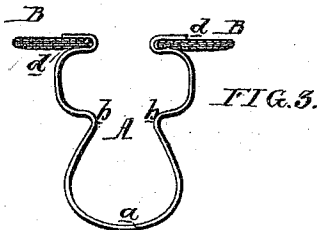
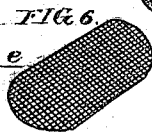
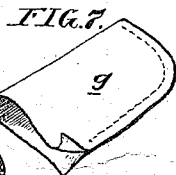
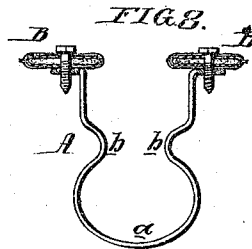
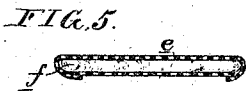
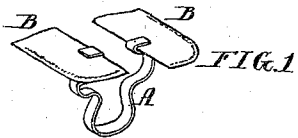
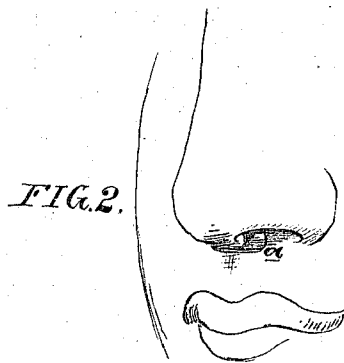


B. W. JAMES.
Nasal Respirators.

No. 142,477.

Patented September 2, 1873.



Witnesses, *Harry Smith*
Thomas McIlwain

Bushrod W. James M.D.
By his Atteys.
Hawson and Son

UNITED STATES PATENT OFFICE.

BUSHROD W. JAMES, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN NASAL RESPIRATORS.

Specification forming part of Letters Patent No. 142,477, dated September 2, 1873; application filed March 8, 1873.

To all whom it may concern:

Be it known that I, BUSHROD W. JAMES, M. D., of the city and county of Philadelphia, State of Pennsylvania, have invented an Improved Nasal Respirator, of which the following is a specification:

The object of my invention is to provide a less bulky and more convenient and effective respirator for the nose than those heretofore used; and I accomplish this object by combining a spring-clip, A, adapted for attachment to the nose, as hereafter described, with screens B B secured to the opposite ends of the said clip, adapted to the shape of the interior of the nostrils and composed of wire-gauze, fiber, and fabric, or equivalent material, which will arrest and separate all noxious particles from the inhaled air, without obstructing the passage of the latter. (See perspective views, Figs. 1 and 2, of the accompanying drawing.)

The clip A consists of a simple flat strip of gold, silver, steel, or other metal, bent to about the shape shown in the enlarged view, Fig. 3, so as to form a loop, *a*, and two opposite projections, *b b*, the ends being also bent abruptly, so as to form recesses *d d* for the reception and retention of the screens B B, the latter, as best observed in the detached views, Figs. 4, 5, 6, and 7, consisting, in the present instance, of fine wire-gauze *e* rounded and bent in at the edges so as to retain a mass of cotton wool, *f*, and the whole being inclosed within a bag-like cover, *g*, of silk or other open fabric.

In applying the respirator the screens are inserted into the nostrils, within which they are retained by the clip A, the latter having sufficient inherent spring to cause its projection *b b* to bear against the opposite sides of the central division or septum of the nose with a slight pressure, not great enough to inconvenience the wearer, but sufficient to retain the whole in place.

No portion of the respirator, when it has been thus adjusted to the nose, is visible, with the exception of the loop *a*, and this, as will be observed on reference to Fig. 2, is not sufficiently prominent to be unsightly.

The loose edges of the fabric *g* project beyond the rigid portion of the screens and entirely fill the nostrils, thus serving as a packing to prevent the passage of any air around the said screens. In inhaling, therefore, the air must pass through the screens, by which all noxious particles will be separated from the same and prevented from entering the lungs.

The respirator is intended especially for the use of persons having weak lungs, but it may be used with advantage by miners, grinders, and polishers, and others whose occupations compel them to breathe air loaded with impurities and noxious particles which should be excluded from the lungs.

I do not confine myself to a screen consisting of wire-gauze, cotton-wool, and silk, as other materials may be substituted for the same; but I propose to construct the said screen so cheaply that, after having become charged with impurities, they can be thrown away and replaced by fresh ones.

For convenience of attaching the screens to and detaching them from the clip, I prefer the method of connection illustrated in Figs. 1 and 3; but the said screen may be fastened by screws, as illustrated in Fig. 8, or otherwise.

As a modification of my invention, may be mentioned the fact that the clip might be so modified in form as to be adapted for attachment to the wings of the nose instead of to the center of the same.

I claim—

A nasal respirator, consisting of a clip, A, constructed for attachment to the nose, substantially as described, and carrying screens B B adapted to the interior of the nostrils, as specified.

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

BUSHROD W. JAMES, M. D.

Witnesses:

WM. A. STEEL,

JOHN K. RUPERTUS.