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(54) **Armrest**

Armlehne

Accoudoir

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• **PATENT ABSTRACTS OF JAPAN vol. 2003, no.
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2004 (2004-07-08)**

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Description

[0001] The present invention relates to an armrest for worktables or the like, including laminar flow benches, glove boxes, fume cupboards, and work benches, primarily in the laboratory trade.

[0002] It is well known to provide worktables or writing desks with an armrest or support plate.

[0003] The known constructions have the disadvantage that they are fixed to the table so that they cannot be moved freely around on the table. This means that they are not usable in laboratory equipment, since they will interfere with the laminar flow in glove boxes; fume cupboards, and laboratory work benches. A movable armrest is known from US 4 069 995 A.

[0004] It is an object of the present invention to provide a rotatable and weight adjustable armrest.

[0005] According to the invention the above and other objects are fulfilled by provision of an armrest having an arm supporting member for supporting a human arm, and a base member supporting the arm support member and having a bottom surface for positioning on a work surface.

[0006] The bottom surface of the base member may be a substantially plane surface. Alternatively, the bottom surface may have protrusions, e.g. three protrusions for stable positioning on a work surface, such as a table. In a preferred embodiment, the bottom surface has a protruding plane surface forming a plane ring surface for stable positioning of the base member on a work surface, such as a table.

[0007] It is an important advantage of the present invention that the armrest may be stably positioned on a surface without being fixedly attached to the surface. In this way, the armrest may be moved around freely on the work surface. For example, in laboratory equipment, such as laminar flow benches, glove boxes, fume cupboards, work benches, etc., the armrest may be positioned at any position on the work surface in the work area of the equipment in question. In this way, interference of the armrest with the airflow in the equipment may be avoided.

[0008] The freedom of positioning of the armrest on a surface may also be advantageously utilized in other environments, such as on writing tables, work tables, work benches, etc. The armrest may be utilized on any type of table.

[0009] The armrest may further comprise a rod with a first end and a second end, and wherein the first end is connected to the arm supporting member and the second end is connected to the base member. The second end of the rod may be adjustably connected to the base member so that the height of the armrest is adjustable. Further, the second end of the rod may be rotatably connected to the base member so that the arm supporting member may be rotatably fixed to the base member.

[0010] The rod may comprise a joint so that the arm supporting member can be adjustably tilted with relation to the base member.

[0011] The surface of the arm supporting member that is intended to face the user's arm during use may be bended to provide a suitable fit with a human arm whereby an ergonomic armrest is provided. For example, the surface may substantially form a part of a cylinder.

[0012] When the user of the armrest puts his arm in the arm support member, the arm may be moved horizontally in a steady and controlled movement.

[0013] In one embodiment, the armrest may be made of metal, such as stainless steel, aluminium, e.g. anodised aluminium, etc., so that the armrest may withstand autoclaving, 135 °C air temperature, steam, chlorinated solvents, and ultraviolet light. Further, the armrest made of metal will be non-poisonous by fire, and the armrest will not evoke allergy.

[0014] The present disclosure and its numerous objects, features, and advantages may be better understood by reference to the following description of an illustrative embodiment taken in conjunction with the accompanying drawings, in which:

Fig. 1 is a front view of an exemplary embodiment of an armrest according to the present invention,

Fig. 2 is a side view of the embodiment shown in Fig. 1,

Fig. 3 is a photo of the embodiment shown in Fig. 1,

Fig. 4 is a photo of another preferred embodiment of the present invention, and

Fig. 5 is a photo of the embodiment shown in Fig. 4 from another angle and also showing an extension member.

[0015] The Figures illustrate preferred embodiments of the armrest according to the invention. The illustrated embodiments are made of stainless steel and anodised aluminium. The illustrated armrests 10 have an arm supporting member 12 for supporting a human arm, and a base member 14 supporting the arm support member and having a bottom surface 16 for positioning of the base member 14 on a work surface. A person using the armrest inserts the arm, e.g., from the rear side, into the arm support member 12, whereby the arm may be moved horizontally in a steady and controlled movement.

