C. A. Gregory,

Filling Bottles,

No. 29,781. Patented Aug. 28, 1860.

Witnesses.
Lt. B. Stewart.
H. W. Howard.

Inventor.
Charles A. Gregory.

UNITED STATES PATENT OFFICE.

CHARLES A. GREGORY, OF POUGHKEEPSIE, NEW YORK.

APPARATUS FOR FILLING BOTTLES.

Specification of Letters Patent No. 29,781, dated August 28, 1860.

To all whom it may concern:

Be it known that I, CHARLES A. GREGORY, of Poughkeepsie, in the county of Dutchess and State of New York, have invented a new and useful Machine for Filling Bottles and other Vessels; and I do hereby declare the following to be a correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a front elevation of the machine. Fig. 2 is a side elevation with the lever up. Fig. 3 is a side elevation with the lever down. Fig. 4 is a vertical transverse section of one of the measuring cylinders, with its valves and vent, showing the position of the valves when the lever is up. Fig. 5, is a similar section of the same parts, showing their position when the lever is down. Fig. 6, is a top view of the rock shaft, with its arms and holders.

The same part is marked, wherever it occurs in the drawings, by the same letter of reference.

The nature of my invention consists in the construction of a simple and convenient machine for filling any number of vessels with a measured quantity of liquid, without danger of spilling or wasting, and with a precision and rapidity unattainable by hand.

To enable others to make and use my machine, I will proceed to describe its construction and operation, referring to the drawings, in which A marks the frame of the machine of any suitable size and material; B, a tank or reservoir, in which the liquid to be bottled is placed; C, measuring cylinders, of any required size and number, inserted into the bottom of the reservoir, and opening into it, as clearly shown in Fig. 4; V, valves controlling the upper openings *o* of the cylinders. These valves are attached to valve rods *r*, which pass up through sleeves *t*, and are attached at top to the cross rod D. The sleeves *t* do not extend quite down to the valves V, but are replaced below by springs *s*, which tend to keep the valves in close contact with the valve seats. The cross rod D, is hinged or pivoted at *a*, to the upper end of the pitmen P, the lower ends of said pitmen being pivoted to the cranks E. The cranks E, are on the ends of the valve rod F, which controls the valves *c*, of the cocks, which open into the bottom of the cylinders C. These valves, when open, discharge the contents of the cylinders through the nozzles *n*, into any vessel below them. The valve rod F, is operated by the lever L, so that when the lever is up, all the valves *c* will be closed, and when it is down, they will all be open.

R marks a rock shaft placed in proper bearings in the frame as shown, and having arms *e* with rings *f* on their ends, fitting over upright pins *p*, and resting upon the upper ends of spiral springs S. Projecting from this shaft, are the holders *h*, which spring open to receive the necks of the bottles to be filled, and hold them under the nozzles *n*. They are held up by the operation of the springs S.

To admit of the free passage of air into and out of the cylinders C, vent tubes *v*, are used, which pass up nearly to the top of the tank B. The cross rod D, rises and falls in the guides G, attached to the upper part of the tank.

The operation of the machine is as follows: The tank being filled with the liquid to be bottled, and the lever L, being raised to the position shown in Fig. 2, the valve V, is open, and the valve *c*, closed. Hence the liquid flows from the reservoir B into the cylinder C, its contained air escaping through the vent tube *v*. The vessels to be filled are now applied to the nozzles *n*, where they are held by the holders *h*, and the lever L, is depressed till it occupies the position shown in Fig. 3. When in this position, the valves V, are closed, and the entrance of liquid into the cylinders from the reservoir B, is prevented, while the lower valves *c*, are simultaneously opened, and the contents of the cylinders discharged into the vessels placed to receive it, the vent tubes *v*, supplying the air which replaces the liquid in the cylinders. This operation can be performed as rapidly as the vessels can be placed and removed, and each vessel will invariably receive the exact amount required, without waste, or soiling of the vessels, or the hands of the operators, or the premises in which the operation is carried on.

With sticky or corrosive liquids, or those that create a stain, or are otherwise objectionable or dangerous to handle, this machine will be found particularly desirable, while in all cases where bottling is done on a large scale it will secure a great economy of time and labor.

Having thus fully described my invention, what I claim and desire to secure by Letters Patent, is—

A machine for filling bottles and other vessels, constructed and operating substantially in the manner described, whereby any required number of vessels may simultaneously receive a measured quantity of liquid from a reservoir, with rapidity, precision and safety, as set forth.

The above specification, signed and witnessed this ninth day of August, A. D. 1860.

CHARLES A. GREGORY.

Witnesses:
Jos. B. Stewart,
Chas. F. Stansbury.