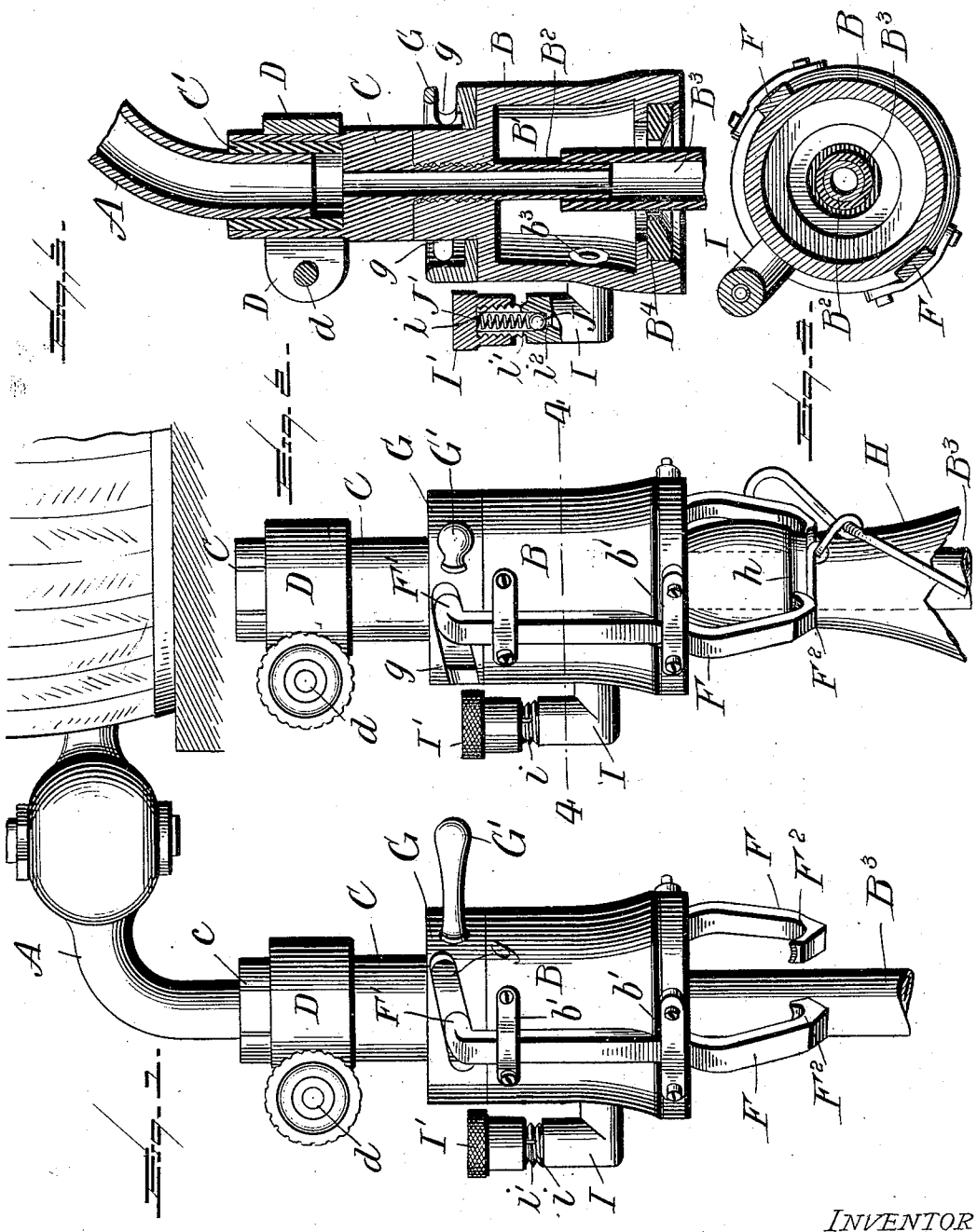
No. 703,874. Patented July 1, 1902.

C. T. WHITE.

BOTTLE FILLING DEVICE.

(Application filed Oct. 14, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

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BOTTLE-FILLING DEVICE.

SPECIFICATION forming part of Letters Patent No. 703,874, dated July 1, 1902.

Application filed October 14, 1901. Serial No. 78,647. (No model.)

To all whom it may concern:

Be it known that I, CHARLES T. WHITE, of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Bottle-Filling Devices; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

This invention is an improved apparatus for bottling carbonated liquids; and its object is to provide a device which can be attached to faucets of ordinary retail or dispensing apparatus, so that the liquids can be dispensed at retail in open vessels or may be bottled from the dispensing-faucet by attaching the improved bottling device thereto, such device not interfering with the ordinary use of the faucet for drawing the liquids for immediate consumption, but enabling bottles to be filled from such faucets without foaming or permitting escape of the carbonic-acid gas which livens the liquid, so that when drawn into bottles the liquid can be transported without becoming flat.

