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(12) # EUROPEAN PATENT APPLICATION

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(54) **Device for controlling headaches.**

(57) A device for controlling headaches which comprises a spring clip having a pair of opposed gripping jaws adapted for being applied under spring bias onto a human ear.

The gripping jaws may be adjustable in gripping width/or gripping power and may have an inclined arcuately recessed edge at their free end.

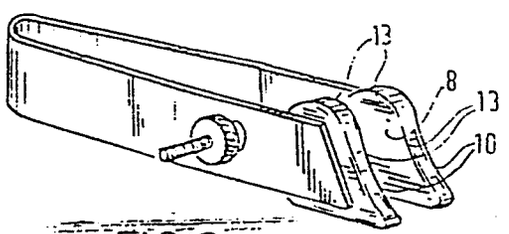

FIG. 2

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Device for the relief of headache

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The following description concerns an invention which relieves headache or makes headache disappear. In the field of acupressure/acupuncture it has been known for a long time that headache can be made to disappear by exerting pressure on the appropriate places on the ear-lobe. This is done manually. Using this knowledge a device has been invented which by reason of its form and applicability can be placed on the ear-lobe, rendering pressure with the fingers unnecessary. The underlying principle of the invention is that if a strong surface pressure is achieved by adjusting the pressure-pads using an adjusting screw between the two arms, no pressure point can arise and stop or restrict the flow of blood. The invention has become an aid which anyone can use without special instruction in order to relieve headache. With the hand - the method used hitherto - it is almost impossible to maintain this same constant pressure, in that intermittent interruptions occur in the therapy. Tests with the invention have shown that the pressure-pads can produce the pressure needed to make the headache go away and can keep this pressure constant. Here too the basic idea is that the surface pressure can be adjusted.
The span and thus the gripping power of the clip can be adjusted. This means that the invention can be used by various people with various shapes of ear and ear-lobes of varying thicknesses.

The invention is of universal use not only because of the data mentioned above but also because of the shape of the pressure-pad. This is adapted to the anatomical shape of the ear-lobe. The pressure-pad has a specially curved top which ensures that the only points that are affected are those that correspond to the headache area.

From DE-A-2915500 a clip is known which does in fact cause a pressure point, either by means of a ring ending in a point or by means of the small surface area. Consquently with this clip it is not possible to achieve the constant (adjustable) pressure.

Furthermore, if the layman uses this clip it is almost impossible for him to find the precise spots on the ear where it should be fixed. Therefore in my invention the clip is shaped more in accordance with the anatomy. Pressure at one point is bound to restrict the blood-flow to a certain extent.

FR-A-2466244 is a clip the sole purpose of which is to keep in place a magnet that is used for treatment. It is presumed that the treatment will be magnetic. Magnetism has a different effect on the body than pressure.

From DE-A-2703315 and PCT 81/00202 a clip is known which is supposed to be able to remove pain by means of acupressure, the clip being placed on some part of the body, but not specifically on the ear. One of the arms of this clip has a rounded end which cannot possibly give an evenly distributed surface pressure.

DE-A-427041 and GBA 385.992.
These applications concern a method of treatment which involves putting pressure on the nose. The pressure-pads are not flat. In neither invention can the pressure be increased.

FRA-2419063 concerns a device resembling a pair of scissors which will never be able to produce surface pressure. Furthermore, the pressure is not adjustable.

The description of the invention will be clarified below, with the help of drawings.
The drawings show schematically the following:

Figures 1 and 2: a side-view and a view from an angle of the invented device in the preferred design,

figure 3: the device of figure 1 when fixed to the ear, and

figures 4 and 5: a frontal- and side-view respectively of the invented device according to a different preferred design.

