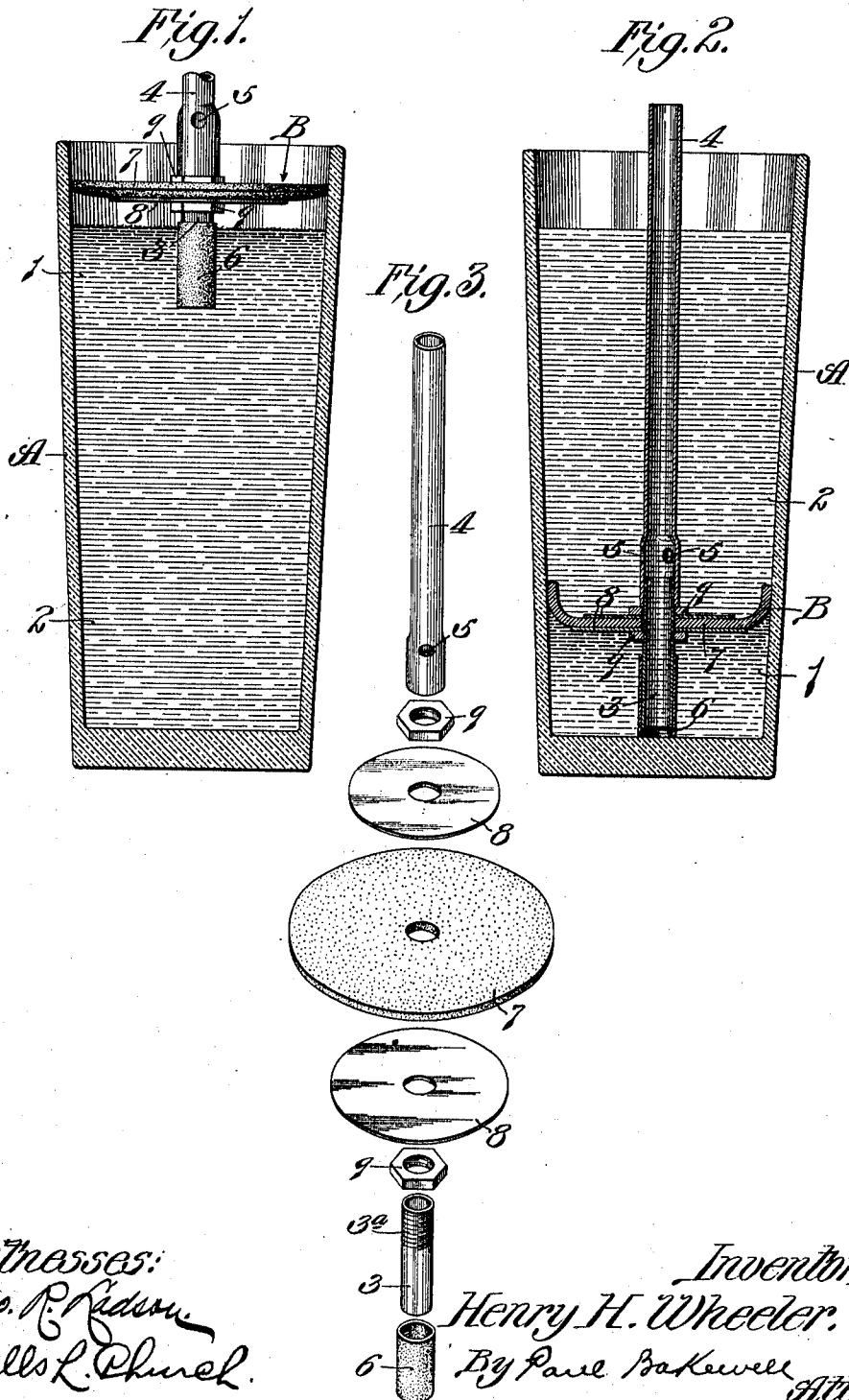


H. H. WHEELER.
 LIQUID SEPARATING DEVICE.
 APPLICATION FILED OCT. 31, 1910.

982,328.

Patented Jan. 24, 1911.



Witnesses:
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UNITED STATES PATENT OFFICE.

HENRY H. WHEELER, OF EAST ST. LOUIS, ILLINOIS.

LIQUID-SEPARATING DEVICE.

982,328.

Specification of Letters Patent.

Patented Jan. 24, 1911.

Application filed October 31, 1910. Serial No. 589,985.

To all whom it may concern:

Be it known that I, HENRY H. WHEELER, a citizen of the United States, residing at East St. Louis, Illinois, have invented a certain new and useful Improvement in Liquid-Separating Devices, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make use the same.

This invention relates to devices for separating liquids or for separating portions of a liquid which are of different specific gravity.

The object of the invention is to provide a device which is so constructed that two superimposed layers of liquid can be transposed without discharging the liquid from the receptacle in which it is contained.

Figure 1 of the drawings is a vertical sectional view showing my device arranged in a drinking glass preparatory to transposing the layers of liquid in the glass; Fig. 2 is a vertical sectional view showing the layers transposed; and Fig. 3 is a perspective view of the various parts of my device.

Referring to the drawings, A designates a glass or other suitable receptacle, and 1 and 2 designate two different layers of liquid contained in said glass, the layer 1 floating upon the layer 2.

