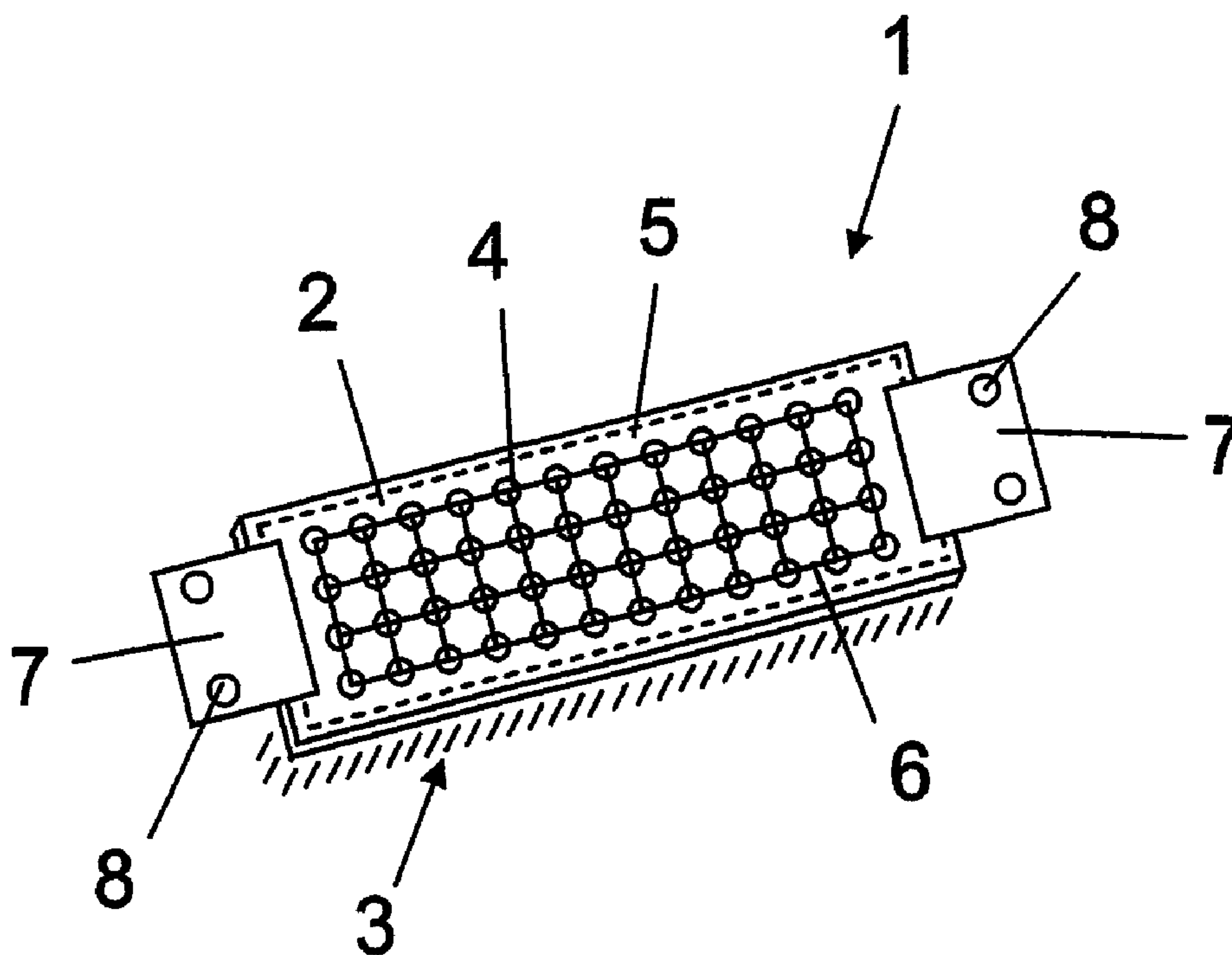




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 (54) Title: MOP COVER WITH PRESSURE BODIES



(57) Abrégé/Abstract:

A mop cover (1) for a cleaning device is described which includes a textile sheet structure (2) with a cleaning surface (3), whereby the sheet structure (2) is provided with pressure bodies (4) and the pressure bodies (4) can be engaged with the sheet structure (2) in such a way that a punctiform pressing of the cleaning surface (3) onto the floor to be cleaned is achieved.

