No. 627,158. Patented June 20, 1899.

J. TURNBULL.

BOTTLING RACK.

(Application filed Nov. 13, 1897.)

(No Model.)

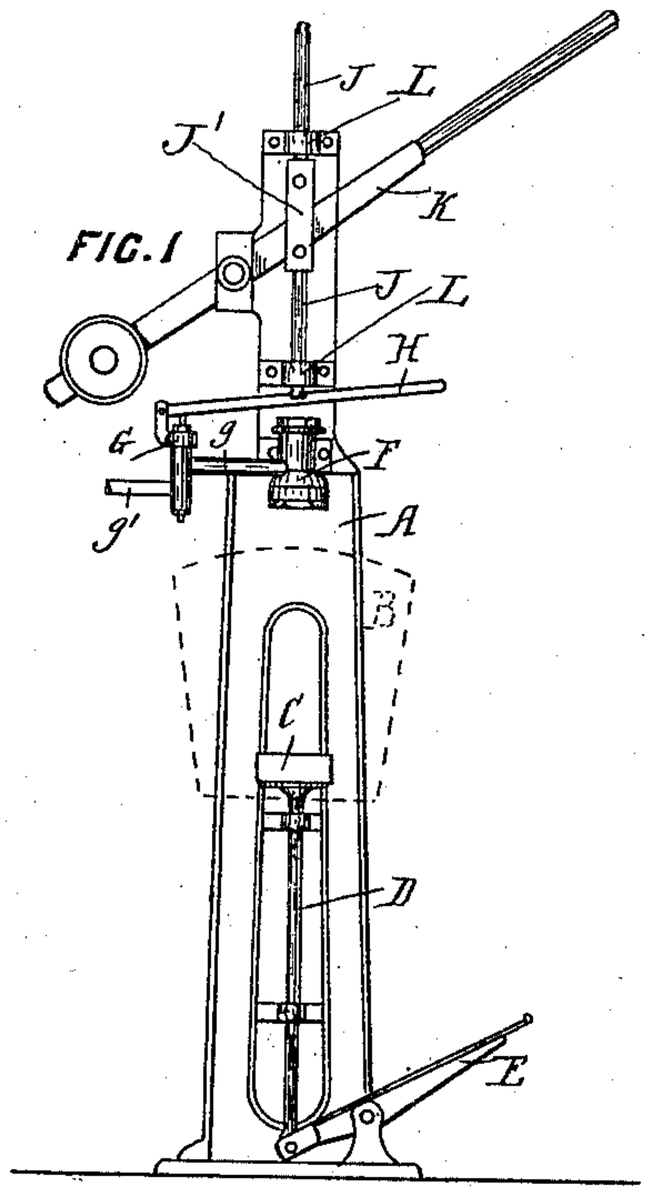

FIG. 1

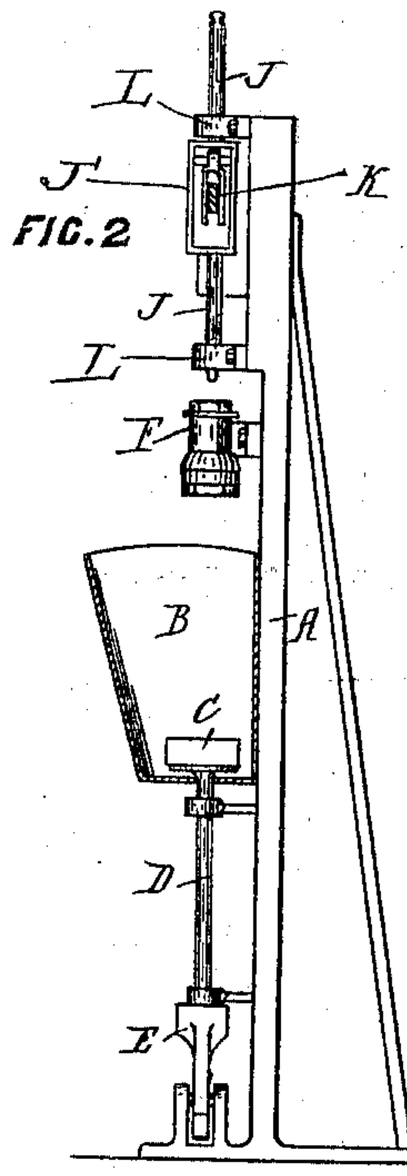

FIG. 2

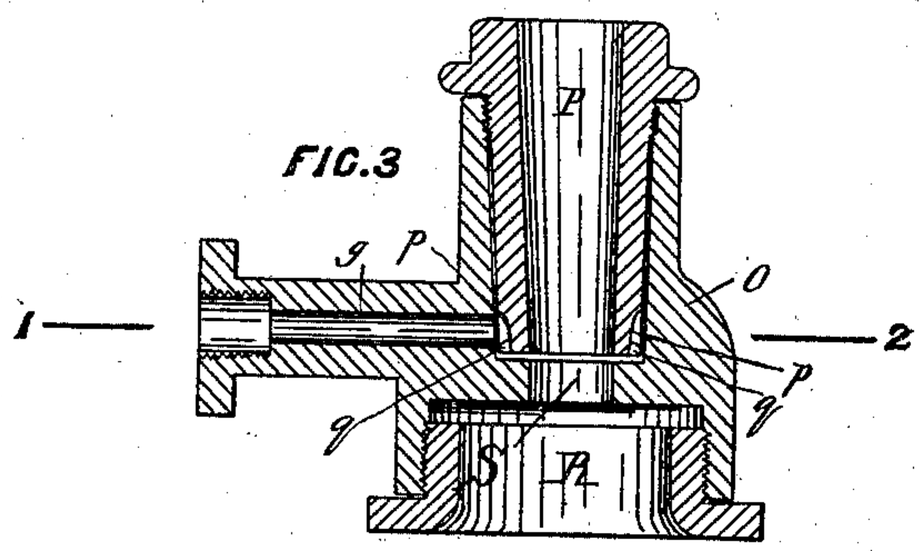

FIG. 3

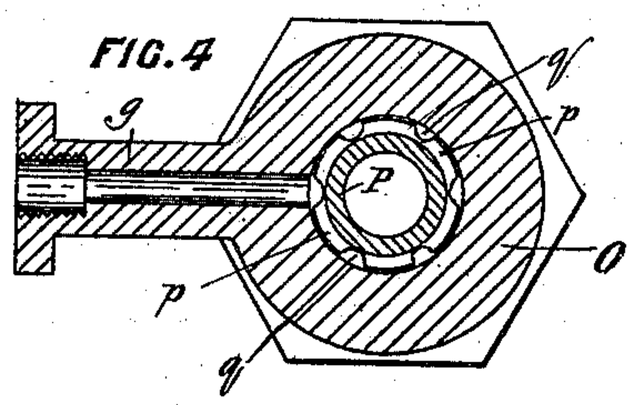

FIG. 4

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UNITED STATES PATENT OFFICE.

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BOTTLING-RACK.

SPECIFICATION forming part of Letters Patent No. 627,158, dated June 20, 1899.

Application filed November 13, 1897. Serial No. 658,402. (No model.)

To all whom it may concern:

Be it known that I, JOHN TURNBULL, of Sydney, in the county of Cumberland and Colony of New South Wales, have invented a new Bottling-Rack; and I do hereby declare the following to be a full, clear, and exact description of the same.

The bottling-rack that forms the subject of the present invention in almost all its parts is constructed similarly to many of those generally in use; but it contains two features of novelty whereby the process of bottling beers and other frothing or fobbing liquids is rendered much more effective.

In the accompanying drawings, Figure 1 is a front elevation of the entire apparatus, the bucket being removed. Fig. 2 is a side elevation of the same, the bucket being in section. Fig. 3 is a detail, on an enlarged scale and in vertical section, of the bottling-neck. Fig. 4 is a sectional plan of the same, taken on the line 1 2 of Fig. 3.

