

(No Model.)

J. E. MIDGLEY & D. D. CASE.
NASAL RESPIRATOR.

No. 480,505.

Patented Aug. 9, 1892.

Fig. 1

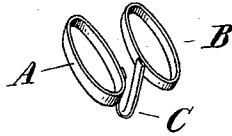


Fig. 2

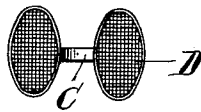


Fig. 3

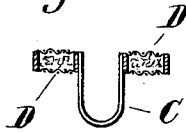


Fig. 4

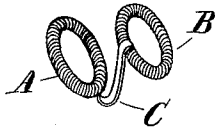
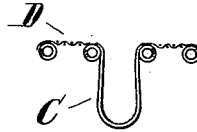


Fig. 5



Witnesses:

S. M. Hulbert
M. B. O'Keefe

Inventors:

Joseph E. Midgley
Dorset D. Case
By *W. A. Sprague & Son*
Attys.

UNITED STATES PATENT OFFICE.

JOSEPH E. MIDGLEY AND DORSET D. CASE, OF DETROIT, MICHIGAN.

NASAL RESPIRATOR.

SPECIFICATION forming part of Letters Patent No. 480,505, dated August 9, 1892.

Application filed October 3, 1891. Serial No. 407,596. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH E. MIDGLEY and DORSET D. CASE, citizens of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Nasal Respirators, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in nasal respirators; and it consists in the peculiar construction of frames adapted to be inserted into the nostrils, coupled together by a yoke passing over the septum of the nose, together with a fabric or other reticulated material secured upon said frame, either to prevent the inhalation through the nose-orifices of dust or other foreign particles or for the purpose of medication.

The invention further consists in the peculiar construction, arrangement, and combination of the various parts, as more fully hereinafter described.

In the drawings, Figure 1 is a perspective view of our improved frames. Fig. 2 is a plan view thereof, showing a gauze secured to said frames to strain the air passing into the nose-orifices. Fig. 3 is a central section through the frames, showing the gauze applied upon both sides to form a medication-chamber. Fig. 4 shows a modified construction of frame. Fig. 5 is a cross-section thereof, showing the gauze applied thereto.

A and B are two oblong frames of substantially the shape of the interior of the nostrils. These frames we preferably make of light strips of material—metal, celluloid, or other substance—preferably choosing a substance which is non-corrosive. We also preferably employ in these frames a material having a certain amount of flexibility, so that it will adapt itself to different sizes or shape of nostrils and that when placed therein it will tightly fit against the sides, so as to make necessary the passage through such frames of any air which enters the nostrils. These frames are coupled together by a yoke C, preferably made of elastic material and of suitable shape to fit around the septum of the nose, so as to assist in holding the frames in position and also to enable us to more easily apply or re-

move the device. Across these frames we place a gauze D of cloth, metal, or any other reticulated substance of such nature that it will strain from the air passing into the nostrils any foreign substance, or this gauze may carry a suitable medicine, which will be inhaled in the breath of the wearer.

In applying the device for medication we preferably employ the device shown in Fig. 3, in which the gauze D is applied on both sides of the frame, forming within a chamber B, adapted to receive a porous medium—such as cotton or cloth—to which the medicine may be applied. This enables us to apply a large quantity and at the same time to strain out from the air any foreign substance which it may contain.

In order to make the respirator efficient, it is desirable that the frame be elastic or yielding, so as to prevent an unpleasant feeling to the wearer or injury to the parts and to enable us to adapt it to different-sized nostrils; and to this end we preferably use a construction similar to that shown in Fig. 4, in which the frames A and B are made of coiled wire F, bent into the desired shape. These coils will not only enable me to adapt the frame to different sizes and shape of nostrils, but they may be compressed in inserting them into place and will expand the frame against the walls of the nostril to tightly close the orifice.

With such a device persons working in dusty or unhealthy places can strain out all foreign substances from the air, and thus protect their throats and lungs from disease, and in cases of bronchial troubles the parts can be medicated to the best possible advantage in the manner described.

What we claim as our invention is—

In a nasal respirator, the combination of two frames formed of spirally-coiled yielding material, a yoke connecting the frames, and reticulated material across the frames, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

JOSEPH E. MIDGLEY.
DORSET D. CASE.

Witnesses:

M. B. O'DOHERTY,
N. L. LINDOP.