[0016] The bottom surface 16 of the base member 14 has an inner recess illustrated by the broken line 18 so that the base member 14 rests on a ring-shaped, plane surface along the circumference of the bottom surface 16 providing a surface for stable positioning of the base member 14 on a work surface, such as a table.

[0017] The illustrated armrest 10 further comprises a rod 20 with a first end 22 and a second end 24, and wherein the first end 22 is connected to the arm supporting member 12 and the second end 24 is inserted into an opening in the base member 14 adapted to receive

and hold the rod 20. The second end 24 of the rod is adjustably connected to the base member 14 so that the height of the armrest 10 is adjustable. Adjustment of the height of the armrest 10 is performed by loosening the screw 26 so that the inserted rod 20 can slide up and down in the base member 14 for provision of a suitable working position. Re-tightening of the screw 26 secures the adjusted height.

[0018] Further, the second end 24 of the rod 22 is rotatably connected to the base member 14 so that the arm supporting member 12 is rotatably fixed to the base member 14. In the illustrated embodiments, the ring 28 can rotate so that the hand of the user may be moved freely horizontally for example in order to move a pipette precisely to a test tube or the like.

[0019] The rod 20 also comprises a joint 30 so that the arm supporting member 12 can be adjustably tilted with relation to the base member 14. The screw 32 may be loosened and the tilt of the arm support member 12 adjusted whereafter the adjustment of the arm support member is retained by tightening the screw 32 again.

[0020] The surface 34 of the arm supporting member 12 that is intended to face the user's arm during use is bended to provide a suitable fit with a human arm whereby an ergonomic armrest 10 is provided. In the illustrated example, the surface 34 forms a part of a cylinder.

[0021] As illustrated in Fig. 5, an extension member 36 is provided having a first end 38 for insertion into the base member 14, and a second end 40 for reception of the arm support member 12. The extension member 36 increases the adjustable height of the armrest 10 when inserted into the base member 14. Further, a pad 42 of woven or nonwoven fabric is positioned on the surface 34 for user comfort. The circumference of the pad 42 fits the circumference of the surface 34.

[0022] The illustrated embodiments 10 has a weight of about 800 grams and the diameter of the base member 14 at the bottom surface 16 is about 12 cm for provision of an armrest that may be moved around freely when desired while providing adequate resistance against unintentional movement so that the user may move the supported arm steadily and securely.

[0023] Other embodiments made of other suitable materials may be envisioned, e.g. weighing from 100 gram to 5 kg, such as from 100 gram to 2 kg, etc, and having a diameter ranging from 5 cm to 25 cm, such as from 8 cm to 20 cm, etc.

Claims

1. An armrest (10) having
an arm supporting member (12) for supporting a human arm, and
a base member (14) supporting the arm support member and having a bottom surface for positioning on a work surface whereby the armrest may be moved around freely on the work surface, and

a rod (20) with a first end and a second end, wherein the first end is connected to the arm supporting member and **characterised in that**

the second end of the rod is adjustably and rotatably connected to the base member (14) so that the height of the armrest is adjustable and the arm supporting member is rotatably fixed to the base member.

2. An armrest according to claim 1, wherein the rod comprises a joint (30) so that the arm supporting member can be adjustably tilted with relation to the base member.
3. An armrest according to claim 1 or 2, wherein the surface of the arm supporting member that is intended to face the user's arm during use substantially forms part of a cylinder.
4. An armrest according to any of the preceding claims, and made of metal, such as stainless steel, aluminium, e.g. anodised aluminium, etc.

Patentansprüche

1. Armlehne (10) mit:

einem Armstützelement (12) zum Stützen eines menschlichen Arms, und
einem Basiselement (14), das das Armstützelement trägt und eine Unterfläche zum Positionieren auf einer Arbeitsfläche aufweist, wodurch die Armlehne frei auf der Arbeitsfläche bewegbar ist, und
einer Stange (20) mit einem ersten Ende und einem zweiten Ende, wobei
das erste Ende mit dem Armstützelement verbunden ist,

dadurch gekennzeichnet, dass

das zweite Ende der Stange derart einstellbar und drehbar mit dem Basiselement (14) verbunden ist, dass die Höhe der Armlehne einstellbar ist und das Armstützelement drehbar an dem Basiselement befestigt ist.

