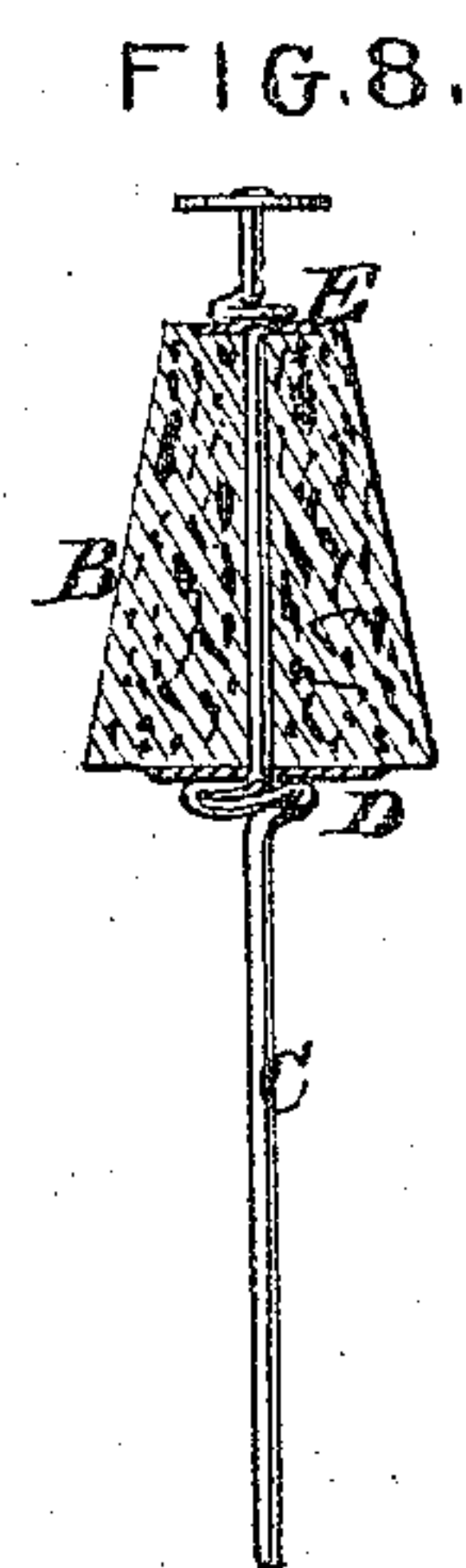
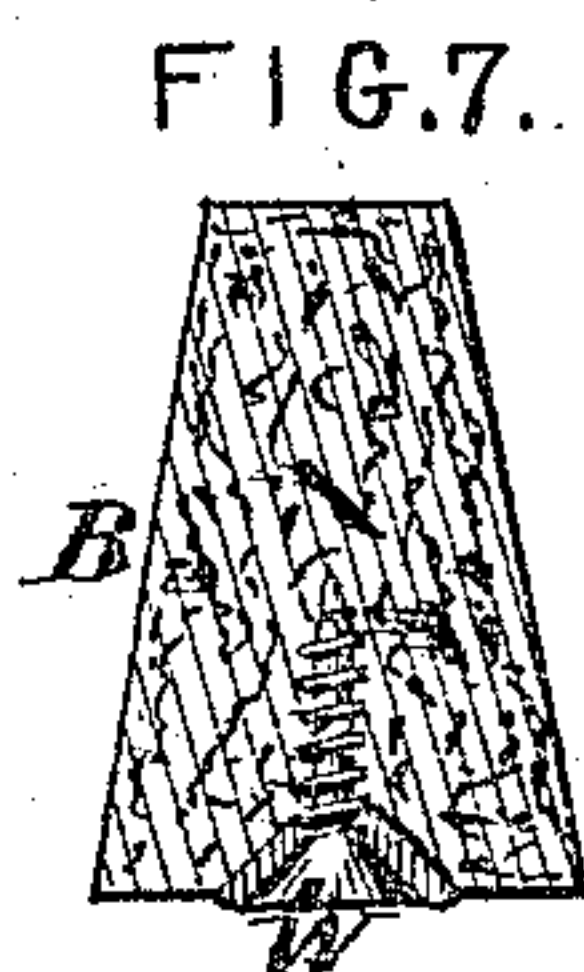
