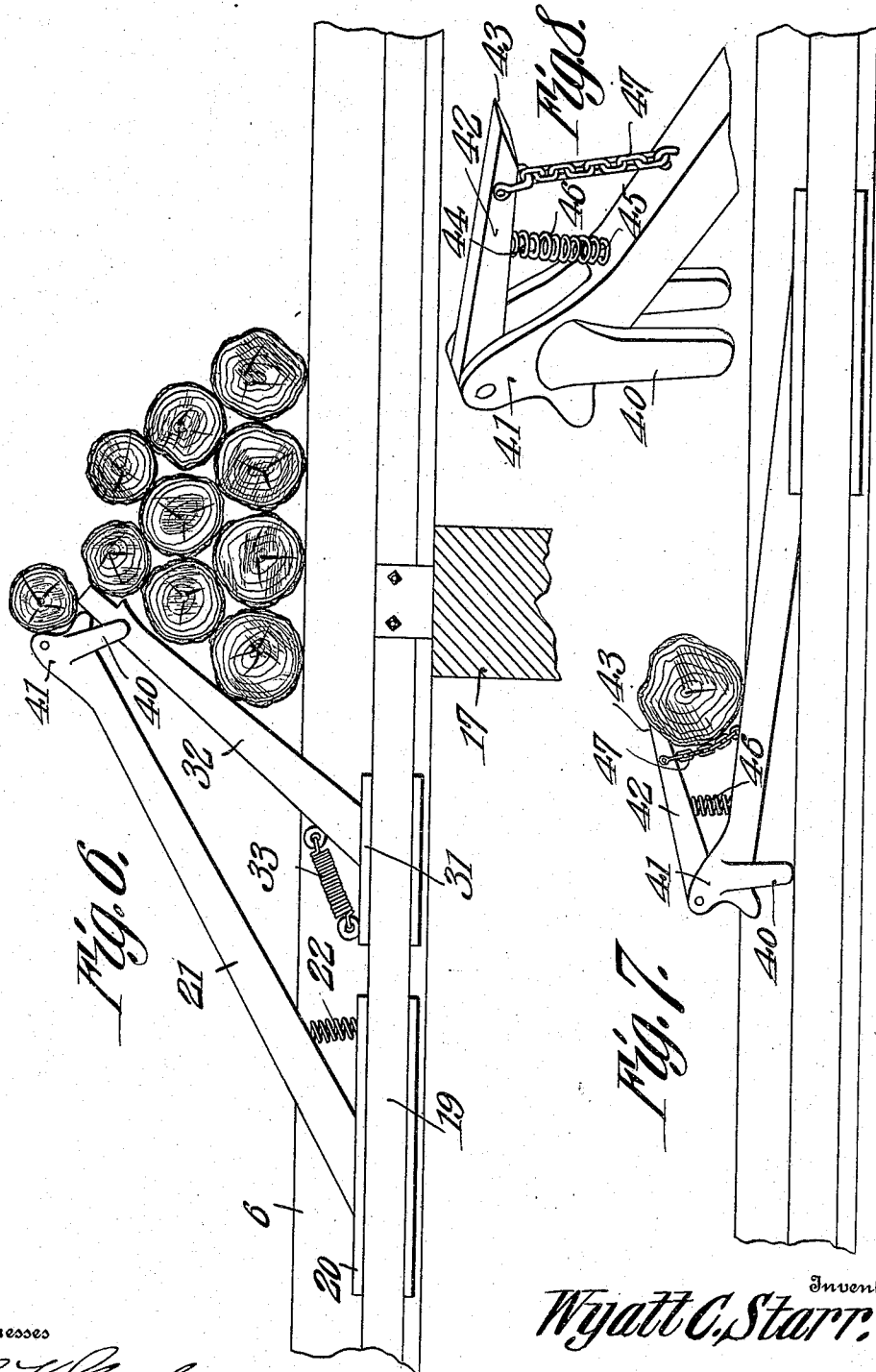
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Witnesses

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UNITED STATES PATENT OFFICE.

WYATT C. STARR, OF SILVERSPRING, FLORIDA.

LUMBER-LOADER.

937,192.

Specification of Letters Patent.

Patented Oct. 19, 1909.

