

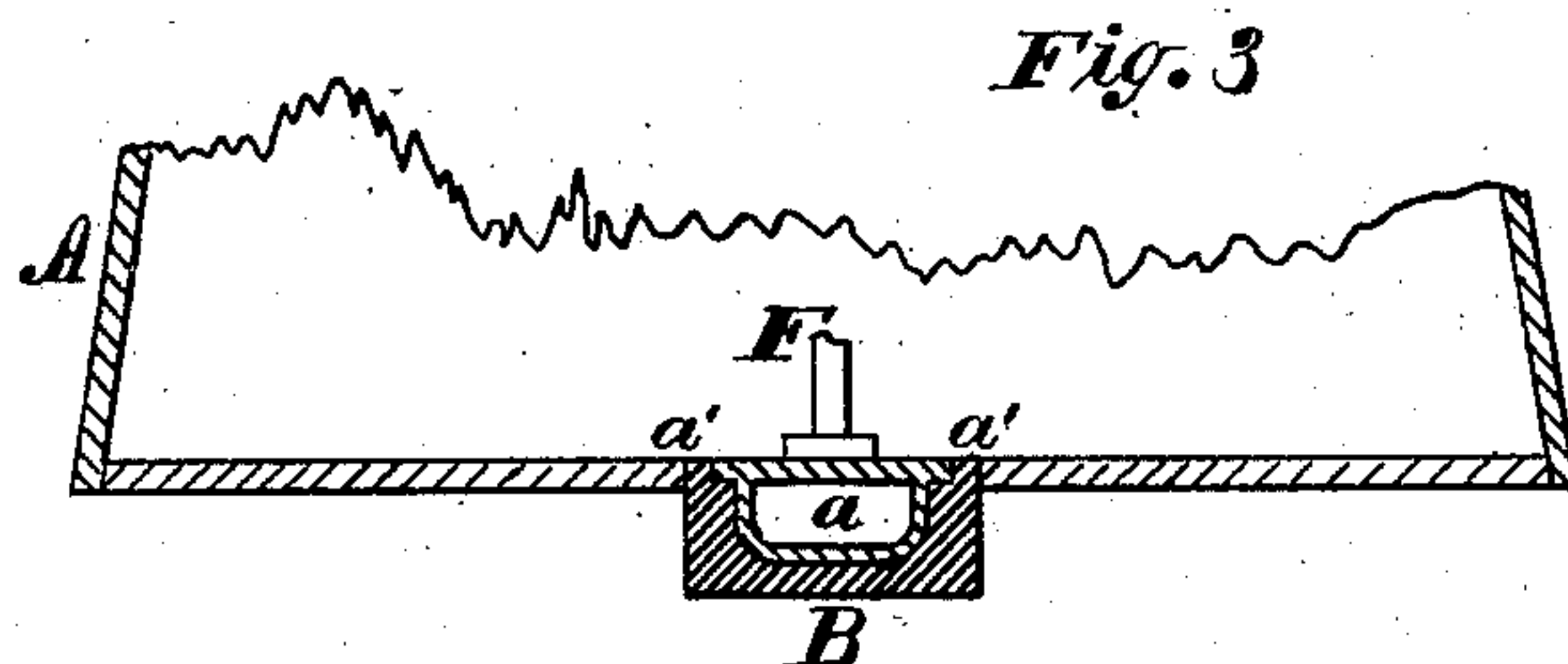
