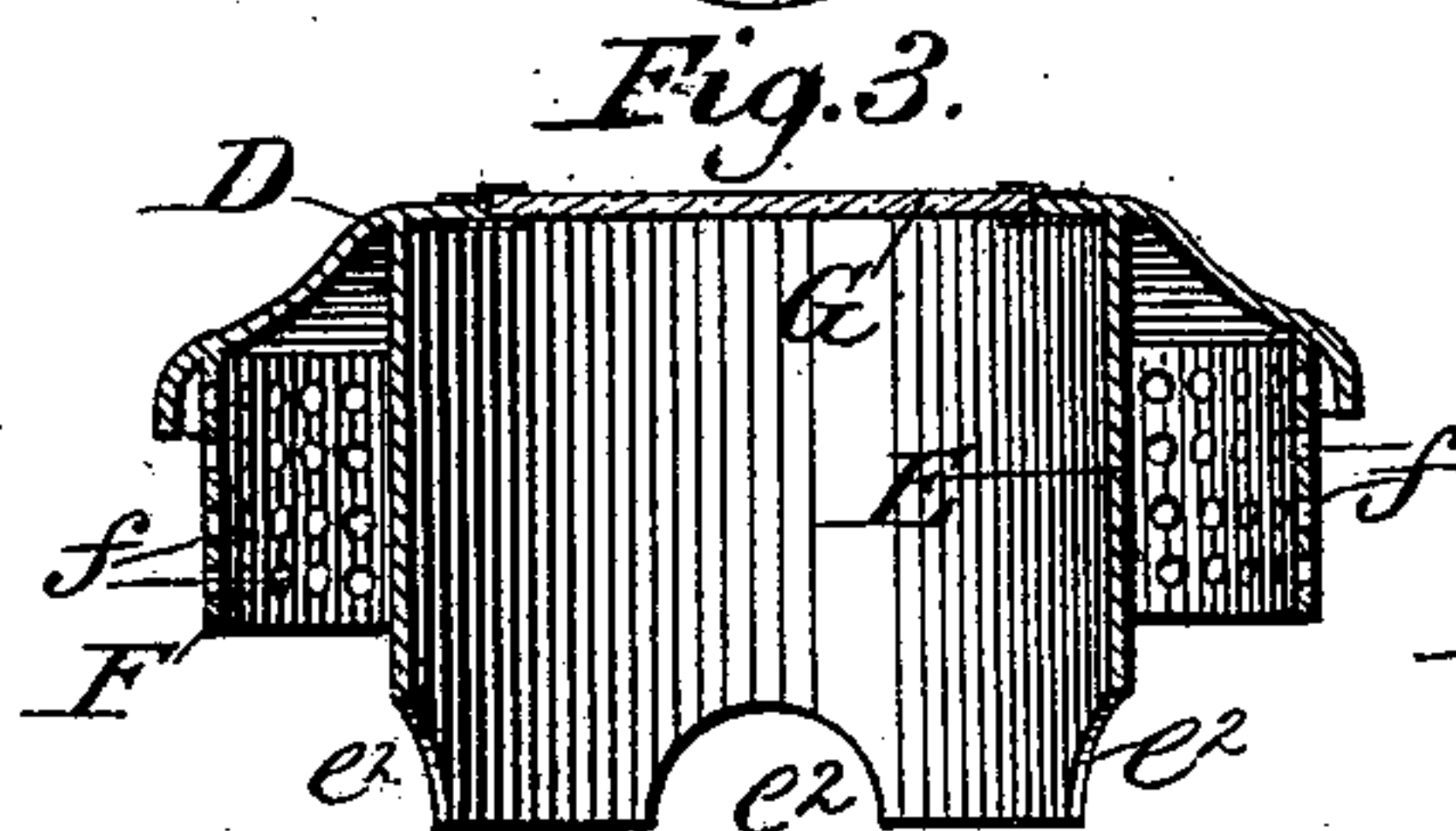
