

Jan. 24, 1967

TEUVO (TEODOR) SARESVUO

3,299,919

ARRANGEMENT IN DRUMS WITH UNPERFORATED MANTLE

Filed Jan. 6, 1965

2 Sheets-Sheet 1

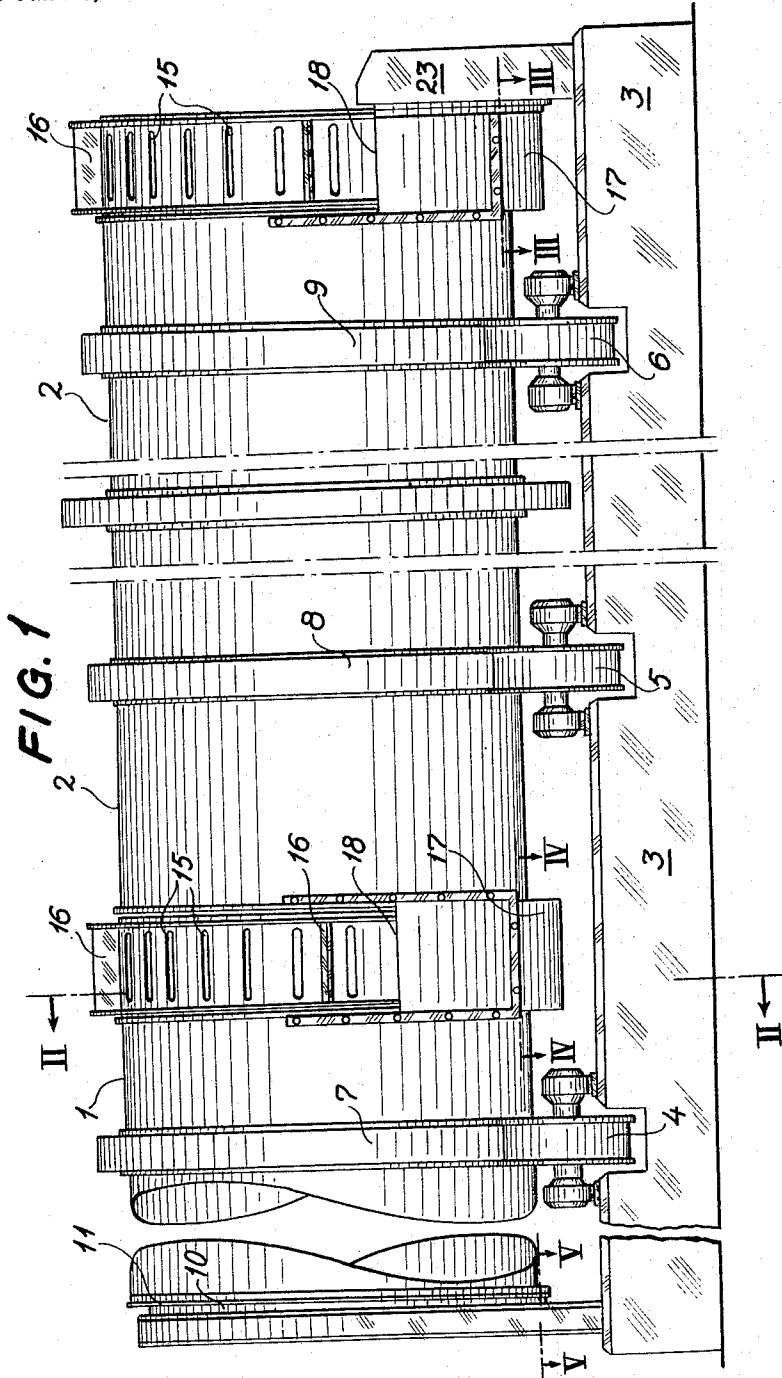


FIG. 1

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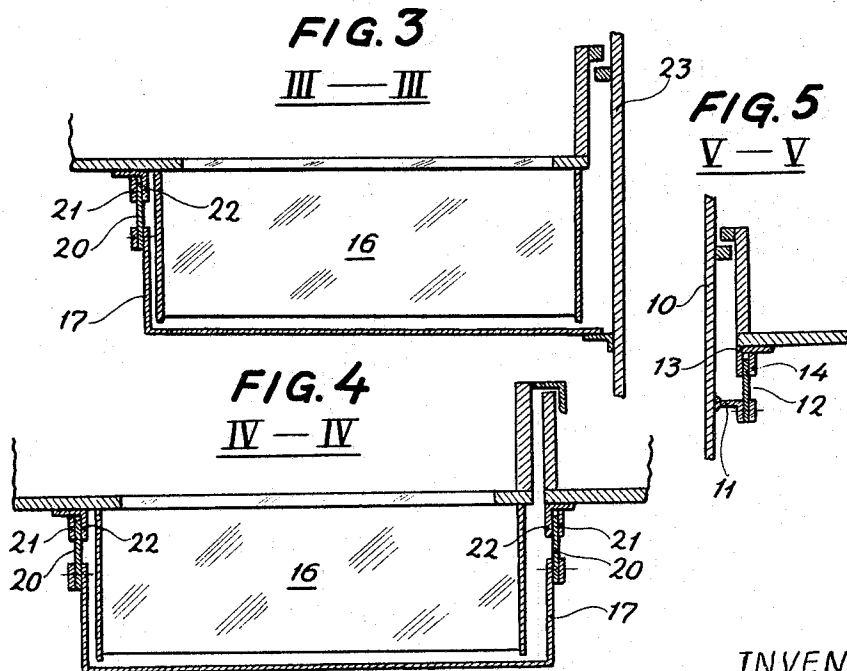
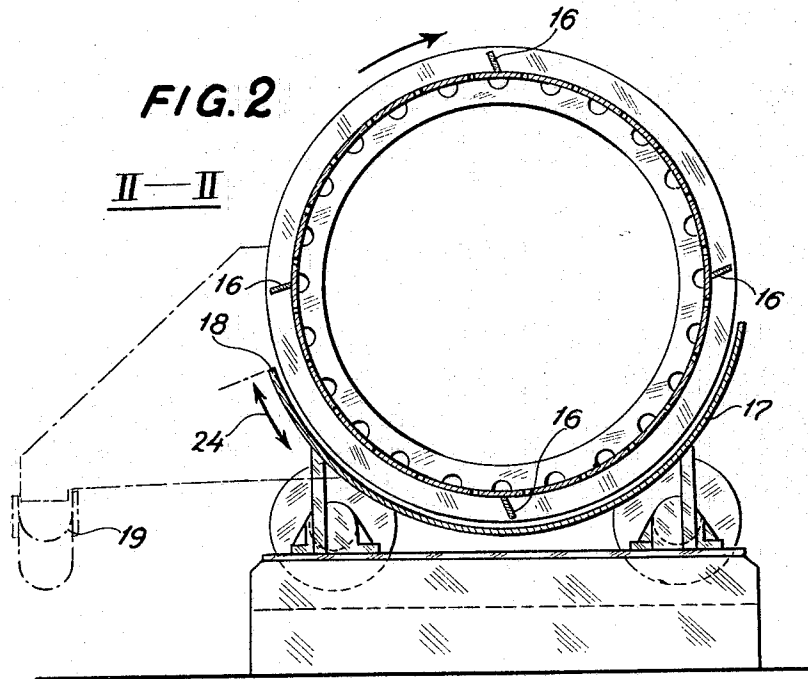
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ARRANGEMENT IN DRUMS WITH UNPERFORATED MANTLE

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 Filed Jan. 6, 1965, Ser. No. 423,805
 Claims priority, application Sweden, Jan. 9, 1964, 236/64
 2 Claims. (Cl. 144—208)

The present invention refers to barking drums with an unperforated mantle, and the object of the invention is to produce a barking drum with one or several sections, which is simple in construction and operated with a controllable water volume.

Heretofore barking drums generally have been executed as of the grate type, whereby it has been possible to bark the logs either as dry, or, by immersing the drum into a water trough, generally poured of concrete, as wet. The mechanical strength of the grate mantle, however, is fairly low, and therefore drums have been constructed also with unperforated mantle. Such drums have been provided with face ring flanges, directed towards the centre of the drum, in which case the collar thus formed determines the height of the water level in the drum. Thus, however, results in the disadvantage, that the longer the logs to be barked, the lower the said collars must be made in order to make it possible for the logs to be fed into the drum and removed from the same. This again decreases the water volume, which is a disadvantage particularly when logs with dry or frozen bark are to be barked, in which case the drum preferably should contain warm water as much as possible. When barking green logs the water level should be kept as low as possible. For reasons of