

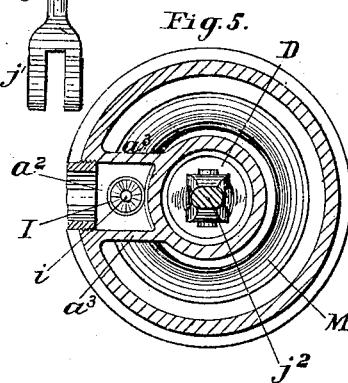
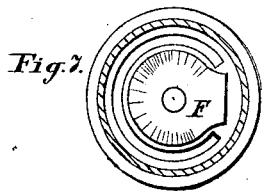
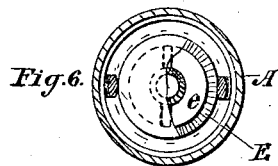
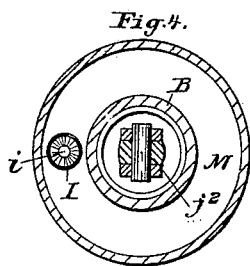
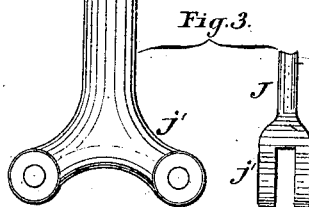
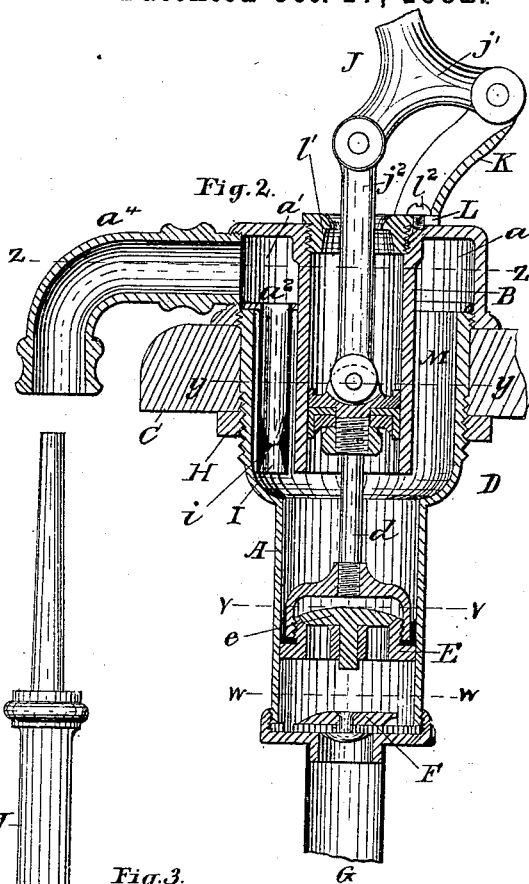
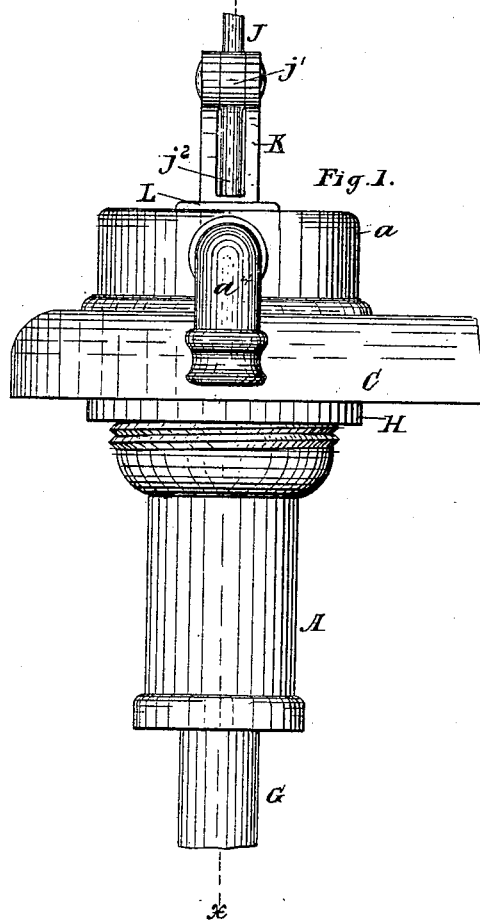
(No Model.)

J. P. ELLACOTT.

PUMP.

No. 266,117.

Patented Oct. 17, 1882.



Witnesses

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PUMP.

SPECIFICATION forming part of Letters Patent No. 266,117, dated October 17, 1882.

Application filed June 25, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH P. ELLACOTT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Pumps, set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a front view of the pump.
10 Fig. 2 represents a vertical section taken on the line *x x*, Fig. 1. Fig. 3 represents the pump-handle and an end view of one of its arms. Fig. 4 represents a plan section taken on the line *y y*, Fig. 2. Fig. 5 represents a plan section taken on the line *z z*, Fig. 2. Fig. 6 represents a plan section taken on the line *v v*, Fig. 2, and
15 Fig. 7 represents a plan section taken on the line *w w*, Fig. 2.

