No. 798,674. PATENTED SEPT. 5, 1905.

J. HAAS.

AIR BLAST NOZZLE.

APPLICATION FILED FEB. 23, 1905.

Fig. 1.

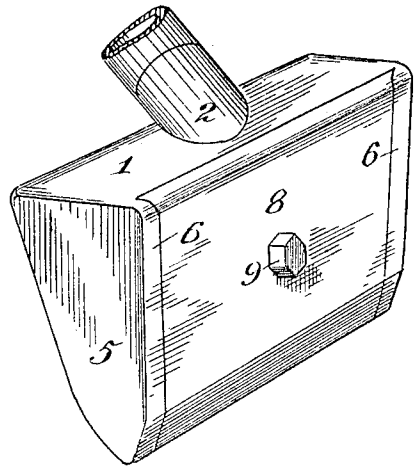


Fig. 2.

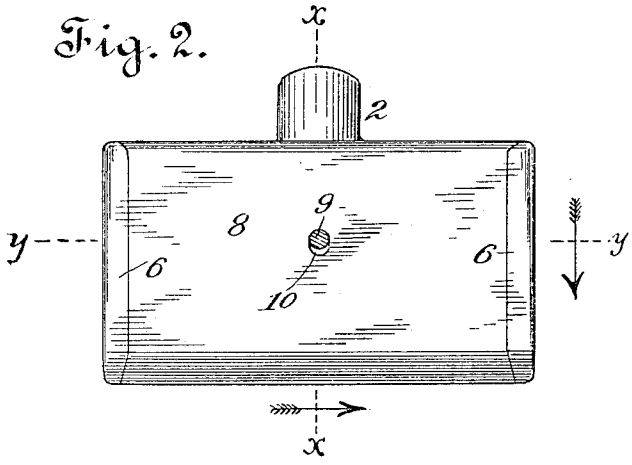


Fig. 3.

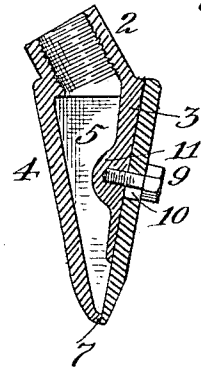


Fig. 4.

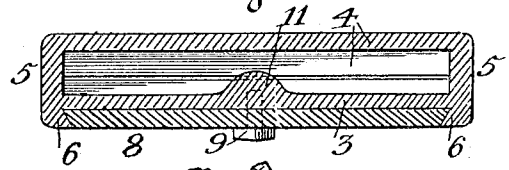
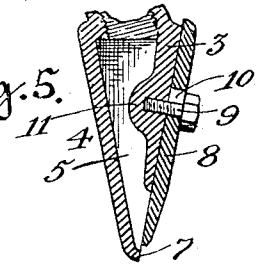


Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOSEPH HAAS, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO SANITARY DEVICES MANUFACTURING COMPANY, OF SAN FRANCISCO, CALIFORNIA, A CORPORATION.

AIR-BLAST NOZZLE.

No. 798,674. Specification of Letters Patent. Patented Sept. 5, 1905.

Application filed February 23, 1905. Serial No. 246,993.

To all whom it may concern:

Be it known that I, JOSEPH HAAS, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Air-Blast Nozzles, of which the following is a specification.

My invention relates to air-blast nozzles intended more particularly for emitting air under pressure for cleaning purposes. It is especially adapted to be used in systems for cleaning, by means of compressed air, walls, shelves, furniture, and other surfaces and structures.

The object of my invention is to provide very simple, convenient, and efficient means for opening, closing, and regulating the air-outlet opening. This simplicity of construction and the small number of parts employed facilitates the making of the nozzle and renders it stronger and more durable than nozzles for like purposes generally used heretofore.

