

No. 710,814.

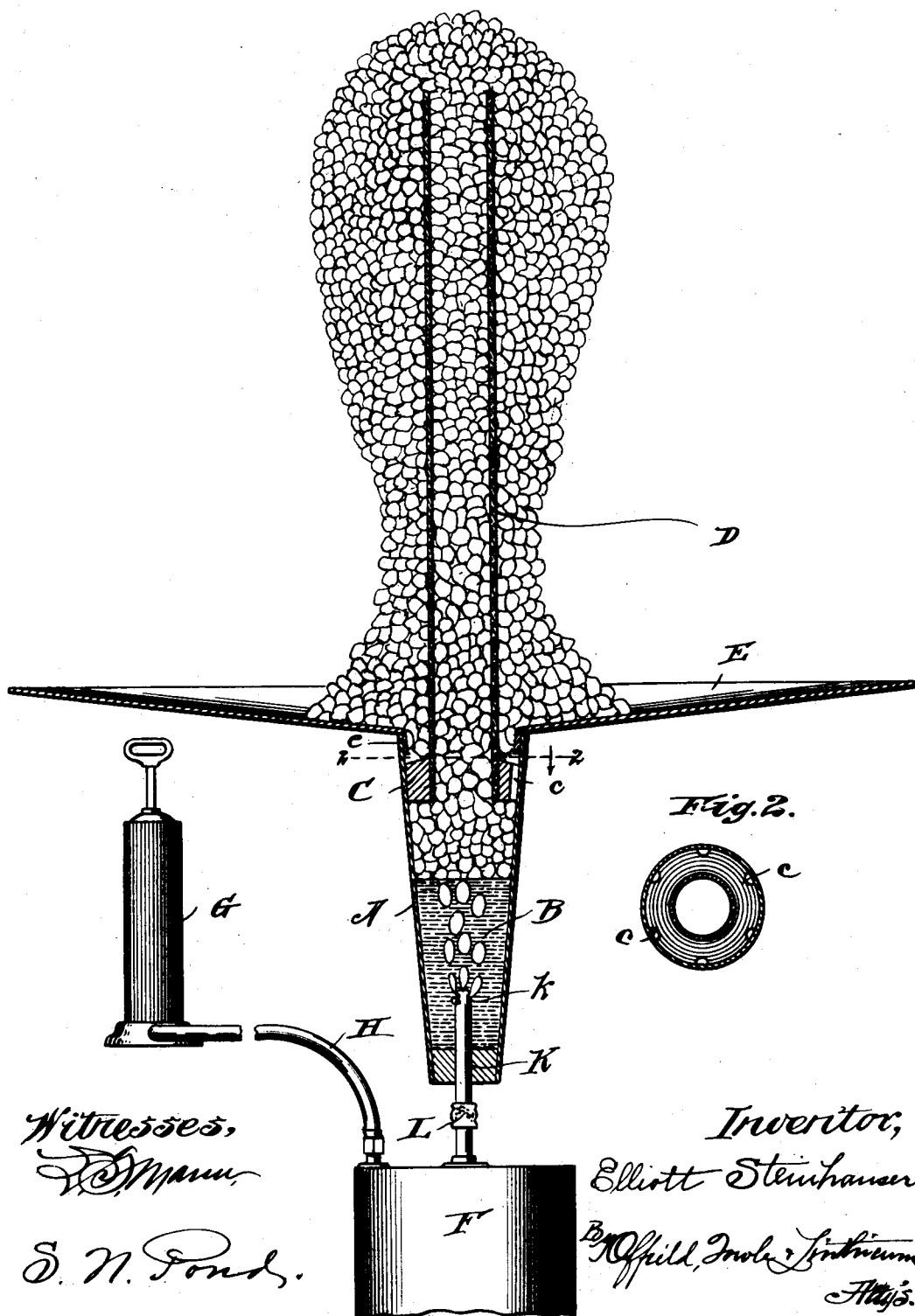
Patented Oct. 7, 1902.

