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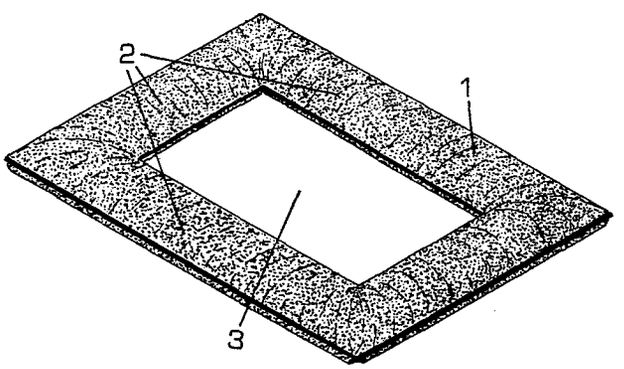
(54) Cushion with central passing aperture for cervical arthrosis sufferers, and procedure for construction.

(57) Cushion consisting of an internal structure, preferably made of expanded polyurethane, with internal springs or of typical known materials, of the traditional shape but equipped with a central passing rectangular, square, circular, oval or any other shape aperture in which the sleeper's head may be inserted. At the same time, it holds the neck with no vending since it is supported by the perimetrical structure, in whatever position is assumed.



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Cushion with central passing aperture for cervical arthrosis sufferers, and procedure for construction

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This invention concerns a cushion that offers relief to those suffering from cerebral arthrosis and also prevents the onset of related conditions.

It is known that the unnatural position of the neck during sleep, in contact with the more or less swollen and hard cushions currently used leads frequently to the onset of cervical arthrosis, shown to be a wide-spread phenomenon today.

The aim of this invention is to supply a cushion coadjuvant in the therapy of cervical arthrosis, low in cost and of enhanced functionality.

This aim is achieved with a cushion consisting of an internal structure, preferably made of expanded polyurethane, with internal springs, or of typical known materials, of the traditional shape but equipped with a central passing rectangular, square, circular, oval or any other shape aperture in which the sleeper's head may be inserted. At the same time, it holds the neck with no bending since it is supported by the perimetrical structure, in whatever position is assumed.

It is evident that in this way the use of the cushion is not dependent on a precise position of the head relative to the structure.

In one variant of the invention, said central aperture of the internal structure of the ucshion may be divided into two or more secondary apertures.

In a further variant, said central aperture may be filled to a thickness less than that of said perimetrical swelling.

Furthermore, in order to prevent any deformation, the perimetrical structure described may eventually have spacers on the opposite sides of any type. In one of their simplest variants, said spacers consist of several thread stitches applied, in correspondence with the internal part of the central passing aperture, between the sopposite lengths of the necessary lining containing said cushion.

With regard to the procedure for constructing the internal structures of the expanded polyurethane cushions, they are shaped using high frequency welders.

However, it is known that expanded polyurethane cannot be hot welded because of thedanger of fire and also because of the fumes resulting from the increased temperature, and that the traditional high frequency welders

have no weld effect. THerefore, when they are applied directly to the portions of said material, the welding of the internal parts of the cushions and the like is effected according to the present invention by using a counter-punch shaped as required. First there is a layer of 100% cotton (or synthetic fiber blend) material, then the polyurethane to be welded and a second layer of material as above, before the punch to give the welding shape. When the high frequency generators are then powered, equipped with electronic welders, the electromagnetic waves, passing through the two layers of material, easily and perfectly effect the welding of the polyurethane parts.

Finally, once the cushion has been constructed, including the insertion of the internal polyurethane structures in the respective lining, the invention provides that each cushion may be inserted in one or more transparent plastic bags (or not), placed beneath a press of known type and emptied of air. At the same time the open side or sides of the container bags are hot welded, with resulting vacuum or semi-vacuum packaging, as a function of the number of bags used.

A preferred embodiment of the invention is shown in the enclosed drawing in figures 1, 2 and 3.

Figure 1 shows an axonometric view of the internal structure, in expanded polyurethane.

Figure 2 shows the packaging with lining and eventual spacer points.

Figure 3 shows the cushion in its final preparation, after passage under the press and welding of the plastic containers.

The details of the drawings show internal structure 1, in expanded polyurethane, prepared using the high frequency welding procedure, characterized by the perimetrical swellings 2 and the central passing aperture 3, said structure 1 being inserted in lining 4 and eventually blocked, with passing spacer points 5 and then placed in single or multiple bag 6 of plastic materials and hot welded to effect an air seal.

