No. 803,123. PATENTED OCT. 31, 1905.

E. MOXHAM.

PROCESS OF FORMING KEGS OR VESSELS PROVIDED WITH INTERNAL SHOULDERS.

APPLICATION FILED AUG. 15, 1905.

2 SHEETS—SHEET 1.

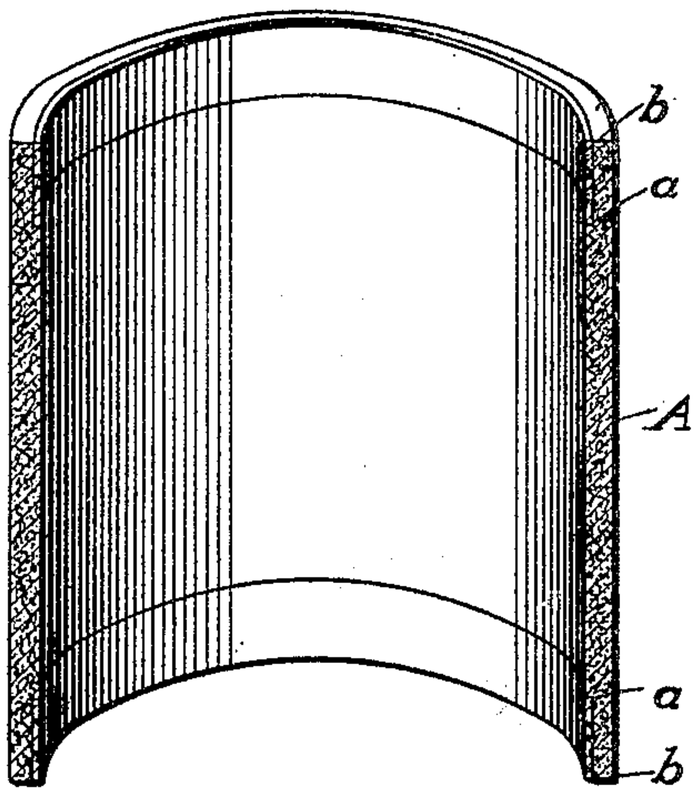

Fig. 1.

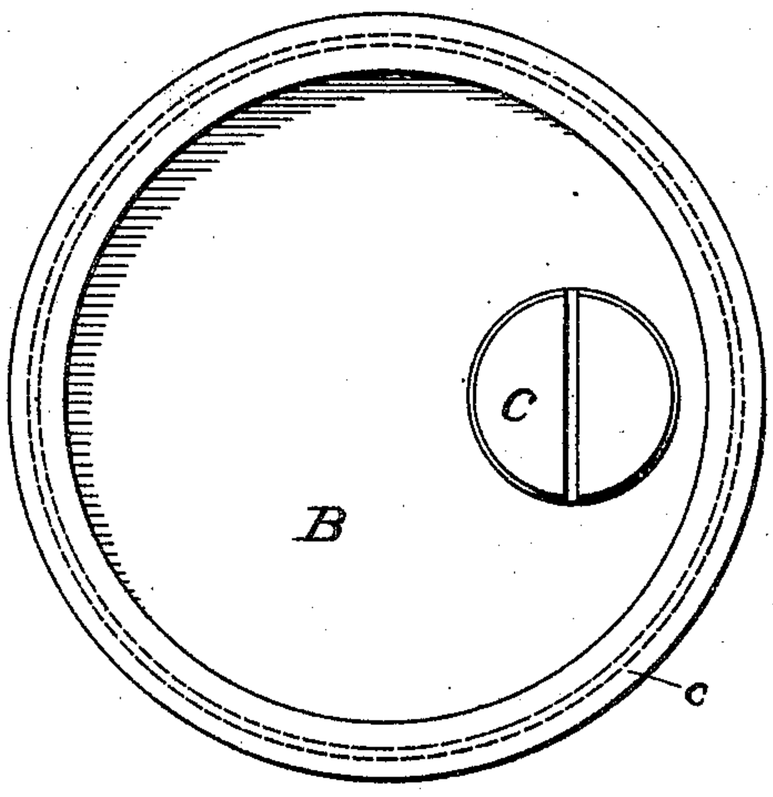

Fig. 3.

