

(No Model.)

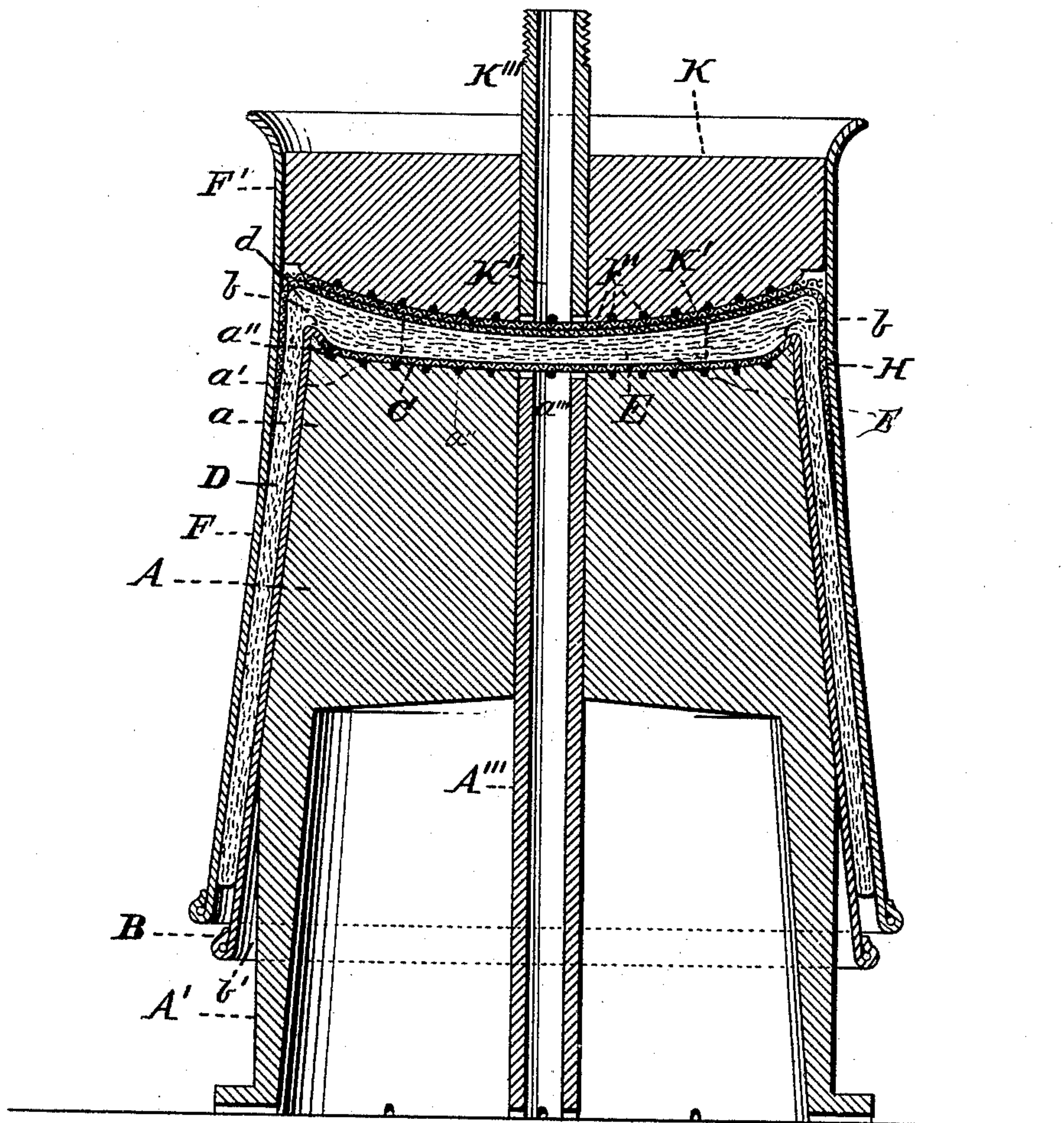
2 Sheets—Sheet 1.

U. HULL & W. W. McEWAN.  
MACHINE FOR MAKING PAPER PAILS.

No. 440,594.

Patented Nov. 11, 1890.

*Fig. 1.*



Witnesses

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(No Model.)

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Fig. 3.

