

(No Model.)

P. J. HOGAN.
BOTTLE FILLING DEVICE.

No. 295,009.

Patented Mar. 11, 1884.

Fig. 1.

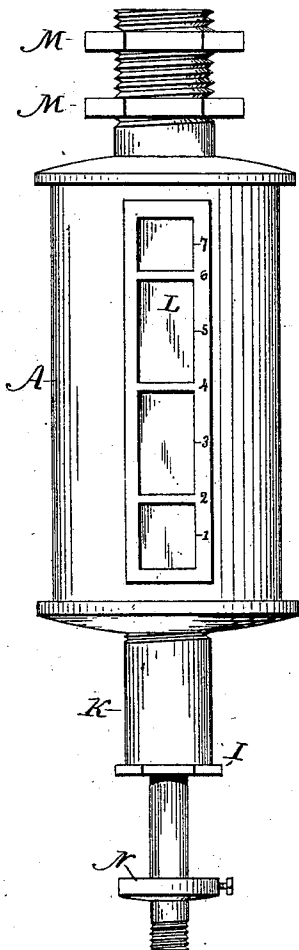
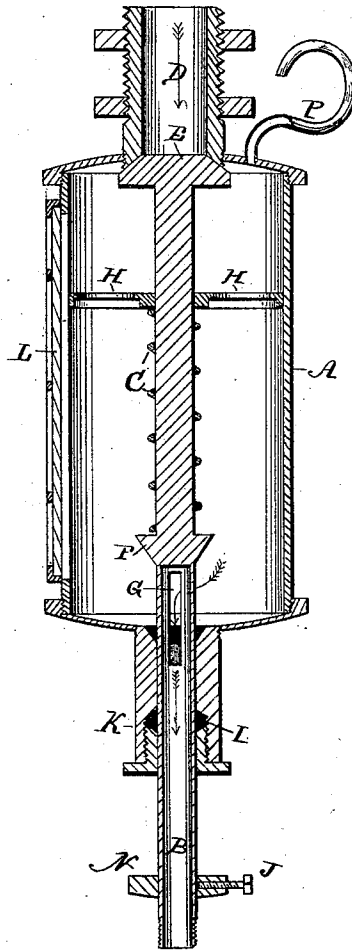


Fig. 2.



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UNITED STATES PATENT OFFICE.

PHILIP J. HOGAN, OF NEGAUNEE, MICHIGAN.

BOTTLE-FILLING DEVICE.

SPECIFICATION forming part of Letters Patent No. 295,009, dated March 11, 1884.

Application filed May 25, 1883. (No model.)

To all whom it may concern:

Be it known that I, PHILIP JOSEPH HOGAN, a citizen of the United States, residing at Negaunee, in the county of Marquette and State of Michigan, have invented certain new and useful Improvements in Bottle-Filling Devices, of which the following is a description.

This invention relates to that class of devices which are used to fill bottles with cider, beer, whisky, mineral waters, &c. Heretofore devices for this purpose have been provided each with a valve-chamber having two valves upon the same stem—one to close the outlet of the chamber and the other to close the inlet at opposite times; but this chamber has not formerly been provided with means for measuring the amounts to be drawn into bottles. They have not been provided with means for adjusting the vent-pipe, and their outlet has been by means of the common puppet-valve, the outlet being around the stem, requiring an external tunnel to concentrate the discharge within the size of a bottle-neck, then requiring further provision for the escape of air from the bottle by fluting the neck of the tunnel externally.

My invention is intended to obviate the objections and supply the deficiencies above indicated; and it consists in a bottle-filling device provided with a window and a graduated scale by means of which the fluid may be measured, in a vent provided with a long flexible pipe, and in a discharge-valve having a tubular side-perforated stem, constructed as hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a front elevation of my invention, and Fig. 2 is a central vertical section of the same.

