

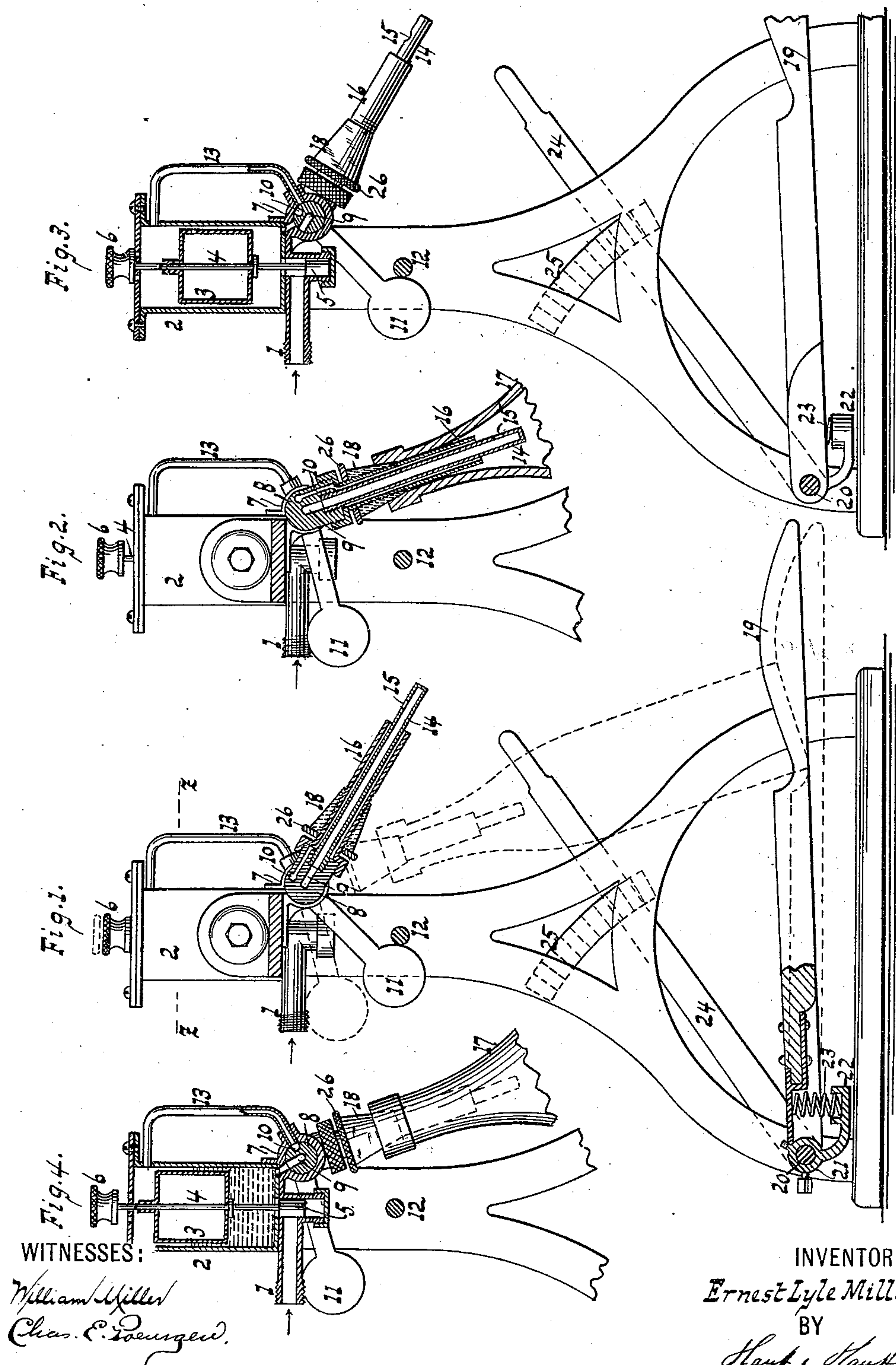
(No Model.)

2 Sheets—Sheet 1.

E. L. MILLER.  
BOTTLING MACHINE.

No. 564,528.

Patented July 21, 1896.



