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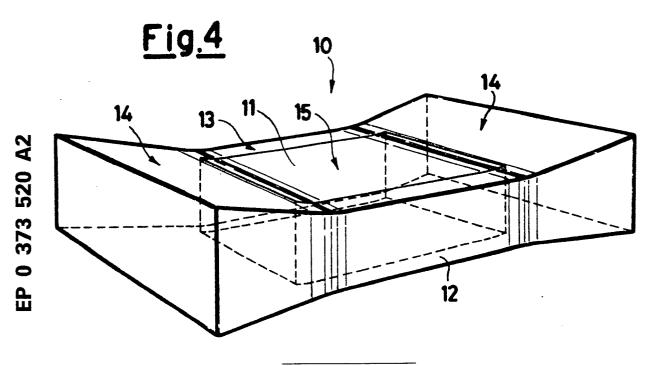
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- Ergonomic cushion, particularly for the prevention and/or therapy of cervical problems.
- © Ergonomic cushion (10) for the prevention and/or therapy of cervical problems constituted by a central element (11) connected to an outer element (12) of composite shape having a gradually increasing section, made of materials able to supply a differentiate thrust, completed with a cushion-case of elastic material.



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## ERGONOMIC CUSHION, PARTICULARLY FOR THE PREVENTION AND/OR THERAPY OF CERVICAL PROBLEMS

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The present invention refers to an ergonomic cushion particularly for the prevention and/or therapy of cervical problems.

Numerous types of cushion of varied shapes and made of different materials are known.

Substantially all these known cushions lead to assume, during sleep, a wrong position especially as regards the cervical region of the spine, with consequent anomalous stresses both for the spine and the musculature of the neck and shoulders.

This does nothing but produce or even increase the problems of the cervical region.

The main object of the present invention is that of obviating the drawbacks shown by the known cushions by providing a new cushion able to enable a person to assume during sleep a right position of the cervical column.

Another aim of the present invention is that this right position, able to avoid the arising or the worsening of noises to the column, can be assumed either when a person sleeps lying on the back or on the side.

With these ends in view, it has been provided an ergonomic cushion for the prevention and/or therapy of cervical problems characterized by the fact of being constituted by a first central element connected to a second outer element of composite shape, said first central element being entirely surrounded by said second element and moreover said first and second element being integral to each other.

Always according to the present invention, said first element is made of a material having a thrust reaction less than that of said second outer element

Moreover said second element is constituted by a partially empty parallelepipedal central portion continuously connected to two end portions having a section gradually increasing upward and sideward.

Moreover said empty space in said parallelepipedal central portion on its turn is a parallelepipedal empty space.

According to another preferred embodiment of the present invention said empty space in said central portion is a spheroidal empty space.

Preferably said first central element and said second outer element are made of latex foam of natural or synthetic rubber at different densities, said latex foam of said first central element having a density lower than said latex foam used for said second outer element.

In alternative to a preferred solution said cushion can be a cushion in which said first central element and said second outer element are made of polyurethane foams at different densities, said polyurethane foam of said first central element having a density lower than said polyurethane foam of said second outer element.

Preferably said first element has a substantially parallelepipedal or spheroidal shape.

In the end said first central element and said second outer element have a flat bearing base.

Moreover the present invention concerns a cushion-case and/or a covering for a cushion mainly constituted by a parallelepipedal central portion connected to two end portions having a section gradually increasing sideward and upward. Preferably the cushion-case is provided with a seam extending along the edge of each one of the greater sides.

In order to better understand the characteristics and further advantages of the present invention, this latter is described and illustrated in a non-limiting example, with reference to the attached sheets of drawing in which:

FIGURE 1 is a top plan view of a cushion according to the invention;

FIGURE  $\underline{2}$  is a section made along line II-II of figure 1;

FIGURE 3 is a section made along line III-III of figure 1;

FIGURE 4 is a perspective view of the cushion of figure 1; and

FIGURE 5 is a sectional partial view of a cushion according to the invention provided with a cushion-case or covering having lateral seams.

