

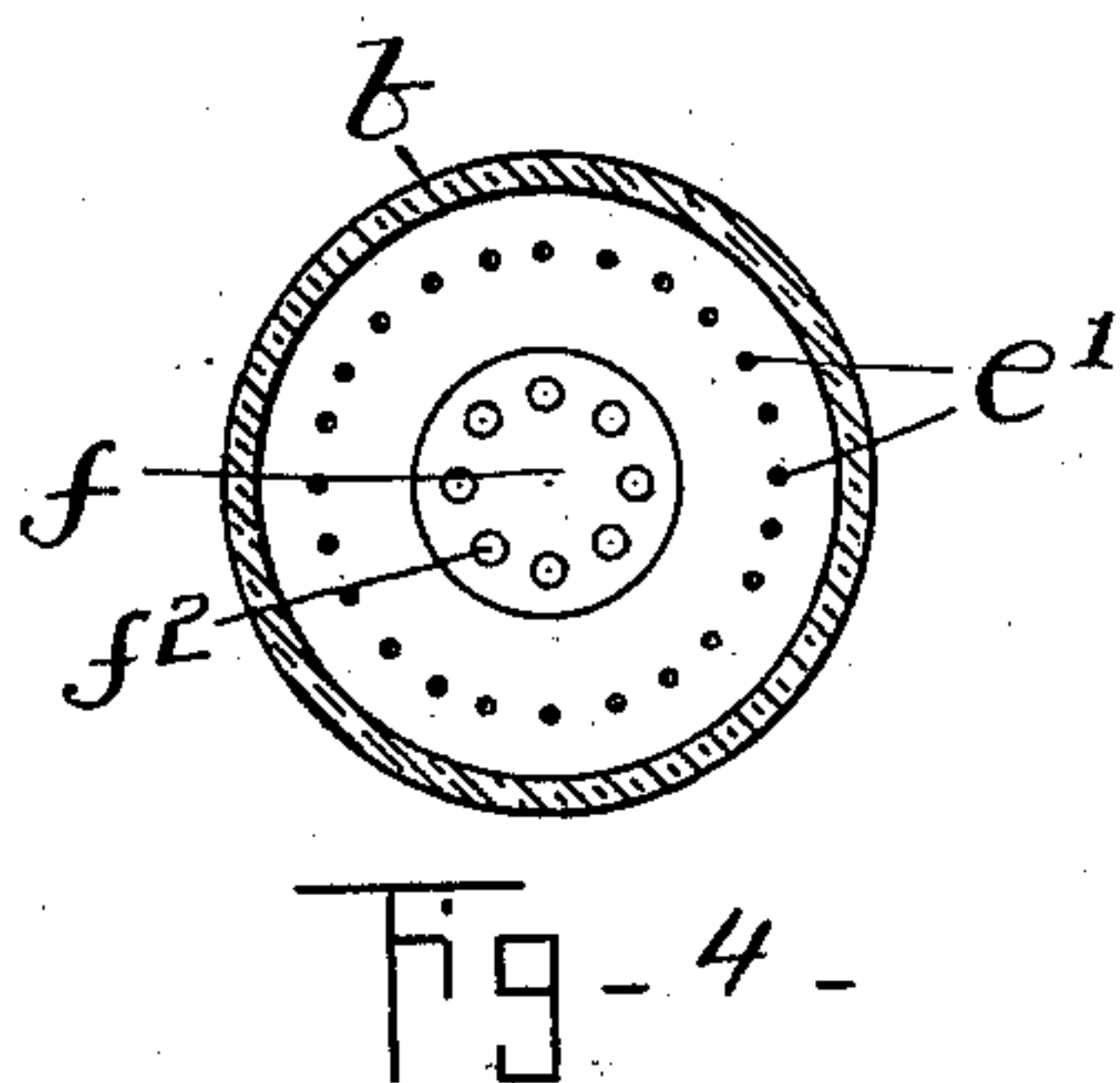
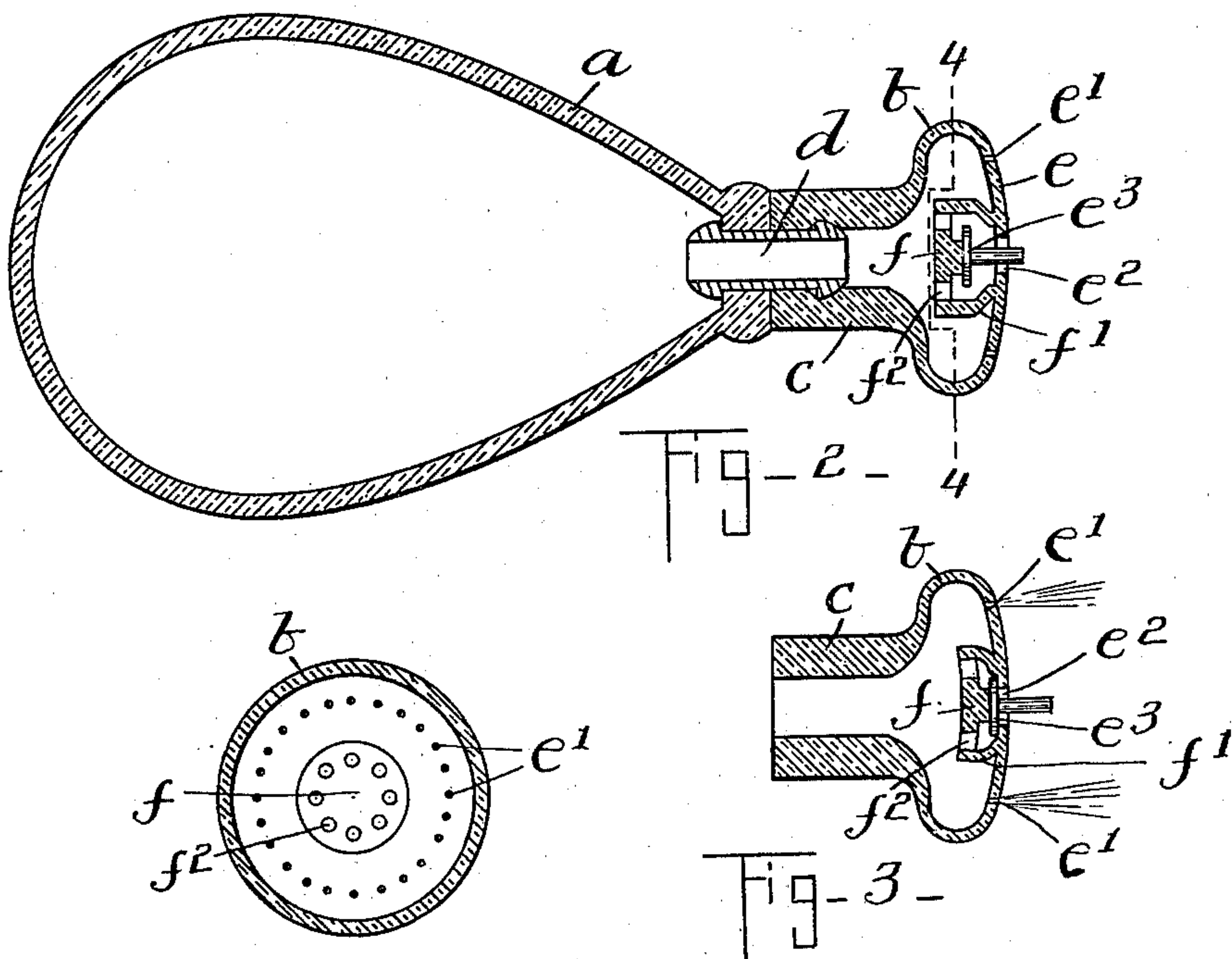