My invention consists in a device for transposing the layers 1 and 2 or arranging the layer 1 under the layer 2 without discharging the liquid from the glass, and in the preferred form of my invention as herein shown, said device consists of a plunger or piston B that fits snugly inside of the glass, and a conduit 3 in said plunger that permits the liquid on the under side of the plunger to escape or pass to the upper side of the plunger when the plunger is forced downwardly in the receptacle A. A tubular-shaped handle 4 is detachably connected to the portion of the conduit 3 which projects above the top face of the plunger B as, for example, by means of internal screw-threads on the lower end of said handle which cooperate with external screw-threads 3^a on the upper portion of the conduit 3, and ports 5 are formed in said handle 4 adjacent the lower end thereof so as to permit the escape of the liquid which passes upwardly from the under side of the plunger B through the conduit 3. I prefer to provide the conduit

3 with a flexible extension 6 which bears against the bottom of the receptacle A when the plunger B reaches the limit of its downward movement so as to prevent the liquid on the under side of the plunger from escaping or passing upwardly through the conduit 3.

The plunger B may be formed in various ways but I prefer the construction herein shown because it produces a plunger which fits snugly in receptacles of different diameters and can also be used with a tapered receptacle such for example, as a drinking glass. Said plunger consists of a disk 7 of rubber or other suitable material, and a pair of disk-shaped plates 8 between which the rubber disk is clamped. The conduit 3 consists of a short piece of metal tubing which passes through openings in the rubber disk 7 and plates 8, and said plates and disks are securely clamped together and also locked to the conduit 3 by means of nuts 9 mounted on the screw-threaded portion 3^a of said conduit. The flexible extension 6 on the lower end of the conduit 3 preferably consists of a short piece of rubber tubing, and the handle 4, which is used to depress the plunger B or force it downwardly in the receptacle A, consists of a piece of metal tubing which is long enough to project above the level of the liquid in the receptacle when the plunger B is in its depressed position.

With a device of this character I can put the foam on the top of a glass of beer at the bottom of the glass without emptying the glass, the foam being represented by the top layer 1 in Fig. 1 and the beer by the bottom layer 2 in said figure. To accomplish this, I insert the plunger B in the glass, as shown in Fig. 1, preferably by canting the plunger slightly so that the air on the under side of same can escape, and then slowly forcing the plunger downwardly. As the plunger moves downwardly the beer or liquid which constitutes the bottom layer 2 will pass upwardly through the conduit 3 and escape through the ports 5 which are located above the plunger B. When the flexible extension 6 on the conduit 3 comes into contact with the bottom of the glass a tight joint will be formed and the upward flow of the liquid through the conduit 3 will thus be cut off, the tubular handle 4 being thereafter removed by screwing it off of the conduit 3. The plunger B

remains in the glass while the beer is being drunk and thus prevents the foam from escaping from the bottom of the glass.

While I have herein described the device as being used for transposing the contents of a glass of beer, namely, putting the foam in the bottom of the glass and under the beer, it will, of course, be understood that the device could be used for various other purposes, and while I prefer to construct the device in the manner herein shown I do not wish it to be understood that my invention is limited to such a construction as various changes could be made in the device without departing from the spirit of my invention.

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

1. A device for transposing superimposed layers of liquid, comprising a piston or plunger which is adapted to be inserted in the upper end of the receptacle that contains the liquid, and means for permitting the bottom layer of liquid in the receptacle to pass to the upper side of said plunger as the plunger is forced downwardly in the receptacle.

2. A device for transposing superimposed layers of liquid, comprising a plunger which fits snugly in the receptacle that contains the liquid, and a conduit passing through said plunger and depending from the under side thereof a distance approximately equal to the thickness of the top layer so as to permit the bottom layer of liquid to pass to the upper side of the plunger when the plunger is forced downwardly in the receptacle.

3. A device for transposing superimposed layers of liquid, comprising a plunger which fits snugly in the receptacle that contains the liquid, a conduit passing through said plunger and depending from the under side thereof a distance approximately equal to the thickness of the top layer so as to permit the bottom layer of liquid to pass to the upper side of the plunger when the plunger

is forced downwardly in the receptacle, and a removable operating device for depressing said plunger.

4. A device for separating superimposed layers of liquid, comprising a plunger which is adapted to be inserted in the upper end of the receptacle that contains the liquid, said plunger being so constructed that it fits snugly inside of said receptacle, a hollow member depending from the under side of said plunger and passing through the top layer so as to form a passageway through which the liquid in the bottom layer can pass upwardly when the plunger is depressed, and an operating device for said plunger arranged in alinement with said hollow member and provided with a port through which the liquid can escape from said hollow member.

5. A device for separating superimposed layers of liquid, comprising a piston or plunger which is adapted to be inserted in the upper end of the receptacle that contains the liquid, said plunger having a flexible edge, a conduit passing through said plunger and provided with a flexible lower end, and a tubular-shaped operating handle detachably connected to the upper end of said conduit and provided with a port.

6. A device for the purpose described, comprising a plunger composed of a flexible disk and plates between which said disk is clamped, a conduit passing through said plunger and depending from the under side of same, a tubular-shaped handle screwed onto the upper end of said conduit and provided with a port, and a flexible extension on the lower end of said conduit.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this twenty-seventh day of October 1910.

HENRY H. WHEELER.

Witnesses:

GEO. R. LADSON,
GEORGE BAKEWELL.