No. 757,886. PATENTED APR. 19, 1904.

W. B. COCHRANE.

LIQUID DISPENSING APPARATUS.

APPLICATION FILED MAR. 24, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

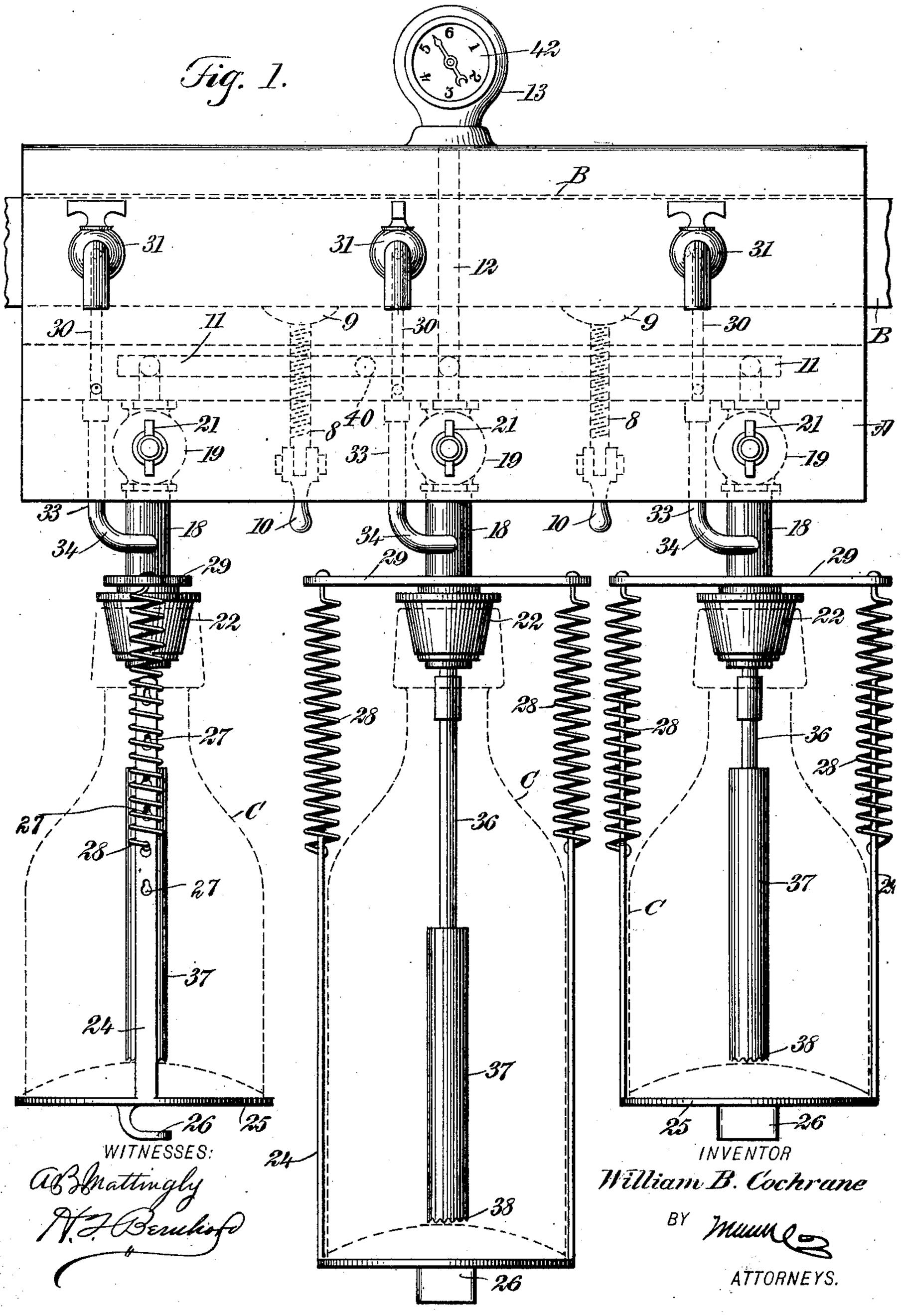

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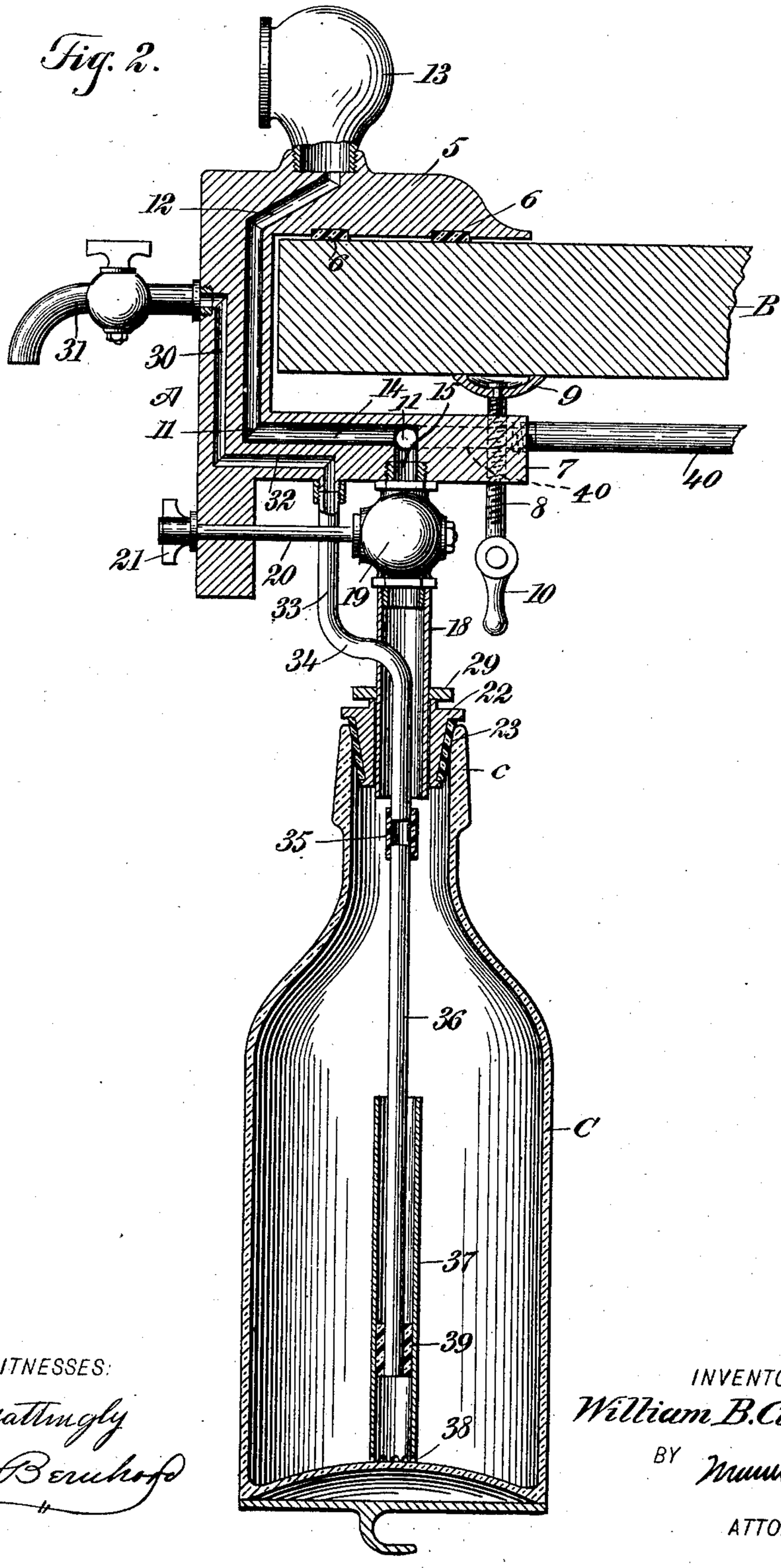
Fig. 2.



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UNITED STATES PATENT OFFICE.

WILLIAM B. COCHRANE, OF CHICAGO, ILLINOIS.

LIQUID-DISPENSING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 757,886, dated April 19, 1904.

Application filed March 24, 1903. Serial No. 149,352. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. COCHRANE, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Liquid-Dispensing Apparatus, of which the following is a full, clear, and exact description.

This invention relates to improvements in liquid-dispensing apparatus, in which I seek to provide a simple and efficient structure adapted for use in connection with any kind of a counter, bar-room fixture, or other place for the purpose of dispensing liquids from the original package.

My apparatus is constructed to allow a number of bottles or packages to be contained therein at one time, although the liquid contents of the packages may be individually drawn off, as desired, by the manipulation of suitable valves. Each bottle or package is held air-tight in engagement with a suitable stopper, and said package is supported by a suitable form of holder which can be manipulated so as to readily dismount an empty bottle and replace it by a filled bottle.

Further objects and advantages of the invention will appear in the course of the subjoined description, and the novelty will be defined by the annexed claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the figures.

Figure 1 is an elevation of a liquid-dispensing apparatus embodying my improvements, and Fig. 2 is a vertical sectional view through the same.