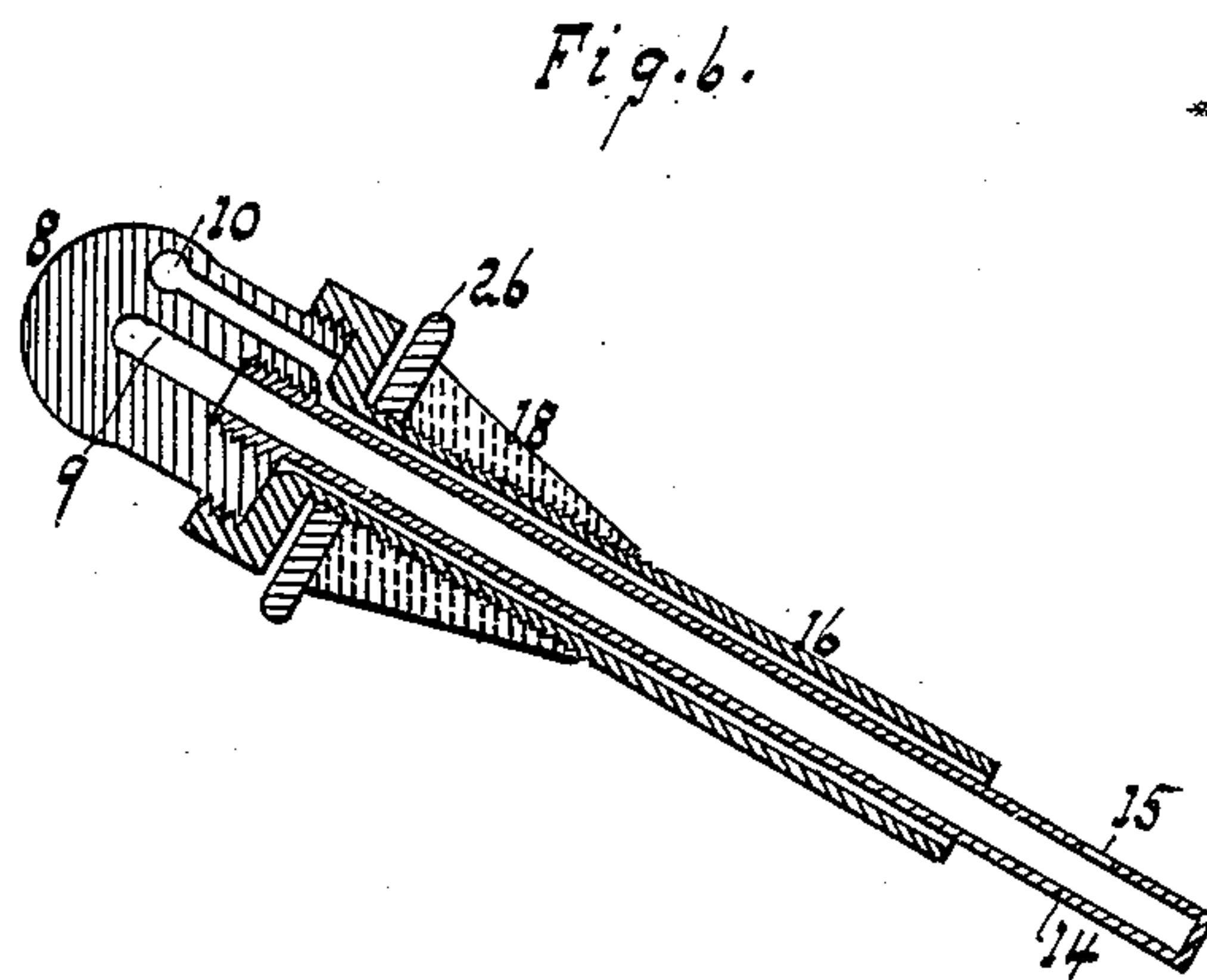
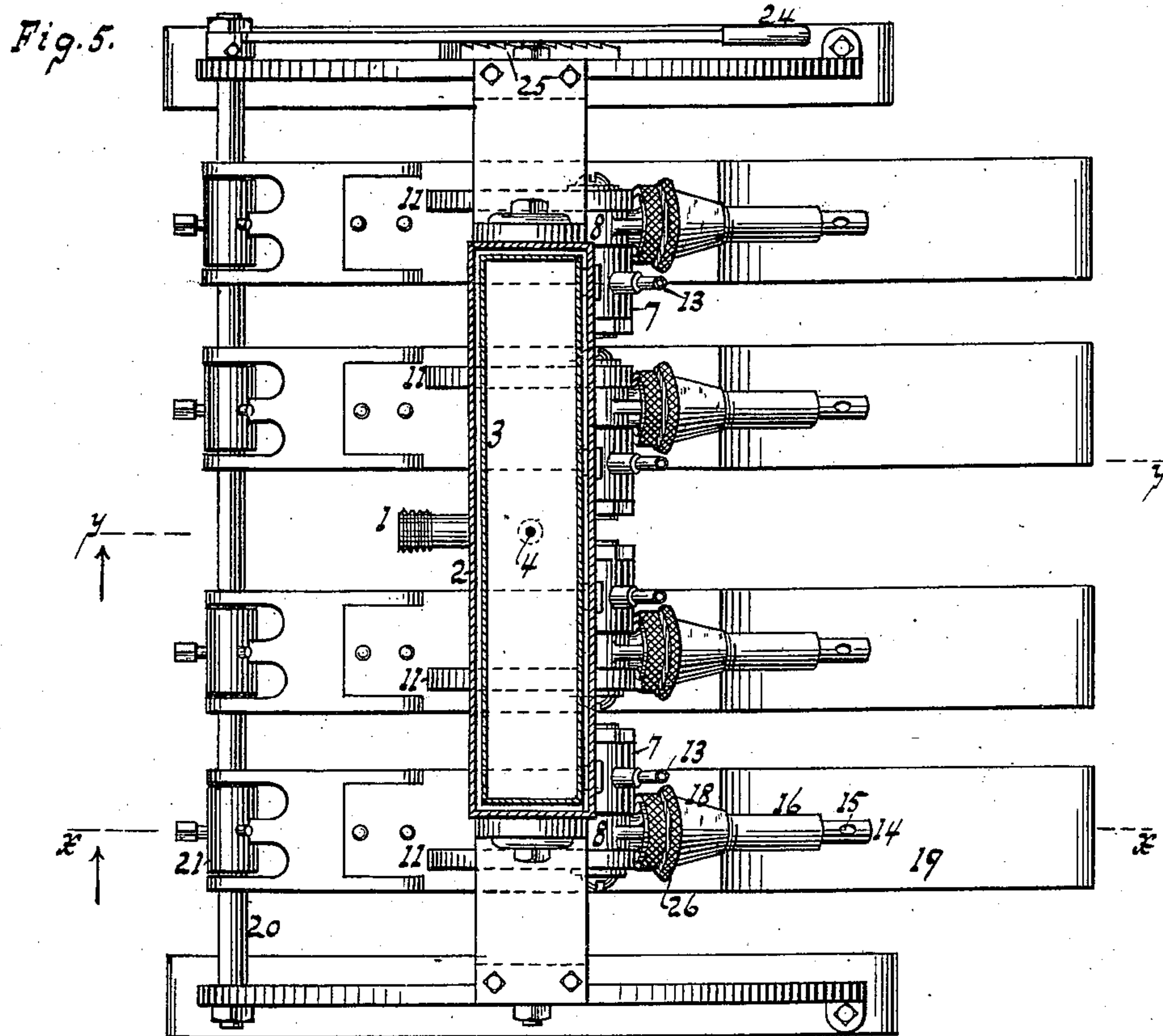
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WITNESSES:  
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Chas. E. Boergere,

