

A. ROBERTS & A. LIBERT.  
 ROTARY PULP WOOD BARKER AND PEELING MACHINE.  
 APPLICATION FILED APR. 28, 1908.

934,464.

Patented Sept. 21, 1909.

3 SHEETS—SHEET 1.

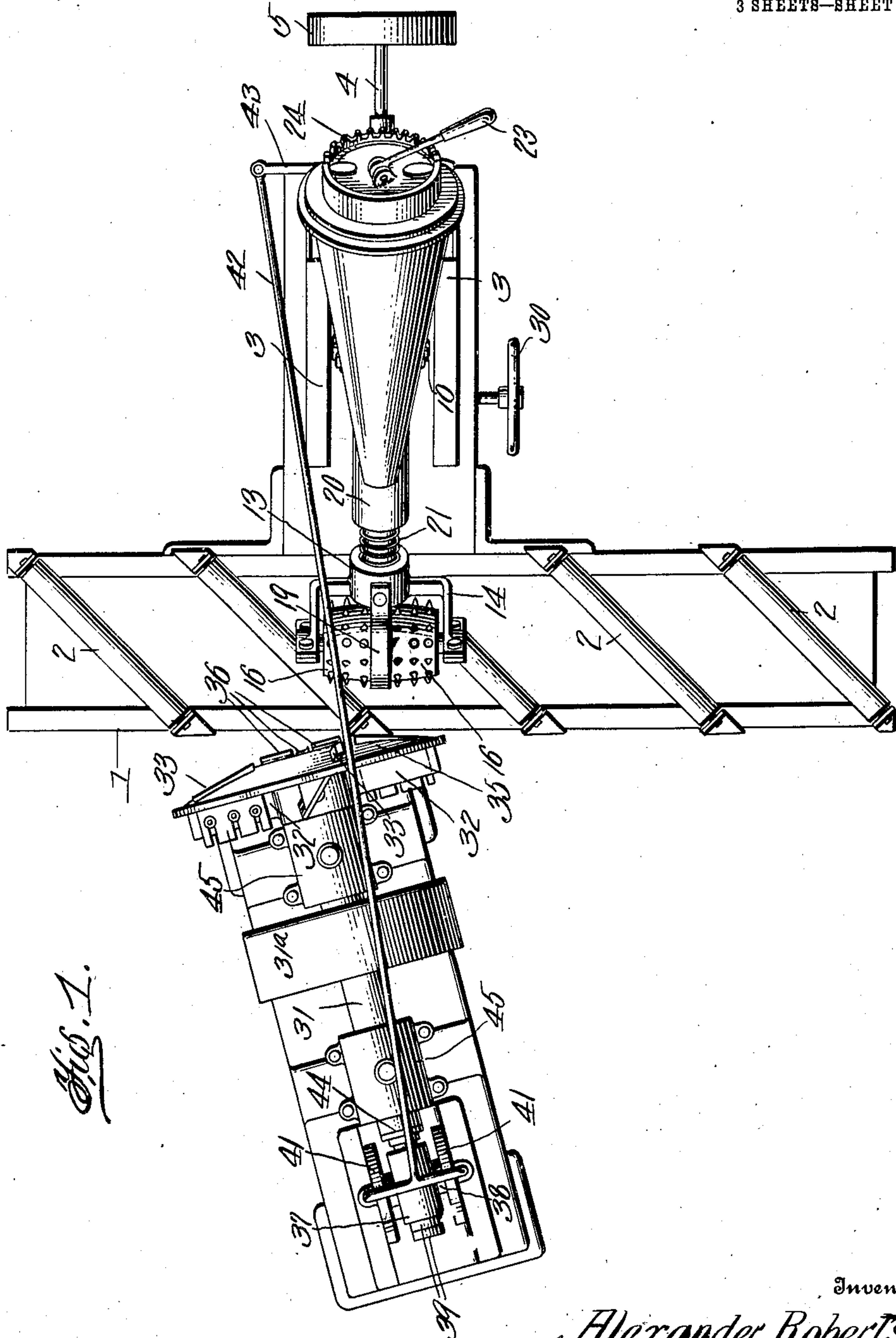


Fig. 1.