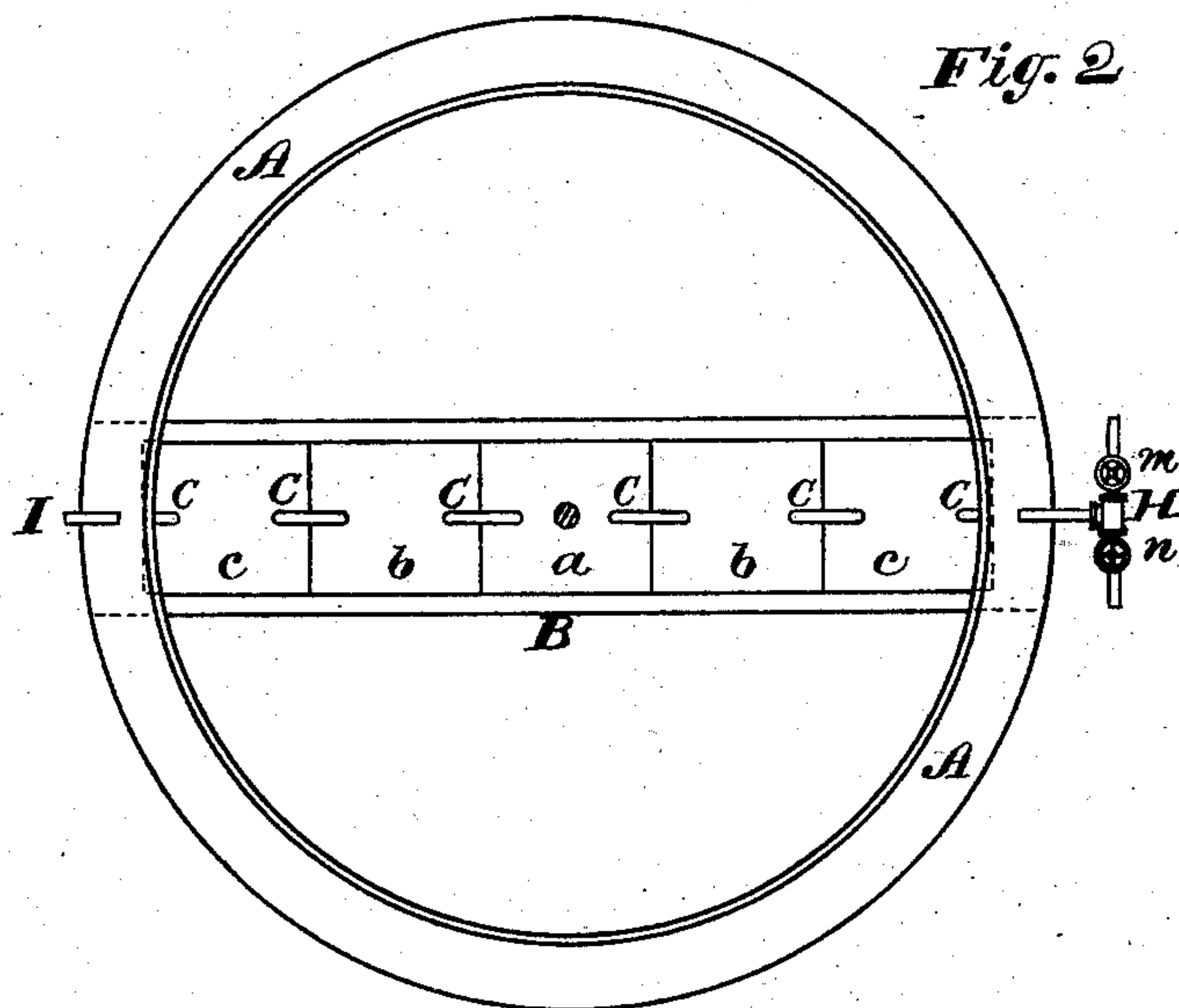