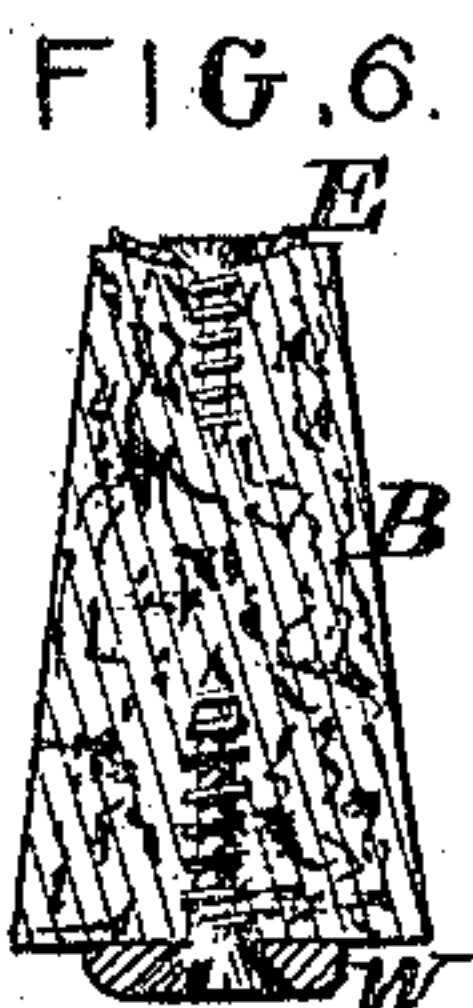