The invention therefore consists in the simple novel bottling attachment for faucets, &c.; and its essential features are summarized in the claims, while the following description, in connection with the accompanying drawings, will impart a clear understanding of a simple and practical embodiment thereof.

Referring to said drawings, Figure 1 is a side view of the attachment secured to an ordinary dispensing-faucet. Fig. 2 is an enlarged view showing the manner of filling a bottle. Fig. 3 is a vertical section through Fig. 2. Fig. 4 is a transverse section on line 4 4, Fig. 2.

In said drawings, A designates an ordinary dispensing-faucet to which the bottle-filling attachment is secured. This attachment consists of a hollow body or chamber B, provided with a sleeve C, rising from its upper end. Said sleeve may be integral with body, but preferably is formed separately therefrom and secured thereto, as indicated in Fig. 3 of the drawings. This sleeve is split, as shown at *c*, and is slipped onto the delivery end of the faucet A and secured water and gas tight thereto by means of the clamp D, which is provided with an adjusting-screw *d*. To insure a tight joint, the sleeve may be lined with rubber or other suitable material, as at C', which acts as a gasket or bushing between the sleeve and faucet. The body B is preferably cylindrical for convenience in manufacture and is provided with an interior chamber B', preferably of larger diameter than the sleeve C. Depending into this chamber below the sleeve is a nipple B^2, which communicates with the sleeve and may be part thereof, and to this nipple is attached the upper end of a filling-tube B^3, preferably a section of rubber hose that extends below the body and is adapted to enter the bottle H and conduct liquid thereinto, said tube B^3 being preferably long enough to extend down to the side of the bottle and let the liquid flow down the side of the bottle without bubbling or foaming. Below this chamber B' and in the lower end of the body is an annular recess in which is seated an annular gasket B^4, of rubber or other suitable material, against which the mouths of the bottles H are held during the filling operation. In order to hold the bottle tightly against this gasket during the filling operation, bottle-clamps F are employed. Two diametrically opposite clamps are shown, which are attached to the exterior sides of the body and may be guided in vertical grooves therein and confined by cross-pieces *b'*, as shown, so that lateral play of such clamps is prevented; but the invention is not restricted to the particular way shown of holding and guiding the bottle-clamps. The upper ends of said bottle-clamps are provided with inwardly-projecting lugs F', which engage inclined cam-grooves *g* in a cam-ring G, rotatably surrounding sleeve C and resting upon the top of body B. Said sleeve can be rotated by a handle G' or in other convenient manner. When moved one way, the cams force the bottle-clamps upwardly, thereby drawing the mouth of the bottle H tight against the gasket B^4. When the motion of the ring G is reversed, the clamps are lowered and the bottle released. The lower ends of the bottle-clamps F are bent, so as to easily embrace the neck of a bottle H entered between them, as in Fig. 2, and they are provided with inwardly and

upwardly projecting hooks F^2, which are adapted to engage under the flange or shoulder *h* of the bottle-neck, as shown, and hold the bottle securely during the filling operation.

To the side of the body B is connected a venting-pipe I, provided with a suitable valve to control the escape of air, said pipe communicating through an opening b^3 with the chamber B′ and having its outer end threaded, as at *i*′, and slotted, as at *i*, a screw-cap I′ being run thereon, and said cap can be adjusted up or down, so as to uncover more or less of slots *i*. Within vent-pipe I below the slots *i* is a valve-chamber having a suitable valve. As shown, this chamber has a seat i^2, on which is seated a ball-valve J, held down by a spring J′, confined by cap I′, as shown.

Operation: The device may be readily attached to the nozzle of any ordinary faucet by slipping the sleeve thereupon and securing it thereto by the clamp D, and by using bushing C′ a tight joint is insured. The cam-ring is turned to lower the clamps. Then filling-tube B^3 is slipped into the neck of the bottle to be filled and the latter pushed upward between the clamps, the latter being allowed sufficient play at their lower ends to permit the bottle-neck to be readily entered therebetween. The cam-ring is then turned and pulls the clamps upward, causing their hooks to grip the bottle just below its bead and lift it upward, forcing its mouth tightly against the gasket E and making an air-tight joint between the bottle and chamber B′. Then the liquid is admitted through the faucet A and flows directly into the bottle through tube B^3 and the air in the bottle escapes into chamber B′ and thence into the atmosphere through vent I, the escape of the air being regulated by properly adjusting the vent-valve so as to hold the air in bottle with the desired pressure. This can be done in the form shown in drawings by adjusting cap I′ so as to more or less uncover slots *i* and hold valve J down with the desired pressure, which should approximate the pressure of gases in the vessel from which the liquid is being decanted. Where the pressure is uniform in the vessel, the pressure in the bottle will also be uniform during the filling operation. If there is any tendency to foam, the pressure on the valve should be slightly increased. If the liquid does not flow readily into the bottle, the pressure on valve should be slightly relaxed. By this means the escape of air is so regulated that the air-pressure on the liquid in the bottle is substantially the same as the pressure on the liquid in the vessel, so that foaming of the liquid in the bottle and escape of the carbonic gases from the liquid will be prevented, thus enabling a person to fill a bottle with carbonated liquid from an ordinary vessel containing such liquid without escape or loss of the gases. When the bottle is filled, cam-ring G is turned so as to lower the clamps and release the bottle, which is then withdrawn.

