C. L. ROBBINS.

DOG ATTACHMENT FOR SAWMILLS.

APPLICATION FILED SEPT. 7, 1909.

981,945. **Patented Jan. 17, 1911.**

2 SHEETS—SHEET 1.

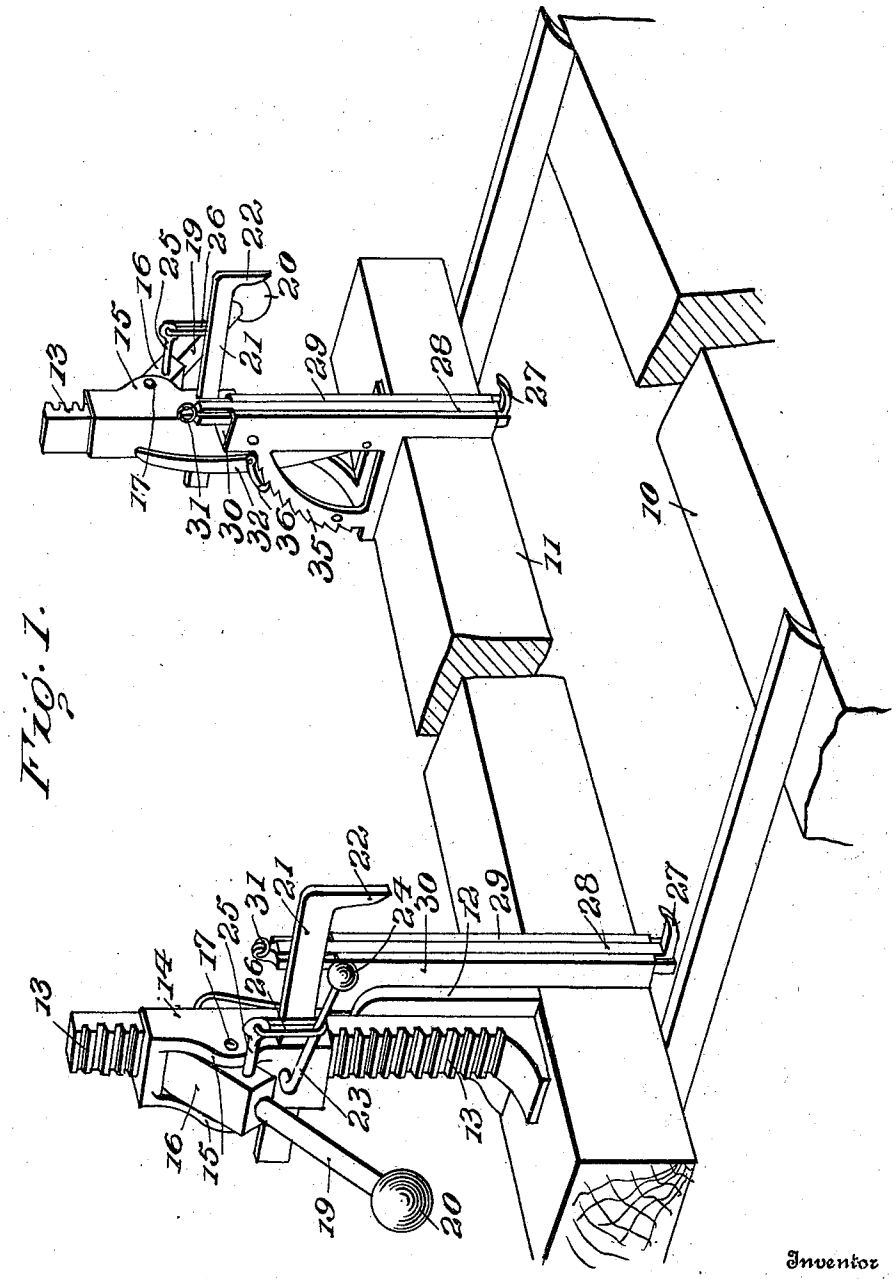

Fig. 1.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

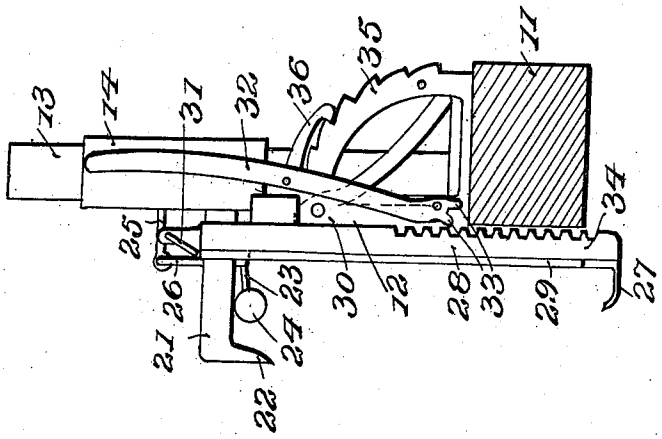
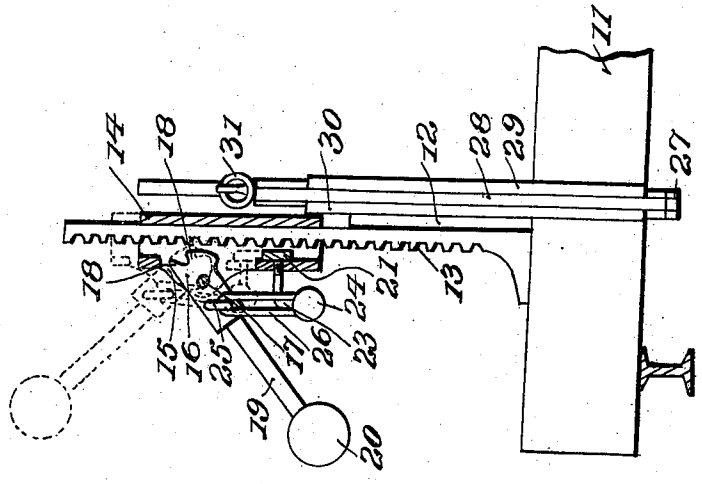