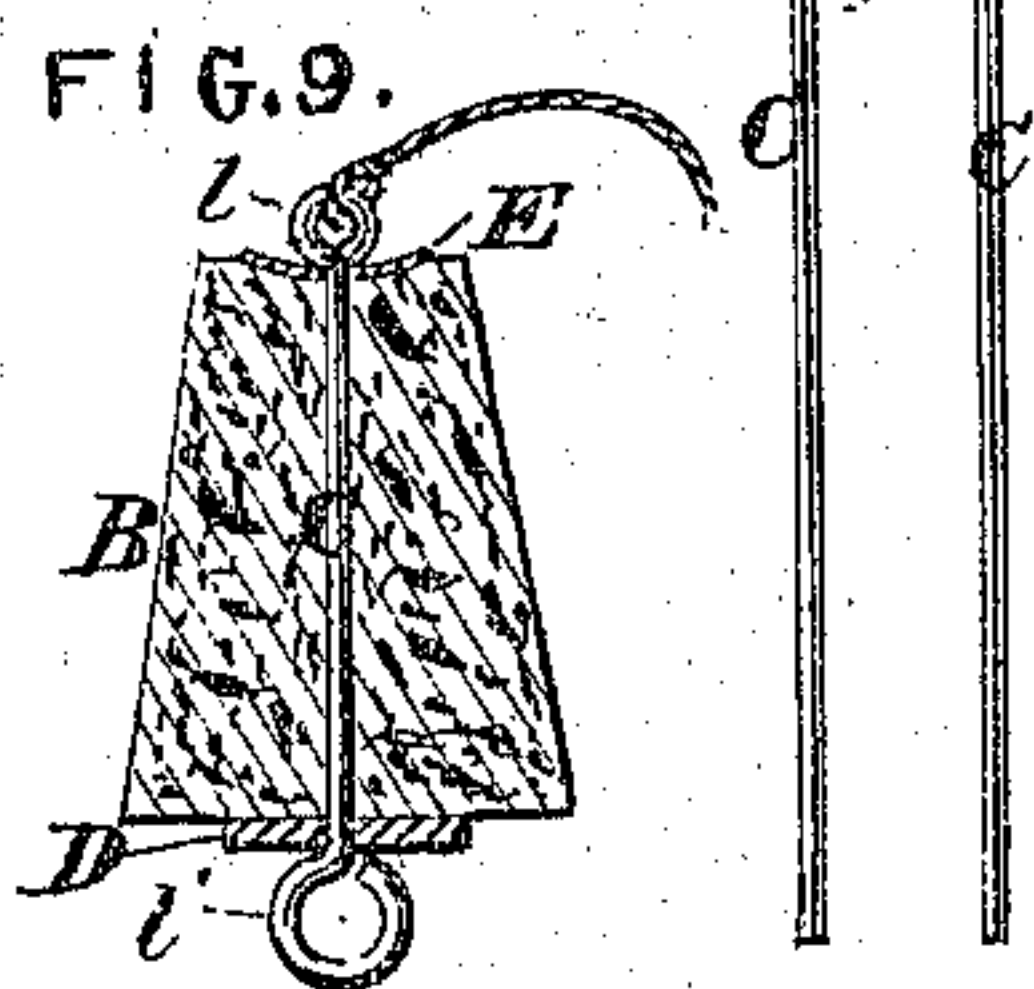
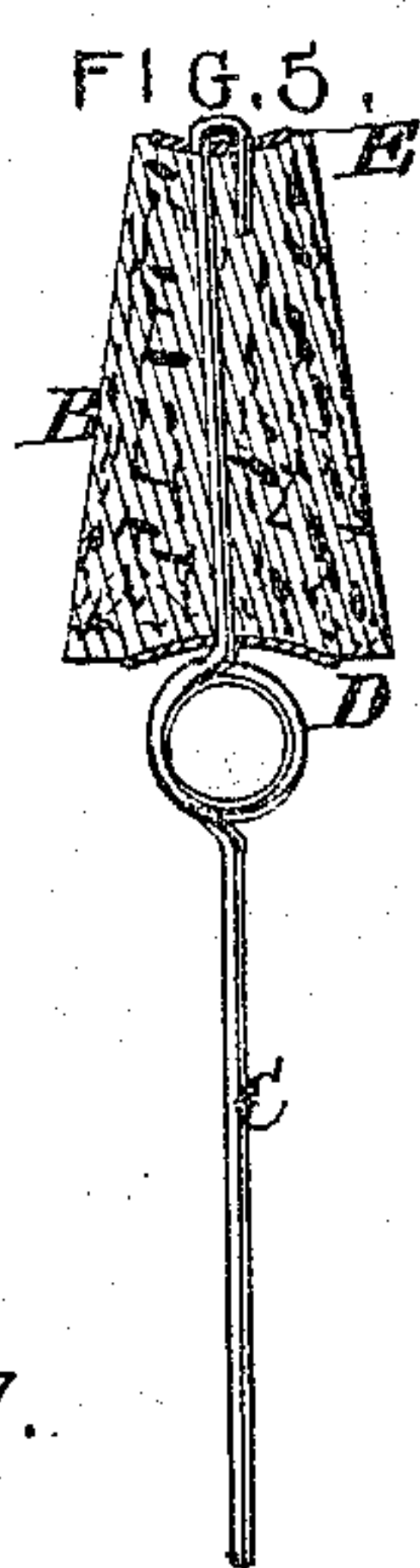
