

J. H. HAMLIN.
 ATOMIZER.
 APPLICATION FILED SEPT. 16, 1914.

1,243,514.

Patented Oct. 16, 1917.

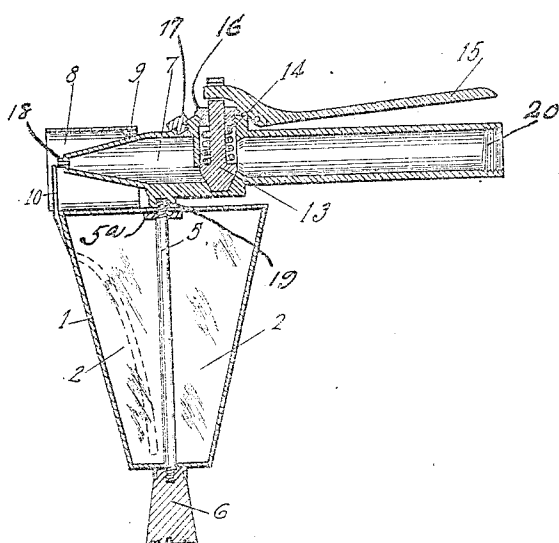


FIG 1

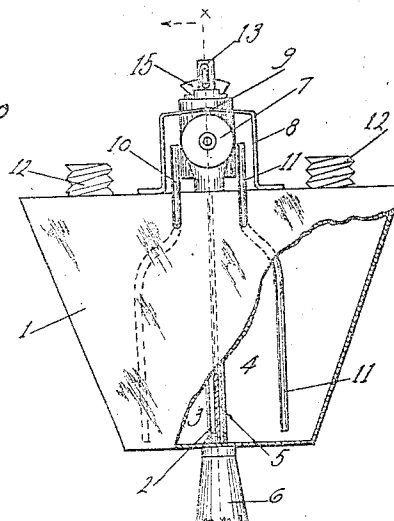


FIG 2

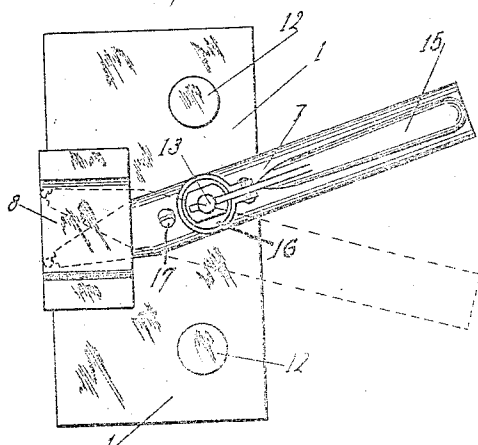


FIG 3

WITNESSES:

Marie R. Leahy
M. Herschowitz

John H. Hamlin INVENTOR,
 BY *Chas. M. C. Chapman* ATTORNEY.

UNITED STATES PATENT OFFICE.

JOHN H. HAMLIN, OF NEW YORK, N. Y., ASSIGNOR TO HAMLIN IMP-ERVIA CO., INC.,
OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

ATOMIZER.

1,243,514.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN H. HAMLIN, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented a new and useful Improvement in Atomizers, of which the following is a description.

This invention relates to apparatus for coating, decorating, and applying for other purposes, one or more substances, and particularly relates to an atomizer capable of applying, at will, one or several substances in succession.

Among the objects of my invention may be noted the following: to provide means by which all kinds of liquids, semi-liquids, and pulverulent substances may be atomized in the most effective manner; to provide an atomizer so constructed as to be capable of being used in connection with either a liquid or a solid in pulverulent form, and also capable of applying the two or more of such substances in succession; to provide an atomizer by means of which liquid, in any form desired, may be atomized and applied to a given surface and subsequently, at the will of the operator, a pulverulent substance may be applied upon the same surface, whereby various ornamental effects may be obtained; and to provide a simple, effective, and cheaply constructed device by means of which all the foregoing objects may be secured.