Fig. 2.



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UNITED STATES PATENT OFFICE.

CHESTER L. ROBBINS, OF EAST THOMPSON, CONNECTICUT.

DOG ATTACHMENT FOR SAWMILLS.

981,945. Specification of Letters Patent. Patented Jan. 17, 1911.

Application filed September 7, 1909. Serial No. 516,343.

To all whom it may concern:

Be it known that I, CHESTER L. ROBBINS, citizen of the United States, residing at East Thompson, in the county of Windham and State of Connecticut, have invented certain new and useful Improvements in Dog Attachments for Sawmills, of which the following is a specification.

This invention relates to wood sawing and has particular reference to an improvement upon log-beam carriage-dogs.

An object of this invention is to provide a novel construction of operating means for locking the upper tooth of the carriage-dog in an engaged position and of effecting such positioning by the ordinary movements necessary to feed the same to the log.

The invention has for another object the provision of an upper and a lower tooth for the log-beam carriage which employ simple mechanism for their operation and which are locked rigidly in a closed position when set.

The invention has for a further object the provision of means whereby all tension is released from the teeth of the lever (which engages the vertical rack when the tooth is embedded in the lumber,) so that the sleeve which carries the lever and the upper dog may be adjusted to the desired vertical position.

The invention still further aims at the provision of means whereby a dog is automatically locked in adjusted position at the end of its downward movement to engage the log, the dog being freed during such downward movement and locked only at the end of the same, thereby permitting of an accurate adjustment of the dog during the downward movement of the same as the dog may be adjusted within a sleeve by the free hand of the operator.

For a full understanding of the invention reference is to be had to the following description and accompanying drawings, in which:—

Figure 1 is a perspective view of a portion of a log-beam carriage having the improved attachments applied thereto. Fig. 2 is a front elevation of the combined upper and lower dogs in position and mechanism for operating the same, and Fig. 3 is a side elevation of the same, the set-beam being disclosed in section.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings the numeral 10 designates a log-beam carriage upon which a set-beam 11 is disposed upon which the improved teeth and mechanism are mounted. Intermediately of the set-beam 11 a standard 12 is positioned which supports upon its outer face a rack 13. The rack 13 is vertically disposed and has the teeth of the same extended outwardly. A sleeve 14 is engaged loosely about the rack 13 and is provided with a pair of outstanding lugs 15 between which is pivotally mounted a lever 16 upon a pin 17. The lever 16 carries two teeth 18 which extend inwardly from the same and engage the teeth of the rack 13 for the purpose of forcing the sleeve 14 upwardly or downwardly as is desired. The lever 16 is provided with an outwardly extending portion 19 which is provided with a weight 20 to normally retain the same in a downward position, the portion 19 being employed for swinging the lever 16.

Transversely formed through the lower end of the sleeve 14 is an aperture which receives a dog 21 upon the outer extremity of which is located a tooth 22 turned downwardly and adapted for engagement in the upper edges or faces of the logs located across the log-beam 10. The means employed for locking the dog 21 in adjusted position comprises a lock-lever 23 which is threaded and engaged at its inner extremity through the side of the sleeve 14 to impinge the inner end of the lock-lever 23 against the side of the dog 21. The outer end of the lock-lever 23 is turned at substantially right angles and extended inwardly beneath the lever 19 and in substantially parallel relation to the dog 21. A weight 24 is located upon the outer end of the lock-lever 23 and serves the purpose of normally holding the same in a downward or locked position. The lever 16 is provided at one side adjacent to its outer end with an eye-bolt 25 which carries a depending link 26 which loosely engages about the lock-lever 23 and within which the lock-lever rests when in a normal downward position.

The lower tooth 27 of the log-beam carriage is disposed upon the lower end of a shank 28 which is vertically and reciprocally retained by a flange 29 in a standard 30 secured against the standard 12 and is pro-

vided at its upper end with a ring 31, or the like, for engagement with the hand of the operator when it is desired to draw the shank 28 upwardly. For the purpose of binding the tooth 27 against the under face of the log a hand-lever 32 is fulcrumed at its lower end to the lower extremity of the standard 30 and is provided with a pair of teeth 33 which project outwardly and engage with the teeth of the rack 34 formed upon the inner face of the shank 28. A segment 35 is positioned upon the rear face of the standard 30 and is disposed parallel to the plane of movement of the lever 32 and is engaged by a pawl 36 pivotally mounted intermediately of the lever.

