

March 23 , 1926.

1,577,762

P. C. SCHAANNING

MAGAZINE WOOD PULP GRINDER

Filed Sept. 23, 1924

2 Sheets-Sheet 1

Fig. 1.

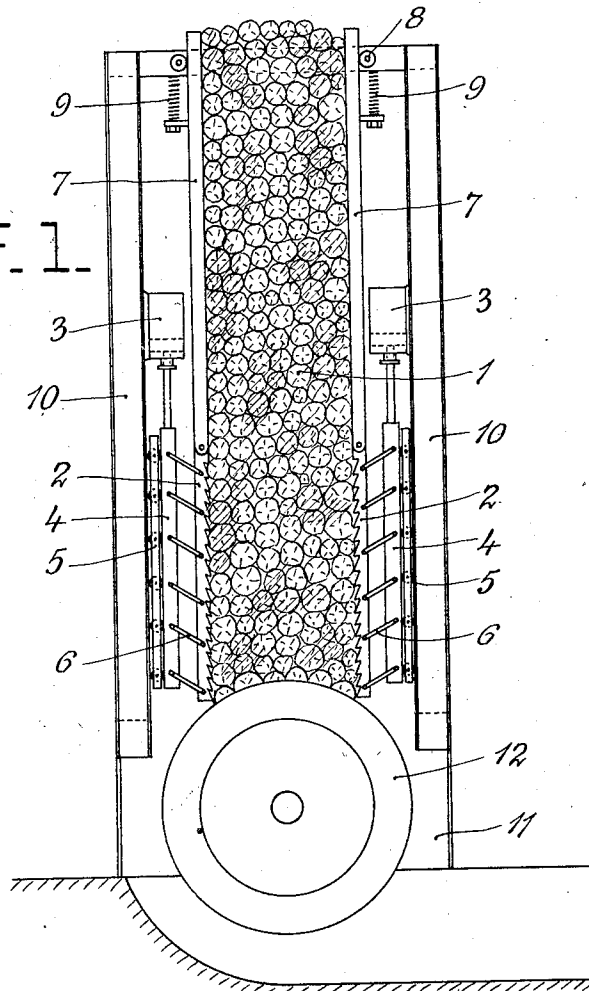
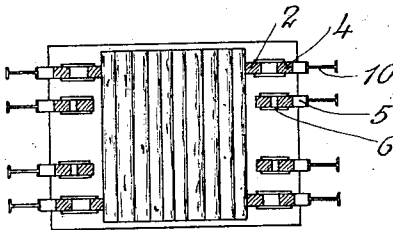


Fig. 2.



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Fig. 3.

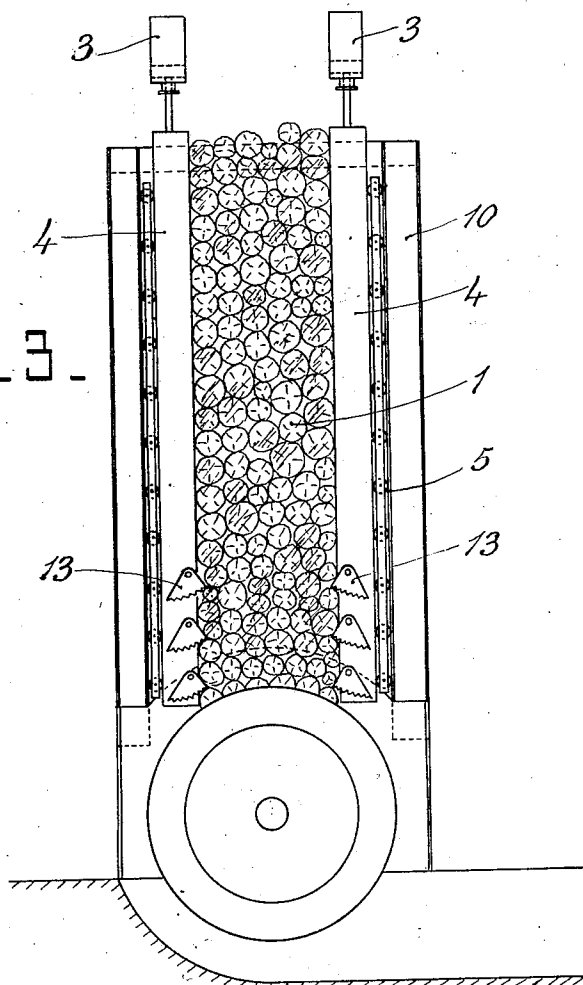
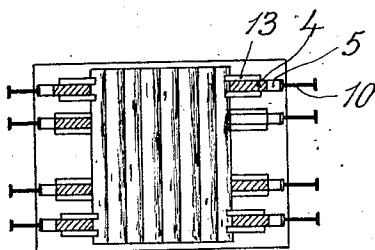


Fig. 4.



