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(54) **Multi-function floor treatment device**

(57) A floor treatment tool (10) comprising a handle (11), a joint (12) and a drier part (20), such as a drying spatula, and holders (30a and 30b) provided with clamping parts (32a-32d), which holders can be locked onto the drier part by pressing so that the cloth (40), paper or mop will remain between the drier part and the holders or between the drier part and the clamping parts of the holders. The lower surface of the holders may be

provided with a saw-toothed edge (33) or spikes (33). The holders are connected to the drier part or to its connecting part (21) by a joint (31), aperture or dovetail joint. The holder is preferably made of flexible material and, according to an embodiment, it is connected to the floor treatment tool by a string (35).

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Description**SUBJECT OF THE INVENTION**

[0001] The present invention relates to a floor treatment tool comprising a handle, a drier part provided with a drying spatula, and a dry, damp or wet cloth, paper or mop attachable to the drier part.

PRIOR ART

[0002] A prior-art floor treatment tool has sticker pieces attached to the upper surface of the drier part, and therefore the only kind of cloth that can be attached to the drying spatula is a cloth having suitable sticker attachment parts that will stick to these sticker pieces. The disadvantage is that, unless the cloth material is of a kind to which the stickers will adhere, it will not be possible to attach any other cloth, mop or equivalent to the drier because they have no attachment parts fitted to these stickers.

OBJECT OF THE INVENTION

[0003] The object of the present invention is to create a floor treatment tool having a drier part to which it is possible to attach any dry, damp or wet cloth, paper or mop for sweeping a floor, after which the floor can be dried with the drier part.

FEATURES OF THE INVENTION

[0004] The floor treatment tool of the invention is characterized in

- that the tool has at least one holder in conjunction with the drier part so that the drier part preferably has at least one holder on either side of the handle (11),
- that the holder can be fastened to the drier part so that an edge part of the dry, damp or wet cloth, paper or mop remains between the drier part and the holder, preferably between at least one holder and the drier part on either side of the handle,
- that both sides of the cloth, paper or mop can be used, in such manner
- that, in a first position of the cloth, the cloth fastened at its edge part to the drier part is turned under the drying spatula of the drier part for dry, damp or wet sweeping of the floor,
- and that, in second position of the cloth, the cloth is turned to a position beside the drying spatula, preferably to the front side of the drying spatula, for drying of the floor by means of the drying spatula.

EMBODIMENTS OF THE FLOOR TREATMENT TOOL OF THE INVENTION

[0005] A preferred embodiment of the floor treatment tool of the invention is characterized in

- that the floor treatment tool comprises a joint between the handle and a connecting part of the drier part
- the tool has cloth holders on either side of the connecting part of the handle, said holders having at least one clamping part which, when pressed onto the drier part, is locked in place,
- that the edge part of the cloth, paper or mop remains between the holders and the drier part or between the clamping parts of the holders and the drier part.

[0006] A second preferred embodiment of the floor treatment tool of the invention is characterized in that the lower surface of the holder is provided with a saw-toothed edge or spikes to lock the cloth, paper or mop in place between the holder and the drier part.

[0007] A third preferred embodiment of the floor treatment tool of the invention is characterized in that the holder is connected to the drier part, to the joint between the drier part and the handle or to its connecting part via a joint.

[0008] A fourth preferred embodiment of the floor treatment tool of the invention is characterized in

- that the holder is made of flexible material and has a locking head at its end,
- and that the locking head can be locked to the drier part or to its connecting part by means of an aperture, cut-out or notch, preferably so that the locking parts form a dovetail joint.

[0009] A fifth preferred embodiment of the floor treatment tool of the invention is characterized in that it comprises a string connected to the holder, the opposite end of said string being fastened to the drier part or to a sleeve provided in conjunction with the handle, either directly or through an aperture in the connecting part.

[0010] A sixth preferred embodiment of the floor treatment tool of the invention is characterized in that two holders are connected to the opposite ends of the same string.

[0011] A seventh preferred embodiment of the floor treatment tool of the invention is characterized in that the holder is provided with a locking spike, which can be locked to a corresponding locking hole in the drier part.

[0012] An eighth preferred embodiment of the floor treatment tool of the invention is characterized in that

- the drier part is provided with a locking spike, onto which the cloth, paper or mop can be pressed so that the spike will protrude through the cloth,

- and that the holder is provided with a locking hole, stud, button or equivalent corresponding to the locking spike of the drier part,
- and that the holder can be locked to the locking spike of the drier part, so that the edge part of the cloth, paper or mop will remain between the holder and the drier part.

