

J. J. HRUSKA,
WOOD BARKING MACHINE.
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1,243,294.

Fig. 2.

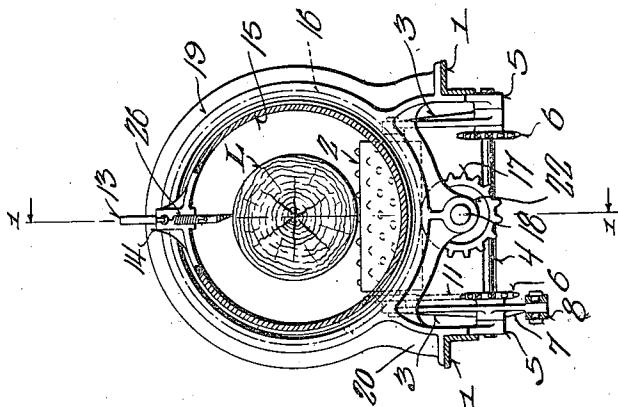
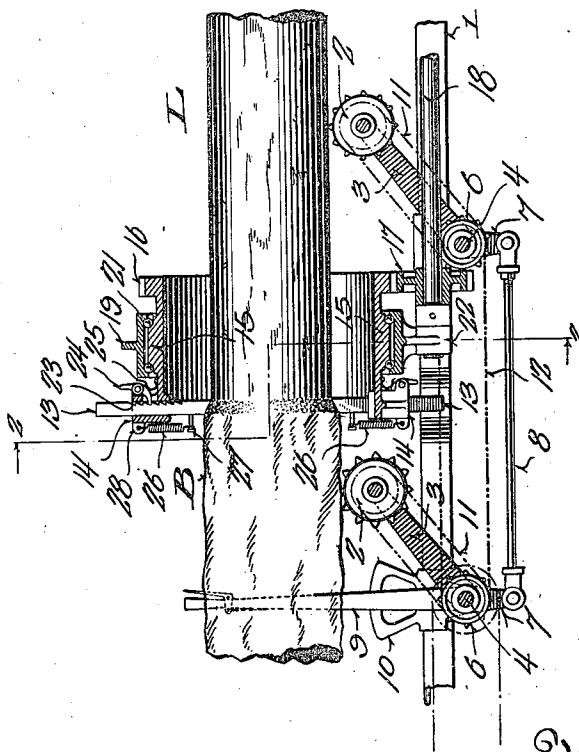


Fig. 1.



Inventor:

Joseph J. Hruska
By Geo. W. Hruska
Attorney

Witness:
James J. Hruska

UNITED STATES PATENT OFFICE.

JOSEPH J. HRUSKA, OF MENOMINEE, MICHIGAN.

WOOD-BARKING MACHINE.

1,243,294.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH J. HRUSKA, a citizen of the United States, and resident of Menominee, in the county of Menominee and State of Michigan, have invented certain new and useful Improvements in Wood-Barking Machines; and I do hereby declare that the following is a full, clear, and exact description thereof.

10 My invention relates to new and useful improvements in wood barking machines, particularly that type having a rotary cutter positioned to revolve about the log which is being barked.

15 One of the principal objects of the invention is to provide a barking mechanism which will entirely remove the bark from a log and leave the same substantially the same diameter throughout its length and 20 circular in cross section.

Another object is to provide an improved feeding mechanism for moving the log toward the cutter.

25 Still another object of this invention is to provide a comparatively simply constructed barking mechanism which, while being very efficient in operation, will, because of its relatively few number of parts be rather inexpensive to manufacture.

30 With the foregoing and many other objects and advantages in view, the invention resides more particularly in the novel combination, formation and arrangement of parts which will be hereinafter described 35 and claimed.

In the drawings:—

Figure 1 represents a substantially vertical longitudinal sectional view on the line 1—1 of Fig. 2.

40 Fig. 2 is a vertical transverse section on the plane of the line 2—2 of Fig. 1.

In the preferred embodiment of my invention as shown in the accompanying drawing wherein similar reference characters designate like parts, it will be noted that the major portion of the operating mechanism is mounted upon a suitable frame composed principally of a pair of spaced apart longitudinally extending angle metal side bars 1, 50 the other parts of the frame not being shown since they form no part of the present invention. The log L from which the bark B is to be removed is disposed longitudinally of the frame and is supported above the side 55 bars 1 thereof by any preferred holding mechanism (not shown) said means being

used if considered necessary, to prevent the rotation of the log.

An improved feeding mechanism is employed in connection with the other parts of the invention and it may also be used to support, or aid in supporting the log. This mechanism consists of a pair of spaced toothed rollers 2 positioned transversely of the side bars 1 and rotatably mounted in the 60 free ends of pairs of arms 3. One of these rollers 2 is disposed on each side of the bark removing mechanism which will be hereinafter described, therefore one engages the portion of the log upon which the bark still 70 remains and the other contacts with the cleaned part. The arms 3 are pivotally mounted on a pair of shafts 4 which are held in suitable bearings 5 secured to and depending from the side bars 1, said shafts 75 also having sprocket wheels 6 carried thereby. From one of the arms on each shaft 4 depends a short crank 7, these cranks being connected by a rod 8 so that movement of one pair of arms 3 will be duplicated by the 80 other pair.

