(No Model.)

M. K. MUCHIN.

Centrifugal Machine.

No. 235,797. Patented Dec. 21, 1880.

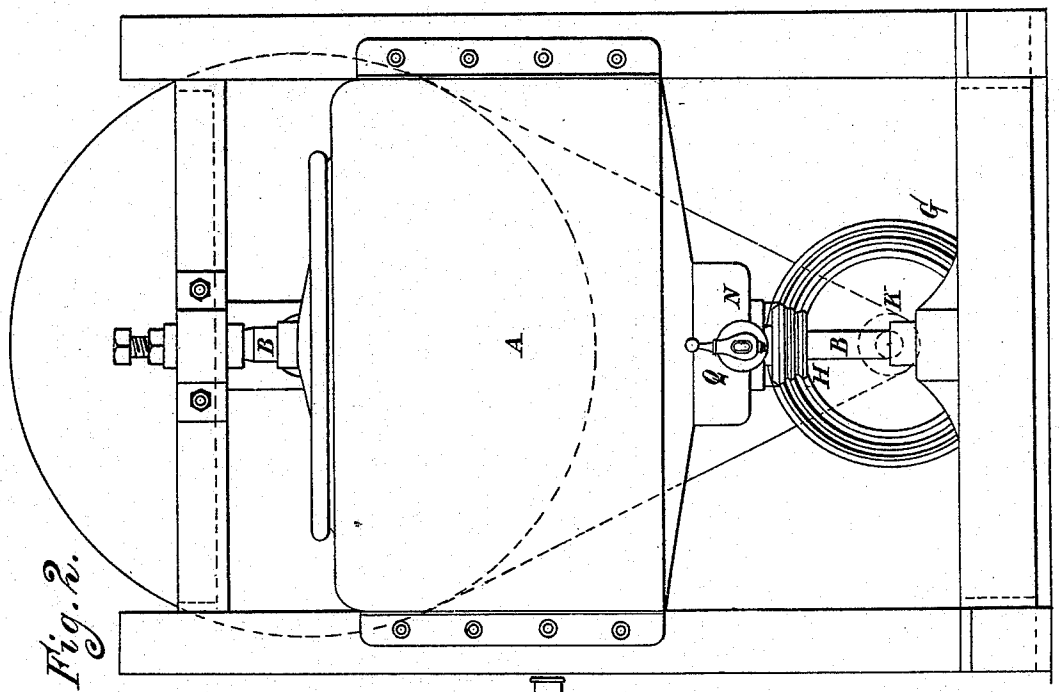


Fig. 2.