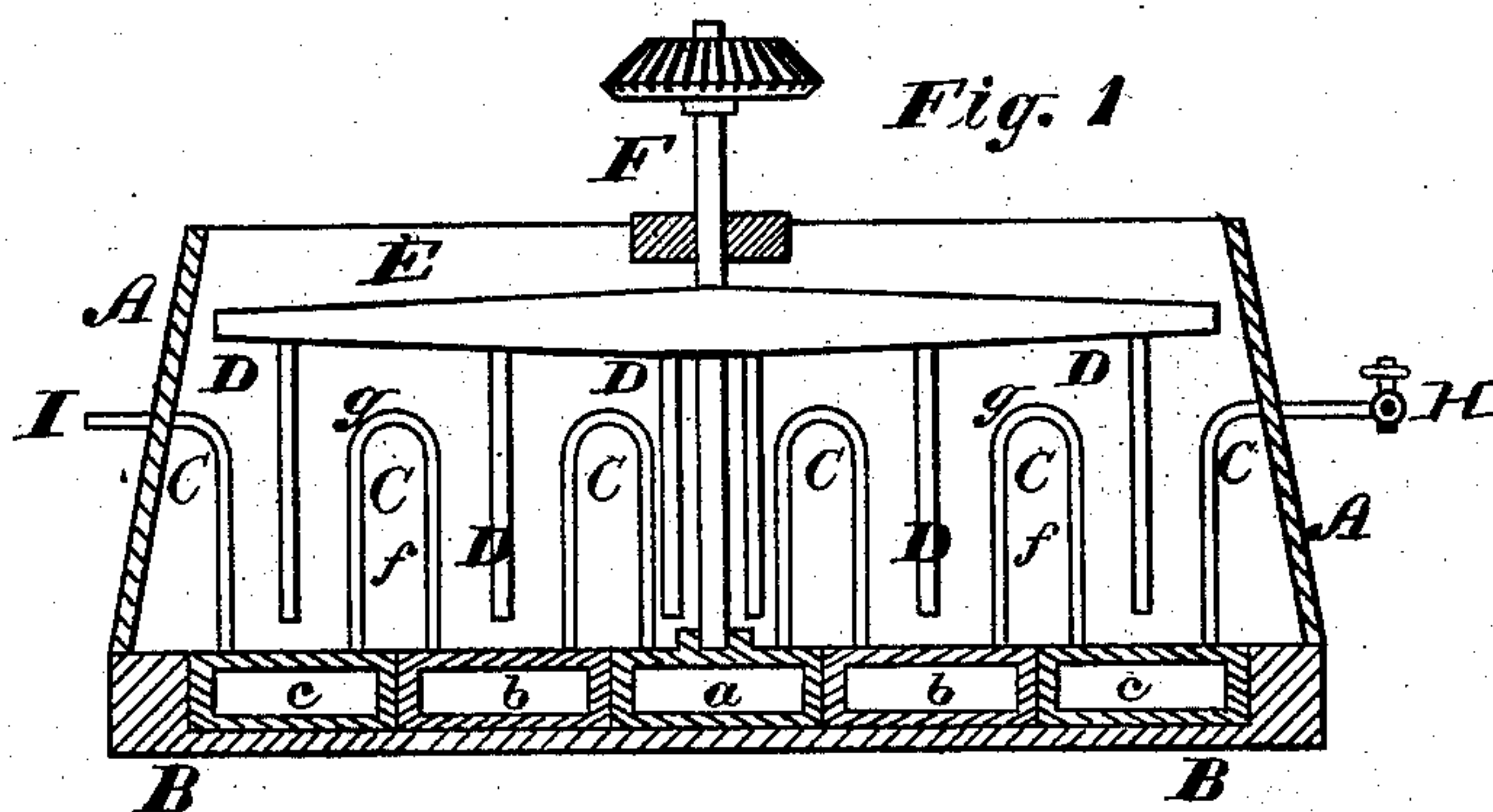
(No Model.)