2. Armlehne nach Anspruch 1, bei der die Stange ein Gelenk (30) aufweist, so dass das Armstützelement relativ zu dem Basiselement einstellbar kippbar ist.
3. Armlehne nach Anspruch 1 oder 2, bei der die Fläche des Armstützelements, die bei Benutzung dem Arm des Benutzers zugewandt sein soll, im Wesentlichen Teil eines Zylinders ist.
4. Armlehne nach einem der vorhergehenden Ansprüche, die aus Metall gefertigt ist, wie z.B. Edelstahl, Aluminium, z.B. eloxiertem Aluminium etc.

Revendications

1. Accoudoir (10) présentant
un élément de support de bras (12) destiné à sup-
porter le bras d'un sujet, et 5
un élément de base (14) supportant l'élément de
support de bras et présentant une surface inférieure
destinée à un positionnement sur une surface de
travail ce par quoi l'accoudoir peut être déplacé li-
brement de tous côtés sur la surface de travail, et 10
une tige (20) avec une première et une seconde ex-
trémité, dans laquelle
la première extrémité est reliée à l'élément de sup-
port de bras et est **caractérisée en ce que**
la seconde extrémité de la tige est reliée de façon 15
réglable et pivotante à l'élément de base (14) de sor-
te que l'accoudoir est réglable en hauteur et que l'élé-
ment de support du bras est fixé de façon orientable
sur l'élément de base. 20
2. Accoudoir selon la revendication 1, dans lequel la
tige comprend une articulation (30) de sorte que
l'élément de support de bras peut être incliné de fa-
çon réglable par rapport à l'élément de base. 25
3. Accoudoir selon la revendication 1 ou 2, dans lequel
la surface de l'élément de support du bras qui est
dirigée face au bras de l'utilisateur pendant l'utilisa-
tion présente sensiblement la forme d'une partie de
cylindre. 30
4. Accoudoir selon l'une quelconque des revendica-
tions précédentes, et fait en métal, comme de l'acier
inoxydable, de l'aluminium, par exemple de l'alumi-
nium anodisé, etc. 35

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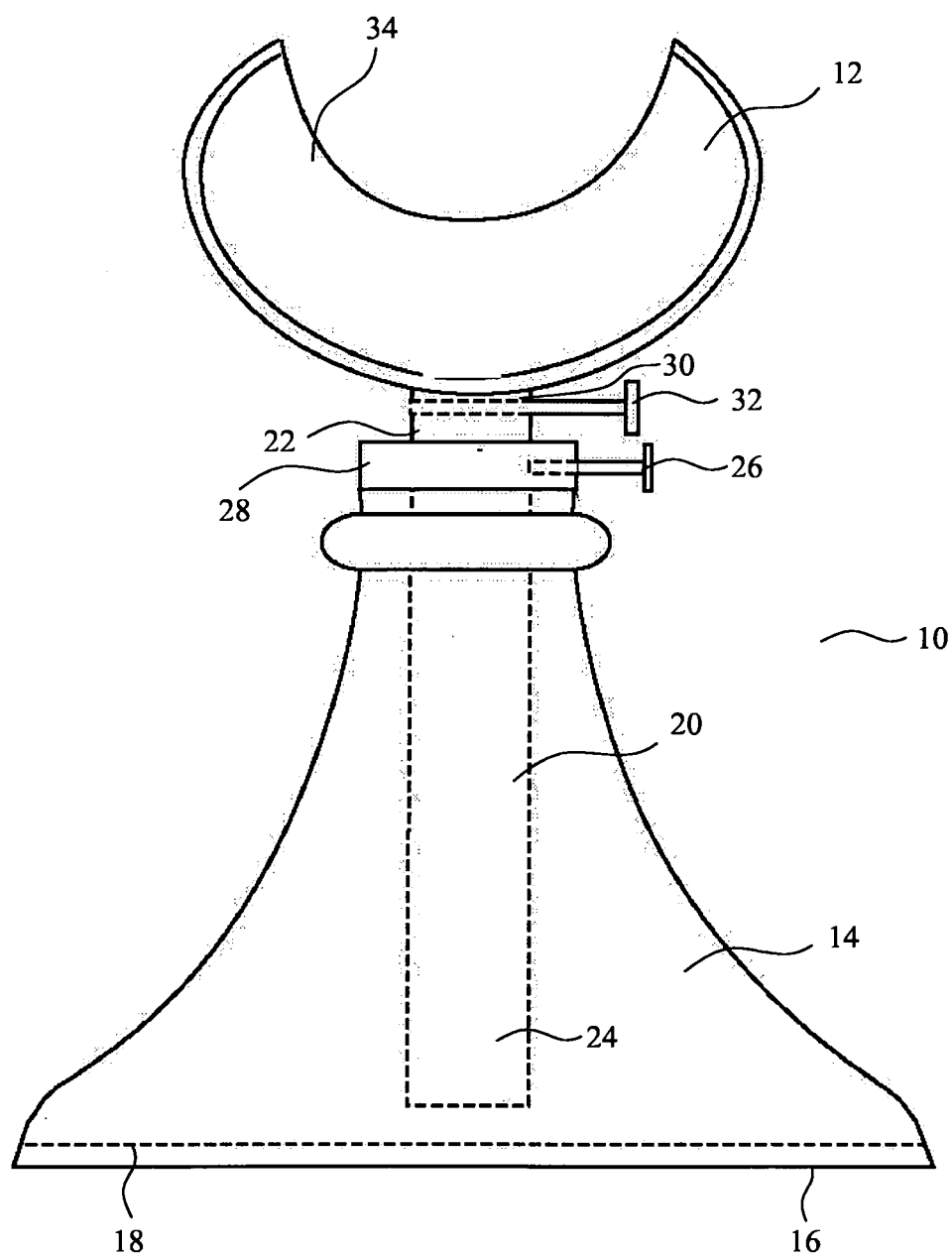