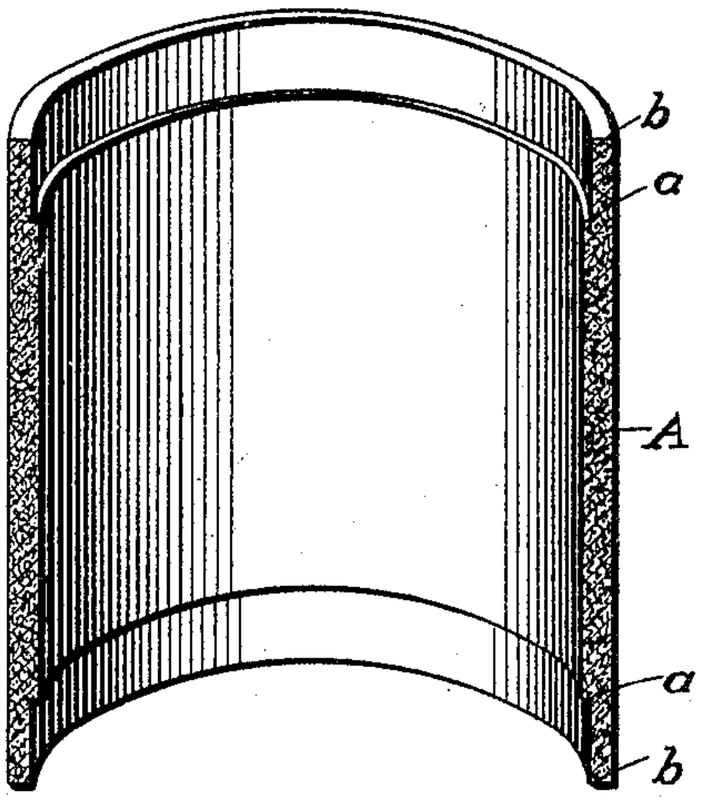

Fig. 2.

