

Sept. 8, 1925.

1,552,498

F. C. NOYES

LOG WOOD PEELER

Filed Sept. 15, 1924

3 Sheets-Sheet 1

Fig. 8. Fig. 9. Fig. 10.

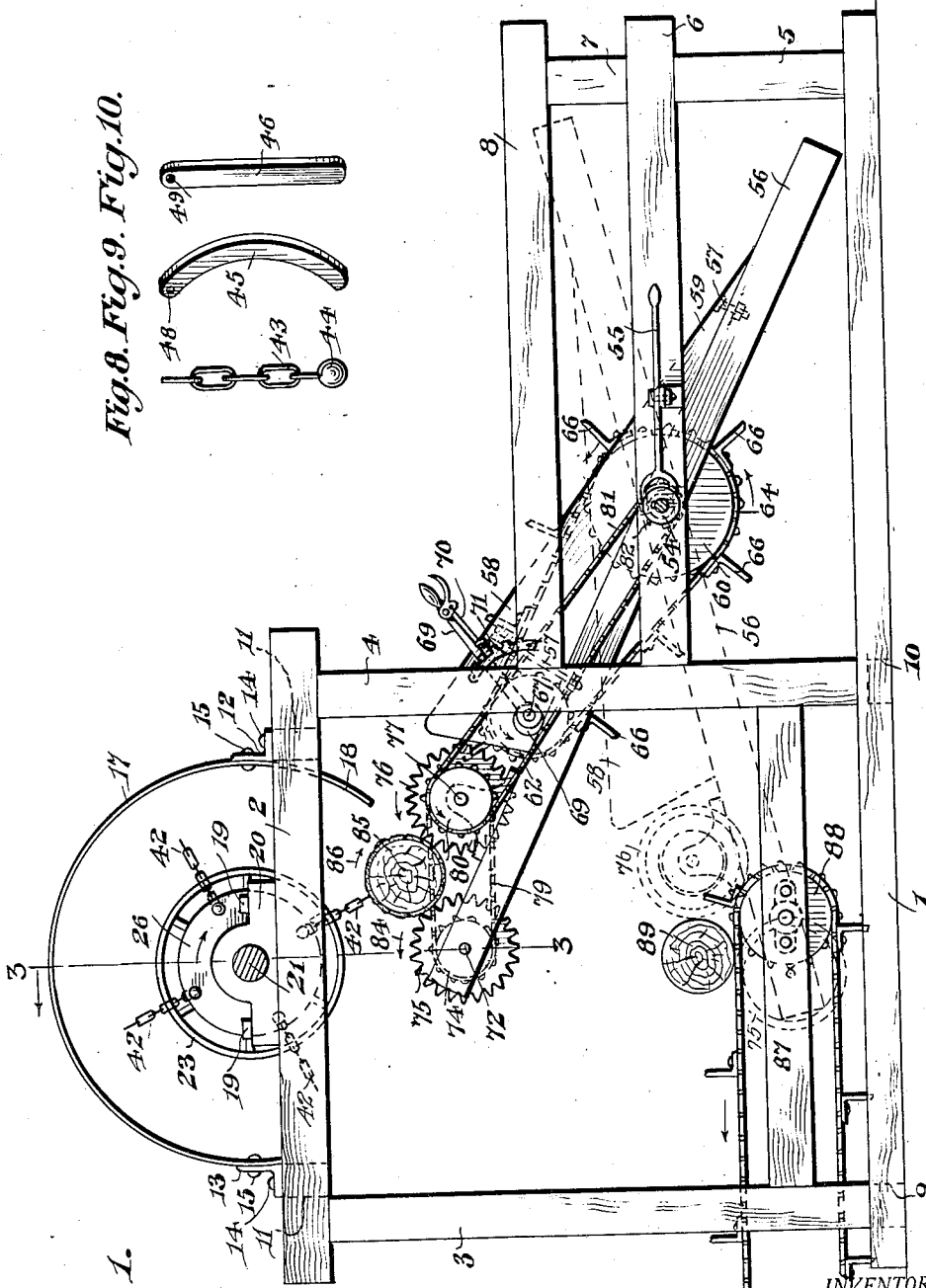
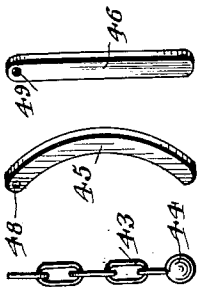


Fig. 1.

