

No. 630,401.

Patented Aug. 8, 1899.

H. DE B. PAGE.

VAPORIZER.

(Application filed Dec. 24, 1898.)

(No Model.)

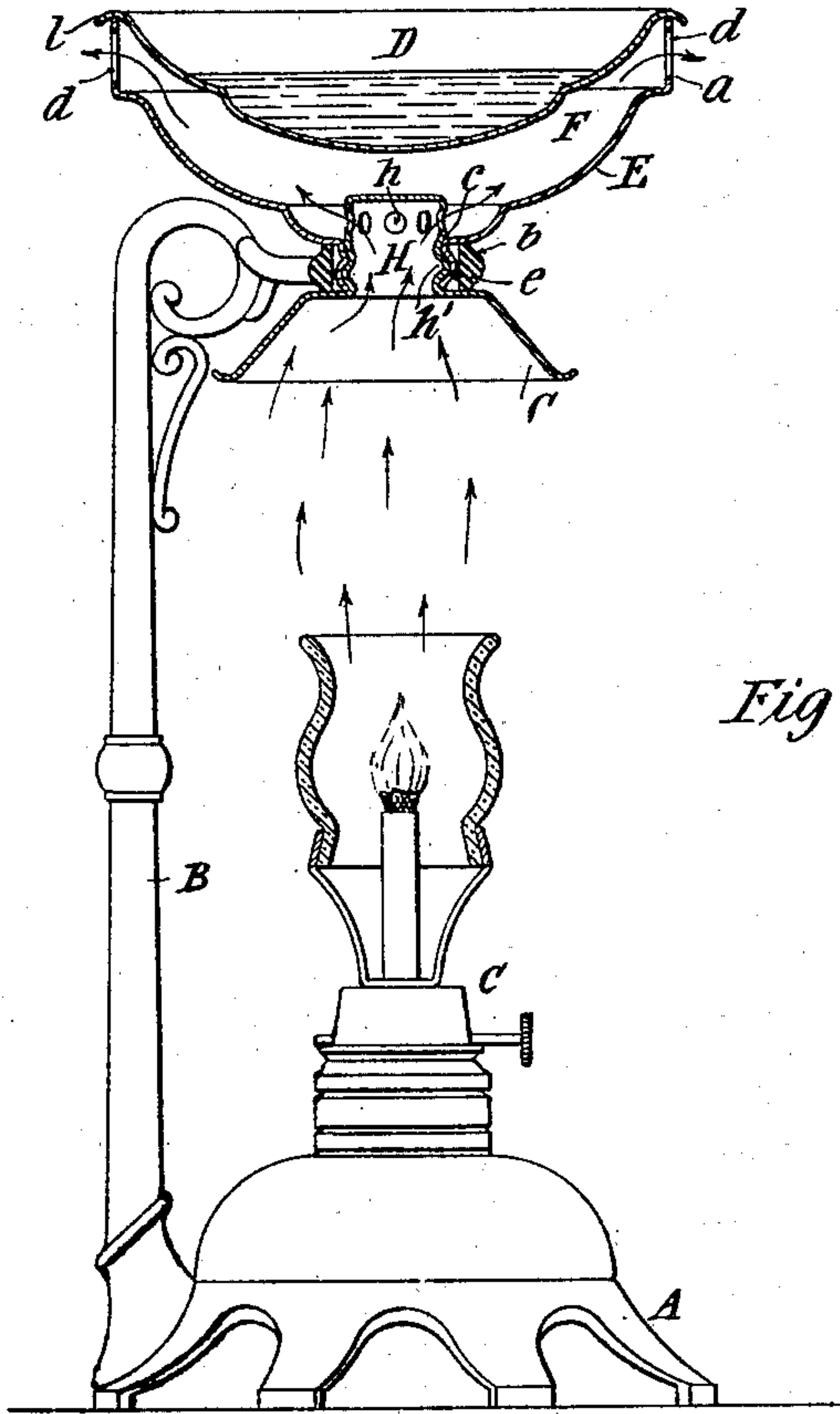


Fig. 1

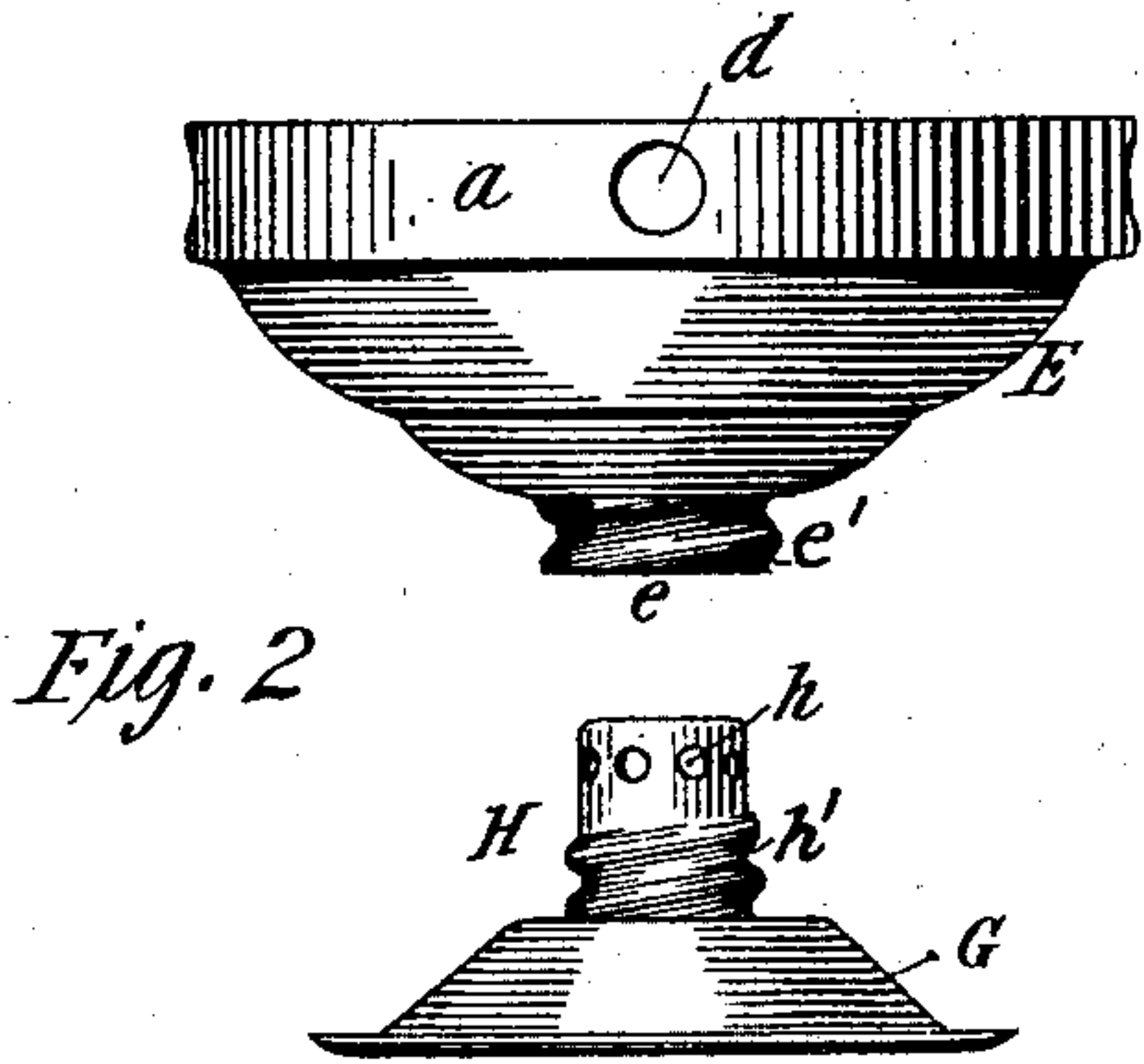


Fig. 2

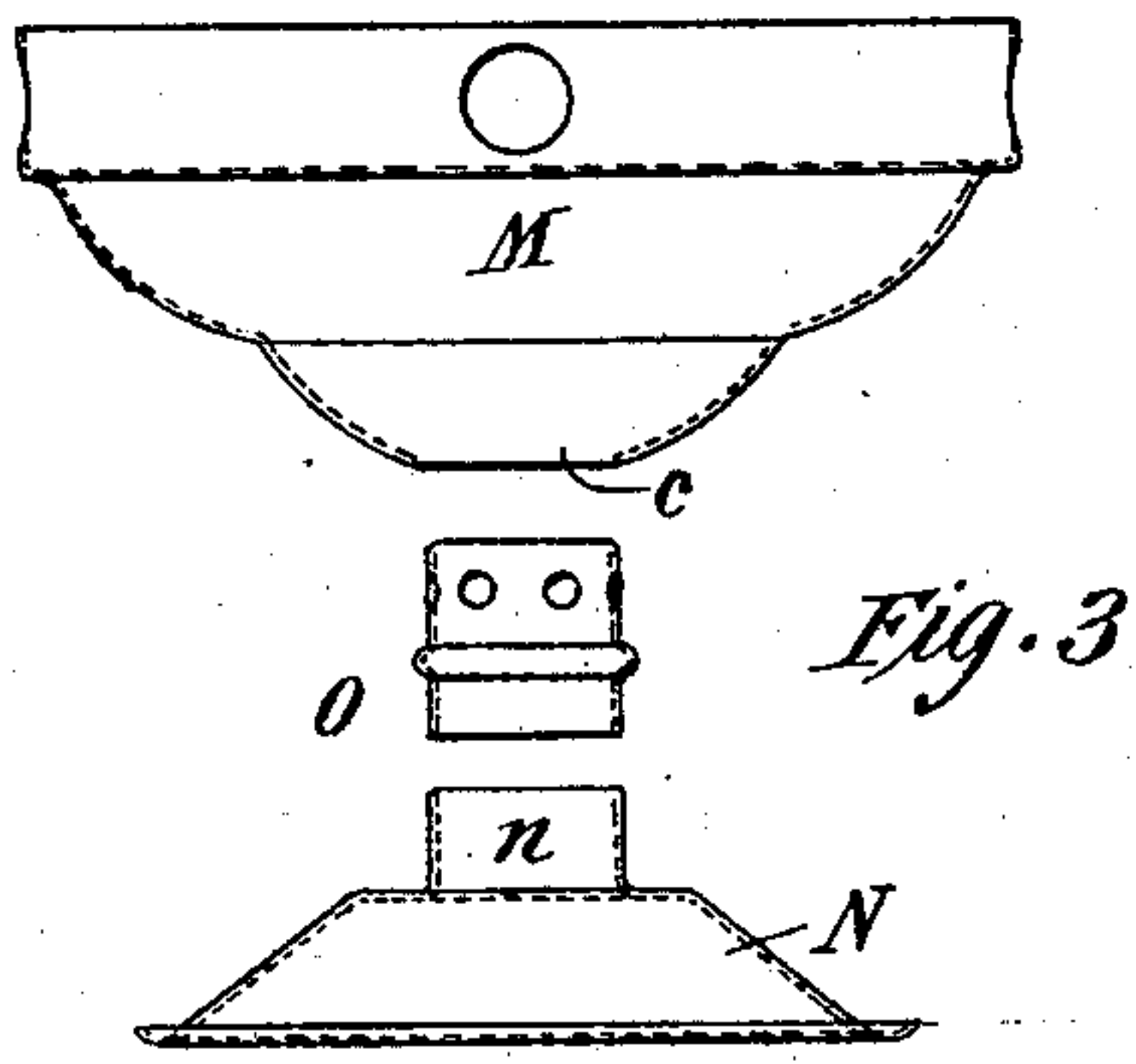


Fig. 3

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VAPORIZER.

SPECIFICATION forming part of Letters Patent No. 630,401, dated August 8, 1899.

Application filed December 24, 1898. Serial No. 700,375. (No model.)

To all whom it may concern:

Be it known that I, HARRY DE B. PAGE, a citizen of the United States, residing in Chatham, in the county of Morris and State of New Jersey, have invented certain Improvements in Vaporizers, of which the following is a specification, reference being had to the drawings accompanying and forming a part of the same.