Fig. 1

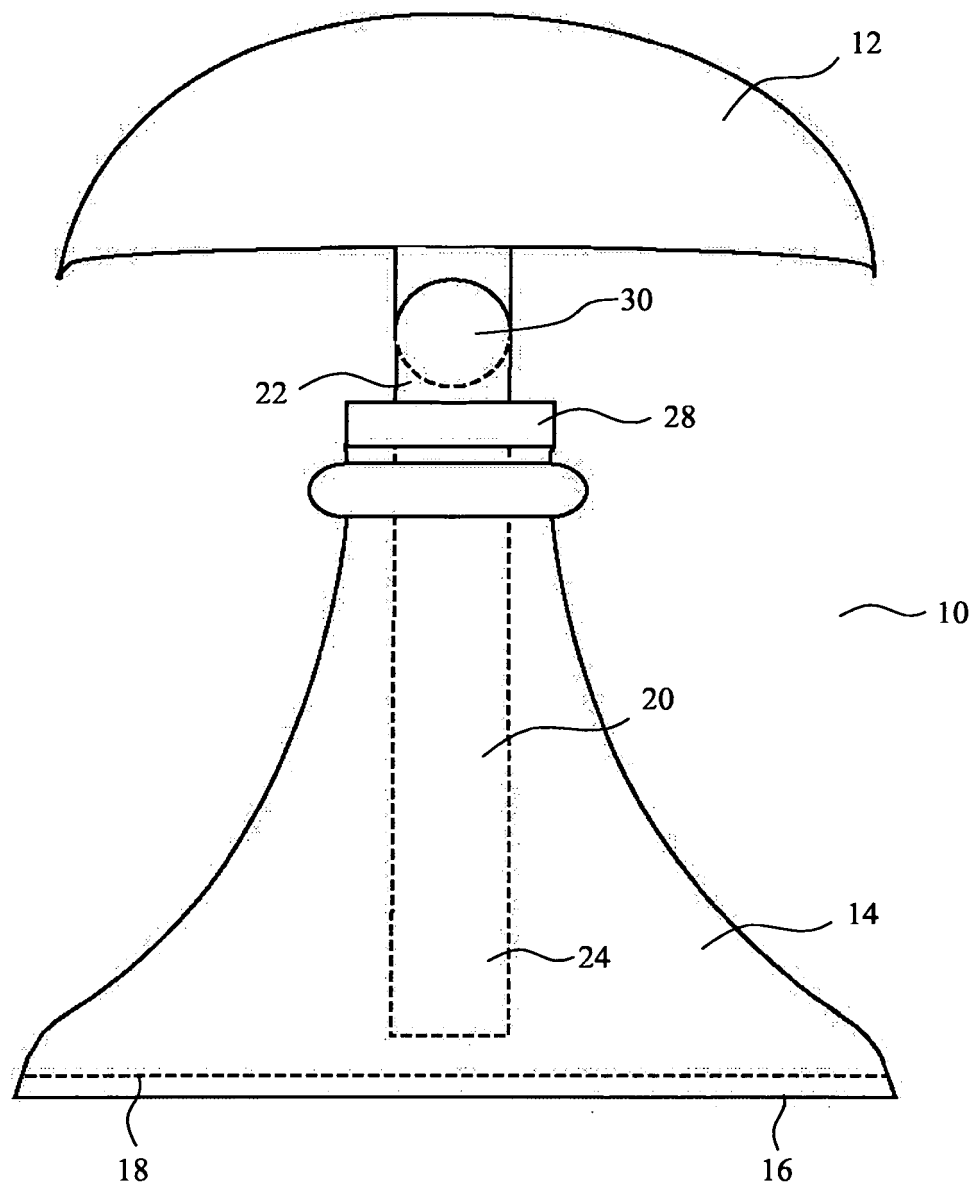