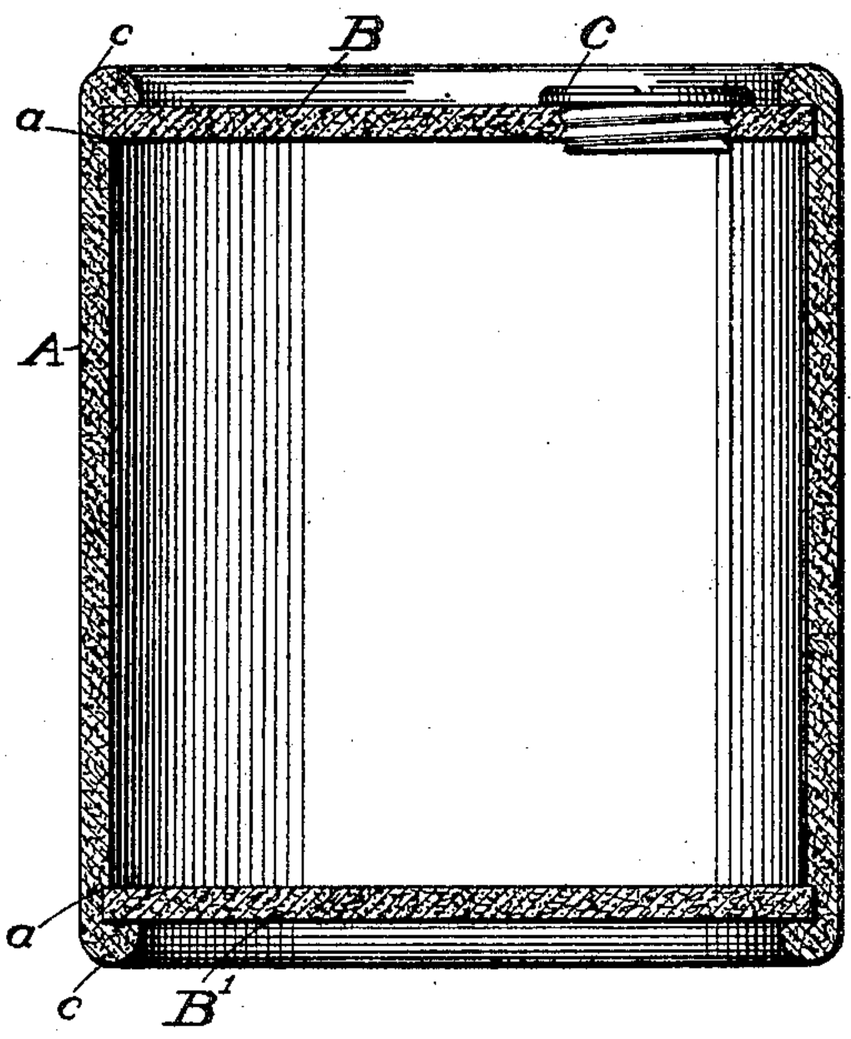

Fig. 4.

Witnesses:
M. M. Hamilton
J. B. Wood

Inventor
Egbert Moxham
by Hazelrig & Hendricks
Attorneys

ANDREW. B. GRAHAM CO., PHOTO-LITHOGRAPHERS. WASHINGTON, D. C.

No. 803,123. PATENTED OCT. 31, 1905.

E. MOXHAM.

PROCESS OF FORMING KEGS OR VESSELS PROVIDED WITH INTERNAL SHOULDERS.

APPLICATION FILED AUG. 15, 1905.