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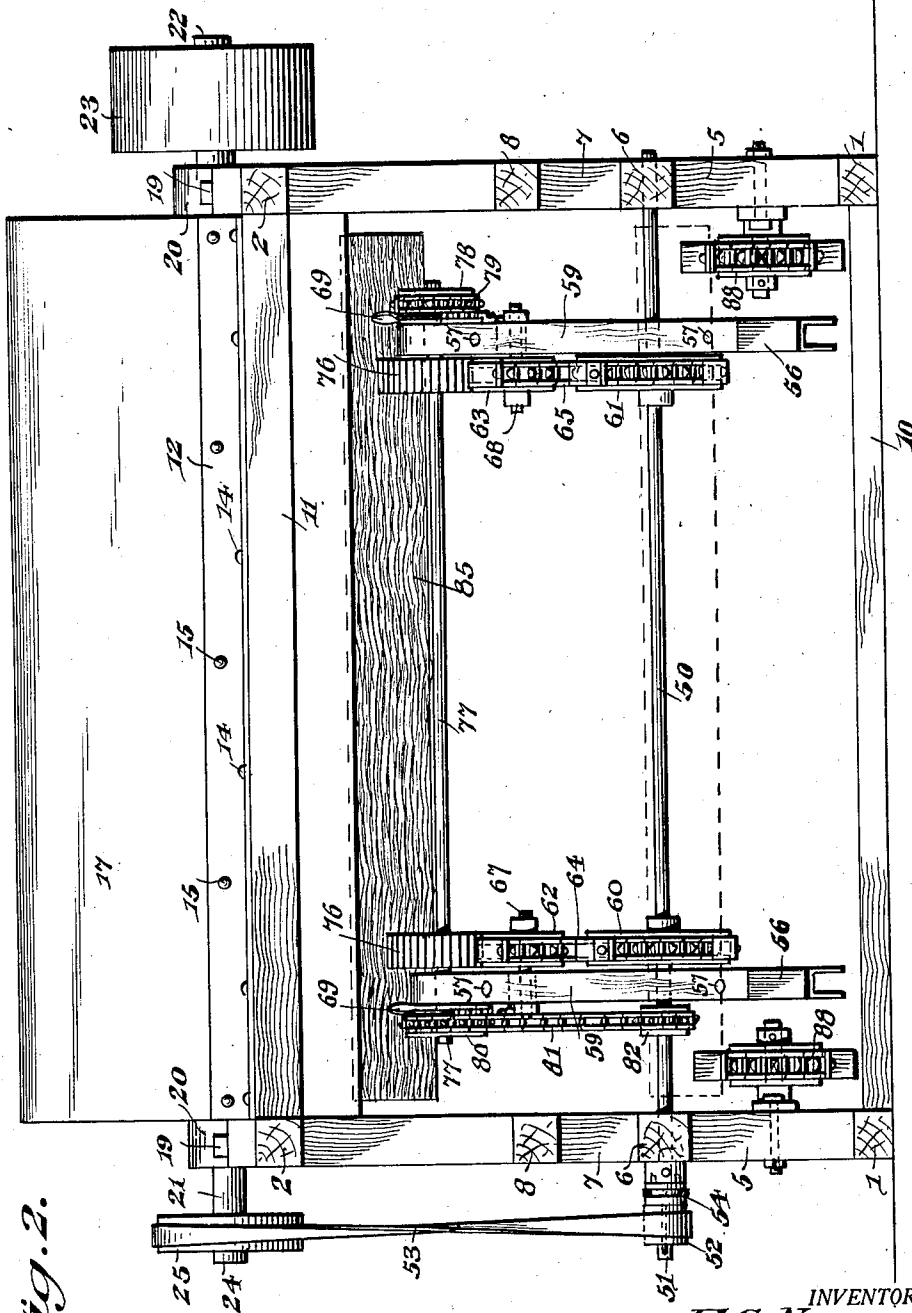
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3 Sheets-Sheet 2