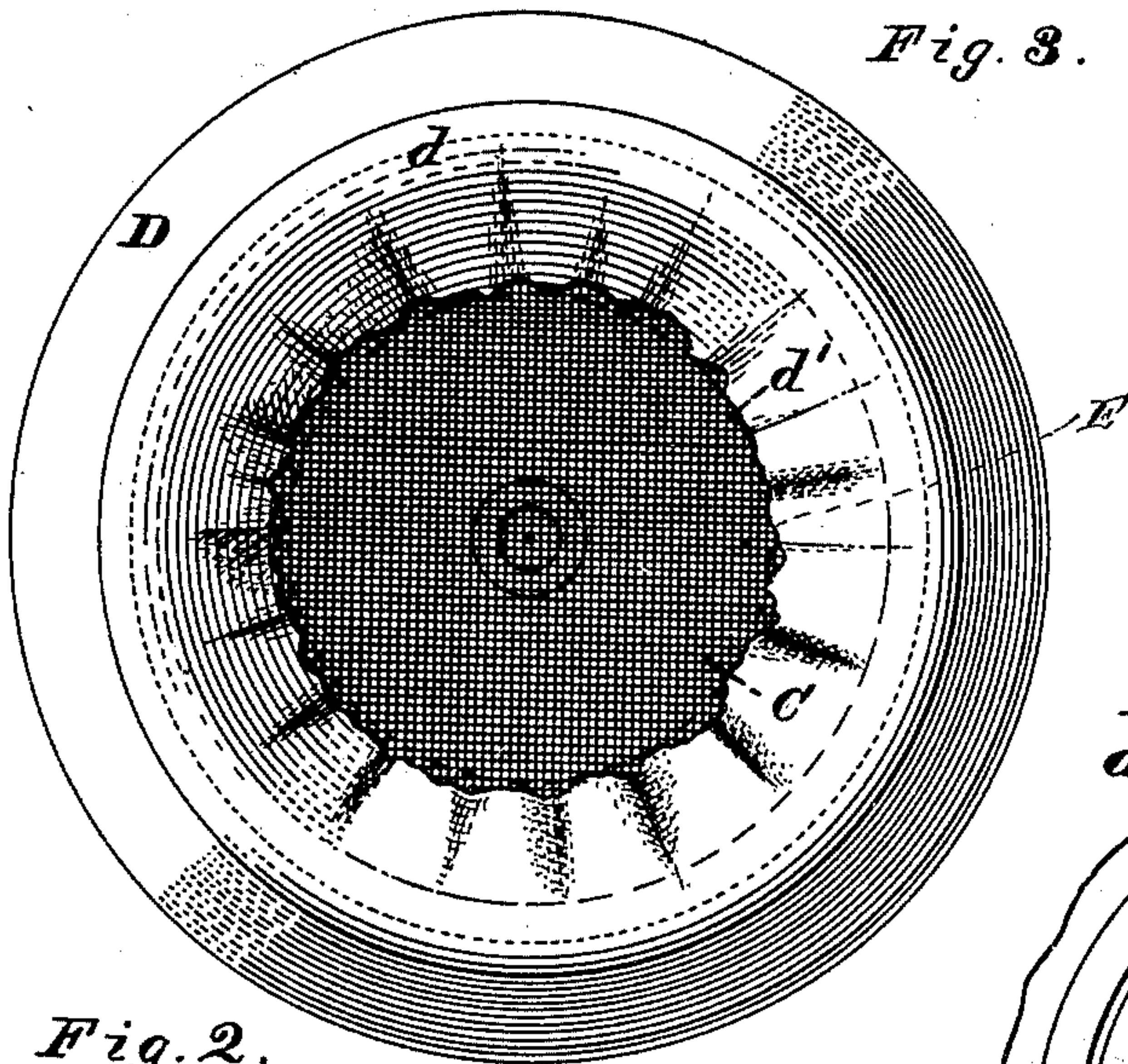


Fig. 4.