Witnesses  
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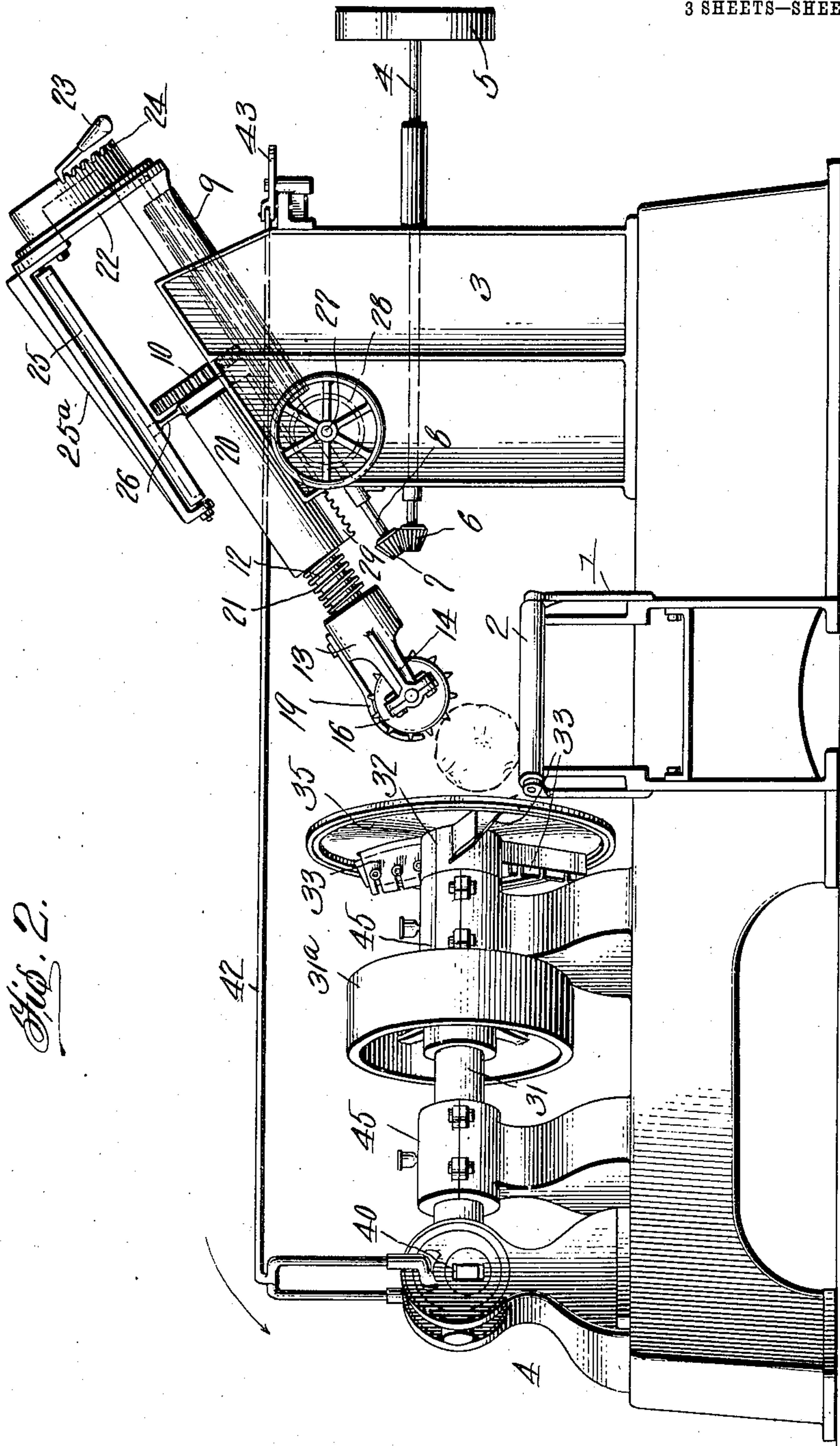


Fig. 2.

