(No Model.)

2 Sheets—Sheet 1.

E. G. CHEWNING.

COMPOUND BOTTLING MACHINE.

No. 250,500. Patented Dec. 6, 1881.

Fig. 2. *Fig. 1.* *Fig. 3.* *Fig. 4.*

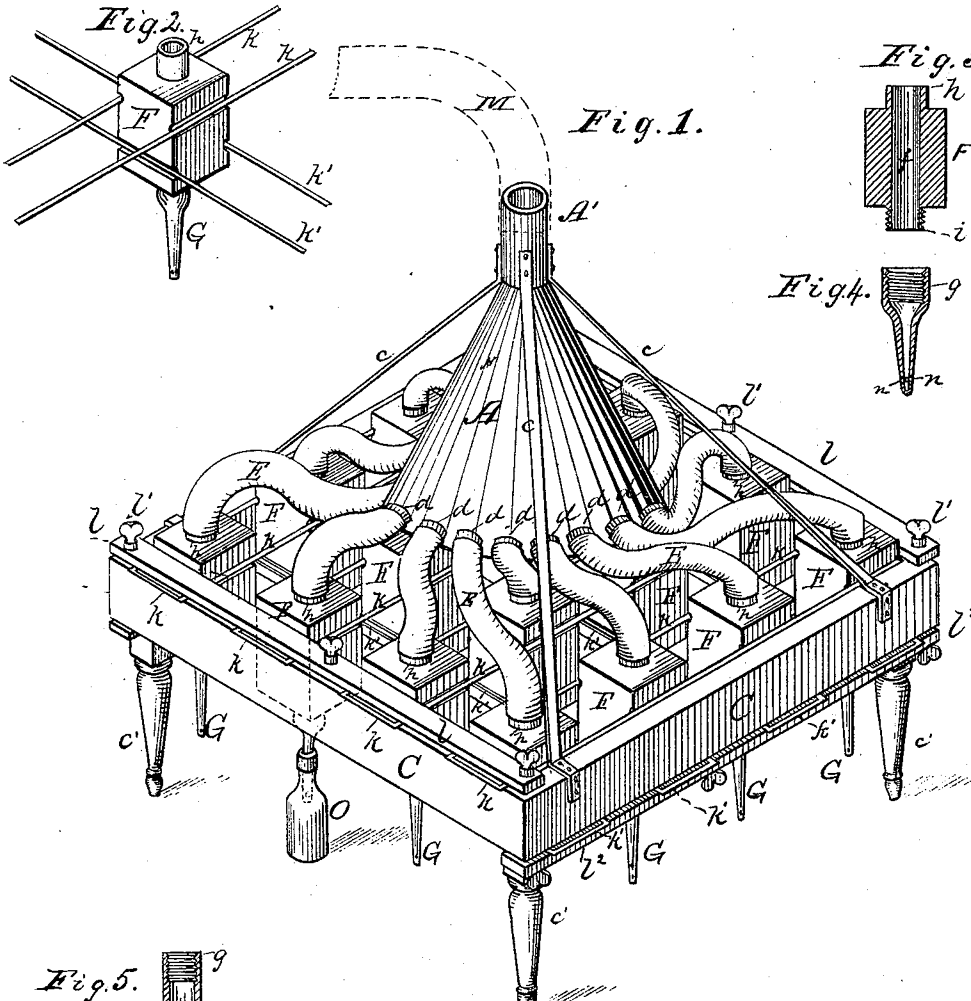


Fig. 5.

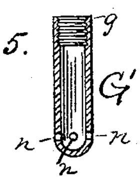
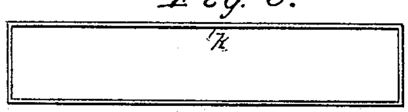


Fig. 6.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 7.

