(Model.)

2 Sheets—Sheet 1.

A. R. WEISZ.

BOTTLING MACHINE.

No. 255,360. Patented Mar. 21, 1882.

Fig. 1.

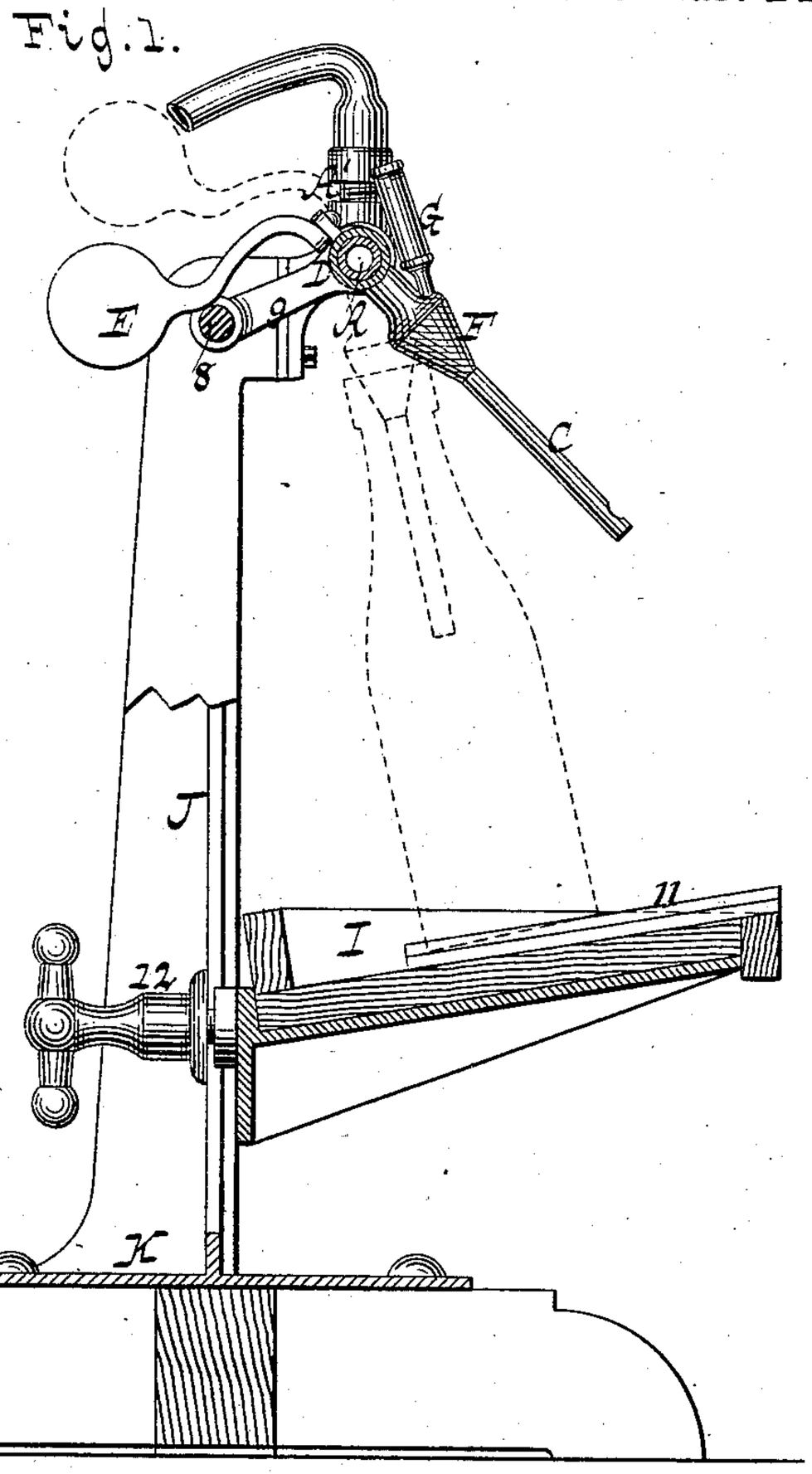


Fig. 2.