Fig. 2

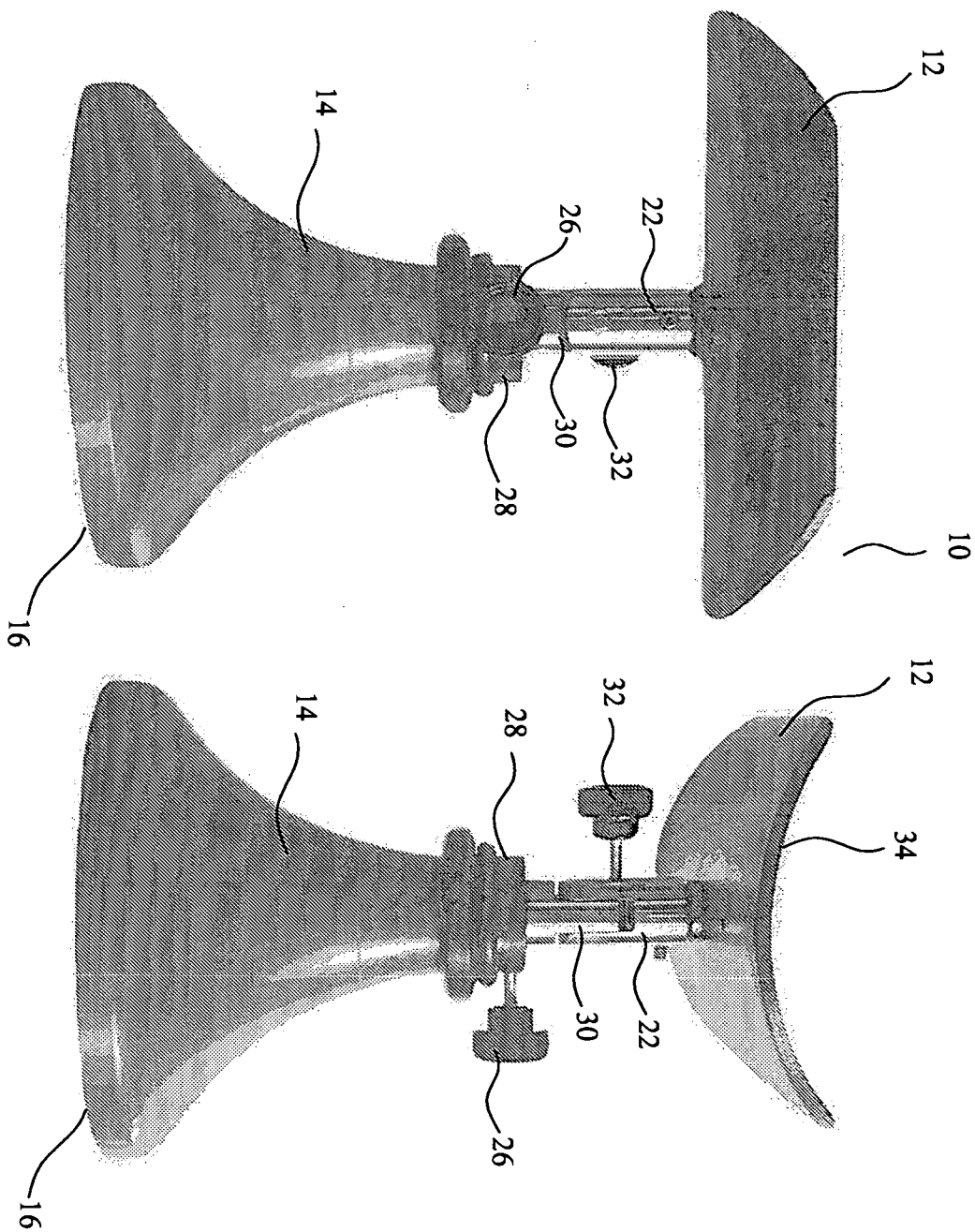