E. STEINHAUSER.
ADVERTISING DEVICE.

(Application filed Feb. 24, 1902.)

(No Model.)

Fig. 1.



Witnesses,
J. H. Mann,
S. H. Pond.

Inventor,
Elliott Steinhauser
By J. H. Offield, Insole & Printmaking
Atty's.

UNITED STATES PATENT OFFICE.

ELLIOTT STEINHAUSER, OF WATSONVILLE, CALIFORNIA, ASSIGNOR TO
ARMOUR & COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF
ILLINOIS.

ADVERTISING DEVICE.

SPECIFICATION forming part of Letters Patent No. 710,814, dated October 7, 1902.

Application filed February 24, 1902. Serial No. 95,359. (No model.)

To all whom it may concern:

Be it known that I, ELLIOTT STEINHAUSER, a citizen of the United States, residing at Watsonville, in the county of Santa Cruz and State of California, 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 which may be exhibited at the counters and in the display-windows of stores and other places with an attractive effect.

To this end my invention consists, generally stated, in a novel device for creating a saponaceous foam or froth in a generally pillar-like form which is capable of being maintained with gradual variations and evolutions in its outline or external contour so long as the operation of the device is kept up and which produces a pleasing and artistic effect to the eye of the observer, whose interest in and wonder at the same may be stimulated by a partial concealment of the cause of the phenomenon.

In the accompanying drawings, Figure 1 is a central vertical section through a preferred form of apparatus in which my invention may be embodied; and Fig. 2 is a transverse plan sectional view of the device, taken on the line 2 2 of Fig. 1 looking in the direction of the arrow.

Referring to the drawings in detail, A designates a vessel which is preferably made in the flaring or generally V-shape form herein illustrated and is adapted to contain a body of soap solution, (designated by B.) The upper end of the vessel A is closed by a readily-removable plug or stopper C, which latter is centrally apertured to receive and seat the lower end of a vertically-disposed tube D, which to produce the best effect should be of glass or other transparent material and which may rise above the vessel A to any desired height, according to the air-pressure employed in the device, a height of from two to four feet being preferred for practical purposes. The plug C is further provided with a series of small apertures formed there-through, preferably disposed at uniform intervals around the peripheral margin thereof,

as indicated at c in Fig. 2, the purpose of which will hereinafter appear. Secured in and to the top of the vessel A is a wide shallow pan or tray E, which is preferably of circular form and engages the vessel A by means of a downwardly-turned flange e, surrounding an opening formed centrally through the pan and removably fitting inside the upper end of the soap-holder A.

At F is indicated a tank or reservoir adapted to be supplied with compressed air by any suitable means—as, for instance, the pump G and hose H, connected therewith. This air-tank is preferably disposed directly beneath the soap-receptacle and has a tube K extending centrally through the base of the soap-receptacle and terminating in a discharge-nozzle k, which is provided with one or more fine apertures for the escape of the compressed air therethrough. It will be observed that the upper end of the pipe K extends a slight distance into the body of saponaceous liquid and is provided at any suitable point therein, preferably between the tank and the base of the receptacle, with a check-valve L, designed to prevent backflow of the liquid in the receptacle to the air-tank when the device is not in operation.

The operation will be readily understood from the illustration and the foregoing description, but may be briefly described, as follows: The tank or holder A having been filled with a body of saponaceous liquid and the several parts of the device having been assembled substantially as shown, the tank F is charged with compressed air from the pump G or any other suitable source, which compressed air tends to escape through the discharge-pipe K, issuing through the nozzle k in the form of one or more fine jets or sprays, these latter rising through the body of liquid, forming therein and thereabove a multitudinous series of bubbles, which under the impelling action of the constantly-rising air-current are continually added to from the soapy liquid and gradually rise through the tube D, overflowing the top thereof in clusters of varying sizes and forms and slowly descending over and around the outside of said tube and coming to rest in the receiving-pan E. By vir-

