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2,528,370

DEVICE TO PREVENT MOUTH BREATHING

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2 Sheets-Sheet 1

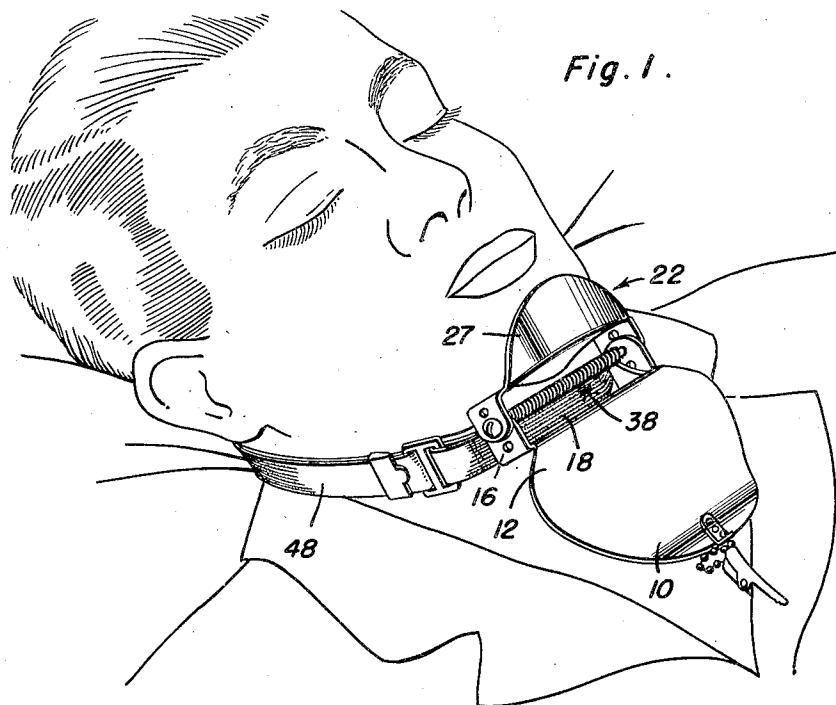
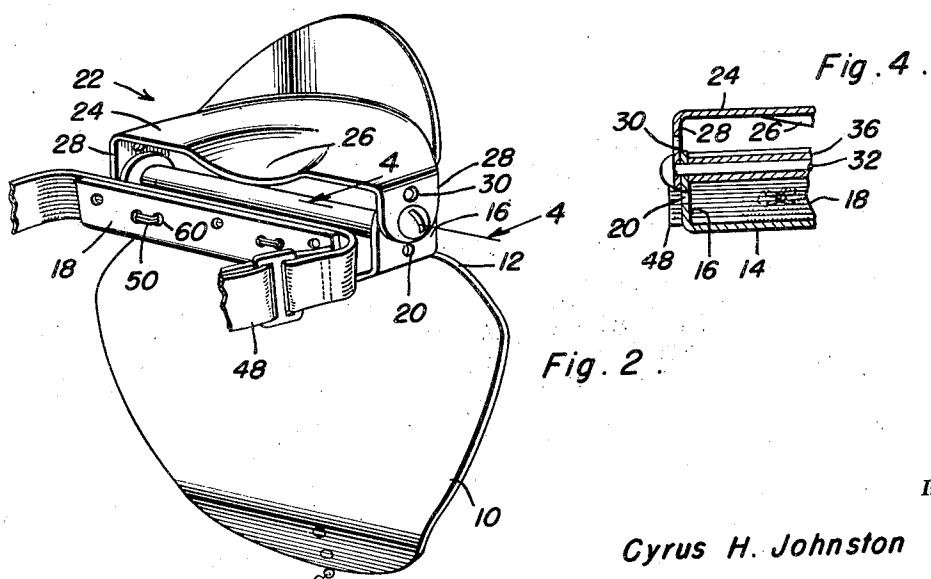


Fig. 1.



