April 8, 1952 F. A. MERTZ ET AL 2,592,054

BARKING DRUM

Filed Nov. 3, 1950 2 SHEETS—SHEET 1

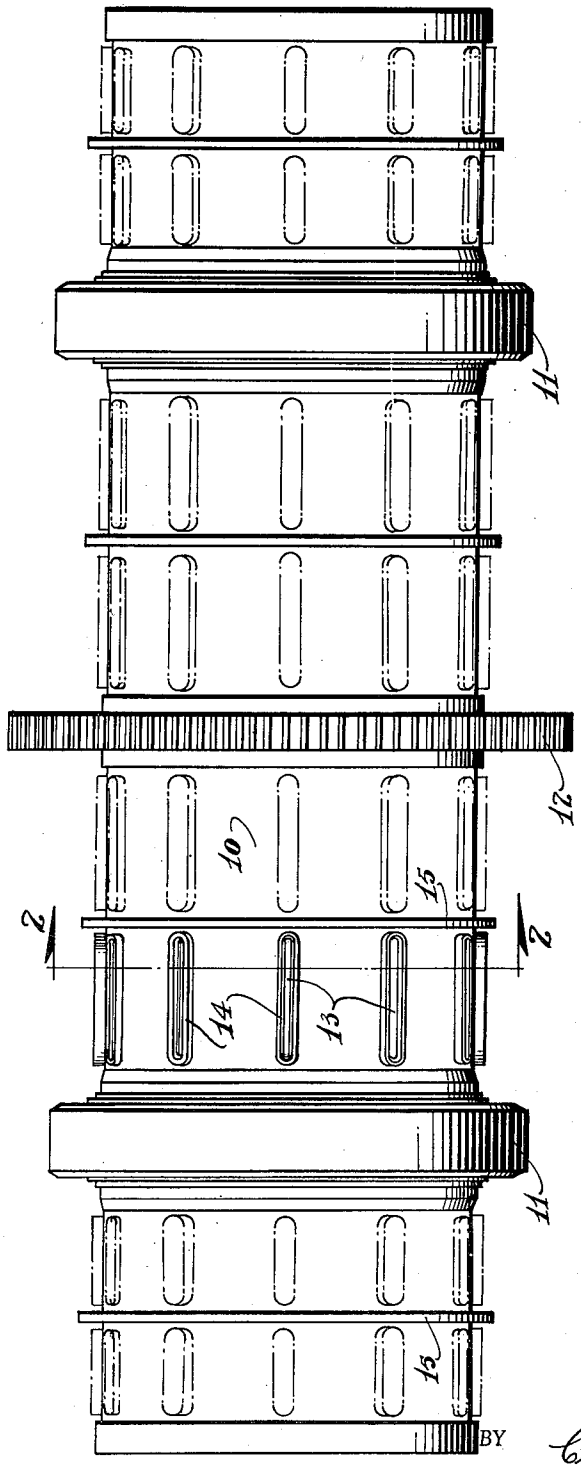


Fig. 1.

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Fig. 2.