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UNITED STATES PATENT OFFICE.

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MAGAZINE WOOD-PULP GRINDER.

Application filed September 23, 1924. Serial No. 739,244.

To all whom it may concern:

Be it known that I, PEDER CHRISTIAN SCHAANNING, a subject of the King of Norway, residing at Villa Aurvang, Vestre Holmen, near Christiania, Norway, have invented certain new and useful Improvements in Magazine Wood-Pulp Grinders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

The present invention relates to a continuous wood pulp grinder of the kind where the wood is automatically fed towards the grindstone through a shaft serving as magazine.

According to the present invention the side walls of the shaft which are parallel to the logs comprise beams, which are adapted to be reciprocated towards and away from the grindstone. Said beams are also adapted to be pressed against the column of wood logs in a direction perpendicular to the feeding movement thereof in order to obtain a firm grip on the column. The reciprocating beams may also be provided with members which are adapted to exert a pressure against the column of wood logs during the movement of the beams towards the grindstone, whereas said pressure is automatically released during the backwards movement of the beams.

Two or more sets of reciprocating beams may be provided, one set moving forwards as the other set moves in the opposite direction.

Each feeding beam may be made in one piece or comprise several pieces hinged together.

On the drawing:

Fig. 1 is a longitudinal sectional view of the grindstone with continuous feeding according to the present invention.

Fig. 2 is a cross section thereof.

Figs. 3 and 4 are similar sectional views of another form of the invention.

On Fig. 1 1 is a magazine and 2 and 7 are the beams which form the reciprocating walls of the magazine. 3 are pressure cylinders with piston and piston rods 4. 5 are roller bearings for taking up the back pressure on the piston rods 4. The piston rods

4 are connected to the lower hinged members 2 of the pressure beams by means of links 6. The upper parts 7 of the reciprocating beams are guided by means of rollers 8. 10 indicates the frame-work, from the upper part of which the beams 7 are suspended by means of helical springs 9. 11 is the grindstone-frame and 12 the grindstone. When rods 4 are retracted by means of the pistons in cylinders 3, they will take beams 2 with them by means of the link connections 6, at the same time releasing the pressure of said beams owing to the inclined position of the links 6. When moving forwards the rods 4 by means of links 6 will exert a pressure in an inward and downward direction on the column of logs, pressing the same against the surface of the grindstone.

As seen on Fig. 2 there are two pair of beams on each side of the magazine. These beams are operated in such a manner that one pair of beams on each side moves against the grindstone, and another pair is retracted therefrom at the same time.

According to the form illustrated on Figs. 3 and 4 the piston rods 4 form the pressure beams and are provided with pivoted tooth segments 13 having an eccentric tooth surface. These segments 13 are automatically pivoted so as to be pressed inwards and grip the logs, when the rods 4 are moved against the grindstone while their grip on the wood logs is automatically released during the movement of the rods away from the grindstone.

Claims:

1. In a magazine wood pulp grinder, a rotating grindstone, a shaft-shaped magazine for the logs to be ground, two sets of longitudinal members forming at least a part of the walls of the magazine, log-gripping means associated with said members, said members and the log-gripping means being arranged to grip the sides of the logs in the magazine and means to reciprocate the two sets of members so that those of one set move toward the grindstone while those of the other set move away from it and vice versa.

2. In a magazine wood pulp grinder, a rotating grindstone, a shaft-shaped magazine for the logs to be ground, two sets of longitudinal bars forming at least a part of the walls of the magazine, log-gripping means associated with said bars, said bars

and the log-gripping means being arranged to grip the sides of the logs in the magazine, and means to reciprocate the two sets of bars so that those of one set move toward the grindstone while those of the other set move away from it and vice versa.

3. In a magazine wood pulp grinder a rotating grindstone, a shaft shaped magazine for the wood logs to be ground, longitudinal bars forming part of the walls of said shaft, means on said bars for gripping

the wood logs, means for reciprocating the bars in the longitudinal direction of the shaft, reciprocating members outside said bars, links connecting said reciprocating members with said bars, gripping means on said bars for engaging the wood logs, when moving in the direction of the grinding surface.

In testimony that I claim the foregoing as my invention, I have signed my name.

PEDER CHRISTIAN SCHAANNING.