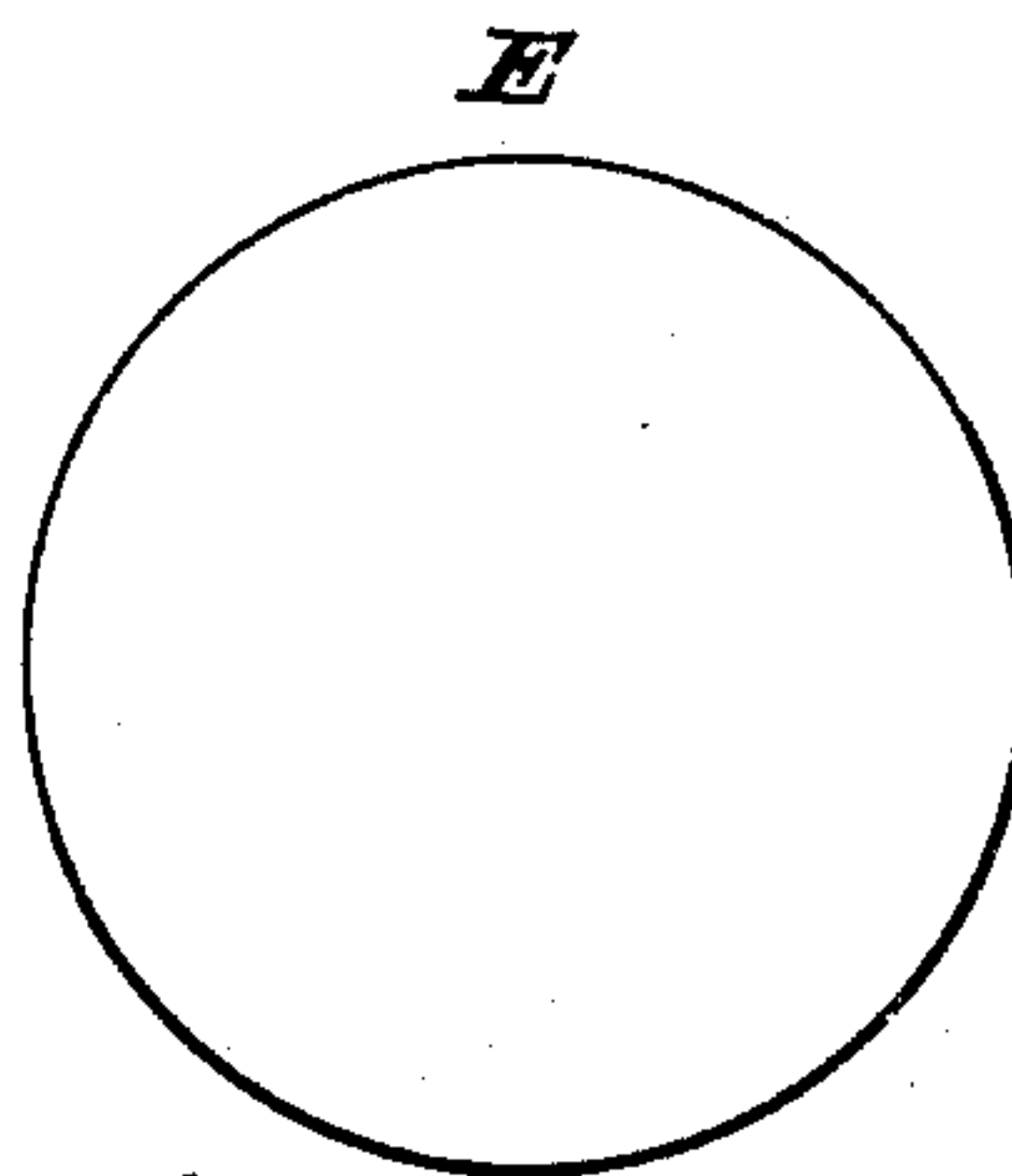


Fig. 5.