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3 Sheets-Sheet 3

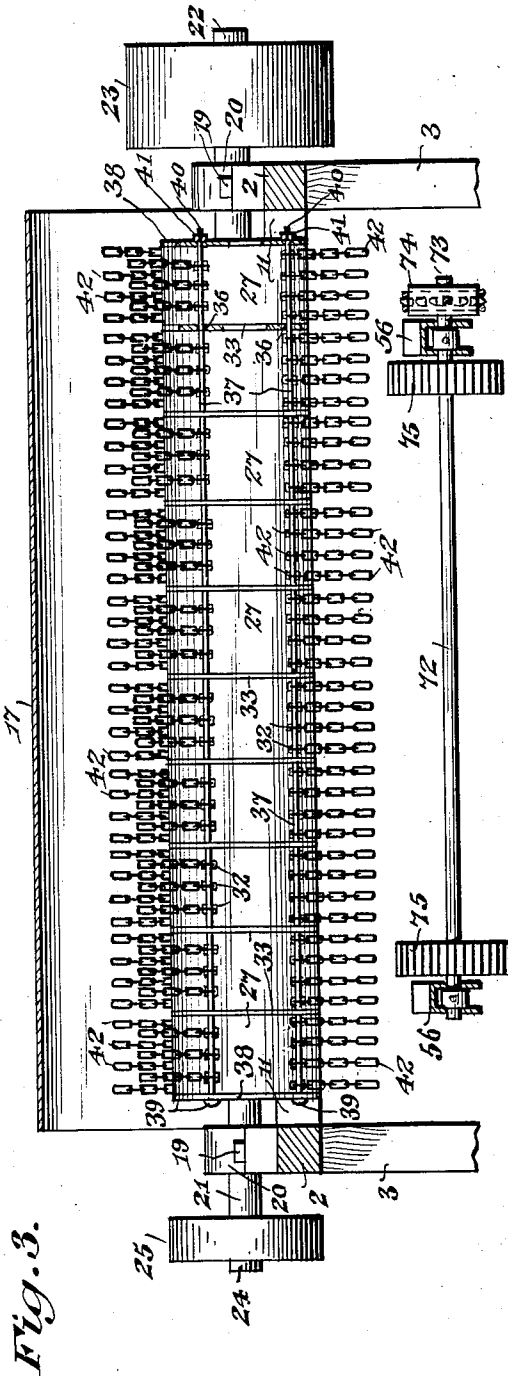


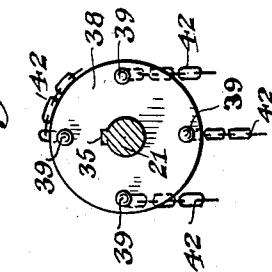
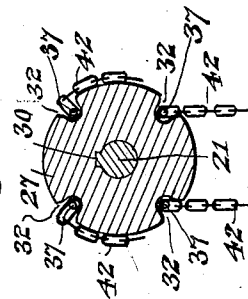
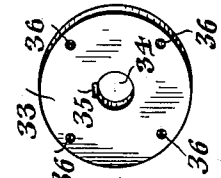
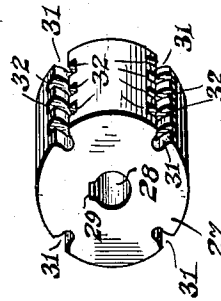
Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.



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UNITED STATES PATENT OFFICE.

FRANK C. NOYES, OF SAVANNAH, GEORGIA.

LOG-WOOD PEELER.

Application filed September 15, 1924. Serial No. 737,811.