With reference to the figures, reference numeral 10 indicates a cushion according to the invention, constituted essentially by a first central element 11 and a second outer element 12.

The outer element 12 is provided in its central portion with an empty space and surrounds the central element 11 that according to a preferred embodiment of the invention has the shape of a parallelepiped.

The central element 11 is connected in a continuous manner to the outer element 12 which has in a central zone, indicated on the whole with 13, a substantially constant section connected in a continuous manner to two end portions indicated on the whole with 14. Said two portions 14 have a section gradually increasing upward and sideward.

The result is a cushion having a completely flat bearing surface 15, two end portions 14 of dimensions gradually increasing towards the edges of a central zone 13 having a substantially constant section.

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The central element 11 is made of a material having a thrust reaction less than that of the outer element 12.

It is preferred to use a latex foam of natural or synthetic rubber, having a lower density for the central element 11 and a higher density for the outer element 12.

The two parts made of latex foam are joined together through an adhesive process.

According to an embodiment the latex foam of both elements comprises a plurality of preferably through cells.

Alternatively, it is possible to use polyurethane foams at different densities, i.e. to obtain a cushion with systems of springs at diversified thrusts.

Moreover the central element 11 can have a configuration different from the parallelepipedal one, and alternatively said central element 11 can be of a spheroidal shape.

It is important to note how the projecting parts of the end portions 14 have been studied to follow the shape of the shoulders of the middle man, so as to favour a right position of the cervical column when lying on the back with the head on the cushion.

Instead when a person lies on the side, the thickness of the cushion will counterbalance the distance between the shoulder and the neck so that the head is again in the right position.

From a careful test on the habits of the middle man, it is found that lying on the back the person sleeps in the middle of the cushion; in this position it is necessary to have a support for the neck and a softer support for the head. In order to assume a right position, the cushion according to the invention will supply the due support for the neck with the central zone 13 of the outer element 12, while the head will lay on the central element 11 made of a material having a less thrust reaction.

Instead lying on the side it is proved that mostly the cushion is used on the lateral part, being thus in need of a support either for the neck or for the head so as to counterbalance the difference of level created by the distance between the end of the shoulder and the neck.

For this reason it is necessary to provide a support having increasing dimensions and made of a material having greater thrust characteristics.

Consequently, the cushion of the present invention provides the end portions 14 of the outer element 12 that satisfy these needs.

It is clear how the cushion of the present invention allows to assume a right position of the cervical column both when a person sleeps lying on the back and on the side.

Moreover the present invention concerns a cushion-case and/or covering 16 for the above disclosed cushion 10 mainly constituted by a paral-

lelepipedal central portion 20 connected to two end portions 21 having a section gradually increasing sideward and upward.

Preferably the cushion-case 16 is provided with a seam 17 extending along the edge of each one of its greater sides. Also, preferably the cushioncase 16 is of elastic material.

