July 15, 1958 T. G. QVEFLANDER 2,843,278

METHOD OF FEEDING WOOD INTO CONTINUOUSLY OPERATING GRINDERS FOR THE PRODUCTION OF WOOD PULP

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Fig. 1.

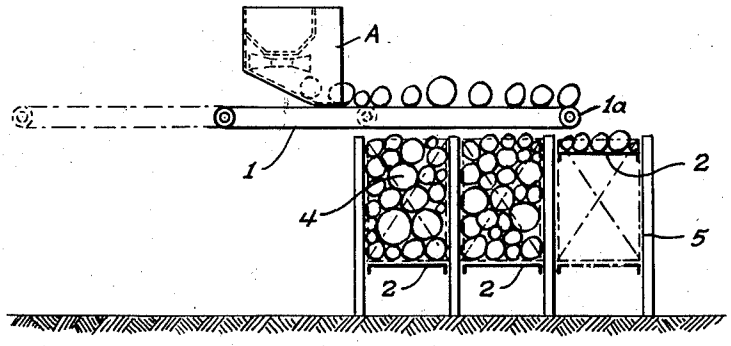
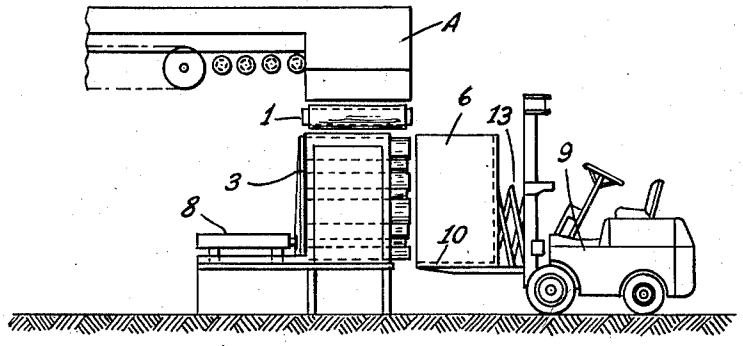


Fig. 2.



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Fig. 3.

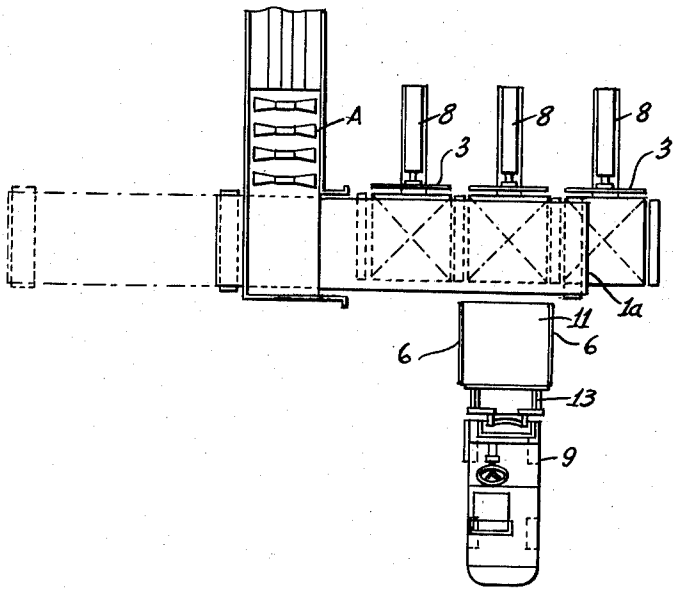
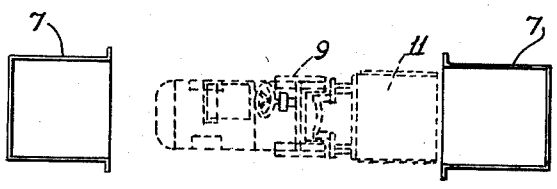


Fig. 4.



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METHOD OF FEEDING WOOD INTO CONTINUOUSLY OPERATING GRINDERS FOR THE PRODUCTION OF WOOD PULP

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Application July 20, 1955, Serial No. 523,242

4 Claims. (Cl. 214—152)

This invention relates to a method of and arrangement for feeding wood into continuously operating grinders for the production of wood pulp and the invention has for its object to lighten the heavy manual labour of feeding wood and thereby to reduce the unnecessarily great demand on labour heretofore required for attendance of grinders.

