

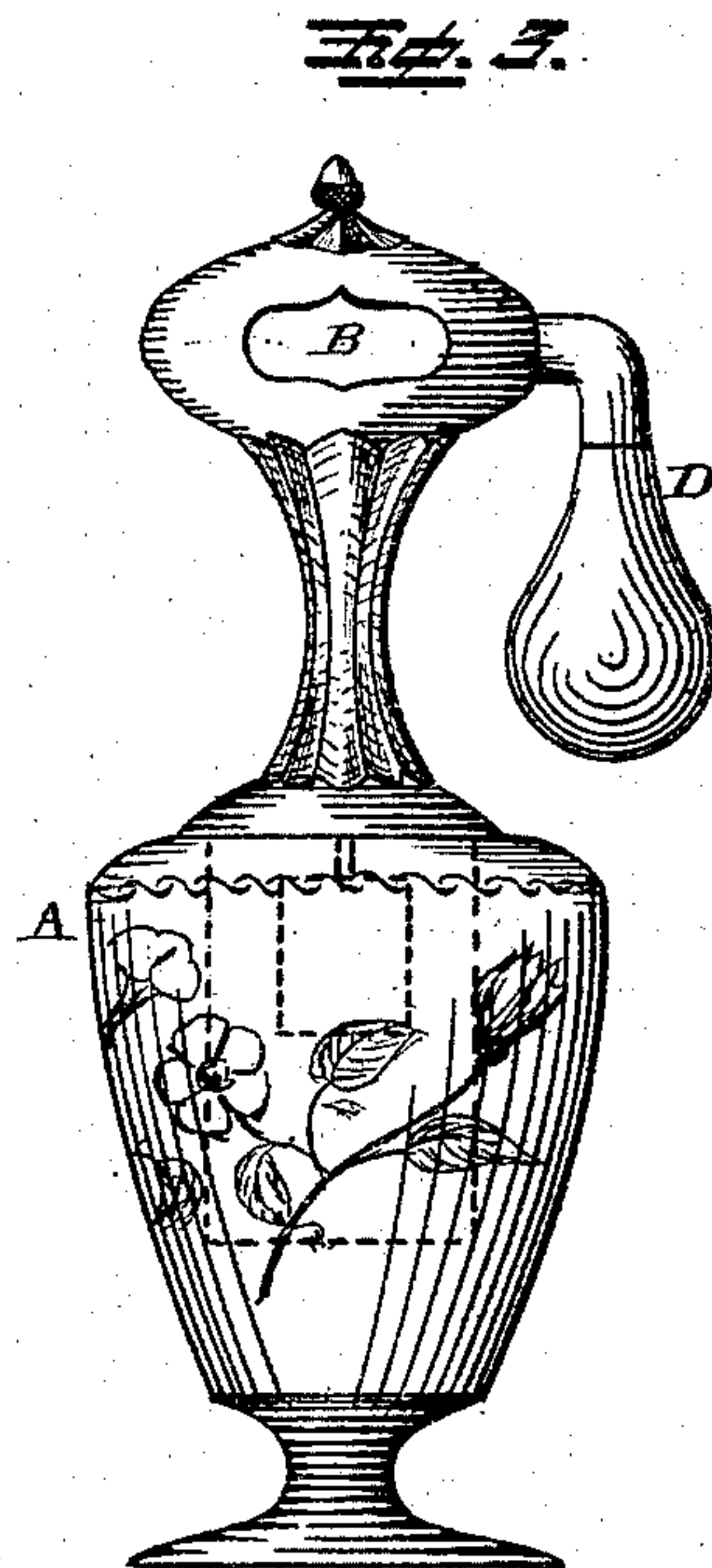
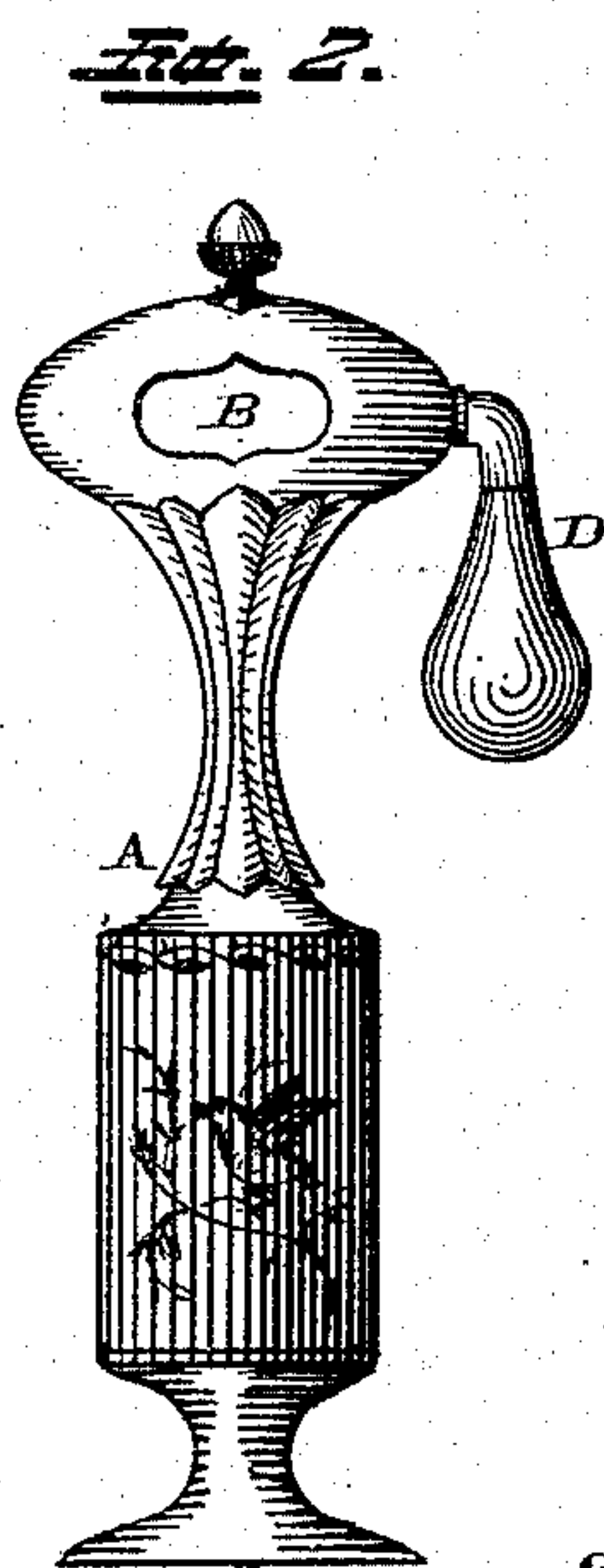