A designates a frame or plate which is adapted for application to the edge portion of a counter, bar-room fixture, or any other place from which it is desired to dispense liquids from the original package. As shown, this frame or plate is provided with a rearwardly-extending top flange 5, which is disposed longitudinally of said frame or plate at the top portion thereof and is adapted to rest on the top of a counter B. I may employ elastic strips 6 between the rearwardly-extending flange of the frame or plate and the counter B in order to prevent the metallic flange from marring or defacing said counter; but these strips may be omitted, if desired. The frame or plate is also provided with a rearwardly-extending flange 7, which is disposed at the lower portion of the plate and in parallel relation to the top flange 5, the two flanges 5 7 being preferably integral with the plate A, although this is immaterial. The rearwardly-extending flange 7 serves as the support for one of a series of binding-screws 8, which are adapted to be mounted in threaded bearings provided in the flange, each screw being furnished at its upper end with a head 9 and at its lower portion with a suitable handle 10.

The plate or frame A is provided with a longitudinal air passage or channel 11, from which leads an upwardly-extending air-passage 12, adapted to have communication with a pressure-chamber 13, the shell of which is detachably screwed to the top flange 5 of the frame or plate. (See Fig. 2.) With this longitudinal passage 11 communicate a series of branch passages 14, which are provided in the lower flange 7, each of said branch passages 14 having a depending length 15. A number of pressure-pipes 18 are coupled to the lower portion of the bottom flange 7 in a way to have communication with the air-passages 14 therein, and each pressure-pipe is provided with a suitable valve or cock 19, the latter having an operating-stem 20, which extends through one of a series of openings provided in the lower portion of the plate or frame A, each stem being furnished with a suitable handpiece 21, as shown by the drawings. Each pressure-pipe 18 is furthermore equipped with a plug or stopper 22, the latter being made, preferably, of metal and soldered, brazed, or otherwise united to the lower portion of said pipe 18. Each plug or stopper 22 is of tapering form and provided with a rubber gasket or packing 23, the latter being held externally in a suitable way on the stopper or plug. The plug or stopper is adapted to be thrust into the mouth portion *c* of a bottle, package, or other container C, and the gasket or packing of the stopper is adapted to engage friction-

ally with the mouth of the bottle or package in a way to produce an air-tight joint between the chamber of the bottle or package and the pressure-pipe 18. A series of the pressure-pipes and stoppers are employed to accommodate a number of bottles or containers, and in the drawings I have shown the apparatus as constructed to accommodate a series of three bottles; but it will be understood that the number of pressure-pipes and stoppers may be increased or decreased at will.

Each bottle or container is adapted to be held tightly in engagement with one of the stoppers or plugs by a yieldable suspension device, and in the drawings this suspension device is shown in the form of a stirrup 24, the cross-bar 25 of which is furnished with a suitable finger-piece or clip 26. The arms of the stirrup, which is yoke-shaped, are provided with a series of slots 27, into either of which may be hooked the lower ends of coiled suspension-springs 28. The upper ends of the springs are fastened in a suitable way to the end portions of the cross-head or plate 29, the same being fitted loosely on the depending pressure-pipe 18 at a point above the plug or stopper 22 thereon. I employ a pair of suspension-springs 28, which are operatively connected with the end portions of the cross-head 29, and to these springs are adjustably fastened the legs of the yoke-shaped stirrup. It is evident that the lower ends of the springs may be adjusted into engagement with corresponding apertures or slots 27 of the series in the arms of the stirrup, thus making provision for lengthening the bottle-support to accommodate packages of different lengths. In the normal position of the yieldable bottle-holder the springs 28 draw the legs of the stirrup upwardly within the coiled portions thereof; but when the bottle is placed in position the stirrup is forced downwardly and the bottle is slipped into place, so that the cork or stopper will enter the mouth of said bottle, after which the recoil of the springs draws the bottle in an upward direction, so that the desired tight frictional engagement between the stopper and the mouth of the bottle is secured. It is evident that the stirrup and the bottle may be pulled downward by hand, and the cross-head may be swung to one side for the purpose of easily removing the bottle from the holder and the stopper of the pressure-pipe, after which another bottle can be substituted for the one removed, and it may be held in engagement with the stopper by the tension of the springs on the stirrup.

The plate or frame A is also provided with a series of individual liquid-passages 30, the same being provided in said plate at proper intervals, as represented by dotted lines in Fig. 1. Each liquid-passage communicates in its upper portion with a faucet or draw-cock 31 of any suitable construction, while the lower portion of each passage is extended to form a branch 32, which is provided in a part of the bottom flange 7 of the frame or plate A. A length 33 of liquid-eduction pipe is coupled to the flange 7 of the frame of plate in a way to have communication with the branch 32 of the liquid-passage 30, and this length of eduction-pipe 33 is bent or curved laterally at a point intermediate of its length, as at 34, said bent portion of the pipe 33 passing through an opening which is provided in the pressure-pipe at a point above the cross-head 29 and the stopper or plug 22, as shown by Fig. 2. The lower portion of the eduction-pipe 33 passes through the corresponding portion of the pressure-pipe 18, so as to protrude therefrom, and this length 33 is provided with a coupling 35, by which another length 36 of eduction-pipe is detachably united to the length 33. The pipe 36 may be slipped into the bottle or container C when the latter is placed in position in the yieldable bottle-holder.