Application filed March 25, 1909. Serial No. 485,720.

To all whom it may concern:

Be it known that I, WYATT C. STARR, a citizen of the United States, residing at Silverspring, in the county of Marion and State of Florida, have invented a new and useful Lumber-Loader, of which the following is a specification.

It is the object of the present invention to improve generally the construction of logging skids and more specifically speaking that class of such skids which are employed in the transfer of logs from a narrow gage railway to the main or transporting railway, and the primary object of the invention is to so construct the skids that the logs may be handled with more precision and certainty and may be properly discharged onto the cars of the main or transporting railway. It is, in this connection, the aim of the invention to provide for the disposal of the logs upon the transporting cars with as little shock and jar as possible and equally and evenly distributed.

One of the novel features of the invention resides in the provision of a plurality of log moving members and a tractor common to all of the members whereby they will be moved simultaneously and to the same degree upon actuation of the tractor.

Other novel features of the invention will be appreciated as the nature of the invention is better understood from the specific description of the invention which is to follow and an inspection of the accompanying drawings, in which—

Figure 1 is a plan view showing the arrangement of the skids embodying the invention. Fig. 2 is a vertical longitudinal sectional view taken through one of the skids. Fig. 3 is a vertical transverse sectional view through one of the skids. Fig. 4 is a detail view of one of the clamps provided for connecting the traction element with the traction cable through the medium of which the said elements are operated or moved. Fig. 5 is a diagrammatic view showing the arrangement of the tractor element on one set of skids with respect to the log moving members thereof, and the arrangement of the cable which connects the tractor element with the said log moving members. Fig. 6 is a view partly in section and partly in elevation showing the manner in which the log moving elements of the skids cooperate when piling or stacking the logs. Fig. 7 is a view in elevation showing the manner of

disposing one of the log moving elements when unloading logs from a car, and Fig. 8 is a detail perspective view of the log engaging end of one of the said elements.

In the drawings, the narrow gage trackway is indicated by the reference character A and it is over this trackway that the narrow gage cars which run from the lumber track are drawn, and the trackway over which the transporting cars travel is indicated by the reference character B and several cars are shown and are indicated by the reference character C, it being understood of course that the result accomplished by the present invention is the transfer of the logs from the cars upon the narrow gage trackway to the cars C upon the main trackway B. This track B, shown in the drawings, is preferably in the nature of a siding and the cars C are run onto it, loaded with logs from the cars upon the trackway A, and then drawn onto the main line and the logs transported to the desired point.

Extending between the two trackways A and B are sets of skids over which the logs are to be moved in transferring them from cars upon the trackway A to the cars C on the track B, and the log supporting means or skids proper of each set are indicated by the numeral 6 and are supported on cross beams 7 which rest upon the upper ends of posts or uprights 8. The skids 6 of course extend in parallel relation one with respect to the other and the means for moving the logs over the skids is of course arranged between the skids. At that end of each set of skids adjacent the trackway A, there are provided inclined ways 9 down which the logs to be transferred may be rolled onto the skids 6 and the upper ends of these ways are of course preferably positioned in the same horizontal plane as the platforms of the cars of the narrow gage railway so that the logs may be readily rolled directly from the car platform onto the said ways.

Arranged at some convenient point adjacent the sets of skids and also adjacent the track B, is a suitable engine or motor which is designed to actuate a drum 11 about which is trained a cable 12, one strand of the cable being above the other inasmuch as the drum is arranged with its axis in a horizontal plane. This cable 12 is also trained about a pulley 13 which is positioned also adjacent the track B but beyond that end of the series of sets of skids op-

posite to the end beyond which the engine 10 is located, the cable 12 extending in parallelism with the forward end of the skids, but in a plane below the skids at their said ends. This cable is designed to serve two uses the first of which is to shift or reciprocate certain tractor beams which impart motion to the log moving members of the skids and its secondary use is to shift the cars C to proper position upon the track B.

