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(54) Floor mop

(57) The subject of this invention is a floor mop. The mop has two identical arms 1, in the center of which is the main element 14 whereon are two combined releasing pedals 19. Clamping flaps 9, 9a can be mounted on the arms 1.

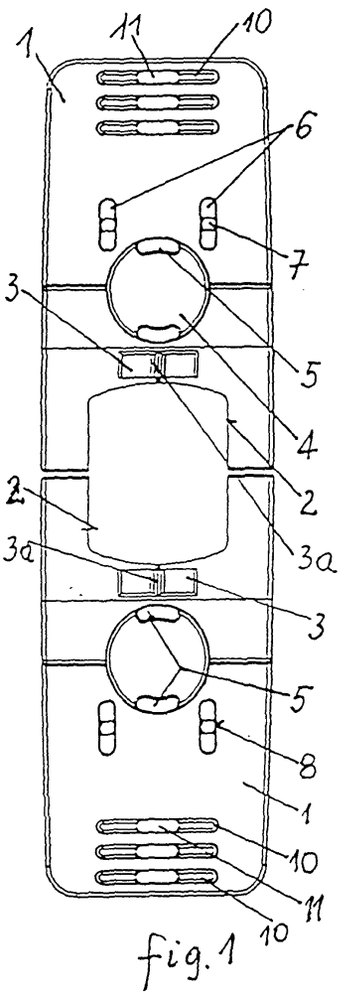

fig. 1

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Description

[0001] The subject of this invention is a tool for wet mopping. Floor mops consisting of extended arms and a main flat element equipped with two pairs of coaxially protruding pins are known in the present state of the art.

[0002] That sort of mop is described in the Italian patent no. IT 1243501. It has two different extended arms and a main flat element, which are combined when used. The main flat element is equipped with two pairs of external, protruding pins. The mop has a pawl for fast releasing of the arms combined by a handle and the major flat element. The pawl is in form of a lever and is mounted on one of the arms in the area of reduced thickness and in the window. Along the lateral part of the main flat element there are protruding sloping surfaces for supporting the arm without a pawl. The main flat element is also equipped with bearings which can be quickly mounted in the arms. On the main flat element there are also protrusions on which a user can put his foot to unlock the pawl and fold the arms. On the other side of the main element there is a belt of reduced thickness which is used for supporting the main element in the second arm protrusion of reduced thickness. The arms have lateral extensions of reduced thickness and mate the corresponding parts of the second arm creating thereby a support. Next, two sloping surfaces are placed at the end of the extension so that they could mate the above sloping surfaces of the main flat element. The leap located between the extensions of one of the arms is for supporting the belt of reduced thickness which is on the main flat element. At the ends of the arms there are pivots for fixing clamps used for clamping fabric pieces.

[0003] A defect of this solution and other solutions simplified, for example, according to the Italian patent nr IT 1236475 is a difficulty in wringing fabric, because the holding arms are remote. Consequently, the solution to the structure of the arms is that each of them has a different structure, with different lateral extensions of reduced thickness and with sloping surfaces. A pawl lever is mounted on one of the arms, whereas the edges and the protrusion of the main flat element mate the pawl. Moreover, the arms which are flat and smooth at the bottom allow smaller pressure of fabric from the arm bottom. Besides mops of that type, because of their complex structure, are heavy and therefore inconvenient for use, especially by women who most frequently use them for cleaning floors.

[0004] The aim of the invention is to offer a floor mop due to which it will be possible to wring the cleaning fabric easily and completely, simplify the structure and easily maneuver the mop while cleaning the floor.

[0005] The main feature of the invention is that on its main element the mop is equipped with combined releasing pedals, located on the extended axes, having a springy element, internal incomplete bearings, external incomplete bearings, locking catches and external locking bumpers, yet the main element has a slide cutout, a seat, protruding main locking bumpers, whereas in the identical arms there are rectangular holes with a locking beam between them, hollows and holes with the axes.

[0006] Preferably, the extensions are supported by pivots, and the locking bumpers are springy.

