Aug. 11, 1931. W. D. TALBOTT ET AL 1,818,657

BARKING APPARATUS

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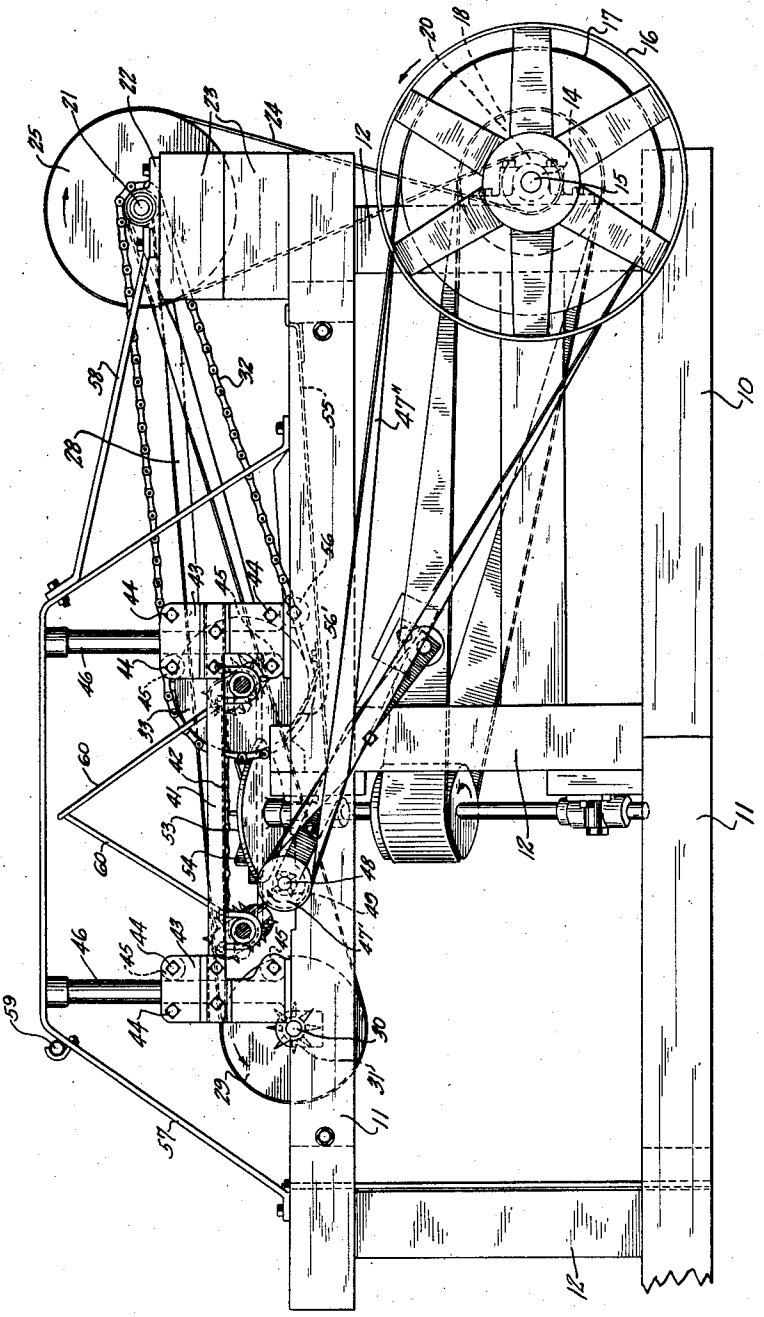


Fig. 1.