This invention relates generally to vaporizers or censers used for vaporizing or evaporating medicinal substances, perfumes, incense, and the like, and relates particularly to the form of vaporizers more specially designed for vaporizing cresylic acid or "vaporesolene" in a sick-room for the treatment of diseases of a zymodic character, such as diphtheria, whooping cough, asthma, and other similar diseases.

The present vaporizer is an improvement upon that described in Patent No. 323,547, granted August 4, 1885, to James H. Valentine.

The object of my invention is to provide a construction which will accomplish all the results made possible by the vaporizer covered by said Letters Patent No. 323,547 and yet which will be cheaper, simpler, and more durable. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved vaporizer, the upper portion of which is in mid-section. Fig. 2 is a side elevation of the vessel E and of the bell G with the perforated and threaded thimble H made integral therewith, as shown in Fig. 1. Fig. 3 is a view of the vessel, the bell, and the thimble formerly used in vaporizers of this class.

Referring to Figs. 1 and 2, the ring-shaped base or foot A, the upright frame or standard B, and the lamp C, which fits into the base A, may be constructed in the same manner as heretofore. D is a cup or basin in which the liquid to be vaporized is placed. This basin is set on the top of an open vessel having raised sides or edges *a*, so that when the vessel D is placed thereon an air-chamber F is formed beneath it within the vessel E. The edges of the basin are turned down slightly at *l* in order to fit over the edges *a* of the vessel E and retain the basin in place thereon. The bottom of the vessel E is formed with an