To all whom it may concern:

Be it known that I, FRANK C. NOYES, a citizen of the United States, residing at Savannah, in the county of Chatham and State of Georgia, have invented certain new and useful Improvements in Log-Wood Peelers, of which the following is a specification.

This invention relates to a log wood peeler, and is designed primarily for removing the bark from log wood used by pulp wood mills, veneer mills and box and crate factories, and has for its object to provide, in a manner as hereinafter set forth, a log wood peeler, having means for feeding the logs to a position to be acted upon and further with means for expeditiously removing the bark from the log after the latter has been shifted to the aforesaid position.

Further objects of the invention are to provide a log wood peeler, in a manner as hereinafter set forth, and which is simple in its construction and arrangement, strong, durable, compact, thoroughly efficient and convenient in its use, readily assembled, and comparatively inexpensive to set up.

With the foregoing and other objects in view, the invention consists of the novel construction, combination and arrangement of parts, as hereinafter more specifically described and illustrated in the accompanying drawings, wherein is shown an embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which come within the scope of the claims hereunto appended.

In the drawings wherein reference characters denote corresponding parts throughout the several views:—

Figure 1 is a side elevation of a log wood peeler, in accordance with this invention, and illustrating in full lines the position of the log during the bark peeling operation and further showing in dotted lines the position of certain of the elements of the machine when the peeled log is discharged.

Figure 2 is a front elevation of the machine.

Figure 3 is a section on line 3—3, Figure 1.

Figure 4 is an end view of the peeler.

Figure 5 is a cross sectional view of the peeler.

Figure 6 is a perspective view of a spacing disk forming an element of the peeler.

Figure 7 is a perspective view of one of the sections of the peeler.

Figures 8, 9 and 10 are perspective views of different forms of beater members.

Referring to the drawings in detail, a log wood peeler machine, in accordance with this invention, includes a supporting frame consisting of a pair of side members, each comprising a bottom bar 1; a top bar 2 of less length than the bar 1, and which is arranged over the rear portion of the latter. The bar 2 is supported from the bar 1 by a pair of spaced vertical bars 3, 4, which are secured to the bars 1, 2, in any suitable manner. Mounted on the front end of the bar 1 is a short vertically disposed bar 5, which supports a longitudinally extending bar 6 abutting against and secured to the vertical bar 4. Mounted on the front end of the bar 6 is a short vertical bar 7, of less height than the bar 5, and which supports a longitudinal bar 8; arranged in alignment with the bar 6 and abutting against and secured to the bar 4. The bars 1 of the side members of the frame are connected together by horizontally disposed bracing and spacing bars 9, 10. The top bars 2 of the side members of the frame are connected together by the horizontally disposed bracing and spacing bars 11.

Secured to the top bars 2 of the side members of the frame, as well as mounted upon said top bars 2, is a pair of spaced oppositely disposed angle irons 12, 13. The angle irons 12, 13 are secured to the top bars 2 by the hold-fast devices 14. Arranged between the angle irons 12, 13, as well as being secured thereto by the hold-fast devices 15, is a semi-cylindrical shield 17, which at the front thereof depends below the bars 2, as indicated at 18.

Secured to the top of each of the bars 2, centrally thereof, by the hold-fast devices 19, is a bearing 20 and journaled in said bearings 20, as well as projecting laterally from each of said bearings is a peeler shaft 21. One of the projecting ends of said shaft 21 is indicated at 22 and carries a drive pulley 23, and the other projecting end of the shaft 21 is indicated at 24 and carries a transmission pulley 25. The pulley 23 is driven by any suitable means, at any desired rate, and provides means for operating the shaft 22 which carries the peeler,

so that the latter will be revolved on the operation of the shaft 22. The peeler is driven in the direction, as indicated by the arrow 26, Figure 1.

5 The shaft 22 forms an element of the peeler and the latter further includes a series of cylindrical beater member carrying sections 27 formed with an axial opening 28, having the wall thereof provided with a pocket 29 in which extends a rib 30 formed lengthwise of the shaft 21, and by this arrangement the section 27 is coupled with the shaft 21 so that it will bodily move therewith.