2 SHEETS—SHEET 2.

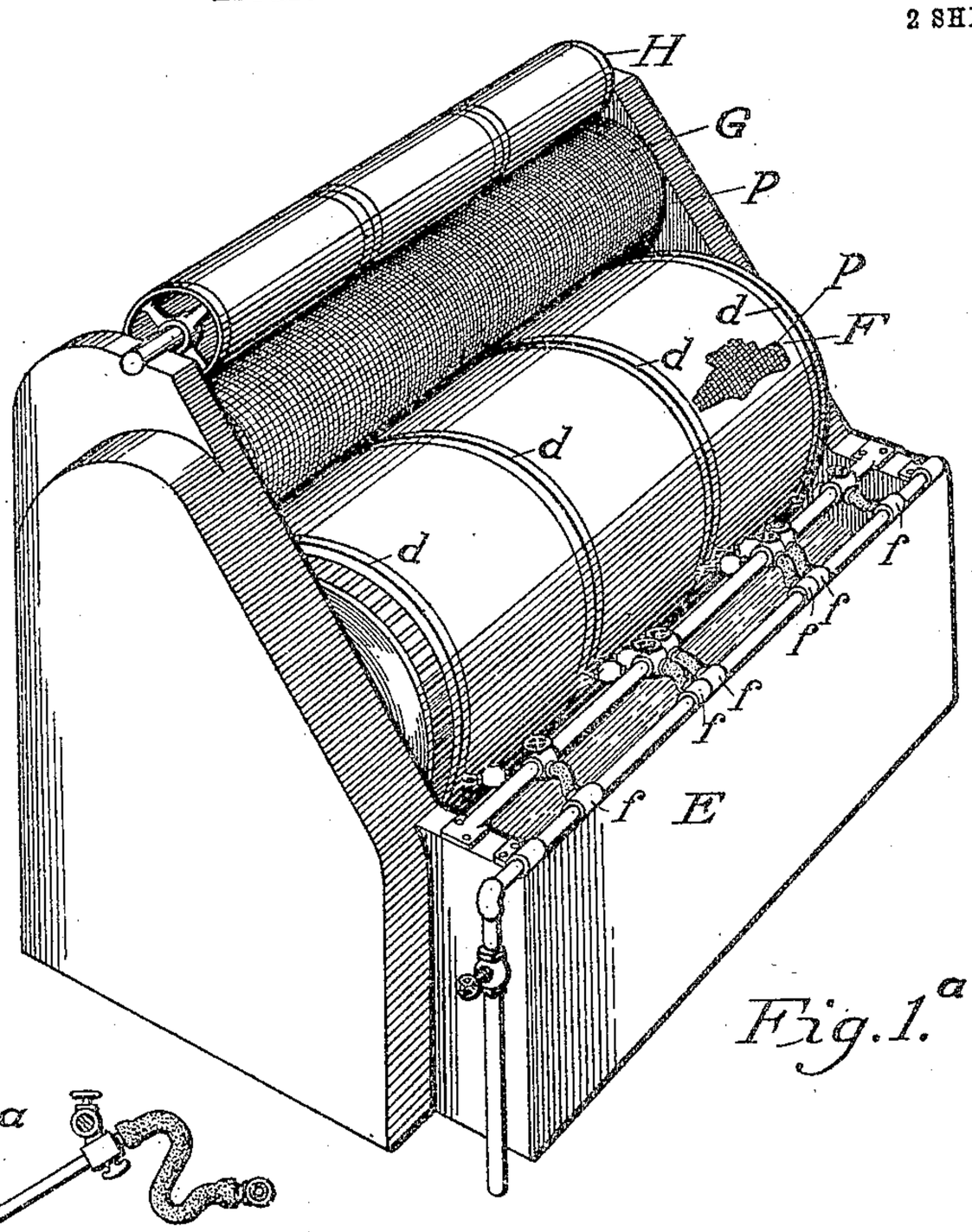

Fig. 1.a

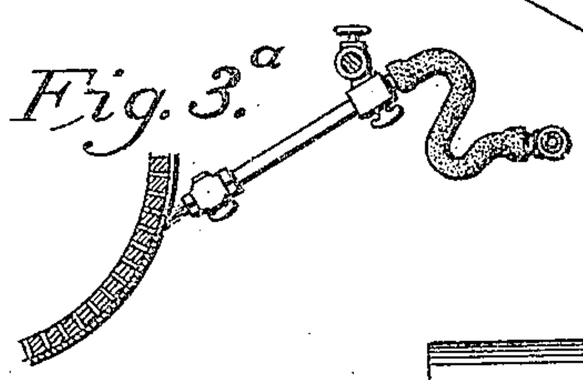

Fig. 3.a

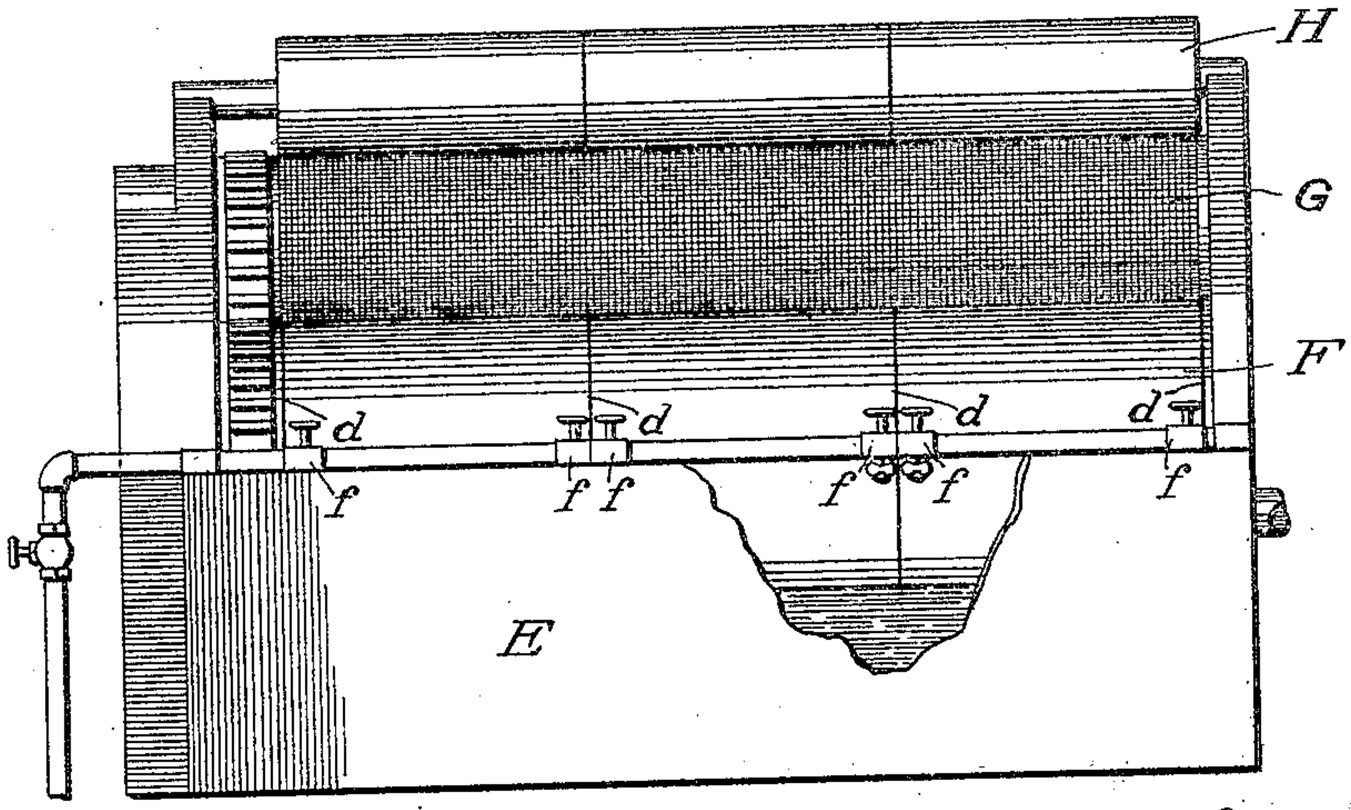

Fig. 2.a

Witnesses
M. M. Hamilton
J. B. Wood.

Inventor
Egbert Moxham
by Keeling & Harding
Attorneys

UNITED STATES PATENT OFFICE.

EGBERT MOXHAM, OF WILMINGTON, DELAWARE.

PROCESS OF FORMING KEGS OR VESSELS PROVIDED WITH INTERNAL SHOULDERS.

No. 803,123. Specification of Letters Patent. Patented Oct. 31, 1905.

Application filed August 15, 1905. Serial No. 274,268.

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 Processes of Forming Kegs or Vessels Provided with Internal Shoulders, 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.

My invention consists in a method for forming a keg or vessel formed of pulp, paper, or similar material and provided with an internal shoulder upon which the head may be placed and rests.

Speaking generally, my invention consists in forming the body of the vessel of pulp, paper, or similar material in the form of a tube of successive layers of pulp. Impinging against the cylinder upon which this pulp is picked up to form the tube are water-sprays which wash away or prevent the formation of the pulp at the points of contact of the water with the pulp. After a sufficient number of layers have been formed to equal the thickness of the shoulder desired the water-sprays are stopped, and thereafter the pulp winds up in one continuous web throughout its entire length. I thus form a tube which is provided with a portion or portions partly cut through that may be readily removed, and thus form a shoulder by the different thicknesses of the tube at this point.

