

No. 790,070.

PATENTED MAY 16, 1905.

E. MOXHAM.

METHOD OF FINISHING AND STANDARDIZING TUBES OF PULP, PAPER, &c.

APPLICATION FILED MAR. 17, 1905.

2 SHEETS—SHEET 1.

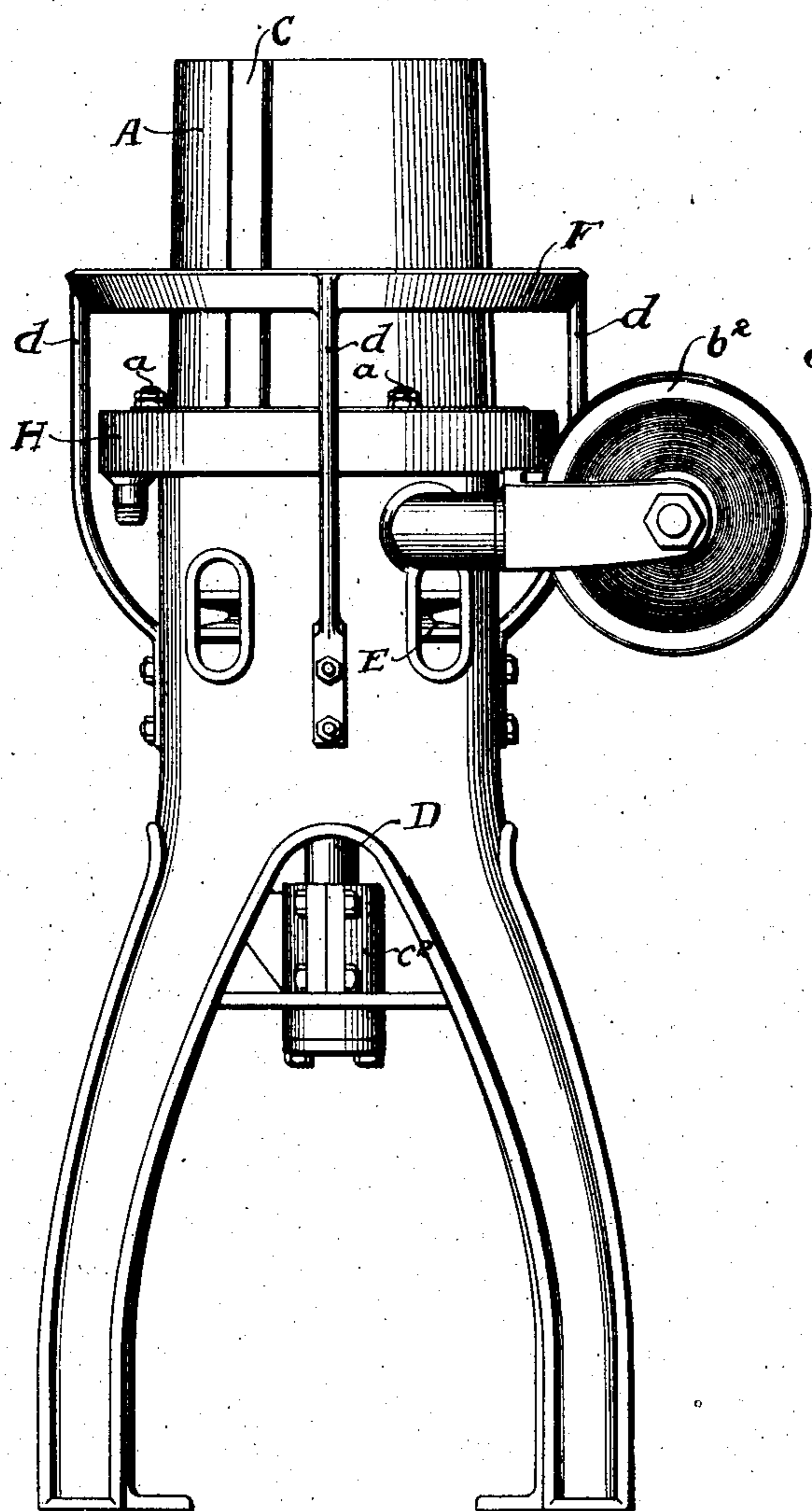


Fig. 1.