15 Each of said sections 27 is formed with a plurality of spaced lengthwise extending peripheral grooves 31, and each of the latter is slightly flared. The opposed walls of each of the grooves 31 are notched, as at 32, and with the notches of one wall aligning with the notches of the other wall. The notches 32 in the walls of one groove are alternately disposed with respect to the notches in the walls of an adjacent groove. As shown by way of example, one of the grooves is provided with four pair of notches and the walls of an adjacent groove with three pair of notches. By this arrangement one groove provides for the reception of four beater members and the adjacent groove three beater members, and owing to the disposition of the pairs of notches the beater members of one groove are alternately disposed with respect to the beater members of an adjacent groove. The beater members will be presently referred to.

40 The peeler further includes a series of combined spacing and supporting disks, which are indicated at 33, and a disk 33 is arranged between a pair of sections 27. Each disk 33 has an axial opening 34 with the wall thereof provided with a pocket 35 for the reception of the rib 30. Each disk 33 is furthermore provided with a series of spaced apertures 36, which align with the grooves 31. The disks 33 are adapted to support a series of coupling rods 37 which extend through the apertures 36 and also through the grooves 31 and provide means for connecting the beater members to the sections 27. The rods 37 are of a length to project from the outer section 27 at each end of said series of sections 27.

55 The peeler further includes a pair of clamping disks 38, which are constructed similar to the disks 33, and the said disks 38 are arranged against the outer side of the outer sections 27 of said series of sections. The rods 37 at one end are provided with heads 39 and which abut against the outer face of one of the disks 38. The other ends of the rods 37 are threaded, as at 40, and project from the other clamping disk 38. Mounted on the threaded ends of the rods 40 are securing nuts 41, which in connection with the

rods 37, heads 39 and disks 38 provide means for clamping the disks 33 and sections 27 together. See Figure 3.

The peeler further includes a plurality of sets of beater members carried by each of the sections 27. As each section 27 is provided with four grooves, it will carry four sets of beater members. If the number of grooves is decreased, the number of sets of beater members will also be decreased, but if the number of grooves is increased, there will be a corresponding increase in the number of sets of beater members.

The beater members of each set can consist of a chain 42, as shown in Figures 3, 4 and 5, or a chain 43 provided at its outer end with a solid globular member 44, as shown in Figure 8, or a segmental arm 45 as shown in Figure 9, or a straight arm 46, as shown in Figure 10. The arm 45 at one end is formed with an opening 48, and the arm 46 at one end is provided with an opening 49. The openings 48 and 49 provide means for the passage of the rods 37.

When the beater members are coupled with the sections 27, the notches 32 form clearances for the swinging action of said members during the revolving of the peeler.

Journalled in the bars 6 of the side members of the supporting frame is a transmission shaft 50 and which is of a length as to project from one of said bars 6. The projecting end of the shaft 50 is indicated at 51 and which carries a shiftable pulley 52, driven from the pulley 25 by a transmission belt 53. Mounted on the shaft 50 is a clutch mechanism 54 for the purpose of clutching the pulley 52 to the shaft 50 to provide for the operation of the latter from the shaft 21. The transmission belt 53 is twisted so that the shaft 50 will operate in the same direction as the shaft 21. The operating lever for the clutching mechanism 54 is indicated at 55.

The shaft 50 pivots in the bars 6 and carries a pair of spaced elongated supports 56, preferably in the form of channel irons. The supports 56 are eccentrically connected to the shaft 50 so that they will be counterbalanced. When the machine is operated to peel or strip off the bark from the log wood, the rear ends of the supports are elevated, see Figure 1, and are maintained in such position by any suitable means or by the operator. In cross section each of the supports is of inverted U-shape and secured upon each of said supports 56, by the hold-fast devices 57, is a pair of triangular-shaped members 58, which form a trackway 59 for the logs, when they are fed by a means to be hereinafter referred to, upwardly to be acted upon by the peeler. The members 58 are positioned on the top of the supports 56, intermediate the ends of these latter, and in a manner so that the wider end of each

member 58 will be arranged a substantial distance from the upper end of a support 56. The supports 56 are of a length and are so connected to the shaft 50; that the upper ends of said supports 56 will extend beyond the axis of the peeler. See Figure 1.