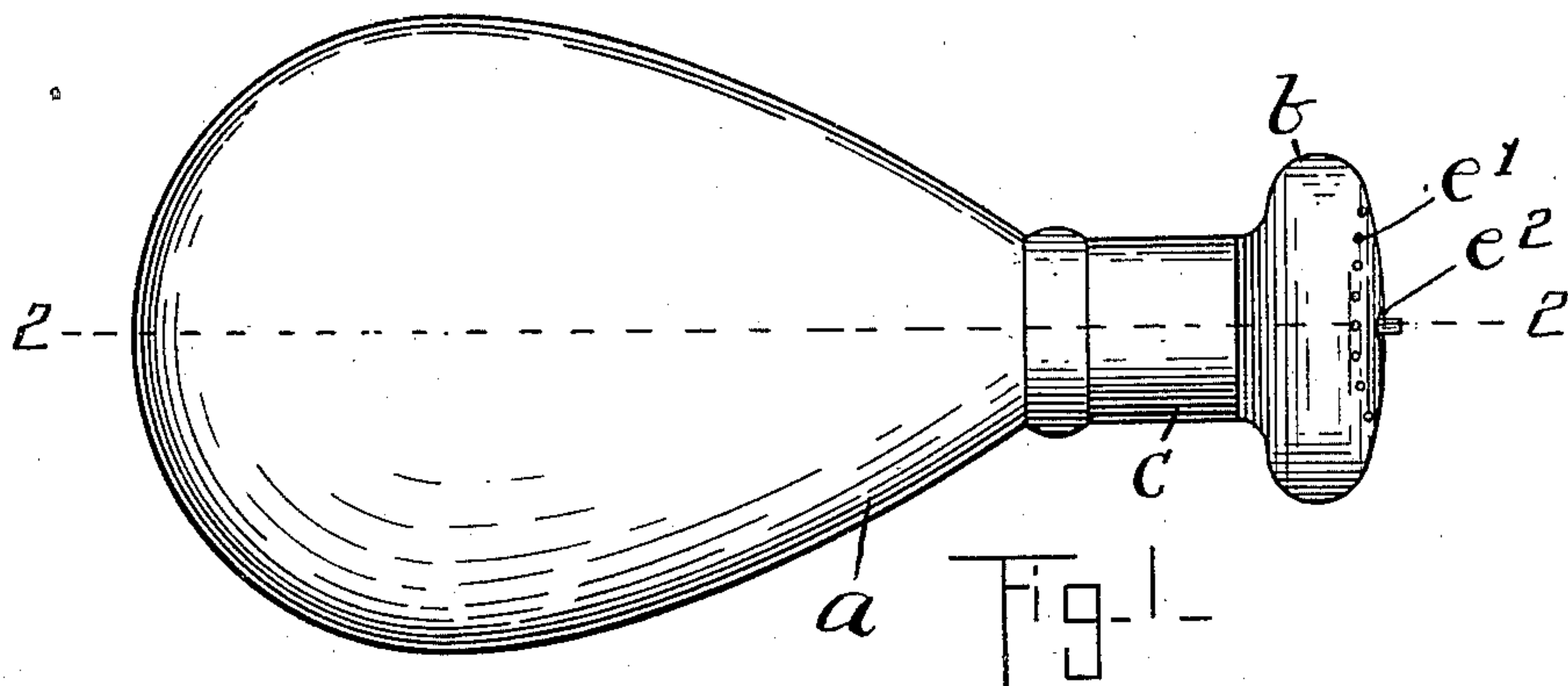
No. 671,423.

