

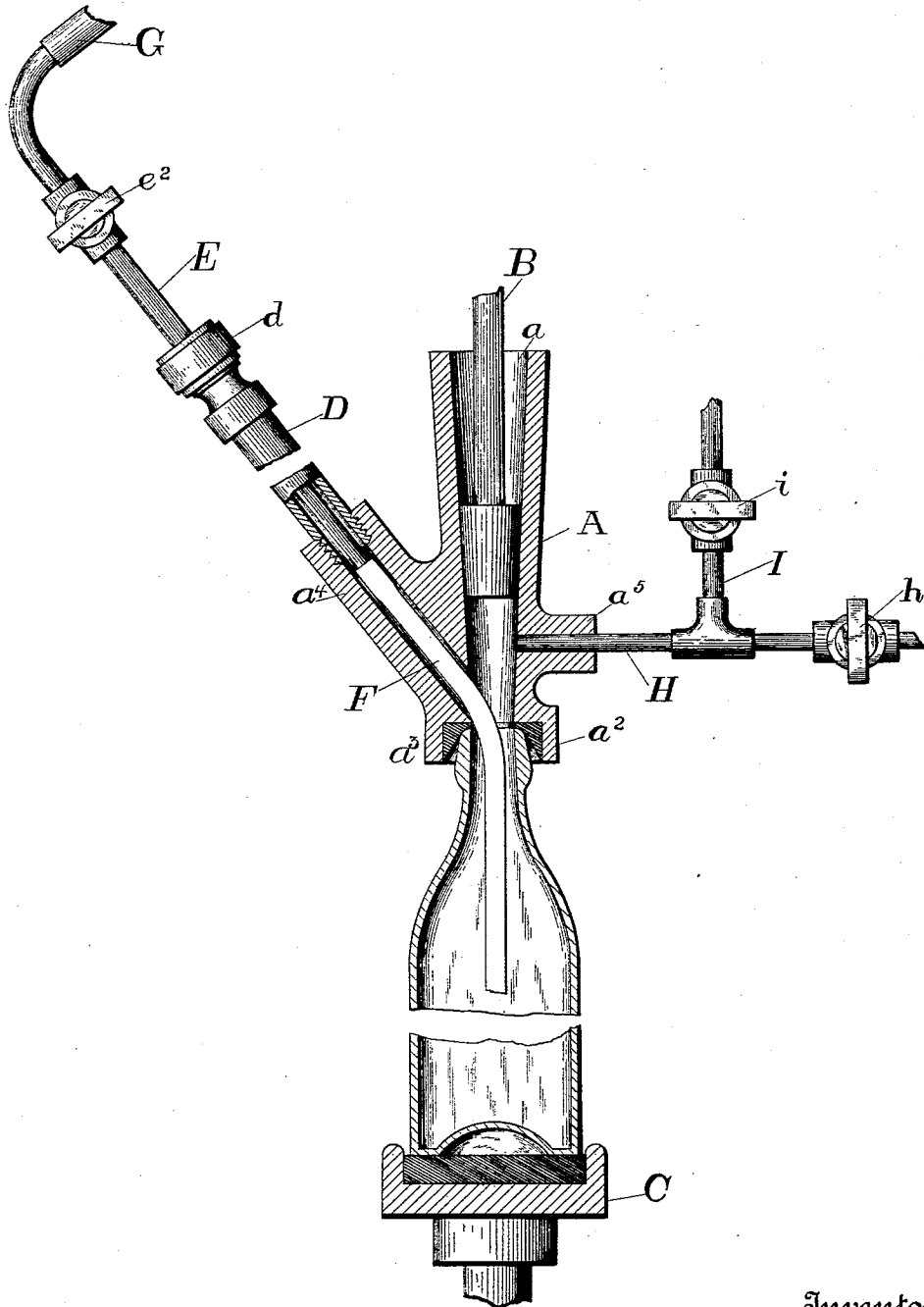
(No Model.)

J. C. PENNINGTON.

APPARATUS FOR FILLING AND CORKING BOTTLES.

No. 573,792.

Patented Dec. 22, 1896.



Witnesses:

H. S. Gilt
R. H. Smith

Inventor:

John C. Pennington,
by *A. J. Dyerforth*
his attorney.

UNITED STATES PATENT OFFICE.

JOHN C. PENNINGTON, OF PATERSON, NEW JERSEY.

APPARATUS FOR FILLING AND CORKING BOTTLES.

SPECIFICATION forming part of Letters Patent No. 573,792, dated December 22, 1896.

Application filed February 1, 1896. Serial No. 577,705. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. PENNINGTON, a citizen of the United States, residing at Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Apparatus for Filling and Corking Bottles; 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 appertains to make and use the same.

This invention relates to apparatus for filling and corking bottles.

The objects are to provide an apparatus adapted in a ready, efficient, and rapid manner to fill bottles with beer, wine, or other spirituous or malt liquors containing carbonic-acid gas in large quantities and then cork the same without loss of the gas; to reduce to a minimum the action of atmospheric air on the beer or liquor to be bottled; to provide a corking-cylinder having suitable means for connection with a liquor-supply and an air or carbonic-acid-gas supply under pressure; to provide means for directing the flow of the liquor to the bottom of the bottle or other receptacle to be filled and thereby prevent foaming; to effect the introduction of compressed sterilized air or carbonic-acid gas under pressure into a bottle to be filled; to provide means for permitting the escape of air or gas from the bottle as the liquor runs in, and, finally, to provide means for compressing the cork and seating it within the bottle when filled.