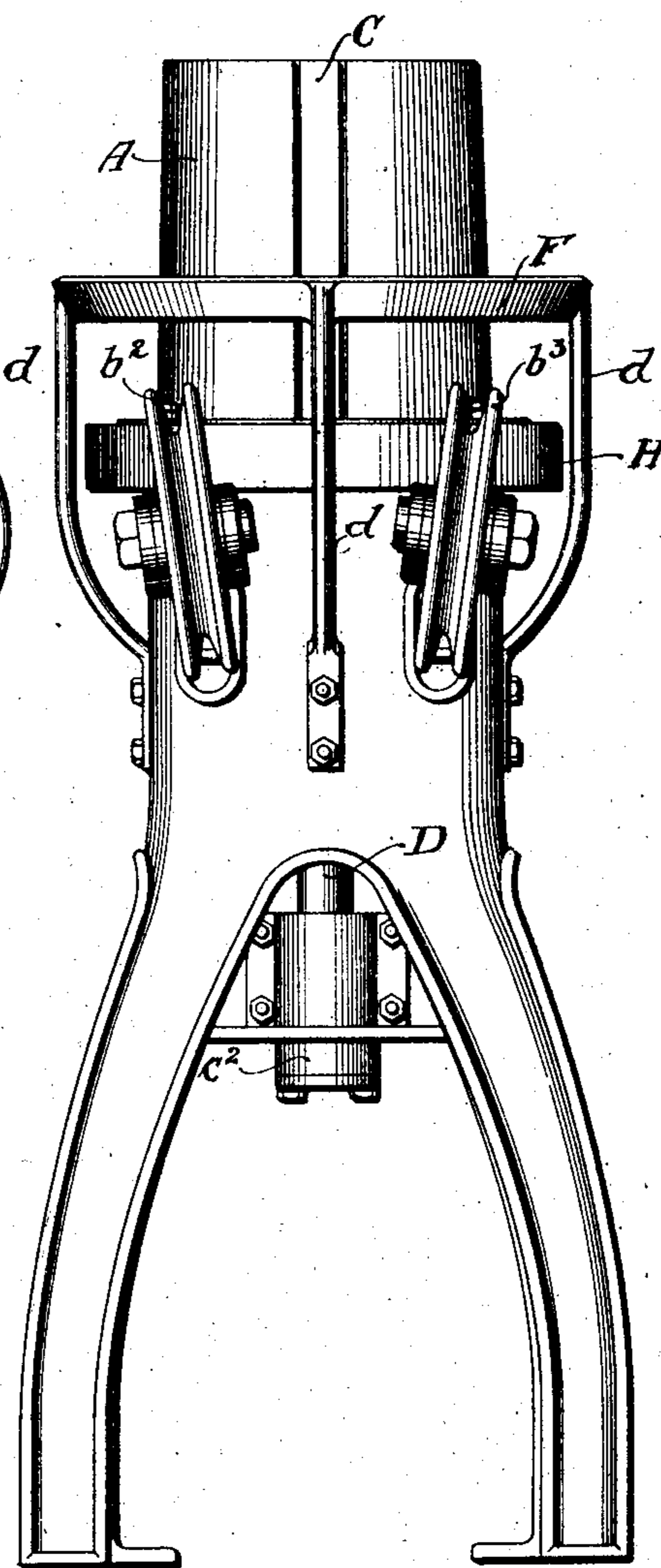


Fig. 2.

