Dec. 22, 1936. D. MEZZ 2,064,986

NOSE CLIP

Filed Feb. 6, 1936

Fig. 1.

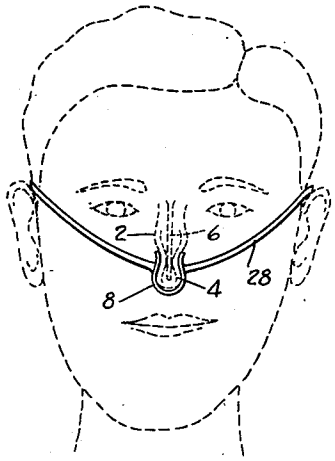


Fig. 2.

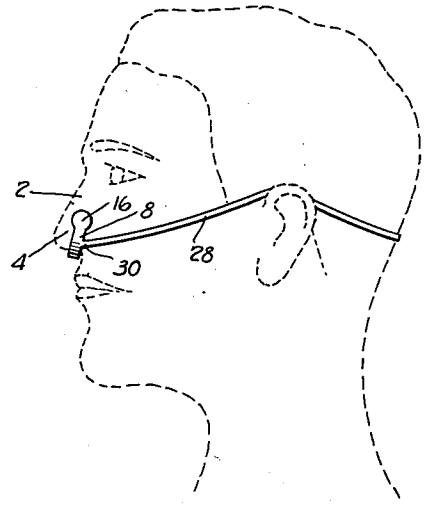


Fig. 3.

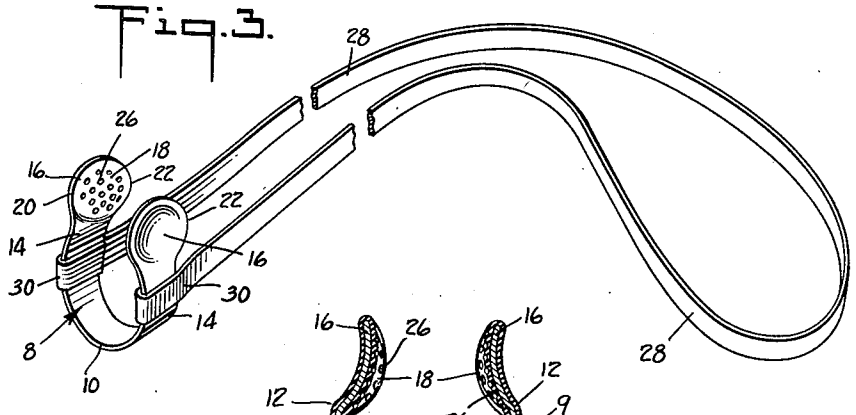


Fig. 4.

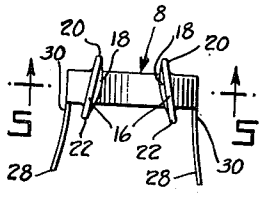
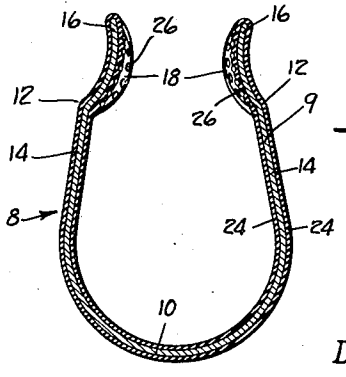


Fig. 5.



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NOSE CLIP

David Mezz, Brooklyn, N. Y.

Application February 6, 1936, Serial No. 62,590

2 Claims. (Cl. 128—346)

My invention relates to nose clips, that is, a clip for closing the nostrils to prevent the entrance of water and other foreign substances into the system of intercommunicating air spaces contained within the skull bones consisting of the nasal spaces, the nasal sinuses, the interior of the ears, and the mastoid processes.

Normally, air fills these air spaces throughout its system but any fluid which enters the nostrils may find its way into the sinuses and interior of the ear. Since ordinarily there is nothing to interfere with the entrance of water through the nostrils, every aquatic session during which the nose goes under water results in the partial or complete filling of this system of air spaces. That is to say, water which enters the nostrils during the acts of bathing, swimming, and especially during diving may, and frequently does, find its way into the sinuses and interior of the ear. Whether this water is clean or contaminated, its abnormal presence in these air spaces leads to the production of unhealthy states therein. Many bathers, in this fashion, develope or aggravate sinus disease, ear abscesses, mastoid infection, and impairment of hearing.

It is the main object of my invention, therefore, to provide a device which will prevent the entrance of water through the nostrils to involve these vital structures.

It is a further object of my invention to provide a device of the character described which will be positive in action, which will be easy to apply and light and comfortable to wear, and which will not fall or slip off during use.

Another object of my invention is to provide a U-shaped strip of material with opposed arms normally resistant to distension, between which arms the nostrils are gripped.

Another object of my invention is to provide a U-shaped strip of spring material to grip the nostrils having a strap or band secured thereto adapted to pass over and around the head and hold the clip in place on the nose of the wearer.

Another object of my invention is to provide a nose clip of the character described which is entirely covered with a soft, resilient material to relieve the harshness of the spring pressure of the U-arms and to reduce irritation to a minimum.

Another object of my invention is to provide a nose clip of the character described having saucer shaped plates at the end of the arms of the U-member.

Another object of my invention is to provide a nose clip of the character described having saucer shaped plates at the end of the arms of the U-member which are relatively biased with respect to each other, providing gripping surfaces which will be flush with the surfaces to be gripped.