With the above objects in view and others which will be detailed during the course of this description, my invention consists in the parts, features, and elements, and combinations thereof, hereinafter described and claimed.

In order that my invention may be clearly understood, I have provided drawings wherein:

Figure 1 is a central, vertical, section of an atomizer embodying my invention;

Fig. 2 is a front elevation of the device portrayed in Fig. 1, a portion of the receptacle being broken away to show the interior construction; and

Fig. 3 is a top plan view of Fig. 1, the mode of using the same being illustrated by full and dotted lines.

Primarily, it should be understood that my apparatus is designed for the purpose of decorating, ornamenting, or preserving

the surface of various substances such as stone, brick, metal, wood, and other natural and artificial substances, and that the objects are obtained by so constructing my apparatus as to enable the operator to first apply a liquid substance, which may be more or less limpid, as desired, and then a solid substance which may be more or less pulverulent, as desired. Or, various liquid substances may be applied in succession, according to the mode of construction adopted for a predetermined purpose. In order that my invention may be understood in its entirety, it may be stated that the receiving tank for the various substances to be applied may be partitioned so as to provide any number of chambers for holding the various different substances; and, in combination with each chamber, I arrange a siphoning tube through which the liquid or substance of the chamber can be drawn for atomizing purposes. In combination with these several devices, a single, or it may be a plurality of atomizing devices may be employed in order to produce the results according to my invention. In the drawings, I have shown simply as an example or embodiment of my invention, a structure which is portable and easily carried and manipulated; but, I desire it understood that the following description of said apparatus is not to be taken as a limitation upon the structural features thereof, but simply as an example of a device or apparatus embodying the broad idea of means constituting my invention.

Referring to the drawings, the tank or receptacle 1 is shown as rectangular in form and divided centrally by the partition 2 into two chambers 3 and 4. These chambers may contain liquid or solid substances, or one or more of them may contain a liquid and the others solid substances, the latter being in pulverulent form, and the former sufficiently limpid for the purposes contemplated. Extending centrally through the receptacle, from bottom to top, is a spindle or rod 5, the lower end of which extends through the bottom of the receptacle and has screwed thereon a handle, or base, or other support 6. The spindle 5, at its upper end, extends through the top of the receptacle and is held from movement by a nut 5^a, secured to the screw-threaded end of said spindle within the receptacle. The nut

5^a may be a washer, or lug, secured to, or integral with, the top of the receptacle to afford a reinforce for the latter at that point.

The atomizer is generally indicated by the numeral 7, the forward atomizing end of which is extended within a guard 8, which protects both the atomizing end of the atomizer and the upper exposed ends of the siphoning tubes 10 and 11, which extend down into the tank and respectively into the chambers 3 and 4, terminating near the bottom of said chambers. The guard also limits the movement of the atomizer in both directions, thus enabling the same to be quickly and accurately placed with reference to the tubes 10 and 11. The numeral 9 indicates a frictional device carried centrally on the interior of the top of the guard 8, for engagement with the nozzle of the atomizer to hold the same in a central position. The receptacle is provided with a plurality of apertures in its top, corresponding to the chambers within the receptacle, each being closed by a screw-plug, or cap, 12, thus providing for the admission of the substances to be contained in the receptacle. The atomizer, generally speaking, is provided with a valve 13, under control of a spring 14, said valve being operated against the control of the spring by a lever 15.

Particular details of the atomizer are not of extreme importance to my invention, although it should be understood that a ready means for manipulating the valve 13, such as the coöperative action of the lever 15 and spring 14, should be provided, and the valve should be so constructed as to properly close the passage through the tube 7, and should also be provided with a removable nut, holder, or cap, 16, enabling the removal of the valve 13 from the containing chamber, and also the spring 14, in the event the latter should break, or not be strong enough, means being thus provided for removing the parts, renewing the same, and cleaning them. In the event the tube 7 should become clogged, or it is found necessary to gain access to the same, a removable plug 17 is provided through the medium of which the air may be ejected, or an instrument may be inserted for the desired purpose. The forward end of the nozzle of the atomizer is provided with a jet 18, of suitable size and form, which coöperates with the upper end of the siphoning tubes 10 and 11, to force air across the top of the latter, to draw and spray the contents of the chambers 3 and 4. To permit the proper coöperative action of the jet 18, and the tubes 10 and 11, the atomizing tube is pivoted to the top of the tank, preferably centrally thereof, as shown in Fig. 1; and, for the purpose, the upper end of the rod 5 may be employed upon which to pivot the said tube, as shown at 19. The pivotal arrangement of the atomizer is such as to

