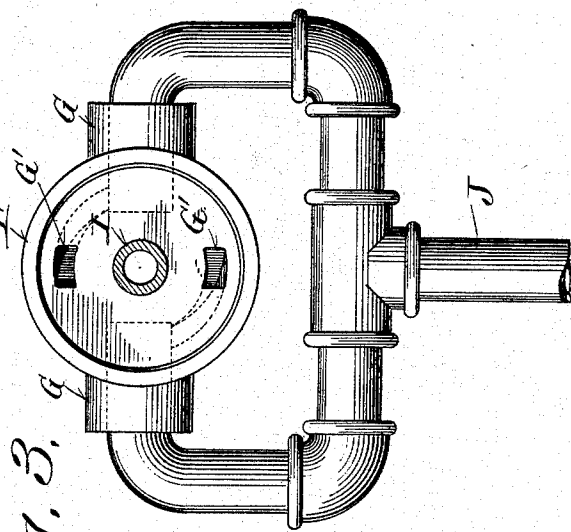
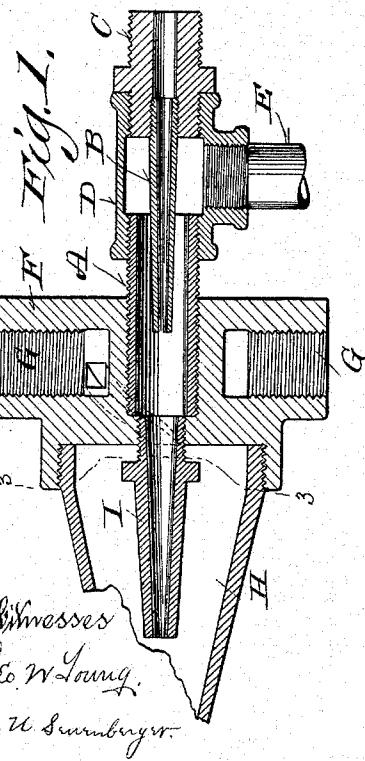
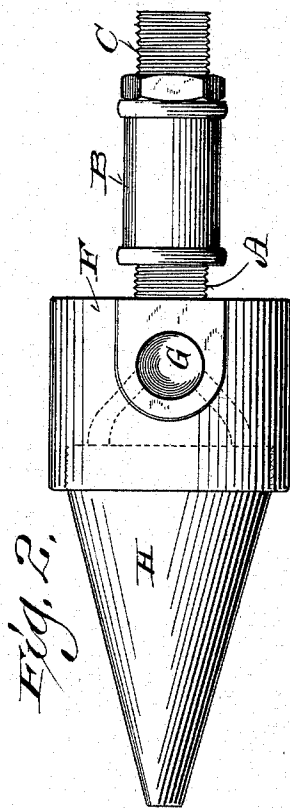


(No Model.)

F. B. GIESLER.
ATOMIZER.

No. 526,525.

Patented Sept. 25, 1894.



Witnesses
Geo. W. Young,
J. H. Swinburner.

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UNITED STATES PATENT OFFICE.

FRANKLIN B. GIESLER, OF MILWAUKEE, WISCONSIN.

ATOMIZER.

SPECIFICATION forming part of Letters Patent No. 526,525, dated September 25, 1894.

Application filed October 9, 1893. Serial No. 487,626. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN B. GIESLER, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Atomizers; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to provide a simple and efficient atomizer for various fluids; and it consists in certain peculiarities of construction and combination of parts hereinafter described with reference to the accompanying drawings and subsequently claimed.

In the drawings: Figure 1 represents a sectional view of an atomizer constructed according to my invention; Fig. 2, an elevation of the same; Fig. 3, a plan view of the atomizer with its outer nozzle detached and its inner nozzle in section on line 3—3 of Fig. 1, and Fig. 4, is an illustration of the disposition of spiral continuations belonging to fluid inlet-ports of said atomizer.

Referring by letter to the drawings A represents a hollow stem that receives a nozzle B fitted to a pipe C designed for communication with a source of compressed air, and by means of a T coupling D, said stem and pipe are joined to another pipe E for connection with a source of steam-supply.

The body of the atomizer is a block F fitted to the stem A and provided with lateral ports G having spiral continuations G' that lead out through said block to discharge within a nozzle H detachably connected thereto, this nozzle constituting a vaporizing chamber and inclosing another nozzle I fitted to the aforesaid block in communication with said stem. As shown in Fig. 3, the aforesaid inlet ports are coupled to a pipe J that leads from a source of water or other fluid supply.

In the operation of the atomizer, the compressed-air has a direct passage through nozzle B and mingles with steam in the stem A, the product of these elements escaping through the nozzle I to atomize water or other fluid that enters the nozzle H through the

spiral continuations G' of the ports G, and, because of these peculiar continuations of said ports, the fluid is given a whirling motion in opposite directions, as shown by arrows in Fig. 4, whereby every particle of said fluid is subjected to the influence of the mingled compressed-air and steam, the result being a vapor of more or less density, in proportion to the nature of the aforesaid fluid and the proportions of the atomizing elements.

Although the herein described atomizer may be utilized for vaporizing various fluids, it is of special value in connection with pneumatic malting apparatus for the provision of air saturated with water in either a cool or heated condition.

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

1. An atomizer comprising a body having fluid inlets provided with spiral continuations discharging in opposite directions, a hollow stem and communicating nozzle extended in opposite directions from said body, a coupling on the stem for connection with sources of compressed-air and steam, a nozzle leading from the compressed-air inlet into said stem, and another nozzle in position on the aforesaid body to serve as a vaporizing chamber, substantially as set forth.

2. An atomizer comprising a body having lateral fluid-inlets provided with spiral continuations discharging in opposite directions, a mixing-chamber central of said body, compressed-air and steam conveyers leading to the mixing chamber, and a nozzle constituting a chamber into which the mixing-chamber and fluid-inlets discharge, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

FRANKLIN B. GIESLER.

Witnesses:

N. E. OLIPHANT,
HENRY DANKERT.