opening *c*, preferably in the center. The sides of the vessel E are drawn down below this opening, so as to form a short tube or throat *e*, which is threaded, as at *e'*, to correspond with the threads on the thimble, hereinafter described. The sides of the vessel E are perforated at intervals with small openings *d d* for the escape of gases from the air-chamber F. G is a metal bell, the top of which is spun or pressed into a closed tube or thimble H made integral with said bell and which corresponds in size to the inner diameter of the open tube or throat *e* of the vessel E. Near the top of this thimble are a number of perforations *h*, and below the perforations and between the perforations and the bell the outer walls of the thimble are threaded, as shown at *h'*, to correspond with the threads on the inner walls of the throat *e* of the vessel E. The bell G and the vessel E are then put together by screwing the tube *e* upon the thimble H, first passing the said thimble H through the ring *b* of the standard B, where a ring is used for supporting the vessel E and the basin D. Instead of being threaded the tube *e* may be made with corrugations and the thimble H with corresponding corrugations, so that when the thimble is pressed into the tube the corrugations on the thimble will spring into the corrugations on the tube, and thus securely fasten the two parts together. When the lamp C, which stands directly beneath the bell G, is lighted, the heat passes upward from it through the bell and the thimble and through the perforations *h* into the chamber F. On entering this chamber the gases divide and flow into diverging directions through the outer wall of the chamber, where they pass through the openings *d d*.

Fig. 3 illustrates the method of constructing vaporizers of this class prior to my invention. M is a vessel corresponding to the vessel E of Figs. 1 and 2, having an opening *c*, preferably in the center, but having no throat or open tube around said opening. N is a bell corresponding to the bell G of Figs. 1 and 2, and projecting upward from said bell is an open tube or throat *n*. O is a thimble closed at one end and with perforations near the closed end corresponding to the thimble H of Figs. 1 and 2; but said thimble O is made separate from the bell N. This vaporizer is

put together as follows: The tube *n* of the bell is passed through the ring *b* of the support B, where such ring is used, and is passed into the opening *c* of the vessel M. By mechanical means the end of the tube *n* projecting within the vessel M is then turned down, so as to constitute a flange and to hold the vessel M and the bell N in rigid connection. The open end of the thimble O is then inserted through the vessel M into the opening formed by the inner walls of the tube *n* and by mechanical force is pressed into said opening, so that the end of said thimble remains held within said opening by frictional contact.

Thus it will be seen that in the form of vaporizer used prior to my invention the vessel and bell and thimble are made separately, involving more labor, material, and expense than when made as in my invention. In putting together the old device the services of a workman and the use of mechanical force are necessary to fasten together the bell and the vessel and properly to place the thimble in its position, whereas in my invention the two parts can be joined by screwing or pressing them together by hand. In the old form of device there is danger of the thimble working loose and becoming lost, whereas in my form this cannot occur. In case of damage to any part of the old device it is necessary for the user to return the entire device to the manufacturer and for the latter to employ a workman to take the same apart and replace the damaged part, whereas in my form the user can easily take apart the vaporizer and himself can replace the damaged part with a new part obtained from the manufacturer. I therefore claim for my invention the following advantages: reduction of parts and reduction of cost of labor and material, increased ease of assembling the parts and resulting reduced cost of manufacture, impossibility of the thimble working loose, increased ease in replacing damaged parts, and general improvement in simplicity and durability. While exhibiting these advantages over the form of vaporizer described in Patent No. 247,480 and

doing away with some of the objections inherent to that form of construction, my invention still retains all of the advantages claimed for the vaporizer covered by said patent.

Having thus described the construction of my vaporizer, I claim as my invention—

1. A vaporizer consisting of the combination of the basin as D, for containing the substance to be vaporized; a cup-shaped vessel, as E, adapted to support the basin and deep enough to form an air-chamber beneath it and having its walls prolonged into an open tube, as *e*, around an opening, as *c*, in its bottom, and having the walls of said tube threaded; a bell, as G, arranged beneath said vessel and having a thimble, as H, extending upward therefrom, the walls of said thimble being perforated near the top and being threaded between the perforations and the bell to correspond with the threads on the tube *e*, and a frame or standard adapted to uphold the vessel E and bell G above a source of heat, substantially as and to the effect set forth.

2. A vaporizer consisting of the combination of the basin, as D, for containing the substance to be vaporized; a cup-shaped vessel, E, adapted to support the basin and deep enough to form an air-chamber beneath it and having its walls prolonged into an open tube, as *e*, around an opening, as *c*, in its bottom, and having the walls of said tube corrugated; a bell, as G, arranged beneath said vessel and having a thimble, as H, extending upward therefrom, the walls of said thimble being perforated near the top and having corrugations between the perforations and the bell to correspond with the corrugations on the tube *e*, and a frame or standard adapted to uphold the vessel E and bell G above a source of heat, substantially as and to the effect set forth.

In witness whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

HARRY DE B. PAGE.

Witnesses:

JAMES N. CATLOW,
ALEXANDER MITCHELL.