(No Model.)

L. W. GRASNICK.

POWDER DUSTER.

No. 385,456. Patented July 3, 1888.

Fig. 1.

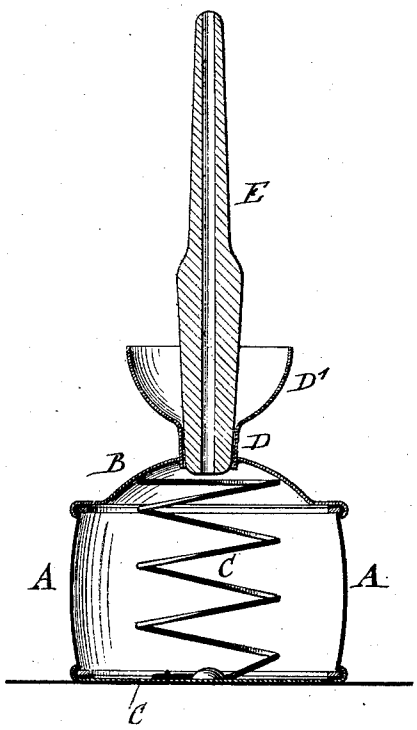


Fig. 2.

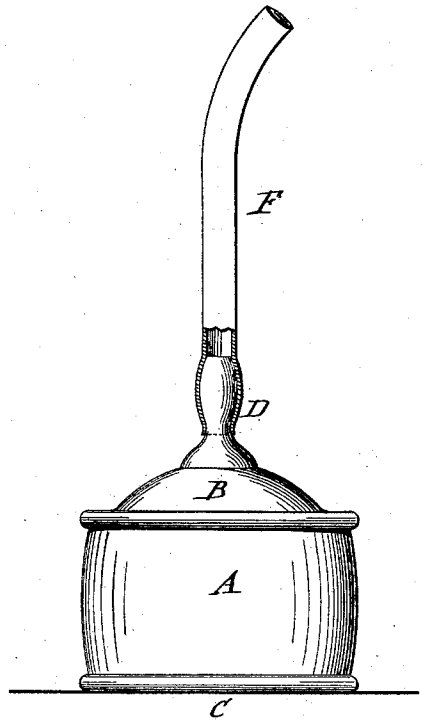
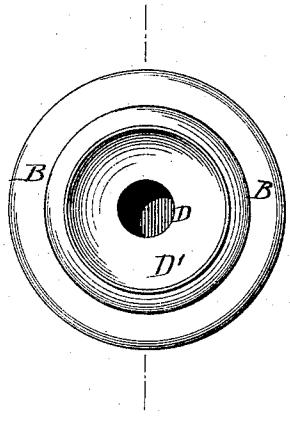


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

LOUIS W. GRASNICK, OF BROOKLYN, NEW YORK.

POWDER-DUSTER.

SPECIFICATION forming part of Letters Patent No. 385,456, dated July 3, 1888.

Application filed January 9, 1888. Serial No. 260,159. (No model.) Patented in Germany April 6, 1882, No. 21,530.

To all whom it may concern:

Be it known that I, LOUIS W. GRASNICK, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Rubber Bulbs, (for which Letters Patent have been granted to me in Germany, No. 21,530, dated April 6, 1882,) of which the following is a specification.

This invention relates to an improved bulb for insect-powder blowers, atomizers, pneumatic whistles, and other purposes, which bulb is intended to take the place of the more expensive rubber bulbs, and which is of a strong and durable construction; and the invention consists of a bulb for insect-powder blowers, atomizers, and the like, said bulb being composed of a cylindrical body of soft rubber or other elastic material, sheet-metal top and bottom plates clamped to the upper and lower edges of the elastic body, ring-shaped washers introduced between the top and bottom plates and the edges of the elastic body, and retained by circumferential flanges of the top and bottom plates, and a spiral spring interposed between the sheet-metal top and bottom, the top plate being provided with an outlet-tube, as will be more fully described hereinafter, and finally be pointed out in the claims.

In the accompanying drawings, Figure 1 represents a vertical central section of my improved bulb used as an insect-powder gun. Fig. 2 is a side elevation of the same used in connection with an atomizer. Fig. 3 is a top view of Fig. 1.

Similar letters of reference indicate corresponding parts.

A in the drawings represents the cylindrical body of my improved bulb, which body is made of soft rubber or other suitable elastic material that is preferably cut in suitable length from a rubber tube of the required diameter. The upper and lower edges of the elastic body A are applied to top and bottom plates, B and C, by means of metallic rings, over which rings and the edges of the body A the circumferential flanges *b* of the top and bottom plates are folded, so as to produce the tight and rigid connection of the elastic body A with the top and bottom plates, B and C. A spiral spring, D, is interposed between the top and bottom plates and attached to either of said plates, the spiral spring serving to move the top plate away from the bottom plate when the pressure on the plate is relaxed. The top plate, B, is provided with an outlet-tube, D, which, when the bulb is to be used as an insect-powder blower, is provided with a funnel-shaped enlargement, D′, for filling the bulb, and with a detachable nozzle, E.

When the bulb is to be used with an atomizer, whistle, or other apparatus, a rubber or other tube, F, is attached to the tube D, as shown in Fig. 2. A bulb of this construction can be readily used by pressing the top and bottom plates toward each other and then permitting the bulb to expand again by the action of its spiral spring, it serving thus to expel the air and produce by the air-waves the desired effect.

The bulb can be manufactured at a considerably lower rate than bulbs made entirely of rubber, which latter are made in molds, and are therefore more expensive than my bulb, in which the elastic body is simply cut off from a soft-rubber tube of the required diameter and then fastened to the top and bottom plates.

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

An elastic bulb consisting of a cylindrical body of elastic material, top and bottom plates having circumferential flanges, ring-shaped washers introduced between the flanges of the top and bottom plates and the edges of the elastic body, so as to secure the latter to the top and bottom plates, a spiral spring interposed between the top and bottom plates and attached to one of said plates, and an outlet-tube applied to the top plate, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

LOUIS W. GRASNICK.

Witnesses:
PAUL GOEPEL,
SIDNEY MANN.