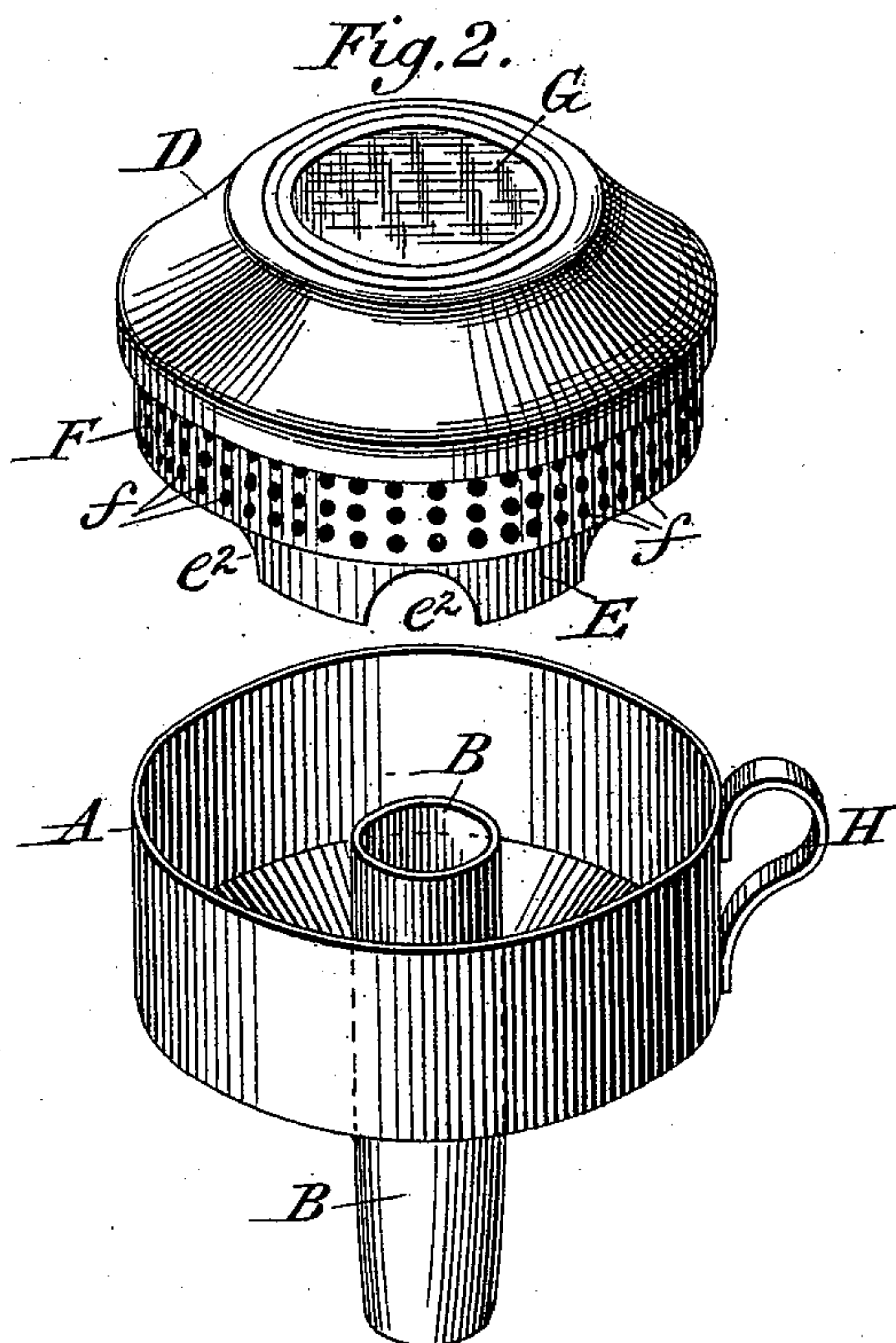
