Sept. 13, 1966 G. M. DICK ET AL 3,272,245

BARKING DRUM

Filed April 29, 1964 3 Sheets-Sheet 1

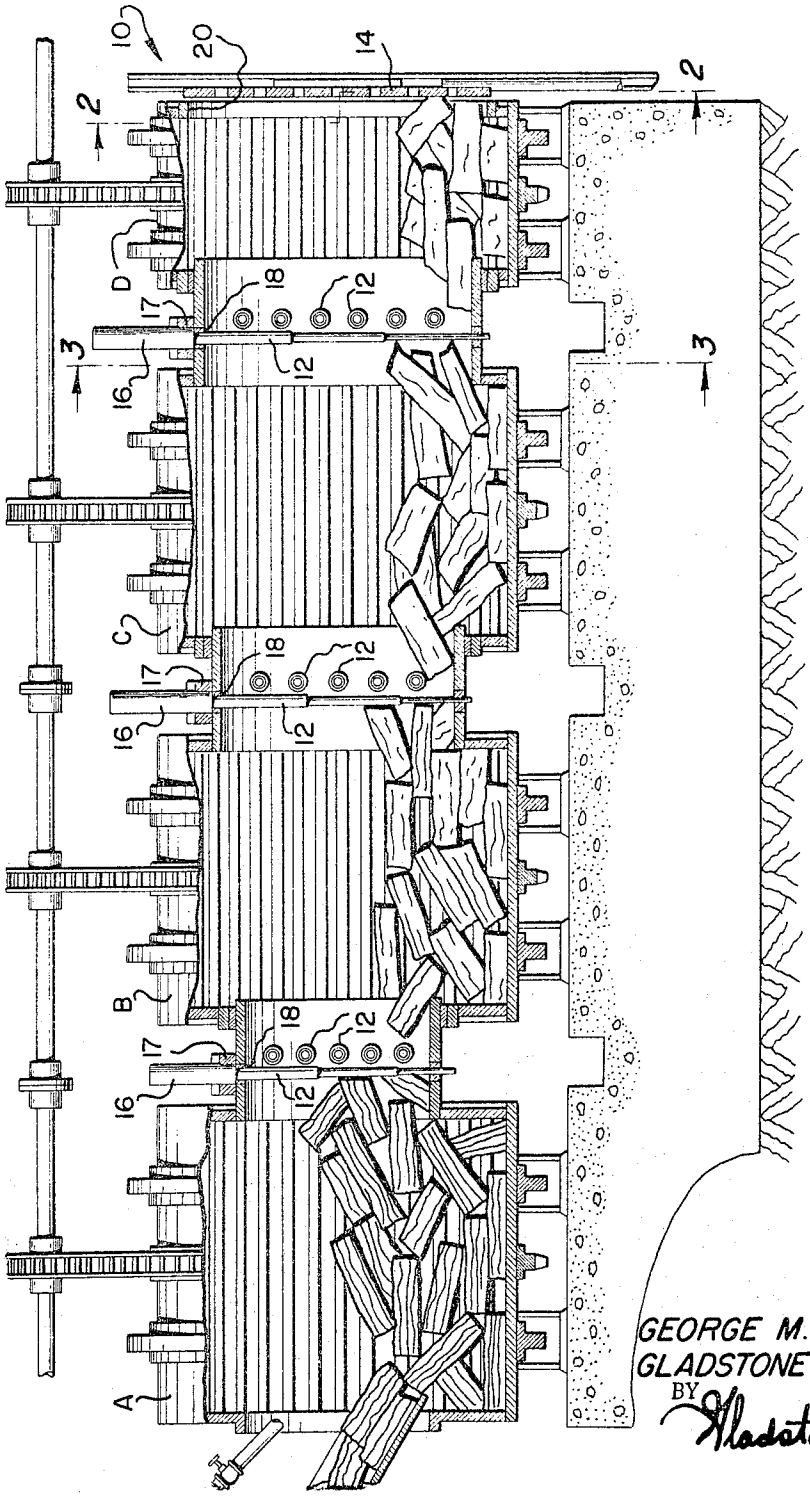


FIG. 1

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Filed April 29, 1964 3 Sheets-Sheet 2