Naturally, while the principle of the invention remains the same, the forms of realization and the details of construction may be varied widely from that reported here without going beyond the bounds of the invention.

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Claims:

1. Cushion consisting of an internal structure, preferably made of expanded polyurethane, with internal springs, or of typical known materials, of the traditional shape but equipped with a central passing rectangular, square, oval or any other shape aperture in which the sleeper's head may be inserted; at the same time, holding the neck with no bending since it is supported by the perimetrical structure, in whatever position is assumed.

2. Cushion as claimed in claim 1, wherein said central aperture of the internal structure of the cushion may be divided into two or more secondary apertures.

3. Cushion as claimed in the preceding claims, wherein said central aperture may be filled to a thickness less than that of said perimetrical swelling.

4. Cushion as claimed in the preceding claims, characterized by the presence of spacers on opposite sides of the perimetrical structure to prevent deformations.

5. Cushion as claimed in the preceding claims, wherein said spacers consist of several thread stitches applied, in correspondence with the internal part of the central passing apertures, between the opposite lengths of the necessary lining containing said cushion.

6. Procedure for the construction of cushions shaped as in the preceding claims characterized by the use of high frequency welders, using a counter-punch shaped as required; first there is a layer of 100% cotton (or synthetic fiber blend) material, then the polyurethane to be welded and a second layer of material as above, before thepunc h to give the welding shape; when the high frequency generators are then powered, equipped with electronic welders, the electromagnetic waves, passing through the two layers of material, easily and perfectly effect the welding of the polyurethane parts.

7. Procedure for the construction of cushions shaped as in the preceding claims characterized by the insertion of the internal polyurethane structure in one or more plastic bags, followed by placement beneath a press and hot welding of the open side or sides, to effect a cavuum or semi-vacuum packaging, as a function of the number of bags used.