EMBODIMENT EXAMPLES

[0013] In the following, the invention will be described with reference to examples and the attached drawings, wherein

LIST OF FIGURES

[0014]

- Fig. 1-14 present different embodiments of the floor treatment tool and the cloth holders in diagrammatic side view,
- Fig. 15 presents a cross-sectional view of the drier part of the floor treatment tool with a cloth attached to it by means of a holder according to the invention.

[0015] Fig. 1 presents a floor treatment tool 10, which comprises a handle 11 connected via a joint 12 to a drier part 20. The drier part 20 comprises a connecting part 21, to which the handle 11 is connected via the joint 12. Connected to the connecting part 21 in Fig. 1 are also two cloth holders 30a and 30b, which are pivoted on the connecting part 21 by joints 31a and 31b. Provided at the end of each cloth holder 30a and 30b is a clamping part 32a and 32b, which can be pressed onto the drier part 20 so that the cloth holders 30a and 30b are locked in place. The cloth is thus pressed between the drier part 20 and the saw-toothed edges 33a and 33b on the lower surface of the cloth holders 30a and 30b. When the cloth thus held in place is to be removed or changed, the cloth holders 30a and 30b are lifted upwards in Fig. 1, so that they turn about the joints 31a and 31b and the cloth is released from the gap between the cloth holders and the drier part 20.

[0016] Fig. 2 presents a second embodiment of the floor treatment tool, which has spikes 33a and 33b on the lower surface of the cloth holders 30a and 30b. When the cloth holders 30a and 30b are pressed into position against the counterpart 20, the spikes 33a and 33b lock the cloth in place.

[0017] Fig. 3 presents an embodiment of the floor treatment tool wherein the lower edges of the cloth holders 30a and 30b are not provided with spikes or equivalent. In this embodiment, the cloth is clamped between the clamping parts 32a and 32b and the drier part 20 when the clamping parts 32a and 32b are pressed onto the drier part 20.

[0018] Fig. 4 presents an embodiment of the floor

treatment tool wherein each of the two pivoted cloth holders 30a and 30b comprises two clamping parts, the first cloth holder 30a having clamping parts 32a and 32b while the second cloth holder 30b similarly has clamping parts 32c and 32d. in this case, the cloth is clamped by four clamping parts.

[0019] Fig. 5 presents a floor treatment tool in which the cloth holders 30a and 30b are locked to dovetail grooves or corresponding cutouts made in the spatula 20. In this case, the cloth holders 30a and 30b are preferably bodies formed from a flexible material, which have at one end a clamping part 32 fitted over the drier part 20 and at the opposite end a locking head 34 fitted to a corresponding groove or notch in the connecting part. As the cloth holders 30 are made of a flexible material, they need not be pivotally connected to the connecting part.

[0020] Fig. 6 presents an embodiment wherein the cloth holders 30a and 30b are pivoted on the drier part 20 via joints 31a and 31b provided on the drier part.

[0021] In Fig. 7, the cloth holders 30a and 30b consist of clamping parts 32a and 32b connected to the drier part 20 by strings 35a and 35b.

[0022] Correspondingly, in Fig. 8, cloth holders 30a and 30b made of flexible material have been connected to the upper surface of the body part 26 of the drier part 20 by inserting expansions 34a and 34b provided at the ends of the cloth holders 30a and 30b into holes in the drier part, where the expansions 34a and 34b are locked.

[0023] In the embodiment in Fig. 9, the clamping parts 32a and 32b of the cloth holders 30a and 30b are connected by strings 35a and 35b to a sleeve 22 provided in conjunction with the handle 11. When the damp or perhaps wet cloth attached to the drier part 20 by means of the clamping parts 32a and 32b has become dirty in use, it can be easily removed by pulling the sleeve 22 on the handle 11 upwards, thus causing the clamping parts 32a and 32b as well as the cloth to be released from the drier part 20.

[0024] Fig. 10 corresponds to the embodiment in Fig. 9 in other respects except that the strings 35a and 35b of the clamping parts 32a and 32b of the cloth holders 30a and 30b are passed to the opposite side of the sleeve 22 through an aperture in the connecting part 21. The device functions in a corresponding manner, but the strings 35a and 35b remain more controllably near the drier part 20 during use.

[0025] In Fig. 11, the cloth holders 30a and 30b are fastened to the shaft of the connecting part 21 between the handle 11 and the drier part 20.

[0026] Fig. 12 corresponds to the embodiment in Fig. 10 in other respects except that the two cloth holders 30a and 30b are attached to opposite ends of the same string 35.

[0027] In Fig. 13, the drier part 20 has locking spikes 25a and 25b on the upper surface of the body part 26, onto which spikes the cloth can be pressed so that the

spikes protrude through the cloth. The holders 30a and 30b can then be locked to the locking spikes by means of a locking hole 38, stud, button or equivalent. The edge part of the cloth thus remains in place between the holders and the body part 26 of the drier part 20.

