Sept. 23, 1930. C. B. THORNE 1,776,643

LOG BARKER

Filed Oct. 22, 1928 3 Sheets-Sheet 1

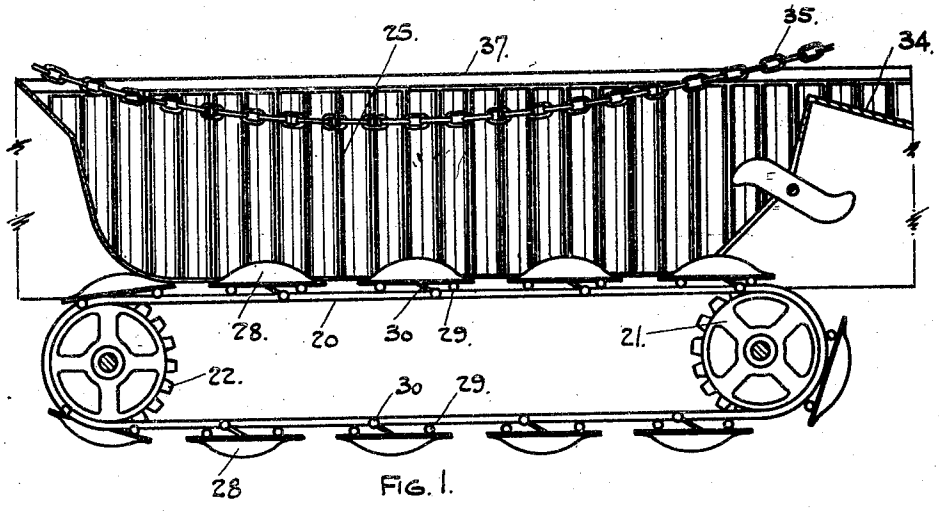


Fig. 1.

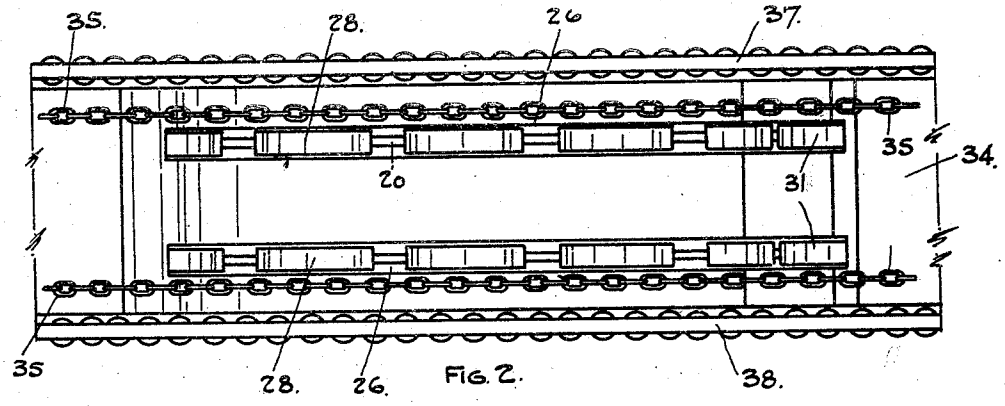


Fig. 2.

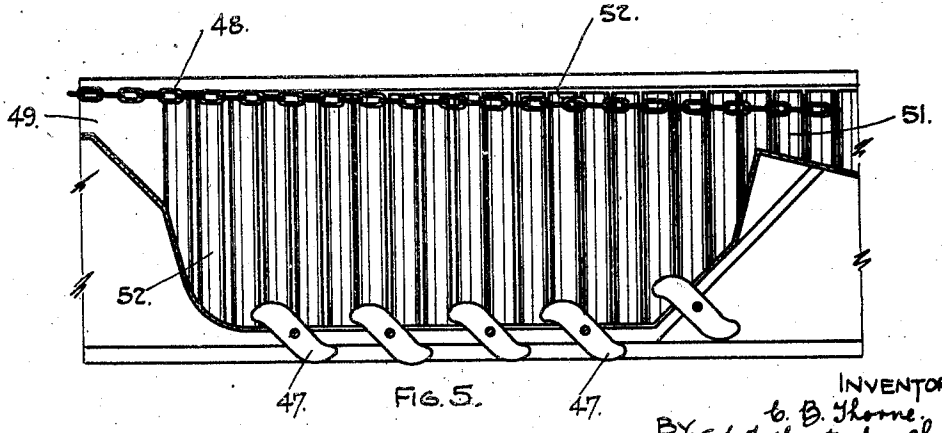


Fig. 5.