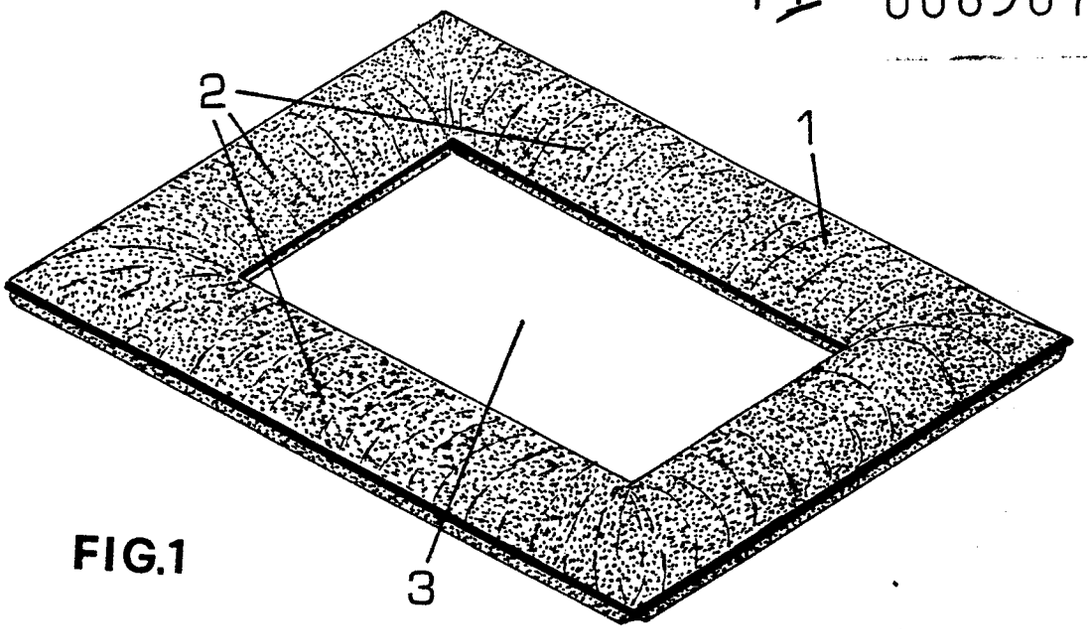

FIG.1

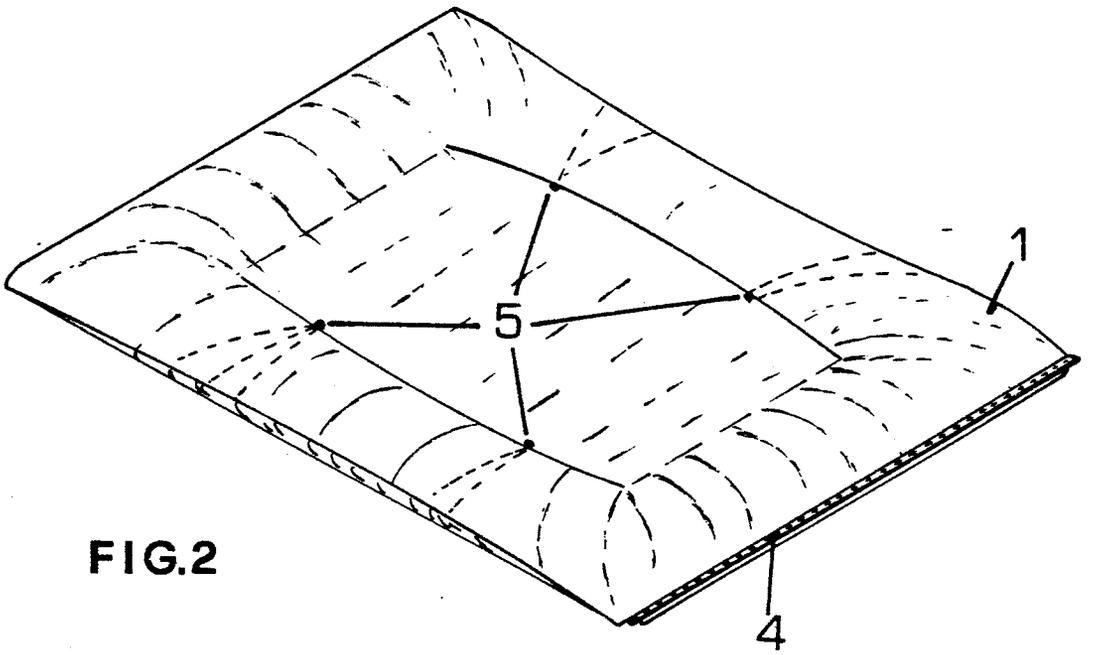

FIG.2

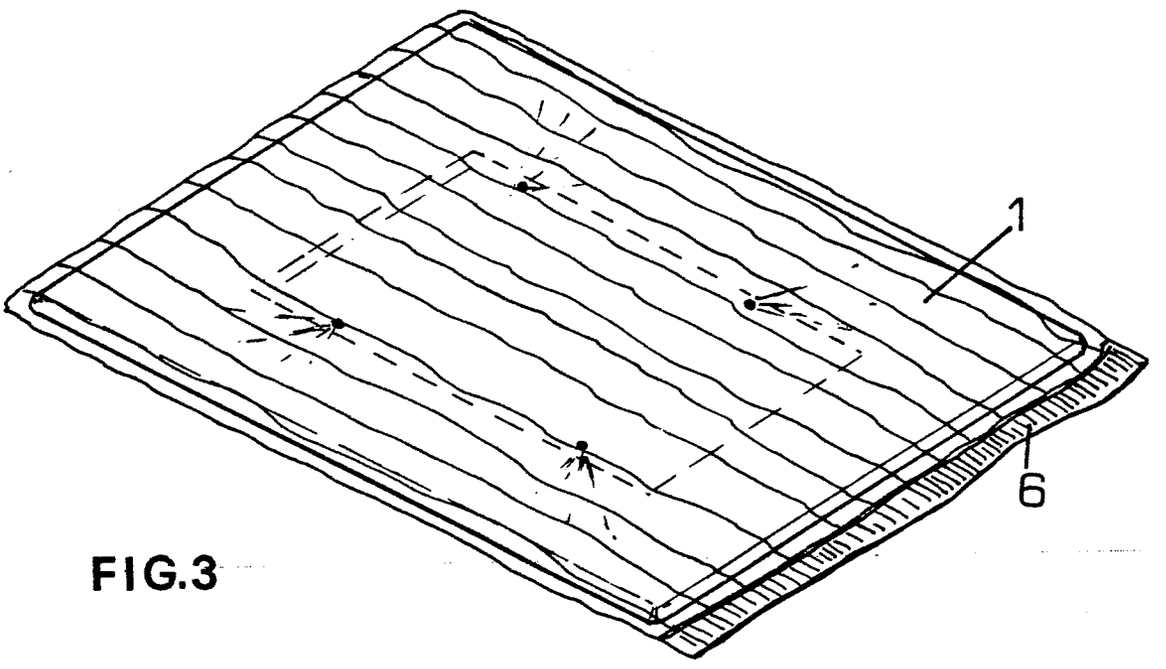

FIG.3