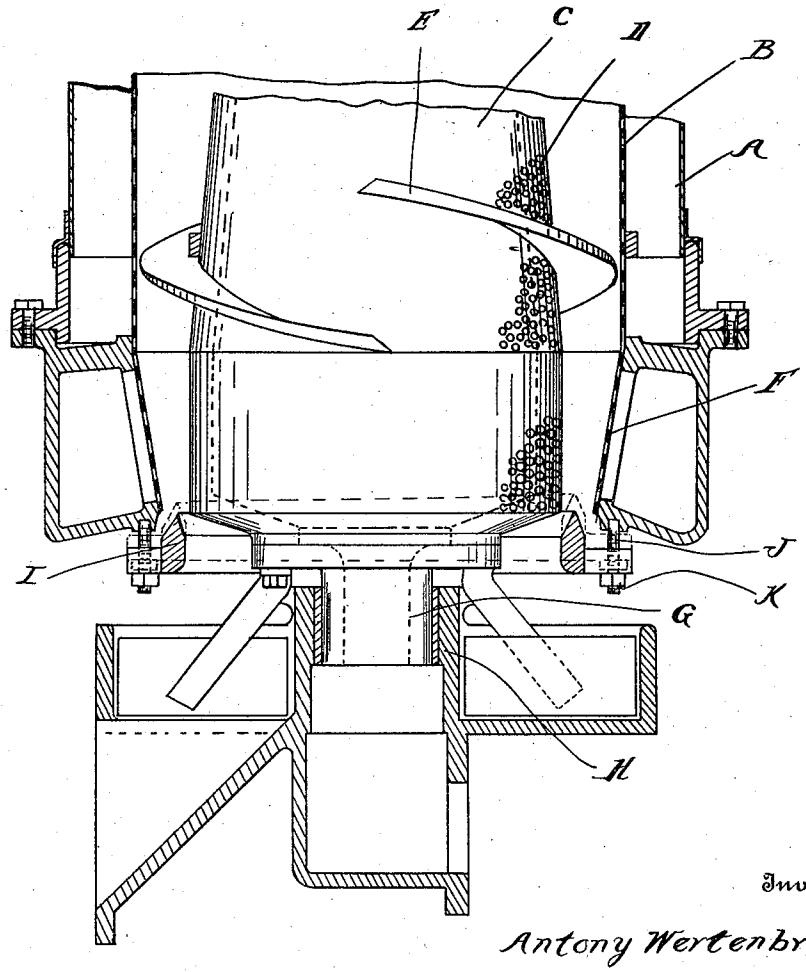
A. WERTENBRUCH.

PULP PRESS.

APPLICATION FILED APR. 18, 1918.

1,299,524. Patented Apr. 8, 1919.



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UNITED STATES PATENT OFFICE.

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PULP-PRESS.

1,299,524. Specification of Letters Patent. Patented Apr. 8, 1919.

Application filed April 18, 1918. Serial No. 229,255.

To all whom it may concern:

Be it known that I, ANTONY WERTENBRUCH, formerly a subject of the Emperor of Germany, having taken out first citizenship papers of the United States of America, and residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Pulp-Presses, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to apparatus for the extraction of moisture from pulp and of that type in which the pulp to be pressed is fed through a tapering or varying passage having screened sides. More particularly the invention relates to presses comprising a rotating hollow worm member having a screened surface and a concentric surrounding stationary screen, the annular passage between said members being progressively contracted from one end to the other.

With constructions such as described it has been customary to provide means for variably restricting the outlet for the pulp, this being accomplished by an annular member of wedge-shaped cross-section lying adjacent to one of the walls and adjustable in the throat or outlet for the pulp. Thus by adjusting this member the opening may be contracted or enlarged so as to offer greater or less resistance to the pulp and consequently to apply a correspondingly varying pressure thereto. It has been customary, however, to arrange this adjustable member adjacent to one of the screen surfaces so that during adjustment it will cover to a greater or less extent the perforations of the screen. This is objectionable inasmuch as the only escape for the moisture contained in the pulp is through the contacting screens and therefore the efficiency is cut down in proportion to the extent the screen is shielded. The present construction is designed to avoid this defect and consists in means for variably contracting the throat or discharge opening without in any way covering the screen surface. More specifically it consists in an annular member of wedge-shaped cross-section which is spaced from both the outer and inner screened surfaces and is adjustable inward and outward in relation to the discharge opening.

In the drawings, a portion of the press is represented in longitudinal section showing the restricting means in different positions of adjustment respectively in full and dotted lines.

A is the stationary outer casing having an inner screen wall B, and C is the rotating inner member having the screen surface D and the spiral blades E. The surface D flares from the upper to the lower end so as to form a progressively contracting space between the inner and outer screens and at the lower end there is a tapering section F of the outer screen for forming a contracted throat or discharge opening. The member C is hollow and at its lower end is provided with a hollow trunnion G which is journaled in a suitable bearing such as H at the base of the press.

I is an annular member arranged beneath the discharge passage or throat and preferably substantially midway between the outer and inner screened surfaces. This member I is of an upwardly-tapering cross-section and in its lowest position of adjustment forms no restriction to the area of the discharge opening. If, however, the member I is adjusted upward it will progressively contract or obstruct the opening so as to produce any desired restriction to the outlet of the pulp. This adjustment is preferably effected by suspending the member I from the outer casing, as by means of the studs J, and nuts K engaging said studs will adjust the member into different positions. In each position of adjustment the member I is spaced from both the outer and inner screens and therefore there will be no shielding or obstructing of the screen surfaces.

What I claim as my invention is:

1. In a press, the combination with spaced non-parallel screens and means for forcing the material between said screens toward the contracted end, of means spaced from said screens for variably restricting the throat or outlet therebetween.

2. In a press, the combination with spaced non-parallel screens and means for forcing the material therebetween toward the contracted end, of a member arranged intermediate said screens and spaced therefrom having a wedge-shaped cross-section, and means for adjusting said member into and out of the throat between said screens.

3. In a press, the combination with a rotating worm member having a screened surface and a stationary surrounding screened member, of an annular member having a wedge-shaped cross-section adjustable into and out from the throat between said screened members and spaced therefrom to variably restrict the outlet for the material.

4. In a press, the combination with a rotary hollow worm having a screened surface, of a surrounding stationary member having a screened surface, an annular member secured to said stationary member and of a wedge-shaped cross-section, and means for adjusting said annular member into and out from the throat between said screened surfaces to vary the open area thereof, said annular member being spaced from the screened surfaces.

5. In a press, the combination with spaced screens, of means spaced from and movable into the space between said screens for variably restricting the space, and means for forcing the material between said screens toward said restricting means.

In testimony whereof I affix my signature.

ANTONY WERTENBRUCH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."