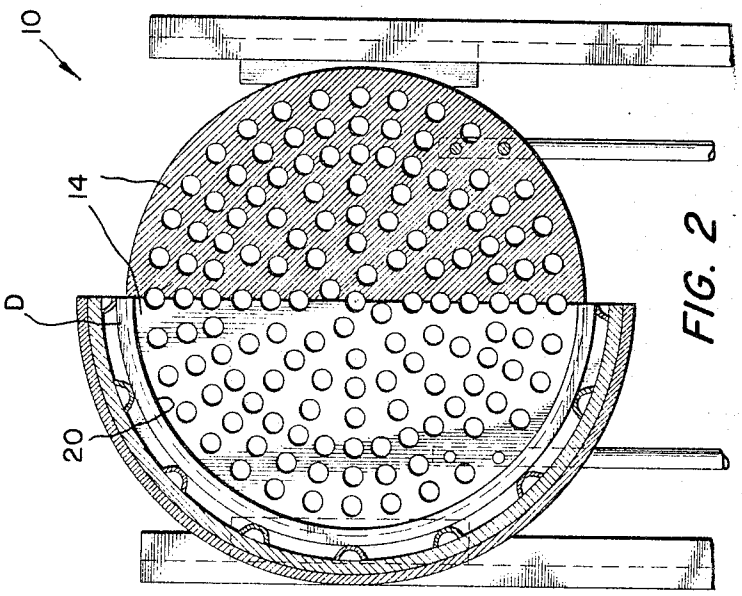


FIG. 2

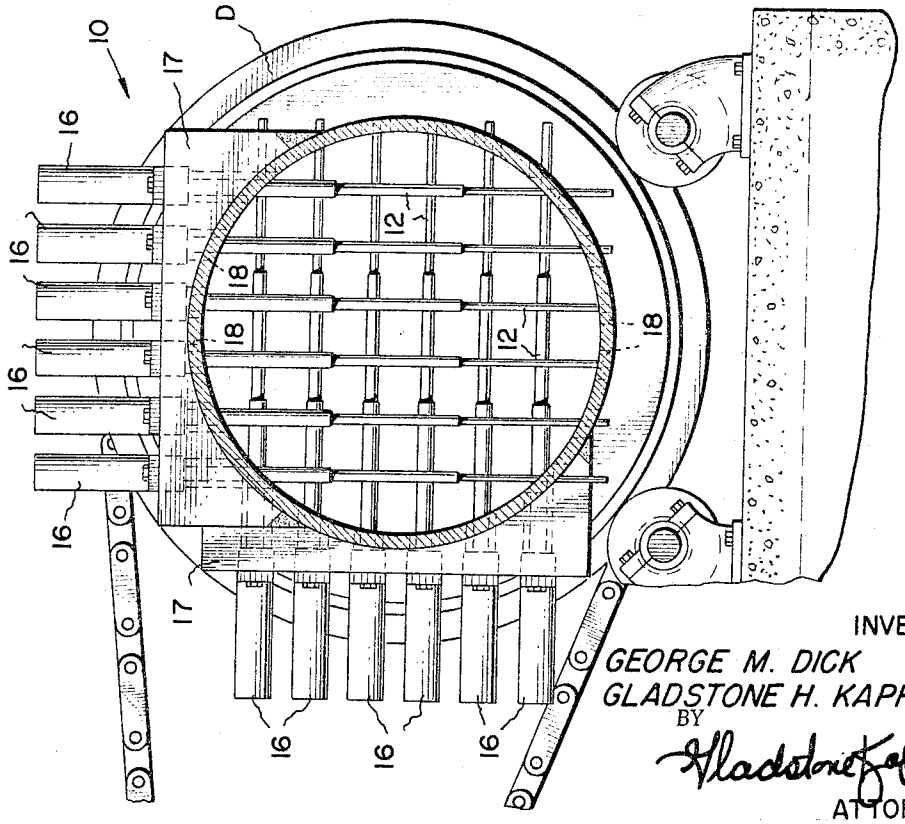


FIG. 3

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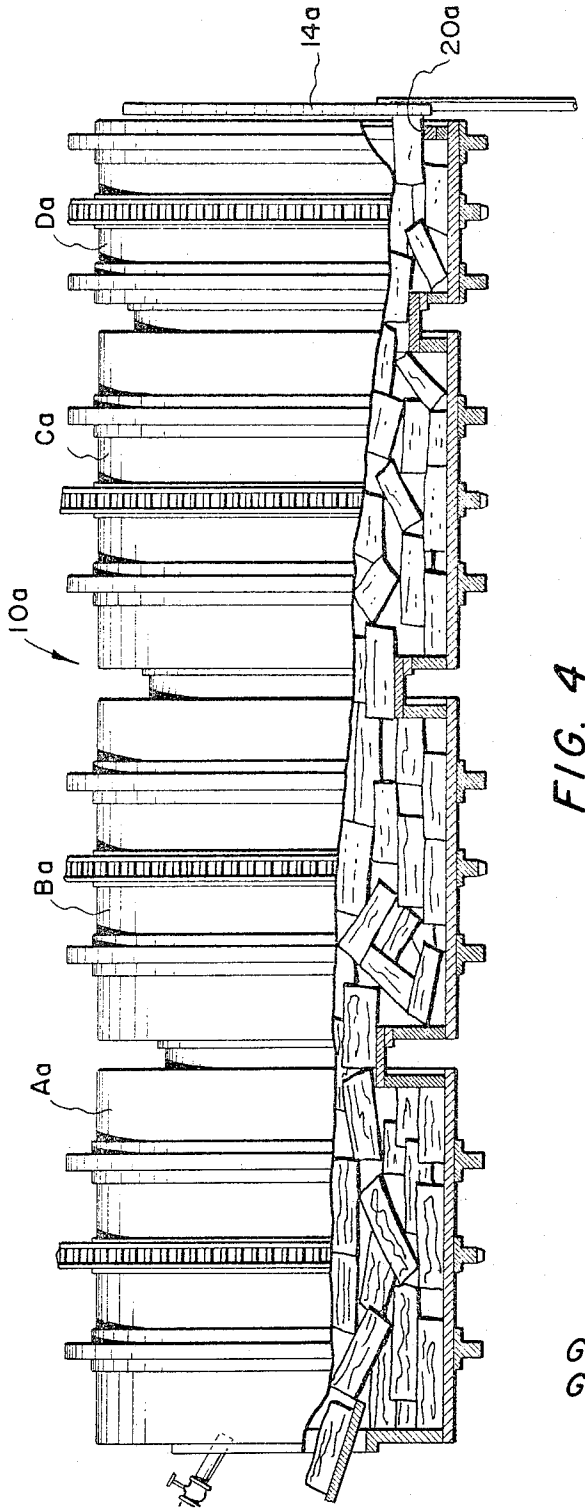


FIG. 4

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3,272,245

BARKING DRUM

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Filed Apr. 29, 1964, Ser. No. 363,515
15 Claims. (Cl. 144—208)

This invention relates to barking drums.

Conventional barking drums generally do not permit a variance in the length of the time period during which logs being debarked by the barking drums remain in the drums. Thus, frequently these conventional barking drums discharge logs before they are completely debarked. These unbarked logs, which often still retain relatively large quantities of unremoved bark, must be sorted from the fully debarked logs and reprocessed by the barking drums for the removal of their retained bark. This sorting and reprocessing of the logs is undesirable in that it adds additional expense to the debarking process.

It is the general object of the present invention to avoid and overcome the foregoing and other difficulties of and objections to prior art practices by the provision of a barking drum including means for controlling the length of the time period during which logs remain in the drum are subjected to the debarking process.

It is a further object of the present invention to provide a more efficient barking drum.

