Dec. 12, 1944. H. W. WILKINSON 2,365,032

EYE PAD

Filed Dec. 22, 1941

FIG_1_

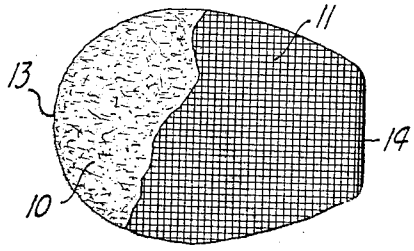


FIG_2_

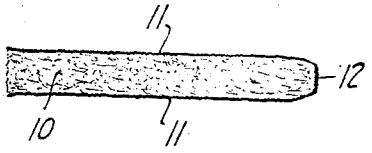


FIG_3_

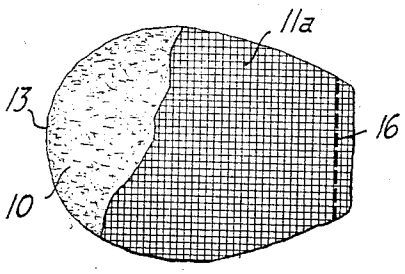
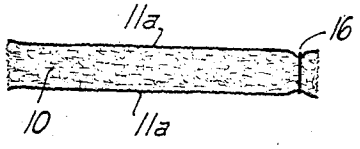


FIG_4_



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EYE PAD

Hall Weldon Wilkinson, San Jose, Calif.

Application December 22, 1941, Serial No. 423,911

3 Claims. (Cl. 128—163)

This invention relates to eye pads and particularly to an eye pad comprising an inner layer of absorbent material interposed between opposite layers of sheeted covering material and of the character commonly used in medical practice as an absorbent dressing, such as a surgical type of dressing, for application over the eye of a patient.

In use, an eye pad of this character, and of the character contemplated by my invention and disclosed herein, is intended to be applied in and over the recession of the orbital region of the face with one flat surface of the pad in direct contact with the eyelids and with the pad as a whole filling in the orbital recession and accommodating itself to the bony conformation of the orbital area. The pad is usually fixed in the desired position by means of several or more strips of ordinary adhesive tape extended across from the brow to the check and from the nose to the temple area and applied tautly enough that the mild pressure thus exerted on the pad is transmitted through this element and to the eyelids themselves. The primary purpose of the pad is to hold the eyelids closed and effectively immobilized by means of this slight pressure thus exerted against them, thereby to protect any injured, diseased or surgically operated portion of the eyeball or other ocular structure from the undesired effects thereon which result from unrestricted movement of the eyelids, while at the same time providing a soft and porous element for the absorption of secretions deriving from the covered eye.

To accomplish this primary purpose satisfactorily during the usual but variable intervals between changes of the dressing, which are most often from three to six hours but may be as long as from twelve to twenty-four hours, an eye pad must maintain its original shape, position and thickness; otherwise the pressure of the pad against the eyelids, which is necessary for immobilization of these parts, cannot be sustained continuously or in sufficient degree to insure this desired restriction of eyelid movement.

The eye pads of this general character which have already been devised and used do not accomplish this purpose satisfactorily because their improper construction results in several disadvantageous features. In the first place, presently known pads after being fixed in position over the orbital area readily lose their original shape within a few hours by getting mussed up from the natural distorting effects of ordinary usage. Secondly, they easily get twisted out of their original position because of spreading and slippage between the opposing flat surfaces of the pad, so that part of the pad may come unduly to overlap the brow, temple or cheek bone. Thirdly, they fail to maintain for a sufficient length of time the desired restriction of eyelid movement. This is due to the fact that the loss of original shape and position resulting from the spreading and slippage just mentioned materially reduces the original thickness of the pad and permits it to become loose in situ, thereby subtracting from the mild pressure that was originally applied against the pad and eyelids by the fixating strips of adhesive tape and that is necessary for maintenance of eyelid immobilization. In the fourth place, difficulty is frequently experienced in satisfactorily or conveniently fixing present eye pads in the desired position in the orbital recession because they get out of shape even due to the gentle manual handling during this procedure. This is a distinct disadvantage because proper placement and fixation of a non-distorted pad is essential to the end of maximal performance of function. Lastly, from a cosmetic standpoint, they quickly become unsightly in appearance as a direct result of the above shortcomings. These disadvantages of known eye pads and the consequent failure of said pads to satisfactorily perform the functions desired of them because of the reasons mentioned, are due to the fact that they are improperly designed.

The eye pad of my invention contemplates a distinct improvement over previous eye pads because it is so designed and constructed as to eliminate and overcome the above mentioned disadvantages. In my improved eye pad this is accomplished by means of a constructional feature that renders my eye pad resistant to physical forces tending to distort it out of shape, thus enabling my eye pad to effectuate, insure, and secure for its user maximum performance of the functions and purposes sought in the employment of such a pad. Because of this resistance to distortion resulting from my improved construction my eye pad (*a*) satisfactorily maintains its original shape during usage for as long as several days, (*b*) does not get twisted out of its original position in the orbital recession, (*c*) maintains for a sufficient length of time the desired immobilization of the eyelids because factors (*a*) and (*b*) preserve original thickness of the pad and therefore maintain the original pressure applied to the eyelids through the pad by the fixating strips of adhesive tape or other type of fixating means, (*d*) adequately retains its original shape under manual handling incident to usage and placement in position over the eye, thus assuring the user a pad which can be very easily and conveniently fixed in proper position

in the very beginning so as to secure maximum performance of function, and (*e*) retains a neat appearance during usage as a result of facts (*a*) and (*b*) and because it is properly shaped and dimensioned for adaptation to the anatomical conformation of the orbital area.