[0007] The advantage of the invention is that it allows easy insertion of fabric in the wringing press because the arms contact when folded. Moreover, the mop is light because its arms have many hollows at the bottom, and consequently it is easy to use while fabric adheres better to the arms. As a result of using the new structure of the main element and mounting the combined releasing pedals thereon, it was possible to have two identical arms which can be used interchangeably in the mop, which simplifies production and assembly.

[0008] The example of the subject of the invention is shown on the drawing, on which Fig.1 shows the top view of the arms, Fig.2 shows the axial section of the arms, Fig.3 and Fig.4 show the end view of the clamping flaps, Fig.5 shows the end view of the main element, Fig.6 shows the front view of the releasing pedals, Fig. 7 and Fig.8 show the top view of the arms, Fig. 9 shows the bottom view of the main element, Fig. 10 shows the top view of the clamping flap which is narrower than the arms, Fig. 11 shows the top view of the clamping flap which is as wide as the arms, Fig. 12 shows the bottom view of the mop, Fig. 13 shows the end view of the main element - its longer side, Fig. 14. shows the end view of the main element - its shorter side, Fig. 15 shows the bottom view of the main element, Fig. 16 shows the top view of the main element, Fig. 17 shows the end view of the main element - the other longer side, Fig. 18 shows the top view of the combined releasing pedals, Fig.19 shows the front view of the combined releasing pedals, Fig. 20 shows the bottom view of the releasing pedals, Fig. 21 shows the end view of the releasing pedals, Fig. 22 shows the back view of the clamping flap, Fig. 23 shows the bottom view of the clamping flap, Fig. 24 shows the end view of the clamping flap, Fig. 25 shows the top view of the clamping flap, Fig. 26 shows the front view of the clamping flap.

[0009] The floor mop consists of two identical rectangular arms 1 rounded toward their ends which are long rectangular trapezoid shaped in section. Arm 1 corners at the longer side of the section are rounded. The arms 1 have C - cutouts 2 at the top with their central side being convex. Under each of them are two rectangular holes 3 in the center of which is a locking beam 3a. Under those holes 3 are two circular seats 4 with the crescent-shaped outflow holes 5a. In another part of each arm is a pair of rectangular holes 6 which centrally have the axes 7 with collars 8 for fixing clamping flaps 9. At the very end of the arms 1 there are grooves 10, in the center of which are holes 11 shaped identically as those grooves 10, which fulfill various functions with respect to what tools are used.

[0010] The top side of the arms 1 has a surface lower than the symmetry axis of the circular seats 4. At the