A represents the body of the device, made of any suitable material—such as brass—in the form of a drum, perforated at the upper end to receive an inlet-pipe, D, perforated at its lower end to receive a hollow screw-plug, K, and perforated at one side to receive the vertical window L. The inlet-pipe D is screw-threaded, to be inserted in the bottom of a barrel, tank, or receiving-tub, and it is provided with check-nuts M, to screw against the two faces of the bottom of the tub to steady the device and to insure a tight joint. The lower

end of pipe D is shaped to form a seat for the valve E within the chamber.

H represents a web secured to the sides of the chamber, and having a central hub, which serves as a guide for the vertically-sliding stem of valves E and F. The web H is sufficiently open to permit free passage of fluid through it. The lower or outlet valve, F, is provided with a tubular stem, B, which has one or more side inlets, G, below the valve. The said stem is a long slim neck adapted to enter any bottle freely, and it is fitted to slide vertically in the plug K, being provided with a water-tight packed joint, I. It is further provided with a collar, N, which is vertically adjustable by means of a set-screw, J.

C represents a spring acting between the web H and the valve F to close the latter and to open valve E.

The window L consists of a vertical opening in the body A, covered with a glass secured water-tight at its edges, and provided with any suitable graduations to indicate the contents of the chamber when filled to the height of said graduations. These graduations may be arranged to represent quarts, pints, gills, &c., or ounces and fractions thereof, according to the special purpose for which the bottling device is to be used.

In operation, a quantity of bottles is placed within reach of the operator at each hand. Suppose the bottles are to be filled. Place the mouth of a bottle up around pipe B and press it up against the collar N, thereby lifting valve F, and also lifting valve E, but not necessarily enough to close the latter. The inlet G being raised above the seat of valve F, the fluid flows through it into pipe B, and into the bottle, the air readily escaping from the bottle around pipe B, which is relatively small, yet, having a very large hole in it, the bottle is quickly filled. When the bottle is filled, it is lowered, allowing the valve F to be closed by the spring C, and the chamber or body A becomes quickly filled, the air escaping therefrom through the vent-pipe P. The outer end of this pipe has previously been carried over the edge of the tub or barrel and its end hung thereto to insure its being above the fluid inside, so that no fluid can escape thereby, however long the valve E may be left open. This operation may be rapidly repeated until

the fluid is exhausted. Suppose the bottles are to be but partly filled, as is frequently required in bottling aerated waters, &c. First a dipper or other receptacle larger than chamber A will be used to draw the contents of the chamber into, and the valve E will be held up by the hand applied to collar N, while said contents are poured back from said receptacle into the tank. Then a bottle will be placed around pipe B, and valve E will be permitted to open. As soon as the required amount has entered the chamber A, as indicated by the dial at the window L, the bottle is quickly raised to close valve E, and to receive the measured liquid through valve F. The valve F may now be allowed to close, and while the chamber is being again filled to the desired height another bottle may be supplied, and the operation repeated. Thus this device will not only serve to fill bottles full, but it also serves as a rapidly-acting measure to dispense liquids in any desired quantities. The valves would operate by their own weight without the spring C, but the spring insures a quicker action of the valves.

For rapidly filling bottles the collar N will be set at a height to allow valve F to open, yet to prevent valve E from being fully closed,

thereby insuring a rapid flow under full head through the chamber.

What I claim as my invention, and wish to secure by Letters Patent, is—

1. A chamber having a pipe in its upper end to connect it with a tank or other receptacle for fluids, a valve-seat in said pipe, and an aperture and valve-seat in the lower end of the chamber, in combination with two puppet-valves constructed to fit said seats alternately, a stem connecting them, and a hollow stem projecting from the lower valve through its seat below and beyond the exterior of the chamber, said hollow stem being perforated through its sides near the lower valve, substantially as and for the purpose specified.

2. The combination, with the chamber and the valves constructed to slide vertically therein, as described, and having a tubular stem extending therefrom, of a collar vertically adjustable on said stem, substantially as described, whereby the upward thrust of a bottle may close the inlet to said chamber, as set forth.

PHILIP J. HOGAN.

In presence of—

BYRON D. JONES,
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