The operation of the attachments is as follows:—When the log is engaged upon the set-beam 11, the shank 28 is drawn upward through the medium of the ring 31 to engage the tooth 27 against the under side of the log. The hand-lever 32 is now brought into operation by forcing the same backward and downward whereby the teeth 32 will engage with the rack 34 and the tooth 27 is fed upward and caused to engage in the under side of the log. The pawl 36 drops into engagement with the teeth of the segment 35 whereby the lever 32 is prevented from movement upward to release the teeth 27. The upper tooth 22 is operated by raising the lever 19 whereby the teeth 18 are released from the rack 13 and the sleeve 14 is permitted to drop until the tooth 22 engages with the log. As the lever 19 is retained in an upward position the link 26 is carried therewith and the lock-lever 23 is therefore drawn into an upward position to release the dog 21. As the sleeve 14 descends the operator is therefore permitted to move the dog 21 longitudinally and to thereby accurately adjust the point of engagement of the teeth 22 with the log. When the lever 19 is drawn downwardly the lever 16 engages with the rack 13 and forces the sleeve 14 downwardly to force the tooth 22 within the upper face of the log and at the same time permits the lock-lever 23 to drop downwardly and to bind against the side of the dog 21.

When the lever 16 assumes the position which is disclosed in dotted lines in Fig. 2 of the drawings, the teeth 18 are out of engagement with the rack 13. The link 26 is in an upward position to hold the lock-lever 23 from engagement against the dog 21. When the lever 16 is drawn down into a horizontal position, the teeth 18 mesh with the rack 13 and carry the sleeve 14 downwardly thereabout. At this time the lever 23 is in a substantially horizontal position under the action of the weight 24, and its inner threaded end begins to bind against the dog 21 to force the same against the rack 13. Any further downward movement of the lever 23 increases the binding action of the dog 21 against the rack 13 to lock the sleeve 14 upon the rack. The lever 23 is so adjusted through the sleeve 14 that when the teeth 18 leave the rack 13, the binding action upon the dog 21 is sufficient to hold the sleeve 14 in a downward position without the further employment of the teeth 18. The lever 16 is now free to drop into the position disclosed in full lines in Fig. 2 of the drawings, when the weight 24 swings the lever 23 into the lower end of the link 26, as shown. In releasing the dog 21 from the log, the lever 23 may be raised upwardly through the link to free the sleeve 14, to thereby quickly release the dog 21. The handle 19 may be swung upwardly into a horizontal position when the teeth 18 engage the rack 13 and the link 26 raises the beam 23 to release the dog 21. The dog 21 is now sufficiently released to allow the initial adjusting of the sleeve 14 under the action of the lever 16, and upon a slight upward movement of the lever 16 is wholly released by the locking lever 23.

Having thus described the invention what is claimed as new is:—

1. The combination with a log-set beam, of a standard disposed on said beam, a rack upwardly extended from said beam, a sleeve loosely disposed about said rack, a lever carried by said sleeve for engagement with said rack, a dog loosely engaged through said sleeve and extended inwardly therefrom, a lock-lever mounted in threaded engagement through said sleeve to impinge said dog, a tooth carried by said dog for engagement with a log, a weight positioned upon the outer end of said lock-lever to normally retain the same in a locked position and a link disposed between said first lever and said lock-lever for simultaneously actuating the same.

2. In a saw mill dog, the combination with a log supporting mechanism, of a vertical rack carried by the mechanism, a sleeve slidably disposed about the rack, a toothed lever pivoted in the sleeve to engage with the rack for moving the sleeve, a dog loosely engaged through the sleeve adjacent the rack, an operating lever carried by the sleeve to engage and to bind the dog in the sleeve and against said rack, and a link disposed between said toothed lever and said operating lever.

3. A saw mill dog including a vertical rack, a sleeve loosely mounted on said rack, a toothed lever pivoted in the sleeve to mesh with the rack, a dog carried in the sleeve adjacent the rack, a binding lever threaded through the sleeve to engage the rack, and connecting means disposed between the first lever and said binding lever to release the dog upon the upward movement of said first lever.

4. A saw mill dog including a vertical

rack, a sleeve loosely carried upon the rack, a toothed lever pivoted in the sleeve to mesh with said rack and to be released therefrom upon its extreme upward and downward movement, a dog loosely engaged through the lever adjacent said rack, a binding lever carried by the sleeve to engage with the dog to bind the same against the rack, and a loose connection between said first lever and said binding lever to operate the binding lever upon the upward movement of the first lever and to admit of the free movement of the binding lever upon the downward movement of said first lever.

In testimony whereof I affix my signature in presence of two witnesses.

CHESTER L. ROBBINS. [L. S.]

Witnesses:

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