

J. H. WALLACE.
PULP MACHINERY.
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977,147.

Patented Nov. 29, 1910.

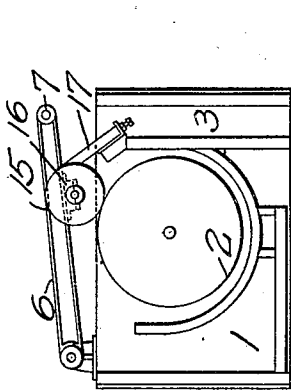


Fig. 1.

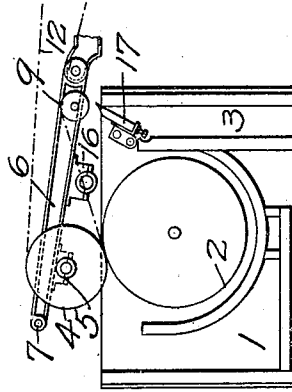


Fig. 4.

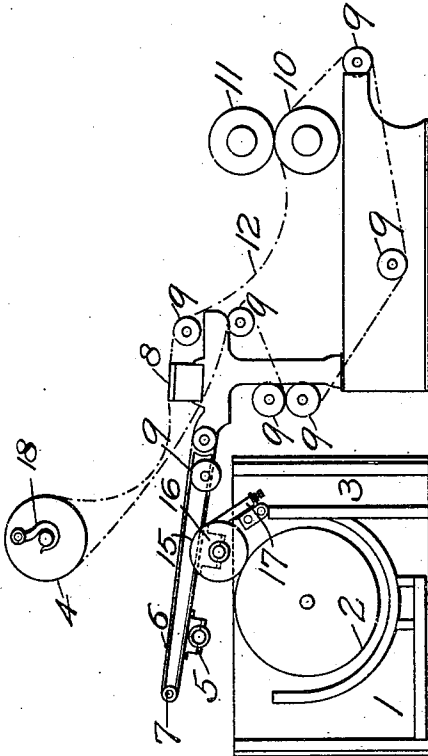


Fig. 3.

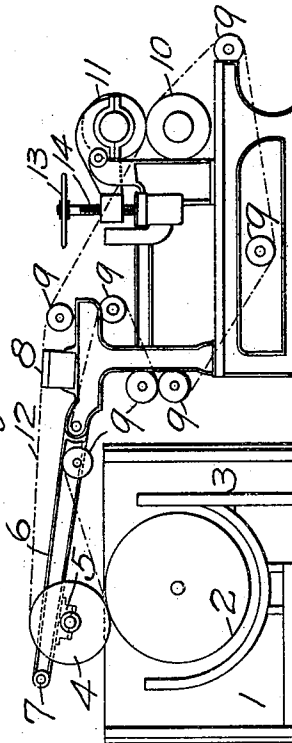


Fig. 2.

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PULP MACHINERY.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH H. WALLACE, a citizen of the United States, and resident of New York, borough of Manhattan, county and State of New York, have made a new and useful Invention in Pulp Machinery, of which the following is a specification.

My invention is directed particularly to an improvement which is applicable to what is known in the art of pulp making as "wet machines" and it has for its object, to provide means for permitting of the use of a single pulp vat, rotatable cylinder mold, and discharge chamber, as either a Standard wet machine, or a Standard feltless wet machine, and I accomplish this result by the mechanism hereinafter described and particularly claimed at the end of this specification.

For a full and clear understanding of my invention, such as will enable others skilled in the art to construct and use the same, reference is had to the accompanying drawings in which the numerals of reference represent like parts wherever used, all of the figures representing the ends of the tanks as being removed so that the structure of the parts sustained therein is seen in end elevational view.

Figure 1 represents what is known in the art as a "Standard feltless wet machine;" and Fig. 2 a "Standard wet machine." Figs. 3 and 4 represent the manner of applying my invention to the two types of machines illustrated in Figs. 1 and 2 respectively.

Referring first to Fig. 1, 1 represents the usual vat into which the liquid pulp is delivered; 2 the drum or cylinder mold provided with the usual covering in the nature of a fine wire mesh upon which the pulp is collected in the form of a sheet, and 3 the pulp discharge chamber; 15 being the couch roll or coucher journaled in journal bearings 16 upon the under side of an adjustable couch-arm 6 pivotally supported upon the top of the vat.