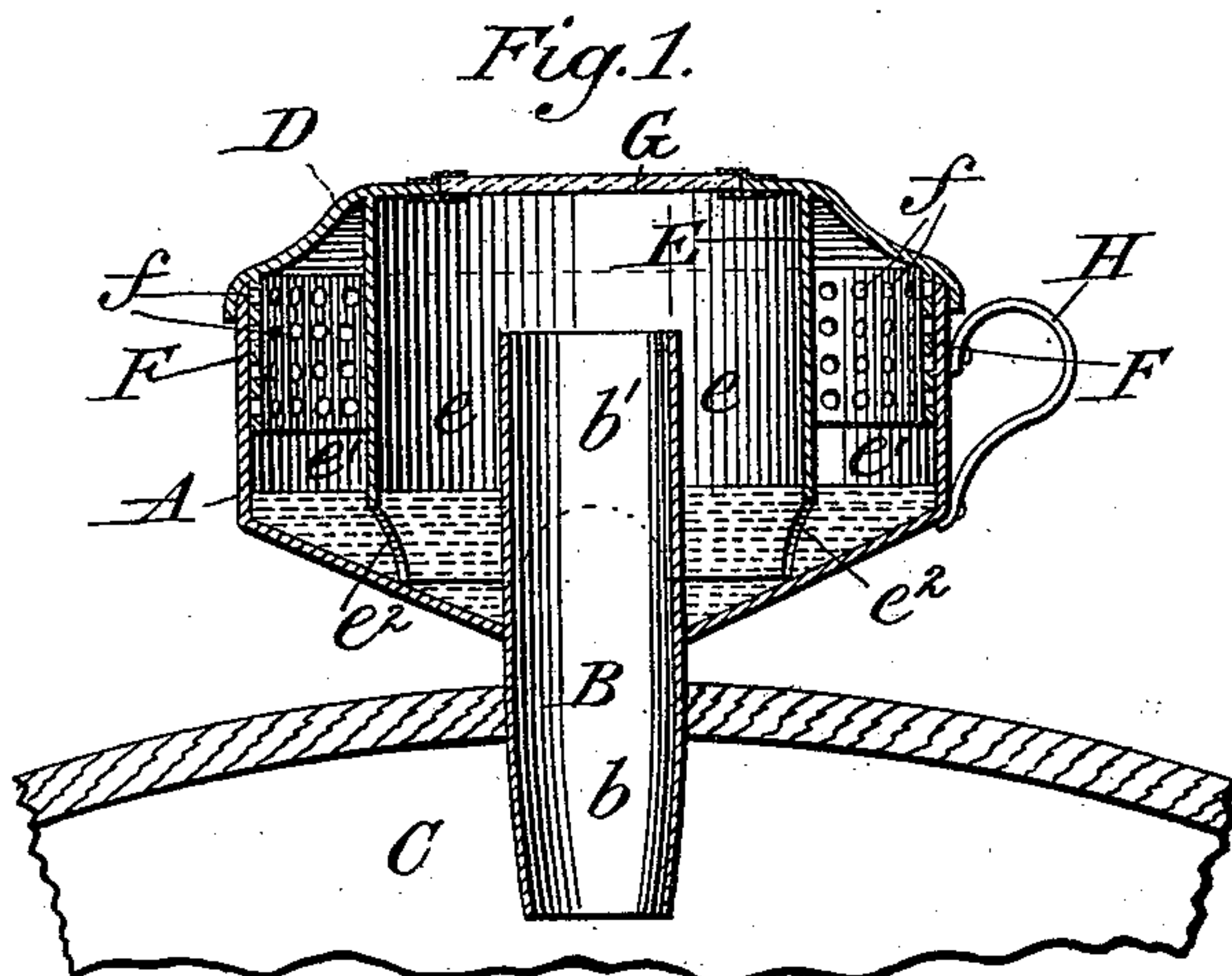