The device 1 depicted in figures 1 to 3 consists of a sprung brace (2) with two arms (3), each bearing a pressure-pad (4) at the open end. A pin (5) passes through screwless holes (not drawn) in both arms (3) and is kept in place by a milled bolt (6) outside and against one

of the two arms (3) and by another milled nut (7), screwed on to the pin (5), outside and against the other arm. Each pressure-pad (4) has a flat surface (8) so that an ear-lobe (9) can be caught in between with an even thickness, whereby a surface pressure, distributed evenly over each pad-surface (8), is exerted on the ear-lobe (9). To fit the ear, i.e. to prevent catching in parts of the ear which contain cartilage, each pressure-pad (4) has been given an undulate upper edge (10). The pressure-pads (4) have rounded edges (13) to prevent sharp and painful pinching at the edges.

The device is attached to one of the ear-lobes (9) of the person who has a headache. Whenever as a result of increasing the pressure by tightening nut (7) the headache is found to be less severe, or better still, to have disappeared completely, one leaves the device (1) in position on the ear-lobe at that particular pressure or opened to that precise distance, for instance, for 20-30 mins, judging according to experience how long is needed to reduce the headache. The clip must be kept on the ear-lobe for at least 20 minutes and it is advisable for the patient to rest during this time. If the headache does not disappear when the clip is attached, apply the clip to the other ear-lobe (9). For each person only one of the two ear-lobes (9) is suitable for treatment. The reason for this is that the definition of laterality is different for everyone. However, you can attach a device (1) to both ear-lobes at the same time. In figure 3 the points (11) corresponding to those on the ear which are related to the headache are marked with dots. Device 21 depicted in figures 4 and 5 differs from device 1, in that a screw-fixture (23), for adjusting over the surfaces the surface pressure that the patient requires, consists of a milled disc (22) with projecting screw-ends (24) at each side, one with a left thread and the other with a right thread, which are fixed to the nuts (25) soldered to the arms (3) which are thus coupled with the pressure-pads (4).

The invention is not restricted to the model shown and described. For instance, one can make the pressure-pads out of hard plastic or flexible material or provide them with a soft cushioned covering.

CONCLUSIONS

1. Device (1) for the relief of headache, characterised by two pressure-pads (4) which can be clipped tightly to the ear; there is a means available to adjust the pressure-pads (4), which exert surface pressure on the ear-lobe, so that this pressure is in principle distributed evenly over the surfaces of the pressure-pads.

2. Device (1) in accordance with conclusion 1, with this special feature: the span between the pressure-pads (4) is adjustable.

3. Device (1) in accordance with conclusion 1 or 2, with this special feature: the pressure exerted by the pressure-pads (4) is adjustable.

4. Device (1) in accordance with conclusions 1, 2 or 3, with this special feature: both of the pressure-pads (4) have a curved upper edge.

5. Device (1) in accordance with conclusion 4, with this special feature: the curved upper edge (10) dips slightly towards the middle.

6. Device (21) in accordance with one of the foregoing conclusions, characterised by a screw (23) which via a left or a right thread is fixed to the two arms that hold the pressure-pads (4).

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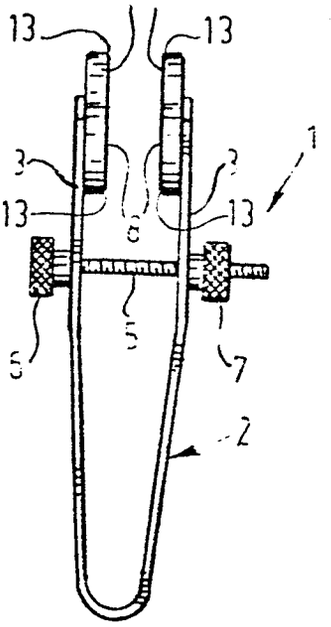