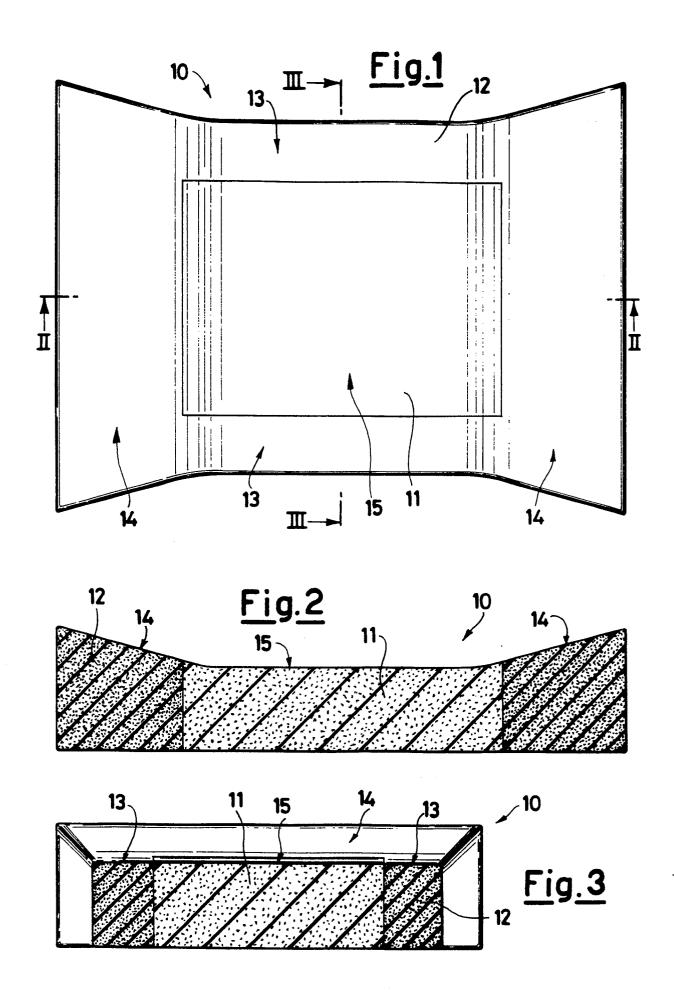
The present description is to be considered by way of explanation, as it can include modifications and variants to be made by the skilled in the art without falling out of the field of protection of the present patent application.

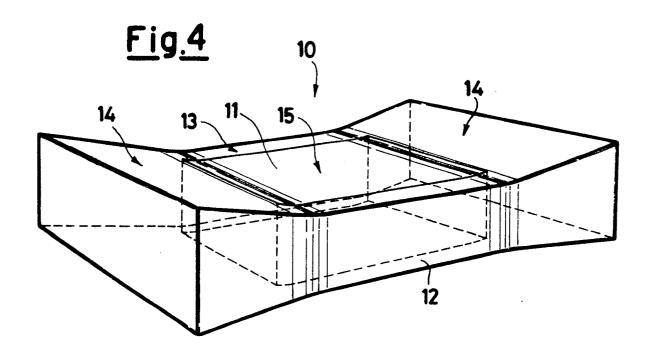
## Claims

- 1. Ergonomic cushion (10) for the prevention and/or theraphy of cervical problems characterized by the fact of being constituted by a first central element (11) connected to a second outer element (12) of composite shape, said first central element being entirely surrounded by said second element and moreover said first and second element being integral to each other.
- 2. Cushion according to claim 1, characterized by the fact that said first element (11) is made of a material having a thrust reaction less than that of said second outer element (12).
- 3. Cushion according to claim 1, characterized by the fact that said second outer element is constituted by a partially empty parallelepipedal central portion (13) connected in a continuous manner to two end portions (14) having a section gradually increasing upward and sideward.
- 4. Cushion according to claim 3, characterized by the fact that said empty space in said parallelepipedal central portion is on its turn a parallelepipedal empty space.
- 5. Cushion according to claim 3, characterized by the fact that said empty space in said central portion is a spheroidal empty space.
- 6. Cushion according to claims 1 and 2, characterized by the fact that said first central element and said second outer element are made of latex foam of natural or synthetic rubber at different densities, said latex foam of said first central element having a density lower than said latex foam used for said second outer element.
- 7. Cushion according to claims 1 and 2, characterized by the fact that said first central element and said second outer element are made of polyurethane foams at different densities, said polyurethane foam of said first central element having a density lower than said polyurethane foam of said second outer element.
- 8. Cushion according to claim 1, characterized by the fact that said first element has a substantially parallelepipedal shape.

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- 9. Cushion according to claim 1, characterized by the fact that said first element has a spheroidal shape.
- 10. Cushion according to claim 1, characterized by the fact that said first central element and said second outer element have a flat bearing base.
- 11. Cushion-case and/or covering (16) for a cushion according to one or more of the preceeding claims mainly constituted by a parallelepipedal central portion (20) connected to two end portions (21) having a section gradually increasing sideward and upward.
- 12. Cushion-case and/or covering as in claim 11, characterized by the fact of being provided with a seam (17) extending along the edge of each one of the greater sides.





<u>Fig.5</u>