Arranged between the supports 56 is a log feeding or conveyor mechanism which acts in conjunction with the trackway 59 to convey the logs to be acted upon by the peeler. The conveyor mechanism consists of a pair of sprocket wheels 60, 61, a pair of sprocket wheels 62, 63 of less diameter than the sprocket wheels 60, 61, a pair of conveyor chains 64, 65, each provided with a series of spaced carriers 66, a pair of shafts 67, 68, and an adjustable bearing 69 for each of said shafts. The sprocket wheels 60, 61 are fixed to the shaft 50 and are operated thereby. The chain 64 travels over the sprocket wheels 60, 62, and the chain 65 travels over the sprocket wheels 61, 63. The shafts 67, 68 carry the sprocket wheels 62, 63, and the said shafts project inwardly from the members 58. The adjustable bearings 69 for the shafts 67, 68 are carried by the members 58, and each of said bearings is adjusted by a hand lever 69 carrying a spring controlled dog 70, engageable in a rack 71 for detachably securing the lever 69 in its adjusted position. The levers 69 provide means for independently elevating or lowering the shafts 67 and 68 so that one side or the other of the conveyor mechanism can be raised or lowered by the operator to take care of logs that are larger at one end than at the other and which is generally the case in connection with log wood. The adjustment of the conveyor mechanism provides means whereby the carriers 66 will project above the members 68 to abut against the log and shift it up the trackway 59 towards the peeler.

Carried by the supports 56, rearwardly of the members 58, is a log positioning and revolving mechanism and which consists of a shaft 72 journaled in the upper ends of the supports 56 and of a length to project from one of said supports, as at 73. The projecting end 73 of the shaft 72 carries a sprocket pinion 74. Fixed to the shaft 72 and arranged in proximity to the inner side of each of the supports 56 is a toothed wheel 75. Mounted on each support 56, in proximity to the wide end of the member 58, is a bearing 76. Journaled in the bearings 76 is a shaft 77 and which is of a length as to project from each of said bearings. One of the projecting ends of the shaft 77 carries a sprocket pinion 78, which is connected to the pinion 74 by a transmission belt 79. The other projecting end of the shaft 77 carries a sprocket pinion 80, which is connected by a transmission belt 81 to the sprocket pinion 82 carried by the shaft 50. By this arrangement, the shaft 77 is operated simultaneously

with the shaft 50 and owing to the transmission belt 79 the shaft 72 is operated synchronously with the shaft 77. Fixed to the shaft 77 and arranged in proximity to the inner side of each bearing 76 is a toothed wheel 83. The wheels 75 and 83 are revolved in the direction of the arrows 84 and when the log 85 is being acted upon by the peeler, it is revolved by the wheels 75 and 83 in the direction of the arrow 86.

The vertical bars 3, 4, of each side member of the supporting frame are connected together at their lower portions by a longitudinal bar 87, and said bars 87 support one end of a conveyor mechanism 88, which is employed for carrying off the peeled or stripped log 89.

After the log has been shifted off the trackway 59, the log is acted upon by the toothed wheels 83 and shifted to the position shown in Figure 1, between the wheels 75 and 83 and while in such position it will be revolved by the said wheels and at the same time will be acted upon by the beater members of the revolving peeler, and the beating or pounding of said members on the revolving log will peel or strip the bark therefrom, and after the log has been stripped, the rear ends of the supports 56 are lowered, see dotted line position, Figure 1 and the peeled or stripped log 89 will be discharged on the conveyor mechanism 88. The raising and lowering of the supports 56 can be had by any suitable means or manually if desired, preferably a suitable lever mechanism, not shown, will be employed for elevating the supports 56, but when said supports are released the rear ends thereof will automatically lower to discharge the peeled or stripped log. The lowering movement of the rear ends of the supports 56 can be governed in any suitable manner. The machine can be built of any size, but as is well-known, the wood generally used by the pulp mills is five feet in length and from five to sixteen inches in diameter. The size of the machine preferably will be to accommodate the operation thereof on the size of logs referred to.