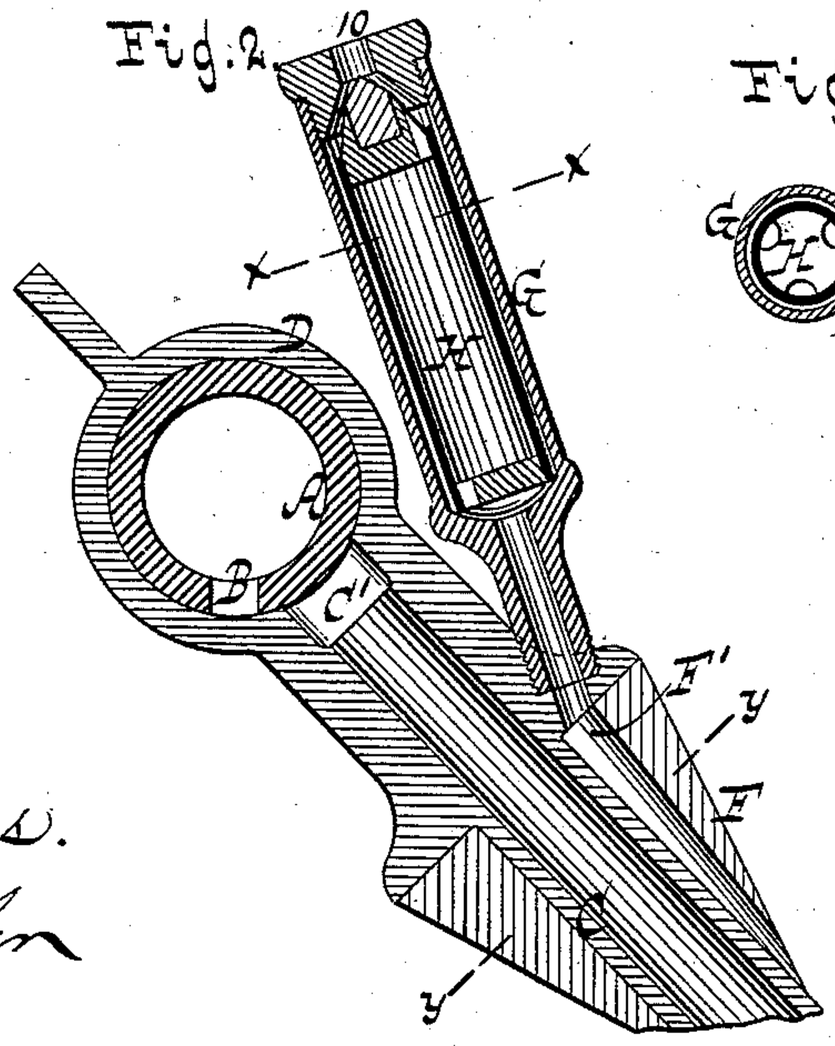
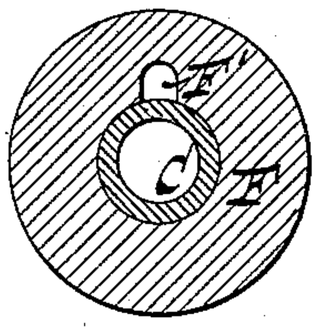


Fig. 3.

Fig. 4.



Witnesses.
Chas. Wahlers.
William Miller

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by
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Attys.

(Model.) 2 Sheets—Sheet 2.

A. R. WEISZ.

BOTTLING MACHINE.

