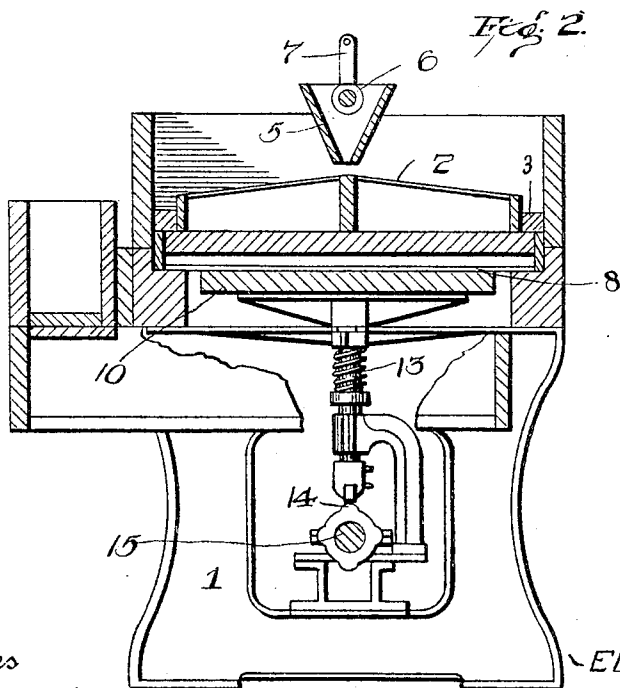
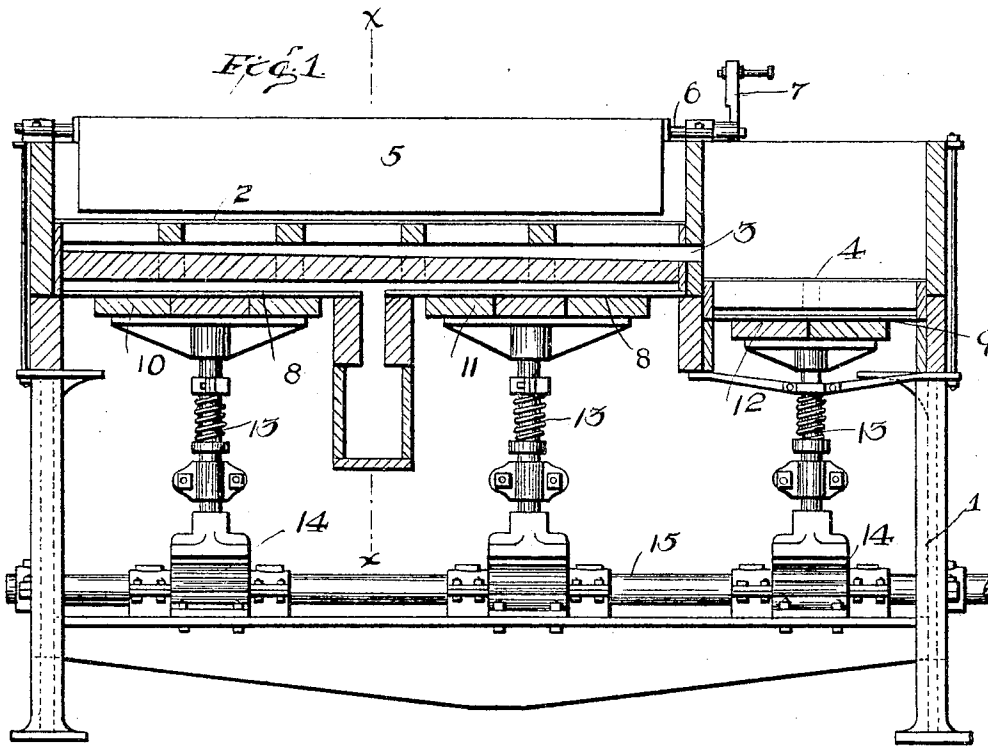


No. 800,594.

PATENTED SEPT. 26, 1905.

E. J. POPE.
PULP SCREEN.

APPLICATION FILED JAN. 13, 1905.



Witnesses
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EDWARD J. POPE, OF HOLYOKE, MASSACHUSETTS.

PULP-SCREEN.

No. 800,594.

Specification of Letters Patent.

Patented Sept. 26, 1905.

Application filed January 13, 1905. Serial No. 240,947.

