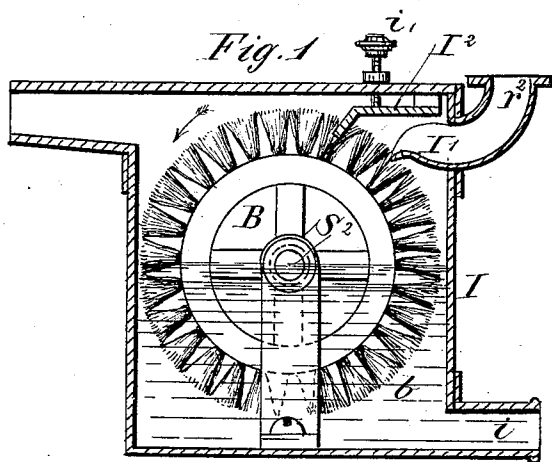
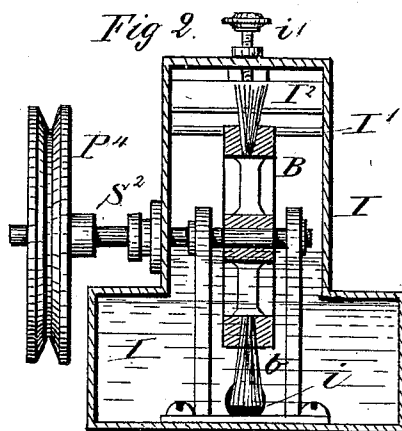
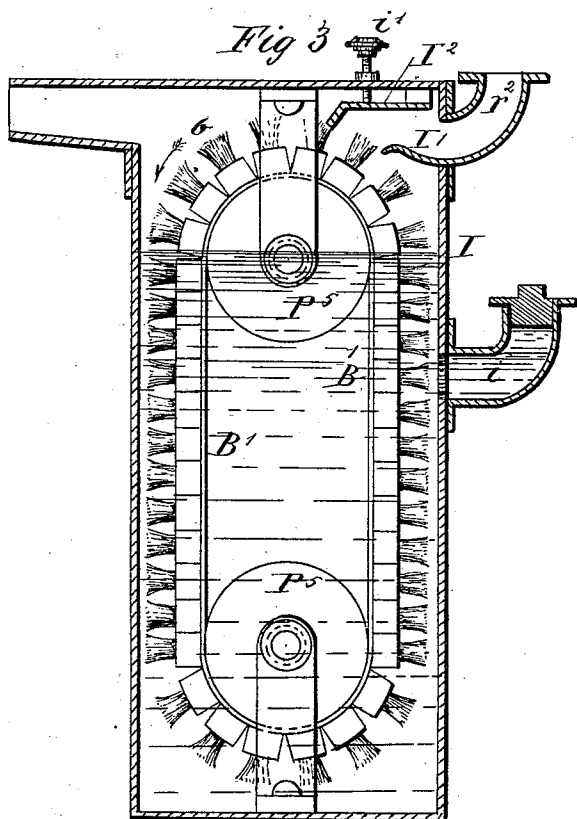
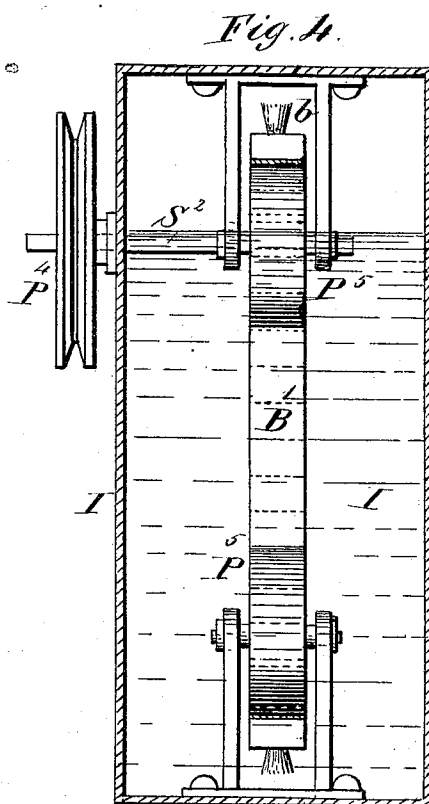


(No Model.)