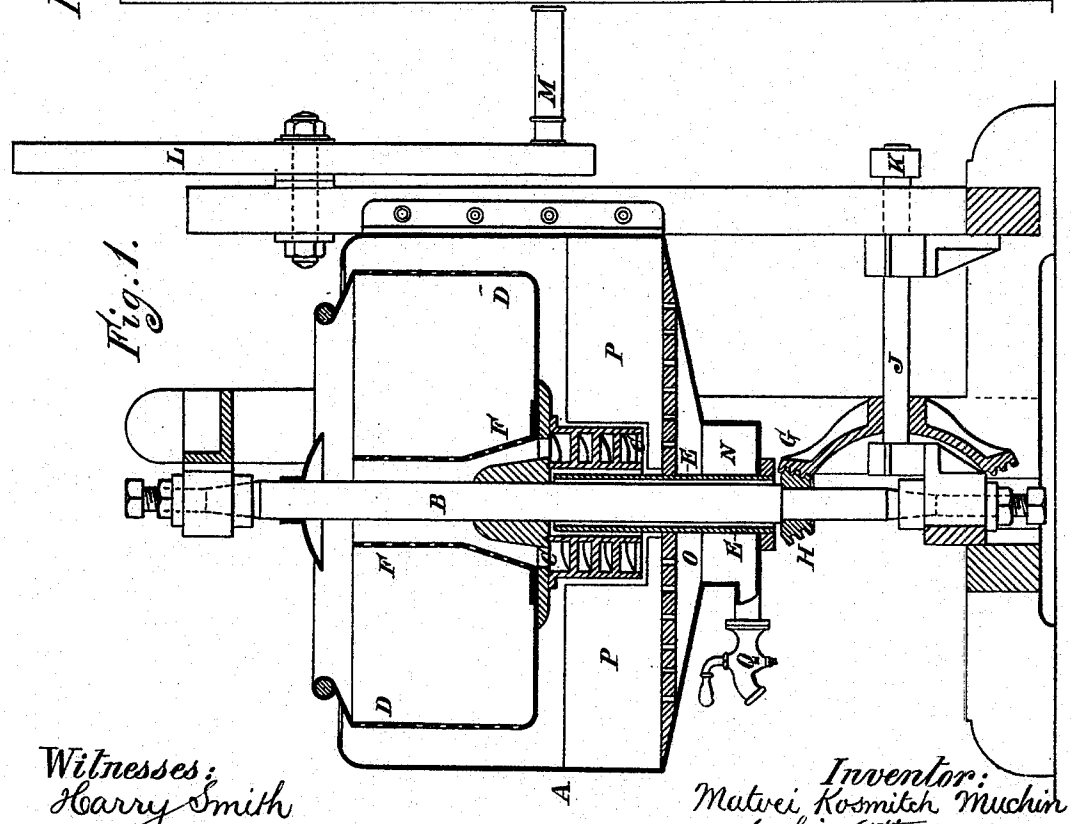


Fig. 1.

Witnesses:
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Inventor:
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by his Attorneys
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UNITED STATES PATENT OFFICE.

MATVEI K. MUCHIN, OF RIGA, RUSSIA.

CENTRIFUGAL MACHINE.

SPECIFICATION forming part of Letters Patent No. 235,797, dated December 21, 1880.

Application filed July 26, 1880. (No model.)

To all whom it may concern:

Be it known that I, MATVEI KOSMITCH MUCHIN, a subject of the Emperor of Russia, and residing in Riga, Russia, have invented certain Improvements in Centrifugal Machines, of which the following is a specification.

My invention relates to certain improvements in the construction of centrifugal machines for washing, soaking, rinsing, or drying fibrous materials, and other purposes, as more fully described hereinafter, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical section of my improved centrifugal machine, and Fig. 2 a front view.

A is the outer cylindrical casing bolted to the uprights of the frame, and through the center of this casing passes the vertical shaft B, adapted at its lower end to a step or bearing in one of the cross-bars of the frame, and having its upper end adapted to a similar bearing in an upper cross-piece. To this vertical shaft is secured the inner perforated drum, D, having a central perforated cylinder or tube, F, around the shaft B, while to the bottom of the drum D is secured the Archimedean screw C, communicating at its upper end with the interior of the tube F and opening at its lower end into the space within the lower part of the casing A. This part of the casing is preferably provided with a perforated flooring, and below this is a well, N, having an outlet-pipe, Q, while above the partition are preferably arranged a series of radial partitions, P, to prevent the shaft, screw, and drum from causing by their rotation the swirling of the water introduced into the casing.

Around the shaft B, at the part where it passes through the bottom of the casing, is arranged a tube, E, which is secured to the casing and projects some distance upward in the casing within the screw and above the level of the water when the casing is filled with the usual quantity, so that the outer casing needs no stuffing-box or bearing for the rotating shaft carrying the drum. This shaft may be driven in any manner that may be found convenient. In the drawings I have shown it as driven from a hand-wheel, L, provided with a handle, M, and having a belt passing over a pulley, K, on the shaft J, the latter carrying a grooved friction-wheel, G, gearing into a corresponding wheel, H, on the shaft B.

If desired, the outer casing may be made double, so that it may be heated with steam or by other means.

This machine may be used for washing, rinsing, soaking, or lixiviating fibrous materials, and when the proper supply of liquid has been poured into the casing and the materials placed in the drum the machine is set in motion, so that as the drum rotates the screw C will cause the water to ascend and by the centrifugal force pass through the goods and the perforations of the drum, to be again drawn up by the screw. When the washing, rinsing, soaking, or lixiviating is completed the shaft B is turned in the opposite direction, so that the screw C will not draw up the liquid, and the materials contained in the drum D will thus be dried by the centrifugal action.

I claim as my invention—

1. The combination of the stationary casing adapted to contain liquid, and having a central tube, E, with the shaft B, passing through said tube and carrying the drum and Archimedean screw C attached thereto, all substantially as described.

2. The combination of the shaft and rotary drum with the stationary casing provided with radial partitions P in its lower part, as and for the purpose specified.

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

MATVEI KOSMITCH MUCHIN.

Witnesses:

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