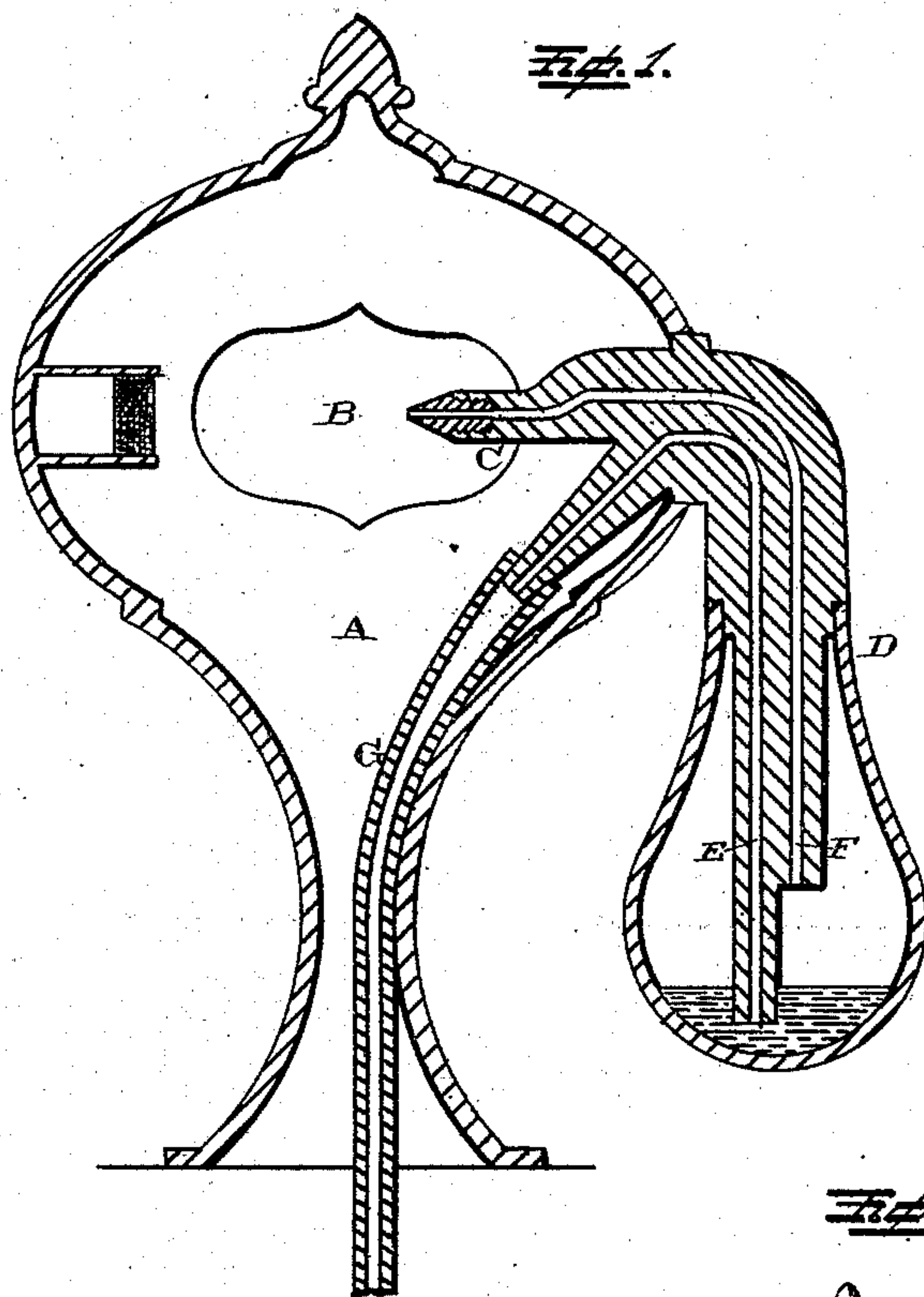
(No Model.)

