

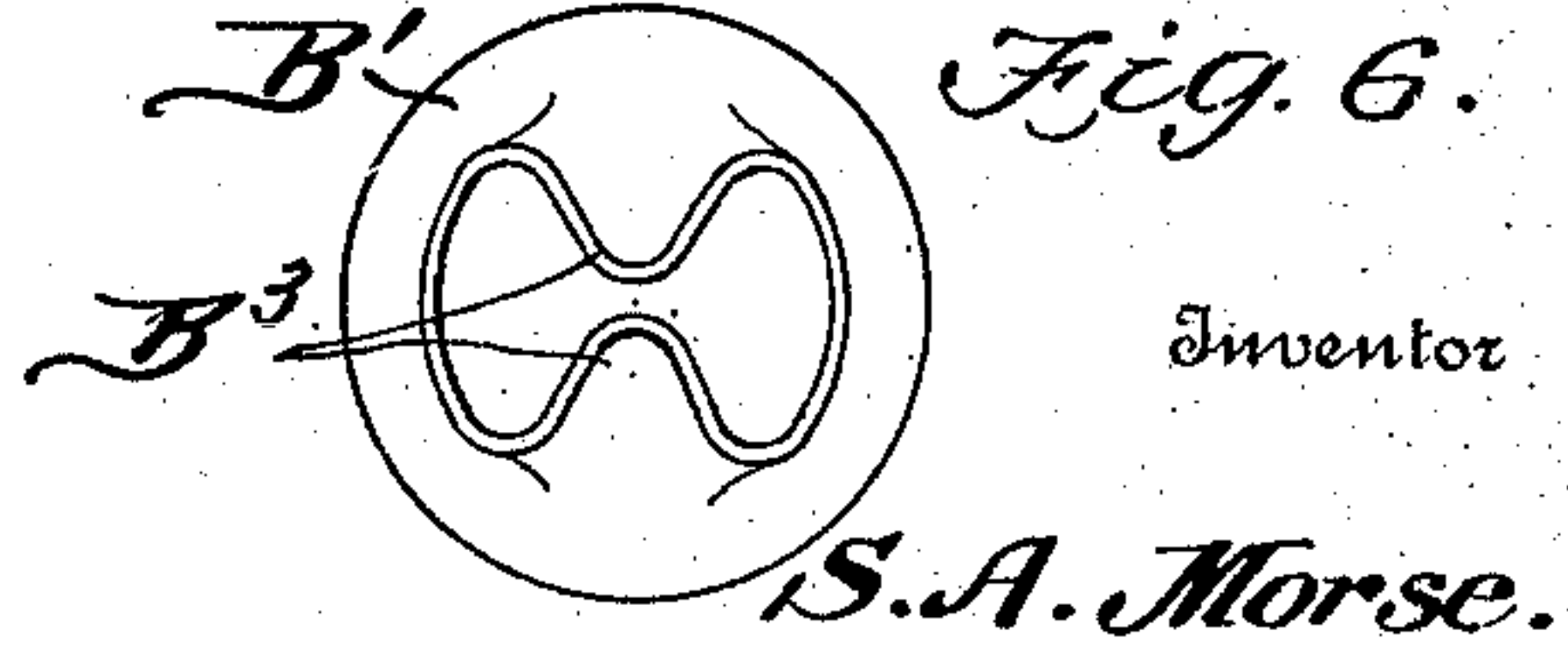
