

O. B. GILMAN.
ATOMIZER.
APPLICATION FILED JUNE 6, 1912.

Patented Mar. 18, 1913.

1,056,094.

Fig. 1.

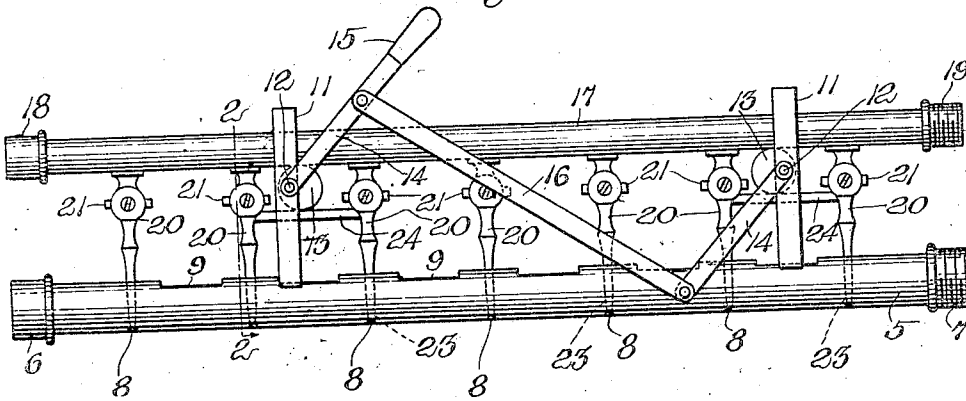


Fig. 3.

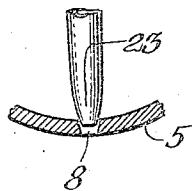
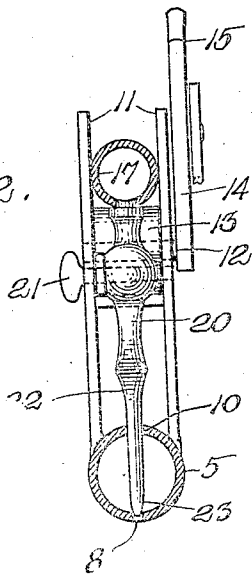


Fig. 2.



Witnesses:

J. H. Blair.

E. C. Murphy

Inventor:

Oscar B. Gilman

By Henry J. Miller
att'y.

UNITED STATES PATENT OFFICE.

OSMON B. GILMAN, OF CAMBRIDGE, MASSACHUSETTS.

ATOMIZER.

1,056,094.

Specification of Letters Patent.

Patented Mar. 18, 1913.

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To all whom it may concern:

Be it known that I, OSMON B. GILMAN, of Cambridge, county of Middlesex, and State of Massachusetts, have invented certain new and useful Improvements in Atomizers, of which the following is a specification, reference being had to the accompanying drawings, forming part thereof.

This invention has reference to improvements in devices for atomizing or spraying melted butter or other heavy oils and the invention is used particularly for the purpose of applying butter oil in atomized condition to crackers and other articles of food, especially bread-stuff.

One object of the invention is to so construct an atomizer of this nature that the spray of oil may be distributed evenly to the crackers or other objects under operation.

Another object of the invention is to simultaneously control a series of spraying devices of this nature.

The invention consists in the atomizer herein described and claimed.

Figure 1 represents the improved atomizer in side elevation showing the control levers. Fig. 2 represents an enlarged sectional view taken on line 2—2 Fig. 1, looking in the direction indicated by the arrows of said line. Fig. 3 represents an enlarged detail view of portions of Fig. 2.

Similar numbers of reference designate corresponding parts throughout.

In carrying this invention into practice I provide the oil receptacle 5 closed at one end by the cap 6 and having at the other end the threaded member 7 adapted to receive the end of a supply pipe through which melted butter may be delivered to the tubular receptacle 5. This receptacle 5 is substantially cylindrical in cross section and has at its lower portion a series of tapering outlets 8, 8 while in the upper portion are formed the openings 9, 9 and the perforations 10, which latter are located above and in line with the outlets 8, 8.

Mounted on the receptacle 5 are pairs of guides 11, 11 in which guides are journaled the shafts 12, 12 having the cams 13, located between said guides, and the lever arms 14, one of which has the handle member 15. These arms 14, 14 are connected by the pivoted rod 16 whereby, under movement of one of said lever arms, motion is transmitted to the other of said arms. Slidably mounted between the upper portions of said

guides 11, 11 is the air pipe 17 closed at one end by the cap 18 and having at the other end the member 19 adapted to receive a connection from the air pressure supply. Mounted in said pipe 17 is the series of nozzles 20, 20 each having the valve 21 and the mouth piece 22, adapted to extend through the perforations 10, and having the tapering end 23 adapted to be received by one of the tapering outlets 8 of the butter receptacle 5. Pairs of these nozzles 20, 20 are connected by the member 24 between which and the pipe 17 the cams 13 are located whereby when the cams 13 are rotated in one direction they bear on said cross members 24, 24 and press downward said cross members, the nozzle connected with said cross members and the air supply pipe 17, so that the ends 23 of the nozzle mouth pieces 22, 22 are forced into the outlets 8, 8 of the butter receptacle 5, while if the cams 13, 13 are rotated or swung in another direction they bear against and lift said air supply pipe 17, and thus effect the upward movement of said air supply pipe and its series of nozzles to open the outlets 8, 8. When now, melted butter is supplied to the receptacle 5 and cams 13, 13 are swung to move the nozzles 20, 20 upward, the ends 23, 23 of the mouth pieces 22, 22 of said nozzles are moved approximately to the position shown in Fig. 2, whereby small annular passages are forced between said mouth pieces 22, 22 at the ends thereof, and said outlets 8, 8. The valves 21, 21 are now adjusted to permit the flow of air through said nozzles and such air, under suitable pressure, passing through the ends 23, 23 of the mouth pieces 22, 22 and through the outlets 8, 8 will induce, by suction, the flow of the melted butter through said outlets 8, 8 and will effect the atomization of said butter. If such atomization is not sufficient, valves 21, 21 are opened still farther or if too much air is flowing through said mouth pieces, said valves 21, 21 can be partially closed. When it is desired to stop the spraying of the butter, the handle 15 can be operated to effect the swinging or rotating of cams 13, 13 to move the pipe 17 with its nozzles in the direction to enter the ends of the nozzle mouth pieces in to the outlets 8, 8, whereby the flow of butter is prevented while the flow of air may continue. It is, however, usual to shut off the air supply soon after stopping the flow of butter, as above described.

While I have herein shown the preferred construction of my improved atomizer it is not my intention to limit this invention specifically to such preferred form as I understand that the device may be modified as regards details of construction without departing from the spirit of my invention.

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

An atomizer comprising two parallel tubular members the lower of which has a row of perforations and is furnished with upwardly extending guides between which

the upper tubular member is received, said upper member having a series of nozzles in registry with the perforations of the lower member, pairs of which nozzles are connected by cross members, shafts journaled in said guides and having cams located between said cross members and said upper tubular member, arms on said shafts, and a link connecting said arms, substantially as described.

OSMON B. GILMAN.

Witnesses:

HENRY J. MILLER,
ESTHER C. MURPHY.