strength the drum must not be made too long, which is the reason for the use of drums made with two or three sections, but essentially only of the grate type with the drum immersed in a water trough. In the case of drums with unperforated mantle, tightening of seams between the different sections proves difficult.

The removal of bark from drums with unperforated mantle has been solved by providing the face of the drum with short bark discharge slots, through which the bark falls into stationary troughs poured of concrete, from which troughs they are removed by means of blades fitted to the outer periphery of the drum, over one edge of the chute. In conventional drums the water level in the drum is determined by the face flanges, the face plates and the brim height of the stationary bark discharge troughs, without any kind of possibility to control the same.

The present invention may be employed in barking apparatus having one or several barking drums with unperforated mantle, positioned in line, the discharge end of the drum or the discharge ends of the drums being provided with bark discharge slots evenly distributed around the periphery, and with bark removal blades fitted around the outer periphery, as well as a bark discharge trough or troughs, partly embracing the drum. The principal characteristics of the invention are that the feed and the discharge ends of the drum are provided with stationary face plates of a height corresponding to the maximum permissible height of water level in the drum or drums, which plates are tightened against the drum in a manner permitting the drum to rotate freely with respect to the plates, and further that the bark discharge trough or troughs, which also are tightened against the drum, are constructed so that at least one edge of the trough or troughs can be raised or lowered for regulating the height of the water level in the drum or drums.