With these objects in view the invention consists in the combination, with a corking cone or cylinder, of a slidable tube carrying a flexible section adapted to be inserted into the bottle; furthermore, in the combination, with a corking cone or cylinder, of a hollow extension or arm provided with a stuffing-box, a hollow piston working in the stuffing-box, and a flexible section of tubing attached to the inner end of the piston; furthermore, in the combination, with a corking cone or cylinder, of a hollow extension provided with a stuffing-box, a hollow piston working in the stuffing-box, a flexible section of tubing attached to the inner end of the piston, and a supply-pipe connecting with the cone to supply sterilized air or carbonic-acid gas under

pressure to the bottle to be filled, and, finally, in the various novel details of construction, as will be hereinafter fully described and claimed.

In the accompanying drawing, forming part of this specification, and in which like letters of reference indicate corresponding parts, I have illustrated one form of embodiment of my invention, although other forms of embodiment thereof may be employed without departing from the spirit of the same, and in the drawing the figure is a view in side elevation, partly in section, displaying the corking-cylinder, the plunger for forcing the cork into a bottle, the hollow extension from the cylinder, the tube connected therewith, the stuffing-box, the piston working therein and connecting with the supply of liquor, the flexible section of pipe attached to the tube, and the pipes and cocks for supplying and governing the supply and escape of sterilized air or carbonic-acid gas to and from the bottle.

Referring to the drawing, A designates the corking-cylinder, the bore a of which is coneshaped in order to compress the cork and thus cause it when seated within the bottle to expand and remain firmly fixed in place. The follower or plunger B for seating the cork may be operated by any well-known system of levers such as commonly employed for this purpose, and therefore needs neither description nor illustration.

The bottom of the corking-cylinder is provided with a base-piece a^2 , having a recess in which is seated a rubber or other resilient gasket a^3 , the orifice through which is coneshaped, so that when the neck of the bottle to be filled is brought into contact with the gasket by the platen C the incline inner walls of this orifice will effect a gas-tight closure to prevent the escape of gas, air, or liquor from the bottle. The cylinder is further provided with two apertured or hollow teats or extensions a^4 and a^5 , the former of which has secured to it, preferably by a screw connection, a tube D, having its upper or outer end provided with a stuffing-box d , in which works a hollow piston E, carrying at its inner end a flexible section of tubing F and near its outer end a cock e , this piston being connected by a flexible pipe G with a tank (not shown) containing beer, wine, or other liquor under a

pressure of compressed sterilized air or carbonic-acid gas greater than the pressure due to the effort of the gas in the liquor to escape. To the extension a^5 is attached a pipe H, to which latter is connected a pipe I, leading to a suitable holder containing carbonic-acid gas or sterilized air under pressure, (the holder not being shown,) a cock i on this latter pipe serving to control the supply of gas or air to the corking-cylinder. The pipe H also carries a cock h , which constitutes an escape-valve to permit of the escape of air or gas from a bottle as the beer, wine, or the like flows thereto.

15 In operation a bottle is first placed on the platen C, and by suitable mechanism (not shown) the platen is raised to bring the neck of the bottle into engagement with the gasket a^3 . The follower is now operated and drives the cork down the cylinder a sufficient distance to effect a gas-tight seal in the cylinder above the bottle. The piston is now pushed down until the lower end of the tube F reaches nearly to the bottom of the bottle, and the cock I is opened, allowing sterilized air or carbonic-acid gas to flow to the bottle and thereby compress the air therein. The cock I is now closed and the cock e^2 opened, thereby allowing the beer, wine, or other liquor to flow into the bottle, the cock h being slightly opened to allow the air or gas in the bottle slowly to escape as the liquor runs in. When the bottle is full, the cocks e^2 and h are closed, the piston is moved outward to draw the tube F out of the bottle, and the plunger is operated to seat the cock in the neck of the bottle.

35 By having the flexible tube to extend to or

nearly to the bottom of the bottle the beer or other liquor will flow into the bottle and gradually drive out the contained air or gas in such a manner as effectually to prevent the generation of any foam.

It is to be understood that, if preferred, the pipe H will be connected with the pipe D, and thus do away with the extension a^5 ; also, that several corking-cylinders may be placed side by side and be supplied from a common supply of liquor and air or gas.

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

An apparatus for filling and corking bottles comprising a corking-cylinder A having a cone-shaped bore and two hollow teats or extensions a^4 , a^5 communicating with the cylinder, a tube D secured to the extension a^4 and having a stuffing-box at its outer end, a hollow piston E working in the stuffing-box and carrying a cock e^2 , a flexible section of pipe F carried by the inner end of the piston, a pipe G secured to the outer end of the piston and connecting with a supply of liquor, a pipe H secured to the extension a^5 and carrying a cock h constituting an escape-valve, a pipe I coupled to the pipe H and connecting with an air or gas supply, and a cock i for closing the pipe I, substantially as described.

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

JOHN C. PENNINGTON.

Witnesses:

JOHN R. BEAM,

C. FRANK KIREKER.