It is another object of the present invention to provide a barking drum that removes substantially all of the bark from the logs that pass therethrough.

The aforesaid objects of the present invention, and other objects which will become apparent as the description proceeds, are achieved by providing an improved barking drum for debarking logs. This improved barking drum has a drum body which preferably is a cylindrical shell having a plurality of sections for receiving the logs. In addition, means are provided for controlling the length of time that the logs stay in the sections of the cylindrical shell.

For a better understanding of the present invention reference should be had to the accompanying drawings, wherein like numerals of reference indicate similar parts throughout the several views and wherein:

FIG. 1 is a longitudinal view partially broken away and in section of a barking drum including an embodiment of the present invention;

FIG. 2 is a sectional view along the line **2—2** of FIG. 1 in the direction of the arrows;

FIG. 3 is a sectional view along the line **3—3** of FIG. 1 in the direction of the arrows;

FIG. 4 is a longitudinal view similar to FIG. 1 illustrating an alternative embodiment of the invention.

With specific reference to the form of the present invention illustrated in the drawings, and referring particularly to FIG. 1, a barking drum is indicated generally by the reference numeral **10**. The barking drum **10** can be any type of barking drum such as the types illustrated and described in the United States patent application of George M. Dick, Serial No. 109,310, filed on May 11, 1961 and issued on June 9, 1944, as United States Patent No. 3,136,345 and as further illustrated in United States Patent No. 1,228,374 issued to J. J. Ross on May 29, 1917. The barking drum **10** is of the rotary type wherein the rotation of the barking drum **10** is utilized to cause the logs in the drum **10** to abrade against each other, and, thus, cause the bark to be removed from the logs. The drum **10** can be rotated any number of well known ways such as by a chain drive assembly as shown in the Ross Patent No. 1,228,374 or by direct gear drive as shown in the

afore-mentioned George M. Dick patent application Ser. No. 109,310 filed on May 11, 1961.

The barking drum **10**, as shown in FIG. 1, comprises four section A, B, C and D but it will be understood that the present invention can be practiced in a barking drum having any given number of sections. In order to retain the logs in the various sections A, B, C and D of the barking drum **10** for controlled periods of time, retaining means such as the rods **12** and end screen plate **14** are provided. The rods **12** and the end screen plate **14** are positioned at the end of each of the sections A, B, C and D, respectively, and form a screen to prevent the flow of the logs from section to section while allowing the free flow of the bark through the drum **10**. Thus, it can be seen that the logs are maintained in the debarking process for longer controlled periods of time, thus, attaining more complete debarking.

The rods **12** can be positioned in the drum **10** by any number of well known methods such as by a series of extension cylinders **16** disposed on a frame **17** as shown in FIG. 3. The rods **12** are disposed on the extension cylinders **16** and are thereby inserted and withdrawn in and out of the drum **10** as required simply by the press of a button. The cylinder frame **17** is attached to the drum **10** and rotates therewith. The cylindrical surface of the drum **10** is, of course, provided with openings **18** to receive and support the rods **12**.

It will be understood that the rods **12** are inserted and withdrawn in and out of the drum **10** to vary the flow of the logs from section to section of the drum **10**. The flow of the logs in this manner can be varied from zero flow to the maximum flow permissible by the openings of the various sections.

The rate of discharging of the logs from the drum **10** is controlled by means of the screen plate **14** that is positioned immediately adjacent the discharge opening **20** of the drum **10**. The screen plate **14** is raised and lowered by any number of well known methods such as a chain hoist assembly (not shown) to vary the size of the discharge opening **20** to control the rate of discharge of the logs from the drum **10**.

It will, thus, be understood that the length of time the logs are maintained in the debarking process can be fully controlled to achieve more complete and efficient debarking.

