

1,148,651.

The drawing consists of two views of a mechanical assembly, labeled A and B. View A (top) shows a side profile of the device. It features a base with a curved front edge. A vertical rod passes through the base, with a component labeled 'M' at the bottom. Above 'M' is a component labeled 'H'. A spring mechanism is shown on the left, with labels 'F' and 'G'. A dashed line labeled 'B' indicates a specific path or feature. Other labels include 'N', 'P', 'R', and 'R'' on the right side. View B (bottom) shows a similar side profile but with different internal components. It includes labels 'F', 'G', 'H', 'M', 'N', 'P', 'R', and 'R'' in different positions compared to View A. A dashed line labeled 'B' is also present in View B.

Fig. 1.

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APPARATUS FOR STRAINING PAPER PULP.
APPLICATION FILED SEPT. 18, 1914.

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Patented Aug. 3, 1915.

3 SHEETS—SHEET 2.

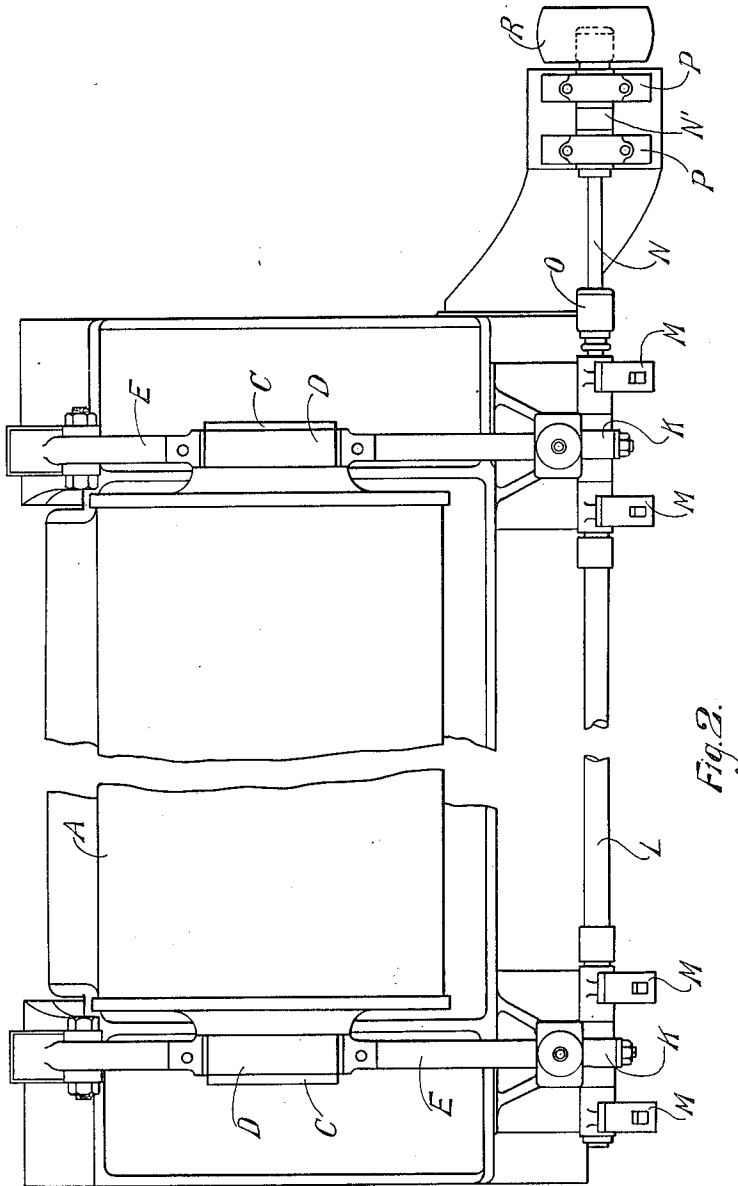


Fig. 2.

