

(No Model.)

M. D. CURRIER & R. A. BRENDEL.
AGITATOR FOR STUFF CHESTS.

No. 436,015..

Patented Sept. 9, 1890.

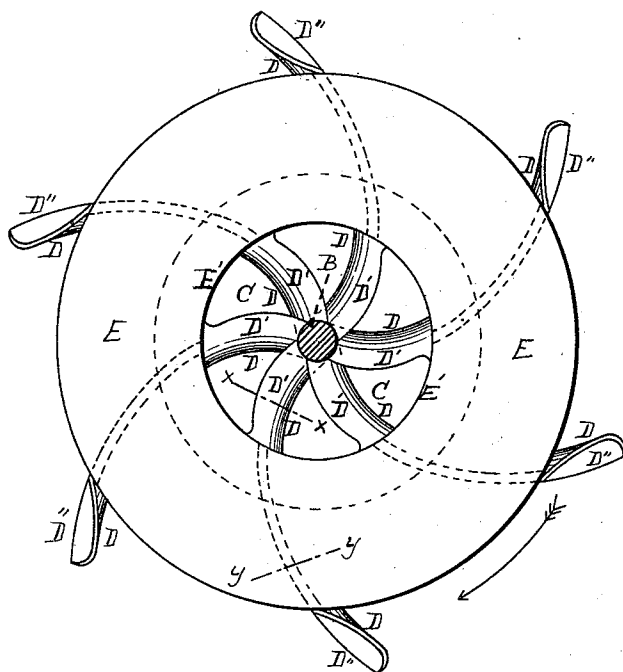


FIG. 1.

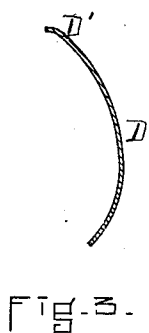


FIG. 3.



FIG. 4.

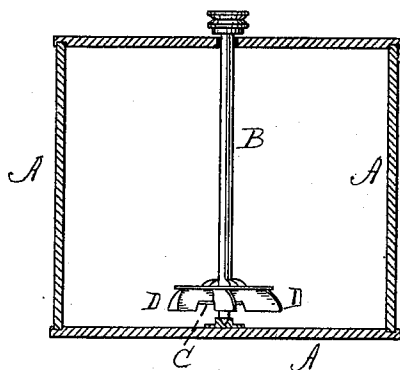


FIG. 5.

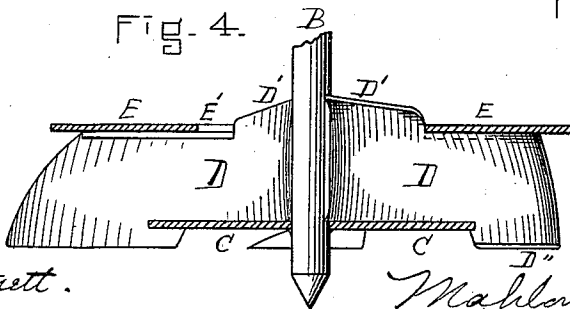


FIG. 2.

WITNESSES.

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UNITED STATES PATENT OFFICE.

MAHLON D. CURRIER AND ROBERT A. BRENDDEL, OF LAWRENCE,
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AGITATOR FOR STUFF-CHESTS.

SPECIFICATION forming part of Letters Patent No. 436,015, dated September 9, 1890.

Application filed September 21, 1889. Serial No. 324,679. (No model.)

To all whom it may concern:

Be it known that we, MAHLON D. CURRIER and ROBERT A. BRENDDEL, both of Lawrence, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Agitators for Stuff-Chests, of which the following is a specification.

This invention has for its object to provide an agitator for stuff-chests used in paper-making, which will be more efficient in keeping the "stuff" in a thorough state of agitation, whereby it is prevented from settling in the bottom of the chest, so that the pump cannot take it, and to more thoroughly and rapidly mix the ingredients, whereby the different kinds of fibers are kept well mixed, thus producing a more uniform paper, and, in case additional coloring-matter is applied during mixing, causing it to mix with great rapidity.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a plan view of our improved agitator removed from the stuff-chest and with the actuating-shaft shown in horizontal section. Fig. 2 is a central vertical section of the same. Fig. 3 is a vertical section of one of the arms or blades taken on line *x x*, Fig. 1. Fig. 4 is a similar section taken on line *y y*, Fig. 1. Fig. 5 is a reduced elevation of our agitator in position in a stuff-chest shown in vertical section.

A represents an ordinary stuff-chest, and B is the shaft, to which rotary motion is applied by suitable mechanism.

C is a disk or plate rigidly secured to the actuating-shaft near its lower end and of suitable diameter.

D D are agitating arms or blades secured to and extending radially from the shaft A and also secured to the disk C on their under edges, and on their upper edges to a flat ring or plate E, having a central opening E'. These arms or agitating-blades are alike and are of the shape shown in the drawings. At the part directly above the plate C and near the shaft they are concavo-convex in vertical section, (see Fig. 3,) and extend above the

surface of the plate E, being bent forward into lips at D'. From this part, instead of being on straight radial lines, they curve back, as shown by broken lines in Fig. 1, and are still concavo-convex at the point shown in Fig. 4, but with the lower edge extending forward into lips D''. Beyond the outer edge of the plate E the outer edges of the blade extend, sloping outward toward the lower edges, which extend perceptibly beyond said plate, while the forward projecting lips D'' are larger and more pronounced and scoop-shaped.

In practice the stuff is caught by the lips D' as the blades rapidly revolve and drawn in through the central opening C and discharged at the outer ends of the blades D, the lines of discharge being nearly or quite radial. An almost circular path is formed by the stuff as it enters at the center and passes out at the outer end of a blade. The office of the lower lips D'' is to catch the stock and guide it up on the blade, and thus give it an upward tendency in its discharge. The result is to thoroughly agitate and mix the stuff, as above mentioned.

An agitator such as we have described is useful in some other arts—such as clay-mixing—and for mixing various substances in a semi-liquid condition—such as chloride of lime—in bleaching, &c.

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent, is—

The herein-described agitator, comprising the shaft B, the radial arms or blades D, concavo-convex in vertical section, provided at their inner upper edges with the lips D' and at the lower edges with the lips D'', and curved horizontally rearward, as described, the lower disk or plate C, and the upper ring or plate E, provided with a central mouth or opening E', substantially as described.

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Witnesses:

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JOHN J. DONOVAN.