My invention relates more particularly to
20 pumps used with stationary wash-bowls in railway-cars, but may be used in other pumps also.

The invention consists in a pump provided with a discharge-passage which is contracted at a point below its highest part; and it further consists in means for adjusting the spout
25 and handle independently or together.

The same letters refer to the same parts in all the figures.

In the drawings, A is the pump-stock of a
30 pump embodying my improvements. B is a secondary cylinder, which depends from and is cast solid with the laterally-adjustable screw-threaded pump-top *a*, which forms a support for the pump by resting on the marble slab C or other support. In this cylinder B works the
35 piston D, forcing water alternately with, but rising and falling simultaneously with, the ordinary lifting-piston, E, to which it is connected by a connecting-rod, *d*, both pistons being rigidly secured thereto. This piston E is provided with an ordinary valve, *e*, and below it,
40 at the bottom of the pump, is a flap-valve, F, of ordinary construction, which opens and closes the suction-pipe G. The tapped sleeve or collar H, screwed around the body of the pump
45 below the support C, acts on the principle of and forms a set-nut to secure the pump firmly to the support C, without regard to the angle at which the pump-top *a* is left. The pump-
50 top *a* has cast with it a six-sided chamber, *a'*,

formed by the side and top of the pump-top *a*, the side of the cylinder B, the shelf *a*², projecting from said cylinder B to the outer wall of pump-top *a*, and two upright plates, *a*³ *a*³, the side of the chamber *a'* formed by the side of
55 the pump-top having an opening which is tapped for the insertion of spout *a*⁴. The shelf *a*² is bored vertically for the insertion of pipe I, which has a contracted part, *i*, at some distance from its top. 60

J is the pump-handle, with arms *j' j'*, one of which is jointed to the connecting-rod *j*², which drives the pistons, and the other of which is pivoted at the top of the standard K, cast on the laterally-adjustable secondary pump-top L, 65 which top L has an opening, in which plays the connecting-rod *j*², a screw-threaded annular flange, *l'*, by which said top L is secured to the rest of the pump, and a set-screw, *l*², on a part of top L projecting beyond said flange *l'*. The
70 working capacity of the secondary cylinder and its piston is preferably about half that of the main cylinder and piston.

It will readily be seen that when the pump-top *a*, with pipe I secured to it, is screwed on, 75 an air-chamber, M, is formed between cylinder B and the sides of the pump.

The operation of the pump is as follows: On the upward stroke of the pistons water is sucked up through valve F, and part of that
80 above the valve *e* is discharged through pipe I, a part follows piston D up cylinder B, and the remainder enters the air-chamber M, compressing the air therein. On the downward stroke the valve F is closed and the cylinder B dis-
85 charges its contents partly through pipe I and partly into the air-chamber M. At the ends and beginnings of strokes the air in the air-chamber M, by its pressure, tends to equalize the flow through pipe I, and by its elasticity tends
90 to prevent pounding. The pipe I is contracted in order to impede the discharge of water, and thus secure a more effective pressure from the air-chamber at the beginnings and ends of strokes. By making the contracted part *i* in
95 pipe I at some distance below the outlet of pipe I there is always a quantity of water above the contracted part *i*. The small stream which passes through the contracted part *i* into the laterally greater body of water above comes out 100

into the chamber *a'* a broader and slower stream. The object of retarding the speed of the discharge is to prevent splashing, and the advantage of this method of so doing is that
5 the friction which slackens the speed of the water increases its volume.

The spout *a'*, being secured to the top *a*, may be adjusted to different angles by slightly screwing up or unscrewing the top *a*. The
10 handle *J* is adjustable similarly by turning the top *L*.

Obviously some parts of the above-described apparatuses may be changed in details of construction without departing from the main features of my invention, by means of which the
15 operations above described are secured. I do not wish to be understood, therefore, as limiting my invention to the apparatuses in all their details as herein shown and described.

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

1. In a pump, the pipe *I*, with contracted part *i*, a valve, *F*, piston *E*, carrying a valve, *e*,
25 air-chamber *M*, and cylinder *B*, with piston *D*, all combined and operating substantially as set forth.

2. In a pump, an adjustable top to which a

spout is attached, in combination with a secondary top, which supports the handle and is
30 adjustable independently of the former, whereby the lateral adjustment of the spout and handle may be effected independent of each other, substantially as described.

3. The pump-stock *A*, in combination with
35 the top *a*, secured to the upper end of the former by a screw-thread, so as to be adjustable thereon, the spout attached to said top, the top *L*, secured to the top *a* by a screw-thread, so as
40 to be adjustable on said top, and the handle *J*, connected to and supported by the top *L*, substantially as and for the purposes set forth.

4. The pump-stock *A*, in combination with
45 the top *a*, secured to the upper end of the former by a screw-thread, so as to be adjustable thereon, the spout attached to said top, the top
50 *L*, secured to the top *a* by a screw-thread, so as to be adjustable on said top, the handle *J*, connected to and supported by the top *L*, and the set-screw *l'*, substantially as and for the purposes set forth.

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