

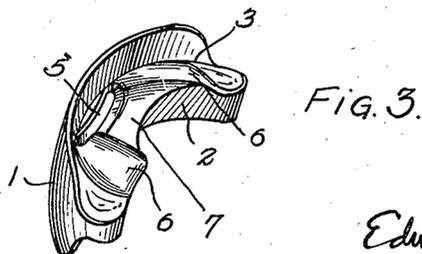
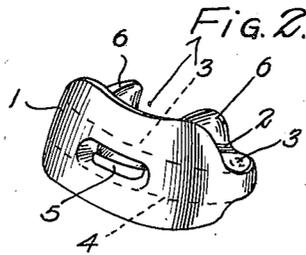
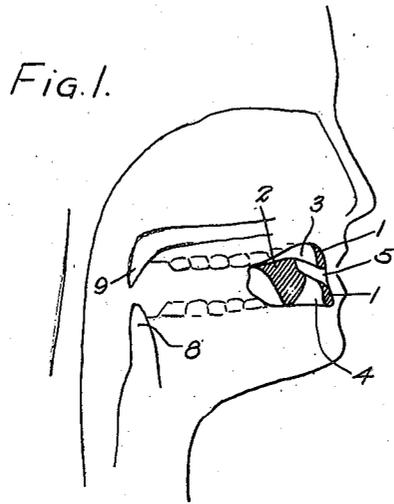
June 19, 1928.

1,674,336

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RESPIRATOR

Filed Oct. 27, 1927



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# UNITED STATES PATENT OFFICE.

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## RESPIRATOR.

Application filed October 27, 1927. Serial No. 229,092.

The invention relates to improvements in mechanical devices which are intended to maintain a natural and plentiful supply of oxygen to the blood of human beings during the sleeping hours; and the objects of the improvement are, first, to provide a clear and unobstructive outlet or channel for the more rapid exhalation of impure air from the lungs laden with carbon dioxide gas, having performed its function in oxidation of the blood and to provide an uninterrupted passage of fresh air with its normal content of oxygen to said lungs; second, to afford facilities for the proper inhalation of oxygen laden fresh air and the proper exhalation of impure or carbon dioxide laden air.

One form of the invention is illustrated in the accompanying drawing in which Figure 1 is a vertical sectional view, showing the device in use;

Fig. 2 is a perspective view looking at the front of the device;

Fig. 3 is a perspective view of the rear of the device.

Referring now to the drawings, the device comprises a front plate member 1 having a curvature corresponding to the arc of curvature of the upper and lower front teeth. The plate member cooperates with a body portion 2 to form an upper interior channel 3 to receive the upper front teeth of the user, and to form a corresponding lower interior channel 4 to receive the lower front teeth. These two channels are spaced apart, so that when in place the upper and lower front teeth will be held apart, a point which is of importance because it props the teeth apart so that air may pass in and out freely, and it moves the jawbone downward, which moves the epiglottis and uvula at the back of the mouth so as to provide a clearer and larger passage of air to and from the throat and lungs.

The respirator is provided with a central air passage 5, which opens into both the upper and lower grooves 3 and 4, so that part of the exhaled air, for example, passes over the body portion 2 and down and out of passage 5, and another part passes under the body portion 2 and up and out of passage 5.

The top of the body portion 2 is provided

with two knobs or projections 6 defining between them an air channel 7. The projections 6 support the tongue above and away from the air passages 5 and 7 and so prevent the tongue from closing the air passages even while the user is asleep.

When the teeth from dental work or from any other reason come too close together or perhaps shut entirely all the soft muscles of the throat supporting the epiglottis (8) and the uvula (9) become collapsed during sleep and draw down together thus reducing the space afforded by the mouth for the exhalation of the impure air coming from the lungs which is laden with carbon-dioxide. The inhalation of fresh air and the exhalation of impure air is thus interfered with, with resultant discomfort to the sleeper, resulting sometimes in unpleasant noises. With this invention, the teeth are propped apart, which moves the epiglottis and uvula so as to enlarge the air passages and at the same time there is provided at all times a clear inlet and outlet passage for the air through the respirator between the teeth.

The respirator may be made of hard or soft rubber, or other suitable material.

I claim:

1. A respirator for placement between the teeth of the user, for preventing snoring and for facilitating breathing, comprising a front plate and a body member cooperating with the front plate and coextensive therewith, to form upper and lower grooves snugly fitting over the upper and lower front teeth of the user, whereby the teeth are held apart, the front plate having an air passage therethrough permitting ingress and egress of air to and from the mouth of the user.

2. A respirator for placement between the teeth of the user, for preventing snoring and for facilitating breathing, comprising a front plate and body member cooperating with the front plate to form upper and lower grooves for the reception of the upper and lower front teeth of the user, whereby the teeth are held apart, the front plate having an air passage therethrough permitting ingress and egress of air to and from the mouth of the user, the body portion being provided with means for supporting the

tongue slightly elevated, for facilitating the free flow of air.

3. A respirator for placement between the teeth of the user, for preventing snoring and for facilitating breathing, comprising a front plate and a body member cooperating with the front plate to form upper and lower grooves for the reception of the upper

and lower front teeth of the user, whereby the teeth are held apart, the front plate having an air passage therethrough, and a pair of projections for supporting the tongue, the projections defining between them a passage for air. 10

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