Witnesses

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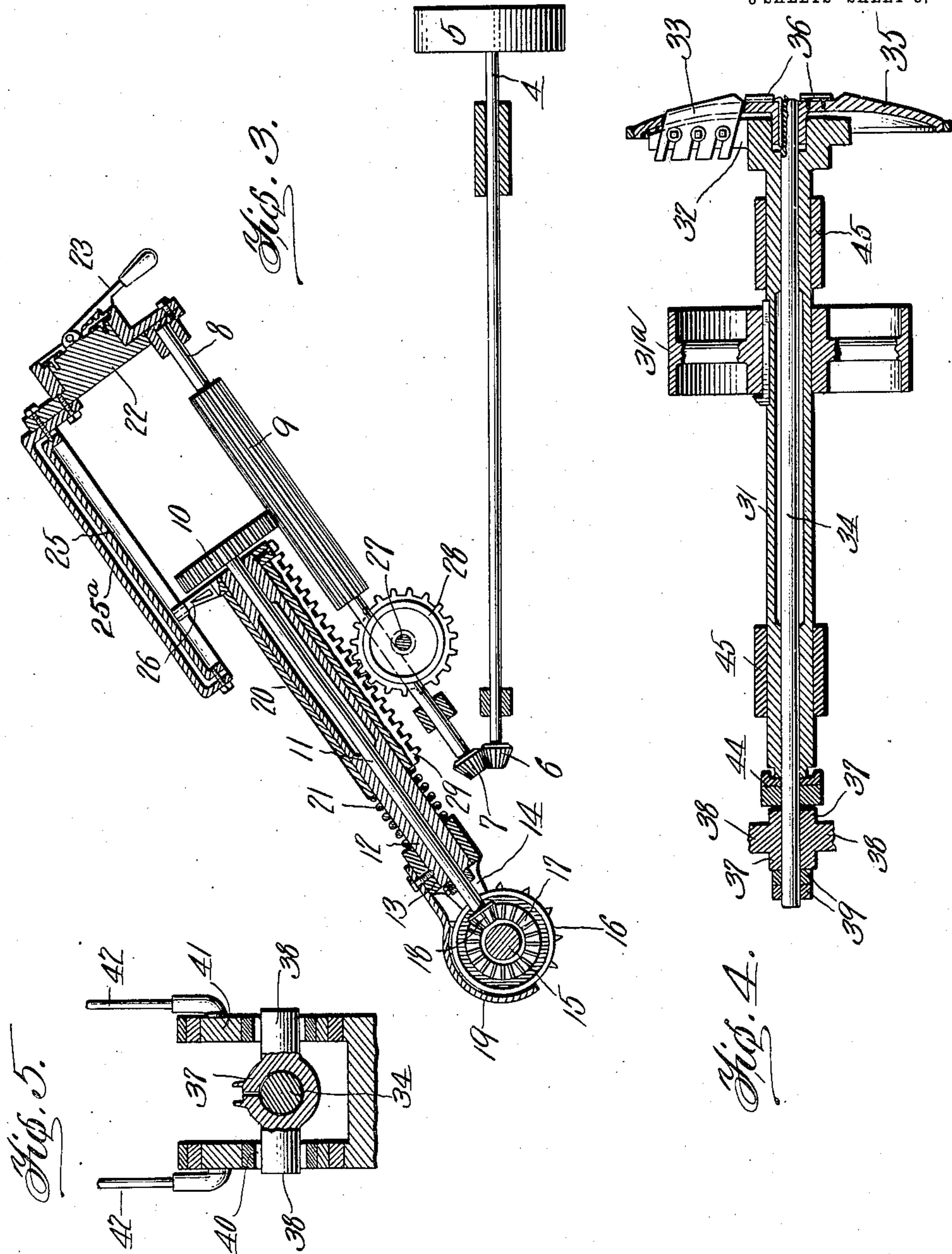


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Witnesses

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# UNITED STATES PATENT OFFICE.

ALEXANDER ROBERTS AND ARTHUR LIBERT, OF GREEN BAY, WISCONSIN.

ROTARY PULP-WOOD BARKER AND PEELING MACHINE.

934,464.

Specification of Letters Patent. Patented Sept. 21, 1909.

Application filed April 28, 1908. Serial No. 429,720.

*To all whom it may concern:*

Be it known that we, ALEXANDER ROBERTS and ARTHUR LIBERT, citizens of the United States, residing at Green Bay, in the county of Brown and State of Wisconsin, have invented a new and useful Improvement in Rotary Pulp-Wood Barkers and Peeling Machines, of which the following is a specification.

10 This invention relates to a device for removing the bark from logs intended for sulfite mills and wood pulp mills.

15 This invention relates to a device of this kind in which the logs to be operated upon are run along a track upon which are mounted diagonally arranged rollers which give a rotary movement to the log as it travels over the rollers and as one side of the log is engaged by a cutter head provided with 20 knives the opposite side portion of the log is engaged by a rotatable spike bumper, whereby the bark is stripped from the log, small knots are removed and the log is otherwise placed in proper condition to be sent to the 25 mill.

The invention consists in the novel features of construction hereinafter described, pointed out in the claims and shown in the accompanying drawings, in which—

30 Figure 1 is a plan view of our device. Fig. 2 is a side elevation. Fig. 3 is a longitudinal section through the bumper portion of the device. Fig. 4 is a longitudinal section through the operating parts of the cutter head portion of the device. Fig. 5 is a 35 transverse section taken through an eccentric shaft feed.