INVENTOR:  
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ATTORNEYS.



# UNITED STATES PATENT OFFICE.

ERNEST LYLE MILLER, OF LOUISVILLE, KENTUCKY, ASSIGNOR TO BUDDE & WESTERMANN, OF NEW YORK, N. Y.

## BOTTLING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 564,528, dated July 21, 1896.

Application filed May 31, 1895. Serial No. 551,251. (No model.)

*To all whom it may concern:*

Be it known that I, ERNEST LYLE MILLER, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented new and useful Improvements in Bottling-Machines, of which the following is a specification.

The object of this invention is to provide a bottling-machine which can be readily adapted to various sizes of bottles, and which, moreover, can be made simple and compact in construction and reliable in its operation; and the invention resides in the novel features of construction set forth in the following specification and claims, and illustrated in the annexed drawings, in which—

Figure 1 is a side elevation of the bottling-machine sectioned along  $xx$ , Fig. 5. Fig. 2 is a view similar to Fig. 1 with parts in a different position than in Fig. 1. Fig. 3 is a section along  $yy$ , Fig. 5. Fig. 4 is a section similar to Fig. 3, with parts in a different position than in Fig. 3. Fig. 5 is a section along  $zz$ , Fig. 1. Fig. 6 is a detail sectional view of a valve-plug enlarged.

The inlet-tube 1 is connected by suitable means to a cask or other supply containing beer or other liquid to be drawn. This inlet-tube 1 communicates with a chamber 2, in which is a float 3, to which is connected the stem 4 of valve 5. When the chamber 2 is empty, as seen in Fig. 3, the float 3, with valve 5, is in opening position to allow communication from tube 1 into chamber 2. When a certain quantity of liquid has entered chamber 2, the float 3 is raised, as seen in Fig. 4, so as to cause valve 5 to shut off further inflow from tube 1 into chamber 2 until the emptying or partial emptying of the latter causes float 3 to drop and open or partly open valve 5 for a further inflow.

The upper end of the valve-stem 4 is provided with a suitable handle 6, located above the machine in convenient reach to be operated by the attendant, for the purpose of enabling the valve 5 and the float 3 to be actuated by the attendant at a point above the float-chamber 2. This is particularly for the purpose of loosening the valve and float should they in any manner become stuck or

not respond promptly to the action of the fluid.