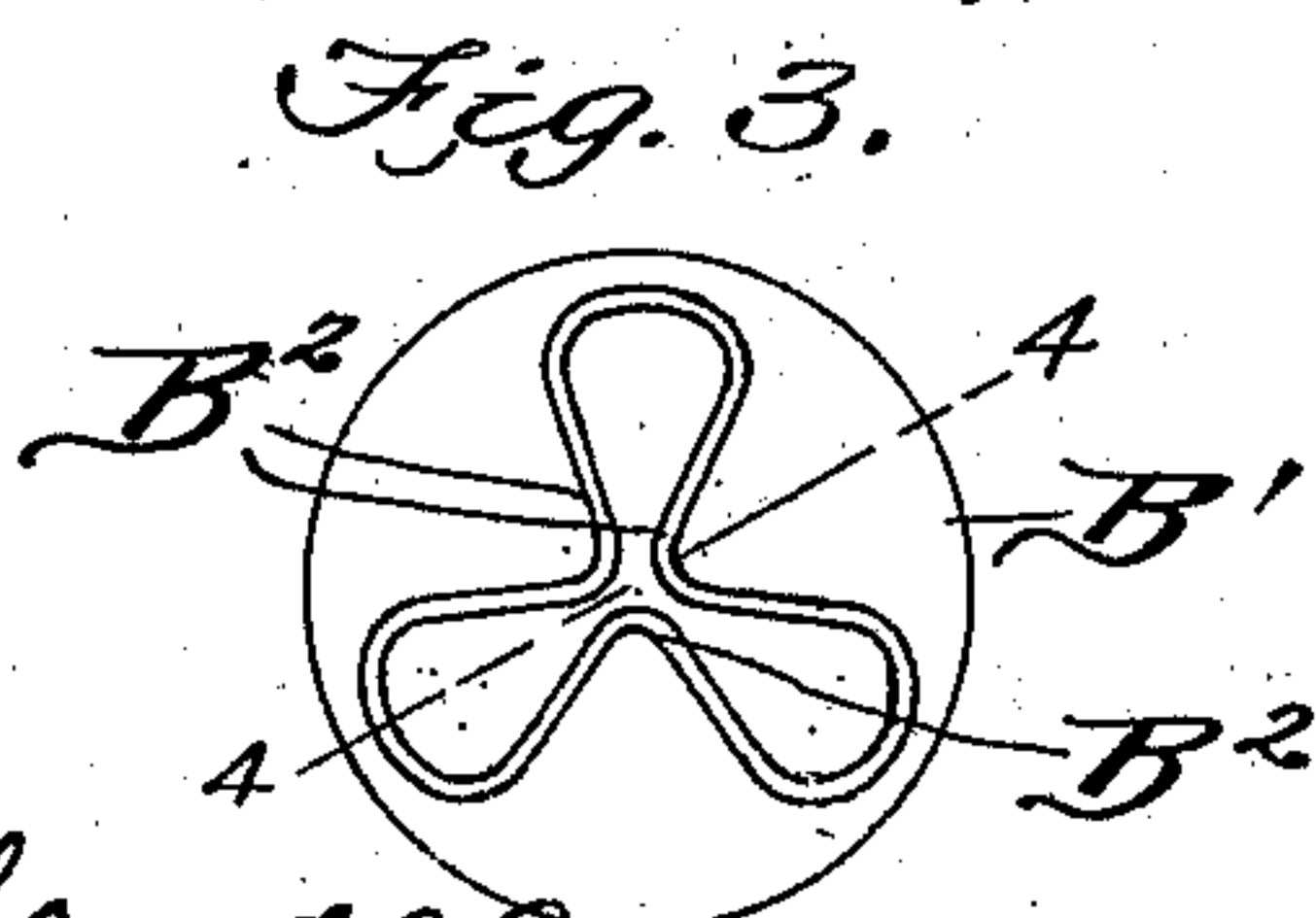
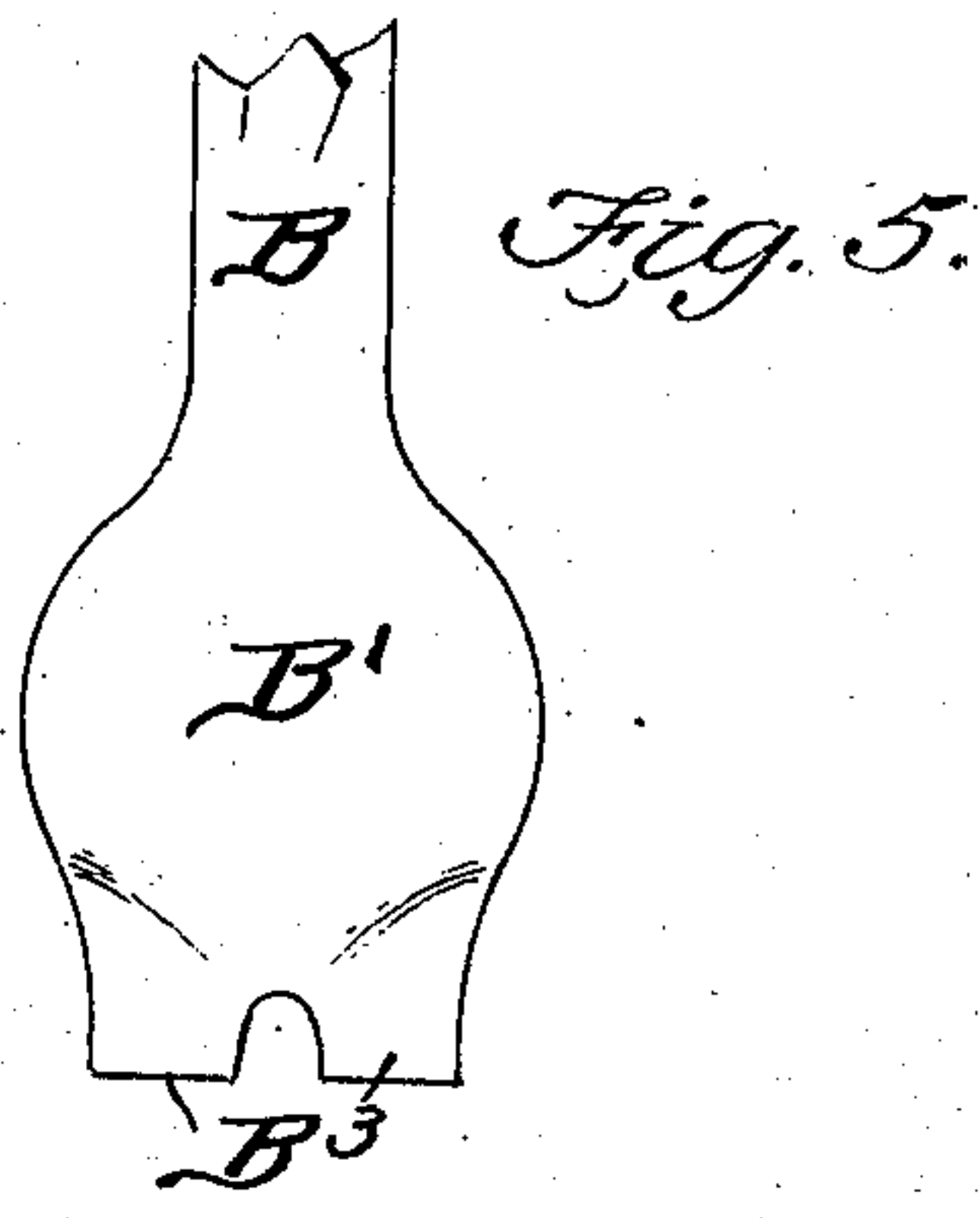