The provision for the adjusting of the conveyor mechanism will prevent the logs from sliding off the trackway when being conveyed to be acted upon by the peeler, and owing to the provision of the clutching mechanism 54, the operation of the conveyor mechanism as well as the log revolving mechanism, is not had until after the supports 56 have been shifted to the necessary inclined position to enable the log to be conveyed to be acted on by the peeler.

It is thought that the many advantages of a log wood peeler in accordance with this invention and for the purpose set forth, can be readily understood, and although the preferred embodiment of the invention is as illustrated and described, yet it is to be un-

derstood that changes in the details of construction can be had which will fall within the scope of the invention as claimed.

What I claim is:—

1. A log wood peeler machine comprising a pivotal supporting means, a log revolving mechanism carried thereby, a conveyor carried by said means for feeding the logs to said mechanism, and a peeler operating on the log revolved by said mechanism. 70
2. A log wood peeler machine comprising a pivotal supporting means, a log revolving mechanism carried thereby, a conveyor carried by said means for feeding the logs to said mechanism, a peeler operating on the log revolved by said mechanism, and means for driving said mechanism and conveyor from said peeler. 75
3. A log wood peeler machine comprising a pivotal supporting means, a log revolving mechanism carried thereby, a conveyor carried by said means for feeding the logs to said mechanism, a peeler operating on the log revolved by said mechanism, and means for adjusting said conveyor. 80
4. A log wood peeler machine comprising a pivotal supporting means, a log revolving mechanism carried thereby, a conveyor carried by said means for feeding the logs to said mechanism, a peeler operating on the log revolved by said mechanism, means for driving said mechanism and conveyor from said peeler, and means for adjusting said conveyor. 85
5. A log wood peeler machine comprising a pivotal supporting means, a log revolving mechanism carried thereby, a conveyor carried by said means for feeding the logs to said mechanism, a peeler operating on the log revolved by said mechanism, and a conveyor for receiving the peeled log from said mechanism. 90
6. A log wood peeler machine comprising a pivotal supporting means, a log revolving mechanism carried thereby, a conveyor carried by said means for feeding the logs to said mechanism, a peeler operating on the log revolved by said mechanism, means for driving said mechanism and conveyor from said peeler, and a conveyor for receiving the peeled log from said mechanism. 95
7. A log wood peeler machine comprising a pivotal supporting means, a log revolving mechanism carried thereby, a conveyor carried by said means for feeding the logs to said mechanism, a peeler operating on the log revolved by said mechanism, means for adjusting said conveyor, and a conveyor for receiving the peeled log from said mechanism. 100
8. A log wood peeler machine comprising a pivotal supporting means, a log revolving mechanism carried thereby, a conveyor carried by said means for feeding the logs to said mechanism, a peeler operating on the log revolved by said mechanism, means for driving said mechanism and conveyor from said peeler, means for adjusting said conveyor to provide for the conveying of a log of varying diameter. 105
9. A log wood peeler machine comprising a pivotal supporting means for positioning a log to be peeled, a log revolving mechanism at one end of said support, a conveyor carried by said means for feeding the logs to said mechanism, a revolvable peeler provided with sets of beater members acting on the log revolved by said mechanism for peeling the same, and a trackway carried by said means and coacting with said conveyor. 110
10. A log wood peeler machine comprising a pivotal supporting means for positioning a log to be peeled, a log revolving mechanism at one end of said support, a conveyor carried by said means for feeding the logs to said mechanism, a revolvable peeler provided with sets of beater members acting on the log revolved by said mechanism for peeling the same, and means for adjusting said conveyor to provide for the conveying of a log of varying diameter. 115
11. A log wood peeler machine comprising a pivotal supporting means for positioning a log to be peeled, a log revolving mechanism at one end of said support, a conveyor carried by said means for feeding the logs to said mechanism, a revolvable peeler provided with sets of beater members acting on the log revolved by said mechanism for peeling the same, a trackway carried by said means and coacting with said conveyor, and means for adjusting said conveyor to provide for the conveying of a log of varying diameter. 120
12. A log wood peeler machine comprising a pivotal supporting means for positioning a log to be peeled, a log revolving mechanism at one end of said support, a conveyor carried by said means for feeding the logs to said mechanism, a revolvable peeler provided with sets of beater members acting on the log revolved by said mechanism for peeling the same, and means for driving said mechanism and conveyor from said peeler. 125
13. A log wood peeler machine comprising a pivotal supporting means for positioning a log to be peeled, a log revolving mechanism at one end of said support, a conveyor carried by said means for feeding the logs to said mechanism, a revolvable peeler provided with sets of beater members acting on the log revolved by said mechanism for peeling the same, and means for adjusting said conveyor to provide for the conveying of a log of varying diameter. 130