Fig. 3

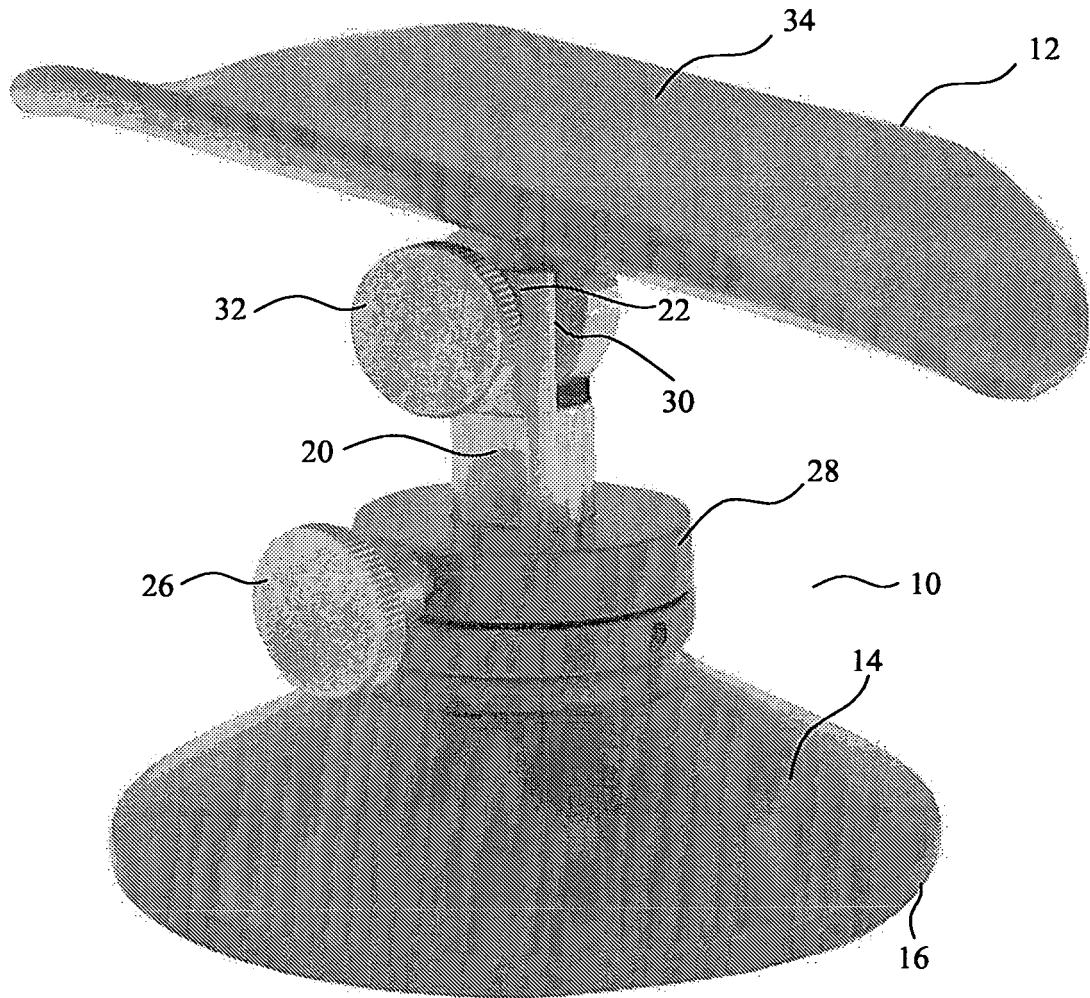


Fig. 4