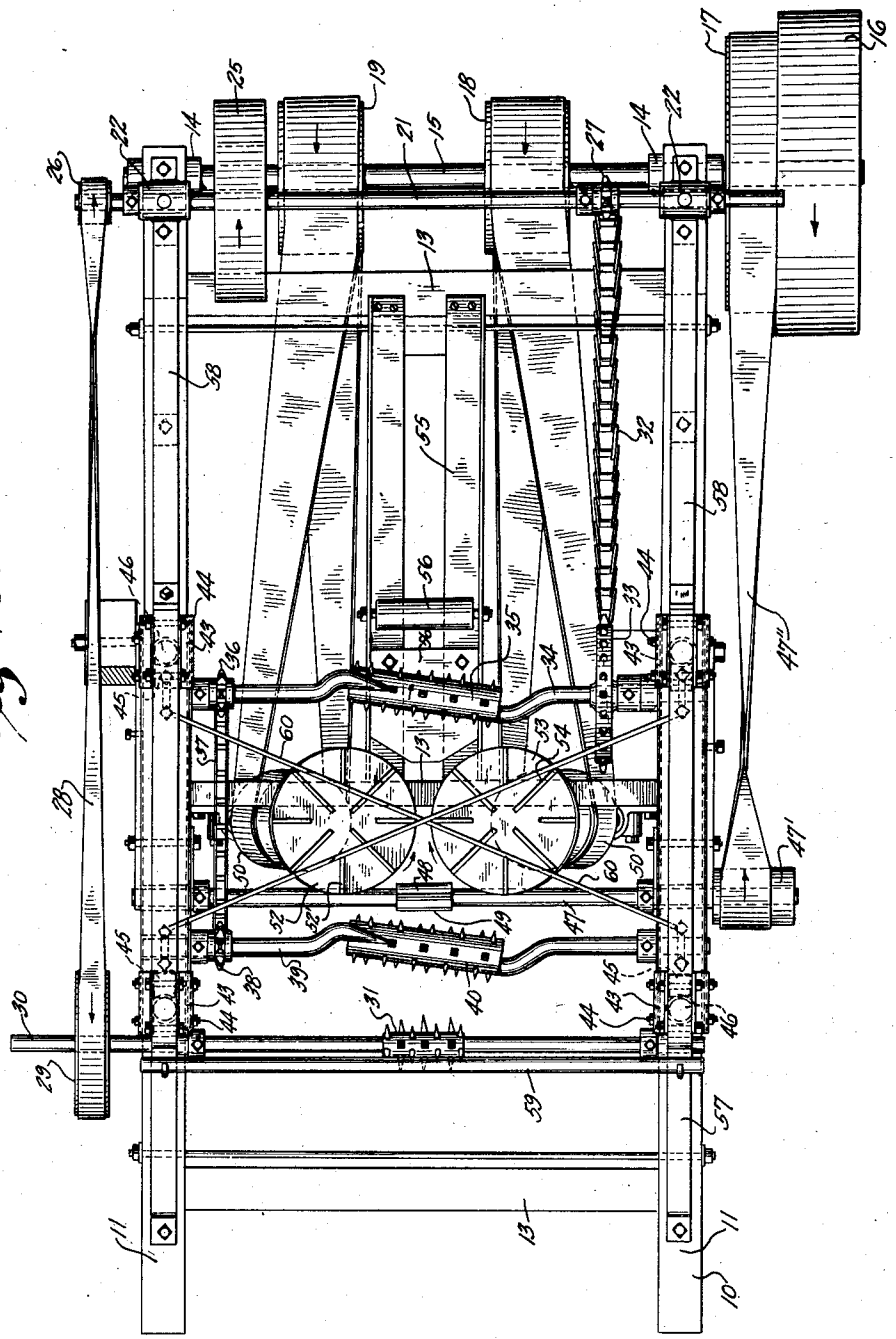
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Fig. 2.



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Fig. 3.