To all whom it may concern:

Be it known that I, EDWARD J. POPE, a citizen of the United States, residing at Holyoke, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Pulp-Screens; 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.

My invention relates to machines for screening pulp in the manufacture of paper, &c. In all screens for this purpose the screen-plates must be kept clean to have the work done properly, and there has been considerable trouble experienced in devising cheap and practical means for removing the coarse pulp and dirt which clings to the surface of the plates, preventing the free passage of the finer pulp. Heretofore the plates have been generally cleaned by scraping the surfaces thereof and taking the coarse pulp out by hand. This method, however, has been found to be undesirable for the reason that some of the coarse pulp and dirt is forced through the screen-plates during the scraping operation, thereby damaging the quality of the screened pulp.

The object of my present invention is to clean the screen-plates without injuring the quality of the output of pulp. With this end in view I arrange my screen-plates on an angle with the apex at the center and dipping to the sides. The pulp-feeding trough is arranged above the apex of the plates and is adapted to be rocked from side to side to deliver the pulp on first one slope of the plates and then on the other, thus washing the coarse pulp and dirt which does not go through the plates into a trough, which carries it to an auxiliary screen comprising plates preferably provided with larger openings than the main screen-plates. All the pulp passing through the auxiliary screen is returned to the main screen-plates, preferably by the same pump that delivers it there in the first place.

In the accompanying drawings, illustrating the preferred embodiment of my invention, Figure 1 is a side view of a machine made in accordance with my invention, with the upper part thereof in vertical section. Fig. 2 is a vertical sectional view on the line *xx* of Fig. 1.

While the preferred embodiment of my invention is fully shown in the accompanying drawings and its construction and operation are clearly described in this specification, the

right is reserved to make such changes from the construction shown and described herein as the scope of the claims hereto appended will permit.

Referring more particularly to the drawings, the mechanism is mounted upon a framework 1. In the upper portion are arranged the main screen-plates 2, at the sides of which are provided troughs 3, sloping to deliver the material therefrom to the auxiliary screen-plates 4, arranged at a lower level than the main screen-plates. Above the apex of the main screen-plates and preferably running its entire length is arranged the rocking trough 5, preferably V-shaped in cross-section, with its lower delivery-outlet restricted. Said trough is mounted on a rocking shaft 6, to one end of which is secured a lever 7, which is operated by any suitable means, such as an arm operated by a belt or gear.

Below the screens are arranged flexible diaphragms 8 and 9, respectively, the former below the main screen-plates, secured to solid diaphragms 10 11, and the latter below the auxiliary screen-plates, secured to a solid plate or diaphragm 12. Each of said solid diaphragms is supported upon the end of a spring-pressed rod 13, having its lower end resting on cams 14, carried by a shaft 15, whereby said flexible diaphragms are vibrated to suck the finer material through the screen-plates.

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

1. In a machine of the character described, the combination with a sloping screen-plate, of an auxiliary screen-plate arranged at a lower level than said sloping screen-plate, and a sloping trough arranged at the lower edge of the sloping plate and adapted to deliver the material which does not pass through said last-mentioned screen-plate to the auxiliary screen-plate.

2. In a machine of the character described, the combination with a sloping screen-plate of an auxiliary screen-plate arranged at a lower level than said sloping screen-plate, and a sloping trough arranged at the lower edge of the sloping plate and adapted to deliver the material which does not pass through said last-mentioned screen-plate to the auxiliary screen-plate, and means to draw the finer material through said screens.

3. In a machine of the character described, the combination with a screen comprising

plates meeting at an apex in the middle and sloping to the sides, of a rocking trough arranged above the apex of said screen and adapted to deliver the material to first one
5 plate and then the other.

4. In a machine of the character described, the combination with a screen comprising plates meeting at an apex in the middle and sloping to the sides, of a rocking trough ar-
10 ranged above the apex of said screen and adapted to deliver the material to first one plate and then the other, and means to draw the finer material through said screen.

5. In a machine of the character described,
15 the combination with a screen comprising plates meeting at an apex in the middle and

sloping to the sides, of a rocking trough arranged above the apex of said screen and adapted to deliver the material to first one
plate and then the other, an auxiliary screen 20 arranged at a lower level than the first-mentioned screen, and troughs arranged along the lower edges of the main screen-plates and adapted to convey the material which does not
pass through the main screen to the auxiliary 25 screen.

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

EDWARD J. POPE.

Witnesses:

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GEO. W. PARKER.