enable the jet 18 to coöperate with both the tubes 10 and 11, as and for the purposes stated. The rear end 20 of the atomizing tube is internally screw-threaded, or otherwise provided with means for attachment of the tube, or other connection running to a compressed air tank which, it will be readily understood, may be of any approved form with air under pressure sufficient to create the atomizing effect at the coöperative points of tubes 10 and 11, with the jet 18.

From the foregoing description, it will be readily understood that the various substances to be used can be deposited in the chambers of the receptacle by removing the caps 12, and compressed air can be supplied the atomizer by the attachment of the tube of the tank thereof with the end 20 of said atomizer. The handle 6 provides a ready means by which to manipulate the device, which will usually be held in the left hand of the operator. By manipulating the lever 15, more or less of compressed air can be forced through the tube of the atomizer and jetted at 18, thus drawing the substances in the chambers through the respective tubes, or pipes, 10 and 11. Fig. 3 shows the two positions of coöperative action of the atomizer with the tubes 10 and 11, one position being shown in full and the other in dotted lines.

From the foregoing description, it will now be readily understood that I have provided an apparatus by means of which the fronts of buildings may be cleaned, dressed, ornamented, or purified; that is to say, by spraying the liquid first upon the building, which may be of any suitable form of adhesive substance, or even paint, a surface will be prepared upon which the pulverulent substance may be subsequently applied and caused to adhere. If the building is to be cleaned, a suitable acid may be employed, this in contradistinction to the very objectionable sand-blasts now employed. On the other hand, a paint may be applied and pulverulent marble subsequently applied, thus restoring the surface of a marble building, or wall, or the same may be done for a brick building or a stone building. The same process may be observed with reference to metal, ornamental pieces, or parts, or structural parts, of buildings and, in this connection, my invention contemplates the idea of pulverizing the metals so as to apply the same to the surface of a similar metal, thereby restoring it to its original condition and preserving it without applying a foreign substance.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. In an atomizing apparatus, a tank or holder having a partition therein forming 130

a plurality of chambers; a siphoning tube extending from each chamber to a predetermined point on the outside of the tank; a shiftable means for cooperating with both
 5 of the said tubes for atomizing and distributing, through the medium thereof, the contents of said chambers; and means cooperating with the atomizing means for protecting the executive end thereof in its several
 10 positions.

2. In an atomizing apparatus, a tank or holder having a partition therein forming a plurality of chambers; a siphoning tube extending from each chamber to a predetermined point on the outside of the tank; pivotally supported shiftable means for cooperating with both of said tubes for atomizing the contents of the chambers; and means cooperating with the atomizing means for
 15 limiting the movement thereof relatively to the siphoning tubes, whereby to enable the atomizing means to accurately cooperate with each of the siphoning means.

3. An atomizing apparatus having, in
 25 combination, a tank or holder having a par-

tion therein forming a plurality of chambers; a siphoning tube extending from each chamber to a predetermined point on the outside of the tank; movable means for cooperating with each of said tubes for atomizing the contents of the chambers; a guard
 30 mounted upon the holder and inclosing the ends of the siphoning tubes and the executive end of the atomizing means, said guard having means cooperating with the atomizing means for holding the same in a neutral position, and also having means cooperating with said atomizing means for limiting the movement thereof and simultaneously locating the executive end thereof in
 35 cooperative relation to one or the other of the siphoning tubes.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOHN H. HAMLIN.

Witnesses:

FRANK O. MILLER,
 MARGARET A. HILL.