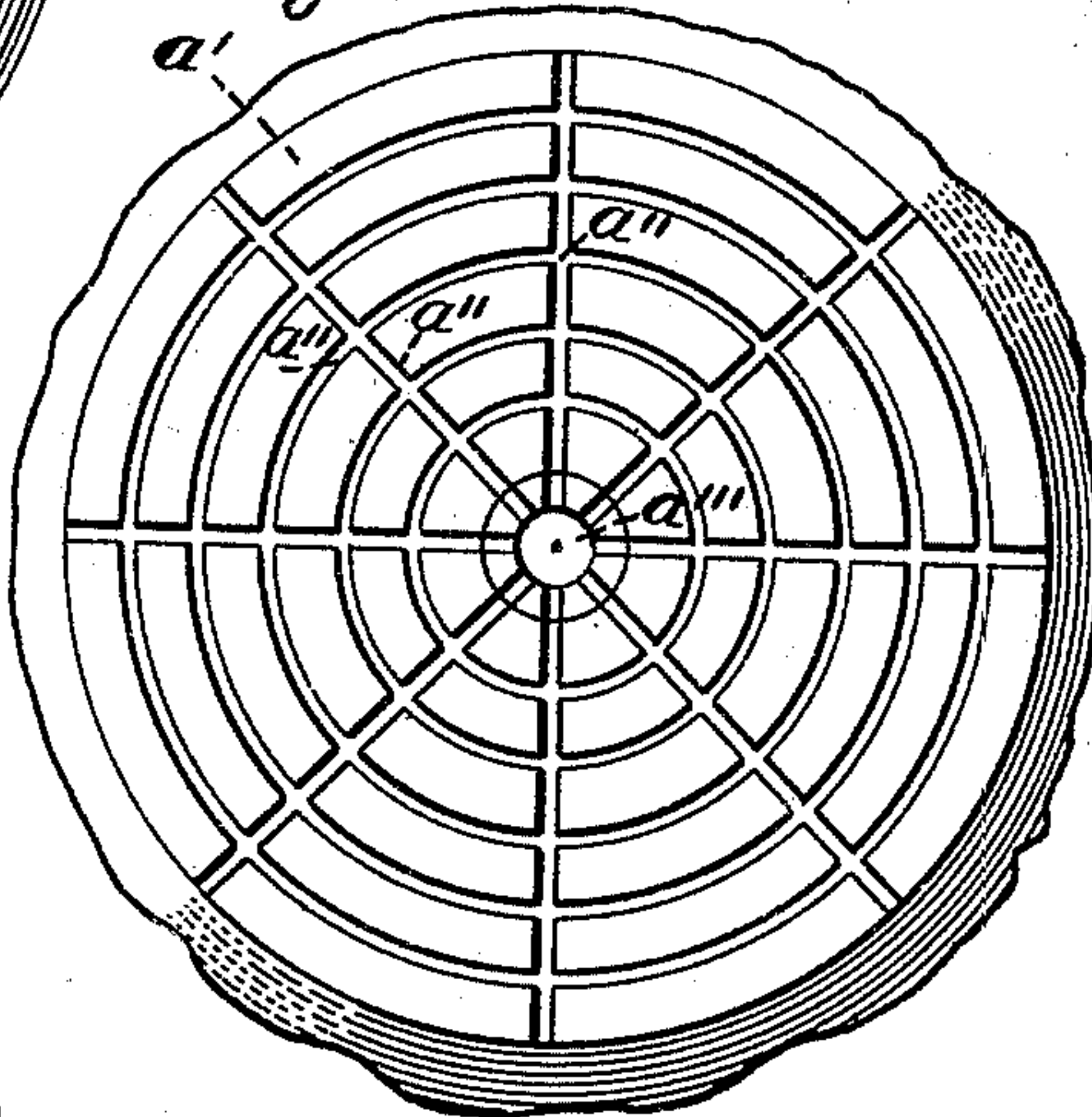