Abstract

A mop cover (1) for a cleaning device is described which includes a textile sheet structure (2) with a cleaning surface (3), whereby the sheet structure (2) is provided with pressure bodies (4) and the pressure bodies (4) can be engaged with the sheet structure (2) in such a way that a punctiform pressing of the cleaning surface (3) onto the floor to be cleaned is achieved.

MOP COVER WITH PRESSURE BODIES

Field of the Invention

The invention relates to a mop cover for a cleaning apparatus, including a textile
5 sheet with a cleaning surface.

Background Art

Such mop covers are most commonly mounted onto the wiping plate of a flat mop,
which in turn is operated by way of a handle. A wiping plate for a flat mop is known from
10 DE 101 53 801 A1 which includes a functional surface equipped with nobs or ribs. These
nobs or ribs are positioned on the wiping plate in such a way that they engage the mop
cover when an increased pressure is exerted on the wiping plate by way of the handle. This
results in the region of the functional surface in an increased surface pressure of the mop
cover onto the floor to be cleaned. This increased surface pressure improves the cleaning
15 efficiency with respect to strongly adhered dirt.

Summary of the Invention

It is an object of the invention to provide a mop cover which independent of the
design of the mop plate provides an improved cleaning effect with respect to strongly
20 adhered dirt.

This object is achieved with a mop cover having a sheet structure equipped with
pressure bodies, which pressure bodies can be brought into engagement with the sheet
structure in such a way that a punctiform pressing of the cleaning surface onto the floor to
be cleaned is achieved. The cleaning surface consists mostly of a textile which is equipped
25 with a cleaning pile on the side directed towards the floor to be cleaned. The pressure
bodies are positioned on the other side, which is the side directed towards the mop plate.
When an increased pressure is exerted by the user on the handle of the mop, and thereby
onto the mop plate, the pressure bodies produce an increased pressure on the mop cover
and thereby an increased surface pressure of the mop cover against the surface to be
30 cleaned. This results in an improved cleaning performance of the mop cover with respect
to strongly adhered dirt, independent of the type of mop plate used. Since the fabric and

cleaning pile of the cleaning surface are flexible, the engagement pressure can be varied over a wide range.

The pressure bodies can be made of an elastomeric material. Such materials have high friction values, whereby the mop cover can be held on the mop plate without slipping. Furthermore, the pressure force can be finely controlled. In other embodiments, the pressure bodies can be made to have a permanent shape. Such pressure bodies enable an especially high punctiform contact pressure and thereby an especially high cleaning performance.

The sheet structure can be made of several layers. Different layers may have different finishes, whereby one layer can have a high water absorption capacity and another layer can have an especially high flexibility. The pressure bodies can be positioned separately on or between the layers or can be embedded into one of the layers.

At least one layer can consist of a foam material. Foam materials, especially those made of an open celled plastic have on the one hand an especially high water absorption capacity and on the other hand also a high flexibility and can be reversibly deformed. When pressure is exerted onto the mop plate, the foam is compressed and the pressure bodies become engaged with the cleaning surface.

The pressure bodies can be embedded into the foam. In that embodiment, the pressure bodies are initially completely covered by the foam and the cleaning surface of the mop cover is pushed evenly onto the surface to be cleaned. This results in an even water excretion an even wiping result. The pressure bodies only come into contact with the cleaning surface when the foam is compressed by the exertion of pressure onto the mop plate to such a degree that the foam thickness is reduced to the thickness of the pressure bodies. The pressure bodies create a punctiform pressing of the cleaning surface onto the floor to be cleaned and thereby an improved cleaning performance with respect to strongly adhered dirt.