[0028] In Fig. 14, the holders 30a and 30b are provided with locking spikes 37a and 37b, which can be locked by pressing to corresponding locking holes 24a and 24b provided in the body part 26 of the drier part 20. In this case, too, the edge part of the cloth remains in place between the holders and the body part 26 of the drier part 20.

[0029] Fig. 15 presents diagrammatic cross-section of the drier part 20 of the floor treatment tool 10, showing that the cloth 40 is locked between the clamping part 32 of the cloth holder 30 and the body part 26 of the drier part 20. In the example in Fig. 15, the holder 30 of the cloth 40 is connected to the floor treatment tool 10 by a string 35. It can be seen from Fig. 15 that the cloth 40 is held on the drier 20 by its one edge 41, so that the rest of the cloth can be turned either under the drying spatula 23 for dry, damp or wet sweeping of a floor, or alternatively to a position beside the drying spatula 23, preferably to the front side of the drying spatula, for drying of the floor using the drying spatula. When the cloth 40 is on the front side of the drying spatula 23 relative to the direction of movement during the drying of the floor, the cloth 40 will collect and adsorb the water accumulated by the drying spatula 23.

ADDITIONAL REMARKS

[0030] It is obvious to the person skilled in the art that different embodiments of the invention may be varied within the scope of the claims presented below. The embodiments of the cloth holders may vary greatly. It is also possible to use e.g. clothespin-type clamps attached to the drier part. The holders are preferably fastened to the drier part in some way as described above. In some cases, however, it is also possible to use separate holders.

LIST OF REFERENCE NUMBERS

[0031]

10 floor treatment tool
11 handle
12 joint
20 drier part
21 connecting part
22 sleeve
23 drying spatula
24 locking hole
25 locking spike
26 body part of drier part
30 holder
31 joint
32 clamping part

33 saw-toothed edge
34 locking head
35 string
36 spike
37 locking spike
38 locking hole
40 cloth
41 edge part of cloth

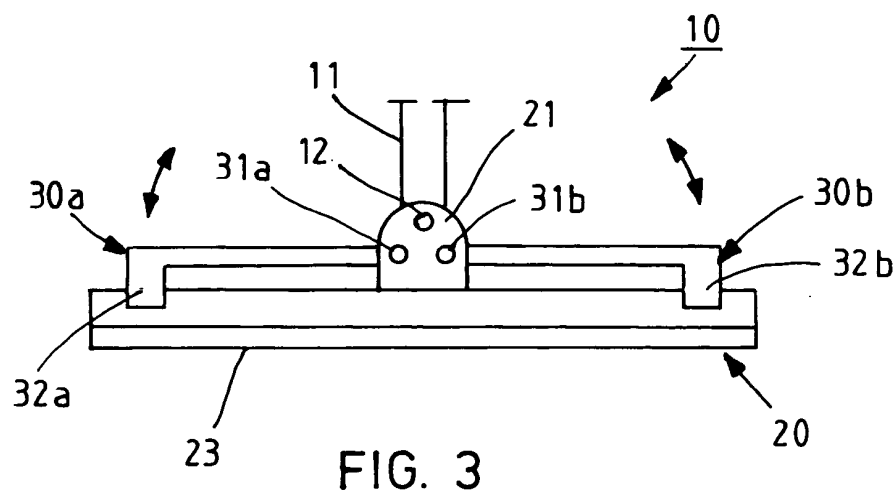
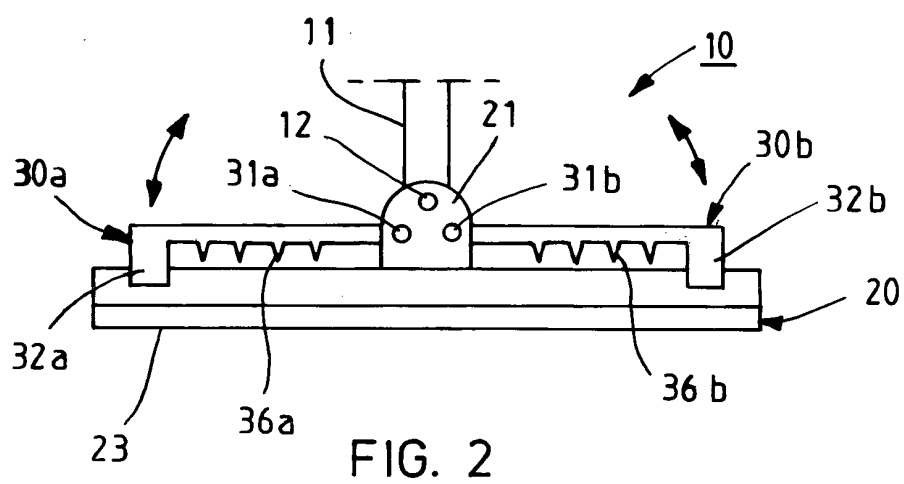
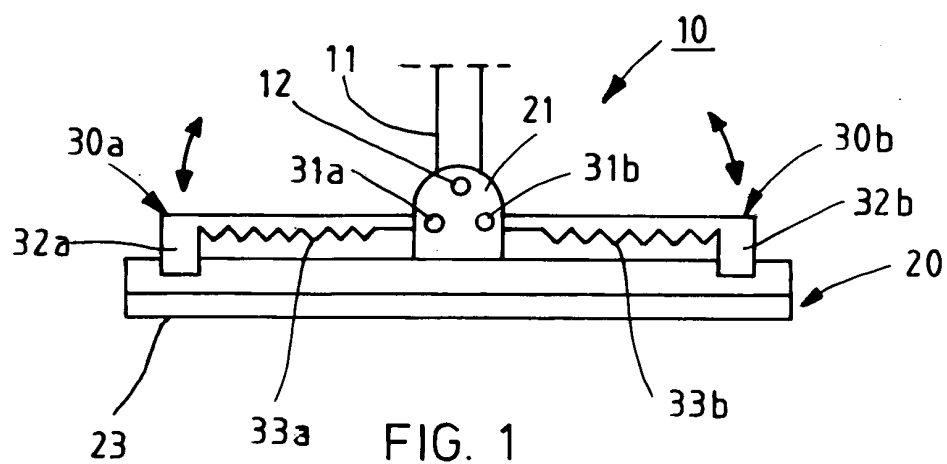
Claims

