No. 721,548. PATENTED FEB. 24, 1903.

C. M. EARL.

SIPHON FILLER.

APPLICATION FILED JUNE 6, 1902.

NO MODEL.

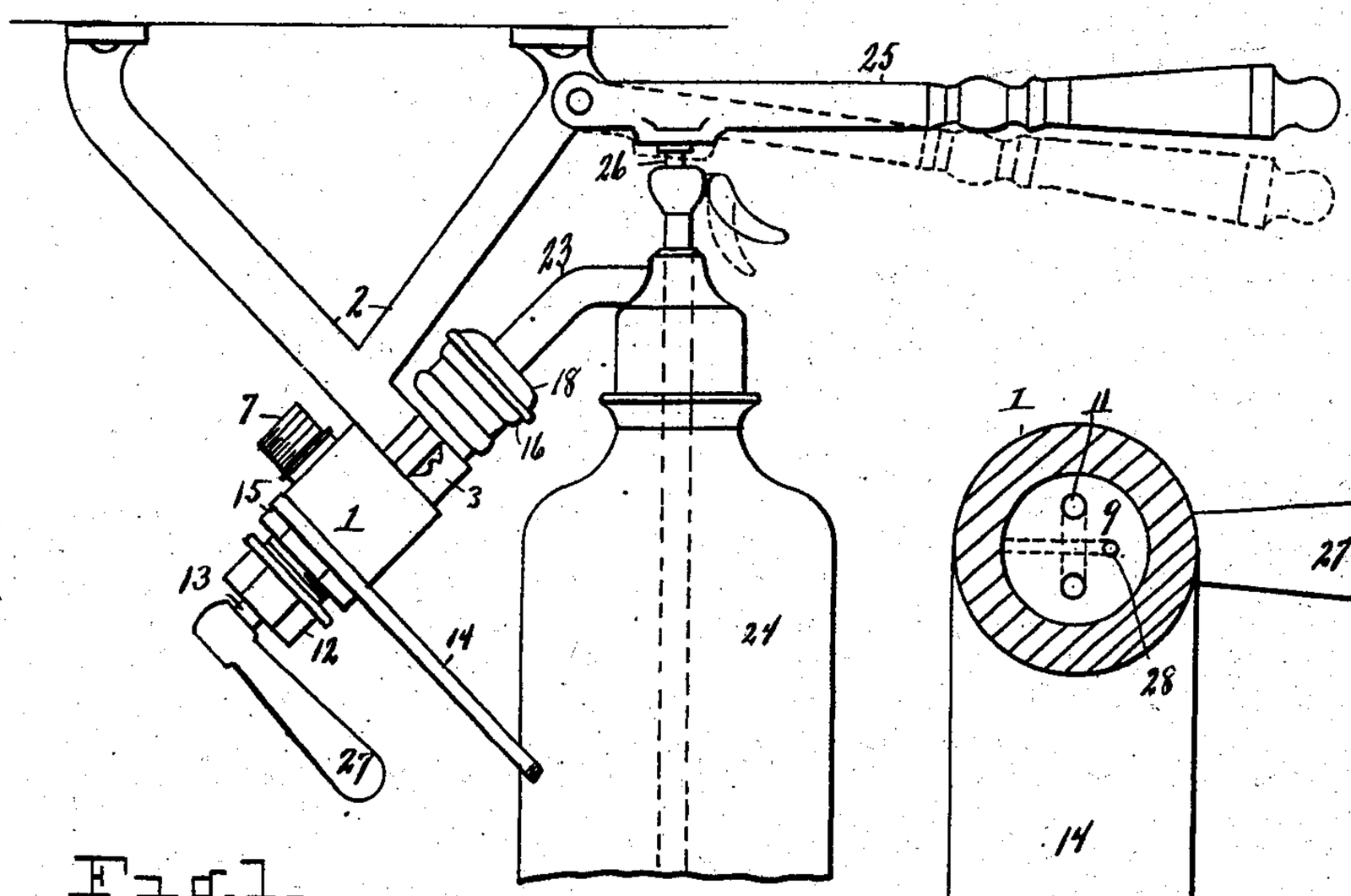

Fig. 1.

Fig. 3.

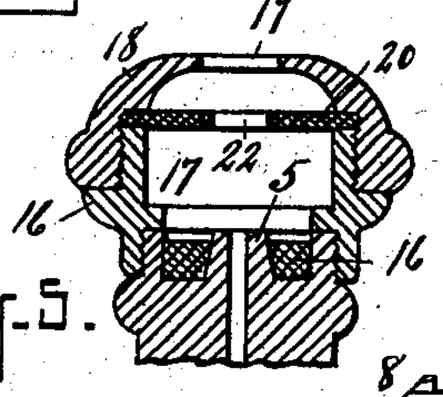

Fig. 5.

Fig. 2.

Fig. 4.

WITNESSES.

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SIPHON-FILLER.

SPECIFICATION forming part of Letters Patent No. 721,548, dated February 24, 1903.

Application filed June 6, 1902. Serial No. 110,483. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. EARL, a citizen of the United States, residing at Detroit, in the county of Wayne, State of Michigan, have invented certain new and useful Improvements in Siphon-Fillers; 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 figures of reference marked thereon, which form a part of this specification.

This invention relates to siphon-fillers; and it consists in the construction and arrangement of parts hereinafter fully set forth, and pointed out particularly in the claims.

The object of the invention is to provide simple and efficient means for confining the sniff or spurt which escapes from the nozzle of the siphon after being filled, so as to prevent the carbonated water from flying upon the operator.