The pressure bodies can be spherically shaped. Such pressure bodies are easily and cost efficiently manufactured and the spherical surface because of its geometry prevents an excessively high punctiform surface pressure of the pressure bodies on the cleaning surface, which could cause a destruction of the mop cover.

The pressure bodies can be distributed evenly over the sheet structure. The abrasive properties of the pressure bodies can thereby be used over the whole width of the

mop plate. In other embodiments, the pressure bodies can be concentrated in the region of connection between the handle and the mop plate. Since the pressure forces are highest in this region, the surface pressure and therefore the cleaning performance is also highest.

The pressure bodies can be connected with one another in a net type structure. The pressure bodies are then connected with one another and can easily and cost efficiently be positioned in a single manufacturing step onto the mop cover. The net shaped structure also improves the strength of the mop cover.

The connection between the pressure bodies can be achieved by way of threads made of plastic or by way of metallic wires. Plastic threads are cost efficient and metallic wires are especially robust. The pressure bodies can be made of a metallic material or made of plastic. Pressure bodies made of metallic materials have an especially high hardness and therefore an especially high abrasive effect. Pressure bodies of plastic are cost efficient.

15 **Brief Description of the Drawings**

Preferred embodiments of the invention will now be described in more detail in the following by way of example only and with reference to the drawings, wherein

Fig. 1 is a schematic illustration of the mop cover; and

Fig. 2 schematically shows a foam body with embedded pressure bodies.

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Detailed Description of the Preferred Embodiment

Figure 1 shows a mop cover 1 for a cleaning device (not illustrated). In this exemplary embodiment, the cleaning apparatus is a flat mop with a mop plate with foldable mop parts, whereby the mop cover includes flaps 7 on which snap buttons 8 are fastened by which the mop cover 1 can be safely fastened to the mop plate. The mop cover 1 has multiple layers and includes a textile sheet structure 2 with a cleaning surface 3. The cleaning surface 3, which is directed towards the floor to be cleaned, is provided with a cleaning pile. A foam layer 5 is positioned on and stitched onto the sheet structure 2 on the side directed towards the cleaning apparatus. The sheet structure 2 is provided with pressure bodies 4 which can be engaged with the sheet structure 2 in such a way that a punctiform pressing of the cleaning surface 3 onto the floor to be cleaned is achieved. For that purpose, the pressure bodies 4 are embedded into the foam layer 5. The pressure

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bodies 4 consist of a metallic material and are therefore of permanent shape. Furthermore, the pressure bodies 4 are spherically shaped and interconnected in a net type arrangement by metallic threads 6. The pressure bodies 4 are thereby evenly distributed over the sheet structure 2.

5 Figure 2 shows in detail the foam layer 5 of the mop cover 1 according to Figure 1 in which the pressure bodies 4 are embedded. Recesses 9 are provided in the foam layer 5 into which the pressure bodies 4 can be positioned.

CLAIMS:

1. A mop cover for a cleaning apparatus, comprising:
a textile sheet structure having a cleaning surface and a mop engaging surface; and
pressure bodies for producing a point form pressing of the cleaning surface onto a floor to be cleaned, the pressure bodies located on the mop engaging surface of the textile sheet structure.
2. The mop cover according to claim 1, wherein the pressure bodies have a permanent shape.
3. The mop cover according to claim 1 or 2, wherein the sheet structure has multiple layers.
4. The mop cover according to claim 3, wherein at least one layer of the sheet structure is made of a foam.
5. The mop cover according to claim 4, wherein the pressure bodies are embedded into the layer made of foam.
6. The mop cover according to any one of claims 1 to 5, wherein the pressure bodies are spherically shaped.
7. The mop cover according to any one of claims 1 to 6, wherein the pressure bodies are evenly distributed over the sheet structure.
8. The mop cover according to any one of claims 1 to 7, wherein the pressure bodies are connected with one another in the form of a net structure.
9. The mop cover according to claim 8, wherein the pressure bodies are interconnected by way of threads of plastic or metal.