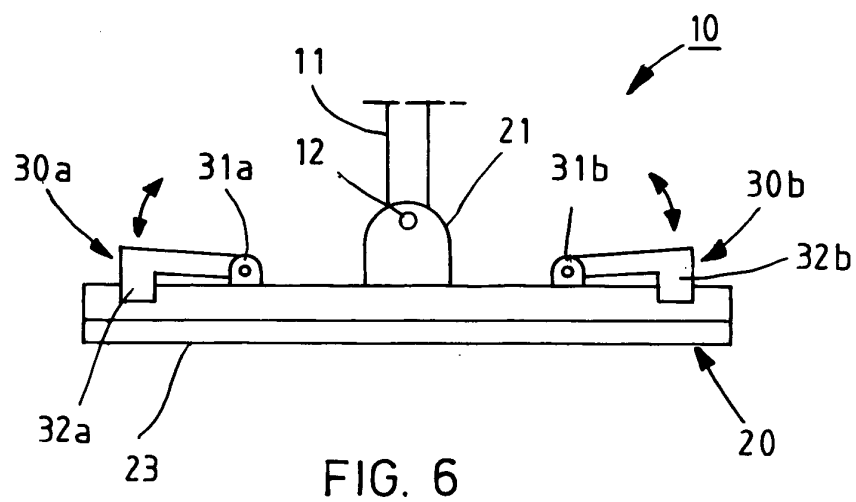
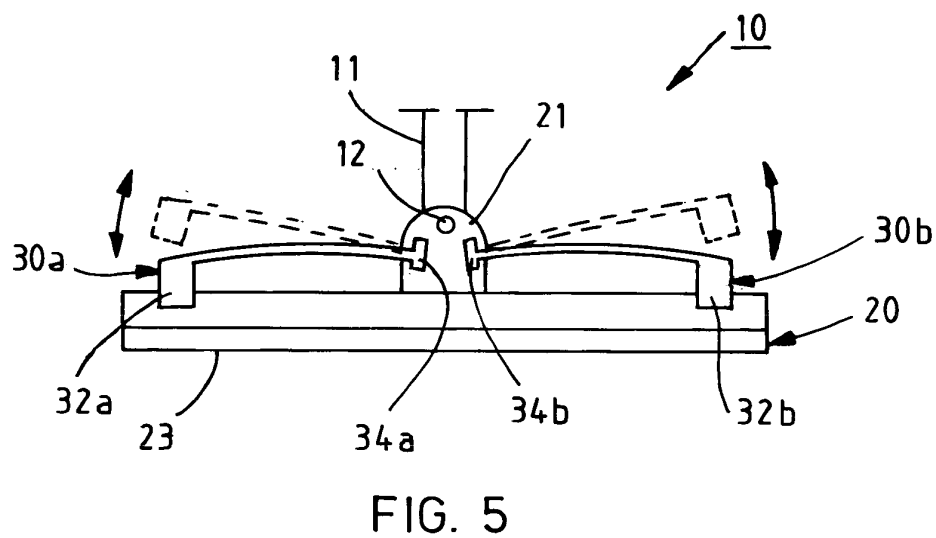
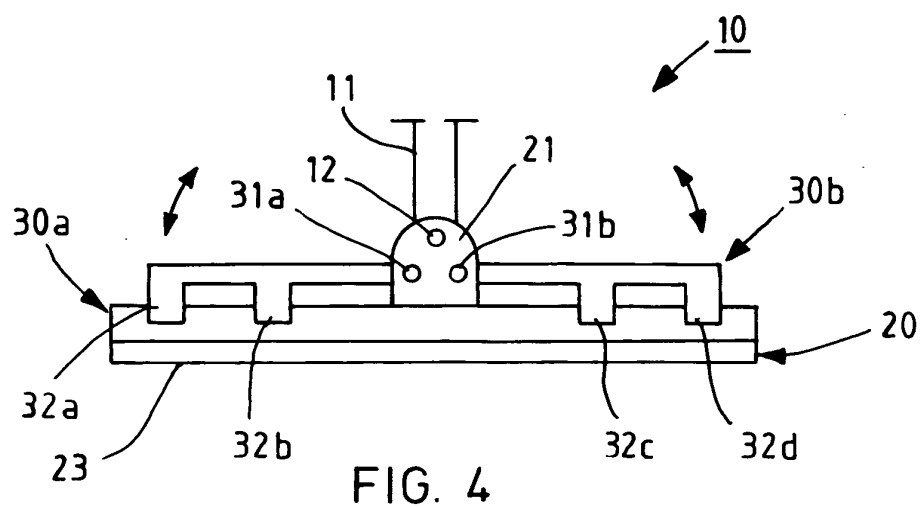
1. A floor treatment tool (10) comprising a handle (11), a drier part (20) provided with a drying spatula (23), and a dry, damp or wet cloth (40), paper or mop attachable to the drier part, **characterized in**
 - **that** the tool has at least one holder (30) in conjunction with the drier part (20) so that the drier part preferably has at least one holder on either side of the handle (11),
 - **that** the holder (30) can be fastened to the drier part (20) so that an edge part (41) of the dry, damp or wet cloth (40), paper or mop remains between the drier part and the holder, preferably between at least one holder (30a, 30b) and the drier part on either side of the handle (11),
 - **that** both sides of the cloth (40), paper or mop can be used, in such manner that
 - in a first position of the cloth (40), the cloth fastened at its edge part (41) to the drier part (20) is turned under the drying spatula (23) of the drier part (20) for dry, damp or wet sweeping of the floor, and that
 - in second position of the cloth (40), the cloth is turned to a position beside the drying spatula, preferably to the front side of the drying spatula, for drying of the floor by means of the drying spatula.
2. A floor treatment tool (10) according to claim 1, **characterized in**
 - **that** the floor treatment tool (10) comprises a joint (12) between the handle (11) and a connecting part (21) of the drier part (20),
 - **that** the tool has cloth (40) holders (30a, 30b) on either side of the connecting part (21) of the handle (11), said holders having at least one clamping part (32a-32d) which, when pressed onto the drier part, is locked in place,
 - **that** the edge part (41) of the cloth (40), paper or mop remains between the holders (30a, 30b) and the drier part (20) or between the clamping parts (32a-32d) of the holders and the drier part.
3. A floor treatment tool (10) according to claim 1 or 2,