The chamber or liquid-supply vessel 2 discharges through a valve having the seat 7 with valve-plug 8. Several valves are shown in the drawings, the number of valves being manifestly subject to variation. The valve-plug 8 has two passages 9 and 10 and has attached thereto a weight 11. When the weight 11 rests against the stop or cross-bar 12, Figs. 1 and 3, the passages 9 and 10 are closed, but when the plug 8 is swung to the position in Figs. 2 and 4 against the action of the weight 11 the chamber 2 can discharge into passage 9, and at the same time passage 10 communicates with conduit 13, leading to the upper part of chamber 2. The weight 11 can be replaced by a spring if seen fit.

The passage 9 communicates with tube 14, having an outlet 15. The tube 16, surrounding tube 14, is of such size that an air space or channel is formed between tubes 14 and 16, this air-channel communicating with passage 10. When a bottle 17 is slipped over the tubes 14 and 16 and is brought to the position shown in Figs. 2 and 4, liquid from chamber 2 can flow through passages 9, 14, and 15 into the bottle while the air from the bottle escapes through the air-channel and along passages 10 and 13 into the top of chamber 2. While the bottle is thus being charged its mouth rests against the cork 18, the bottle being supported on a bottle-rest composed of an arm 19, loosely journaled at its inner end on a rock-shaft 20, rotatably mounted in the frame of the machine. The outer end of the arm is constructed to receive and support a bottle. The rock-shaft 20 is provided with a fixed collar 21, Fig. 1, having a spring-carrying arm 22, on which is mounted a spring 23, which acts upon the bottle-supporting arm 19 and presses the outer end of the latter in an upward direction to tightly hold the mouth of the bottle upon the cork 18. In Fig. 5 a series of bottle-supporting arms are shown, all are mounted on a single rock-shaft 20. Each arm is designed to be operated upon by a spring supported by a spring-supporting arm in the manner above explained, and as is clearly shown in Fig. 1.



The shaft 20 has secured thereto a lever or handle 24, which when set higher or lower and held in required adjustment by engagement with the proper tooth in rack 25 will hold the rest 19 in proper adjustment for shorter or longer bottles.

The cork 18 can be readily formed by a tubular packing or cone of rubber or elastic material slipped over tube 16. By threading the tube 16 for the reception of a nut 26 the cork 18 can be fixed or adjusted along the tube 16 as required by varying lengths or sizes of bottles.

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

1. In a bottling-machine, the combination with a float-chamber having a fluid-inlet tube, of a vertical valve-stem extending through the float-chamber and provided at its upper end with an actuating-handle, a valve mounted on the valve-stem and controlling the flow of fluid through the inlet-tube into the float-chamber, a float mounted on the valve-stem within the float-chamber, a fluid-outlet and an air-inlet leading from the bottom and top portions of the float-chamber, and a valve constructed to simultaneously open or close the fluid-outlet and the air-inlet and having a nozzle adapted to enter the mouth of a bottle, substantially as described.

2. In a bottling-machine, the combination with a suitable frame, and a float-chamber mounted thereupon and provided with a fluid-inlet tube at its bottom portion, of a vertical valve-stem extending through the float-chamber and provided at its upper end with an actuating-handle for moving the valve-stem, a valve secured to the lower end of the valve-stem and controlling the flow of fluid through the inlet-tube into the float-chamber, a float mounted on the valve-stem within the float-chamber, an air-inlet tube leading from the upper end of the float-chamber, a fluid-outlet extending from the bottom portion of the float-chamber, a valve-chamber connected

with the said air-inlet tube and said fluid-outlet, a rotary valve arranged in said valve-casing and constructed to simultaneously open and close the air-inlet tube and the fluid-outlet, and a nozzle extending from a part of the rotary valve and adapted to enter the mouth of a bottle, substantially as described.

3. In a bottling-machine, the combination with a suitable frame, and valve mechanism for introducing a fluid into a bottle, of a rock-shaft journaled in the base of the frame, a bottle-supporting arm loosely journaled on the rock-shaft, a secondary arm secured to the rock-shaft and provided with a spring which presses against the bottle-supporting arm, an adjusting-lever secured to the rock-shaft for rocking the same and thereby adjusting the bottle-supporting arm, and stops with which the lever engages for holding it in a fixed position after adjustment, substantially as described.

4. In a bottling-machine, the combination with a frame, and valve mechanism arranged at the upper portion of the frame for introducing a fluid into a bottle, of a bottle-supporting arm and an arm-adjusting mechanism consisting of a rock-shaft mounted in the frame, a spring-supporting arm mounted on the rock-shaft, a spring interposed between the bottle-supporting arm and said spring-supporting arm for yieldingly pressing the bottle-supporting arm in an upward direction, an adjusting-lever secured to the rock-shaft for rocking the same and thereby changing the position of the bottle-supporting arm, and means for holding the lever in a fixed position after adjustment.

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

ERNEST LYLE MILLER.

Witnesses:

M. E. TAYLOR,  
W. A. MILLER.