F. RHIND.

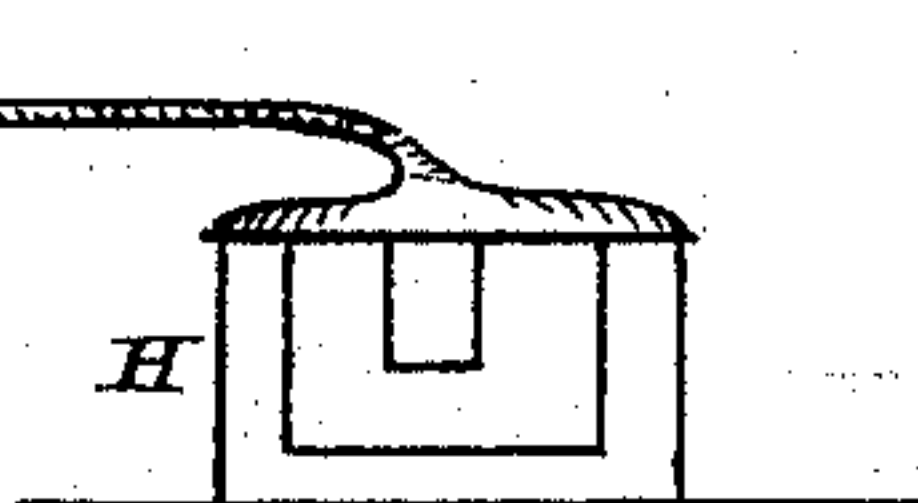
HYDROGEN LAMP OR CIGAR LIGHTER.

No. 252,518.

Patented Jan. 17, 1882.



WITNESSES.  
R. P. Cooney  
W. H. Kern.



INVENTOR:  
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per  
F. A. Lehmann, atty.



# UNITED STATES PATENT OFFICE

FRANK RHIND, OF BROOKLYN, NEW YORK.

## HYDROGEN-LAMP OR CIGAR-LIGHTER.

SPECIFICATION forming part of Letters Patent No. 252,518, dated January 17, 1882.

Application filed November 16, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK RHIND, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful  
5 Improvements in Hydrogen-Lamps or Cigar-Lighters; 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 pertains to make and use  
10 it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in cigar-lighters; and it consists, first, in a standard which is adapted to be placed on a counter,  
15 and which has its upper portion provided with openings, so as to give access to the flame, in combination with a handle containing a sealing medium and a mass of asbestos sponge; second, the combination of the standard and a  
20 swinging handle in which is placed a liquid sealing medium to prevent the escape of the gas until the handle is turned; third, a burner-tip made of iridium, all of which will be more fully described hereinafter.