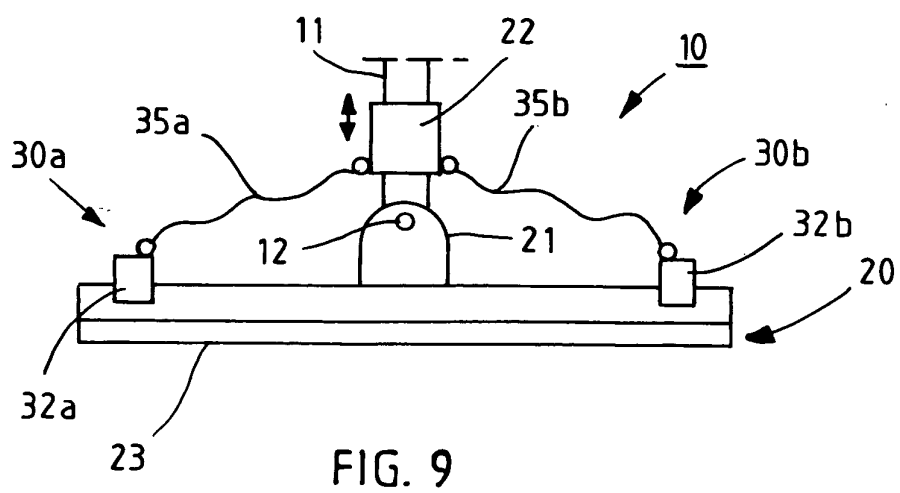
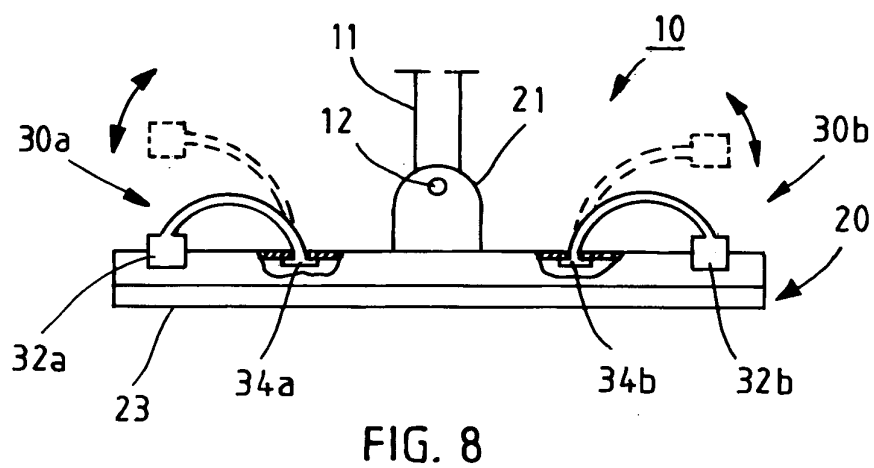
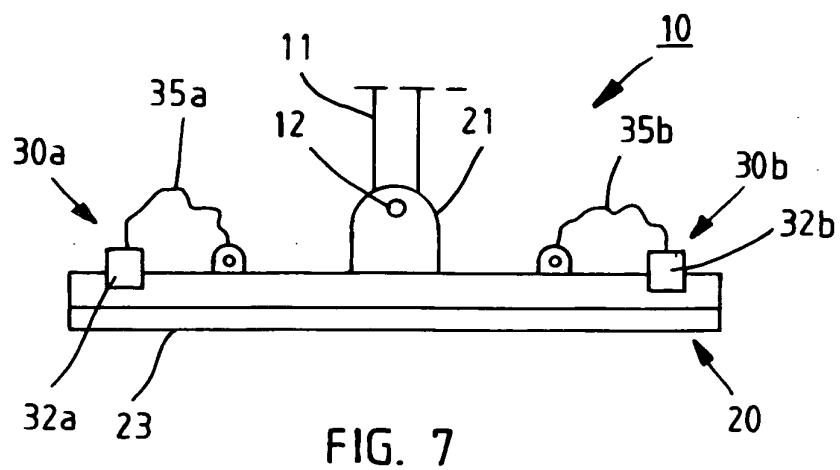
characterized in that the lower surface of the holder (30) is provided with a saw-toothed edge (33) or spikes (36) to lock the cloth (40), paper or mop in place between the holder and the drier part (20).