(No Model.)

E. MARQUARDT.
FERMENTING TRAP.

No. 541,443.

Patented June 18, 1895.



Attest:

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m. e. masue

Inventor.

of Emil Margnardt
by "Max Teng" his attorney

UNITED STATES PATENT OFFICE.

EMIL MARQUARDT, OF BROOKLYN, NEW YORK.

FERMENTING-TRAP.

SPECIFICATION forming part of Letters Patent No. 541,443, dated June 18, 1895.

Application filed April 4, 1895. Serial No. 544,399. (No model.)

To all whom it may concern:

Be it known that I, EMIL MARQUARDT, a citizen of the United States, residing at Brooklyn, Kings county, New York, have invented certain new and useful Improvements in Fermenting-Traps; and I do hereby 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.

My invention relates to the art of fermenting alcoholic beverages, and more especially to the art of vinous fermentation.

The object of the invention is to provide a device in the nature of a trap, to be placed upon the bung or vent of the cask containing the liquor in a state of fermentation, and which is designed, first, to prevent the escape at ordinary pressures of the gases generated in the process of fermentation, such as carbon monoxide and carbon dioxide, alcoholic vapor, &c., from the cask, which would, otherwise, fill the cellar or other space wherein the same is situated, while, at the same time, it will permit the escape of such gases, if, as sometimes happens, they acquire a dangerous pressure; secondly, to form a receiver for the scum, foam and dirt as the same is cast forth from the barrel during the fermenting process, which shall effectually prevent the return of such scum, &c., into the barrel, and, thirdly, to prevent the admission to the interior of the barrel or cask of flies and other vermin, dirt, &c., which would otherwise be apt to find admission to the same, especially during warm weather.

With these objects in view, a fermenting trap constructed according to my invention comprises a tubular, hollow bung, adapted to be inserted into the bung hole of the cask and provided with an upper, enlarged, preferably cup-shaped receiver, into which the tubular bung extends sufficiently to form an annular receptacle within the cup-shaped enlargement. In connection with these elements, my invention comprises a lid provided with an outer depending perforate flange and with a depending annular flange adapted to dip into the annular receptacle so as to extend down to or near the bottom of the same, said depending flange being provided with cut-away portions, so as to allow the outer and inner

annular spaces formed by this depending flange, to communicate.

My invention, moreover, consists in such further features, elements and combinations of parts as will be hereinafter more fully set forth, and pointed out in the claims.

In the drawings accompanying this specification, I have represented a fermenting trap embodying my invention in its preferred form.

In the drawings, Figure 1 represents a vertical longitudinal section of the trap; Fig. 2, a perspective view of the same, the lid being shown as removed for the purpose of giving access to the interior; and Fig. 3, a detail view, in vertical section, of the lid.

Referring to the drawings, A represents a cup-shaped scum-receiver or enlargement, and B a tubular sleeve or bung extending downward below the cup-shaped receiver, as shown at *b*, and preferably tapered somewhat, as shown, so as to be readily inserted into the bung or vent of the cask, C, and to fit snugly therein, so as to completely close the same. This tubular sleeve, as shown, extends upward a considerable distance into the cup-shaped receiver, as at *b'*, so as to form, within the cup-shaped receptacle, an annular space or receiver for the scum, dirt and other matter ejected from the barrel during fermentation. This cup-shaped receiver, as shown, is provided with a lid, D, having a depending flange, E, which dips down into the annular space between the sleeve, B, and the outer wall of the cup-shaped enlargement, thus dividing the said annular space into two annular chambers, *e* and *e'*. In order to permit the annular chambers, *e* and *e'*, to communicate with each other, the depending flange, E, is cut out at one or more points, as shown at *e²*. The lid, D, is also provided with another outer depending flange, F, which fits closely against the inner face of the outer wall of the receiver, A, so as to hold the lid in place. This flange extends down to about half way from the bottom of the said receiver, as shown, and is provided with a series of perforations, *f*, whose purpose will be hereinafter set forth. The lid, D, is, moreover, provided at its top with a window, G, made of glass or other transparent material, which permits inspection of the interior of the fermenting trap. If desired, the trap may be provided with a handle,

H, of any desired form, for the purpose of readily lifting the same from the cask when it is desired to remove the contents which have accumulated therein.