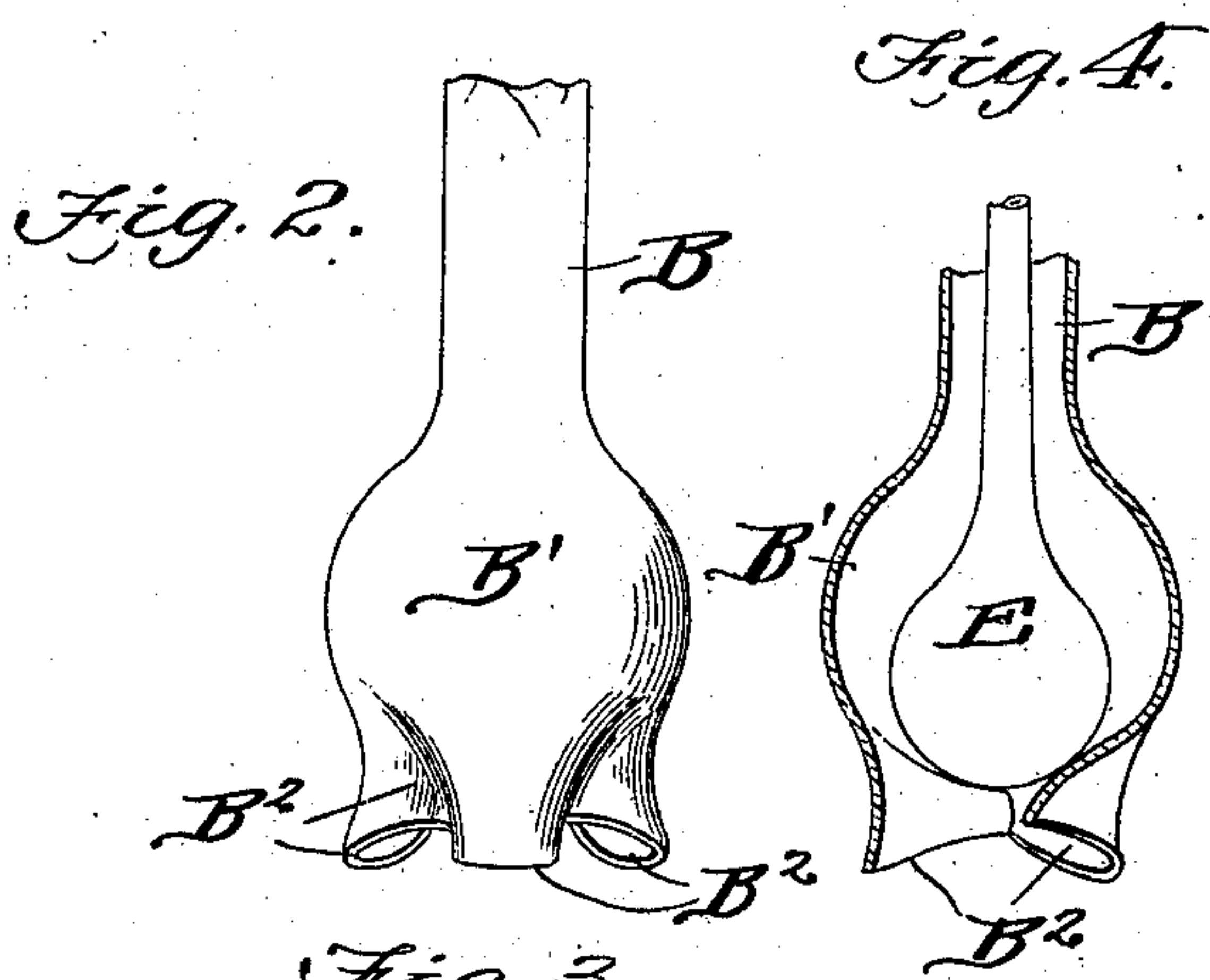
