W. E. DARROW.

PULP DISTRIBUTER.

APPLICATION FILED MAY 5, 1913.

1,078,775. Patented Nov. 18, 1913.

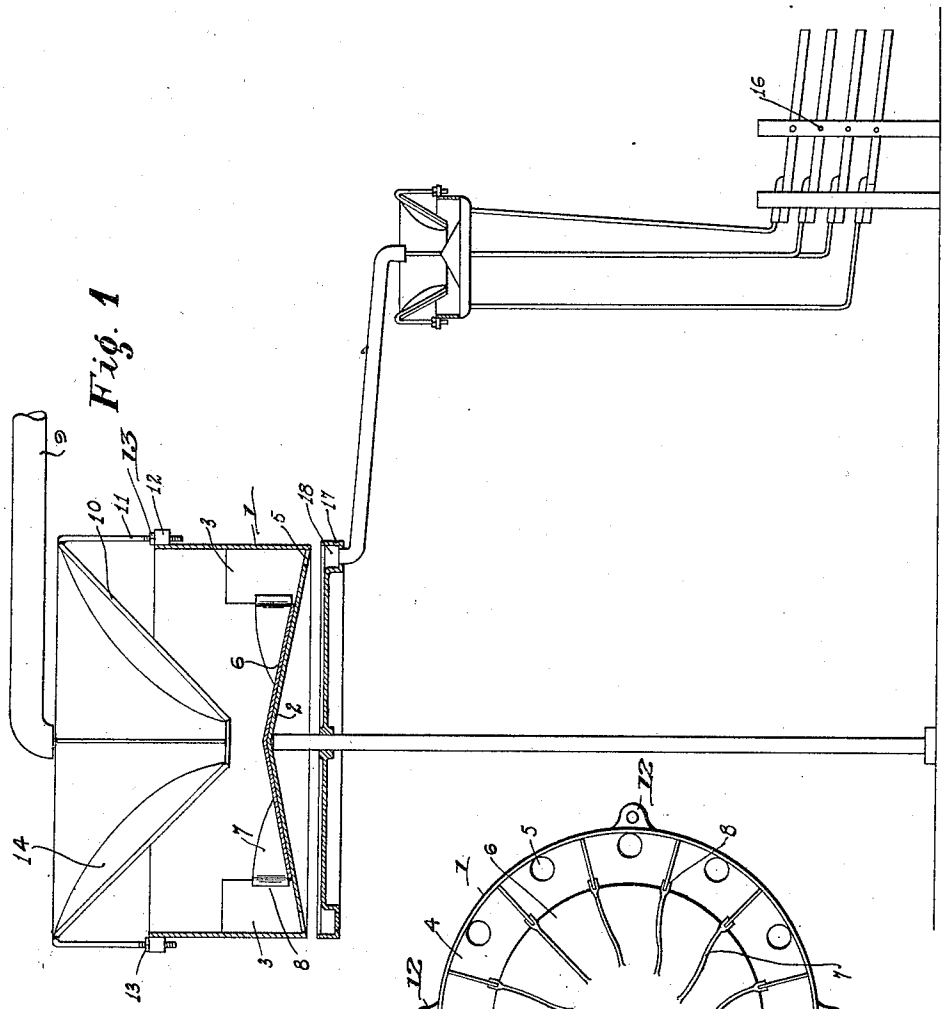


Fig. 1

Fig. 2

Witnesses

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PULP-DISTRIBUTER.

1,078,775. Specification of Letters Patent. Patented Nov. 18, 1913.

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To all whom it may concern:

Be it known that I, WILTON E. DARROW, a citizen of the United States, residing at Sutter Creek, in the county of Amador, State of California, have invented certain new and useful Improvements in Pulp-Distributers; and I do declare the following to be a clear, full, and exact description of the same, 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 the characters of reference marked thereon, which form a part of this application.

This invention relates to improvements in mineral slime and pulp handling machinery and particularly to a distributer for such pulp, the object of the invention being to produce a distributer which will equally distribute the pulp to various points such as delivering to a series of concentrating tables or a series of rotating or stationary concentrating tables, trays or decks shown in Patent No. 878,879 and Patent No. 906,205. When used in connection with said last named patents the invention also embodies a shut off means whereby pulp may be shut off from part of the distributing compartments of the distributer and water admitted thereto for the purpose of washing the pulp at predetermined points as provided for in said patent and in similar patents having predetermined pulp receiving points and predetermined washing points.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purposes for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of the parts as will fully appear by a perusal of the following specification and claims.

On the drawings similar characters of reference indicate corresponding parts in the several views.

Figure 1 is a sectional view of my improved distributer showing a fragmentary portion of the structure displayed in Patent No. 878,879 to show the application thereto. Fig. 2 is a top plan view of my improved distributer.