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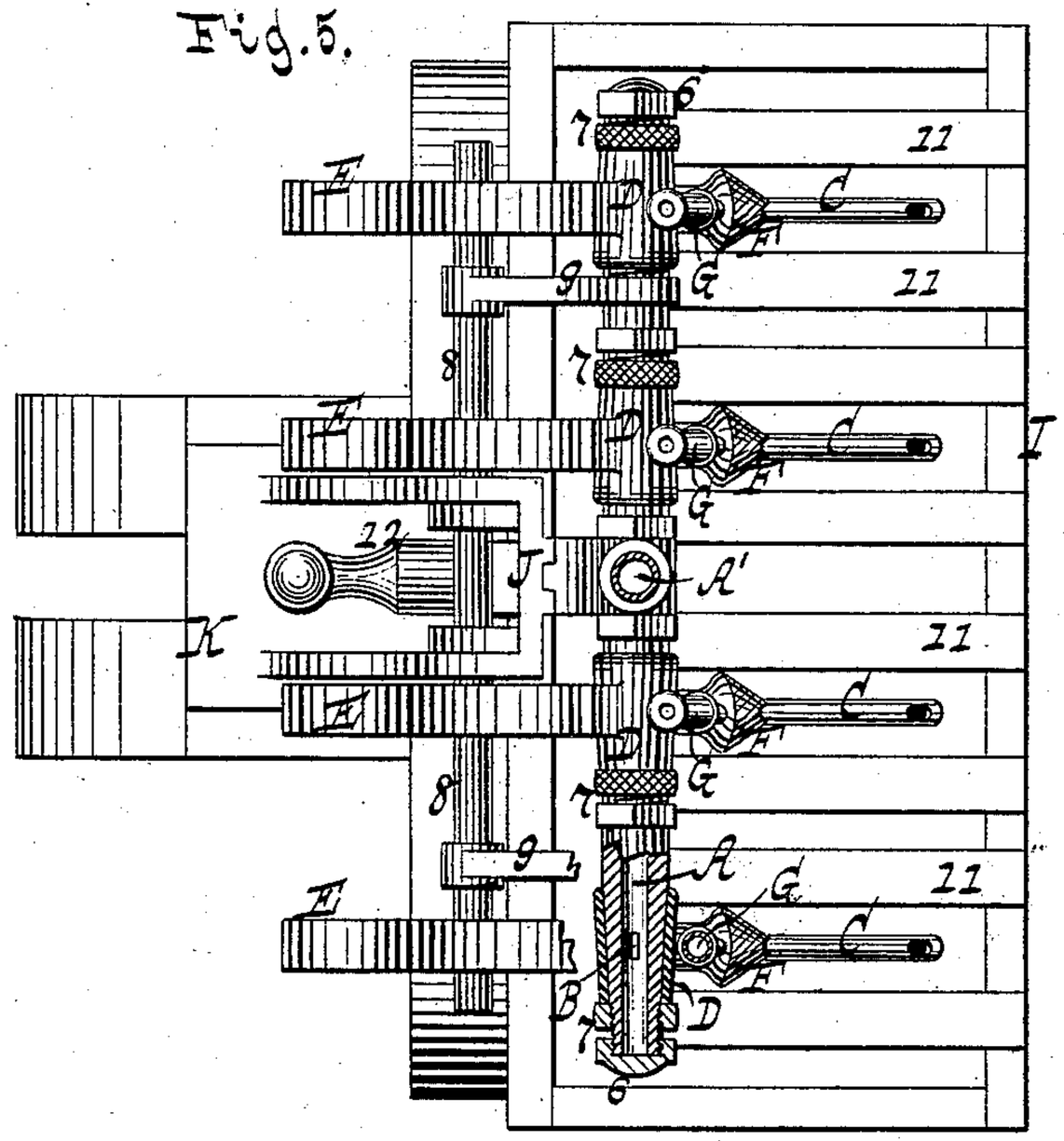
Fig. 5.



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Attys.

UNITED STATES PATENT OFFICE.

ALBERT R. WEISZ, OF BROOKLYN, NEW YORK.

BOTTLING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 255,360, dated March 21, 1882.

Application filed June 21, 1881. (Model.)

To all whom it may concern:

Be it known that I, ALBERT R. WEISZ, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Bottling-Machines, of which the following is a specification:

This invention relates to machines for filling bottles with beer or other liquid; and it consists in the combination of a supply tube or cock adapted to connect with the vessel containing the liquid to be bottled, and constructed with a series of lateral outlet-orifices, a series of filling-tubes constructed with valvular heads fitted on the supply-tube opposite to its outlet-orifices and adapted to rotate thereon for opening the outlet-orifices to the filling-tubes or closing such orifices, and weights or springs acting on the valvular heads of the filling-tubes for closing the outlet-orifices automatically. On the filling-tubes, respectively, is arranged an elastic bottle-stopping vent-ring having communicating with its vent a valve-chamber containing a float-valve closing in an outer direction. A tray or bottle-rest allows the mouths of the bottles to be forced up against the vent-rings of the filling-tubes so as to close them.

This invention is illustrated in the accompanying drawings, in which Figure 1 represents a vertical cross-section of the machine. Fig. 2 is a like section of the filling devices on a larger scale than in the previous figure. Fig. 3 is a cross-section on the line *x x*, Fig. 1. Fig. 4 is a similar section on the line *y y*, Fig. 1. Fig. 5 is a plan or top view of the machine.

Similar letters indicate corresponding parts.

The letter A designates the supply-tube; B, its outlet orifices; C, the filling-tubes; D, their valvular heads, and E the weights. F are the vent-rings; G, the valve-chambers, and H the float-valves. I is the tray or bottle-rest.

