(No Model.)

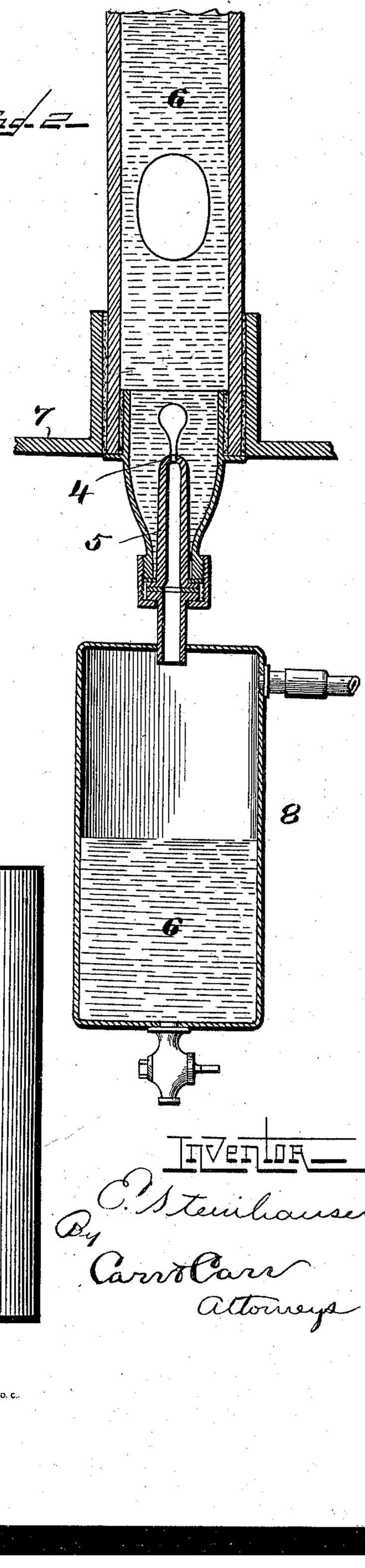
E. STEINHAUSER.

ADVERTISING DEVICE.

No. 598,396. Patented Feb. 1, 1898.

Fig. 1.

Fig. 2.



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ELLIOTT STEINHAUSER, OF ST. LOUIS, MISSOURI.

ADVERTISING DEVICE.

SPECIFICATION forming part of Letters Patent No. 598,396, dated February 1, 1898.

Application filed March 29, 1897. Serial No. 629,769. (No model.)

To all whom it may concern:

Be it known that I, ELLIOTT STEINHAUSER, a citizen of the United States, residing in the city of St. Louis and State of Missouri, have invented a new and useful Advertising Device, of which the following is a specification.

My invention relates to advertising devices, and has for its object to produce a curious phenomenon capable of being exhibited with an attractive effect.

To this end it consists in the device and in the arrangement and combination of parts hereinafter described and claimed.

It also consists in the use of a viscous liquid arranged in a transparent tube in connection with means for forcing bubbles through the same.

In the accompanying drawings, which form part of this specification, Figure 1 is an elevation of a construction embodying my invention, and Fig. 2 is a vertical section of the lower portion of the tube and of the trap attached thereto.

Like symbols refer to like parts in both views.

The principal mechanical elements of my device are a vertical glass tube 1, terminating at the top in an open bowl 2, and a pressure-tank 3, connected to the lower end of said tube. The lower end of the tube is closed air-tight in any suitable manner except for a pin-hole 4, which constitutes a part of the channel connecting the tank with the glass tube. This pin-hole may be a small orifice in a nipple or nozzle 5, extending centrally upward from the bottom and constituting part of the means for closing said bottom. The glass tube is filled with a liquid 6. This stationary column of liquid should be mobile enough to allow a bubble of air to pass through it, but viscous enough to prevent too rapid a rise. The proper consistency admits of some variation, but a consistency slightly more sluggish than castor-oil gives the best results, and that consistency is the standard of what is meant in the claims by "suitably viscous," but I do not wish to be limited thereby to that exact consistency.

The operation is as follows: Air is pumped into the tank until the desired pressure is reached. From the tank the air passes through the intermediate channel and issues under pressure out of the pin-hole at the bottom of the glass tube. In the case of a mobile liquid like water or ether the air would rise rapidly in a nearly-continuous stream of very small bubbles without any advantageous appearance; but with a viscous liquid a considerable quantity of air issues from the pin-hole before it separates from the nozzle. The result is a series of large bubbles separated a considerable distance. On account of the sluggishness of the liquid these bubbles move upwardly at a comparatively slow rate, which can be controlled by changing the consistency of the liquid. Castor-oil is a suitable liquid for two-inch tubes, but a slower movement and better appearance are produced by a mixture in equal parts of glycerin and a solution of glucose. Any suitable antiseptic may be used to keep the liquid sweet.

In practical use as an advertising device I prefer to screen the contents of the top basin by ornamenting the bowl or covering it with a translucent or opaque globe. The air-tank and connected apparatus and pipes are also hidden, and only the glass tube is visible, the nozzle therein being concealed by the nipple by which the tube is fastened to its support. Behind this tube mirrors and colored lights may be arranged as desired, and divers interesting and attractive effects may be produced.

When the pressure in the air-tank is exhausted, more or less of the liquid will run down through the pin-hole in the bottom of the tube. Such leakage might be prevented by a valve inserted in or close to the nipple; but instead of such arrangement I prefer to permit the leakage and prevent it from interfering with the next operation. For this purpose the pipes leading from the air-tank and from the tube are both connected to the upper portion of a chamber 8, which thus constitutes a trap for the liquid. A cock 9 is provided at the bottom of this trap for drawing off the liquid therein.

Obviously my device admits of variation, without departing from my invention, not only with reference to the liquid, but also with reference to the shape and direction of the tube, and the arrangement of mirrors and lights for producing divers effects.

What I claim is—

1. An advertising device comprising a trans-

parent tube open at the top, a stationary column of suitably viscous liquid therein for controlling the size and velocity of the air-bubble, and means for forcing air into the bottom of said tube, substantially as and for the purpose set forth.

2. An advertising device comprising a vertical transparent tube open at the top and closed at the bottom but having a small hole therein, a stationary column of suitably viscous transparent or translucent liquid therein for controlling the size and velocity of the air-bubble and an air-tank communicating with said tube through said hole, substantially as and for the purpose set forth.

3. An advertising device comprising a vertical transparent tube closed at the bottom and adapted to produce visual effects, an upwardly-projecting nozzle in said bottom having a small hole, a pressure-tank, a pipe connecting said tank with said nozzle, and a trap in said pipe provided with a draw-off cock, substantially as and for the purpose set forth.

4. An advertising device comprising a vertical transparent tube open at the top and closed at the bottom, an upwardly-projecting nozzle in said bottom having a small hole, a pressure-tank, a pipe connecting said tank with said nozzle, and a trap in said pipe provided with a draw-off cock, said tube being filled with a stationary column of suitably viscous liquid for controlling the size and velocity of the air-bubble, substantially as and for the purpose set forth.

5. An advertising device comprising a vertical glass tube, a stationary column of liquid therein composed of a mixture of glycerin and a solution of glucose for controlling the size and velocity of the air-bubble, and means for forcing air into the bottom of said tube, substantially as and for the purpose set forth.

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