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Sept. 23, 1930. C. B. THORNE 1,776,643

LOG BARKER

Filed Oct. 22, 1928 3 Sheets-Sheet 2

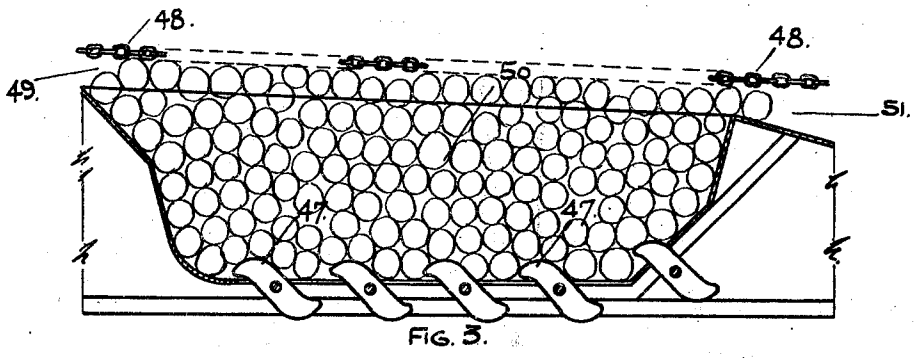


FIG. 3.

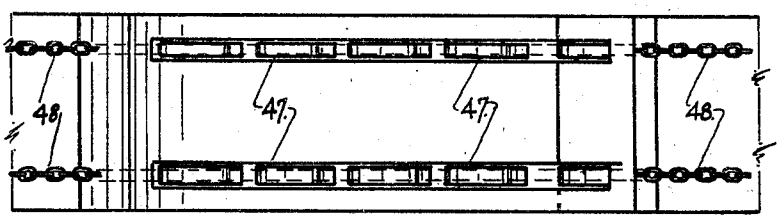


FIG. 4.

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LOG BARKER

Filed Oct. 22, 1928 3 Sheets-Sheet 3

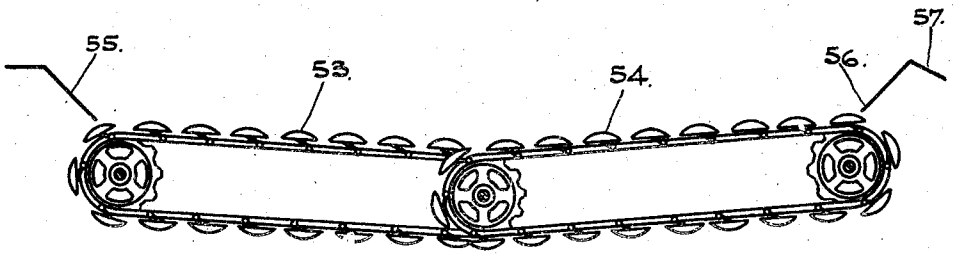


FIG. 6.

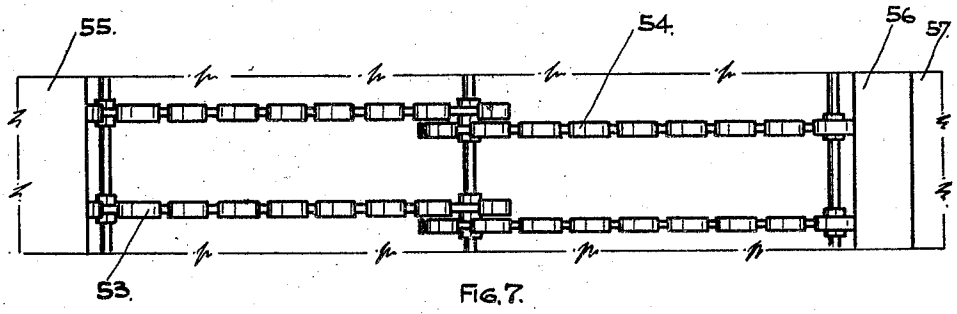


FIG. 7.