tue of the natural tendency of the bubbles to eling and cluster together a body of considerable size is soon formed, which completely envelops the tube D and usually assumes the
 5 generally inverted-pear shape herein illustrated. The particular form and dimensions of this frothy body will depend somewhat on the temperature and degree of moisture of the surrounding air, these latter principally
 10 determining the rate at which evaporation takes place; but one of the most attractive features of the device resides in the gradual overflow and downfall of the clusters of bubbles and the continually varying and changing
 15 form of the pillar created thereby. As the bubbles descend into the pan E and burst they are constantly replaced by new bubbles generated in the soap-holder and continually rising and overflowing through the tube D,
 20 so that so long as the air-pressure is maintained substantially constant the volume of the frothy body enveloping the tube D will remain substantially constant, though constantly changing its form. The soapy matter
 25 withdrawn from the liquid B and carried upward in the form of bubbles and froth by the operation described is upon the bursting of the bubbles and the escape of the air contained therein to the atmosphere returned by
 30 gravity through the central opening of the pan E and the peripheral openings c of the stopper C, trickling down the inner walls of the vessel A and rejoining the liquid therein to be used over again in the same manner.
 35 Hence it will be seen that the operation of the device can be maintained almost indefinitely with a given volume of saponaceous liquid so long as the air-pressure is maintained.

By increasing the air-pressure a more rapid
 40 circulation of the bubbles will be set up and the volume of the same surrounding the tube D will be generally increased, although this latter feature depends more upon the atmospheric conditions surrounding the device
 45 and the quality and density of the soapy liquid employed than the particular air-pressure employed.

The device when in full operation under favorable atmospheric conditions presents a
 50 very beautiful and pleasing effect to the eye of an observer, which effect is enhanced by making the visible portions of the apparatus of glass, it being understood that the soap-receptacle, the air-tank, and the air-compressor
 55 will usually and preferably be suitably concealed from view, thus lending a partial air of mystery as to the source and cause of the phenomenon.

I do not limit myself to the particular forms or relative proportions and arrangement of
 60 the elements of the device as herein shown and described, since it is obvious that the same might be considerably varied without departing from the spirit of my invention. For instance, a plurality of upstanding tubes
 65 might be employed, if desired, as guides and supports for the pillar of foam in place of the single tube shown and described.

I claim—

1. An advertising device in the nature of
 70 a soap-bubble fountain, comprising a vessel adapted to contain a soap solution, a tube communicating with and rising from the upper end of said vessel, a pan surrounding the lower end of said tube and seated in and communicating with the top of said vessel, a pipe
 75 entering the vessel and terminating in a nozzle located below the normal level of the soap solution, and means for supplying a constant stream of compressed air through said pipe
 80 and nozzle, substantially as and for the purpose set forth.

2. An advertising device in the nature of a soap-bubble fountain, comprising a vessel adapted to contain a soap solution, a tube
 85 communicating with and rising from the upper end of said vessel, a pan surrounding the lower end of said tube and seated in and communicating with the top of said vessel, a pipe entering the base of the vessel and terminating
 90 in a nozzle located below the normal level of the soap solution, a compressed-air tank with which said pipe communicates, and an air-pump for supplying compressed air to said tank, substantially as and for the purpose set
 95 forth.

3. An advertising device in the nature of a soap-bubble fountain, comprising a vessel adapted to contain a soap solution, a centrally and peripherally apertured plug or
 100 stopper seated in the upper portion of said vessel, a tube seated in and rising from the central aperture of said plug and communicating with said vessel, a pan surrounding said tube at its base and seated in and communicating with the upper end of said vessel
 105 above said plug, a pipe entering the base of the vessel and terminating in a nozzle normally submerged in the solution, and means for supplying a constant stream of compressed air through said pipe and nozzle, substantially as and for the purpose set forth.
 110

ELLIOTT STEINHAUSER.

Witnesses:

SAMUEL N. POND,
 FREDERICK C. GOODWIN.