25 Figure 1 is a vertical section of one form of my invention. Figs. 2 and 3 are side elevations of different forms of the same.

A represents an ornamental standard of any desired shape, size, or construction, and which  
30 is to be placed upon the counter of a cigar-store or the bar of drinking-saloons, or in any other prominent place where cigars are sold or a light is needed for any purpose. Through one, two, or more sides of the top of  
35 this standard are made suitable openings, B, of any desired shape, through which the cigars to be lighted are inserted. The mouth C of the pipe through which the hydrogen gas is discharged against the platinum sponge is thus  
40 incased, so that drafts of air cannot affect the flame in any manner. Where the gas-jet is not thus protected every current of air strikes against it and destroys its lighting qualities for the time being, because the gas must be  
45 projected against the sponge with just a certain proportion of air, and when this proportion of air is exceeded the lighting qualities of the gas are destroyed. This standard A will be shaped according to whether the gas-gen-  
50 erator is placed inside of the standard or below it under the counter. In some cases it may be

found desirable to have the gas-generator placed in the base of the standard, in which case the base of the standard will be made enlarged, as shown in Fig. 3, and thus the whole  
55 apparatus can be moved around and placed in any desired position. Where, however, the gas-generator is to be placed under the counter the standard will be preferably made as shown in Figs. 1 and 2, though I do not desire  
60 to limit myself to any special shape or configuration.

Swiveled, hinged, or otherwise loosely connected to one side of the top of the standard A is the handle D, which is made hollow, and in  
65 the lower portion of which is placed a suitable quantity of mercury to form a sealing medium. The upper portion of the handle is made solid, and with it are formed the two pipes E F. The one E, which projects down near the bot-  
70 tom of the handle, has its lower end closed by the mercury or other sealing medium. The lower end of the second pipe, F, extends a suitable distance above the top of the sealing medium, and is always open. Leading from the  
75 gas-generator H, which can be placed in the lower portion of the standard A or under the counter, as above described, is a pipe, G, which connects with the top of the pipe E in the handle. The gas rises from the generator, which  
80 is of the usual construction, and passes down into the pipe E, and is prevented from escaping from either pipe by the sealing medium in the bottom of the handle. When, however,  
85 the handle is turned partially around the sealing medium flows down into one side of the handle and leaves the lower end of the pipe free, when the gas escapes freely through the  
90 lower end of the pipe E and passes out through the pipe F and ignites against the platinum sponge in the usual manner. As soon as the handle has returned to position the flow of gas is shut off and the gas-jet at once extinguished.

Heretofore the platinum sponge has been fastened upon a small net-work of very fine  
95 wires, and has for that reason been very difficult to prepare and exceedingly frail to handle.

In preparing the platinum which I use in connection with this lamp I take the platinum sponge and mix it with a small quantity of as-  
100 bestus, so as to form a homogeneous mass. This asbestos, being non-combustible, serves to



hold the platinum sponge together without in any manner interfering with its becoming red-hot, and renders the sponge easy and safe to handle, at the same time that its cost is very greatly cheapened. Where the platinum sponge is thus mixed with asbestos it can be prepared in small disks, which can be readily removed from and replaced in position whenever desired without the slightest danger of breakage.

10 As the gas must escape from the end of the pipe through a very small orifice, and as this orifice is constantly enlarging if no steps are taken to control it, I make a tip, through which the gas escapes, of iridium, which is sufficiently  
15 hard to prevent any enlargement under ordinary circumstances.

Having thus described my invention, I claim—

20 1. The combination of the standard A, made hollow at its top and provided with the openings B, the gas-tip C, and mass of platinum sponge placed inside of the standard, and a

handle containing a sealing medium, substantially as shown.

2. In a cigar-lighter, the combination of a 25 standard with a swinging handle which is applied thereto, and in which handle is placed a liquid sealing medium to prevent the escape of the gas until the handle is turned partially around, substantially as shown. 30

3. The combination of a standard and gas-generator with a connecting-pipe, G, the swinging handle containing the two pipes E F and a liquid sealing medium, and a gas-tip and a mass of platinum sponge, substantially as set 35 forth.

4. In a cigar-lighter, a gas-burner tip made of iridium, substantially as shown.

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

FRANK RHIND.

Witnesses:

F. A. LEHMANN,  
WM. H. KERN.