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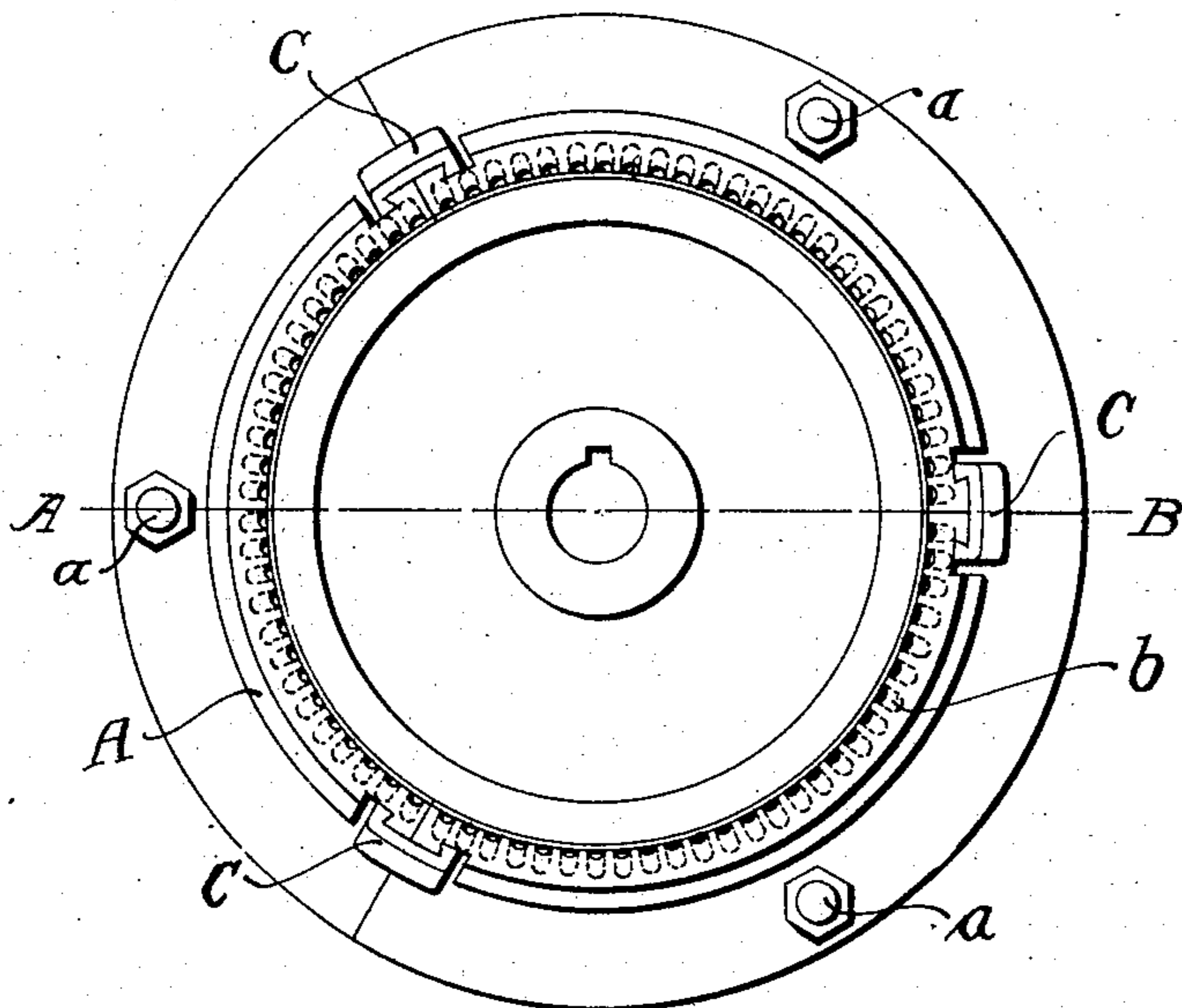


Fig. 4.