The liquid-eduction pipe is also furnished with an extensible length 37, which is formed in its lower end with a series of notches constituting a plurality of radial inlet-openings 38. This extensible length of pipe 37 is coupled to the eduction-pipe 36 by an elastic gasket 39, of rubber or any other suitable material, said gasket fitting friction-tight in the extensible length 37 and serving to operatively connect the lengths of pipe 36 37, thus making provision for increasing or decreasing the length of the eduction-pipe for the purpose of fitting bottles of different lengths and allowing the notched lower end of the extensible length 37 to rest on the bottom of the package, container, or bottle C.

Air under pressure from a suitable storage-tank or other means of supply is conveyed to the dispensing apparatus by a pipe 40, the same being coupled to the rearwardly-extending bottom flange 7 for communication with the air-passage 11, and the degree of pressure of the air supplied by the apparatus is indicated by a suitable gage 42, adapted to be mounted in the elevated pressure-chamber 13. Any suitable style of gage may be attached to the pressure-chamber; but as the gage does not form a part of the present invention I have not considered it necessary to illustrate and describe the same specifically herein.

The frame or plate A may be readily adjusted to the edge portion of a counter B or its equivalent by arranging said plate opposite to the edge, and thus making it take a position wherein its top flange 5 will rest on the counter. The elastic strips 6 may or may not be employed, and the screws 8 can be rotated by hand for the purpose of clamping the frame or plate firmly in position. The desired number of bottles can be conveniently placed in the spring-holders for the stoppers or plugs 22 to enter the mouths thereof, and air under pressure is conveyed to the appara-

tus by the pipe 40. When it is desired to draw the liquid contents from one of the bottles or holders C, the valve 19 is opened by manipulating its stem 20, so as to admit air to the bottle from the passage 11, the air passing through the valve 19 and the pressure-pipe 18 into the upper portion of the liquid-container. By opening the faucet or cock 31 liquid can be displaced by the air-pressure from the bottle, said liquid flowing through the ports 38, the lengths of pipe 39 37 33, and the eduction-passage 30 to the cock 31. By closing the cock 31 the passage of liquid is cut off, although the valve 19 may remain in an open condition in order that the air-pressure may be exerted constantly, or as desired, on the liquid contained in the bottle or package C. The series of cocks 31 may be opened individually to draw the liquids from the different bottles; but when it is desired to replace an empty bottle by a filled one the operator should turn the handpiece 21 in order to close the proper air-valve 19, thus preventing the escape of air from the apparatus during the interchange of the bottles.

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

1. A liquid-dispensing apparatus having an angular counter-fixture provided with air-passages and with a series of individual liquid-passages, separate air and liquid cocks in communication with the respective passages of said counter-fixture, a series of pressure-pipes in communication with the air-passages and each having means for connecting the same with bottles or packages, and eduction-pipes fitted to the pressure-pipe and communicating individually with the liquid-passages.

2. A dispensing apparatus comprising a counter-fixture having means for clamping the same in position, air and liquid passages in said counter-fixture, pressure-pipes attached to the counter-fixture and communicating with the air-passages therein, eduction-pipes fitted to the pressure-pipes and having communication individually with the liquid-passages, and suitable draw-cocks also communicating individually with said liquid-passages.

3. A dispensing apparatus comprising a counter-fixture having means for clamping the same in position, an air-passage in said frame or plate, a liquid-passage separate from said air-passage, a draw-cock for controlling the liquid-passage, a valved pressure-pipe in communication with the air-passage, and an eduction-pipe communicating with the liquid-passage and passing through the pressure-pipe.

4. A liquid-dispensing apparatus having a counter frame or plate provided with means for clamping the same in position, an air-passage and a series of liquid-passages in said frame or plate, a series of valved pressure-pipes communicating with the air-passage and each provided with a plug or stopper, and extensible eduction-pipes passing individually through the pressure-pipes and communicating in like manner with the liquid-passages of said counter frame or plate.

5. In a liquid-dispensing apparatus, the combination with a pressure-pipe having a bottle-stopper, of a cross-head fitted on said pipe above the stopper thereof and free to turn in a horizontal plane, a stirrup, and springs connected to said cross-head and to the stirrup for suspending the latter from the cross-head.

6. In a liquid-dispensing apparatus, the combination with a pipe having a bottle-stopper, of a cross-head fitted on said pipe, a stirrup having its legs provided with a plurality of apertures, and springs attached to the cross-head and connected adjustably to the apertured legs of the stirrup, said springs being effective in suspending the stirrup from the cross-head, in variable relation thereto.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM B. COCHRANE.

Witnesses:

WILLIAM PERRY,

JOE LAMBERT.