bottom the arms 1 have plenty of hollows 12 which have the shape of rectangles, rectangles with one of their sides convex or concave, right-angled triangles with one of their sides convex or concave, whereas at hollow vertexes there are bearing seats 13. The main element 14 having two pairs of protruding pins 15 is between the arms 1 in the hollows 2. The main axis 17 is fixed on the main pivots 16 on the top surface of the main element 14, and the extended axes 18 are externally fixed on both sides of its extensions, on which there are combined releasing pedals 19, equipped with a springy element 20, internal incomplete bearings 21, external incomplete bearings 22, locking catches 23, external locking bumpers 24. On the top surface of the releasing pedals 19 are anti-slip ridges a. The extended axes 18 are supported by additional pivots 25. The main element 14 has a slide cutout 26, a seat 27, and externally the main protruding locking bumpers 28. Near each main locking bumper 28 there are nicked slots 29, due to which the bumpers 28 are stringy. At the bottom the main element 14 has rectangular hollows b and rectangular holes c, which are under the main axis 17 and the extended axes 18. The floor mop may be equipped with one or two clamping flaps 9 or 9a, which look like a rectangle but have rounded corners at the bottom, which are of the same radius as arm 1 rounded corners. At the top the clamping flaps 9 or 9a have centrally protruding rounding with a hollow 31 which is also present on the rectangular part. On the hollows 31 there are anti-slip humps 32 , due to which it is easier to hold the flaps 9 or 9a while putting fabric. The clamping flaps 9, 9a are convex externally, have rectangular protrusions 34 on which there are protruding spikes 35 for holding fabric. Moreover the clamping flaps 9 or 9a have catches at the bottom, which are mounted on the axes 7 with collars 8, and centrally the flat springy element 32 which is in circular seats 4a when the clamping flaps 9, 9a are fixed. Also, it is possible to use narrower clamping flaps 9a of the same construction as flaps 9. When the mop is used the arms 1 are locked by the locking catches 23, which are clipped by the locking beam 3a. When the mop is used the internal locking bumpers 24 are in the socket 27. To fold the arms 1 with their bottom surfaces inward a user must press down one of the two releasing pedals 19 to unlock the locking catches 23 from the locking beams 3a. During that phase the springy element 20 moves along the slide cutout 26 to the center. The arms 1 are released and fall down, because the bearing seats 13 swivel on the pins 15. Fabric pieces spread on the arms 1 fall and then contact. Fabric pieces contacted in this manner can be easily put inside the press and wringed. If it is necessary to use the mop again when the arms 1 are folded, the mop should be placed in such a position so that its arms 1 could touch the mopped floor. Next, by pressing the stick and the fixing-protective mechanism located on the main axis 17, the arms 1 unfold to their horizontal position. During the final phase, the locking catches 23 while sliding down along the locking beam 3a catch it, and then the arms 1 get locked. During the same phase the combined releasing pedals 19 move down through the rotating internal incomplete bearings 21, incomplete external bearings 22, whereas the springy element 20 moves through the slide cutout 26, and the external locking bumpers 24 move out from the seat 27. Whereas in the final phase the main locking bumpers 28 touch the external surfaces of the arms 1 making their further upward movement impossibl

Claims

1. The floor mop consisting of two extended arms combined with the main element equipped with two pairs of coaxially protruding pins, having on its upward side two pivots and the main axis is **characterized in that** on the main element /14/ it has the combined releasing pedals /19/, placed on the extended axes /18/, equipped with a springy element /20/, incomplete internal bearings /21/, incomplete external bearings /22/, locking catches /23/ and external locking bumpers /24/, yet the main element /14/ has a slide cutout /26/, the seat /27/, and main protruding locking bumpers /28/, whereas rectangular holes /3/ with a locking beam /3a/ between them, hollows /12/ and rectangular holes /6/ with axes /7/ are in the identical arms /1/.

2. According to claim 1, the mop is **characterized in that** the extended axes /18/ are supported by additional pivots /25/.