The tractor beams mentioned above are indicated by the numeral 14 and are mounted in suitable brackets or bearings 15 upon the foremost ones of the uprights 8 in such manner as to permit of their reciprocatory movement in a line transversely of the forward end of the set of skids. As heretofore stated, one of the tractor beams 14 is associated with each set of skids and connected to each beam at one end thereof is a clamp comprising a pair of hinged members 16 arranged, as at 17, to grip the upper stretch of the cable 12 between them, there being pivoted to one of the members a latch 18 which may be swung to position to engage with the other member of the clamp and bind the two members upon the cable. By the provision of these attaching clamps, as will be understood, the tractor beams 14 may be connected to the cable at any point in the length of the upper stretch thereof, and that if disconnected from the cable, the cable may be utilized as a means for drawing the cars C to proper position with respect to the skids, some suitable connection being of course provided either upon the cable or the cars or attachable or detachable to and from both the cars and cable.

As shown in Figs. 1 and 3 of the drawings, there are three skids in each of the sets and disposed between the intermediate skid and each of the side skids is a pair of guides 19 and supported and working between these guides, which guides extend in substantially the same plane with the skids and in parallel relation with respect thereto, is a block 20 upon which is pivotally mounted a log-engaging arm 21 the said arm being inclined upwardly in the direction of the forward end of the skids and being normally held in position to engage with a log in advance of its end, by means of a spring 22 which is connected to the arm and also to the block as is clearly shown in Fig. 6 of the drawings.

It will be understood from the description of the invention thus far given that upon movement of the blocks 20 in the direction of the forward ends of the skids, and engagement of the extremity of the arm 21 with a log upon the skids, the said log will be shoved along the skids in the direction of the forward ends of the same. It will further be understood, that inasmuch as

two of these log moving members are provided, and are arranged for movement along parallel guides, and as heretofore stated simultaneously, the log being moved will during the entire time of its movement lie transversely of the skid and will maintain this position until discharged onto one of the cars C. In order to move these log moving members in their guides, connection is provided between the members and the tractor beam and this connection is in the nature of a continuous cable which is connected as at 23 at one end to one end of the tractor beam 14 and is then trained around a pulley 24 at the forward end of the guide in which one of the blocks 20 is mounted, and after being passed around this pulley 24, is extended rearwardly as at 25 in a plane beneath but parallel with and between the members of the said guide, it being connected at some point in its length, permanently, to the said block 20. The cable is then passed around a pulley 26 which is journaled at the rear end of the guide just mentioned, and is then extended diagonally beneath the intermediate skid and passed about a pulley 27 journaled at the forward end of the other guide 19 after which, the cable is extended again directly rearwardly as at 28 parallel to its stretch and is connected again at some point in the length of this stretch 28 to the other one of the blocks 20, the point of connection of the blocks with the two sections of the cable being however identical as regards relative location. The cable is finally passed around a pulley 29 journaled at the rear end of the last mentioned guide and is then extended diagonally forwardly between the skids and about a pulley 30 at the forward ends of the skids and has its extremity secured to the other end of the tractor beam.

It will be understood from the foregoing description of the invention that owing to the peculiar arrangement of the cable which connects the tractor beam and the log moving members, these members are actuated or moved in their guides simultaneously and to the same degree upon reciprocation of the tractor beam and that when this beam is moved in one direction, to the right in Figs. 1 and 3, the log moving members will be moved forwardly to carry the log in a corresponding direction, and it will further be understood that when the tractor beam is shifted in a reverse direction, the log moving members will be retracted. Also mounted in the guides 19, one in advance of each of the blocks 20 is a block 31 upon which is pivoted an arm 32 normally held in elevated position by means of a spring 33, the arm being capable of being swung down so as to be in a plane entirely below the plane of the upper faces of the skids whereby to permit the passage of a log over the said arm

and to position in advance thereof after which passage of the log the arms will automatically swing or return to normal position through the action of the spring.

5 As is clearly shown in the drawings, the arms 21 are of greater length than the arms 32 so that when the blocks carrying the arms 21 are moved forwardly in their guides until substantially in engagement with the
10 blocks carrying the respective arms 32, they will over-reach the said arms 32 and advantage is taken of this construction by providing for stacking of logs upon the skids, this being accomplished by bringing the
15 arms 32 into position against a log or logs, upon which other logs are to be stacked or piled and then moving the arms 21 to shove the said other logs up along the upper sides of the said arms 32 and onto the first mentioned logs, as will be readily understood
20 from an inspection of Fig. 6 of the drawings.