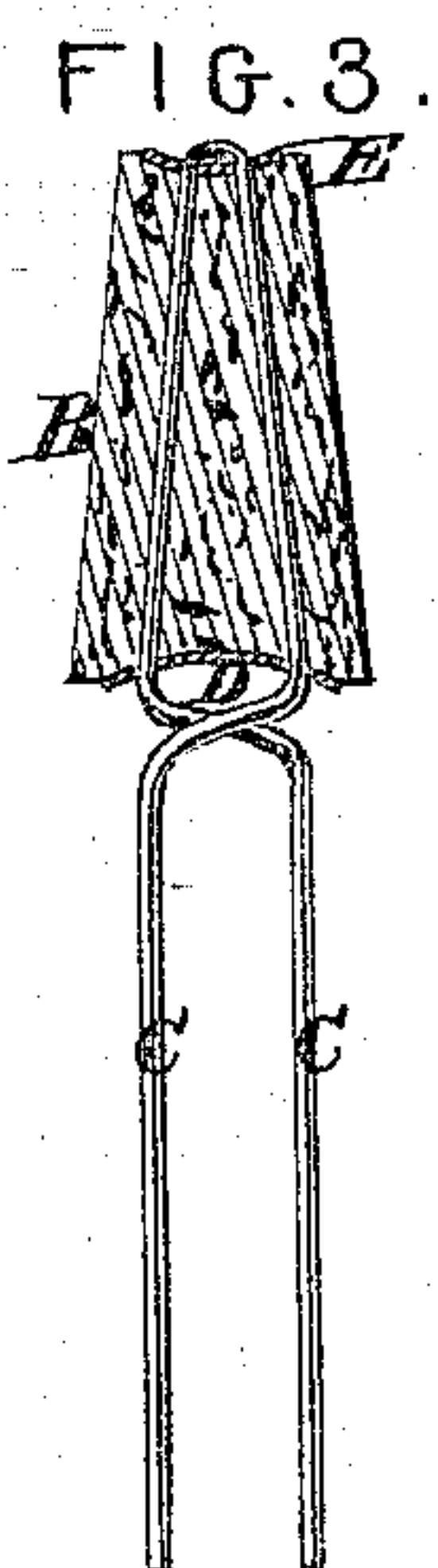