3. According to claim 1, the mop is **characterized in that** the main locking bumpers /28/ are springy.

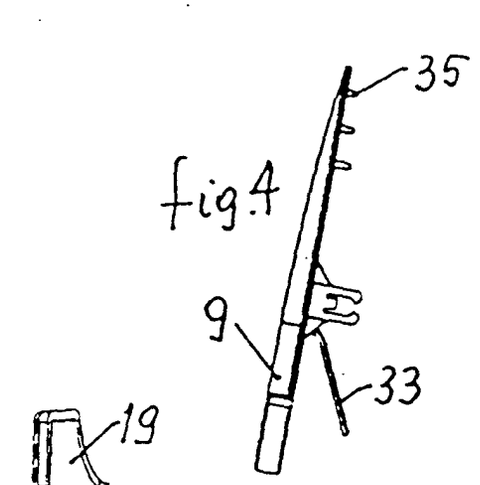


fig.4

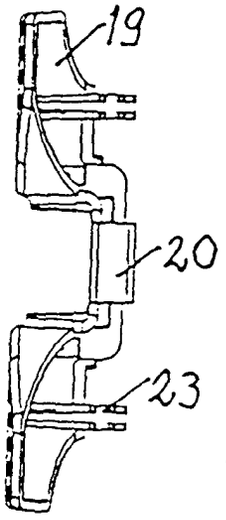


fig.6

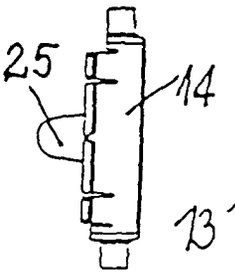


fig.5

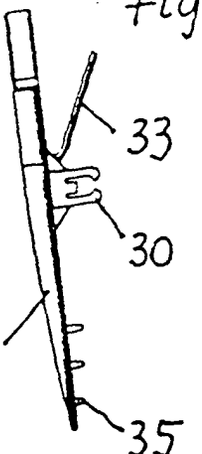


fig.3

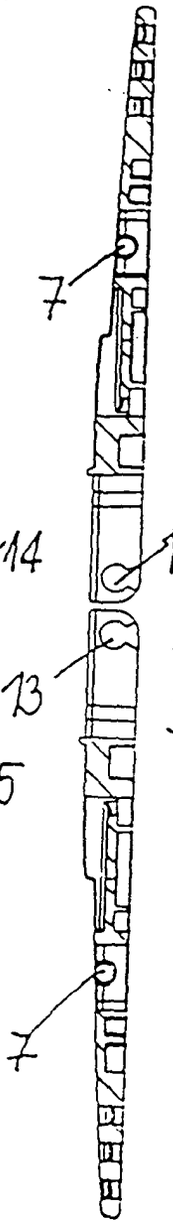


fig.2