S. MARCUS.
VAPORIZER.

No. 275,238.

Patented Apr. 3, 1883.



Witnesses
William S. Goulter
Alfred Leonard

Inventor
Siegfried Marcus
per Harry Orth
att'y.

UNITED STATES PATENT OFFICE.

SIEGFRIED MARCUS, OF VIENNA, AUSTRIA-HUNGARY.

VAPORIZER.

SPECIFICATION forming part of Letters Patent No. 275,238, dated April 3, 1883.

Application filed November 24, 1882. (No model.) Patented in Belgium May 13, 1882, No. 57,900, and in Italy June 30, 1882, XVI, 14,290 and XXVIII, 401.

To all whom it may concern:

Be it known that I, SIEGFRIED MARCUS, a subject of the Emperor of Austria, residing at the city of Vienna, in the Austro-Hungarian Empire, have invented certain new and useful Improvements in Carburetors, Atomizers, or Vaporizers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention has for its object to provide means whereby liquids of every kind may be thoroughly atomized or vaporized, and which means are of simple construction and operation, and may be applied to the cooling of the air in rooms, to disinfect or to perfume the same by vaporizing or atomizing liquids having the required properties, or to produce explosive gases for use in gas-engines, or illuminating-gases, to feed inhaling apparatus, &c.

In the accompanying drawings, Figures 1 and 2 show respectively a longitudinal and a transverse section of my improved atomizer, and Figs. 3 and 4 are like views of a modification in the construction of the same.

Like letters of reference indicate like parts.

I is a vessel, of suitable construction, in communication with a feed-reservoir through pipe *i*. The relative position between the two is preferably such that the level of the liquid in I will never rise much beyond the center of the shaft *S*². The latter is mounted in suitable bearings, and carries a brush-wheel, B, to which a continuous rotation in the direction of the arrows, or an intermittent rotation or an oscillatory movement may be imparted by any suitable mechanical appliances. For example, as shown in the drawings, the brush-wheel B may have a continuous rotation imparted thereto from a suitable prime motor, belted or otherwise, driving the pulley *P*⁴ on the brush-wheel shaft *S*². As the brushes *b* are passing through the liquid they take up a certain quantity thereof, and then come in contact with a

scraper or shield, *I*¹, whereby any excess of liquid is removed from the brushes *b*, which afterward come in contact with the adjustable atomizing-plate *I*², where the remaining liquid adhering to the brushes is atomized, and where a current of air coming through pipe *r*² may be mixed with the atomized liquid and carry it out of the apparatus.

In Figs. 3 and 4 I have shown the atomizing-brushes *b* mounted on an endless belt, *B*¹, traveling over belt-pulleys *P*⁵, supported in suitable bearings. Otherwise the operation and construction of the atomizer is the same as those of the one just described.

Instead of causing the brush-belt to travel in a vertical direction, said belt may be caused to travel in a horizontal direction, and the construction and arrangement of these appliances will, to some extent, depend upon the special purpose for which they are employed.

Having now described my invention, what I claim is—

1. An atomizer for vaporizing or atomizing liquids of any kind, this atomizer consisting essentially of a traveling brush arranged to take up a portion of the liquid to be atomized and cast the same off in a spray by contact with a deflecting-plate.

2. An atomizer consisting essentially of a traveling brush partially immersed in the liquid, a scraper to remove the excess of liquid from the brush, and a deflecting-plate for deflecting the bristles of the brush, for the purpose specified.

3. The herein-described atomizer, consisting of a traveling brush, a scraper, *I*¹, and a deflecting or atomizing plate, *I*², arranged for operation within a suitable vessel or casing, substantially as described.

4. The combination, with the traveling brush, of an adjustable deflecting or atomizing plate, *I*², for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

SIEGFRIED MARCUS.

Witnesses:

JAMES RILEY WEAVER,
WILLIAM HÜNING.