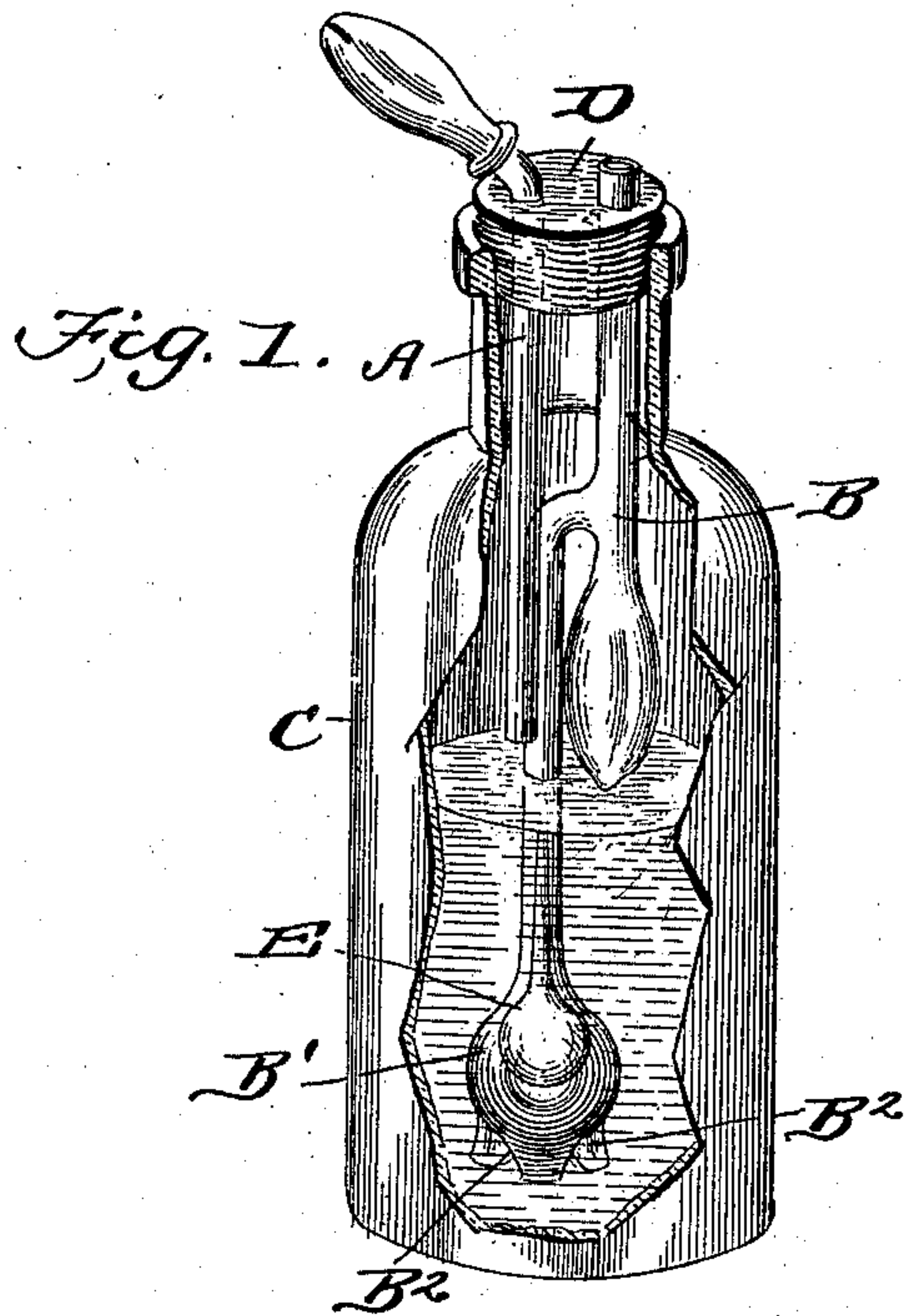
No. 717,436.