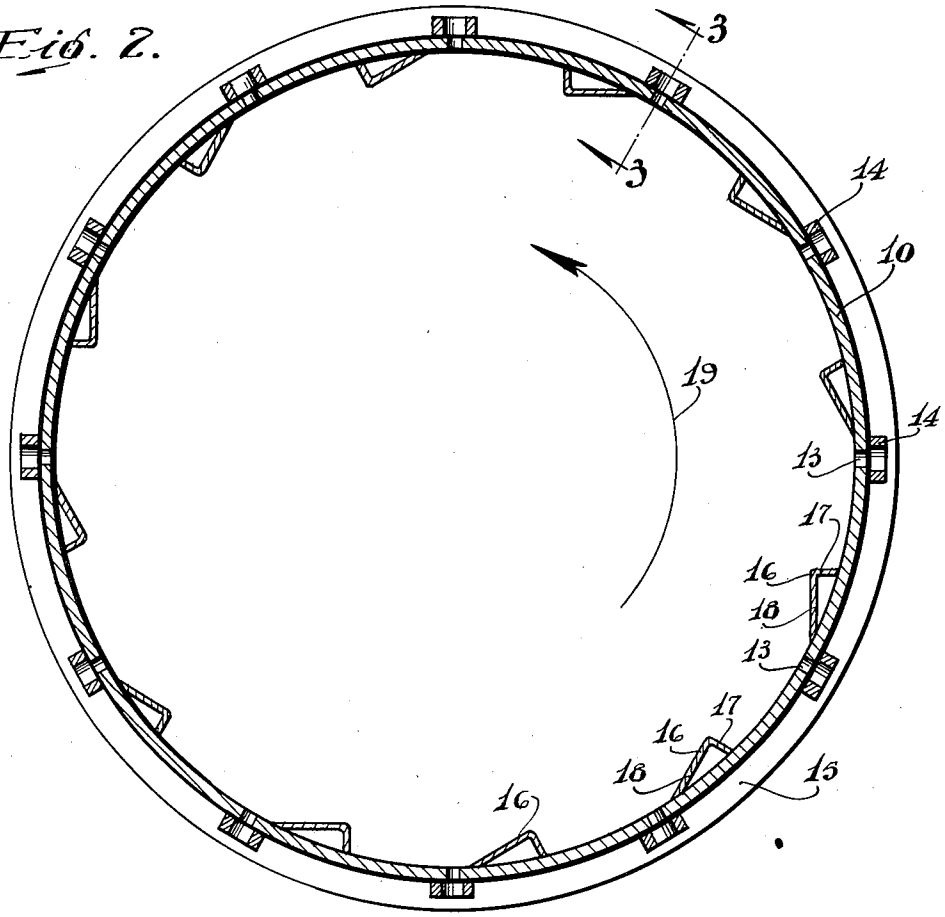
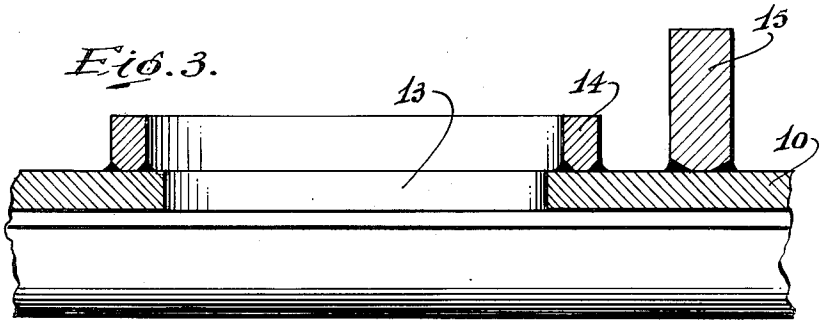


Fig. 3.



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Patented Apr. 8, 1952

2,592,054

UNITED STATES PATENT OFFICE

2,592,054

BARKING DRUM

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Application October 3, 1950, Serial No. 188,188

4 Claims. (Cl. 144—208)

1

This invention relates to improvements in barking drums, of the type commonly employed to strip the bark from logs by tumbling action within the drums.

Barking drums are necessarily quite large, commonly forty-five feet long and about twelve feet in diameter, and are obviously subjected to severe punishment in service. Prior to the present time, these devices have not been entirely satisfactory, due primarily to the high original and maintenance costs encountered. Sectional drums, each section provided with individual riding rings and driving gears, have been employed, but are expensive to build and maintain, and exhibit inherent deficiencies in such matters as bark removal, wood loss and the like. Welded drums constructed of steel plate have been suggested, but are prone to crack and give way wherever bark removal ports are provided in the shell.

It is an object of the present invention to provide a sturdy, rugged barking drum reinforced in novel manner, whereby the service life of the drum is greatly extended, and the cost of maintenance is reduced to a low level.

A particular object of the invention is the provision of a barking drum comprising a continuous cylindrical shell provided with milled bark removal ports, each port being reinforced by a bar affixed externally to the shell and enclosing the port, but suitably spaced therefrom. Another object of the invention is to provide in a barking drum of the type described novel lifting members, which serve also as reinforcement for the shell and its ports. Further objects will be in part obvious and in part pointed out hereinafter.