10. The mop cover according to any one of claims 1 to 9, wherein the pressure bodies are made of a metallic material or plastic.

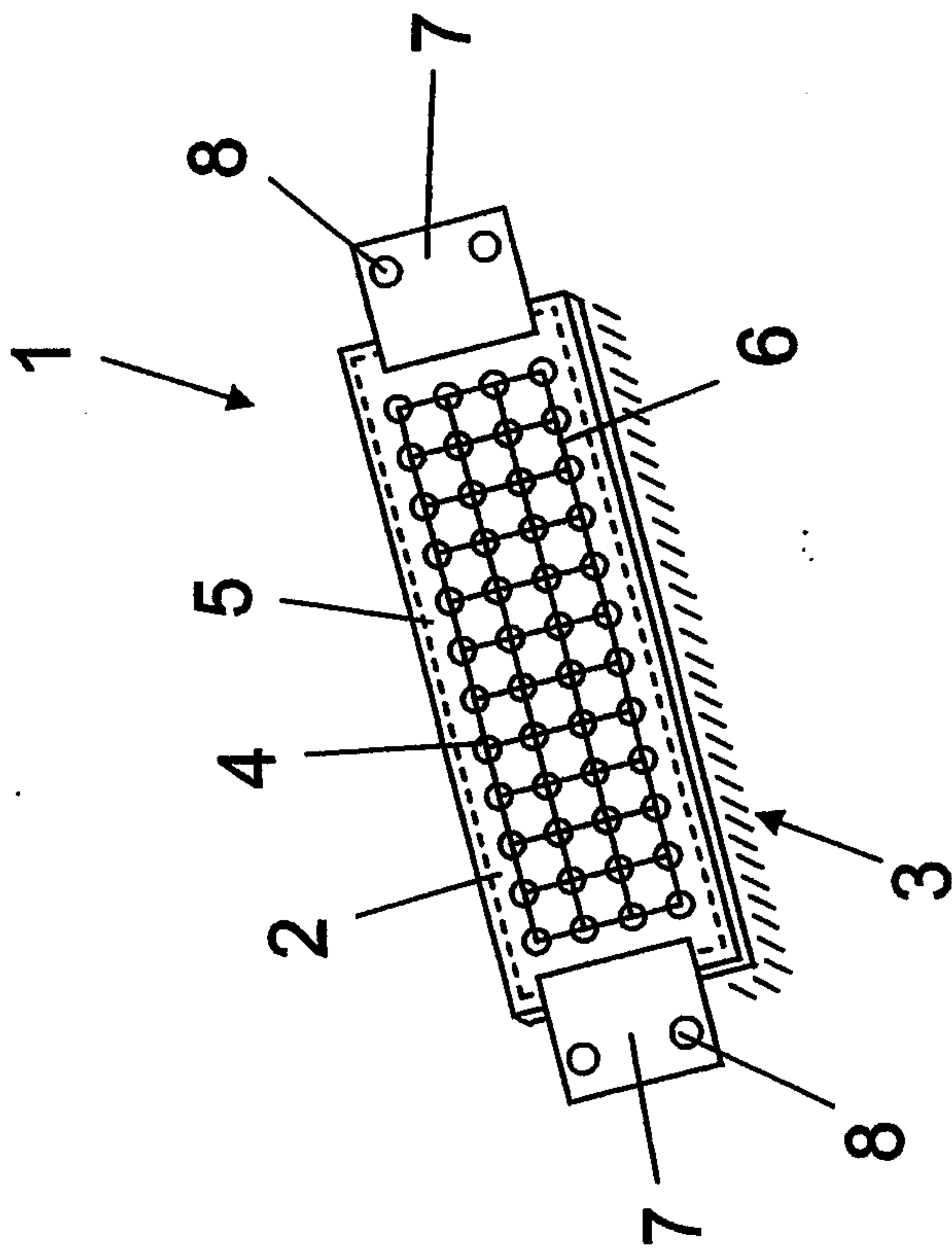


Fig. 1

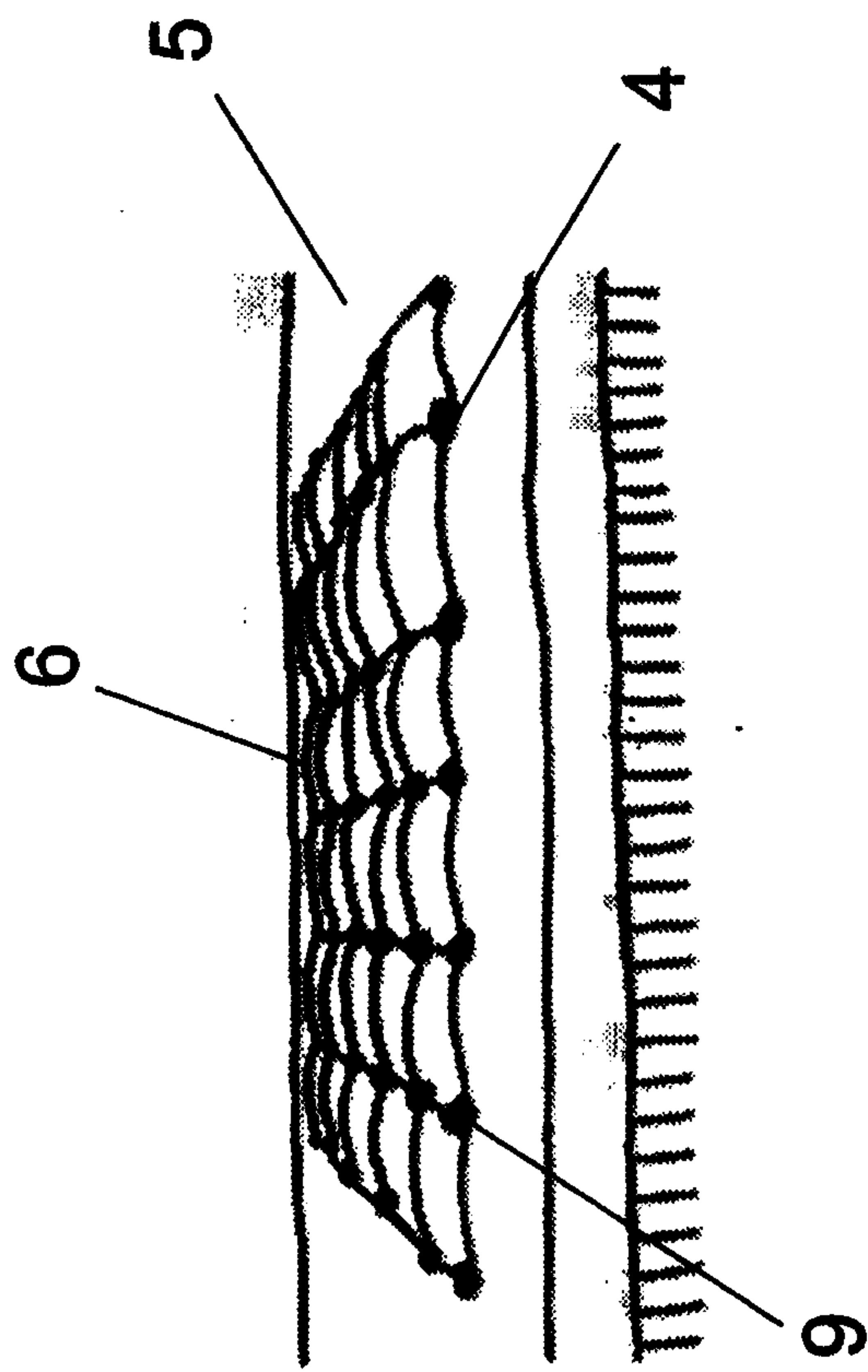


Fig. 2

