E. CORNELIS.

APPARATUS FOR THE MANUFACTURE OF MINERAL WATER.

No. 187,357. Patented Feb. 13, 1877.

Fig. 1.

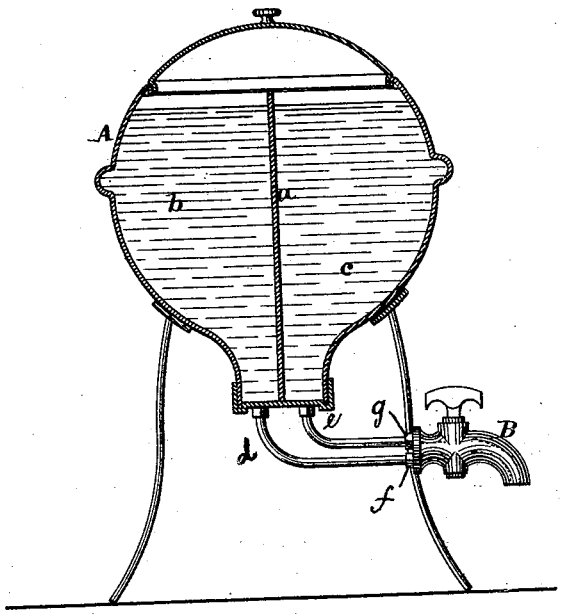
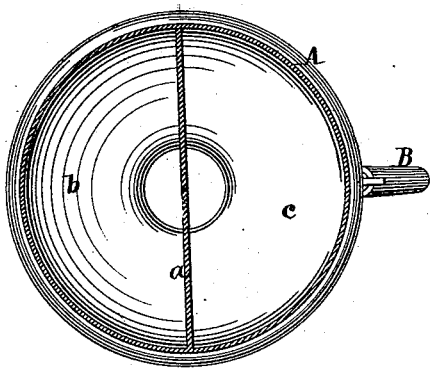


Fig. 2.



Witnesses.

Otto Hufeland

Robt. E. Miller

Inventor.

Edward Cornelis

by

Van Santvoord & Hauff

his attorneys.

UNITED STATES PATENT OFFICE.

EDWARD CORNELIS, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND JOHN M. ELLIOTT, OF SAME PLACE.

IMPROVEMENT IN APPARATUS FOR THE MANUFACTURE OF MINERAL WATER.

Specification forming part of Letters Patent No. **187,357**, dated February 13, 1877; application filed December 26, 1876.

To all whom it may concern:

Be it known that I, EDWARD CORNELIS, of the city, county, and State of New York, have invented a new and Improved Apparatus for the Manufacture of Mineral Waters, which invention is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a vertical section. Fig. 2 is a horizontal section.

Similar letters indicate corresponding parts.

This invention relates to that class of apparatus for the manufacture of mineral water in which a vessel is employed divided into two compartments of a vertical partition; and my invention consists in providing the bottom of such vessel with two pipes communicating with the two compartments on opposite sides of the vertical partition, said pipes extending downwardly and horizontally from the said bottom, and communicating with a two-way cock, as will be more fully hereinafter described.

In the drawing, the letter A designates a vessel, which is made of sheet metal, or any other suitable material, and which may be protected on its inside by a lining of tin, enamel, or other material which does not corrode by contact with the ingredients that are employed in the manufacture of mineral waters, or which may be made entirely of glass. This vessel is divided by a vertical partition, *a*, in two compartments, *b c*. *d* and *e* represent two pipes, connected with the bottom of the vessel A, and communicating with the compartments *b* and *c*, on opposite sides of the vertical partition-plate, said pipes projecting downwardly and horizontally from said bottom, and communicating at their ends with a single cock, B, having two ways, *f* and *g*.

By locating the pipes both on the outside of the vessel, it is evident that they may be more readily removed for cleansing, and can be more conveniently and effectually secured to the compartments than where one pipe passes through one chamber into the other and farther. As both pipes are wholly outside of the compartments, any corrosion or deposit will take place only on the interior of the pipes, whereas in the apparatus of this class, as heretofore constructed, one of the pipes is liable to corrosion on both the inside and outside, resulting in more rapid deterioration, and consequently lessening the durability of the apparatus.

In order to manufacture plain carbonic-acid water, I place into the compartment *b* a solution of bicarbonate of soda, and into the compartment *c* a solution of tartaric acid; or any other materials may be selected which, when brought in contact, will produce the desired effect.

In preparing these solutions care must be taken to make them of the proper strength, so as to avoid either an alkaline or an acid taste when they are mixed together. It will be readily seen that no carbonic acid is evolved as long as the two solutions are kept in separate compartments; but if the cock B is opened, and the solutions are permitted to discharge simultaneously into a tumbler, the evolution of carbonic acid takes place as soon as the two solutions mix in the tumbler. By these means all danger of an explosion is avoided, and the solutions can be readily so prepared that the evolution of carbonic acid takes place in the tumbler as fast as may be desirable.

My apparatus can be used with advantage for the production of all mineral waters which are to contain carbonic acid, and, if desired, more than two compartments may be provided for the reception of various solutions, the cock B being provided with a corresponding number of ways, so that the several solutions are not permitted to come in contact with each other until the cock is opened and the solutions are allowed to discharge into a tumbler or other vessel.

I do not claim, broadly, a vessel divided into two compartments by a vertical partition combined with a two-way cock, one way of which extends into one compartment, and the other and shorter way into the remaining compartment, as such is not new; but

What I claim as new, and desire to secure by Letters Patent, is—

The combination, with the vessel A, divided

into two compartments, *b c*, by a vertical partition, *a*, of the two pipes *d e*, attached to the bottom of the said vessel, and communicating with the vessel on opposite sides of the partition *a*, said pipes projecting downwardly, and horizontally attached to the ways *f g* of a two-way cock, B, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 11th day of December, 1876.

ED. CORNELIS. [L. S.]

Witnesses:

JOHN M. ELLIOTT,

E. F. KASTENHUBER.