The particular feature of constructional design embodied in the eye pad of my invention which imparts to it the above features of functional utility not now possessed by presently known eye pads, is the incorporation in its construction of a distortion-resisting connection between the opposed outer retaining layers of sheeted material which reinforces the pad and renders it resistant to torsional stresses without impairing its other necessary physical properties.

Other objects and advantages of the invention will be apparent from the following description of certain preferred embodiments, as illustrated in the accompanying drawing, in which:

Figure 1 is a plan view of an eye pad constructed in accordance with the instant invention with a part of the covering broken away.

Figure 2 is a side view of the eye pad shown in Figure 1.

Figure 3 is a plan view of a modified form of eye pad.

Figure 4 is a side view of the eye pad shown in Figure 3.

Figures 1 and 2 show in full size a preferred form of eye pad embodying the instant invention, the pad comprising a layer 10 of a suitable absorbent material such as the absorbent cotton commonly employed for surgical purposes, which is interposed between opposite layers 11 of permeable sheeted material, such as a coarse mesh surgical gauze or other suitable material, which are co-extensive with the absorbent layer and serve as covering and retaining layers therefor. The layers 11 are provided with a reinforcing, distortion-resisting connection 12 which extends between the covering layers while leaving the major portion of the peripheral edge of the absorbent layer exposed. Connection 12 is preferably integrally formed with the gauze retaining layers 11 so that the retaining layers 11 and the connecting strip or end portion 12 are formed of the same uninterrupted sheet of gauze.

As seen in Figure 1, the eye pad has a generally oval contour with a rounded nasal end 13 and a substantially straight-edged temple end 14. The major width dimension of the pad is closer to the nasal end 13 than to the temple end 14 and preferably the pad has its curvature slightly decreased from the nasal end toward the temple end so that it tapers toward the temple end 14. The width of the temple end 14 is preferably such as to lie between the greatest prominences of the brow bone and the cheek bone so as to be adaptable to the contour of the orbital area and facilitate proper application of the fixating strips of adhesive tape. The reinforcing connection 12 is preferably located at the temple end of the eye pad, i. e., at the portion of the pad which is least protected by bony orbital prominences. It will be noted that with the connection 12 at the temple end of the pad, the entire periphery of the pad will be protected against scuffing when applied to an eye, this protection being afforded in part by the connection 12 and otherwise by bony prominences around the orbital area.

Figures 3 and 4 illustrate a modified construction in which the layer of absorbent cotton 10 is placed between two covering layers of surgical gauze 11*a* which are connected along the entire temple edge of the pad by loose stitching 16. The stitching should be of the character where the ends of the thread are tied or otherwise secured in place to prevent unravelling.

In use, the eye pad is placed over the orbital recession with the eyelids closed and with the nasal end 13 closely adjacent the nose of the patient and the temple end 14 adjacent the temple between the brow and cheek bone of the patient. The pad is then taped in place by the use of usual adhesive tape, one strip of tape being applied across the temple end of the pad diagonally from the brow bone to the cheek bone, another strip of tape being applied across the nasal end of the pad diagonally from the brow bone to the cheek bone, and a third strip of tape being applied horizontally from the bridge of the nose to the temple area. The absorbent cotton 10 provides for absorption of any eye secretions and is of a thickness to provide the desired pressure on the eyelids to maintain them closed.

It will be apparent from the above description that the provision of a reinforcing connection between the covering layers of the pad effectively prevents distortion of the pad. The utility of the reinforcing connection is further enhanced when the pad is in place if located at the temple end. In this way, the eye pad maintains itself in its original shape, position and thickness so as to exert for the required period of time the amount of pressure necessary for the desired immobilization of the eyelids.

I claim:

1. An eye pad for positioning in the orbital recession of the eye of a patient, said pad comprising an inner layer of compressible absorbent material and outer layers of permeable sheeted material engaging the respective side surfaces of said inner layer, said pad being shaped to provide a rounded nasal end and a temple end of reduced width to lie between the brow and cheek bones of a patient, and a reinforcing connection between said outer layers at one end only of said pad, said compressible absorbent material constituting the sole means other than said reinforcing connection capable of substantially resisting relative movement between said outer layers.

2. An eye pad for positioning in the orbital recession of the eye of a patient, said pad comprising an inner layer of compressible absorbent material and outer layers of a permeable sheeted material engaging the respective side surfaces of said inner layer, said outer layers being joined by a connecting strip extending across a minor portion only of the edge of said absorbent material with a major portion of said edge exposed, said outer layers and said strip being formed integrally from the same uninterrupted sheet of material, and said compressible absorbent material constituting the sole means other than said connecting strip capable of substantially resisting relative movement between said outer layers.

3. An eye pad for positioning in the orbital recession of the eye of a patient, said pad comprising an inner layer of absorbent material and outer layers of permeable material, said outer layers being connected together along a minor portion of the pad periphery, said outer layers being free and unconnected along the major portion of the pad periphery, and the major portion of the periphery of said absorbent material layer being free from peripheral confinement by said outer layers.

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