In order to hold the arms 21 at all times in fixed relation with respect to the arms 32, each of the arms 21 is formed at its
25 upper end with depending spaced fingers 40 which straddle the corresponding arm 32 and perform the function stated. As heretofore stated, it is intended that the arms 21 may also be employed in removing the logs
30 from a car and to this end, each of the arms 21 is formed at its extremity with spaced upstanding ears 41 between which is pivoted the inner end of a finger 42 having a spur log-engaging end 43. Each of the fingers
35 is formed upon its under edge with a stud 44 and the upper edge of the corresponding arm 21 is formed also with a stud indicated by the numeral 45, a spring 46 being engaged at its end with the stud whereby it is held
40 in fixed position between the finger and the arm and the finger is in this manner held normally in elevated position, its upward movement being limited however by a chain 47 which is connected at one end to the
45 finger and at the other end to the arm. When the arms 21 are to be employed in the manner stated, their position is reversed with respect to the blocks upon which they are mounted and they are caused to travel to the
50 rear end of the machine until their ends have passed beneath the log upon the car after which forward movement is imparted to the arms whereby to move the log in a corresponding direction, the finger 42 being
55 engaged therewith.

It will be understood of course that the device embodying the present invention is to be employed in the stacking of logs upon the skid by setting in operation the log-
60 engaging arm 21, which will carry the log along the skid, up the inclined arm 32, and pile them in advance of the said arm 32, in the manner shown in Fig. 6 of the drawings. When the logs have been thus piled
65 and after they have remained for some little

time, pending the arrival of transportation cars on the track B, and it is desired to load the logs from the skid on to the cars C, the logs nearest the terminals of the skids are rolled on to the cars, and the arms 32, as
70 the logs are removed from the skid, may be bodily advanced, so as to be within convenient reach.

What is claimed is:—

1. In mechanism of the class described, 75
skids, a plurality of log moving members mounted for travel between the skids, and a tractor common to all of the members for imparting simultaneous movement thereto.

2. In mechanism of the class described, 80
skids, a plurality of log moving members mounted for travel between the skids and adapted to engage with a log at a plurality of points in its length, and a tractor common to all of the members for imparting simultaneous movement thereto of the same degree. 85

3. In mechanism of the class described, 90
skids, a plurality of log moving members mounted to travel between the skids and adapted to engage with a log to be moved at a plurality of points in its length, and a tractor common to all of the members and capable of movement to advance or retract said members in unison. 95

4. In mechanism of the class described, 100
skids, a plurality of log moving members mounted to travel between the skids, a tractor common to all of said members, and skid members mounted for movement between the skids in advance of the first mentioned members.

5. In mechanism of the class described, 105
skids, a plurality of log moving arms mounted to travel between the skids, skid members mounted also for movement between the skids, and means upon the log moving arms arranged to straddle the skid members.

6. In mechanism of the class described, 110
skids, a plurality of log moving members mounted for travel between the skids, a tractor beam mounted for reciprocatory movement in advance of the skids, and connection between the said traction beam and the log moving members whereby movement of the
115 beam will impart movement to the said members.

7. In mechanism of the class described, 120
skids, a plurality of log moving members mounted for travel between the skids, a tractor beam mounted for reciprocatory movement in advance of the skids, and connection between the said beam and the members whereby movement of the beam in one direction will serve to advance the said members
125 and movement in a reverse direction will serve to retract the members.

8. In mechanism of the class described, 130
skids, a plurality of log moving members mounted for travel between the skids, a trac-

tion cable, a tractor beam mounted for reciprocatory movement in a line transversely of the skids, means for detachably connecting the tractor beam with the traction cable, and connection between the tractor beam and all of the members whereby movement of the beam will serve to impart movement to the members simultaneously.

9. In mechanism of the class described, skids, a plurality of log moving arms mounted to travel between the skids, skid members mounted also for movement between the skids, and means upon the log moving arms arranged to engage the skid members.

10. In mechanism of the class described, a

plurality of log moving arms mounted to travel between the skids, skid members mounted also for movement between the skids, means upon the log moving arms arranged to straddle the skid members, and a log engaging finger pivoted at the end of the said arms.

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

WYATT C. STARR.

Witnesses:

J. V. TARVER,

P. M. MOSELEY.