Patented Apr. 2, 1901.

A. McTERNEN.
SPRINKLER.

(Application filed Nov. 7, 1900.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

ANDREW McTERNEN, OF ANDOVER, MASSACHUSETTS.

SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 671,423, dated April 2, 1901.

Application filed November 7, 1900. Serial No. 35,760. (No model.)

To all whom it may concern:

Be it known that I, ANDREW McTERNEN, of Andover, county of Essex, State of Massachusetts, have invented an Improvement in Sprinklers, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object to improve the construction of sprinklers, and resides, essentially, in the construction of the nozzle of the sprinkler.

In accordance with this invention the nozzle consists of a chambered body having an elastic end wall provided with a number of perforations through which the liquid is expelled, and for simplicity of construction the chambered body may itself be made elastic. The nozzle has an inlet-port for the liquid, preferably made in its elastic end wall, and a valve is provided for said inlet-port, which consists of what is commonly called in the art a "tack-valve," which is contained in a case attached to the inside of the elastic end wall of the nozzle, and said valve-case has an end wall provided with a number of perforations and with an elastic side wall. Compression of said valve-case acts to force the valve into position to close the inlet-port, and therefore serves as an elastic actuator for the valve. In practice the valve-case will be made of soft rubber, the same as the chambered body of the nozzle to which it is attached.