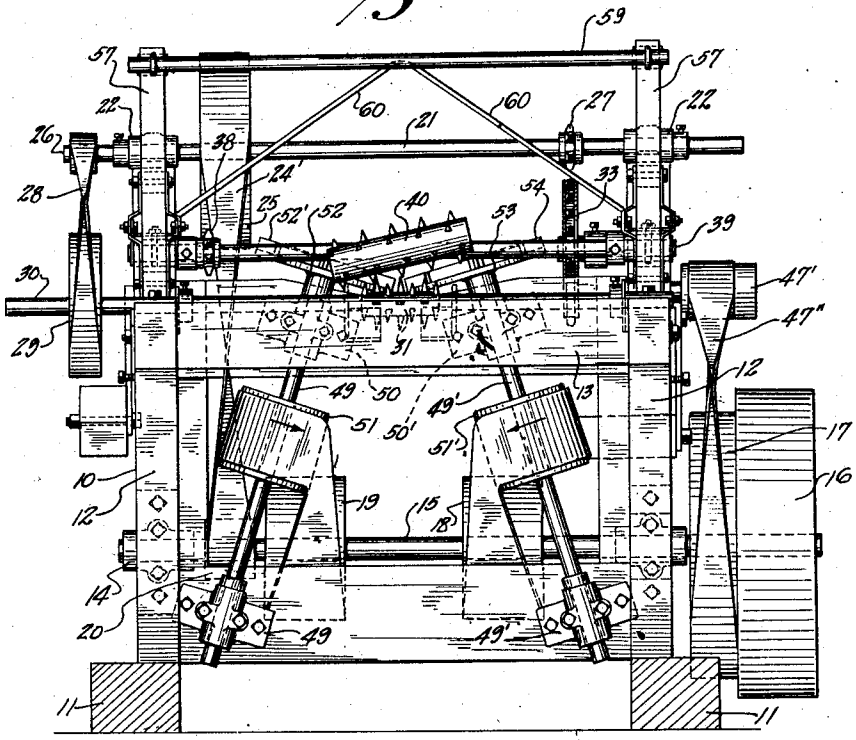
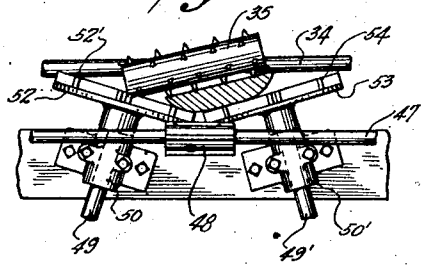


Fig. 4.



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UNITED STATES PATENT OFFICE

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BARKING APPARATUS

Application filed February 27, 1928. Serial No. 257,405.

This invention relates to improvements in barking apparatus, and more especially to a machine for removing the bark from slabs.

In ordinary saw mill practice, it is customary to first square a log, that is, to saw the log lengthwise upon four sides, at substantially right angles to each other, so as to cause the log to assume a square shape in cross section. The portions of the log removed in this process are commonly known as slabs, and comprise strips having one curved side and one flat side. These slabs contain a considerable amount of wood fibre which is valuable for paper making purposes, providing the bark upon the curved portion can be efficiently removed therefrom.

As these slabs were formerly sold for fuel, at a small price, it became important to devise some means for efficiently removing the bark so that they could be utilized for paper making.

Several barking machines have heretofore been devised which operate upon the shaving principle in which knife blades have been caused to act upon the log. These machines have all been found to cause considerable waste due to the fact that valuable wood was often shaved off, and other portions with the bark on were left untouched.

It is one of the objects of this invention to provide an improved apparatus for removing bark which operates upon the shaving principle, in which the slabs are subjected to a rocking motion while being fed through the machine so that all parts of the slab are brought into contact with the knife blades in order to most efficiently remove the bark without waste, and without leaving portions unpeeled.

It is a further object of this invention to provide a barking apparatus which automatically adjusts itself to receive slabs of various sizes.

It is a further object of this invention to provide a barking apparatus which is simple in construction and operation, and well adapted for the purpose described.

With the above and other objects in view, the invention consists of the improved barking apparatus and all its parts and combinations as set forth in the claims and all equivalents thereof.

In the accompanying drawings, in which the same reference characters designate the same parts in all of the views:

Fig. 1 is a side elevation of the improved barking apparatus;

Fig. 2 is a plan view thereof;

Fig. 3 is a view of the discharging end of the device; and

Fig. 4 is a detail view showing how the cutting disks engage a slab.

Referring to the drawings, the numeral 10 designates a frame generally which comprises horizontally disposed, spaced apart side members 11, vertical side members 12, and connecting members 13. Bearing members 14 are secured at one end of the frame to the vertical side pieces, and within these bearings a drive shaft 15 is journaled. One end of the shaft extends through its bearing, and on this end a large pulley 16, for connection with a source of power and a smaller pulley 17 are rigidly mounted. Between the two bearing members 14, pulleys 18 and 19 are also rigidly mounted, and also a small pulley 20 (see Fig. 1).