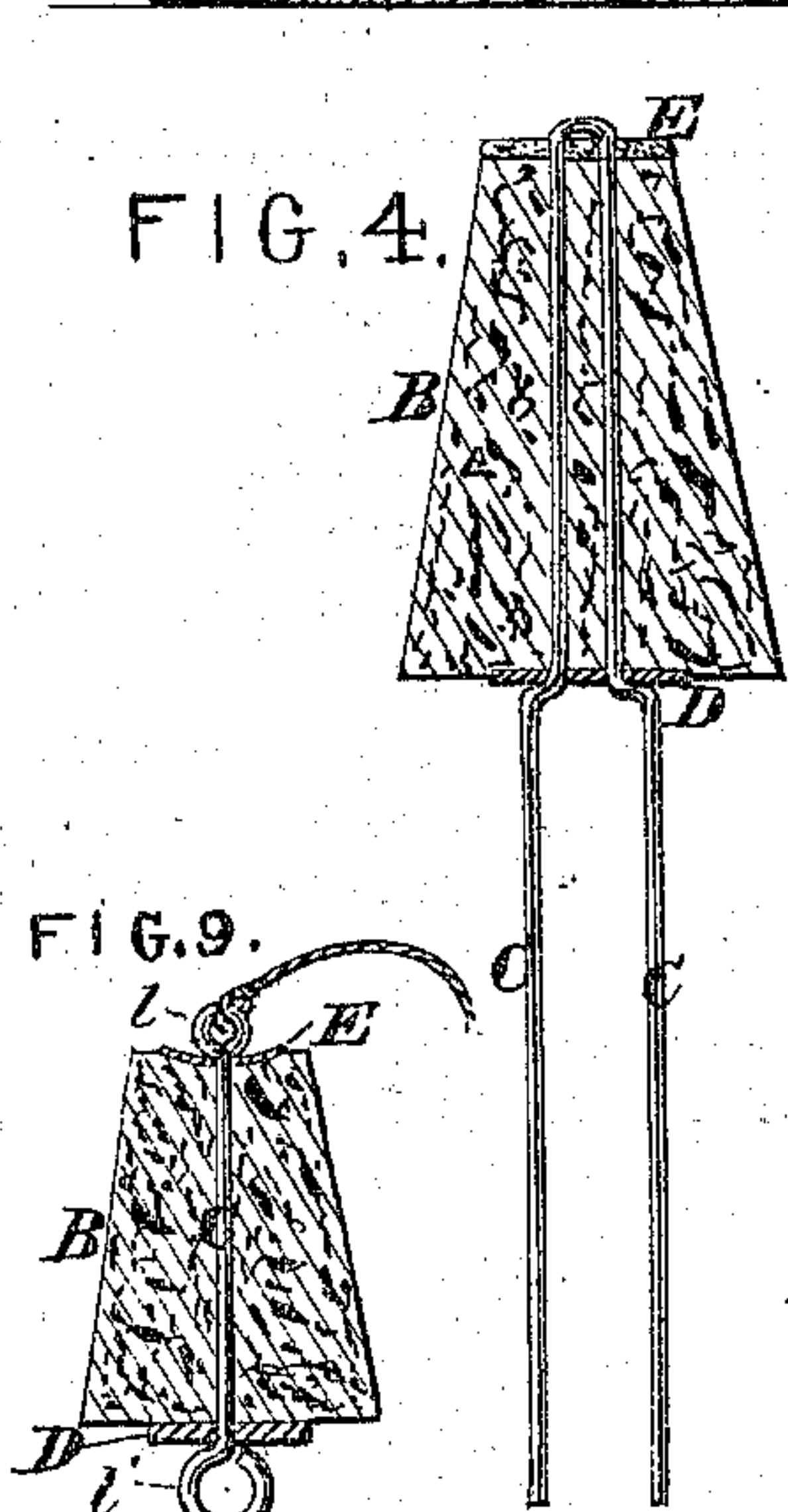
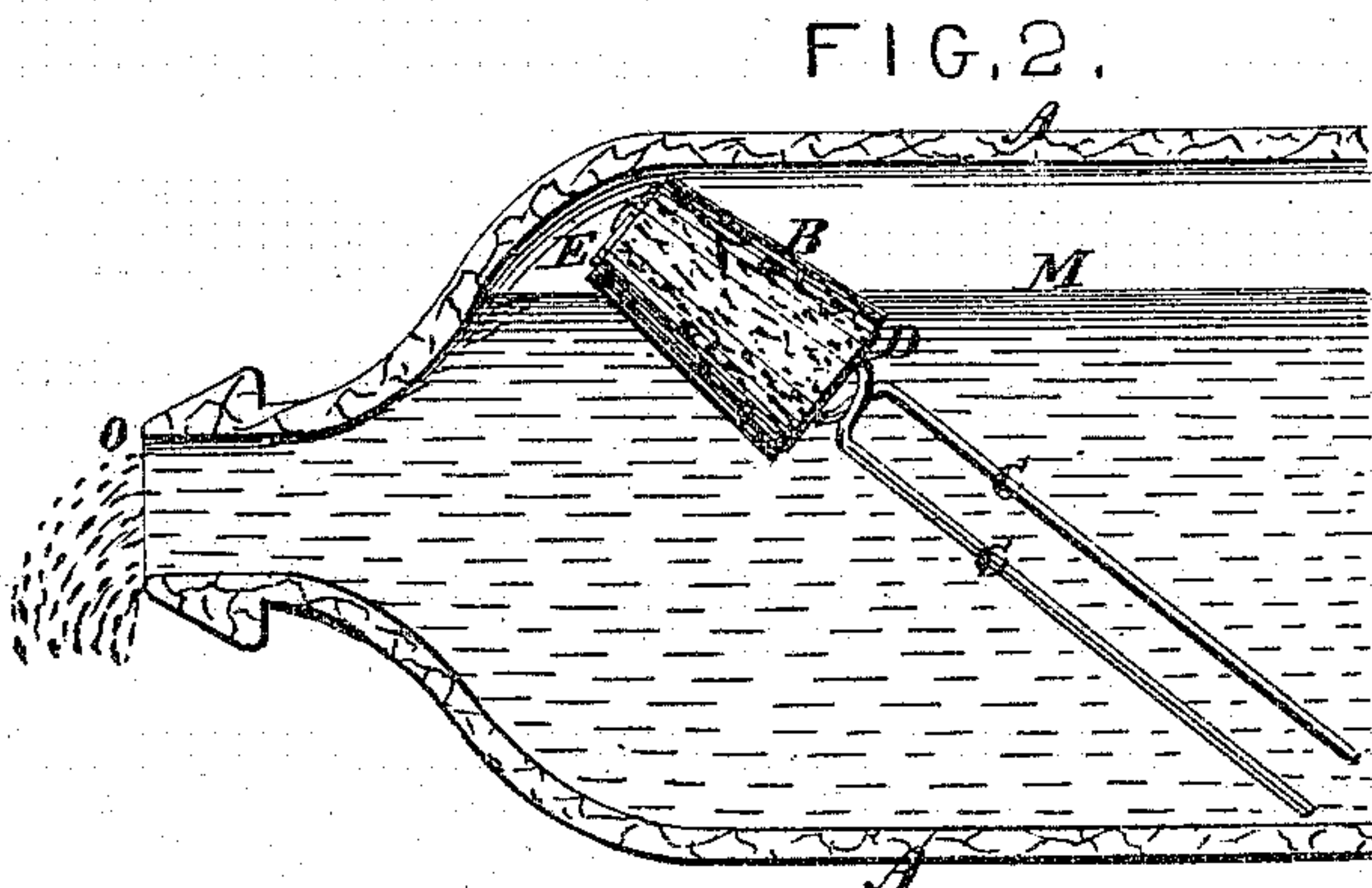