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4. A floor treatment tool (10) according to claim 1, 2 or 3, **characterized in that** the holder (30) is connected to the drier part (20), to the joint (12) between the drier part and the handle (11) or to its connecting part (21) via a joint (31). 10
5. A floor treatment tool (10) according to claim 1 or 2, **characterized in that**
 - the holder (30) is made of flexible material and has a locking head (34) at its end, and that 15
 - the locking head (34) can be locked to the drier part (20) or to its connecting part (21) by means of an aperture, cut-out or notch, preferably so that the locking parts form a dovetail joint. 20
6. A floor treatment tool (10) according to claim 1 or 2, **characterized in that** it comprises a string (35) connected to the holder (30), the opposite end of said string being fastened to the drier part (20) or to a sleeve (22) provided in conjunction with the handle (11) either directly or through an aperture in the connecting part (21). 25
7. A floor treatment tool (10) according to claim 1 or 2, **characterized in that** two holders (30) are connected to the opposite ends of the same string (35). 30
8. A floor treatment tool (10) according to claim 1 or 2, **characterized in that** the holder (30) is provided with a locking spike (37), which can be locked to a corresponding locking hole (24) in the drier part (20). 35
9. A floor treatment tool according to claim 1 or 2, **characterized in**
 - **that** the drier part (20) is provided with a locking spike (25), onto which the cloth (40), paper or mop can be pressed so that the spike will protrude through the cloth, 40 45
 - and **that** the holder (30) is provided with a locking hole (38), stud, button or equivalent corresponding to the locking spike (25) of the drier part, 50
 - and **that** the holder (30) can be locked to the locking spike (25) of the drier part (20), so that the edge part (41) of the cloth (40), paper or mop will remain between the holder and the drier part. 55