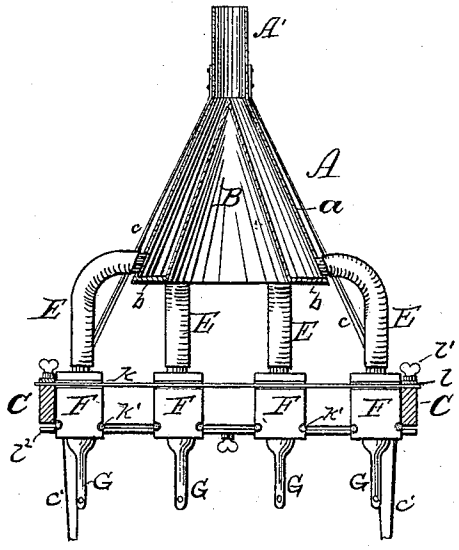
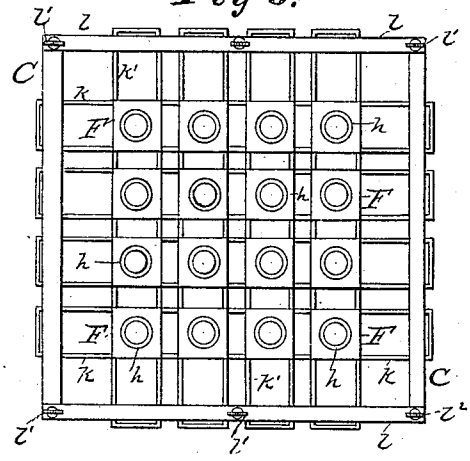


Fig 8.



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UNITED STATES PATENT OFFICE.

EDWARD G. CHEWNING, OF NORFOLK, VIRGINIA.

COMPOUND BOTTLING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 250,500, dated December 6, 1881.

Application filed October 15, 1881. (No model.)

To all whom it may concern:

Be it known that I, EDWARD G. CHEWNING, a citizen of the United States, residing at Norfolk, in the county of Norfolk and State of Virginia, have invented certain new and useful Improvements in Compound Bottling-Machines; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to a bottling-machine having a multiplicity of discharge-nozzles, its object being to enable the filling of a number of bottles simultaneously by the same machine.

In the accompanying drawings, Figure 1 is a perspective view of a compound bottling-machine constructed according to my invention. Fig. 2 is a detached view of one of the adjustable blocks and its attached single nozzle. Fig. 3 is a vertical central section of one of the adjustable blocks. Figs. 4 and 5 are longitudinal sections of different-sized single nozzles. Fig. 6 is a view of a pair of the rods for supporting the adjustable blocks. Fig. 7 shows a vertical central section of the distributer and frame, and a row of the adjustable blocks and single nozzles in full lines. Fig. 8 is a top view of the frame, with the adjustable blocks arranged closer together than shown in Fig. 1.

The distributer A has the exterior shape of an inverted funnel, with a straight nozzle, A′, which serves as the induction-pipe of the distributer, the outer shell, *a*, having secured within it a cone, B, which is separated from it by an intervening space, the apex of said cone extending partially into the nozzle A′, while its entire lower edge is connected with the lower edge of the shell *a* by the annular plate *b*, which forms the bottom wall of the chamber between the cone B and the outer shell. The distributer A is supported above the frame C by rods *c*, secured to said frame and to the nozzle A′, said frame being supported by legs *c*′. Near the base of the distributer a series of short spouts, *d*, project from the outer shell all around, and serve as a means of securing the ends of the flexible pipes or hose E, which lead from the distributer to the several adjustable hollow blocks F, which support the several single nozzles G or G′, which are closed at their tips and have lateral discharge-orifices, as shown at *n*. These hollow blocks are rectangular and bored centrally to form the passages *f* through them. From the top of each block F projects a plain nipple, *h*, surrounding the passage, and serving to connect the end of the flexible pipe, which is slipped snugly over it. A screw-nipple, *i*, projects similarly from the bottom of each block and serves as a means of attaching the single nozzles, each of which is provided with a screw-socket to fit said nipple, as shown at *g* in Figs. 4 and 5.