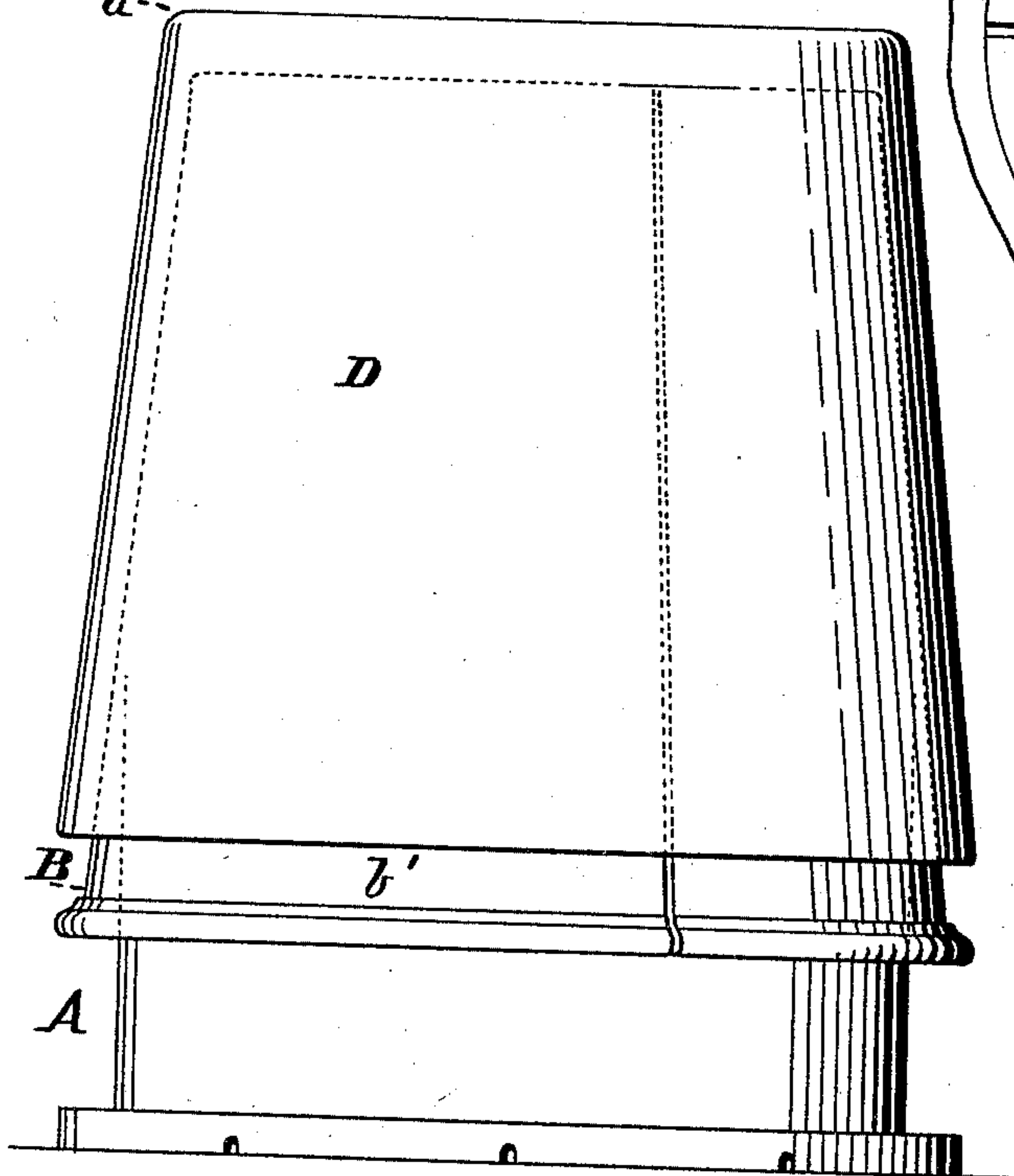