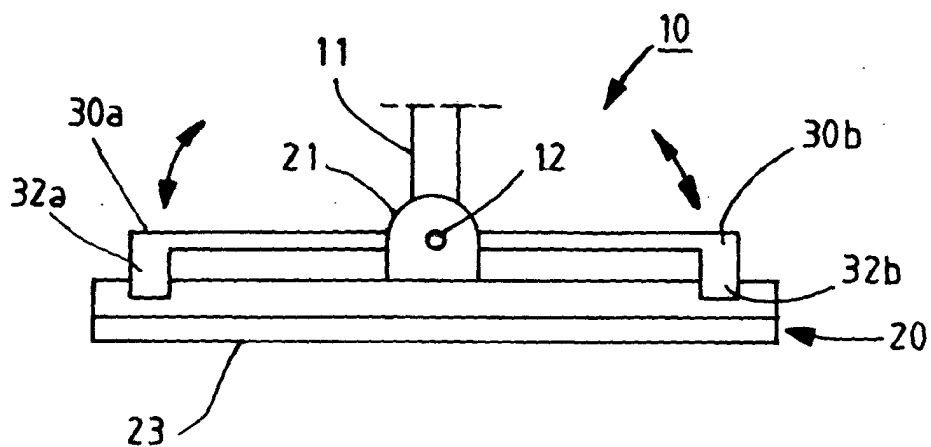


FIG. 11

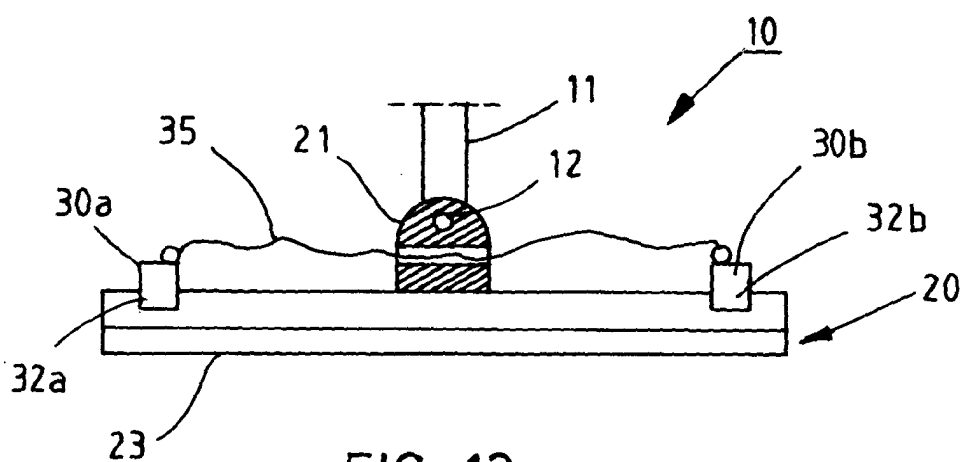


FIG. 12

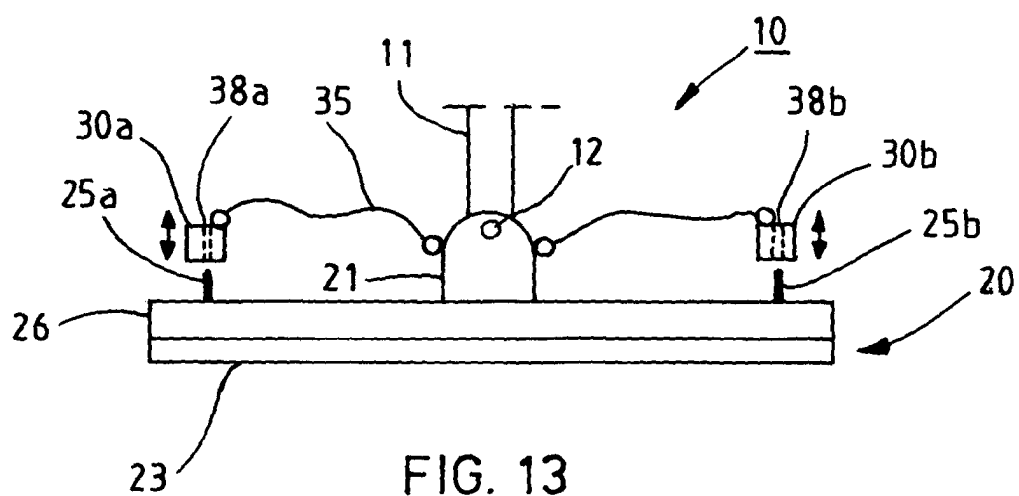


FIG. 13

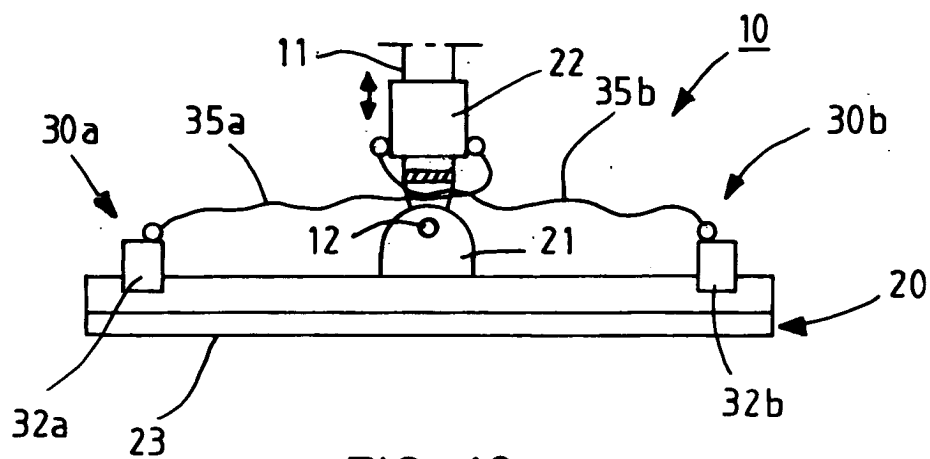


FIG. 10

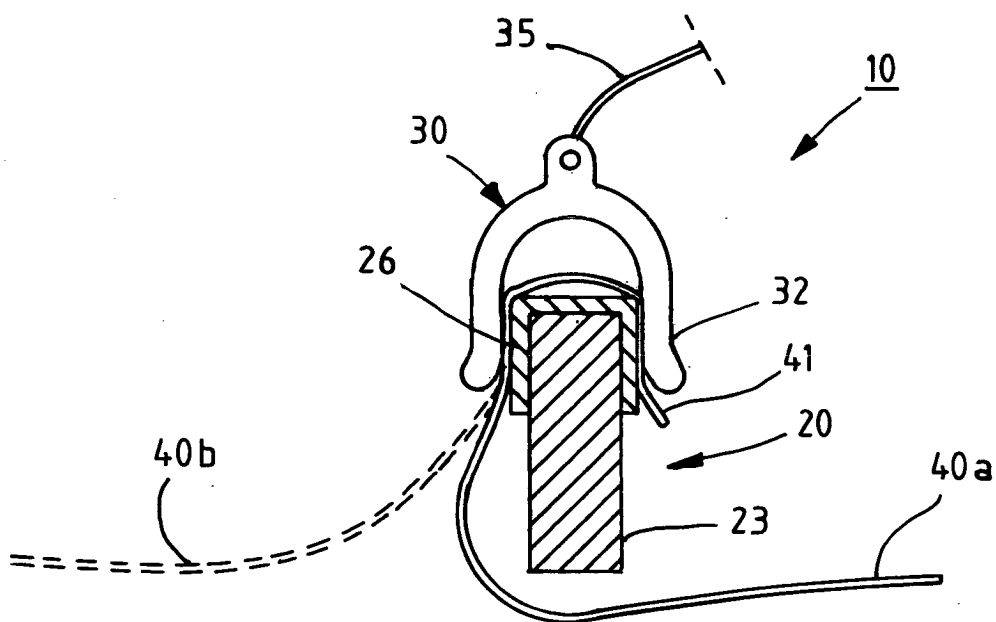