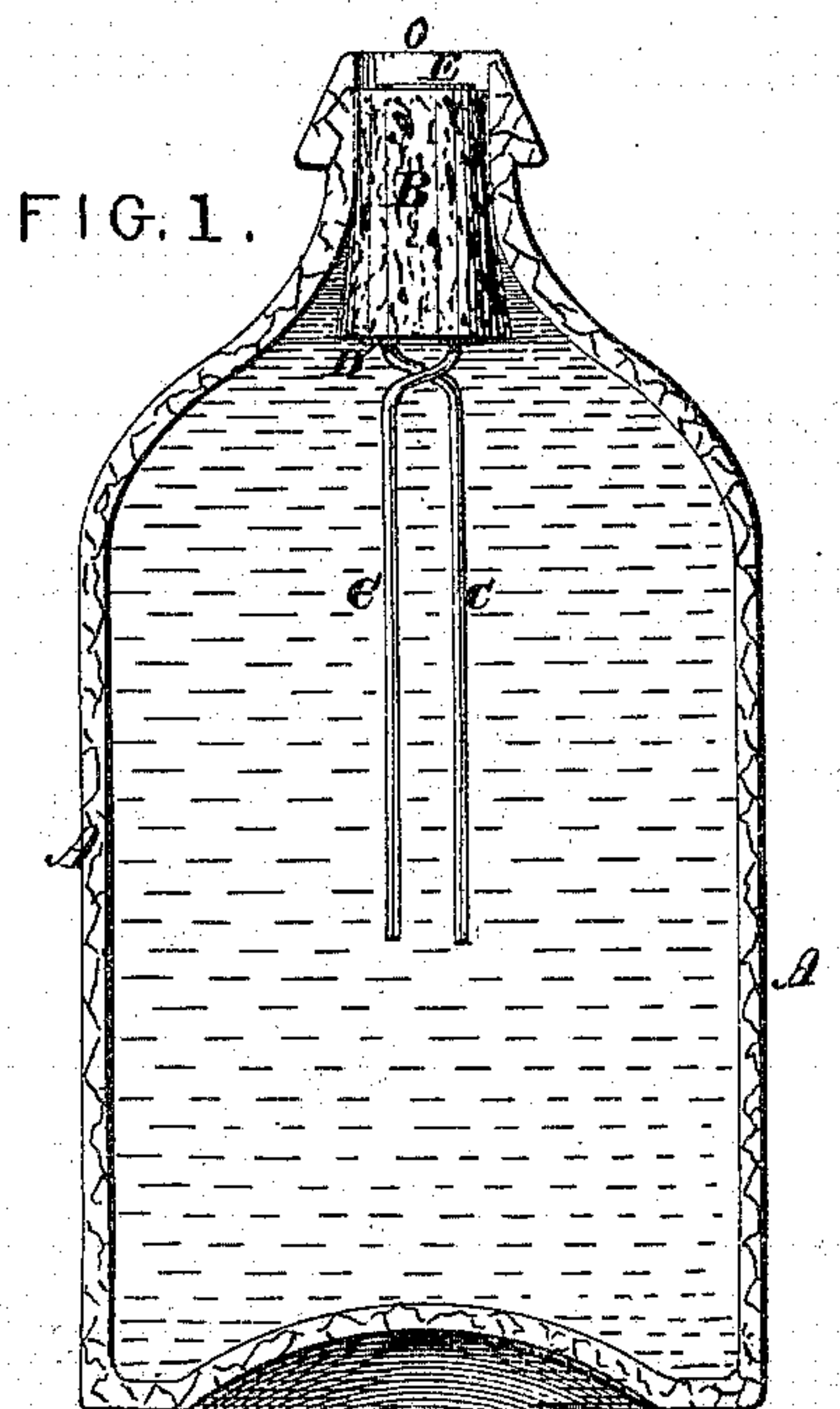


