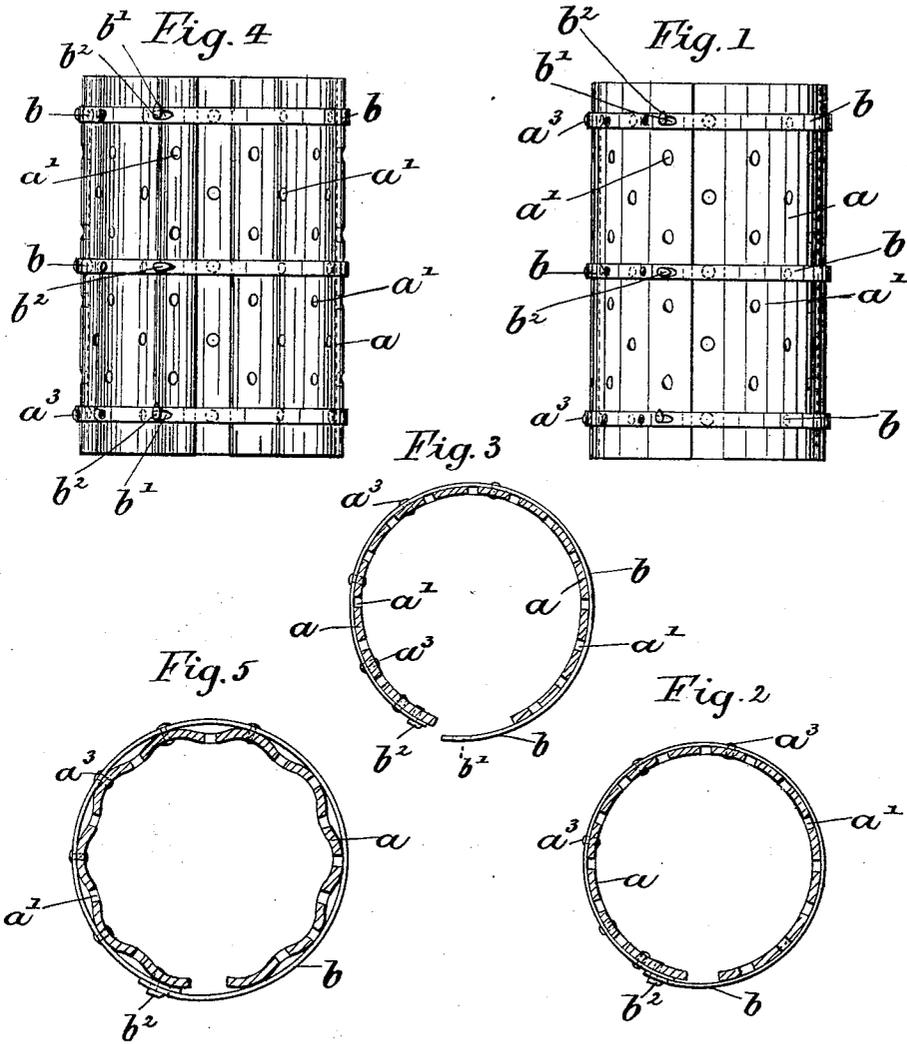


(No Model.)

J. R. THAME.
DRYING FRAME FOR PULP BARRELS.

No. 434,741.

Patented Aug. 19, 1890.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES RAPER THAME, OF BOXMOOR, COUNTY OF HERTS, ENGLAND,
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DRYING-FRAME FOR PULP BARRELS.

SPECIFICATION forming part of Letters Patent No. 434,741, dated August 19, 1890.

Application filed February 6, 1890. Serial No. 339,400. (No model.) Patented in England August 8, 1887, No. 10,879, January 4, 1888, No. 166, and January 9, 1888, No. 346; in France February 8, 1888, No. 188,616; in Belgium February 8, 1888, No. 80,579; in Austria-Hungary June 4, 1888, No. 10,682 and No. 22,538; in Spain July 13, 1888, No. 8,043, and in Germany December 23, 1888, Nos. 48,063 and 49,281.