A still further object of my invention is to provide a nose clip of the character described with saucer shaped plates at the end of the arms of the U-member which are relatively convex and provided with surface irregularities to afford a friction grip on the surfaces to be contacted and gripped thereby.

Other objects will in part be pointed out below, and in part be apparent from a description of an illustrative embodiment of my invention.

In the drawing made a part hereof,

Figure 1 is a front face view of a man's head with my nose clip in place;

Fig. 2 is a side view of the head of Fig. 1, showing the positioning of the head band;

Fig. 3 is a perspective of one form of nose clip constructed according to and embodying my invention;

Fig. 4 is a plan of the nose gripping portion of my device; and

Fig. 5 is an enlarged section on the line 5—5 of Fig. 4.

The outer framework of the nose consists of a bony, immobile upper part, indicated in Figure 1 by reference numeral 2, and a cartilaginous, compressible lower part, indicated by reference numeral 4. An internal, intervening partition 6, known as the nasal septum, separates the right from the left system of air spaces, and is also the medium by means of which lateral compression of the cartilaginous compressible part of the nose completes the mechanical closure of the nostrils and the anterior-most part of the air spaces, thus obviating the entrance of water into the nose, sinuses, and ear chambers.

The compression medium of my invention consists of a clip 8, which is formed of a strip 9 of spring material, preferably steel, fashioned into substantially U-shape, with heel 10 thereof being curved. Ends 12 of arms 14 of this U-shaped clip are provided with circular, saucer shaped plates 16. Preferably, I form plates 16 as an integral part of the strip 9 of which the clip is made as by merely flattening and rounding the ends thereof, although, if desired, the plates may be added on to and secured to the ends of the clip.

The opposing surface portions 18 of plates 16 are curved inwardly; that is, their surface portions are convex to each other, and plates 16 are angled so that they are relatively biased, the

distance between the plates at front 20 thereof being less than the distance therebetween at back 22. Most noses are narrower at the front than at their bases, i. e., most noses dwindle in width from the face outwardly to the anterior edge, and by angling the plates and curving their surface portions as above set forth, the plates will abut squarely against the surfaces of the nose to be gripped, and a better and more lasting grip will be secured.

The entire clip 8, arms, plates and all, is completely covered and surrounded by a thin layer or sheath 24 of resilient material, preferably rubber, although other materials, such as felt, may be employed for this purpose. This covering 24 serves to protect the skin from the material of which the clip may be made, and will act as a cushion to absorb the spring pressure of plates 16 and reduce the irritation which must inevitably be caused by the presence of a device to close the normally open nostrils. Surface portions 18 of covering 24 may be provided with surface irregularities such as minute holes 26, although corrugations, serrations or scorings may be employed in order to roughen the surface portions 18 and produce a friction grip which will keep clip 8 from slipping from the nose when once it has been adjusted in place thereon.

I provide a band 28 of elastic material, also preferably rubber, and secure the ends 30 thereof about the middle of arms 14 of the U-member 8. Band 28 is expanded and passed over and around the head of the wearer, and its constriction will serve to bind and secure the clip to the head. When both cover 24 and band 28 are of similar rubber material, as is preferable, band ends 30 may be merged with and blended into the material of which sheath 24 is made, so as to reduce bulk and provide a smooth and continuous surface.

The device is put on as follows: arms 14 and plates 16 are spread, against their normal tendency to approach each other. With arms 14 in the distended position, clip 8 is slipped up on the nose until heel 10 approaches the underside of the nose and plates 16 extend upwardly of the nose and are directed against the sides of the nose immediately below the bony framework. Upon release of the arms, the inherent resiliency of the spring will cause arms 14 and plates 16 to approach each other and press against nostrils 4 and cause nostrils 4 to press against septum 6. As the nostrils approach and abut against the septum, the passageway through the nose is blocked off and completely closed. Band 28 is then expanded and passed over and behind the head of the wearer, and fitting on the ears on the sides of the head, contracts to keep clip 8 from slipping or falling from the position on the nose at which the plates were permitted to approach each other and clamp onto the sides of the nose. Both the contraction of the spring material of clip 8, and the elastic material of band 28 serve to keep the device in place when once it has been put on.

The nose clip and band are light, foldable into very small compass, contain no relatively movable parts, and are easy and simple to put on and take off. It provides a positive safeguard against water entry into the skull air chamber system, and effectively reduces the risk of infection during contact with water. If desired, my clip may be made in a variety of sizes, to accommodate it for use with different nose and head sizes.

Having now described my invention, what I claim and desire to secure by Letters Patent is:

1. A device for closing the nostrils by compressing the nostril sides against the intermediate septum comprising a substantially U-shaped member formed of a single flat strip of spring material having enlarged extensions at the ends thereof and integral therewith forming plates, said plates being relatively biased, the distance therebetween on one side thereof being greater than at the other the surfaces of which are bowed so that said plates are relatively convex, said arms and the extensions therefrom being slightly inclined to each other, the entire device being covered with a layer of resilient material, whereby the spring material will not come into direct contact with the nose.

2. A device for closing the nostrils by compressing the nostril sides against the intermediate septum comprising a substantially U-shaped member formed of a single flat strip of spring material having enlarged extensions at the ends thereof integral therewith forming plates, the surfaces of which are bowed so that said plates are relatively convex, said arms and the extensions therefrom being slightly inclined to each other, the entire device being covered with a thin layer of rubber, and having a rubber band, merging with the aforementioned rubber layer on the clip, each end of which band is secured to one of the U-arms, said band upon expansion being adapted to pass around the head of the wearer and secure the device thereto upon constriction thereof.

DAVID MEZZ.