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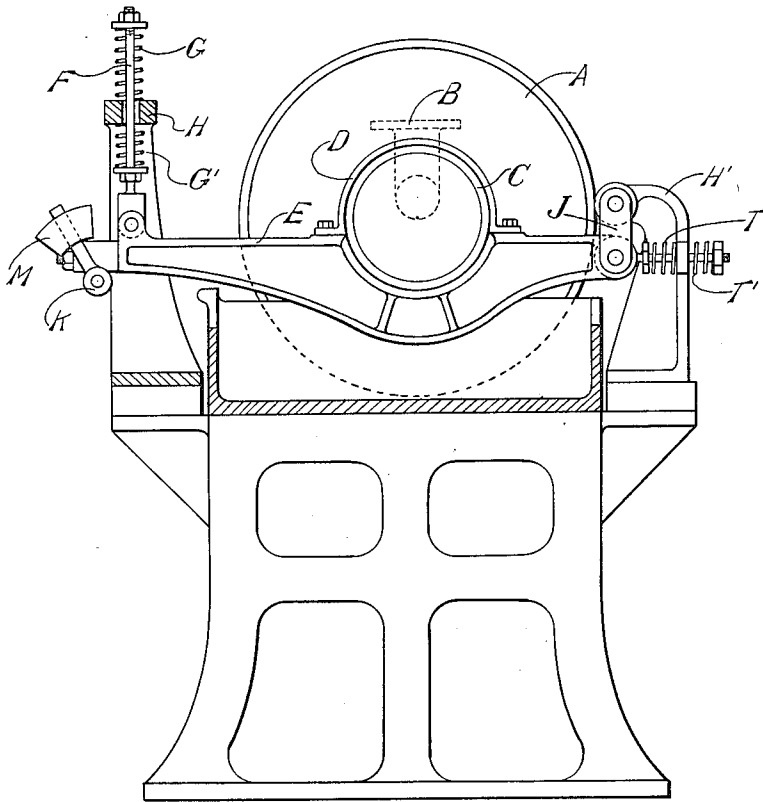
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3 SHEETS—SHEET 3.

Fig. 3.



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UNITED STATES PATENT OFFICE.

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APPARATUS FOR STRAINING PAPER-PULP.

1,148,651.

Specification of Letters Patent.

Patented Aug. 3, 1915.

Application filed September 18, 1914. Serial No. 862,341.

To all whom it may concern:

Be it known that I, WILLIAM WORBY BEAUMONT, a subject of the King of Great Britain and Ireland, residing at Outer Temple, 222 Strand, in the city of Westminster, England, have invented new and useful Improvements in Apparatus for Straining Paper-Pulp, of which the following is a specification.

10 This invention relates to paper pulp straining apparatus of the type wherein is employed a straining drum to which is imparted, by way of cradle-arms carrying the drum, a compound vibratory movement
15 wherein altitudinal and lateral motions are combined; my present invention consisting in improved means adapted for use in effecting the gradual rotation of the said drum as the result of such compound vibratory movement.

20 In carrying out my present invention, I impart to the cradle-arms, in which the straining drum is mounted, a compound vibratory movement of the character above referred to; that is to say, a movement compounded of vertical and horizontal motions, and I utilize the resultant circular or elliptical movement of the cradle-arms for effecting the gradual rotation of the drum
30 about its axis.

In the accompanying drawings, Figure 1 is a side view, Fig. 2 a plan and Fig. 3 an end-view of a drum-strainer embodying my present improvements.

35 A is the strainer-drum to which a compound vibratory motion is imparted, the pulp being fed into the drum by pipes B B. The drum is carried by means of tubular trunnions C C freely mounted in bearings
40 D D arranged about the middle of the arms E E. Each of these arms is carried at one end by an adjustable pivoted suspending rod F and spring G supported on a bracket H, while its opposite end is pivotally suspended from the bracket H' by the link J. At the spring-supported ends of the arms
45 E E are bearings K K in which runs the shaft L carrying the vibromotors M M. The shaft L is driven by the shaft N through a universal joint O; thus enabling the shaft
50 N, under the influence of the rotating vibromotors M M, to move laterally through a

sufficient range. The shaft N is arranged within a hollow shaft N', the latter being mounted in bearings P P and furnished 55 with a pulley R. Between the shaft N and the hollow shaft N' is a second universal joint for affording the shaft N the requisite lateral freedom.

By the rotation of the vibromotor shaft 60 L and vibromotors M M at a high speed, a gyratory motion is imparted to the said shaft, which motion is transmitted to the ends of the arms E E; the movement of these arms varying from a circular or elliptical one at their points of attachment to the shaft L to a nearly horizontal movement at their points of attachment to the links J J. By means of this mechanism, I obtain for the strainer-drum a silent circular or elliptical movement compounded of vertical and horizontal motions, the said movement being, moreover, variable by the angular adjustment of the vibromotors M M upon the shaft N, and by the adjustment of the lock- 75 nuts above the springs G G, and below the springs G' G'. By means of the springs T T', the horizontal motion of the arms E E may be adjusted.

The drum-trunnions C C being freely 80 mounted in their bearings D D and the vibratory movements imparted to the strainer-drum being of a circular or elliptical character, the drum rotates gradually and automatically; thus permitting the whole of the 85 mechanism hitherto employed for directly effecting its rotation to be dispensed with.

I claim:—

In paper-pulp straining apparatus wherein the straining drum is mounted in cradle- 90 arms and wherein the said drum is caused to rotate as the result of subjecting the said cradle-arms to vibratory movements, the combination, with a freely mounted strainer drum, of cradle-arms wherein the said drum 95 is freely trunnioned, and means for imparting to the said arms gyratory movements compounded of altitudinal and lateral motions.

WILLIAM WORBY BEAUMONT.

Witnesses:

H. D. JAMESON,
W. E. ROGERS.