The method of the invention is chiefly characterized in that the wood brought to the grinding mill for feeding into the grinders is first fed into a plurality of collecting pockets advantageously located in close proximity to each other and then is, subsequent to the formation of a unit load of desired quantity in one or more of the said pockets, withdrawn therefrom while wood is being fed into one or more empty pockets, that on said withdrawal a slight increase in width of unit load is allowed for facilitating withdrawal of unit load and that the unit load is then transported and pushed into the magazine of a grinder with slightly greater magazine width that the width of the unit load increased on withdrawal, advantageously as soon as the wood previously fed into the magazine has been consumed to a level corresponding to that for feeding the unit load transported in front of the said magazine.

The invention will be described more in detail in the following with reference to the accompanying drawing which illustrates by way of example an arrangement embodying the invention and adapted for carrying out the method of the invention.

Fig. 1 illustrates the collecting pockets adapted to be used in the arrangement of the invention, as viewed from the open side thereof.

Fig. 2 is an end view showing a truck driven in front of one of the collecting pockets.

Fig. 3 is a top plan view of the arrangement according to Fig. 1 and Fig. 2 and

Fig. 4 shows the magazines of two grinders with a truck in position for pushing a unit load into one of the magazines.

According to the drawing it is assumed that the wood to be ground is supplied to the mill by suitable means A arranged above the pockets and shown in Figs. 1–3, it being understood that the said means does not form any part of the invention.

From the supply means A the wood falls onto a conveyor means **1** arranged at the feeding end **1***a* thereof to feed wood in the desired order into any of the collecting pockets **5** arranged immediately underneath the conveyor means **1** and in close proximity to each other. According to the invention this is achieved by mounting the conveyor means **1** for movement and adjustment longitudinally for feeding wood into the respective pockets **5**. The conveyor means **1** can also, when so desired, be mounted for reciprocating movement over the individual pockets while feeding of wood is going on and the bottom plates **2** of the collecting pockets are arranged by some suitable means to descend or sink from an initial level near the top of the pockets according to the wood amount fed thereinto and thereby forestall oblique falling of blocks of wood. The open side wall of

the pockets **5** shown in the drawing can naturally be arranged to be closed during the feeding period and opened on withdrawing the unit load fed e. g. into the pocket to the left of Fig. 1 and designated with reference numeral **4**. For withdrawing the unit load the rear wall **3** of each individual pocket **5** is mounted to move towards the fore wall of the pocket, by hydraulically guided piston means **8** schematically shown in the drawing, so the load **4** can be pushed onto a truck or other suitable transport means **9** driven near the respective pocket and be transported to and fed into the magazine **7** (Fig. 4) of a grinder, not shown, advantageously as soon as the wood previously fed into the magazine has been consumed to a level corresponding to the discharge level **10** of the truck **9**. For receiving the load the truck is provided with a transporting pocket **11** having side walls **6** which form a pocket slightly wider in width than the width of the collecting pockets **5** while the width of the magazine **7** is arranged slightly wider than the width of the truck pocket **11** so the unit loads can without difficulty be pushed out of the truck by some suitable means such as that shown at **13** and shot into the respective grinder.

It is to be understood that the supply of wood to the conveyor means **1** should be arranged regulatable according to how the feeding work progresses while taking into consideration possible variations and stagnations.

I claim:

1. The method of feeding wood to the grinder position for the production of wood pulp which comprises, feeding logs of substantially the same length into the upper ends of collecting pockets, building up vertical stacks of said logs in said pockets to a desired height while rigidly confining the sides of said stacks to a desired width and, on the filling of said first pocket, forcing the wood out of the same longitudinally into a second pocket, carried on a transport truck, and of slightly greater width than said first pocket while maintaining said wood in said vertically stacked relation and rigidly confining said sides of said stack in said second pocket, transporting said wood while in said second pocket and bringing the same into alignment with a third pocket, forming the entrance to a grinder, and of slightly greater width than said second pocket and upon achieving said alignment, forcing said wood from said second pocket longitudinally into said third pocket as soon as said third pocket is in a position to receive the same.

2. The method as in claim 1 and including at the outset selectively feeding said logs into one of a plurality of collecting pockets.

3. The method as in claim 1 and including, movably supporting the bottoms of said collecting pockets for vertical movement within said pockets, feeding said logs into said pockets at the top thereof and moving said bottoms downwardly in response to the logs fed into said pockets until a unit load is formed.

4. The method as in claim 1 and including forcing said wood out of said collecting pockets in the form of complete stacks.

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