J. H. PARKHURST.

Bottle-Stopper.

No. 133,883.

Patented Dec. 10, 1872.



Witnesses
Geo. L. Swin
Walter Allen

Inventor.
James H. Parkhurst
By Knight Bros
Attorneys

UNITED STATES PATENT OFFICE.

JAMES H. PARKHURST, OF ST. LOUIS, MISSOURI, ASSIGNOR OF TWO-FIFTHS
HIS RIGHT TO AMOS F. PARKHURST, OF LA SALLE, ILLINOIS.

IMPROVEMENT IN BOTTLE-STOPPERS.

Specification forming part of Letters Patent No. 133,883, dated December 10, 1872.

To all whom it may concern:

Be it known that I, JAMES H. PARKHURST, of St. Louis, in the county of St. Louis and State of Missouri, have invented certain Improvements in Bottle-Stoppers, of which the following is a specification:

Nature and Objects of the Invention.

The first part of my invention consists of a tapering stopper, provided with a weight on its lower end, or preferably a bent wire passing through the stopper and extending a short distance below it, the stopper being inserted into the bottle with its larger end first, by means of which construction of stopper the latter will be floated, and feathered or guided into the orifice in the neck of the bottle, when the latter is filled with any liquid; and when the stopper is forced into the bottle to remove its contents, and inverted or partially inverted for that purpose, the stopper with its attached wire will not impede the flow of the liquid from the bottle, but will float across the upper part of the bottle below the neck. The second part of my invention consists in the employment of washers at the upper and lower extremities of the stopper, through which the bent wire is inserted, thereby protecting the stopper, the upper washer also preventing the breakage of the stopper, when the latter is driven into the bottle for the removal of its contents, by means of the ordinary ice-pick used for that purpose, or otherwise. The third part of my invention relates to the construction of a bottle-stopper applied to liquids which generate little or no gas, and consists in the employment of a stopper weighted at its lower end, and provided with washers on its upper and lower bases, its upper end having also a ring or its equivalent attached thereto, whereby the tapering stopper may be drawn by a string, or pliers, or otherwise, into the mouth of the bottle when there is not sufficient gas evolved by the liquid in the bottle to force the stopper up into its mouth.

Description of the Drawing.

Figure 1 is a vertical longitudinal section of a bottle and bottle-stopper embodying my invention, the bottle being filled. Fig. 2 is a similar view of the same with the stopper forced

into the bottle and the liquid being poured out. Fig. 3 is a detached sectional view of the bottle-stopper, as shown in Figs. 1 and 2. Figs. 4, 5, 6, 7, and 8 are sectional views of modifications of my invention. Fig. 9 is a sectional view of a stopper embodying my invention as applied to a bottle filled with a liquid in which gas is not generated.

General Description.

A represents a bottle, in the orifice *o* of which the tapering stopper B is inserted, its larger end or base first. The stopper B has two perforations near its center to receive the bent wire C, which passes through the lower washer D and one of the above-mentioned perforations, thence through the upper washer E, where it is bent over the latter, and passes downwardly through the other perforation and lower washer D, the two ends of the wire being twisted, preferably, below the lower washer, as shown in Figs. 1, 2, and 3, the ends of the wire C extending sufficiently below the stopper to feather and guide it into the orifice of the bottle when it is filled.