The lever 9 fixed in any suitable manner to one pair of arms is adapted to be used to force the rollers 2 into engagement with any size log which is to be operated upon, 85 the rollers being held in engagement with said log by disposing a pawl carried by the lever in any one of a number of teeth formed on the segment 10. Each roller 2 has a sprocket or other form of gear mounted on 90 one end around which are trained sprocket chains 11 to connect these sprockets with the sprockets 6, an additional sprocket chain 12 uniting the sprockets on the two shaft 4. Actuation of one of the sprockets or one of 95 the shafts 4 is carried out in any suitable manner, the same being connected to any desired source of power. In this manner both of the rollers will be simultaneously rotated so that the log L will be moved longitudinally of the frame whenever said rollers 100 have been engaged therewith as a result of the adjustment of the lever 9.

The cutting blades 13 of the bark removing mechanism are diametrically opposed 105 and adjustably held in sockets 14 formed on one edge of a ring-like member or annulus 15 which is adapted to surround the log L and is of sufficient diameter to receive logs of any ordinary size. The member 15 is 110 preferably made large enough to surround any log which is liable to be encountered.

The edge of the member opposite that upon which the sockets 14 are formed is provided with a gear ring 16, the teeth of which mesh with a spur gear 17 fixed on a main drive shaft 18. Thus when the gear 17 is rotated, the member 15 will be revolved about the log, and the cutting blades 13 which have been adjusted with respect to the surface thereof will remove the bark.

The member 15 is held for rotation within an annular stationary support 19 having feet 20 projecting from its opposite sides and secured to the side bars 1, said support having a pair of ball races which, together with similar races carried by the member 15 and bearing balls 21, form means for permitting easy rotation of the revolving parts. The support 19 also has a depending bearing 22 in which one end of the shaft 18 is rotatably mounted. The cutting blades 13 consist of bars having their inner ends sharpened, one edge of each having ratchet teeth 23 with which pivoted dogs 24 engage, springs 25 normally holding said dogs in engagement with the teeth. It will be seen from Fig. 1 that the formation of the ratchet teeth 23 is such that the cutting blades will be prevented from moving outwardly so long as the dogs are in operative position, and that inward movement of the blades will be prevented by reason of a contracting coil spring 26 whose opposite ends are connected respectively with pins 27 projecting from the blades 13 and ears 28 carried by the sockets 14. This construction permits the blades to be readily adjusted with respect to any size log after the same has been centered in the annular member 15.

The operation of this machine should be readily understood from the accompanying drawing, but briefly described is as follows: After the log L has been positioned so that its center line is substantially in the center of the annular member 15, the lever 9 is moved in the proper direction to force the teeth of the rollers 2 into contact with said log, said rollers being locked in this position by the co-action between the lever and the segment 10. The cutting blades are then ready to be adjusted, they being moved inwardly toward each other a sufficient extent to readily allow all of the bark to be removed, the amount of movement of the blades depending upon the size of the log and the thickness of the bark thereof. After all of these adjustments have been made the operation of the machine is begun by starting the mechanism which rotates the shaft 18 and the rollers 2, it being necessary

to simultaneously feed the log toward the rapidly rotating member 15 so that the blades thereof will continuously remove the bark B. This movement of the several parts of the device and the log continues until all of the bark has been removed therefrom. In some instances it may be necessary to provide more than one pair of diametrically opposed cutting blades, in which case, they would be disposed at different points around the periphery of the member 15.

From this description it will be obvious that a very simply constructed wood barking machine has been produced and one which very quickly and thoroughly removes the bark from any size log regardless of the thickness of the bark or the kind of tree which is being operated upon. Various minor changes may be made in the form and proportion of the various parts of the device without departing from or sacrificing any of the principles of the invention as set forth herein.

What is claimed is:—

1. A device of the class described comprising an annular member to receive an elongated piece of work material, a socket carried by the member, a blade in said socket, said blade having ratchet teeth in one edge, a pawl carried by the member for engagement with said teeth to hold the blade against movement in any direction, a spring connected by its opposite ends with the blade and socket to hold the former in the latter, and means for rotating the member around the work material.

2. In a machine of the class described, a frame including a pair of spaced side bars, a stationary annular support having a pair of spaced feet secured to the side bars, a ring-like member rotatably mounted in said annular support and extended beyond the sides of the same, an annular external series of gear teeth on the member adjacent one end, a cutting blade on the other end of the member, a bearing depending from the annular support between the side bars, an operating shaft journaled in the bearing, and a pinion on the shaft and meshing with said series of gear teeth.

In testimony that I claim the foregoing I have hereunto set my hand at Menominee, in the county of Menominee and State of Michigan, in the presence of two witnesses.

JOSEPH J. HRUSKA.

Witnesses:

JOHN WIZNER,
INA W. NYLAND.