A is the standard or frame, B the bucket, and C the bottle-stand, which is raised by means of the rod D and treadle E. The bottling-neck is shown at F. The liquid enters the neck F through the pipe *g*, the supply of liquid being controlled by the valve G, which is an ordinary conical valve kept on its seat by means of a spring.

g' is the pipe leading from the carbonating-chamber or other source of liquid-supply.

The valve G is controlled by means of the lever H, which is manipulated by the operator.

J is the corking-plunger, and is so constructed that by reversing its ends it may be used for corking either pint or quart bottles.

Upon reference to Figs. 1 and 2 it will be seen that the plungers proper are secured at the opposite ends of a frame J', the plungers J working in ways or guides L, secured upon the head of the machine in line with the cork-receiving socket below. A weighted lever K, fulcrumed at one side of the frame, extends through the frame J', and by manipulating it the plunger may be raised or lowered. By simply reversing the position of the frame J' and the plunger J either the small or large plunger may be employed, as desired, according to the size of bottle being used at the time.

The bottling-neck, Figs. 3 and 4, is constructed in three parts. The main casting O is tapped to receive the cork-socket P, which is internally made to taper, so that the cork shall be gradually compressed as it is forced down by the plunger J. The external lower end of the cork-socket P and at a point opposite the center of the pipe *g* (through which the liquid enters the neck) is provided with an annular groove *p*, which entirely encircles it. At right angles to the annular groove *p* are vertical leads or ways *q*, down which the liquid that enters through the pipe *g* can descend. As will be seen upon reference to Fig. 3, the leads or ways *q* do not open directly into the discharge-orifice S, but upon the upper face of a shoulder directly below the lower end of the cork-receiving socket P. By thus making and arranging the parts the liquid is forced to flow down around the wall of the opening S and will run down the inner face of the bottle-neck instead of passing therein in a stream or a series of jets. The underneath of the main casting O is tapped to receive a socket R for the mouth of the bottle. The cork-plunger J having been turned so that it shall be suited to the size of bottle to be corked the operation of bottling will proceed as follows: A bottle is placed upon the bottle-stand C, which is then raised by depressing the treadle E until the mouth of the bottle is home in the socket R. The operator then depresses the lever H, thereby opening the valve G and admitting the liquid to the neck through the pipe *g*. The liquid will then fill the annular groove *p* and pour down the vertical ways *g* and along the inner surface of the neck of the bottle, thus avoiding frothing and what is technically known as "fobbing" until the bottle is full of liquid without froth or fob. The operator then releases the lever H and temporarily eases the pressure of his foot on the treadle E, thereby causing a snift of the gas. He then depresses the corking-lever K, and the plunger J will force the cork (which has been previously placed in the cork-socket P) into the neck of the bottle and the operation will be complete, and the bottle may be removed.

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

1. In a bottling-neck the combination of a

main frame or casting provided with a lateral inlet; a cork-socket mounted in the upper end thereof and having an annular channel formed around its lower end in line with the inlet; a series of vertical leads or ways extending up from the lower end of the socket and opening directly into the channel; a shoulder extending in beneath said leads or ways; and a bottle-receiving socket-piece mounted in the lower portion of the casting, substantially as described.

2. In a bottling-neck the combination of a main frame or casting; a cork-socket mounted therein; an inlet discharging around the lower end of the socket; an outlet beneath said socket, said outlet being of a diameter less than the external diameter of the lower end of the socket; and a series of vertical leads or ways formed in the socket and discharging around the outlet.

3. In combination with the head of a corking-machine; a reciprocating frame mounted thereon; plungers of different size carried at opposite ends of the frame; means for guiding said frame and permitting a reversal thereof, substantially as described; and means for operating the frame.

4. In combination with the head of a corking-machine; a reciprocating frame; plungers of different size carried at the opposite ends of the frame; guides secured to the head substantially as described through which the plungers work; and means for raising and lowering the frame.

5. In combination with the head of a corking-machine; a reciprocating frame J'; plungers of different size carried at the opposite ends of the frame; guides L removably secured to the head and through which the plungers pass; and a weighted lever K fulcrumed at one side of the head and passing through the frame J' substantially as described.

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

JOHN TURNBULL.

Witnesses:

MANFIELD NEWTON,

JAS. T. HUNTER.