An embodiment of my invention is fully hereinafter described and is shown in the accompanying drawings, in which—

Figure 1 is a perspective view of the nozzle. Fig. 2 is a front elevation. Fig. 3 is a vertical cross-section on line *x x* of Fig. 2, showing the outlet closed. Fig. 4 is a horizontal section on line *y y* of Fig. 2. Fig. 5 is a section like Fig. 3, showing the outlet open.

I represent the nozzle structure as substantially rectangular in front or rear elevation and substantially triangular in end elevation. The main body of the structure is a hollow casting having the top 1 formed with the threaded socket 2, which is connected to the air-supply pipe, the front wall 3, the rear wall 4, and the end walls 5. The end walls may be substantially parallel. The front and rear walls approach each other downwardly; but the rear wall extends below the front wall, leaving a space, as shown in Fig. 3, between their edges. The surface of the front wall is machined by planing or milling, so as to form a recess having a smooth bottom surface, and the machining operation produces two dovetail guides 6 at the ends of the recess. The lower edge of the rear wall 4 is smoothed off slightly in the plane of the machined surface of the front wall, as shown at 7 in Figs. 3 and 5. This smooth plane edge can be formed by the same machine and at the same time that the front wall is surfaced.

A slide-plate 8 is adjustable in the dovetail guides of the front wall and is held in adjustment by a screw-bolt 9, passing through a slot 10 and screwed into a thickening or boss 11 on the inner surface of the front wall. When the plate is in the position of Fig. 3, its surface makes a close fit with the planed edge 7 of the rear wall, and the nozzle is thereby closed. By loosening the screw-bolt a very delicate upward adjustment of the plate 8 can be made, so as to form an outlet-slit, as shown in Fig. 5, which slit may be of any width within the range of adjustment permitted by the slot 10. The air under strong pressure rushes through the slit thus formed, and the nozzle, which has a suitable flexible connection with the air-supply, is applied to the surface or structure to be cleaned.

The simplicity of the construction, comprising only three parts, as well as of the adjustment and air regulation, will be readily noted. I dispense with all removable parts, such as washers and distance-pieces, heretofore used and substitute for them the single sliding plate, which need not be detached.

While I have described and referred to the device as an "air-blast nozzle," it is evident that it can be used for the emission of other fluids, either separately or in connection with an air-current.

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

1. In an air-blast nozzle, a hollow body having two converging walls one extending below and into the plane of the other so that their edges are separated, and a single adjustable plate adapted to slide in said plane and to bridge the space between said edges and to be adjusted to leave an outlet-slit.

2. An air-blast nozzle having front and rear converging walls, one of which is shorter than the other, a plate adjustable upon the shorter wall, and a plane surface formed at the edge of the longer wall, said surface being in the plane of the outer surface of the shorter wall.

3. In an air-blast nozzle, relatively long and short converging walls, and a plate upon the shorter wall, and forming a movable extension of the same; said plate being adjustable so as

either to make an outlet-slot or to close said slot by contact with the edge of the longer wall.

4. In an air-blast nozzle, a hollow structure having converging front and rear walls the latter extended below the former, dovetail guides at the ends of the front wall, an adjustable plate in said guides, and means for holding said plate in adjusted position.

5. In an air-blast nozzle, a wall having its outer surface recessed to form a bearing-surface and guides for a slide, a slide adjustable upon said bearing-surface, and a second wall inclined to the plane of the first wall, and having a bearing edge in the plane of said bearing-surface.

6. An air-blast nozzle, comprising relatively short and long converging front and rear walls 3, 4, a closed top 1 having a hollow socket 2, and end walls 5, all forming a hollow structure; guides 6 projecting from the face of the front wall, a slotted sliding plate 8 adjustable on the face of the front wall and in said guides, a planed edge 7 on the rear wall and a bolt 9 passing through the slot in said plate and into the front wall.

In testimony whereof I have affixed my signature, in presence of two witnesses, this 15th day of February, 1905.

JOSEPH HAAS.

Witnesses:
S. W. SEELY,
M. R. SEELY.