Patented Dec. 30, 1902.

S. A. MORSE.
INHALER.

(Application filed Mar. 29, 1902.)

(No Model.)



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UNITED STATES PATENT OFFICE.

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INHALER.

SPECIFICATION forming part of Letters Patent No. 717,436, dated December 30, 1902.

Application filed March 29, 1902. Serial No. 100,578. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN ALFRED MORSE, a citizen of the United States, residing at Oklahoma, in the county of Oklahoma and Territory of Oklahoma, have invented a new and useful Improvement in Inhalers, of which the following is a specification.

This invention relates generally to an improvement in inhalers, and particularly for an inhaler patented by me July 10, 1883, No. 281,114.

The object of my present invention is to provide the bulb at the lower end of the inlet-tube with an opening in its extreme lower end, so that the residue may readily escape from the tube, and thus assuring an easy and perfect operation of the float-valve.

Another object of my invention is to provide the said lower end of the bulb with inwardly bent or crimped portions, which are formed after the valve has been inserted within the bulb and which are for the purpose of positively retaining the said valve in the bulb.

With these objects in view the invention consists in the peculiar construction and arrangement of the said inwardly bent or crimped portions, as will be fully described in the following specification and pointed out in the claim, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of an inhaler, the parts being broken away to show my improvement. Fig. 2 is an enlarged view of the lower or bulb end of the inlet-tube. Fig. 3 is an inverted plan of the same. Fig. 4 is a detail section taken on the line 4 4 of Fig. 3. Fig. 5 is a detail elevation of the lower end of the inlet-tube, illustrating a slightly-modified arrangement of the inwardly bent or crimped portions. Fig. 6 is an inverted plan of the construction shown in Fig. 5.

In carrying out my invention I employ the same general arrangement of an inhaler, and especially of the mouthpiece and tube A and the inlet-tube B, which are retained within the bottle or receptacle C by means of the stopper D, as clearly shown. The lower or bulb end B' of the inlet-tube B has its extreme lower end open, the edges of the said opening being bent inwardly or crimped, as shown at B², which is for the purpose of positively retaining the float-valve E within the tube and at the same time providing a suitable outlet

for the liquid, and therefore affording no rest for the residue to settle upon and prevent the valve from operating, and when it is understood that nearly all compounds for an inhaler of the kind described contain a certain amount of sticky or gummy liquids the importance of providing an opened bottom in the bulb will be readily appreciated. The opening at the bottom of the bulb also provides an inlet for the liquid to enter the tube and operate the valve.

In operation, should a person by mistake blow into the mouthpiece instead of drawing in or inhaling the fumes within the bottle, the liquid will be forced through the opening at the bottom of the bulb, causing the valve to rise, cutting off the entrance to the tube B, and thereby prevent the contents of the bottle from being forced into the tube and into the acid vacuum bulb formed in the said tube B. I have found from practical experience that by providing an escape for the residue at the bottom of the bulb a more perfect and positive operation of the valve is assured and the clogging which necessarily takes place if there is no escape for the residue is avoided, and it will therefore be seen that the opening in the bottle forms a double purpose—viz., to provide an escape for the residue and also provide an inlet for the air.

In Figs. 1 to 4, inclusive, I have shown three inwardly bent or crimped portions B² in the bulb, while in Figs. 5 and 6 I have shown but two such inwardly bent or crimped portions B³; but the operation and effect of this construction is identically the same as that shown in Fig. 1.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

An inhaler, comprising a downwardly-open inlet-tube, the edges of said opening being crimped inwardly and the tube being enlarged adjacent to its lower end, and a float-valve, positioned and retained in said enlarged portion by virtue of its configuration, substantially as described and for the purpose herein set forth.

STEPHEN ALFRED MORSE.

Witnesses:

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