The frame C incloses a rectangular space, within which the adjustable blocks F are supported by two series of pairs of rods, *k k*′, which set into grooves made for them in the sides of the blocks, the rods *k* being arranged to cross the frame, and resting on opposite upper edges thereof, their ends being secured by clamping-bars *l*, arranged above them, and secured to the frame-bars by thumb-nuts *l*′, which enter the frame-bars and serve to draw said clamping-bars tightly against the rods, or to release them, as desired. These upper supporting-rods, *k*, pass through grooves in the upper portions of opposite sides of the blocks, while the lower supporting-bars, *k*′, pass through grooves in the lower portions of the sides, at right angles to those embraced by the rods *k*. The lower supporting-rods, *k*′, are secured in position by means of clamping-bars l^2, which by means of suitable screws may be caused to clamp said rods to the lower edges of two opposite frame-bars, at right angles to the supporting-rods *k*.

A pipe for supplying liquid to the distributer is indicated in dotted lines at M, this pipe being usually made of flexible rubber hose, the end of which is sprung over the distributer-nozzle A′, as shown in Fig. 1. The liquid to be bottled flows, from any suitable source of supply, through the pipe M, into the distributer through the nozzle A′, filling the chamber between the cone B and outer shell, *a*, and then flows from this chamber, through the flexible connecting-pipes E and hollow blocks F, to the

several single nozzles G or G′, as the case may be, and thence into the bottles, into which said nozzles project, as shown in Fig. 1, in which one bottle, O, is shown in position to be filled.

It will be understood that as many bottles may be filled at once as there are single nozzles, each of said nozzles entering a bottle.

In practice the frame C may be raised or tilted to one side and the bottles arranged in position to receive the nozzles, and after the bottles are filled the frame may be again raised in order to remove them. The frame may either be raised by hand or by means of ropes and pulley.

The nozzles may be made of various sizes to suit different sizes of bottles, as shown in Figs. 4 and 5; and in order that large-bodied bottles may be placed close together, or that a greater number of blocks than shown may be used to support nozzles for filling a large number of small bottles simultaneously, the boxes are made adjustable on their supporting-rods as follows: If the lower clamping-bars, L^2, are loosened, the supporting-rods *k* may be moved laterally to bring the blocks F close together, said blocks sliding on the upper rods. When they have been brought to the proper position in one direction the lower rods are to be secured in place by their clamping-bars, and the upper rods will then be loosened and moved laterally at right angles to the movement of the lower rods, thus bringing the blocks close together in another direction. By this movement of the blocks they may be brought together toward the center of the frame, as shown in Fig. 6, and in the vacant spaces at each end of each row of blocks additional blocks may be inserted, if desired, the rods being sprung slightly for this purpose.

Having now described my invention and explained the operation thereof, I claim—

1. A compound bottling-machine consisting of a distributer adapted for connection with a supply-pipe, a series of flexible pipes leading from said distributer, and a series of bottling-nozzles connected with the outer ends of said flexible pipes, substantially as described.

2. A compound bottling-machine composed of a distributer adapted for connection with a supply-pipe, a series of flexible pipes leading from said distributer, and a series of adjustable bottling-nozzles connected to the outer ends of said pipes, substantially as described.

3. In a compound bottling-machine, the combination, with the distributer A, having the induction-nozzle A′, opening into an annular chamber within said distributer, of the flexible pipes E, leading from said distributer, and the adjustable bottling-nozzles connected with the outer ends of said pipes, substantially as described.

4. The combination, with the suitably-supported distributer A, having an induction pipe or nozzle, A′, opening into an annular chamber within said distributer, of the flexible pipes E, leading from said distributer, the adjustable blocks F, connected with the outer ends of said flexible pipes, and provided at their lower ends with means for connection of the single bottling-nozzles, substantially as described.

5. In a compound bottling-machine, the combination of the suitably-supported frame C, with the grooved hollow blocks F, and the two series of pairs of rods *k* and *k′*, lying in the grooves of said blocks at the upper and lower portions thereof respectively, said pairs of rods being laterally adjustable, substantially as described.

6. In a compound bottling-machine, the combination, with the suitably-supported distributer adapted for connection with a supply-pipe, of the flexible pipes E, the adjustable hollow blocks F, the adjustable pairs of rods *k* and *k′*, the frame C, supporting said pairs of rods, and suitable single bottling-nozzles connected to the lower ends of said adjustable blocks, substantially as described.

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

EDWARD G. CHEWNING.

Witnesses:

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PHIL. W. HALE.