(No Model.) 2 Sheets—Sheet 1.

T. MÜLLER.

CENTRIFUGAL MACHINE.

No. 455,832. Patented July 14, 1891.

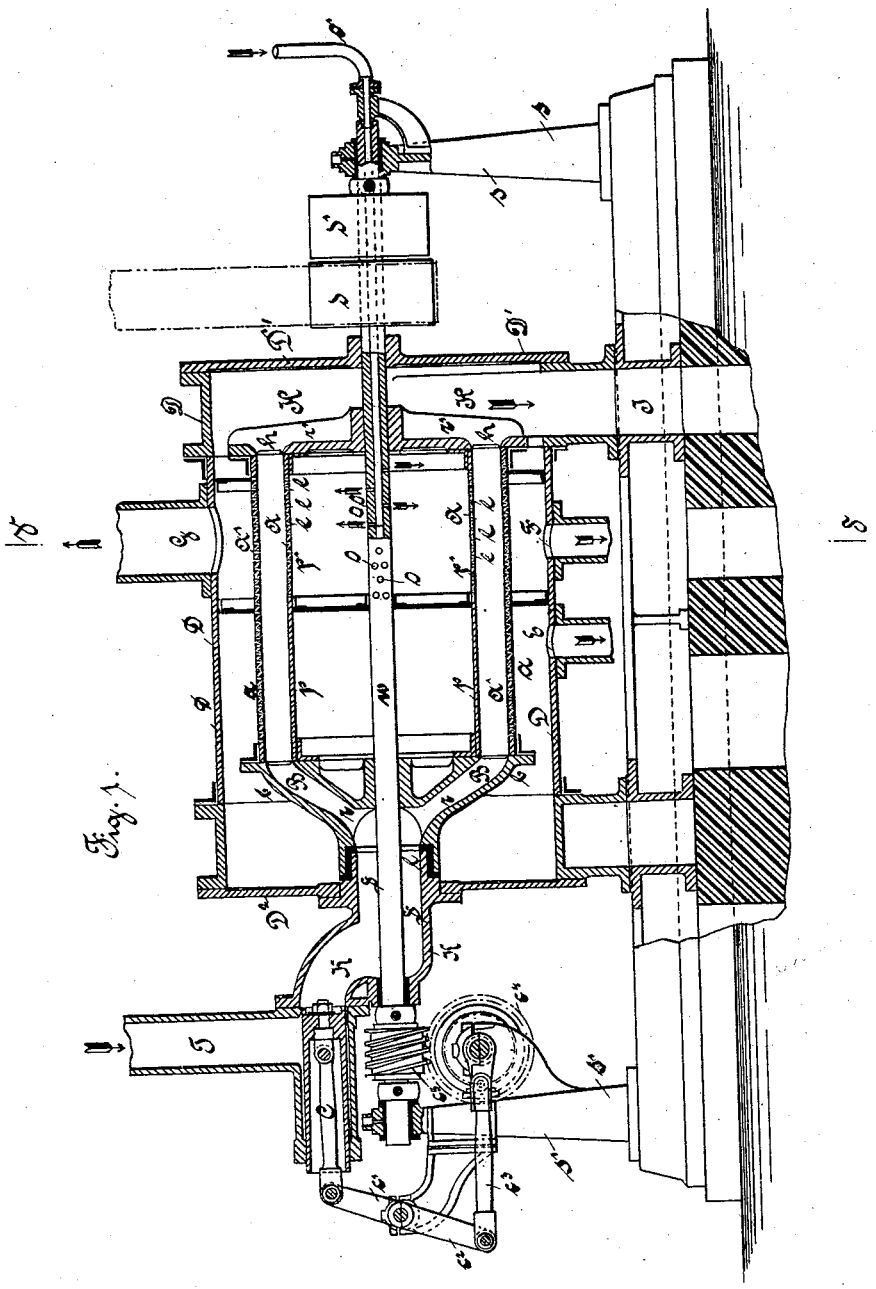

Fig. 1.

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(No Model.) 2 Sheets—Sheet 2.