The invention and the novel features thereof may best be made clear from the following description and the accompanying drawings, in which:

Figure 1 is a side elevational view of an exemplary embodiment of the present invention;

Figure 2 is a sectional view of the barking drum of Figure 1, taken on the line 2—2 thereof, some parts in the background being omitted, and

Figure 3 is an enlarged sectional view taken on the line 3—3 of Figure 2, showing details of the reinforced port construction of the drum.

Referring to the drawings, an exemplary embodiment of the invention comprises a continuous cylindrical shell 10, constructed preferably of welded steel plate, having mounted thereon a spaced pair of riding rings 11 and the driving gear ring 12. A plurality of ports 13 are provided in the shell to permit egress of bark therefrom, the ports being disposed in a plurality of transverse rows, individual ports of each row being circumferentially spaced relative to each other and the ports of the several rows being disposed in longitudinal alignment, as shown. As an outstanding feature of the invention, the ports 13 are formed in the shell 10 by milling, whereby they are smooth-walled and regular, and formed without heating the shell, or otherwise weakening or damaging the shell structure.

2

A reinforcing bar 14 encircles each port and is affixed to the exterior of the shell, preferably by welding, the bars being shaped, desirably, to correspond to the port openings. The reinforcing bars are seated away from the port edges, the spacing therebetween permitting welding of the bars without impairing the port walls or weakening or damaging the shell. Disposition of the external reinforcing bars in the manner described, that is, in spaced relationship to the port edges, has been found to result in an outstandingly rigid and sturdy port structure.

To further reinforce the shell, particularly in the vicinity of its ports, external reinforcing rings 15 are affixed to the shell, as by welding, intermediate adjacent port rows. The reinforcing rings are found to contribute materially to the strength and durability of the drum structure. It will be recognized that the gear ring 12 and riding rings 11 assume the function of the reinforcing rings 15 at the position of the former.

A further outstanding feature of the invention resides in the novel lifting member structure provided therein. As best shown in Figure 2, a longitudinally extended lifting member 16 is affixed to the interior of the shell adjacent to but slightly spaced in the direction of rotation from each line of ports. The lifting members 16 preferably take the form of unequal leg angles, constructed of heavy plate and affixed to the shell by welding the ends of the legs thereto. The lifting members desirably extend substantially the entire length of the shell, whereby they serve not only to engage and turn the logs being barked, but as essential reinforcements for the shell and particularly for the adjacent lines of ports.

The lifting members comprise short legs 17 and long legs 18, the short legs facing in the direction of rotation indicated by arrow 19 in Figure 2, and the long legs trailing backwardly toward the adjacent line of ports. The external corner edge of the lifting members is suitably

rounded, to reduce wood loss in the barking operation. Constructed in this manner, the lifting and turning effect of the lifting members is outstandingly efficient, as is their barking action, and the bark removed is guided by the long legs 18 thereof to the adjacent lines of ports.

It will thus be seen that there has been provided by this invention a structure in which the various objects hereinbefore set forth, together with many practical advantages, are successfully achieved. As various possible embodiments may be made of the mechanical features of the above invention, all without departing from the scope thereof, it is to be understood that all matter hereinbefore set forth or shown in the accompanying drawings is to be interpreted as illustrative, and not in a limiting sense.

We claim:

1. A barking drum comprising a continuous shell, a plurality of milled ports in said shell, and a reinforcing bar affixed externally to said shell adjacent to and encircling each of said ports.

2. A barking drum comprising a continuous cylindrical shell, a plurality of longitudinally extending milled ports in said shell, and a reinforcing bar affixed externally to said shell and encircling, but spaced from, each of said ports.

3. A barking drum comprising a continuous cylindrical shell, a plurality of longitudinally extending, circumferentially spaced, milled ports in said shell, a reinforcing bar affixed externally to said shell and encircling, but spaced from, each of said ports, and a lifting member affixed internally to said shell adjacent each of said ports, each of said lifting members comprising unequal leg angles, each disposed with its longer leg extending toward the adjacent port.

4. A barking drum as defined in claim 3 in which the edges of the legs of the angles are continuously welded to the interior of the shell, to serve as longitudinally extending reinforcing elements.

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