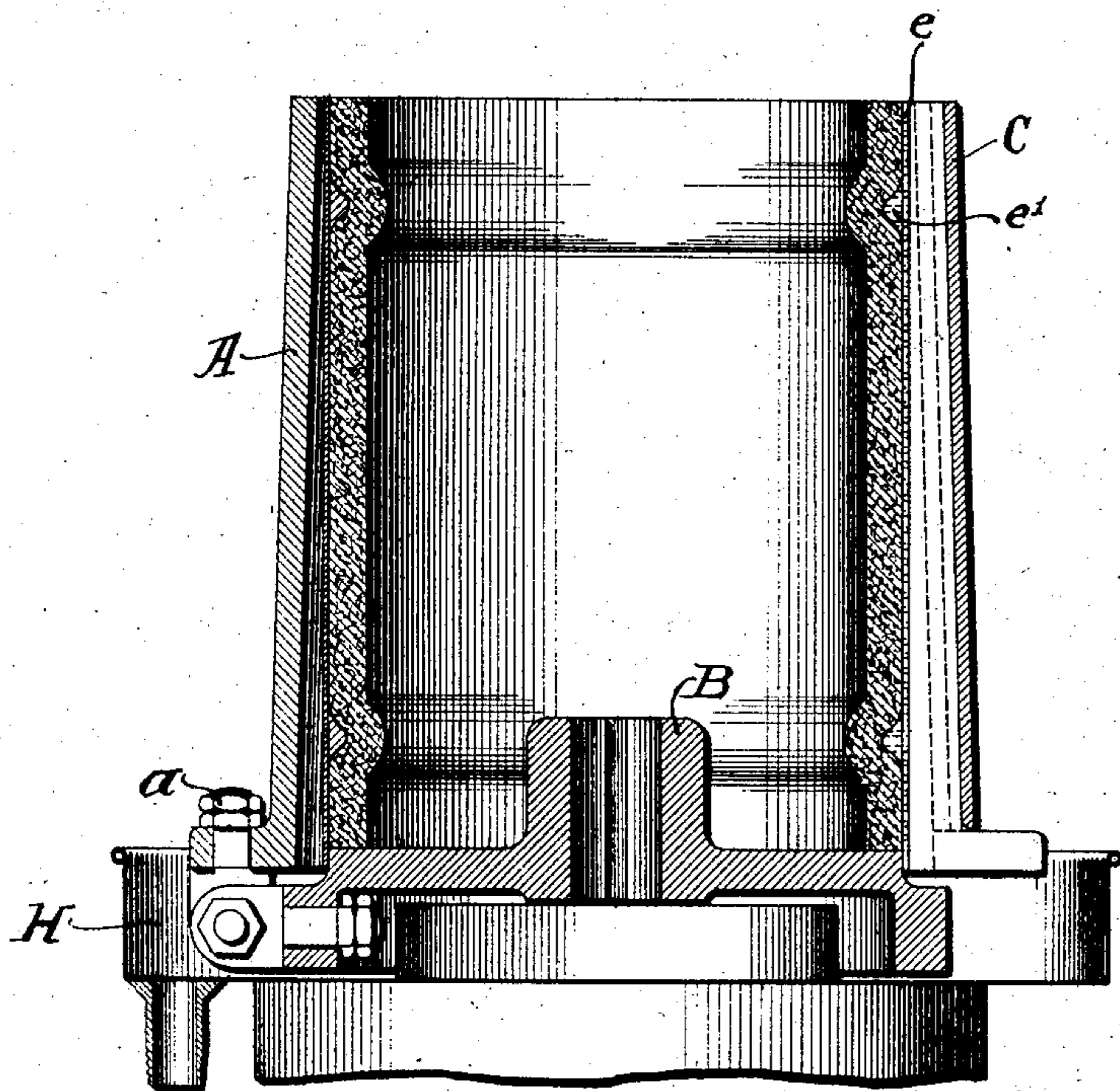


Fig. 3.