vided with sets of beater members acting on the log revolved by said mechanism for peeling the same, a trackway carried by said means and coacting with said conveyor, and means for driving said mechanism and conveyor from said peeler.

15. A log wood peeler machine comprising a pivotal supporting means for positioning a log to be peeled, a log revolving mechanism at one end of said support, a conveyor carried by said means for feeding the logs to said mechanism, a revolvable peeler provided with sets of beater members acting on the log revolved by said mechanism for peeling the same, means for adjusting said conveyor to provide for the conveying of a log of varying diameter, and means for driving said mechanism and conveyor from said peeler.

16. A log wood peeler machine comprising a pivotal supporting means for positioning a log to be peeled, a log revolving mechanism at one end of said support, a conveyor carried by said means for feeding the logs to said mechanism, a revolvable peeler provided with sets of beater members acting on the log revolved by said mechanism for peeling the same, a trackway carried by said means and coacting with said conveyor, means for adjusting said conveyor to provide for the conveying of a log of varying diameter, and means for driving said mechanism and conveyor from said peeler.

17. A log wood peeler machine comprising a pivotal supporting means for positioning a log to be peeled, a log revolving mechanism at one end of said support, a conveyor carried by said means for feeding the logs to said mechanism, a revolvable peeler provided with sets of beater members acting on the log revolved by said mechanism for peeling the same, means for driving said mechanism and conveyor from said peeler, and means for receiving and conveying off the peeled log from said mechanism.

18. A log wood peeler machine comprising

a pivotal supporting means for positioning a log to be peeled, a log revolving mechanism at one end of said support, a conveyor carried by said means for feeding the logs to said mechanism, a revolvable peeler provided with sets of beater members acting on the log revolved by said mechanism for peeling the same, a trackway carried by said means and coacting with said conveyor, means for driving said mechanism and conveyor from said peeler, and means for receiving and conveying off the peeled log from said mechanism.

19. A log wood peeler machine comprising a pivotal supporting means for positioning a log to be peeled, a log revolving mechanism at one end of said support, a conveyor carried by said means for feeding the logs to said mechanism, a revolvable peeler provided with sets of beater members acting on the log revolved by said mechanism for peeling the same, means for adjusting said conveyor to provide for the conveying of a log of varying diameter, means for driving said mechanism and conveyor from said peeler, and means for receiving and conveying off the peeled log from said mechanism.

20. A log wood peeler machine comprising a pivotal supporting means for positioning a log to be peeled, a log revolving mechanism at one end of said support, a conveyor carried by said means for feeding the logs to said mechanism, a revolvable peeler provided with sets of heater members acting on the log revolved by said mechanism for peeling the same, a trackway carried by said means and coacting with said conveyor, means for adjusting said conveyor to provide for the conveying of a log of varying diameter, means for driving said mechanism and conveyor from said peeler, and means for receiving and conveying off the peeled log from said mechanism.

In testimony whereof, I affix my signature hereto.

FRANK C. NOYES.