7 is a weight adjustably secured to the outer end of the couch-arm 6 which may be supplanted by a spring secured to the arm and to the top of the vat, the function of said adjustable parts being to regulate the pressure of the couch-roll 15 upon the cylinder mold 2.

17 is a doctor pivotally secured at the top of one side of the pulp discharge chamber 3

so that the sharp edge thereof will remove the pulp from the couch-roll 15.

Referring now to Fig. 2 the parts 1 to 7 are the same as disclosed in connection with Fig. 1, except that the couch-roll in this instance numbered 4 is of larger diameter than the couch-roll 15, Fig. 1, is journaled in bearings 5, and rests normally on the mold 2 at a point farther from the pivot point of the couch-arm 6 and from the chamber 3 than did the couch-roll 15 in Fig. 1. In this form (known as the Standard wet machine) 9, 9, 9, etc. represent felt supporting rolls journaled upon the base and the couch-arm and one of the upright supports of the machine, and adapted to carry a fibrous felt 12 of the usual nature upon the upper surface of which the leaf pulp is carried, passing over a suction box 8 provided with the usual suction pump, not shown, but adapted to draw the water out of the pulp carried by the felt as it advances over said box and ultimately passes out between the press rolls 10—11, which rolls are provided with the usual adjustable screw 14 and hand operating wheel 13 for regulating the pressure upon the pulp and carrying felt.

My improvement contemplates the use of a single adjustable couch-arm 6 as shown in Figs. 3 and 4 in such manner that the apparatus shown in Figs. 1 and 2 may be utilized with either of two couch rolls 4 or 15, as described. To this end there are two sets of journal bearings 5 and 16 detachably secured to the under-surface of the couch-arm 6, and either of two couch-rolls 4 or 15 may be utilized as clearly shown.

In Fig. 3 there are shown hooks 18 secured to the ceiling or some part of the building in which the machine is located for suspending that one of the two couch-rolls which is not in use while the other is being used. An examination of Fig. 3, therefore, clearly discloses my improved means for utilizing the apparatus as a "Standard feltless wet machine" in which the pulp is deposited in the discharge chamber 3; while Fig. 4 discloses the apparatus as adapted for a "Standard wet machine" the couch-roll 4 in the first instance as shown in Fig. 3 being removed and hung upon the hooks 18, and the couch-roll 15 in the second instance, as shown in Fig. 4, removed with the couch-roll 4 in operation.

It will be noted that my improvement embraces, therefore, a couch-roll arm pro-

vided with two sets of journal bearings and two rolls for adapting the same for use with either type of machine and that this couch-roll arm is pivotally supported in each instance at some point independent of the vat, thus adapting said vat and its contained parts for use in either type of machine as disclosed.

I do not limit my invention to the specific device shown and described for effecting the result sought, as the same may obviously be departed from as to details and still come within the scope of my claims hereinafter made, the essence of the invention lying in the adaptability of a couch-arm with two couch-rolls for use with two different types of machines, thereby materially decreasing the expense as to the building of machines, and also enabling one to use less floor space than was possible prior to my invention.

Having thus described my invention what I claim and desire to secure by Letters Patent of the United States is—

1. Means for enabling the vat and drum or cylinder of a Standard feltless wet machine to be utilized in connection with a Standard wet machine, embracing a couch-arm provided with two sets of journal bearings and two detachable couch-rolls, said

journal bearings being located at different distances from the point of support of the couch-arm.

2. A couch-arm provided with two couch-rolls located at different distances from the stationary end thereof, said rolls being detachable therefrom.

3. A couch-arm provided with two couch-rolls located at different distances from the stationary end thereof, said rolls being detachable therefrom and of different diameters.

4. A Standard wet machine embracing a base or frame provided with a plurality of felt rolls, a felt carried thereby, a pivoted couch-arm carried by the base, a pair of couch-rolls carried by the couch-arm, said couch rolls being detachable from the arm; together with a vat, a cylinder mold, a pulp discharge chamber, and a pivoted doctor located above the discharge chamber.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH H. WALLACE.

Witnesses:

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