J. MATTHEWS.

Apparatus for Filling Bottles.

No. 138,421. Patented April 29, 1873.

Fig. 1.

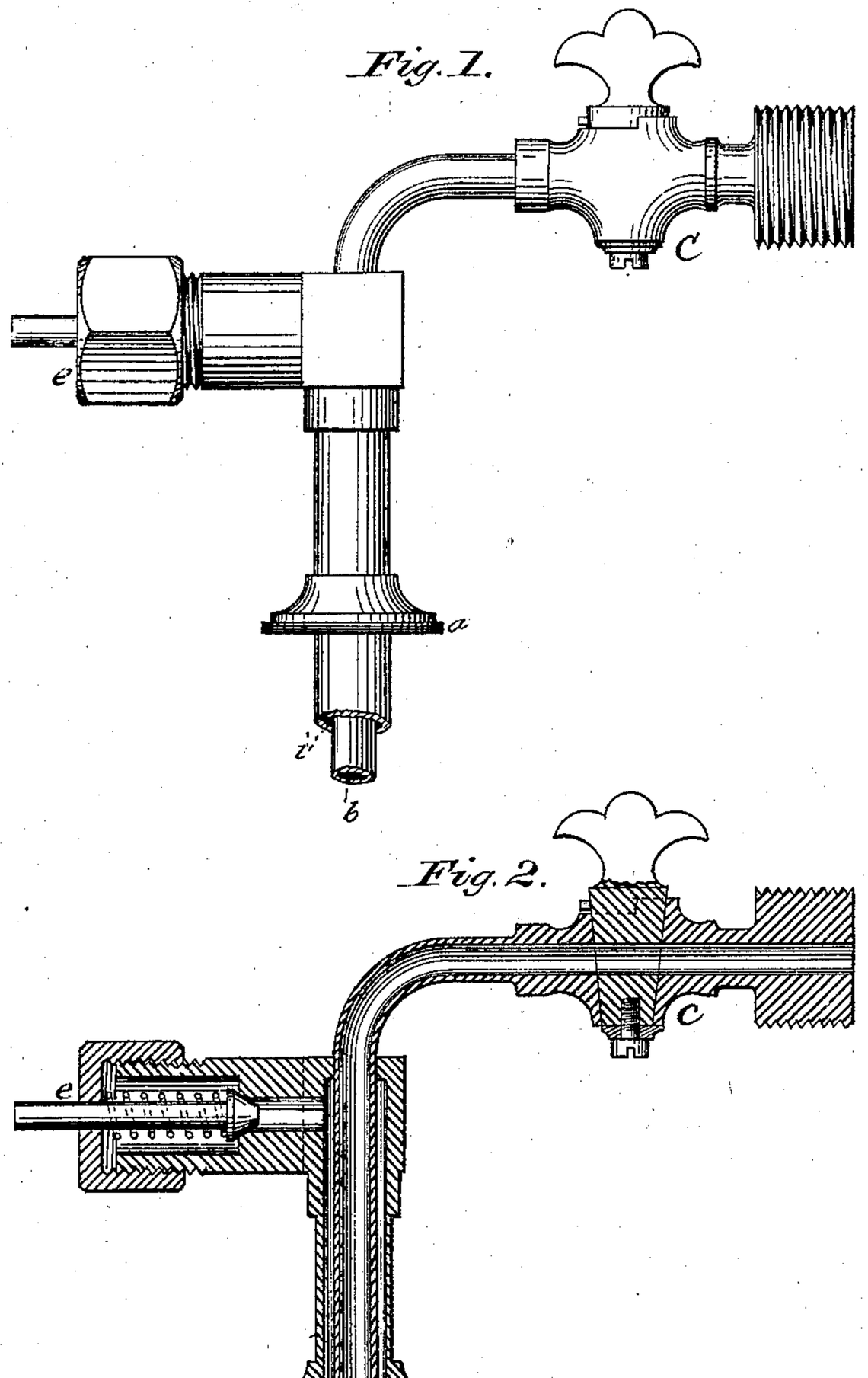

Fig. 2.

Witnesses:

William H. Herbell

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JOHN MATTHEWS, OF NEW YORK, N. Y.

IMPROVEMENT IN APPARATUS FOR FILLING BOTTLES.

Specification forming part of Letters Patent No. **138,421**, dated April 29, 1873; application filed March 21, 1873.

To all whom it may concern:

Be it known that I, JOHN MATTHEWS, of the city, county, and State of New York, have invented, made, and applied to use a new and useful Improvement in Apparatus for Filling Bottles; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, which shows a vertical section of the apparatus which constitutes my invention, and which forms a part of this specification.

This invention relates to an apparatus for filling bottles that have small mouths and bottles closed by internal valves with aerated and other liquids, so as to prevent any interference of the liquid passing into the bottle by the air or gas passing out. This apparatus consists of a double tube, as shown in the accompanying drawing, one of which passages, for the admission of the water, projects below the passage for the egress of the air or gases contained in aerated liquids.

a is the rubber packing which makes the joint between the bottle and the apparatus. C is a water-cock. *b* is the water tube or passage. *i i* is the air-passage. *d* is the bottle. *e* is the air-valve. This apparatus may be attached to or form a part or the whole of the filling-head of the ordinary bottling-machine.

To fill the bottle, it is brought beneath the filling-tube, which may be brought down so as to enter the bottle and press upon the rubber packing at the mouth. The water-cock *c* is then opened, the water passes into the bottle through the water-passage *b*. The air or the gases in the bottle are compressed and are discharged through the air-passage *i i* and the valve *e*, which, by means of a spring or weight of the usual construction, may be set to maintain the required pressure within the bottle.

By means of this arrangement the smallest bottles may be filled without any interference of the opposing currents of air and water during the operation of filling.

It is obvious that the tube may have a partition, or be otherwise divided into two passages.

The advantages of this apparatus are, that aerated liquids may be bottled without losing the gas contained in them, and without any waste of the liquid from being driven out by the outflow of the air in the bottle.

By regulating the force of the spring or weight any amount of pressure may be maintained in the bottle, and only the gas from excessive pressure permitted to escape so as to let the liquid flow in. This constitutes the chief feature of the invention.

What I claim as my invention, and desire to secure by Letters Patent, is—

The improved filling apparatus herein described, composed of a liquid-tube and an air-tube with a pressure-regulating valve, both tubes projecting into the bottle while filling, and the liquid-tube projecting below the air-tube, all substantially as specified.

JOHN MATTHEWS.

Witnesses:

WILLIAM H. HERBELL,
WILLIAM THOS. GOLDEN.