ALTERNATIVE EMBODIMENTS

It will be understood by those skilled in the art that, alternatively as shown in FIG. 4, only the screen plate **14*a*** positioned adjacent the discharge opening **20*a*** of the drum **10*a*** is utilized to control the size of the discharge opening **20*a*** and thus control the length of time the logs are maintained in the debarking process. The screen plate **14*a*** can be raised and lowered by a chain hoist assembly (not shown) or an elevator assembly (not shown) or by any other well known means.

It will be recognized by those skilled in the art that the objects of the present invention have been achieved by providing a barking drum having control of the time the logs are subjected to the debarking process thus achieving complete and efficient debarking.

While in accordance with the present statutes preferred and alternative embodiments of the present invention have been illustrated and described in detail, it is to be particularly understood that the invention is not limited thereto or thereby.

We claim:

1. A barking drum for debarking logs, comprising:

(a) a cylindrical shell for receiving said logs;

(b) said cylindrical shell being provided with at least two sections; and

(c) means for positively controlling the length of time that said logs stay in each of said sections.

2. A barking drum for debarking logs, comprising:
(a) a cylindrical shell for receiving said logs;
(b) said cylindrical shell being provided with at least two sections with each section having a discharge opening; and
(c) means for positively controlling the size of each of said drum section discharge openings.

3. A barking drum for debarking logs, comprising:
(a) a cylindrical shell for receiving said logs;
(b) said cylindrical shell being provided with at least two sections with each section having a discharge opening; and
(c) screen means disposed inside said cylindrical shell at each of said discharge openings for positively controlling the length of time that said logs stay in each of said sections.

4. A barking drum for debarking logs, comprising:
(a) a cylindrical shell for receiving said logs;
(b) said cylindrical shell being provided with at least two sections; and
(c) rods disposed between said sections and extending into said cylindrical shell perpendicular to the longitudinal axis of said cylindrical shell to form a screen, for positively controlling the length of time that said logs stay in each of said sections.

5. A barking drum for debarking logs, comprising:
(a) a cylindrical shell for receiving said logs;
(b) said cylindrical shell being provided with at least two sections with each section having a discharge opening;
(c) means for rotating said cylindrical shell; and
(d) rods disposed between said sections in said discharge opening and rotating therewith and extending into said cylindrical shell perpendicular to the longitudinal axis of said cylindrical shell for positively controlling the length of time that said logs stay in said cylindrical shell.

6. The barking drum according to claim **5** wherein said rods are reciprocable to vary the size of each of said discharge openings.

7. A barking drum for debarking logs, comprising:
(a) a drum body;
(b) said drum body having an inlet section for receiving logs and a discharge section for discharging logs;
(c) said discharge section of said drum body being connected to said inlet section thereof such that logs received by said inlet section are delivered to said discharge section; and
(d) means for controlling the length of the time period during which logs received by said inlet section are retained within said drum body before being delivered to said discharge section.

8. A barking drum according to claim **7**, wherein said controlling means comprises means disposed within said drum body intermediate said inlet section and said discharge section for controlling the flow of logs into said discharge section from said inlet section.

9. A barking drum according to claim **8**, wherein said means disposed intermediate said inlet section and said discharge section is adjustable to vary the flow of logs to said discharge section.

10. A barking drum according to claim **8**, wherein means are provided for controlling the length of the time period during which logs are retained in said discharge section before being discharged thereby from said drum body.

11. A barking drum according to claim **10**, wherein said means for controlling the length of the time period during which logs are retained in said discharge section comprises screen means for retaining logs within said discharge section.

12. A barking drum according to claim **8**, wherein said means disposed within said drum body intermediate said inlet section and said discharge section comprises screen means.

13. A barking drum according to claim **8**, wherein said means disposed within said drum body intermediate said inlet section and said discharge section comprises a plurality of rods extending transversely through said drum body.

14. A barking drum according to claim **13**, wherein a means is provided for adjusting said rods to control the delivery of logs to said discharge section.

15. A barking drum according to claim **14**, wherein said adjusting means is operatively connected to said rods to longitudinally urge said rods into and out of said drum body.

References Cited by the Examiner

UNITED STATES PATENTS

1,463,887 8/1923 Guettler ---------- 144—208

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