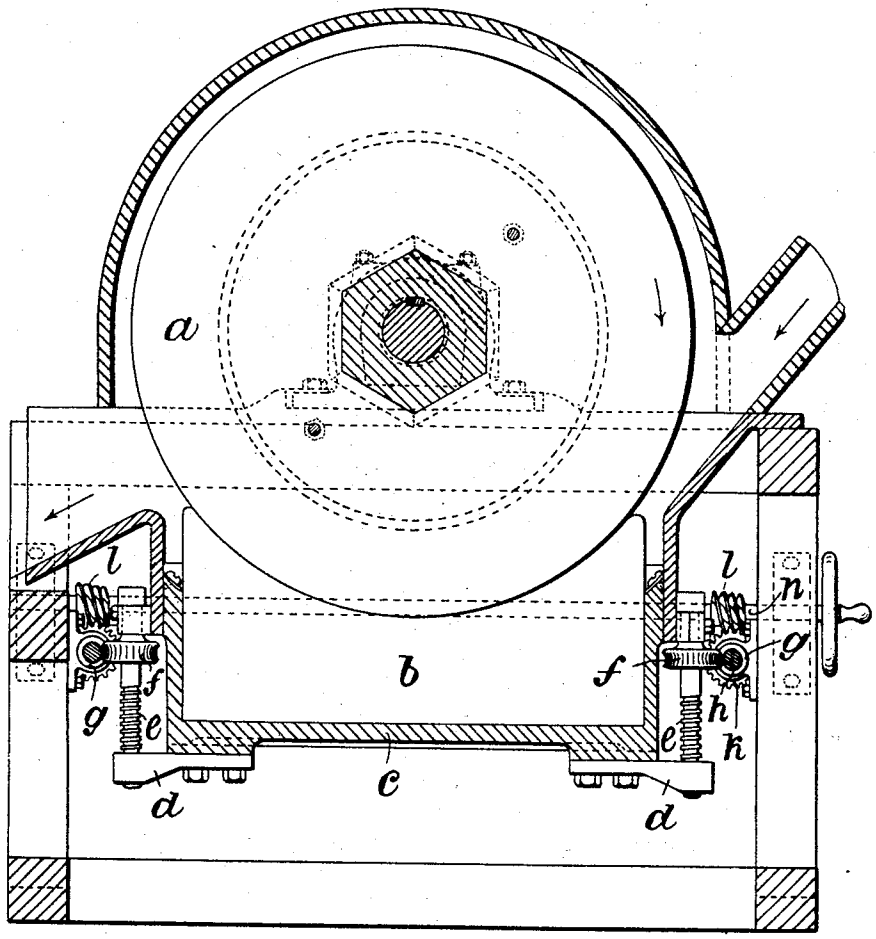
No. 771,403. PATENTED OCT. 4, 1904.

A. WAHLSTRÖM.

MEANS FOR REFINING WOOD PULP OR CELLULOSE.

APPLICATION FILED MAR. 9, 1904.

NO MODEL.



Witnesses:
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No. 771,403. Patented October 4, 1904.

UNITED STATES PATENT OFFICE.

AUGUST WAHLSTRÖM, OF HÖNEFOS, NORWAY.

MEANS FOR REFINING WOOD-PULP OR CELLULOSE.

SPECIFICATION forming part of Letters Patent No. 771,403, dated October 4, 1904.

Application filed March 9, 1904. Serial No. 197,288. (No model.)

To all whom it may concern:

Be it known that I, AUGUST WAHLSTRÖM, a subject of the King of Norway and Sweden, residing at Hönefos, in the Kingdom of Norway and Sweden, have invented new and useful Improvements in the Means for Refining Wood-Pulp or Cellulose; and I hereby declare that the following is 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, reference being had to the accompanying drawing, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to means of refining wood-pulp or cellulose; and it consists in improvements whereby is obtained that the wood-pulp may pass the refining apparatus without being ground or crushed into powder.

According to my invention the refining apparatus is provided with an under stone supported in such a manner that the whole upper face of the same exercises a uniform pressure on the runner or the fibers passing between the two stones. To insure a perfect parallel adjustment, I place the under stone in a frame or box, which is hung on a number of (preferably four) screw-rods. These rods are operated simultaneously by means of a single adjusting device through the medium of suitable gearing on and connected with the screw-rods.

In the annexed drawing is shown, partly in vertical section, a refining apparatus according to my invention.

a is the runner, which rotates in a vertical plane, *b* the under stone, and *c* the frame or box in which the under stone is placed. This frame or box is provided with ears or projections *d*, preferably one at each corner of the frame, which ears have a screw-threaded boring in which works vertically-supported screws *e*. These screws are rotatably supported in the frame of the machine and are prevented from being moved longitudinally, and each of them is provided with a worm-wheel *f*, meshing with a screw or worm *g* on the shafts *h*, which in their turn is provided with a worm-wheel *k*, meshing with the worms *l l* on the shaft *n*. On this latter shaft is mounted a hand-wheel or a crank *m*. It will be seen that by turning the shaft *n* by means of the hand-wheel or crank the vertically-supported screws *e* are simultaneously rotated, and thereby the frame *c*, with the under stone *b*, is lifted or lowered in the same degree over its whole surface. I prefer to use four screws *e*, mounted in the frame of the machine and having their lower ends hanging freely downward.

It will be apparent that various changes or modifications may be made and will readily suggest themselves to any one making and using the same, and I do not, therefore, restrict myself to the specific construction, combination, and arrangements of parts herein shown and described, but reserve to myself all equivalents thereof as might come within the terms of the claims.

An apparatus constructed as described above is capable of giving a product consisting substantially of long fibers, and at the same time this apparatus has a large effectivity and may very easily be regulated and attended to.

I claim—

1. The combination of a vertically-mounted rotary runner having a plain peripheral grinding-face, a bedstone mounted beneath said runner and having a plain grinding-face encompassing the greater portion of one-half of the grinding-face of the runner, and means to bodily adjust the bedstone and its grinding-face relatively to the grinding-surface of the runner.

2. The combination with the machine-frame a rotary runner vertically mounted therein and a stationary bedstone mounted beneath the runner, of a frame in which said stone is held, a bracket secured near each corner of the stone-frame having threaded apertures projecting beyond the sides thereof, screw-bolts rotatably mounted in the machine-frame engaging the threads of the apertures, a worm on each of said bolts, shafts on two opposite sides of the machine-frame, gears on each of said shafts in mesh with the worms of two of the bolts, a cross-shaft and worms thereon in mesh with a gear on each of the side shafts.

In witness whereof I have hereunto set my hand in presence of two witnesses.

AUGUST WAHLSTRÖM.

Witnesses:

ALFRED J. BRYN,

JOH. VAALER.