(No Model.)

L. K. BINGHAM.

APPARATUS FOR MAKING PRINTERS' ROLLERS.

No. 413,843. Patented Oct. 29, 1889.

Fig. 1.

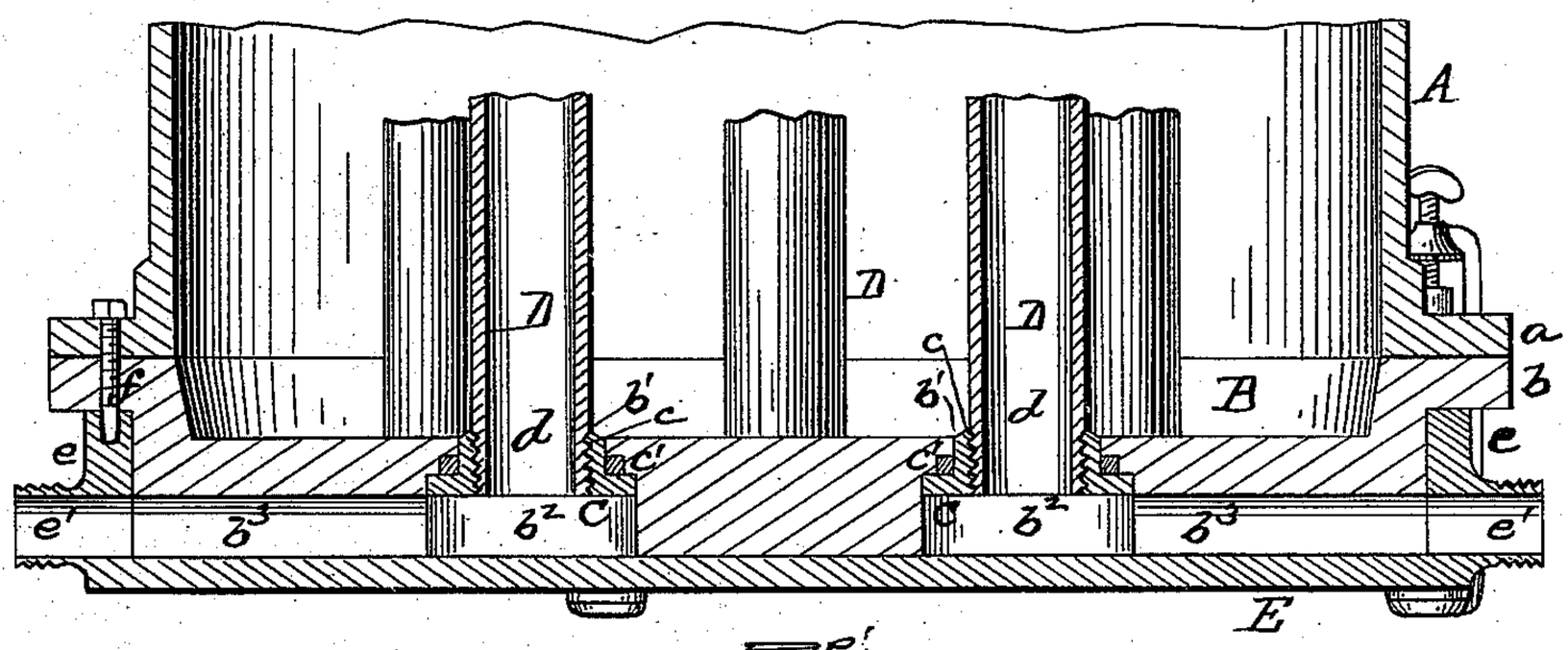
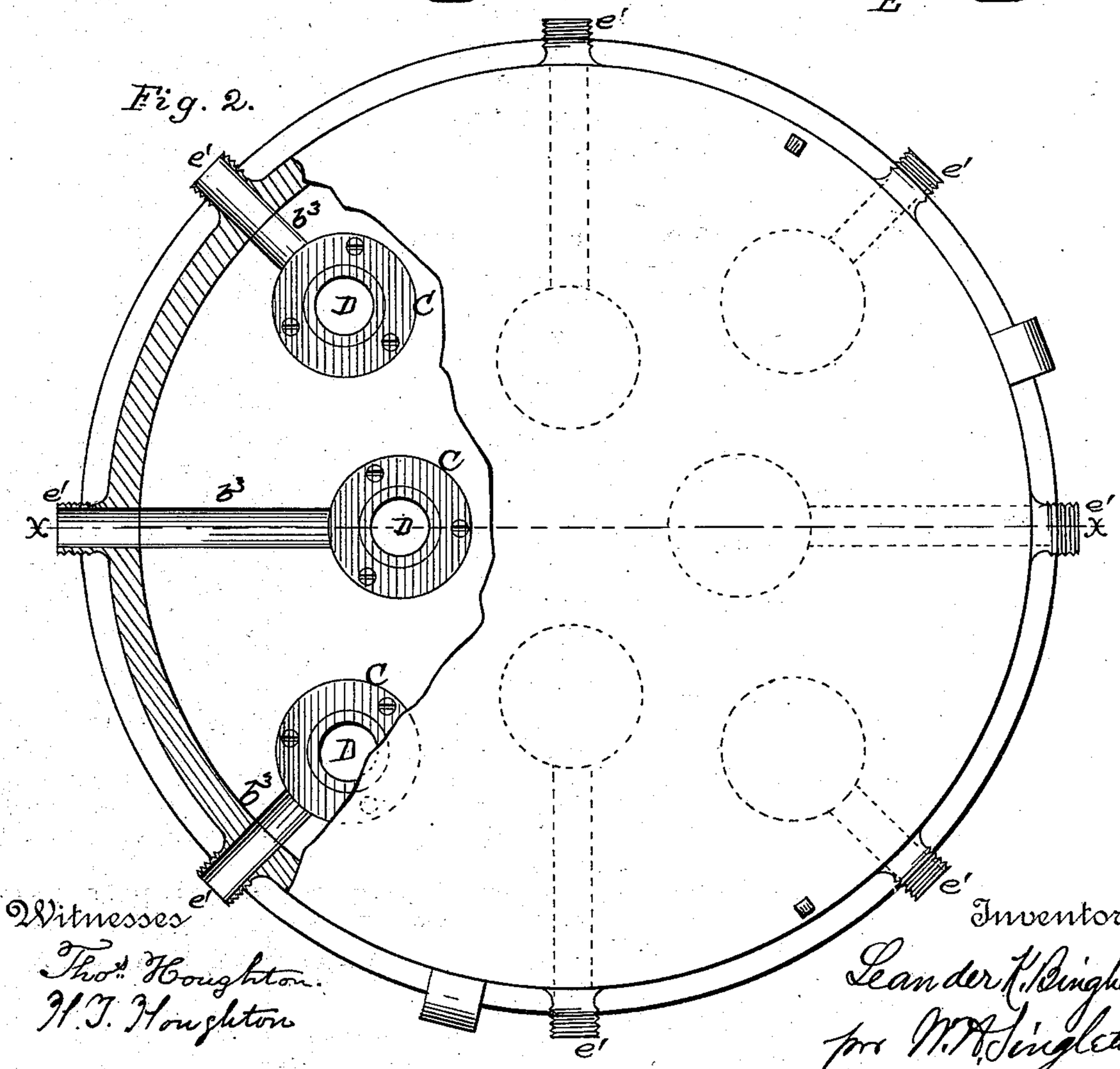