Referring now more particularly to the characters of reference on the drawings, the numeral 1 designates the main receptacle of the distributer which is preferably circular in form and provided with a conical bottom 2.

Projecting inwardly in a radial manner from the outer circumference of the member 1 are a plurality of divisional vanes 3 dividing the distributer into a plurality of compartments 4. Each compartment being provided at its lower end with a discharge outlet 5.

The numeral 6 designates a false bottom on the bottom 2 which projects to the inner edges of the divisional vanes 3 and is provided with corresponding upwardly projecting vanes 7 having mortised ends 8 to fit over the inner edges of the vanes 3 to hold the same and the false bottom 6 in position. In practice, the pulp is conveyed through a pipe 9 and discharges into a funnel-shaped receptacle 10 adjustably mounted on the member 1 by means of rods 11 projecting into slotted members 12 on said members 1 and having adjustment nuts 13. By this adjustment means the flow of the pulp through the funnel shaped member is controlled to cause it to always lie under a certain weight pressure to cause it to flow evenly into the distributer. The inner surface of the member 10 is provided with a plurality of projecting vanes 14 to prevent the swirl of the pulp as it is discharged into said member 10. The pulp then discharges through the bottom of the member 10 into the receptacle 1 and on the false bottom 6 and is discharged by the vanes 7 and 3 into the various compartments where it passes out through the holes 5 to any suitable conveying or further distributing mechanism for the purpose of getting it to concentrating tables, trays or decks.

If designed for use with any concentrating mechanism having predetermined points for receiving pulp and other predetermined points for receiving water, examples of which are shown in the above mentioned Patents, Nos. 878,879 and 906,205, then of course it becomes necessary that at some point in said distributer no pulp be received but water received instead and to that end I have devised the false bottom 6 having the vanes 7, which bottom and vanes can be removed and a corresponding false bottom interposed which will have a shut off or division wall 15 between certain ones of the vanes 3, which wall will have a desired number of vanes to divide the pulp into a

smaller number of equal divisions while the division wall will prevent pulp from distributing into the compartments 4 so shut off. Then with the operation of the device, the water can be supplied to the compartments 4 thus shut off and then pass on to the concentrating table or decks. As an example of this, I have shown in Fig. 1, a brief sketch or the concentrating structure shown in Patent No. 878,879 as at 16. In this form of structure the distributer 1 would remain stationary and the auxiliary distributer 17 would pass thereunder and the pulp would be received from the open compartments 4 and water received from the closed compartments 4. Hence, as the member 17 revolves under the distributer 1 it will receive in its compartments 18 pulp from the pulp distributing compartments 4 and water from the water distributing or closed compartments 4 and hence, with the revolution of the members 17, the trays 16 will receive pulp a portion of the time and water the balance of the time as is necessary for the concentrating operation.

If the device is applied to a structure similar to that shown in Patent No. 906,205 in which the concentrating table revolves, then I would provide the member 1 which revolves with the tables and the member 17 would be held stationary and then the same operation would take place, namely, part of the time the revolving concentrating trays would receive the pulp and then when the shut off trays carry the water discharged on such trays they would be suitably washed. Similarly, the distributer could be adapted for use in any or all forms of concentrating tables and the distributer could have as many compartments open to receive pulp as desired and as many closed to receive water, as desired.

If the distributer was made for general use and a lesser or greater number of concentrating tables, trays or decks were to be used, than the holes 5 provided for, then the number of active discharge holes 5 could be controlled by the insertion of the false bottom 6 having a cut off 15 adapted to cut off the required number of compartments 4 as can readily be seen.

From the foregoing description it will be radily seen that I have produced such a device as substantially fulfils the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice, such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention.

Having thus described my invention what I claim as new and useful and desire to secure by Letters Patent is:—

1. A device of the character described comprising a receptacle having a conical bottom, a plurality of inwardly projecting vanes in said receptacle, a false bottom in said receptacle, said false bottom having vanes equally spaced and curved to unite with and form extensions of a number of said first named vanes, as described.

2. A device of the character described comprising a receptacle having a conical bottom, inwardly projecting vanes in said receptacle, a false bottom in said receptacle, said false bottom having a plurality of equally spaced vanes adapted to unite with and form extensions of a part of said first named vanes, said false bottom having also a shut off wall adapted to separate said false bottom from a plurality of compartments formed by said first namel vanes and to divide the pulp equally to the other compartments.

3. A device of the character described comprising a receptacle, said receptacle being divided into equal compartments by inwardly projecting vanes, a false bottom in said receptacle divided into equal spaced compartments adapted to register with part of the compartments in said receptacle, said false bottom having a division wall adapted to separate part of its compartments from part of the compartments in said receptacle, as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILTON E. DARROW.

Witnesses:
STEPHEN N. BLEWETT,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."