

(No Model.)

H. KUPFER.
Aerator.

No. 232,980.

Patented Oct. 5, 1880.

Fig. 1.

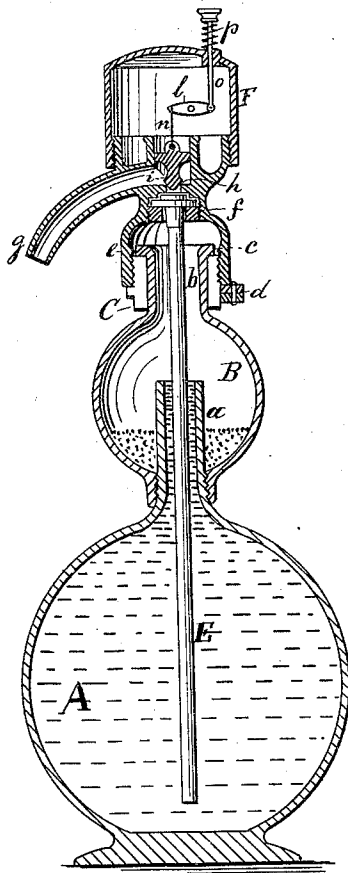


Fig. 2.

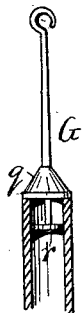
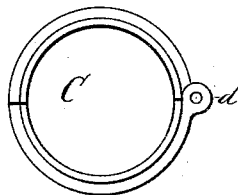


Fig. 3.



Witnesses:
F. B. Townsend
T. W. Kasehagen.

Inventor:
Heinrich Kupfer
per Lotz & Dyer

Attorneys.

UNITED STATES PATENT OFFICE.

HEINRICH KUPFER, OF CHICAGO, ILLINOIS.

AERATOR.

SPECIFICATION forming part of Letters Patent No. 232,980, dated October 5, 1880.

Application filed August 7, 1880. (No model.)

To all whom it may concern:

Be it known that I, HEINRICH KUPFER, a resident of Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Aerators, of which the following is a specification.

The object I have in view is to produce a simple, cheap, and convenient apparatus for aerating liquids or liquid mixtures of various kinds intended for drinking purposes, which apparatus will require no particular skill to manipulate it, and can be made cheap enough for family use.

My invention consists in the peculiar construction of my aerator, as fully hereinafter explained.

In the accompanying drawings, forming a part hereof, Figure 1 is a central vertical section of the apparatus; Fig. 2, a separate view of the stopper for temporarily closing the mouth of the lower vessel, and Fig. 3 a separate top view of the screw-collar.

Like letters denote corresponding parts in all the figures.

The apparatus is composed of a lower vessel, A, and an upper vessel, B, the lower vessel having a neck, *a*, which extends upwardly through the bottom of the upper vessel and to about the center of the same.

The vessel B is supported upon the neck *a*, and is secured thereto by suitable means. Both vessels A and B are made preferably of glass, and since they are subjected to considerable pressure they are preferably covered by a jacket of woven wire, which is drawn tight to support the glass walls of the vessels.

The vessel B has a neck, *b*, somewhat larger than the neck *a* of the lower vessel, which neck *b* is enlarged or turned outwardly at its upper end to form a shoulder, *c*. Upon the neck *b*, below the shoulder *c*, is placed the screw-threaded metal collar C, which is made in two parts, secured together by a hinge, *d*.

D is the metallic fountain-head of the apparatus. It is composed of an inverted cup, *e*, which has an internal screw-thread engaging with the screw-thread of the collar C. Within the cup *e* is held, by a screw-ring, *f*, the glass tube E, which extends down to near the bottom of the lower vessel, A. The head D has an outlet-pipe, *g*, and an opening, *h*, at the inner

end of the outlet, which connects the glass tube with such outlet and forms a seat for the valve *i*. The valve *i* fits water-tight in a short cylindrical way, *k*, formed in the head D, and has its lower end reduced in size to fit the opening *h*.

The head D is covered by a cap, F, screwed thereon. This cap contains a lever, *l*, pivoted on a cross-pin, *m*, and connected at one end by a wire, *n*, with the valve *i*. The other end of the lever *l* is connected with a rod, *o*, which passes up through the cap F, and has a spring, *p*, under its head. The spring *p* keeps the valve *i* to its seat against the pressure within the apparatus, while by pressing down on the rod *o* such valve can be raised and the liquid allowed to flow out of the outlet *g*.

G, Fig. 2, is a stopper for closing the neck *a* of the lower vessel while the aerating-powder is being introduced into the upper vessel. This stopper is a wire, having a stopper, *q*, near its lower end in the shape of a cone, and at its lower end a rubber washer, *r*, to guide the stopper and keep the wire stem upright.

Before the fountain-head is attached to the apparatus the liquid is introduced into the lower vessel, A, by means of a funnel having a sufficiently long neck, until such vessel is filled. This liquid may be water or wine, or a mixture of water and the juice of fruits or berries, according to the drink it is desired to produce. The stopper G is then inserted and the mouth of the vessel A closed. If any liquid has flowed over into the vessel B, the apparatus should be tipped up and that vessel emptied. By means of a short-neck funnel the aerating-powder is introduced into the vessel B. This powder is composed of bicarbonate of soda and tartaric acid, or their equivalent. The glass tube is then inserted in the apparatus and the fountain-head screwed to the collar C. Now by tipping the apparatus a little to one side some of the liquid flows out of the neck *a* into the vessel B. This dissolves the powder and forms a gas, which by shaking the apparatus becomes incorporated with the liquid.

Care should be taken that none of the undissolved powder gets into the vessel A.

The apparatus should be set in cold water until the mixture is reduced to the right tem-

perature, when it may be drawn off as desired by depressing the rod *o*.

What I claim as my invention is—

5 1. An aerator for the purpose set forth, composed of the lower vessel, A, having upwardly-projecting neck *a*, the upper vessel, B, secured over the neck *a*, so that said neck extends into said upper vessel above its bottom, the valved fountain-head D, secured to the upper vessel,
10 and the tube E, extending from such valved fountain-head down through the upper vessel and into the lower vessel to near the bottom of the same, substantially as described and shown.

15 2. In an aerator, the combination, with the

vessels A B and the fountain-head, of the screw-collar C, made in two parts hinged together, substantially as described and shown.

3. In an aerator, the combination, with the vessels A B and screw-collar C, of the fountain-head D, composed of cup *e*, outlet-pipe *g*, opening *h*, valve *i*, tubular way *k*, screw-cap F, lever *l*, and rod *o*, and the glass tube E, held in the head by screw-ring *f*, constructed and arranged substantially as described and
20 25 shown.

HEINRICH KUPFER.

Witnesses:

F. W. KASEHAGEN,

K. A. BAUMANN.