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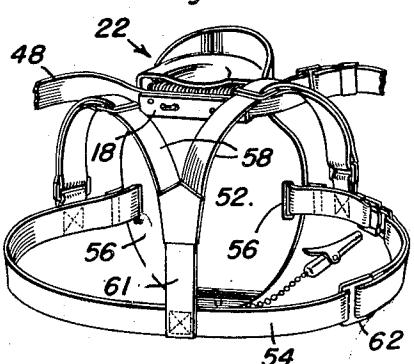
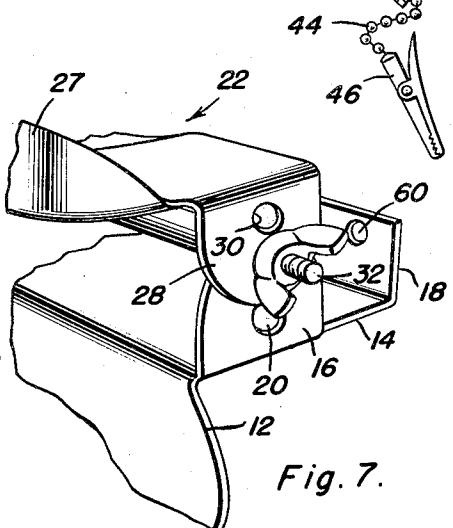
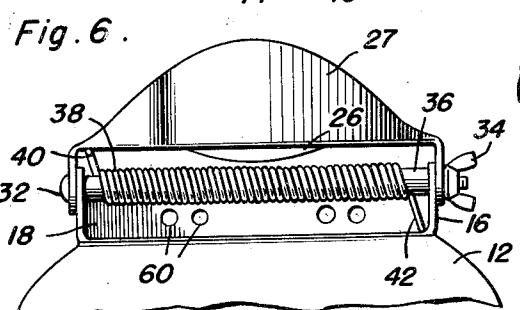
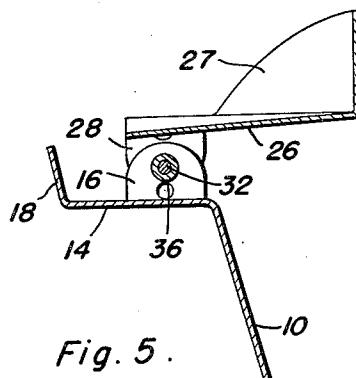
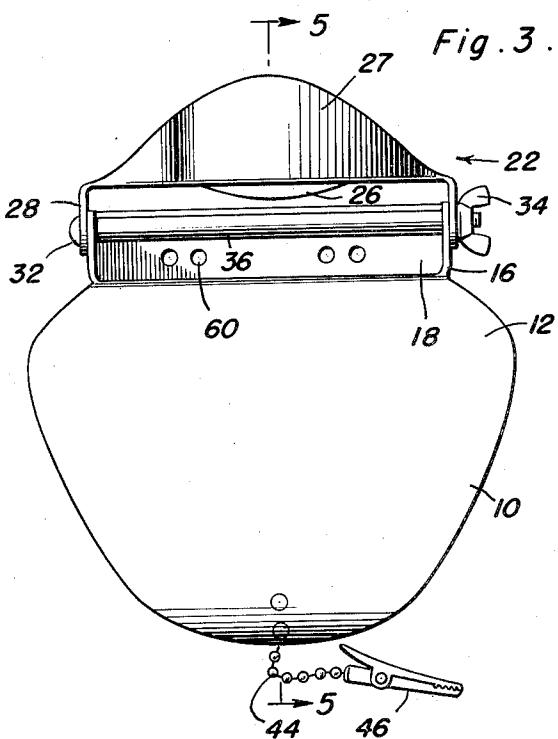
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DEVICE TO PREVENT MOUTH BREATHING

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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DEVICE TO PREVENT MOUTH BREATHING

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6 Claims. (Cl. 128—136)

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This invention relates generally to a device to prevent mouth breathing, more particularly to a novel construction including a breast plate, a chin rest pivoted on the breast plate and means for securing the device on a user.

A primary object of this invention is to provide a device which will be worn by a person during sleep and which will tend to raise the lower jaw, keeping his mouth closed so that he will breathe through the nasal passages.

Another object of this invention, closely allied with the preceding object, is to provide a device which will help to correct mouth breathing, without great discomfort, use of the device also tending to improve posture.

Still another object of this invention is to provide a device which will tend to prevent snoring when worn by a person during sleep.

And a last object to be mentioned specifically is to provide a device of this character which is relatively inexpensive and practicable to manufacture, which is safe and comfortable to wear, which is adjustable to suit different anatomical proportions in different users, and which will give generally efficient and durable service.

With these objects definitely in view, this invention resides in certain novel features of construction, combination and arrangements of elements and portions as will be hereinafter described in detail in this specification, particularly pointed out in the appended claims, and illustrated in the accompanying drawings which form a material part of this application, and in which:

Figure 1 is a three dimensional view of one form of this invention, as worn by a person during sleep;

Figure 2 is a three dimensional view of the device alone, the neck strap portion thereof being shown fragmentarily and the helical spring of the device being removed from this figure;

Figure 3 is a front elevational view of the device with the neck strap and spring removed;

Figure 4 is a vertical sectional view, taken substantially upon the line 4—4 in Figure 2;

Figure 5 is a vertical sectional view taken on the line 5—5 of Figure 3;

Figure 6 is a fragmentary rear elevational view of the device, with the neck strap removed;

Figure 7 is an enlarged detail fragmentary view designed to illustrate how the chin rest may be adjustably spaced with relation to the breast plate; and

Figure 8 is a three-dimensional view of a modified form of this invention in which an under-arm strap and shoulder straps are used to secure

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the device in proper position on the user, either as auxiliary to or in replacement of the neck strap.

Similar characters of reference are employed throughout the specification and throughout the different views of the drawings.