The above object is attained by the structure illustrated in the accompanying drawings, in which—

Figure 1 is a view showing my improved siphon-filler with a siphon-bottle in position therein for filling. Fig. 2 is a central vertical section through the head of the siphon-filler. Fig. 3 is a horizontal section through the filler-head, as on line 3 3 of Fig. 2. Fig. 4 is a fragmentary view in section through the valve and lower end of the filler-head, showing the valve in position to afford a vent for the passage-way through which the carbonated water flows to the siphon. Fig. 5 is a vertical section through the fitting on the upper end of the filler-head, forming therein a sniff-chamber.

Referring to the characters of reference, 1 designates the filler-head, which is adapted to be suspended from the under side of the bar by means of the bracket 2, said head being secured to the bracket by a suitable clip 3. Formed longitudinally through the head is the channel 4, through which the carbonated water is adapted to pass. The upper end of said channel terminates in a nipple 5, surrounded by a compressible washer 6, which lies in an annular recess in the top of said head. Extending from the rear side of the head is a coupling 7, adapted for attachment of a pipe leading to the tank or reservoir containing the carbonated beverage. (Not shown.) Passing through said coupling is an inflow-port 8, which after entering the head turns downwardly and with the lower end of the channel 4 opens into an annular recess in the lower end of the head, in which the valve 9 is seated. Between the face of said valve and the end of the recess is a washer 10, having apertures therethrough which register with the channel 4 and the inflow-port 8. Formed in the valve 9 is a U-shaped passage-way 11, which when the valve is in the position shown in Fig. 2 establishes direct communication between the intake-port and the channel 4. Screwed into the recess in the lower end of the head is a plug 12, which surrounds the stem 13 of the valve and bears upon the valve itself, so as to force it onto its seat or against the washer 10. A bearing-plate 14 is mounted upon the lower end of the head and is secured in place by a jam-nut 15. Said plate projects so as to support the bottle when in position, as shown in Fig. 1. Screwed onto the upper end of the head is a fitting 16, having an annular chamber 17 therein. Upon the fitting 16 is screwed a cap 18, provided with a central aperture 19. Resting upon the upper end of the fitting 16 is an annular washer 20, which is adapted to be confined by an annular shoulder 21 on the cap, that engages said washer when said cap is screwed into place. Formed in said washer is a central opening 22, which registers with the opening 19 in the cap through which the nozzle 23 is adapted to be entered, said nozzle passing through the central opening in the washer 20, which is normally smaller than said nozzle, so that it is caused to grip the nozzle tightly, the washer being made of rubber or of other elastic material for this purpose.

In filling the siphon-bottle with this device the nozzle 23 of the siphon-bottle 24 is passed through the opening in the cap and washer and forced under the washer 6 around the nipple 5. The lever 25, pivoted to the bracket 2, is then depressed at its free end, so as to engage the stem 26 of the siphon-valve, (not shown, but of the ordinary construction,) so

as to force said valve from its seat and open a passage-way through the nozzle into the siphon. The force required to hold the siphon-valve open through the operation of said lever is also sufficient to maintain the nozzle forcibly upon its seat around the nipple 5, so that the flow of carbonated water may be directed through the channel 4 into the nozzle and bottle. When the siphon is in position, as described, the valve 9 is opened by means of the handle 27, so as to cause the opening 11 in the valve to register with the intake-port 7 and the channel 4, allowing the carbonated water to pass into the bottle. When the bottle has been filled, the valve 9 is closed to cut off the flow from the tank or reservoir. The lever 25 is then released, allowing the siphon-valve to close, when the nozzle may be withdrawn from the cap. As the nozzle is released the fluid under pressure which is within the nozzle and the channel 4 is allowed to escape into the chamber 17, in which it is confined and from which its escape is prevented by means of the washer or flexible diaphragm 20, through which the nozzle passes and which so tightly embraces the nozzle as to obviate the escape of fluid from said chamber, the area of which is sufficient to accommodate all of the fluid which the nozzle contains after the siphon-valve has been closed. By this arrangement the spurt of the carbonated beverage under pressure from the nozzle and filler-head as the nozzle is removed is obviated. Upon the closing of the valve 9 a discharge-opening 28 therein, (see Fig. 4,) which stands at right angles to the opening 11 and is independent thereof, is brought to register with the channel 4, as shown in Fig. 4, and with the vent-port 29, whereby the accumulated water in the sniff-chamber 17 and channel 4 is allowed to escape.

Having thus fully set forth my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a siphon-filler, the combination with the head, of a coupling removably attached to the upper end thereof forming a sniff-chamber therein, a fixed nipple extending into said chamber, a fluid-channel communicating with said chamber through said nipple, a flexible diaphragm adjacent to the upper wall of said chamber having a central opening therethrough adapted to close around the siphon-nozzle and form a closed chamber when the nozzle is entered therein, and an opening in the wall of said chamber in line with the opening in said diaphragm.

2. In a siphon-filler, the combination of a head, a sniff-chamber at the upper end of said head, a fixed nipple extending into said chamber, an inflow passage-way communicating with the chamber through said nipple, a valve to control said passage-way, an elastic diaphragm forming the upper wall of said chamber having an aperture therein of smaller diameter than the siphon-nozzle which is adapted to pass through the opening in said diaphragm and seat around said nipple.

In testimony whereof I sign this specification in the presence of two witnesses.

CHARLES M. EARL.

Witnesses:
E. S. WHEELER,
C. E. DAVIS.