Figure 1 shows in side elevation a sprinkler provided with a nozzle embodying this invention. Fig. 2 is a longitudinal section of the sprinkler shown in Fig. 1, the valve being open. Fig. 3 is a longitudinal section of the nozzle, showing the parts in the position they will occupy when the liquid is being expelled through the perforations in the end wall, the valve at such time closing the inlet-port. Fig. 4 is a vertical section of the nozzle, taken on the dotted line 4 4, Fig. 2, looking toward the right.

a represents a bulb, which in the present instance serves as a means for drawing in and expelling the liquid, it being made of rubber, as usual. The nozzle consists, essentially, of a chambered body *b* and a neck *c*, said neck fitting snugly upon the coupling *d*, connected with the bulb, to thereby connect the nozzle

to the bulb; yet it is obvious that said nozzle may be otherwise connected with said bulb.

The chambered body *b* has an end wall *e*, formed or provided with a number of perforations *e'*, through which the liquid passes when the expelling device is operated to expel the liquid, and in practice said chambered body will be made of soft rubber, and consequently elastic to a high degree. The elastic end wall *e* has also an inlet-port *e²* for the liquid. The valve which is provided for closing said inlet-port, as herein shown, consists of a tack-valve *e³*, comprising a disk or plate and a short stem. The tack-valve is contained in a valve-case, which is made elastic, adapting it to be compressed to serve as an actuator for said valve, and, as herein shown, the valve-case is made cylindrical and comprises, essentially, an end wall *f* and a cylindrical side wall *f'*. The valve-case is made of soft rubber, like the chambered body *b*, and its cylindrical side wall is attached to the inside of the elastic end wall *e* of said chambered body. The end wall *f* of the valve-case has a number of perforations *f²*, through which the liquid passes which is drawn in through the inlet-port *e²*. The side wall *f'* of the valve-case being made of soft rubber is suitably elastic to enable the end wall *f* to be pressed toward the end wall *e*, as represented in Fig. 3, to thereby thrust the tack-valve forward and close the inlet-port, and by reason of the inherent elasticity of the valve-case it will immediately recover its normal position when pressure upon it is relieved. The elastic valve-case containing the tack-valve thereby serves as an actuator for the valve, which is operated by the means for drawing in and expelling the liquid.

When the bulb *a* is compressed to expel the liquid, the valve will be automatically closed, and when said bulb expands said valve will be automatically opened.

It will be seen that by making the perforated end wall of the nozzle elastic the perforations thereof will be more or less enlarged by manipulating the expelling device, and by regulating the action jets of varying size may be expelled.

I claim—

1. A sprinkler comprising means for draw-

ing in and expelling liquid, a nozzle consisting of a chambered body having an end wall provided with a number of perforations and with an inlet-port, and a valve controlling said inlet-port and an elastic operating device for said valve operated by the means for drawing in and expelling the liquid, substantially as described.

2. A sprinkler comprising means for drawing in and expelling liquid, a nozzle consisting of a chambered body having an end wall provided with a number of perforations and with an inlet-port, a valve controlling said inlet-port, a case containing said valve having elastic side walls adapting it to serve as an actuator for the valve, substantially as described.

3. A sprinkler comprising means for drawing in and expelling liquid, a nozzle consisting of a chambered body having an end wall provided with a number of perforations and with an inlet-port, a valve controlling said inlet-port, and a case attached to said perforated end wall which contains said valve, said case having a perforated end wall and elastic side walls, substantially as described.

4. A sprinkler comprising means for drawing in and expelling liquid, a nozzle consisting of a chambered body having an elastic end wall provided with a number of perforations and with an inlet-port, a valve controlling said inlet-port, and a case containing said valve having elastic side walls adapting it to serve as an elastic actuator for said valve, substantially as described.

5. A sprinkler comprising means for drawing in and expelling liquid, a nozzle consisting of a chambered body having an elastic end wall provided with a number of perforations and with an inlet-port, a valve controlling said inlet-port, and a case containing said valve attached to said elastic end wall, said case having a perforated end wall and elastic side walls, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ANDREW McTERNEN.

Witnesses:

HORACE H. TYER,
FRANK T. CARLTON.