5 The operation of the fermenting trap so described is as follows: The lid, D, having been put into place, the trap is fitted to the cask by inserting the lower portion, *b*, of the sleeve, B, into the bung hole. A little water or other
10 suitable liquid is then poured into the annular space in the cup-shaped receiver, A, and the lid, D, is then placed in position on the same. The cask is now effectually closed off from the outer atmosphere. As the fermentation
15 proceeds, the gases which are evolved in the cask are first absorbed by the liquid in the receptacle and their further escape is then prevented by the closed trap. When the fermentation becomes more violent, the scum,
20 foam, grape-skins, and other refuse, as they are ejected from the cask are caught first in the annular space, *e*, surrounding the sleeve, B, and finally the pressure of the gases in the cask causes the same to be forced through the
25 cut away portions or ports, *e*², into the outer annular chamber, *e*¹, where they are held by those portions of the depending flange lying between the ports and gradually accumulate. When the accumulations of dirt, &c., have
30 become considerable, which condition can be readily ascertained by inspecting the interior through the window, G, the lid, D, is removed and the cup-shaped receiver withdrawn from the cask, when the contents can be readily
35 thrown out and the parts can then be put into place again, to operate as before. On the pressure of the gases in the cask becoming too great, they are allowed to escape automatically, by raising the lid, when the gases
40 can pass through the perforations, *f*, into the outer air. The apparatus thus acts as a safety valve, and effectually prevents the scattering of the refuse and, perhaps, a portion of the liquids from the barrel around the same.
45 When the pressure has subsided sufficiently, the lid can again be closed.

The advantage of the fermenting trap so described are various. In the first place, under the same, the gases from the cask, whose
50 escape at ordinary pressures has hitherto been a source of great annoyance, are effectually held within the cask, and the air in the cellar or other space within which the same is located is kept pure and uncontaminated.
55 Moreover, the gases are prevented from escaping from the fermenting liquor, thereby preventing the same from becoming weak, and

of low alcoholic strength. In the second place, the construction embodying my invention forms an effectual catch for the scum and
60 other waste matter ejected from the cask, and avoids all danger of the same being returned to the cask, and, moreover, prevents the same from being spattered over and beyond the barrel. It, moreover, forms a receptacle
65 which is easily manipulated, and from which the waste matter, as it accumulates, is readily removed. Thirdly, it completely seals the cask against the admission of all foreign matter, flies, vermin, &c.
70

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

1. In a fermenting trap, the combination, with a receiver having a tubular bung projecting below the receiver and also extending
75 upward into the same, of a lid provided with a perforated flange extending into the receiver and fitting against the inner wall of the same, substantially as set forth.

2. In a fermenting trap, the combination, 80 with a receiver having a tubular bung projecting below the receiver and also extending upward into the same, of a lid provided with a downward-extending flange projecting into the receptacle between the bung and the wall
85 of the receiver, and with a perforated flange extending into the receiver and fitting against the inner wall of the same, substantially as set forth.

3. In a fermenting trap, the combination, 90 with a receiver having a tubular sleeve extending into the same of a lid provided with a flange extending into the receiver and fitting against the inner wall of the same, said flange having a series of rows of perforations,
95 substantially as set forth.

4. A fermenting trap comprising a receiver provided with a tubular sleeve extending into the same and partially below the same, in combination with a lid provided with a de-
100 pending flange extending into the annular space between the tubular sleeve and the outer wall of the receiver and having ports at its lower edge, the said lid being also provided with an outer depending and perforated
105 flange, all substantially as and for the purpose set forth.

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

EMIL MARQUARDT.

Witnesses:

M. C. MASSIE,

PATRICK J. WALSHE.