40 In these drawings 1 represents a suitable track upon which we preferably place diagonally arranged feed rollers 2, although other forms of feeding devices can be arranged upon the track if desired. In a suitable frame 3 is mounted a shaft 4 on which is a driven pulley 5 and a beveled gear 6. The 45 beveled gear 6 meshes with a beveled gear 7 carried by an inclined shaft 8 which shaft carries a long gear 9. Meshing with the gear 9 is a gear wheel 10 mounted upon the upper end of a shaft 11 parallel to the shaft 50 8. Loosely mounted upon shaft 11 is a sleeve 12 which carries a collar 13 which collar supports bracket arms 14 between which are journaled a shaft 15 and upon said shaft are two spiked drums 16 the inner ends of

55 which carry gears 17 which mesh with a beveled gear 18 carried by the lower end of the shaft 11. The space between the two drums 16 is covered by a curved hood 19 carried by the collar 13. A long collar 20 is also mounted upon the sleeve 12 and is 60 spaced from the collar 13 by a coil spring 21. The spring 21 allows a limited sliding movement of the collar 13 upon the sleeve 12 and consequently permits the drums to yield when they come into engagement with knots or 65 projections upon the logs. Mounted upon a head 22 is a lever 23 which works over a rack bar 24 and this head carries a longitudinally grooved downwardly extending bracket 25 into the groove of which extends 70 an arm 26 carried by the shaft 11. A transverse shaft 27 carries a gear wheel 28 which meshes with a rack bar 29 formed on the collar 20, and by rotating the shaft 27 by means of a hand wheel 30 the collar 20, arm 26, 75 shaft 11 and parts carried thereby may be moved longitudinally with respect to the long gear 9, thus regulating the depth to which the spikes of the bumpers will enter the wood, and this movement also allows for 80 using the bumpers with logs of various sizes.

Upon the side of the track 1 opposite the mechanism just described and upon the same base or platform is mounted in suitable bearings a hollow shaft 31 upon an end of which 85 is cast a knife holding head 32 and upon which is fixed a belt wheel 31<sup>a</sup>. Upon this head 32 are secured suitable bark cutting knives 33, of any of the usual types. Within the shaft 31 is slidably mounted a shaft 34 90 which at its end carries a movable curved knife guard 35 upon the central portion of which are placed small knives 36 for the purpose of trimming off small knots and twigs, before the log comes into engagement with 95 the bark cutting knives 33. The guard 35 is suitably slotted and the extent to which the knives 33 project to said guard is regulated by sliding the shaft 34 in the shaft 31, which sliding movement draws the guard plate 35 100 toward the head 32 or moves it away from said head. To provide for this sliding movement of the shaft 34 we secure to said shaft a bearing 37 which is provided with rectangular lugs 38, and is locked upon the 105 shaft 34 by nuts 39, it being understood that the shaft 34 rotates freely in the bearing 37. The lugs 38 project into slots 40 formed in



eccentrics 41 which eccentrics are operated by a bifurcated link 42 connected to a suitable hand lever 43 mounted upon the supporting frame 3. The shaft 34 is locked to the shaft 31 by means of a clutch collar 44.

It will be obvious that by shifting the lever 43 the link 42 will shift the eccentrics 41 and a sliding movement will be given to the bearings 37 and shaft 34. The slots 40 are of sufficient size to allow for the lack of vertical movement on the part of the shaft 18 which is of course held against such movement by bearings 45 in which the shaft 31 is mounted. A protecting sleeve 25<sup>a</sup> is carried by the head 22, and the slotted bracket 25 is preferably connected directly to said sleeve, thus indirectly connecting the bracket to the head.

Having thus fully described our invention, what we claim as new and desire to secure by Letters Patent, is:—

1. A device of the kind described comprising a bracket rotatably adjustable, rotatable spiked drums carried by said bracket, means for rotating the bracket upon its axis, means for sliding said bracket longitudinally, knives rotating in a fixed plane, and arranged opposite said drums, and rollers for supporting logs while being operated upon simultaneously by said drums and knives.

2. In a machine of the kind described, a track way, rollers arranged obliquely upon said track way, said rollers forming a support for logs, spiked drums rotatably mounted above said track way, the said drums being parallel to the track way, and knives rotating in a fixed plane opposite to the drums and at an angle to said track way,

the plane of said knives forming an acute angle with the rollers first mentioned.

3. A device of the kind described comprising rotatable and tiltable spiked drums, a set of rotatable knives, an adjustable knife guard, a supplemental set of knives carried by the guard, said knives being arranged opposite to said drums, and means for supporting logs during passage between said knives and drums, said logs having a rotary movement during such passage.

4. A device of the kind described comprising a shaft having a knife head formed thereon, knives carried by said head, a second shaft slidable within the first shaft, a slotted knife guard carried by the second shaft, slidable bearings in which said shaft is held, lugs carried by said bearings, slotted eccentrics, said lugs fitting in the eccentrics, and means for operating said eccentrics for the purpose of sliding said shaft.

5. A device of the kind described comprising a rotatable shaft, a collar mounted upon said shaft, brackets carried by the collar, a shaft carried by said brackets, spiked drums mounted upon said last mentioned shaft, gears on said drums, a gear upon the first mentioned shaft meshing with the drum gears, means for rotating the first mentioned shaft, means for sliding said shaft longitudinally, and means for tilting the second mentioned shaft.

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