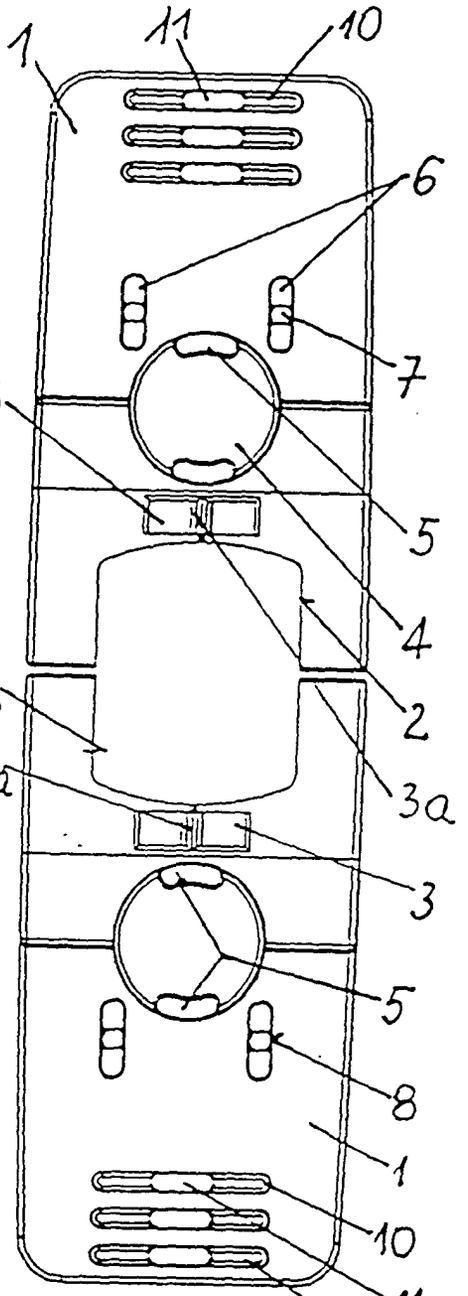


fig.1

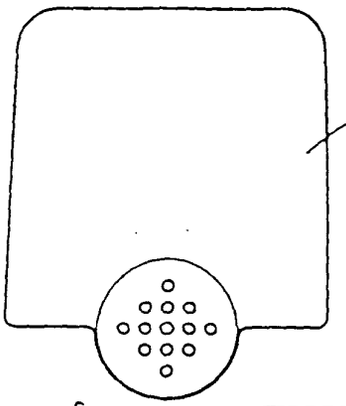


fig.11

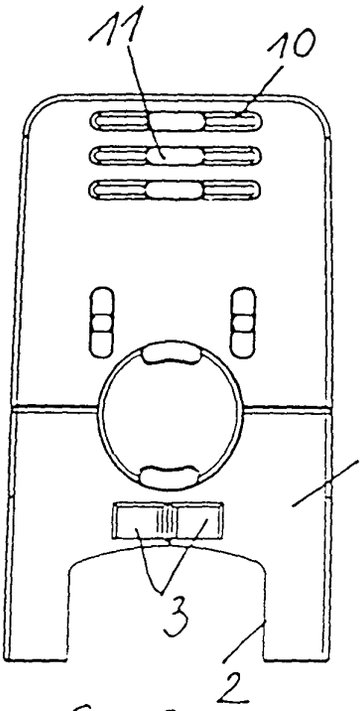


fig.8

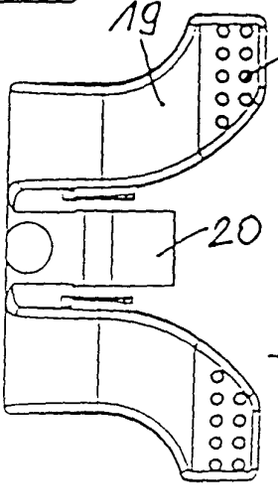


fig.10

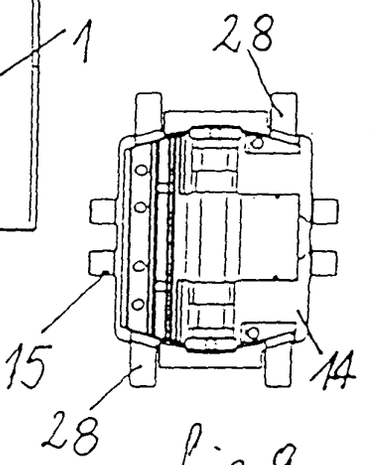


fig.9

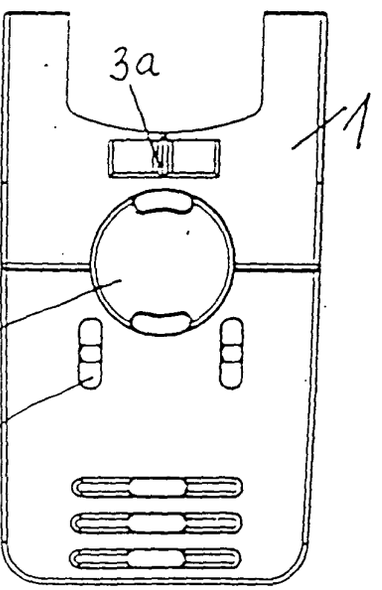


fig.7

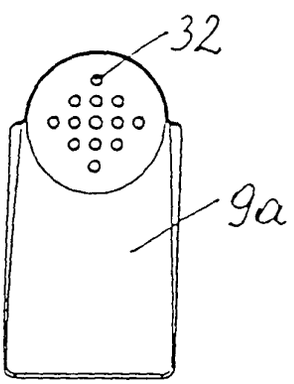


fig.10

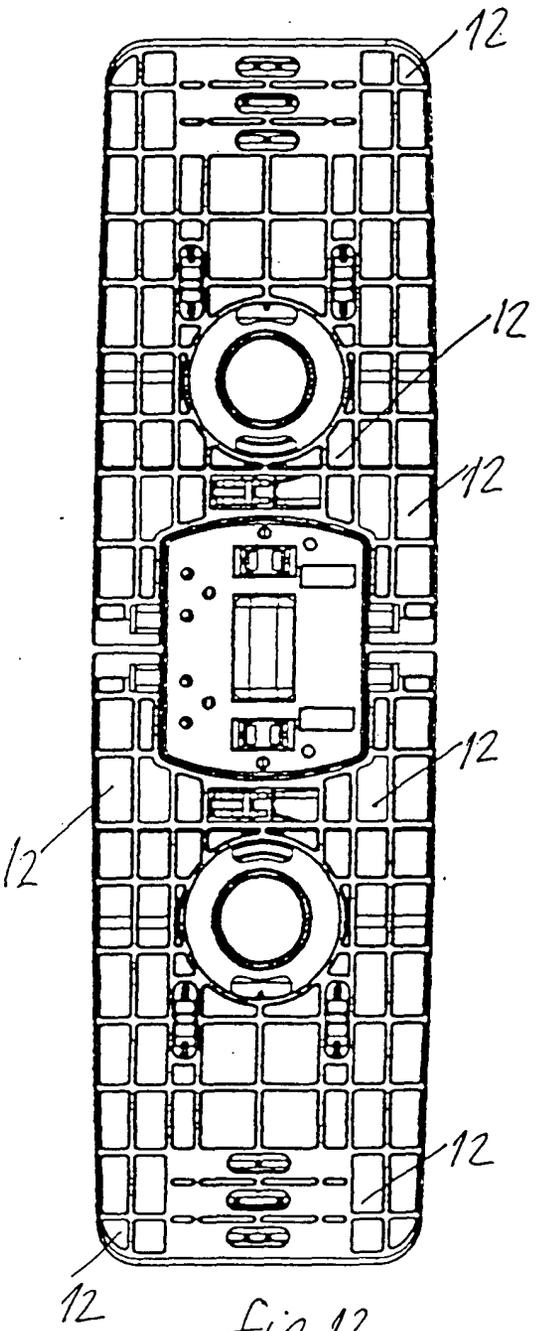