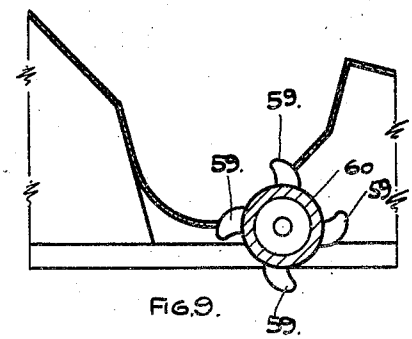


FIG. 9.

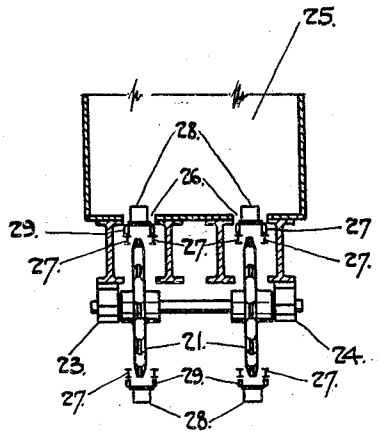


FIG. 8.

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Patented Sept. 23, 1930 1,776,643

UNITED STATES PATENT OFFICE

CARL BUSCH THORNE, OF HAWKESBURY, ONTARIO, CANADA

LOG BARKER

Application filed October 22, 1928. Serial No. 314,247.

The invention relates to a log barber, as described in the present specification and illustrated in the accompanying drawings that form part of the same.

The invention consists essentially of the novel features of construction pointed out broadly and specifically in the claims for novelty following a description containing an explanation in detail of an acceptable form of the invention.

The objects of the invention are to facilitate the removal of the bark, so that the tree in the form of the log is ready to be used for the manufacture of timber, lumber, pulpwood and such other purposes as fall to the properties of wood; to maintain the rubbing of the wood in the removal of the bark in a systematically regular manner, and thus insure the stripping of every log from end to end; to discard the use of drums and other cumbersome devices known for many years past to those familiar with the art; to economize in the consumption of power in the maintenance of this barking machine; and generally to provide means for barking logs that may be produced at a reasonably low cost, and that will insure a steady and large output of barked logs.

In the drawings, Figure 1 is a longitudinal sectional view, showing a travelling chain formed of a cam agitator adapted to operate in a confined area.

Figure 2 is a plan view of the invention as illustrated in Figure 1.

Figure 3 shows a plurality of stationary cam agitators particularly placed in a pocket for the logs, showing a chain retaining member.

Figure 4 is a plan view of the invention as illustrated in Figure 3.

Figure 5 is a longitudinal sectional view showing a modification of the pocket structure as illustrated in the aforesaid figures and the feed hopper adaptable to this form of the invention.

Figure 6 is a modification of the invention as illustrated in Figures 1 and 2, showing the operation of the invention outside of a regular pocket.

Figure 7 is a plan view of the form of the invention illustrated in Figure 6.

Figure 8 is a cross sectional view of the cam chains illustrated in Figures 1, 2, 6 and and 7.

Figure 9 is a detail showing a pocket and a form of cam adaptable to one or other of the forms of the invention illustrated.

Like numerals of reference indicate corresponding parts in the various figures.

Referring to the drawings and particularly Figures 1 and 2, the endless chains, indicated by the numeral 20 are mounted on sprockets 21 and 22, which are suitably driven, and these sprockets are journalled in the bearings 23 and 24 respectively.

The chains travel in a path directly under the bottom of the pocket 25, in which the longitudinal slots 26 are made.

The tracks 27 extend along and around the sprockets on either side of the chains 20 and the cams 28 are supported on said trackways by the rollers 29 and are connected to said chains by the pivotal couplings 30, therefore as these cams are carried by the driven chains, they pass along the slots 26 and project into the pocket 25, so that the logs fed into said pocket are kept in a continuous wave-like motion, so as they rise and fall they turn and rub one another and strip the bark.

Another form of cam 31 is mounted in an end wall of the hopper and suitably driven This cam engages the logs with a view of expelling them from the pocket, that is to say, it keeps raising the finished logs up at that end, or if the logs are not finished it keeps sending them to the discharge so that they may enter a following pocket.

The inclined way or front wall of the pocket leads to the bottom and the chains, and the upwardly inclined rear wall of the hop-

per leads to the discharge platform 34, and above these the upper chains 35 are secured, and these chains rest on a pile of logs and materially assist in disturbing the logs for their rubbing motions, as there is sufficient room left at each end under the ends of the chains for the entrance and the exit from the pocket.