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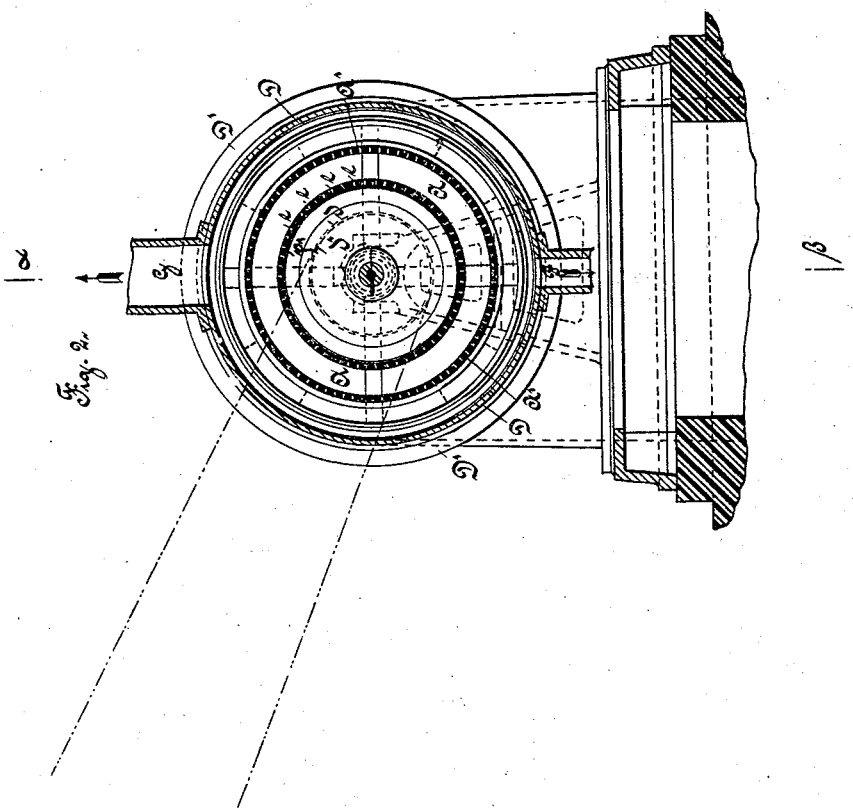

Fig. 2.

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UNITED STATES PATENT OFFICE.

THEODOR MÜLLER, OF MAGDEBURG, ASSIGNOR TO SELWIG & LANGE, OF BRUNSWICK, GERMANY.

CENTRIFUGAL MACHINE.

SPECIFICATION forming part of Letters Patent No. 455,832, dated July 14, 1891.

Application filed August 13, 1890. Serial No. 361,885. (No model.)

To all whom it may concern:

Be it known that I, THEODOR MÜLLER, a subject of the King of Prussia, German Emperor, and a resident of Magdeburg, in the Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in Centrifugal Machines for Pulpy Materials, of which the following is an exact specification.

My invention relates to improvements in centrifugal machines, in which the rotating drum is continually fed with the materials to be dried and is continually emptied of the dry materials. I attain this object by the mechanism illustrated in the accompanying drawings, in which similar letters denote similar parts throughout the different views, and of which—

Figure 1 is a vertical longitudinal section through $\alpha\ \beta$, Fig. 2. Fig. 2 is a vertical cross section through $\gamma\ \delta$, Fig. 1.

The standards $s\ s'$ bear the shaft w with the pulleys $d\ d'$, and the drum A B by the ribs $r\ r$ and by the cross-piece $r'\ r'$. The shaft w is hollow and has the openings $o\ o$, so that hot air or steam may be fed by the pipe o' to heat the contents of the drum. The part p' of the cylindrical drums $p\ p'$ has the perforations $e\ e$ for guiding the hot air or steam into the drum A B, consisting of the perforated cylinder a and of the solid top plate b, of conical form.

The drum A B is inclosed by the case D D' D^2, consisting of the cylindrical part D and of the front plates D' D^2. To the front plate D^2 the tube K is firmly attached, provided with the cylindrical projection l, serving as bearing for the conical part b of the drum A B. The tube K is fed with the material to be dried by the pipe T and by the piston C, moved by lever $c'\ c^2$ and bar c^3, screw-wheel c^4, and worm c^5, the latter being fixed to the shaft w of the centrifugal machine. The case D D' D^2 has the outlets E F G I.

The working of the centrifugal machine is as follows: The pipe T is filled with the pulpy materials to be dried, and by means of the piston C moved to and fro by the machine. A portion of this material is pressed into the tube K and into the rotating drum B A. When reaching the perforated part A of the drum, the material is freed from its wetness by the effect of the quickly-rotating drum, the fluid is discharged through the aperture F E, the material is continuously pressed forward by the feeding mechanism described above, and when reaching that part of the drum which lies opposite to the perforated drum p' the material is exposed to the influence of the hot air, passing the perforations of the drum p'. The hot air escapes finally through tube G, and the dry materials leave the drum at H. The machine may be used for drying, clearing, and washing, as required.

In case sugar is to be whitened steam in lieu of hot air must be led through the shaft w. When used for cleaning or washing, water must be led to the drum A B through the bored shaft W. The machine may be used for washing any material.

Having thus fully described the nature of my invention, what I desire to secure by Letters Patent of the United States is—

The combination of the horizontal drum $p\ p'$, having perforations e for driving air, steam, water, or other agents into the space between the drums, and of the horizontal drum A B, being firmly connected to drum $p\ p'$, with the hollow bearing l, communicating with the feeding device T C K, as well as with the space between the drums, and serving as bearing for drum A B, said drums sitting on the horizontal hollow shaft w, having apertures o and communicating with pipe o' for delivering air, steam, water, or any other agents into drum p', for the purpose as described.

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

THEODOR MÜLLER.

Witnesses
RUDOLF BAUER,
W. EGGELING.