In the drawings, Figure 1 is a vertical transverse section in perspective through the body of the tube before the internal collar or portion has been removed. Fig. 1ª is a perspective view of the machine which may be used to carry out my method. Fig. 2 is a vertical transverse section in perspective through the body of the keg made by my improved process. Fig. 2ª is a front elevation of the machine of Fig. 1. Fig. 3 is a plan view of my improved keg with the head in place. Fig. 3ª is a detail of the water-spray. Fig. 4 is a vertical transverse section of a completed keg or vessel formed by my improved process.

Speaking first of the keg or vessel formed by my process or method which is shown in Figs. 2, 3, and 4, A is the body of the vessel, which is made of layers of pulp in the form of a tube. A portion of this body near each end is removed, so that, as may be seen, the end portions contain less material and are thinner than the remaining portion of the body. This forms inward projections or seats *a a* at the juncture of the thinner and thicker sections of the body. Upon one of these projections or seats is placed the head B and upon the other the head B′. These heads are also preferably made of pulp, paper, or similar material. The ends *b b* of the body, which are the thinner portions of the body, the portion beyond the seats or projections *a a*, are turned over or crimped at *c c* upon the heads B B′, thus clamping the heads securely in place between the crimps *c c* and the internal shoulders *a a*. C is a bung or stopper also preferably made of pulp, paper, or other similar material in the form of a screw-plug and fitted into the threaded hole in one of the heads. This bung or stopper forms no part of my invention and may be constructed of any material and may be fastened in the head in any other mechanical manner desired.

I form this keg by my improved method in the following manner. The machine which I use is shown in Figs. 1ª, 2ª, and 3ª. E is the usual vat containing the pulp. F is the mold-roll or pulp-cylinder revolving in bearings in the side wall of the vat. G is a couch-roll revolving in bearings in the side of the vat and contacting with the mold-roll in such a manner as to remove the layers of pulp formed on the mold-roll and transfer them to the winding-roll or mandrel H. The mold-roll and the couch-roll have perforations P P, as shown. *d d d* are deckles or closed or non-perforated portions of the mold-roll. These deckles are well known in the art for the purpose of separating the pulp into sections. *f f f f* are water-sprays, which receive water from a source of supply. (Not shown.) The mouths of these sprays are each arranged at a distance from the deckles equal to the length of the body, which is to be of thinner cross-section. In carrying out this operation initially the water-sprays are in operation, which not only causes the pulp received upon the roller F to be divided by the deckles into strips, but also prevents the formation of pulp in line with the sprays, which so long as the sprays act form division-lines at these points as well as at the deckles. When the layers have been wound on the winding-roll or mandrel H to the required thickness of the internal projection or shoulder, the water-sprays are shut off. The wet pulp then produces a cylinder wound on the winding-roll continuous between the deckles *d d d d*. When the body has reached the required thickness on the winder H, this winder may be removed from the machine

and the cylinder slipped off the end, there being, due to the water-sprays, demarcation-lines within the cylinder to the depth of the desired layers of pulp to be removed at the ends to form the thinner end sections. Such layers to the desired depth may readily be removed.

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

1. The hereinbefore-described method of forming an improved pulp keg or vessel which consists in first forming the layers of pulp continuous only for a distance of a portion of the length of the keg or vessel, providing a line of separation between said portion and the remainder and then forming layers of pulp continuous throughout the entire length of the keg or vessel.

2. The hereinbefore-described method of forming an improved pulp keg or vessel which consists in forming the pulp in layers upon a mandrel and initially during the formation of the layers projecting water upon a portion of the mandrel to separate the pulp into two sections, and, after a certain number of layers have been thus formed cutting off the water and forming the pulp layers continuous upon the mandrel.

3. The hereinbefore-described method of forming an improved pulp keg or vessel which consists in first forming layers of pulp upon a mandrel in separated portions and then continuing with layers of pulp continuous throughout both sections.

In testimony of which invention I have hereunto set my hand, at Wilmington, Delaware, on this 7th day of August, 1905.

EGBERT MOXHAM.

Witnesses:

IRVING EYER,

M. D. FISHER.