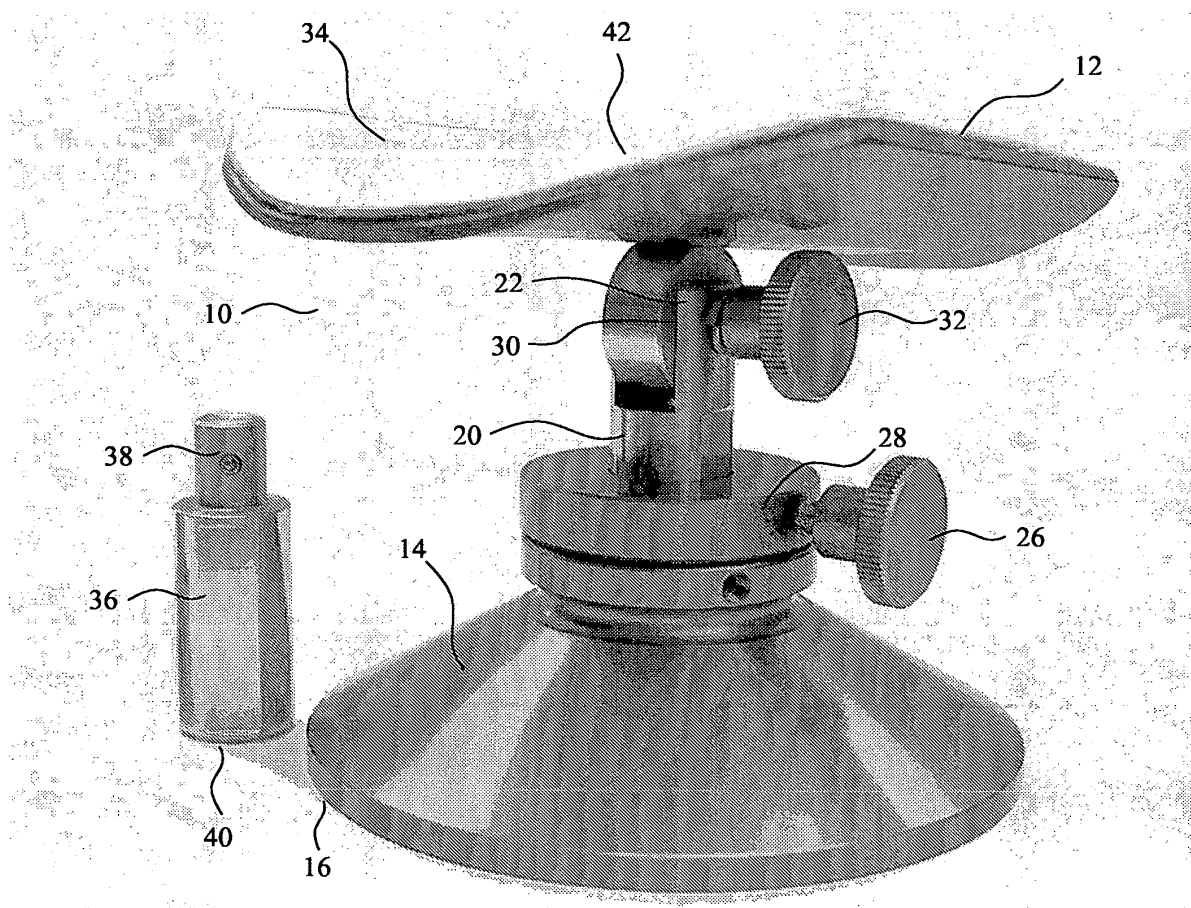


Fig. 5