To all whom it may concern:

Be it known that I, JAMES RAPER THAME, mechanical engineer, a subject of the Queen of Great Britain, residing at Boxmoor, in the county of Herts, England, have invented certain new and useful Improvements in Drying-Frames for Pulp Barrels and Like Articles, (for which I have obtained Letters Patent in Great Britain No. 10,879, dated August 8, 1887, No. 166, dated January 4, 1888, and No. 346, dated January 9, 1888; in France No. 188,616, dated February 8, 1888; in Belgium No. 80,579, dated February 8, 1888; in Spain No. 8,043, dated July 13, 1888; in Austria-Hungary No. 10,682 and No. 22,538, dated June 4, 1888, and in Germany Nos. 48,063 and 49,281, dated December 23, 1888,) of which the following is a specification.

This invention has reference to improvements in frames employed in transporting the soft wet pulp barrels or other articles during their removal from the shaping apparatus and during their drying.

In an application for patent, Serial No. 312,295, dated May 27, 1889, I have described and claimed apparatus for forming barrels and other cylindrical articles from semi-liquid pulp on cylindrical formers capable of contraction to release the pulp cylinder formed thereon, said pulp in a continuous sheet being carried to the forming-cylinder on an endless sheet. The barrels or tubes of wet pulp having been formed on the expansible rotating cylinders, are removed therefrom according to the present invention by a temporary surface slid onto the barrels or tubes of pulp as they rest on the expansible metal cylinder which so far has formed their means of support. The forming split cylinder or contractible roller having been contracted and released from the barrel of wet pulp, this pulp is removed from its former and conveyed to the drying-room by the perforated carrier which keeps the pulp in shape. This drying-frame or carrier is made of metal having sufficient elastic or springy quality to allow the cylinder to ex-

pand or to be expanded sufficiently for the purposes of my invention, and it is slid over the wet pulp tube, the encircling bands being previously released from their locking-catches, allowing the carrier to expand, and then as soon as the pulp has been received within this carrier-frame it is compressed and the bands or strips locked and the whole removed.

Figure 1 is a front view of a carrier frame or tube illustrating my invention. Fig. 2 is a cross-section of the same, showing the carrier-tube closed. Fig. 3 is a like view, showing the carrier-tube opened by the resilience of the parts on the releasing of the catches of the parts on the releasing of the catches b^2 b^2 . Fig. 4 shows an external side view, and Fig. 5 a cross-section, of a carrier with corrugated sides.

The carrier consists of a tube a , which is formed with a number of perforations a' a' , and may be of a plain cylindrical shape, as in Figs. 1, 2, and 3, or may be corrugated, as in Figs. 4 and 5. In either case it is encircled by bands b , (herein shown as three in number,) which bands, when placed with their ends overlapping and the opening b' placed correctly over the rotatory button b^2 , are capable of being locked by the turning of that button on its center. The outer of the three bands in Figs. 1 and 4 are shown locked by the turning of the buttons at right angles to the position in which they are introduced into the correspondingly-shaped slots b' in the bands b . The buttons on the middle bands in Figs. 1 and 4 are shown in the position in which they are kept when the bands are being slipped over them and before being turned for locking. The tube or cylinder a is made preferably of metal and in a single piece, having the capacity of expanding when its catches b^2 are released, as above stated. The bands b are riveted to the cylinder a at intervals by rivets a^3 for about half of the circumference of the cylinder, but for the other half the band is not riveted, so as to leave that half of the cylinder and the bands free to spring open when slipped off the but-

tons b^2 and so enlarge the diameter of the cylinder to the requisite amount to enable it to easily slide over the wet pulp tube.

Although I have only shown three bands 5 as encircling the metal carrier-cylinder, the number may be greater or less, according to the length of the tube or convenience. Although I have shown the riveted portion of the bands to be about half the diameter of 10 the cylinder, this proportion may be varied also. These carriers serve not only to keep the pulp tubes correctly in shape during removal from the forming machinery, but they also serve to prevent their warping during 15 drying.

The corrugation of the cylinder (shown by Figs. 4 and 5) enables greater access of air to the pulp-tubes to be attained, and is specially useful where the pulp tubes are made of 20 larger size or greater thickness. The perforations a' , distributed all over the tube, en-

able the air to pass in and out to the contained article.

I claim—

The herein-described perforated holder for 25 receiving and conveying wet pulp barrels and tubes from the machinery on which such articles have been made, consisting of a resilient split metal tube normally expanded to receive the pulp-formed article within it, and 30 provided with means, as set forth, for holding the same in shape upon such article during drying.

In testimony whereof I, the said JAMES RAPER THAME, have hereunto set my hand this 35 23d day of January, 1890.

JAMES RAPER THAME.

Witnesses:

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