Fig. 2.



Witnesses
Thos. Houghton.
H. T. Houghton

Inventor
Leander K. Bingham.
per W. H. Singleton
Attorney

UNITED STATES PATENT OFFICE.

LEANDER K. BINGHAM, OF NEW YORK, N. Y.

APPARATUS FOR MAKING PRINTERS' ROLLERS.

SPECIFICATION forming part of Letters Patent No. 413,843, dated October 29, 1889.

Application filed March 13, 1889. Serial No. 303,106. (No model.)

To all whom it may concern:

Be it known that I, LEANDER K. BINGHAM, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Apparatus for Making Printers' Rollers; and I do declare the following to be 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 drawings, and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 is a section on line *x x*, Fig. 2, of part of the apparatus. Fig. 2 is a bottom view with part broken away.

This invention relates to improvements in apparatus for making printers' rollers, more particularly to the construction of the lower part of the apparatus.

The invention consists in the construction hereinafter set forth.

In the annexed drawings, the letter A indicates the cylinder having the rim *a*. This cylinder has the usual lower head B, provided with the rim *b*, which bears against the rim *a*, the head being secured to the cylinder at the rim. The head B has the holes *b'* and underneath at these holes the countersinks b^2, from which there run to the outer edge the channels b^3, which may be bottomless, as shown. Within the countersinks are the glands C, having the threads *c*, and between these glands and the head are the packings *c'*. These glands protrude through the holes *b'* and receive the lower ends *d* of the mold-tubes D, the upper ends of which are to be suitably held in the upper head of the apparatus. The lower head B is made, preferably, "dropped," and around it is the removable bottom E, having the surrounding rim *e*. This rim has nozzles *e'*, there being as many as there are channels b^3 in the head B.

After the roller-stocks are inserted into the mold-tubes in the usual way the bottom E is put in place, being centered by the guide-pins *f*, with a nozzle *e'* registering with a channel b^3. In this position it is held by the clamps. To a nozzle is connected the composition-supply pipe, and composition under pressure flows through the channel and up into the mold-tube. After a tube is filled the supply-pipe is moved to another nozzle, the tube there filled, and so on until all are filled. With such an apparatus one or more tubes can be filled, and various different kinds of compositions can be used with the same apparatus.

The nozzles *e'* may be provided with a stop-cock or other closing device.

In another application of even date herewith, Serial No. 303,104, I have shown and claimed an apparatus the lower head of which has bottomless channels, and around such head is a bottom having a nozzle.

Having thus described my invention, what I claim is—

The combination of the cylinder, its mold-tubes, the lower head having the holes for the mold-tubes, and the channels running from the holes to the edge of the head, with the bottom provided with the nozzles, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

LEANDER K. BINGHAM.

Witnesses:

C. MACARTHUR,

CHARLES BINGHAM.