In the following the invention is described in more detail in connection with the attached drawings, which as an

example, illustrate an arrangement according to the invention. In the drawings:

FIG. 1 is a general drawing of a barking drum, seen from the side;

FIG. 2 is a section along the line II—II of FIG. 1;

FIG. 3 is a partial section along the line III—III of FIG. 1;

FIG. 4 is a partial section along the line IV—IV of FIG. 1;

FIG. 5 is a partial section along the line V—V of FIG. 1.

The drawings show a combination of two barking drums 1 and 2 (FIG. 1). The drums are mounted on four pairs of rollers 4, 5 and 6 (the fourth pair of rollers is not shown) fitted on a concrete base 3. Adjacent the rollers the mantle is provided with peripheral runners (carrying rings) 7, 8 and 9. The drum is rotatably driven by means of gear rings fitted between the carrying rings.

At the feed end of the drum a face plate 10 is provided, covering the opening of the drum, and is tightened at its lower side up to at least the center line, against the drum 1 in the manner shown in FIG. 5. To the face plate 10 is attached an arcuate rail 11 concentrically with the drum. To this rail 11 is attached at its one edge a tightening band 12, the other edge of which is fitted between the flanges 13 and 14, attached to the drum, to provide a watertight sliding tightening.

The discharge end of the drum is provided with slots 15 for bark discharge and a number of blades 16 evenly distributed at this area of the periphery. Adjacent the bark discharge slots 15 is provided a bark discharge trough 17 extending over the discharge end of drum 1 and feed end of drum 2, the bottom of said trough 17 following the shape of the drum mantles, and the depth of said trough being such as to permit the blades 16 to move freely in the same, and, when rotating with the drum, as scraping elements to remove the bark pieces fallen through the slots 15 into the trough 17, over the edge 18 of the trough to be further transported, for instance, to a chute 19 (FIG. 2). The trough 17 is at its one side edge tightened against drum 1 and at its other side edge against drum 2 by attaching at the edge of the trough one edge of a tightening band 20, the other edge of which is fitted between the flanges 21 and 22, attached to the corresponding drum, so as to provide a watertight sliding tightening (FIG. 4).

The discharge end of the drum 2 is provided with bark discharge slots 15, blades 16 and bark removal troughs 17 which are similar to those at the discharge end of drum 1. In regard to that end, however, the bark removal trough 17 differs in that only one edge of it is tightened against the drum 2, while its other edge is constituted by the fixed end plates 23 of drum 2 (FIG. 3).

The bark discharge troughs are arranged so that the height of the edge 18 of the trough can be adjusted, as is indicated by the double arrow in FIG. 2. This can be achieved either by having the entire trough movable, whereby the edge 18 is lowered and the opposite edge of the trough is raised, or by having the bottom of the trough made in several sections, in which case the edge opposite the edge 18 remains in place while edge 18 is lowered or raised.

By adjusting the relative threshold height in the troughs after drums 1 and 2 respectively, the discharge flow of water and bark from the drums can be regulated. Easy barking timber gives great amounts of bark, in which case a portion of the bark can be removed already after the drum 1.

The invention is not limited to the construction described above and illustrated in the drawings, and it can be modified in many ways within the scope of the inven-

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tion. Thus, in drum combinations, where no bark discharge devices are provided at the joint of the drums, the tightening between the drums can be accomplished in principle in the same way as with a trough, but utilizing a relatively small intermediate part of trough form.

What is claimed is:

1. In barking apparatus having a barking drum with unperforated mantle, the discharge end of the drum being provided with bark discharge slots evenly distributed around the periphery of the drum, with bark removal blades fitted around the outer periphery of the drum, and with a bark discharge trough partly embracing the drum, the improvement which comprises stationary face plates at the feed and discharge ends of the drum, said face plates being of a height corresponding to the maximum permissible height of the water level in the drum, means for tightening the plates against the drum in a manner permitting the drum to rotate freely with respect to the plates, and means for selectively raising and lowering at least one

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edge of the discharge trough so as to regulate the height of the water level in the drum.

2. Apparatus as claimed in claim 1, wherein the bottom of the bark discharge trough is essentially arcuate, and wherein the means for selectively raising and lowering said one edge of the bark discharge trough comprises means for adjustably rotating said bottom of the trough generally about the longitudinal axis of the drum.

References Cited by the Examiner

UNITED STATES PATENTS

1,148,136	7/1915	Alfsen	-----	144—208
1,253,340	1/1918	Berger et al.	-----	144—208
1,386,930	8/1921	Holm	-----	144—208

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