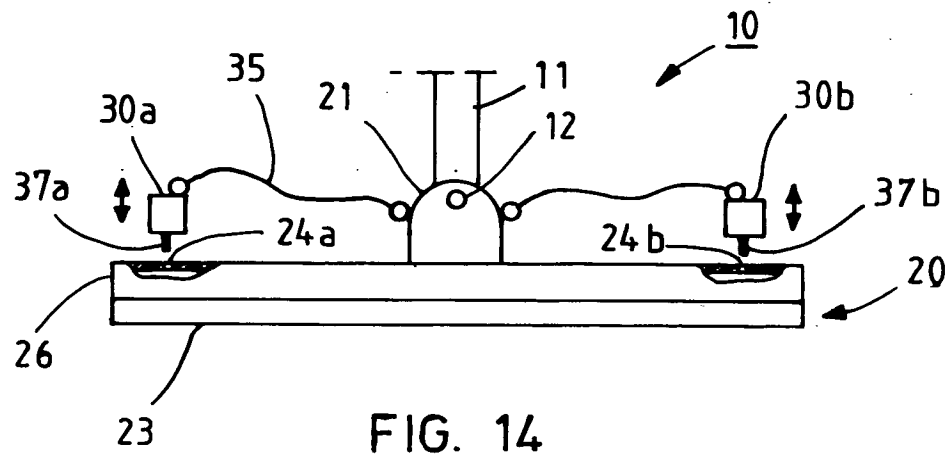


FIG. 15





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Place of search The Hague		Date of completion of the search 21 February 2005	Examiner Bourseau, A-M
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