The sides of the pocket are preferably formed of rollers vertically and pivotally mounted in the beams 37 and 38, so that there can be no binding of any logs in so far as the sides are concerned, but this is not usually considered a necessity, though it materially aids in the operation under some conditions.

In Figures 3 and 4 a number of pivoted and otherwise stationary cam agitators 47 are shown in successive arrangement, particularly to illustrate their use with the top chains 48, which restrict the entrance 49 to the pocket 50, and the exit 51 in said pocket, as well as assist the cams 47 in their work in disturbing the logs and rolling them about into rubbing engagement with one another for the purpose of stripping the bark.

In Figure 5 the same pocket illustrated in Figures 3 and 4 is shown with the roller sides 52, these roller sides comprising rollers journalled in top and bottom beams as mentioned in the foregoing, but in this particular case it is shown in connection with the chains restricting the sides of the entrance and of the exit, and while there is not a great deal of difference in the use of the rollers in this form of the invention and what has been mentioned before, the particular form of S-shaped cam in successive arrangement in a pocket with the guarding chains on the roller sides is extremely efficient.

In Figures 6 and 7 the same form of chains and cams are shown, but in a different arrangement, whereby different sets of chains are in one section and different sets of chains are in another section, and these incline towards one another as indicated by the numerals 53 and 54, the entrance at one end, which is in the form of an inclined way 55, and the exit at the other end, which is in the form of an upwardly inclined way 56, leading to the runway 57.

This all follows on in the same way as fully described in the details, but the usual form of pocket in this invention has been discarded and the logs are just simply dumped on to the platform with agitators projecting therefrom or on to the agitators themselves forming the bottom. The consequence of this is that the bark is stripped off and carried away, simply from the excess of logs in the area of agitation.

In Figure 9 the only point of novelty is the rotating member with several cams projecting therefrom, all these cams having the receding faces 59 and extending at intervals from the rotor 60, which is suitably driven.

This cam member is shown in the end wall of a pocket and may be used in any form of this invention or in any other invention in the same class.

In the operation of this invention, the logs in any of the forms are fed either directly on to the agitators or on to a bottom through which the agitators project. These agitators in the one instance are the cams drawn by chains and in another case they are the actual sprockets forcing up the chains, while in another case they are a successive arrangement of cams, but this later idea is not altogether new, except in connection with features already explained, such as the guarding top chains. These top chains form a very important feature in several forms of the invention as well as the side rollers, which may be applied in any form of the invention whatsoever.

The side rollers materially facilitate the passage of the logs through the pocket without increasing their pace to any extent, but they are prevented from being thrown sideways and jamming the other logs by these rollers.

There are many other features of importance which might be mentioned, but it is obvious that the disturbance of the pile of logs where they are contained in a pocket or on the platform or in any receptacle is the outstanding feature, and this chain mechanism or chain like formation is applied throughout to the disturbing elements.

What I claim is:—

1. In a log barker, means for supporting logs in a pile and means for creating a running wave in contact with the pile and thereby cause a succession of upheavals.

2. In a log barker, a succession of cam-shaped members adapted to reach into a pile of logs and tumble them around and at the same time propel the logs forwardly through the association of said members with rotary members suitably driven.

3. In a log barker, a log pocket, chain conveyers at the bottom of said pocket, a chain driving mechanism and tumbling members secured to said driving mechanism and adapted to bring the logs constantly into rubbing contact during the forward movement.

4. In a log barker, conveyer chains and arcuate cams carried thereby supporting the logs and adapted to tumble them backwardly and forwardly during their continuously forward movement.

5. A log barker, comprising a log support, a chain extending over the pile of logs and means for lifting and forwarding the logs and bringing them into active contact with the overhead chain.

6. A log barker, comprising chain conveyers forming a log support and a plurality of disturbing cams secured thereto, said chains being flexibly connected to said cams and in-

clined inwardly from opposite directions and meeting centrally and tumbling the logs into rubbing contact.

7. A log barker, comprising a log pocket, having log supports and disturbing elements along the bottom and roller walls and a rotating cam at the discharge end lifting the logs on their way to a discharge chute.

Signed at Montreal, Canada, this 20th day of September 1928.

CARL BUSCH THORNE.