Fig. 2.



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# UNITED STATES PATENT OFFICE.

UZAL HULL AND WILLIAM W. McEWAN, OF BELVIDERE, NEW JERSEY,  
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PLACE.

## MACHINE FOR MAKING PAPER PAILS.

SPECIFICATION forming part of Letters Patent No. 440,594, dated November 11, 1890.

Application filed December 14, 1889. Serial No. 333,781. (No model.)

*To all whom it may concern:*

Be it known that we, UZAL HULL and WILLIAM W. McEWAN, citizens of the United States, and residents of Belvidere, in the county of Warren and State of New Jersey, have invented certain new and useful Improvements in Machines for Making Paper Pails; and we 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 letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of this invention, and is a vertical section. Fig. 2 is a side view showing the paper blank in position upon the removable holder. Fig. 3 is a top view of the same. Fig. 4 is a top view of the center disk. Fig. 5 is a top view of the base-block.

This invention has relation to means for facilitating the manufacture of paper pails; and it consists in the novel construction and combination of devices, as hereinafter set forth.

In the accompanying drawings, the letter A designates the base-block or press-head, which usually consists of a lower cylindrical portion A', surmounted by the cone-frustum a, the top a' of which has a shallow concave form, and is provided with channels a'', converging to the central opening a''', from which leads the drain-pipe or legs A''', which may extend to the level of the lower surface of the base-block A. For some pails I may use a base-block having its upper portion cylindrical. Upon the upper portion of the base-block or press-head is placed the removable holder B, consisting of a sheet-metal covering having its upper edge turned inward to form a small flange b, and having its lower or skirt portion b' extended below the level of the lower edge of the paper-pail blank, so that it can be readily manipulated in lifting the pail from the base-block when finished. This holder is divided or cleft along one side, as shown. Upon the concave top of the base-block is placed the wire-cloth guard and

strainer-piece C, also of concave form, to correspond with the contour of the top a', the wire-cloth serving to provide a surface upon which the paper of the side bends, and the bottom center disk when used can be pulped and pressed, also providing a strainer-guard to prevent the pulp from passing down into the draining-channels of the press-head, while allowing the water to pass freely through into the same to be conveyed off through the pipe A'''. The small inwardly-turned flange b of the sheet-metal holder B engages or encompasses the edge of the concave wire-cloth guard and holds the latter down to its proper position upon the top of the base-block A.

D represents the paper side wall, which is a hollow shell of wet paper designed to be placed upon the removable holder B and to have its upper edge extend above the top of the base-block a sufficient distance to admit of bending or turning said edge downward and inward in a folded or plicated manner toward the center of the top of the base-block. This inward plicated flange, however, extends more or less toward the center from the bend at d, and sometimes leaves a central opening d', which is to be fitted with the circular center disk, as at E, the circumscribing edge of this disk meeting the plicated edge of the flange portion of the side wall. The side wall is confined to its proper position upon the removable holder by the bandage F of sheet metal, which is provided with an extension F' of its upper portion, said extension rising above the level of the top of the base-block A. The circular center disk of paper is wet, as is also the plicated flange of the side wall, which is bent over and down to meet it, and in the operation of joining parts by pulping water is freely supplied within the cylindrical chamber bounded by the extension F'. In reducing the plicated flange of the paper side wall and the bottom center disk to the proper pulpy consistence a perforating-tool or needle-instrument (not shown) is preferably employed, this being worked by a picking action into the plicated flange and marginal portion of the center disk until the two are reduced to a pulpy and homogeneous condition.

H is a cloth-binder which is applied over



the pulped portions and held in a strained and secure manner by the pressure of the conical jacket F. This binder serves to prevent the pulp from working out or bulging under the action of the follower K in the pressing operation and assists materially in giving the bottom its proper form.

The follower K is provided with a convex lower or pressure face K', which is usually channeled, as at k'', for drainage, the channels leading to the central aperture K'' of the follower, which is in communication with the pipe K''' of a suction-pump. In this manner it is designed to provide additional means for removing the water expressed from the pulped parts during the descent of the follower in pressing said pulped parts to give the proper contour to the bottom of the pail. After the pressure the follower is raised and the bandage F removed, the cloth-binder H is taken off and the paper pail lifted from the base-block by means of the removable holder B, whereof the skirt or extension b' below the angle of the base-block affords a purchase or holds for the manipulation. This holder, being cleft, is easily loosened and lifted from the base-block, and is as readily loosened from and taken out of the finished pail.

Having described this invention, what we

claim, and desire to secure by Letters Patent, is—

1. The combination, with the base-block and follower for shaping the pulped side wall flange and bottom of a paper pail, of a removable holder, a removable bandage, a cloth-binder, and wire-cloth guards and drains, substantially as specified.

2. The combination, with a press for shaping the pulped side wall flange and bottom of a paper pail, of the removable cleft holder, the removable outer bandage having an upward cylindrical extension, and the wire-cloth guards and drains, substantially as specified.

3. The combination, with the conical base-block having the channeled top, its wire-cloth guard and drain, and the removable conical holder provided at its upper edge with an inward flange, of the cloth-binder, the outer conical bandage having the upward extension, the channeled follower, its wire-cloth guard, and suction-pipe, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

UZAL HULL.

WILLIAM W. McEWAN.

Witnesses:

PHILIP C. MASI,

MARY BOYKIN.