FIG. 1

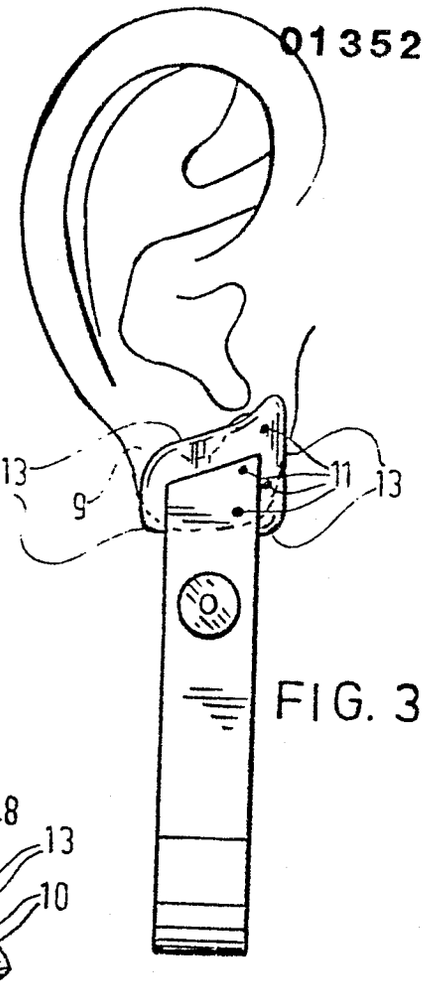

FIG. 3

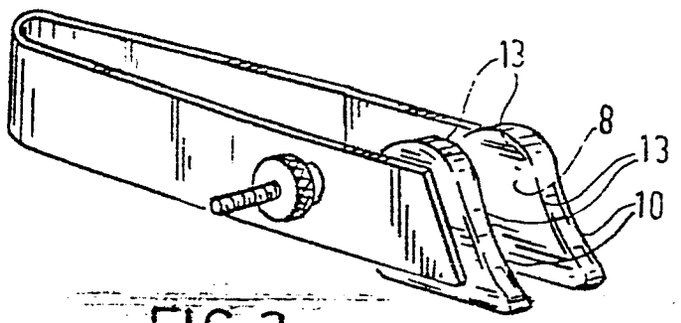

FIG. 2

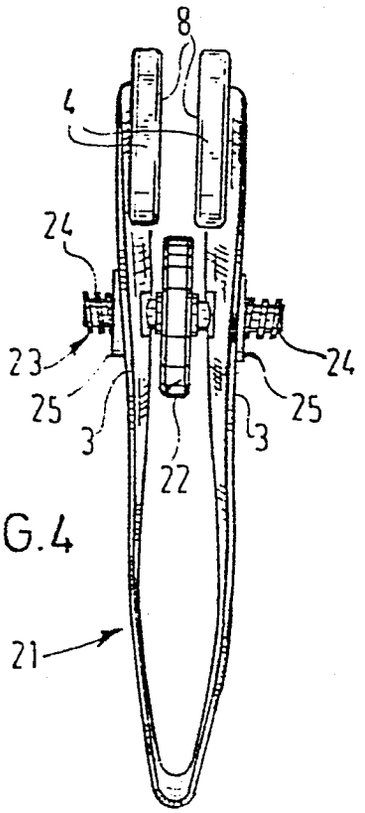

FIG.4

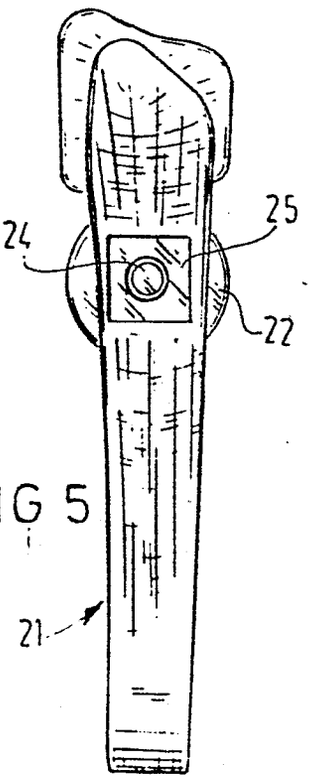

FIG 5