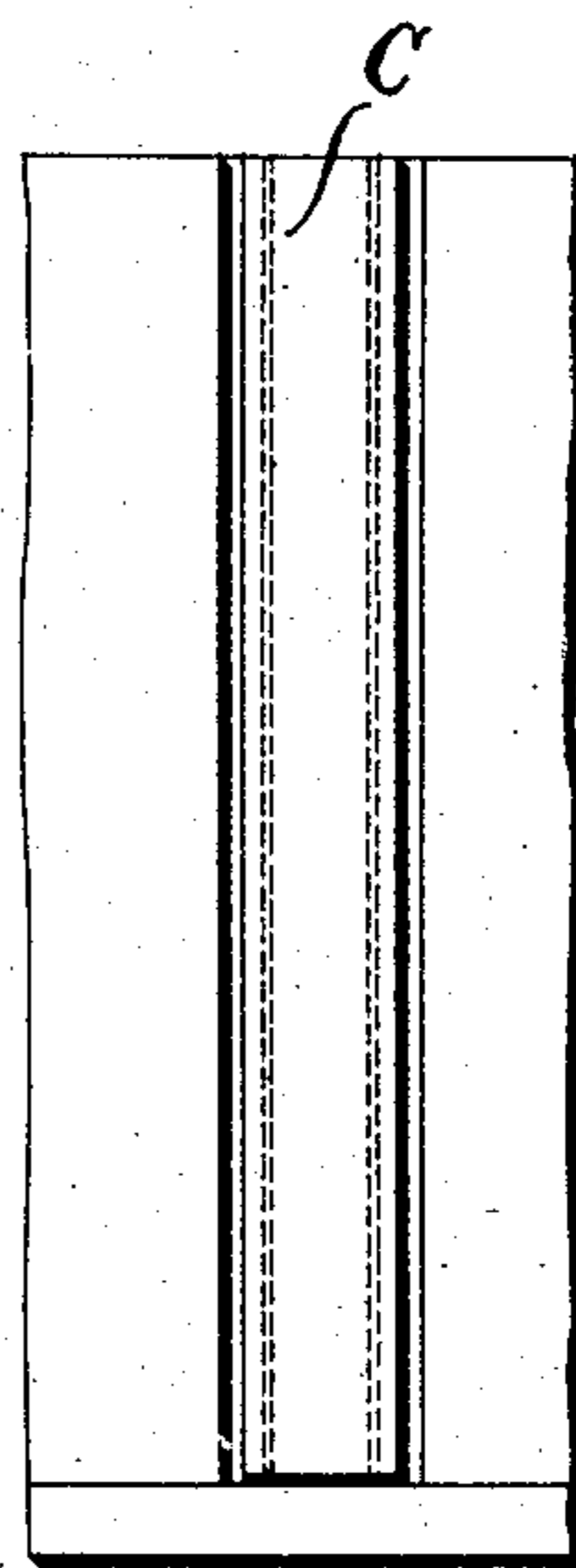


Fig. 5.

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# UNITED STATES PATENT OFFICE.

EGBERT MOXHAM, OF WILMINGTON, DELAWARE.

METHOD OF FINISHING AND STANDARDIZING TUBES OF PULP, PAPER, &c.

SPECIFICATION forming part of Letters Patent No. 790,070, dated May 16, 1905.

Application filed March 17, 1905. Serial No. 250,548.

*To all whom it may concern:*

Be it known that I, EGBERT MOXHAM, a citizen of the United States, residing at Wilmington, county of Newcastle, and State of Delaware, have invented a new and useful Improvement in Methods of Finishing and Standardizing Tubes of Pulp, Paper, or Similar Material and Removing the Water Therefrom, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

I have discovered a new process or method by which a cylinder or tube of pulp, paper, or similar material may in a wet condition be brought to a standard size and contour and the moisture extracted therefrom. Heretofore in the manufacture of tubes or cylinders from pulp, paper, or similar material from the pulp in a wet condition the resultant tubes were not always of standard size or standard consistency. This produced in many cases considerable trouble. By my improved process tubes or cylinders are finished to a standard size and standard consistency, which is of great advantage in this art.