The bottle being empty the stopper, with its attached wire or weight, is forced into the orifice *o*, the large end of the stopper being introduced with the wire first. The bottle is then filled, and the stopper is floated by the liquid, and feathered or guided by the bent wire or weight into the orifice or mouth *o* of the bottle, when the pressure of the liquid or gases generated therein will force the stopper into the mouth of the bottle. Should the stopper not be forced by the gas or liquid securely into the orifice, a few slight blows on the mouth of the bottle will secure the entrance of the stopper into the mouth of the bottle. It is frequently found in the pouring out of the contents of a bottle, the cork of which has been forced into the bottle, that the cork, floating with the liquid being poured out, will be drawn by it into the mouth of the bottle, thereby impeding and frequently preventing entirely the flow of the contents of the bottle. With my improved stopper this difficulty is entirely obviated, as exemplified in Fig. 2, where the bottle is partially inverted and the contents of the bottle are represented as being poured out. In this case the stopper B floats upon the surface M

(see Fig. 2) of the liquid, and the weight of the wire acting vertically draws the stopper and its weight or attached wire across the upper part of the bottle below the neck so that the flow of the liquid will not be impeded. The upper and lower washers E and D are employed to prevent breakage of the stopper in inserting and bending the wire, and the upper washer further serves to protect the stopper from breakage when the stopper is forced in by the ice-pick ordinarily employed for the purpose, or otherwise. In Fig. 3 the wires C are represented as bent across each other below the lower washer D. In Fig. 4 the wires are not so bent. Figs. 5 and 8 are modifications of the same device. In Fig. 5 one end of the wire is bent and inserted into the stopper at its upper end, and the wire is then passed through a perforation in the center of the stopper, and after it has passed through the lower end of it receives several convolutions to give it additional weight and to hold it, and is then extended a short distance below the lower base of the stopper. Fig. 8 is a somewhat similar modification, readily understood from the drawing. In Fig. 6 a weight, W, is attached by a screw to present the smaller end of the stopper to the mouth of the bottle as it is filled. An upper washer, E, attached by a screw or otherwise, is also employed to protect the stopper from injury when being forced into the bottle. Fig. 7 is a modification in which the upper washer is dispensed with, a weight, W, being attached by screw or otherwise to the base of the stopper. In Fig. 9 is represented a stopper intended to be applied to a bottle containing a liquid in which little or no gas is evolved to force the stopper up into the mouth of the bottle. B is the stopper, provided with upper and lower washers E D, and a wire, C, passing through a perforation in or about the center of the stopper. The upper end of the wire C is bent into a ring, *l*, and a ring, *l'*, is similarly formed at the bottom on which a weight, W, may be suspended to balance the stopper. To the upper ring *l* a string may be attached to draw

the tapering stopper into the mouth of the bottle, or the string may be dispensed with and a pair of pliers or other equivalent means be employed to draw up the stopper through the medium of the upper ring *l*. Cork is preferably employed as the material for the stopper, though it is obvious that other materials may be used.

It is obvious that in my invention the employment of wire fastenings, attached ordinarily to the cork and surrounding the neck of the bottle used for soda and mineral waters and other fluids where gas is generated within the bottle to secure the cork to the neck of the bottle, can be entirely dispensed with, as the pressure of the gas upon the base of the tapering stopper tends more securely to wedge the stopper into the mouth of the bottle. The dispensing with the wire cork-fastening generally used to confine the corks of bottles containing soda and other mineral waters, champagne, &c., renders my stoppers much cheaper and more effective, and there is also much less trouble in removing the corks from the mouths of the bottles, as there are no fastening-wires to cut, and the tapering cork can readily be forced into the bottle.

The washers E and D are preferably made concave in form.

Claims.

I claim as new and of my invention—

1. The stopper B provided with a weight at its lower end or bent wire C, extending below its base, in combination with a bottle or other receptacle, substantially as described.

2. The stopper B having a weight or bent wire C, attached as set forth, and provided with the upper and lower washers E D, as and for the purposes described.

3. The weighted stopper B provided with upper and lower washers E D, and wire C having the ring *l*, substantially as described.

JAS. H. PARKHURST.

Witnesses:

OCTAVIUS KNIGHT,
WALTER ALLEN.