A shaft 21 is journaled in bearings 22 mounted on blocks 23 at the same end of the frame as the shaft 15. The shaft 21 is driven in an opposite direction from the shaft 15 by a crossed endless belt 24 which extends from the pulley 18 to a pulley 25. Besides the pulley 25, the shaft 21 has rigidly mounted thereon a pulley 26 and a ratchet wheel 27. The pulley 26 is connected by a crossed endless belt 28 to a pulley 29 on a shaft 30 at the other end of the frame. The shaft 30 carries at an intermediate portion a toothed roller 31.

The ratchet wheel 27 on the shaft 21 is connected by an endless chain 32 to a larger ratchet wheel 33 on one end of an eccentric shaft 34. The eccentric shaft carries, at an intermediate portion an eccentrically mounted toothed roller 35, and at its other end a small ratchet wheel 36. The latter is connected by an endless chain 37 to a similar ratchet wheel 38 on a second eccentric shaft 39. An eccentrically mounted, toothed roll-

er 40 is carried by this shaft. The two eccentric rollers and shafts are mounted in the same auxiliary frame 41, which comprises horizontal side members 42 having slidable members 43 connected to each end. The members 43 comprise spaced apart plates held together by bolts 44. The inner bolts carry rollers 45 which tend to eliminate friction when the frame moves up and down on the rods 46, one of which extends through each slidable member.

A shaft 47, journaled in the main frame, carries a rotary cutting member 48, which has curved blades 49 thereon for assisting in removing the bark. This shaft has a pulley 47′ on an outer end which is connected by a crossed belt 47″ with the pulley 17 on the shaft 15.

Shafts 49 and 49′, each positioned at an angle in the frame, and journaled in bearings 50 and 50′, incline toward each other at their upper ends. The shaft 49 carries a rigidly mounted pulley 51, which is connected by an endless belt to the pulley 19 on the drive shaft 15. The shaft 49′ carries a similar pulley 51′, which is connected by a belt to the pulley 18 on the shaft 15. A disk 52 having upwardly extending knife blades 52′ thereon is mounted on the upper end of the shaft 48, and a similar disk 53 having blades 54 is mounted on the end of the shaft 48′. As the shafts are inclined, the disks are also incilned toward each other. These disks are the principal bark removing members.

A downwardly inclined trackway 55, comprising two spaced apart flanged members, is provided for the slabs which are being fed into the machine. A dead roller 56 is rotatably mounted across said trackway to assist in moving the slabs toward the bark removing members. A plate 56′ is secured to the trackway and inclines upwardly toward the disks 51 to guide the slabs thereto.

A metal band 57 on each side of the machine, having its two ends secured to the upper side member 11, extends over and is secured to the rods 46 to firmly support the same. Each band is also connected by a member 58 to the blocks 23. A transverse rod 59 connects the two bands 57 together at one end of the machine.

Diagonally extending V-shaped stays 60 connect the opposite sides of the auxiliary frame 41 to strengthen the same.

The operation of the barking apparatus is as follows: The pulley 16 is connected to a suitable motor or other source of power by an endless belt. Upon operating the motor, the various parts of the machine are set in motion and revolve in the directions indicated by the various arrows in the drawings. The slabs of wood are fed in upon the trackway 55 with their curved sides down. Each slab will pass over the dead roller 56 and will then be engaged by the teeth of the eccentric roller 35 as it passes underneath. The roller, due to its eccentric mounting, will rock the slab back and forth as it feeds it toward the disks 51, and the upwardly inclined plate 56′ yieldingly guides the slab. As the inclined disks are inclined towards each other the knife blades will come into contact with all of the curved portion of the slab bearing the bark. The rocking motion to which the slab is subjected will further insure the bringing of the entire bark bearing surface into contact with the knives, and the latter will shave off the bark with the least possible waste of the wood fibre. Inasmuch as the auxiliary frame, within which the eccentric rollers are mounted, is slidable on the rods 46, if a large slab is fed into the machine, the auxiliary frame will give to allow additional room below the eccentric rollers. When the end portion of the slab has passed the disks 51, the cutting member 48 will remove any bark which might remain. The slab is then engaged by the eccentric roller 40, which continues to impart a rocking motion so that all of the curved portion of the slab is brought into contact with the cutting member 48 (see Fig. 4). The toothed roller 31 will then advance the slab to the point of discharge at the end of the machine.