O. F. BOOMER.

MASH TUB.

No. 248,084.

Patented Oct. 11, 1881.



WITNESSES_

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UNITED STATES PATENT OFFICE.

OSCAR F. BOOMER, OF BROOKLYN, ASSIGNOR OF ONE-THIRD TO ANDERSON FOWLER, OF NEW YORK, N. Y.

MASH-TUB.

SPECIFICATION forming part of Letters Patent No. 248,084, dated October 11, 1881.

Application filed February 26, 1881. (No model.)

To all whom it may concern:

Be it known that I, OSCAR FINN BOOMER, of Brooklyn, in the county of Kings and State of New York, have invented certain Improvements in Mash-Tubs, of which the following is a specification.

The object of this invention is to provide for the more effective heating of the mash-tub used by brewers, &c., than is possible with the ordinary construction of such apparatus; and it consists in a novel combination of parts, whereby the heat is carried into close and intimate contact and communication with the contents of the tub without interfering with the operation of the usual stirrers or beaters; also, in certain novel combinations of parts whereby the first-named feature of my said invention is effectively and cheaply carried into effect.

Figure 1 is a vertical sectional view of a mash-tub constructed according to my said invention. Fig. 2 is a plan view of the same, and Fig. 3 is a sectional view taken in a plane at right angles to Fig. 1.

A is the mash-tub, having the usual configuration and of the usual construction, except that in place of the central transverse plank, which ordinarily forms a portion of its bottom, there is substituted a beam, B, of a depth and width sufficient to receive the hollow castings hereinafter described. The beam B is secured in place to form part of the bottom of the mash-tub, as represented in Figs. 1 and 3, and has in its upper side a large cavity, (shown in transverse section in Fig. 3,) and the longitudinal upper edges of which are rabbeted to receive the flanges of the castings, as presently herein explained. These castings have substantially the form represented in the transverse sectional view, Fig. 3, and each may be of any desired length, so long as the entire number of castings placed end to end in the cavity formed in the upper part of the beam B extend nearly or quite the length of the said beam within the tub A, as represented in the drawings. These castings are five in number—namely, a central casting, *a*, and others extending outward from said casting, and indicated by the reference-letters *b c*. These castings have flanges *a'*, which rest in the rab-

beted upper edges of the cavity in the beam B, and as represented in Fig. 3. These castings are made hollow by any of the means ordinarily employed in foundries for that purpose—as, for example, by “coring out,” so termed. When placed end to end in the cavity of the beam B, as hereinbefore explained, and represented in Fig. 1, they have no direct communication with each other, but are connected with each other by upright bow-shaped pipes C, the legs *f* of each of said pipes C being substantially parallel and connected at top by a bow or bend, *g*. These pipes are of any desired height, the intent being that the heat radiated or communicated therefrom shall pass direct to heat the contents of the mash-tub as the same is agitated and carried around and brought in contact with the said pipes by the operation of the stirrers D, which are of the usual construction, and attached in the usual manner to a cross-head, E, carried by a rotating vertical shaft, F, the lower end of which shaft may work in a suitable bearing provided in the top of the central casting, *a*.

One end of the series of castings connects with the steam-inlet pipe H, while the castings at the opposite end of said series are provided with an outlet steam-pipe, I, so that steam, being admitted through the pipe H, passes into and through the nearest casting, thence through the adjacent bowed pipe C to the next casting, and thence alternately through the pipes and castings, until it finds its exit through the outlet-pipe I, the steam heating the pipes, and consequently the contents of the mash-tub.

The bowed pipes C are arranged at such distance apart as to permit the stirrers D to pass between them while in rotation, so that the contents of the mash-tub are stirred, agitated, and carried around and brought in contact with the pipes, so that a practical uniform and homogeneous heating of the contents of the mash-tub is secured.

The inlet-pipe H may be connected with two branch pipes, *m n*, each provided with a suitable cock, so that when desired the steam may be shut off and cold water run through the castings and bowed pipes, to rapidly cool the

contents of the mash-tub when the exigencies of the business require such to be done.

It will be observed that by the use of the beam to form or constitute part of the bottom of the mash-tub a simple and effective means is provided for the firm and secure retention and support of the castings in place, and at the same time prevents the infiltration through the joints around the castings of the liquid from the contents of the mash-tub.

What I claim as my invention is—

1. The combination of the hollow castings and the upwardly-extending bowed pipes with a mash-tub, the whole conjoined for use and operation substantially as and for the purpose herein set forth.

2. The hollow castings *a*, connected by the upwardly-extending bowed pipes *C*, in combination with the mash-tub *A* and the rotating stirrers *D*, arranged to move between the bowed pipes *C*, substantially as and for the purpose herein set forth.

3. The beam *B*, having a cavity in its upper side, and forming part of the bottom of the mash-tub *A*, in combination with the hollow castings connected by the upwardly-extending bowed pipes *C*, all substantially as and for the purpose herein set forth.

OSCAR F. BOOMER.

Witnesses:

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