Referring now to the drawings in detail, this invention includes a breast plate 10 having a reduced portion 12 integrally connected with a rearwardly extending portion 14. The portion 14 has laterally disposed upstanding lugs 16 and an angularly disposed portion 18.

The lugs 16 have a plurality of spaced apertures 20. A chin rest, generally indicated at 22, 15 comprises a substantially flat plate 24 having a centrally disposed depressed portion 26 and laterally disposed depending lugs 28. These lugs 28 have a plurality of apertures 30, allowing the single elongated pivot pin 32 to be inserted 20 through the apertures 20 and 30 in the oppositely disposed pairs of lugs, thus allowing the chin rest to be spaced adjustably with reference to the breast plate 10.

The pivot pin 32 is threaded at one end to 25 connect with a wing nut 34 and a spacer sleeve 36 to obtain the proper frictional coefficient between the lugs 16 and 28. A helical spring 38 is coaxially arranged on the sleeve 36, one end 40 of this spring being engaged with a portion of the plate 24 in the chin rest, while the other end 42 of the spring is engaged with an adjacent portion of the breast plate, so that the chin rest will be biased to pivot with reference to the breast plate in order that the chin rest may be at all 30 times urged against the chin of the user. In this connection, it may be noted that this device allows the movement of the chin provided sufficient pressure is brought to bear upon the chin rest, in the interest of safety in use.

40 A flexible linear member 44 which may be of chain or cord character, or the like, is secured to a lower portion of the breast plate 10 and carries a clip 46 which is represented as being an alligator type clip for securement to the user's bed clothing, whenever this is desirable. However, the main attachment means of this device, in this form of the invention, comprises a neck band 48 which will be made adjustable as to length as indicated clearly in the drawings and 45 which will be secured as by the use of laces 50, stitching, or the like, upon the inclined portion 18 of the breast plate, the attachment being facilitated by the provision of apertures 60 in this inclined portion 18.

50 In a modified form of this invention, illus-

trated in Figure 8, the breast plate is enlarged in proportion to the chin rest as indicated at 52, and an under-arm strap 54 is terminally secured to the breast plate 52 by looped terminal portions of the strap 54 inserted through apertures 56 in the breast plate. The under-arm strap 54 may be resilient, and resilient shoulder straps 58 are secured at their front ends to forward portions of the under-arm strap, and joined at their rear ends to a link portion 61 which extends downwardly for connection to a rear portion of the under-arm strap 54. The straps 54 and 58 will be made adjustable as to length, as indicated by the slide buckle members 62 of conventional design. The straps 54 and 58 may be used as auxiliary to or in place of the neck strap 48.

The operation of this invention will be clearly understood from a consideration of the foregoing description of the mechanical details thereof, taken in connection with the above recited objects and the drawings. It will be clear that provision has been made for the angular disposition of the chin rest relative to the breast plate, the proper spacing of the chin rest relative to the breast plate, and adjustability of the means for securing the device on the user. Further description would appear unnecessary.

Minor variations from the embodiments represented may be resorted to without departure from the spirit of this invention and the scope of this invention should be determined as limited only by the terms used in the subjoined claims.

Having described the invention, what is claimed as new is:

1. A device to prevent mouth breathing comprising a breast plate, a chin rest pivoted on said breast plate, means for securing the breast plate on a user, and a spring to bias said chin rest for pivotal movement against the chin of a user.

2. A device to prevent mouth breathing comprising a breast plate, a chin rest pivoted on said breast plate, and means for securing the breast plate on a user, said chin rest being adjustable in relation to said breast plate both as to angular disposition thereto and as to the spacing thereof from the breast plate.

3. A device to prevent mouth breathing comprising a breast plate, a chin rest pivoted on said breast plate, means for securing the breast plate on a user, means to bias said chin rest to move

pivoted relative to said breast plate so that the chin rest can engage the chin of a wearer, and a flexible linear member secured to said breast plate and carrying a clip for temporary securing to clothing of the user.

4. A device to prevent mouth breathing comprising a breast plate, a chin rest pivoted on said breast plate, means for securing the breast plate on a user, means to bias said chin rest to move pivotally relative to said breast plate so that the chin rest can engage the chin of a wearer, said first mentioned means including a harness comprising an under-arm strap terminally secured to said breast plate, and shoulder straps secured to said belt.

5. A device to prevent mouth breathing comprising a breast plate, a chin rest pivoted on said breast plate, means for securing the breast plate on a user, means to bias said chin rest to move pivotally relative to said breast plate so that the chin rest can engage the chin of a wearer, said first mentioned means comprising a neck strap terminally secured to said breast plate.

6. A device to prevent mouth breathing comprising a chin rest, a breast plate, a rearwardly extending portion on said breast plate, a neck strap carried by said portion, said portion and said chin rest having laterally and oppositely disposed pairs of lugs, a pin pivotally securing together each of the pairs of lugs, a spring coaxially arranged on said pin to bias said chin rest for pivotal movement relative to said breast plate and against the chin of a user, and strap means for securing the breast plate on the breast of a user.

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