From the foregoing description it may be seen that the improved barking apparatus is simple in construction and operation and is well adapted to most efficiently remove bark from slabs of wood.

What I claim is:

1. A barking apparatus comprising a frame, bark removing means mounted in said frame, and automatically operated eccentrically mounted rotatable roller means for feeding a length of material having bark to said bark removing means and for imparting a transverse rocking motion to said material as it is being fed, lengthwise through the apparatus.

2. A barking apparatus comprising a frame, bark removing means mounted in said frame, and an eccentrically mounted roller having means thereon for engaging a length of material having bark to feed the same to said bark removing means and to impart a rocking motion to said material as it is being fed.

3. A barking apparatus comprising a frame, bark removing means mounted in said frame, and an eccentrically mounted, toothed roller for feeding a length of material having bark to said bark removing means and for imparting a rocking motion to said material as it is being fed.

4. A barking apparatus comprising a frame, a pair of bark removing members inclined toward each other in said frame, and means for feeding a length of material having bark to said bark removing members

and for imparting a rocking motion to said material as it is being fed.

5. A barking apparatus comprising a frame, a pair of revolubly mounted bark removing disks inclined toward each other in said frame, and means for feeding a length of material having bark to said bark removing disks and for imparting a rocking motion to said material as it is being fed.

6. A barking apparatus comprising a frame, a pair of revolubly mounted bark removing disks inclined toward each other in said frame, and eccentrically mounted means for feeding a length of material having bark to said bark removing disks and for imparting a rocking motion to said material as it is being fed.

7. A barking apparatus comprising a frame, a pair of revolubly mounted bark removing disks inclined toward each other in said frame, and eccentrically mounted means for feeding a length of material having bark to said bark removing disks and for imparting a rocking motion to said material as it is being fed, said eccentrically mounted means being movable in a vertical plane to automatically adjust itself to material of various sizes.

8. A barking apparatus comprising a frame, a pair of revolubly mounted bark removing disks inclined toward each other in said frame, a vertically adjustable auxiliary frame above said disks, and eccentrically mounted feed rollers in connection with said auxiliary frame.

9. A barking apparatus comprising a frame, a pair of revolubly mounted bark removing disks inclined toward each other in said frame, a vertically adjustable auxiliary frame above said disks, and eccentrically mounted feed rollers in connection with said auxiliary frame, means for rotating said feed rollers to move a length of material having bark in one direction, and means for rotating the disks in the opposite direction.

10. A barking apparatus comprising a frame, a pair of revolubly mounted disks inclined toward each other in said frame and having radially extending knife blades on the upper side thereof, vertically extending rods in connection with said frame, an auxiliary frame slidable on said rods, eccentrically mounted feed rollers in connection with said auxiliary frame, a rotatably mounted bark removing roller having knife blades thereon in connection with the main frame, means for rotating the feed rollers to move a length of material having bark in one direction, and means for rotating the disks and the bark removing roller in the opposite direction.

11. A barking apparatus for operating on a slab of wood having a flat uncovered surface and a curved bark covered surface, comprising a frame, bark removing means in said frame, and an automatic means for feeding said slab to the bark removing means and for so rocking the slab as to bring all portions of only the curved bark covered surface thereof into engagement with the bark removing means.

12. A barking apparatus comprising a frame, a pair of bark removing members positioned at an angle with respect to one another in said frame, and means for feeding a length of material having bark to said bark removing members and for imparting a rocking motion to said material as it is being fed.

13. A barking apparatus comprising a frame, bark removing members positioned in said frame and presenting a concave surface, and means for feeding a length of material having bark to said bark removing members, there being a relative rocking movement between the bark removing members and the length of material to bring all bark covered portions of the latter into engagement with the bark removing members.

In testimony whereof, we affix our signatures.

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LEVI BANNERMAN.