While the attachment is particularly designed for use in retail stores, it is obviously quite useful in bottling-works, where a large number of such attachments could be connected with a single vessel or liquid-reservoir to be bottled.

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

1. In a bottling device, the combination of the body having an air-chamber, adjustable bottle-clamps slidably attached to the body and depending below the same, a gasket around the mouth of the chamber at the lower end of the body, and a cam-ring rotatably mounted on the body engaging and operating said clamps, substantially as described.

2. In a bottling device, the combination of the body having an air-chamber, a gasket around the mouth of the air-chamber, a filling-tube extending through the body, vertically-movable bottle-holding clamps slidably attached to the sides of the body, a cam-ring rotatably mounted on the body provided with cam-grooves engaged by the clamps, and an air-vent tube communicating with the chamber, and provided with means for regulating the escape of air, substantially as described.

3. In a bottling device, the combination of the body having an air-chamber, means for attaching the body to a faucet, a filling-tube extending through the air-chamber, a gasket around the mouth of the chamber at the lower end of the body, vertically-adjustable bottle-clamps slidably attached to the body and depending below the same, and a cam supported on the body and engaging and operating said clamps, substantially as described.

4. In a bottling device, the combination of the body having an interior air-chamber, a gasket around the mouth of the chamber, vertically-adjustable bottle-clamps slidably attached to the sides of and depending below said body, a cam-ring above the air-chamber for simultaneously operating said clamps, so as to cause them to engage the bottle-neck and hold it tightly against the gasket, an air-venting pipe communicating with the chamber, a valve therein and means for regulating the pressure of the valve, substantially as described.

5. In a bottling device, the combination of the body having an interior air-chamber, a filling-tube extending through said chamber, and a gasket around the mouth of the chamber; with vertically-movable bottle-clamps slidably attached to the sides of the body and depending below the same having bottle-catching hooks on their lower ends, the cams above the air-chamber engaging the bottle-clamps, the air-vent attached to the body and communicating with the air-chamber thereof, a valve in said vent, a spring for seating said valve and means for regulating the pressure of the spring, substantially as described.

6. In a bottling device, the combination of the body having an air-chamber, a gasket around the mouth of the air-chamber, a filling-tube extending through the body, opposite bottle-holding clamps attached to the sides of the body, and a ring provided with cams adapted to be engaged by the clamps; with an air-vent pipe communicating with the chamber having a threaded end provided with venting-slots, and a screw-cap fitted on the threaded end of the pipe to regulate escape of air therefrom.

7. In a bottle-filling device, the combination of the body having an interior air-chamber, a sleeve connected to the body and provided with means for attachment to a faucet, a filling-tube for conducting liquids from said sleeve through the air-chamber, and a gasket around the mouth of the air-chamber; with vertically-adjustable bottle-clamps attached to the body, a ring surrounding the sleeve having cams engaging the said clamps, to actuate the latter, a vent-pipe communicating with the chamber, having air-slots, and an adjustable cap on the slotted end of the vent-tube, substantially as described.

8. In a bottle-filling device, the combination of the body having an interior chamber, means for attaching the body to a faucet, a filling-tube communicating with the faucet and extending through the air-chamber, and a gasket around the open mouth of the air-chamber; with sliding bottle-clamps on the sides of the body having their lower ends adapted to engage the neck of a bottle, a ring rotatably mounted on the body having cams engaging said clamps, a vent-pipe attached to the body and communicating with the air-chamber, said pipe having a threaded and slotted end, a screw-cap adjustably fitted on the threaded end of the vent-pipe, and a valve in the vent-pipe, all substantially as and for the purpose described.

9. In a bottle-filling device, the combination of the body, having an interior chamber, a split sleeve connected to one end of the body, a gasket therein and a clamp on the sleeve for attaching it to a faucet, a filling-tube communicating with the sleeve and extending through the air-chamber, and a rubber gasket around the open mouth of the air-chamber; with sliding bottle-clamps on the sides of the body having hooks or teeth on their lower ends to engage the neck of a bottle, a ring rotatably mounted on the body having cam-slots engaging said clamps, a vent-pipe attached to the body and communicating with the air-chamber, said tube having a threaded and slotted end, a screw-cap adjustably fitted on the threaded end of the vent-pipe, a ball-valve in the vent-pipe and a spring for seating the valve confined by said cap, all substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

CHARLES T. WHITE.

In presence of—
WM. P. ROBINSON,
ABNER B. GRAHAM.