

(No Model.)

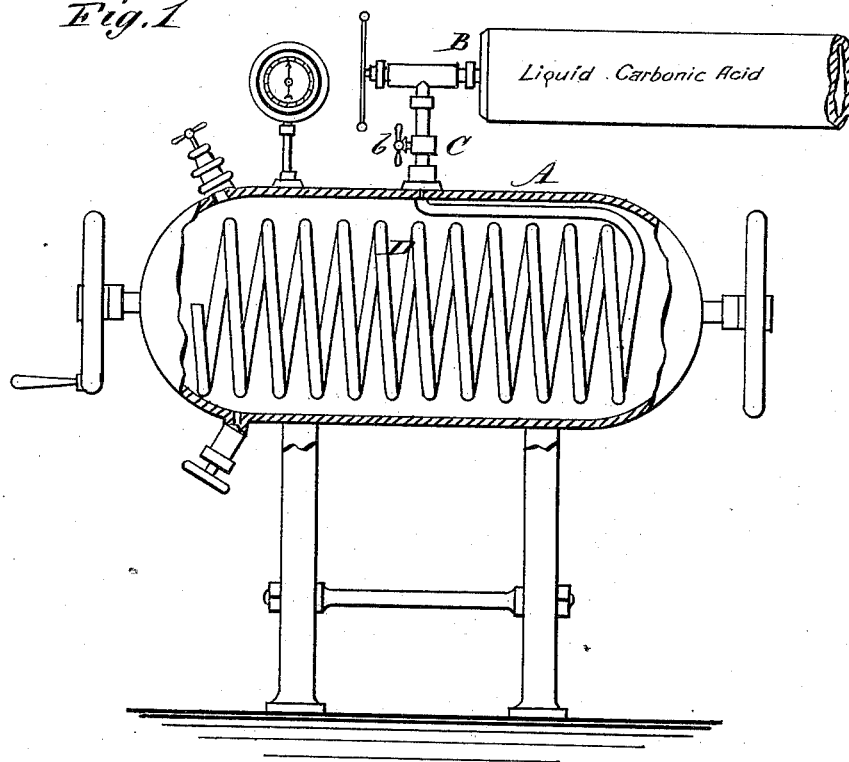
O. BRÜNLER.

APPARATUS FOR MANUFACTURING AERATED BEVERAGES.

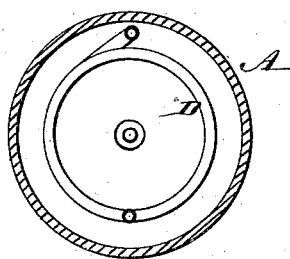
No. 344,562.

Patented June 29, 1886.

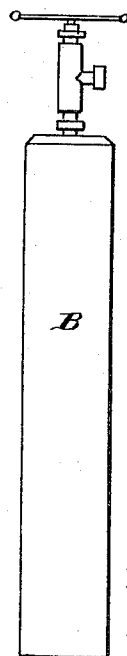
*Fig. 1*



*Fig. 2*



*Fig. 3*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

OSCAR BRÜNLER, OF NEW YORK, N. Y.

## APPARATUS FOR MANUFACTURING AERATED BEVERAGES.

SPECIFICATION forming part of Letters Patent No. 344,562, dated June 29, 1886.

Application filed March 11, 1886. Serial No. 194,914. (No model.)

*To all whom it may concern:*

Be it known that I, OSCAR BRÜNLER, of the city, county, and State of New York, have invented certain new and useful Improvements in Apparatus for Manufacturing Aerated Beverages, of which the following is a full, clear, and exact description.

This invention relates to apparatus for manufacturing soda, mineral, and other waters or liquids requiring to be aerated with or by carbonic-acid gas, and in which said gas is supplied to said liquids within the usual or any suitable receiver or mixer by or from a reservoir containing the gas in a condensed liquefied form, whereby the liquefied gas, by its expansion and return to a liquefied condition within the mixer or receiver, not only charges the liquid therein, as required, but by its absorption of caloric from the contents of the mixer has a cooling effect upon said contents, so that ice for said purpose may be dispensed with.

The object of this invention is to further utilize this reduction in temperature by confining the frigorific effect more directly or immediately to the liquid within the mixer, instead of dispersing it over the walls of the mixer or dissipating it in the surrounding atmosphere. To this end I connect the outlet end of the passage-way used to convey the carbonic-acid gas from the reservoir containing it in a liquefied form with a coil of pipe arranged within the mixer, and so as to be surrounded by the liquid contents of the mixer, and with its extreme end open to conduct the gas into the contents of the mixer, whereby an increased cooling-surface will be obtained within the liquid contents of the mixer by the travel of the gas through the coil.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a partly-sectional longitudinal elevation of a mixer, such as used for bottling purposes, with a charging-reservoir, shown only in part, attached, and having my invention applied. Fig. 2 is a transverse section through the mixing-chamber, and Fig. 3 a longitudinal view of the reservoir which contains the liquefied gas.

A is a bottling-mixer of the ordinary or any suitable construction for containing aerated soda-water or other aerated liquids, a stirrer,

as usual, being ordinarily combined with said mixer; but the invention is not restricted to the use of a stirrer.

B is one of a series, to be used as required, of cylinders or reservoirs charged with the liquefied carbonic-acid gas as derived from natural springs or other suitable source, and condensed in the ordinary manner or by any suitable means. This reservoir, which is portable, and which is provided with a closing-valve, as usual, is made readily attachable and detachable to and from the mixer A through an intermediate connection, C, provided with a regulating or shut-off valve, b.

D is the metal coil, arranged within the mixer A so as to be surrounded by the liquid therein. This coil connects at its one end with the outlet from the connection C, and its other end is left open, so that after the liquefied gas has been turned on to charge the liquid in the mixer with the gas, as required, said gas, before it reaches the liquid in the mixer, has to pass through the whole length of the coil, and by its expansion during its passage will cause an increased cooling-surface to be presented to the liquid in the mixer, as and for the purposes hereinbefore specified.

The receiver or mixer A constitutes what is usually termed the "fountain" of the apparatus.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In soda-water and other like apparatus, the combination, with the receiver, fountain, or mixer of the liquid to be aerated, of an attached supply-connection thereto for the liquefied carbonic-acid gas, and a tubular coil within the fountain or mixer, in communication at its one end with said liquefied-gas connection, and at its other end with the interior of the fountain or mixer, essentially as and for the purposes herein set forth.

2. The combination of the fountain or mixer A, the liquefied-gas-charging connection C, the tubular coil D, in communication at its one end with said connection, and with the interior of the mixer at its other end, and the reservoir, B, of liquefied carbonic-acid gas, substantially as shown and described.

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Witnesses:

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