The supply-tube A is closed at both ends by screw-caps 6, and it is constructed with a nipple, A′, at about midway of its length for its connection with the vessel containing the liquid to be bottled, while it is fastened in a horizontal position to the upper end of a standard, J, rising from a base or foot, K. The outlet-orifices B are in the lateral portion of the supply-tube A, and the valvular heads D of the filling-tubes are fitted on the supply-tube opposite to such orifices, so that the inner ends of the filling-tubes are in line therewith in a direction transversely to the supply-tube. Those portions of the supply-tube A receiving the valvular heads D are tapered, and the valvular heads are secured thereon by nuts 7 to insure a tight joint.

The filling-tubes C project from their valvular heads D, and are open at or near their outer or free ends.

The weights E are connected to the valvular heads D of the filling-tubes, and when the parts are in a normal position the weights rest on a horizontal bar, S, thus bringing the inner ends of the filling-tubes away from the outlet-orifices B of the supply-tube and closing such orifices, as shown in Fig. 2. The weights E can also be arranged in other ways, and, if desired, springs can be substituted for the weights. The bar 8 projects in opposite directions from the standard J, and to the outer portions thereof are secured the shanks of hooks 9, which engage the supply-tube A, thus sustaining the latter on opposite sides of the standard.

In this example the outlet-orifices B of the filling-tubes are vertically beneath the axis thereof, and when the orifices are closed the filling-tubes C stand at an angle of about forty-five degrees to such axis. The interior of the filling-tubes C, moreover, is larger than the outlet-orifices, and hence if the filling-tubes are moved to a lower position—their valvular heads D being thus rotated on the supply-tube—the outlet-orifices of the supply-tube are opened to the interior of the filling-tubes and the liquid escapes from the supply-tube into and through the filling-tubes, while if the filling-tubes are then released they are automatically returned to an upper or normal position by the action of the weights E, or their substitutes, and the outlet-orifices are closed. In order to lessen the motion required to open the outlet-orifices B of the supply-tube to the filling-tubes C, the interior of the filling-tubes is enlarged at the inner end, as at C′, Fig. 2. In practice the filling-tubes C are moved to a lower position by the bottles, which are placed thereon, as indicated in Fig. 1, and the tray I is placed in such a

position that in the downward movement of the filling-tubes the lower ends of the bottles are brought in contact with the tray and the mouths of the bottles are forced up against the vent-rings F, so that these rings act as stoppers to the bottles. The vent-rings F are elastic, being made of india-rubber and preferably of conical shape, and they are fixed to the filling-tubes C, at their upper ends, by cement or other suitable means. The vents F′ of the vent-rings extend upward from their lower edges, and the valve-chambers G communicate therewith, respectively, at their upper ends, each chamber having an aperture, 10, at the outer end, forming a seat for its valve H. The valves H are made in the form of floats, and when the bottles are forced up against the vent-rings F, as before stated, the air escapes from the bottles through the vent F′ of the rings into the valve-chambers G, and thence out through the apertures 10, while when the bottles become filled the liquid rises in the valve-chambers and floats the valves against their seats, thus preventing the re-entrance of air.

The tray I is provided with parallel strips 11 for receiving the lower ends of the bottles between them, and it is inclined to facilitate the escape of the liquid that may be received thereon through a suitable drip-pipe, while it is adjustably secured to the standard J by a set-screw, 12, so that it can be accommodated in its position to bottles of different sizes.

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

1. The combination, substantially as hereinbefore set forth, of the supply tube or cock adapted to connect with the vessel containing the liquid to be bottled, and constructed with a series of lateral outlet-orifices, the filling-tubes constructed with valvular heads fitted on the supply-tube opposite to its outlet-orifices and adapted to rotate thereon for opening the outlet-orifices to the filling-tubes, or closing such orifices, and the weights or equivalent acting on the valvular heads of the filling-tubes for closing the outlet-orifices automatically, as set forth.

2. The combination, substantially as herein-before set forth, with the supply tube or cock, the filling-tubes, and their valvular heads, of the elastic bottle-stopping vent-rings fixed to the filling-tubes, and the valve-chambers communicating with the vents of the vent-rings and containing a float-valve closing in an outer direction, for the purpose specified.

3. The combination, substantially as herein-before set forth, of the tray or bottle-rest with the filling tubes, the elastic bottle-stopping vent-rings fixed to the filling-tubes, and the valve-chambers communicating with the vents of the vent-rings and containing the float-valves closing in an outer direction, for the purpose specified.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

ALBERT R. WEISZ. [L. S.]

Witnesses:
W. HAUFF,
E. F. KASTENHUBER.