Speaking generally, my process consists of subjecting the tube in a moist condition to the action of centrifugal force in a perforated basket, the inner wall of which conforms to the desired size and contour of the tube to be formed.

If the cylinder or tube is to be provided with a groove or grooves, or is, in other words, to be what is known in the art as "corrugated," I provide a corresponding projection or projections on the inner wall of the perforated basket. When the tube is subjected to centrifugal force in the manner above set forth, it will be expanded by this force within the limits of the interior wall of the basket to which it will hug closely and conform itself, the moisture in the cylinder or tube being forced by the centrifugal action through the perforations in the basket-wall. I am thus enabled to produce a finished tube of standard size and consistency and one which may have more or less irregularities in its contour by a simple method.

By carrying out the process hereinbefore

described all tubes produced in the same basket are of standard size and standard consistency, thus enabling me to produce a standard and uniform product.

I will now describe a machine in which my invention may be carried out.

In the drawings, Figure 1 is a side elevation of the complete machine. Fig. 2 is a rear elevation of the same. Fig. 3 is a vertical transverse section on the line A B. Fig. 4 is a plan view. Fig. 5 is a front elevation of clamp for holding sections together.

A is a casing made up of a plurality of sections, three being shown in the drawings. Each of these sections is suitably hinged by means of the hinge-bolts *a* to the base B. On the inner surface of these sections are vertical grooves *b*, expanding toward the bottom or being larger at the bottom than at the top. On the inner surface of the casing, resting against the ridges between the grooves, is secured a perforated basket formed of a perforated metal sheet and gauze lining *c*. If the tube or cylinder to be treated is to be grooved or corrugated, the fluting-pieces *c'* are fastened to this metal sheet. The casing when in its assembled position is secured by the clamps C, which slide over the top of the casing A in the dovetails. This practically gives a solid casing. The base B is set on a shaft D, suitably mounted in the bearings C<sup>2</sup> and rotated by a belt which passes over the idlers *b*<sup>2</sup> and *b*<sup>3</sup> and the pulley E. F is a circular rest supported by the brackets *d d*, the purpose of which is to form a stop or rest for the casing when the clamps have been removed and the same has been opened for the removal of the tube. The pan H is provided to collect and drain off the moisture forced out of the material.

In order to insert the cylinder to be treated, the clamps are slipped off, sections opened on their hinges, and the cylinder or tube inserted and rested on the base B. The sections are then closed, the clamps are forced down in the dovetails, and the shaft revolved, the same motion thus being imparted to the basket, and centrifugal force is thus put upon the cylinder or tube, causing it to expand and conform to the inner contour of the basket,

the metal sheet being of the desired size, shape, and configuration of the finished article.

Having now fully described my invention, 5 what I desire to protect by Letters Patent is—

1. The hereinbefore-described method of finishing a tube of pulp, paper or similar material and removing the water therefrom, which consists in subjecting the tube, in a 10 moist condition, to the action of centrifugal force in a perforated basket, the inner wall of which conforms to the desired size of the tube to be formed.

2. The hereinbefore-described method of 15 finishing a tube of pulp, paper or similar material, and removing the water therefrom, which consists of subjecting the tube, in a moist condition, to the action of centrifugal force in a perforated basket, the inner wall of

which conforms to the desired size and con- 20 tour of the tube to be produced.

3. The hereinbefore-described method of finishing a grooved or fluted tube of pulp, paper, or similar material, and removing the water therefrom, which consists in subjecting 25 the tube to the action of centrifugal force in a perforated basket, the inner wall of which is of the desired size of the tube to be produced and having a projection or projections therefrom. 30

In testimony of which invention I have here- unto set my hand, at Philadelphia, on this 14th day of March, 1905.

EGBERT MOXHAM.

Witnesses:

M. M. HAMILTON,  
THORNLEY B. WOOD.