fig. 12

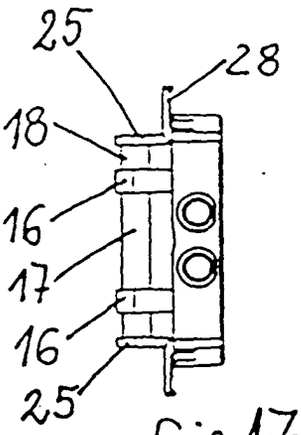


fig.17

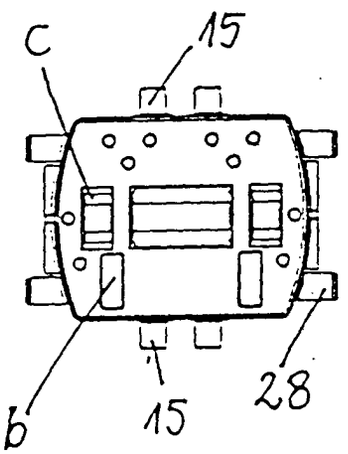


fig.15

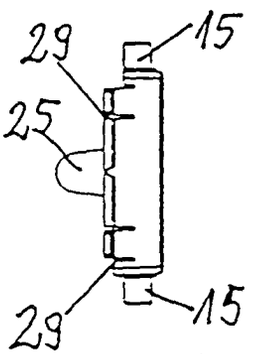
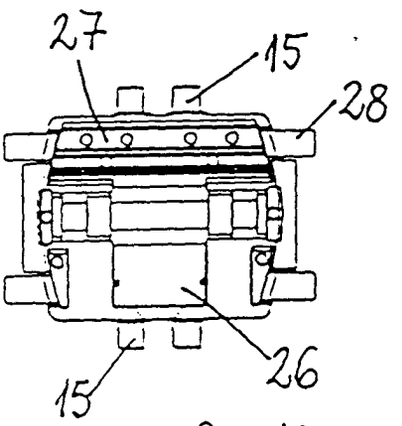


fig.14



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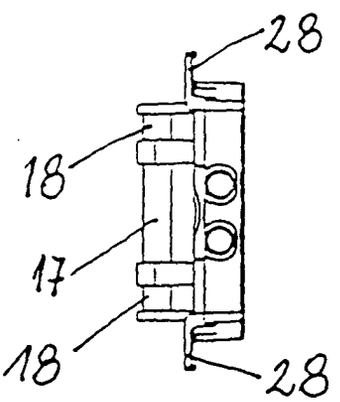


fig.13

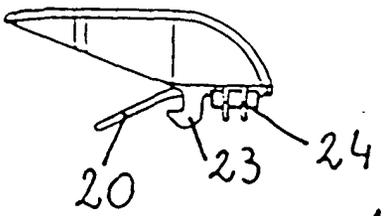


fig.21

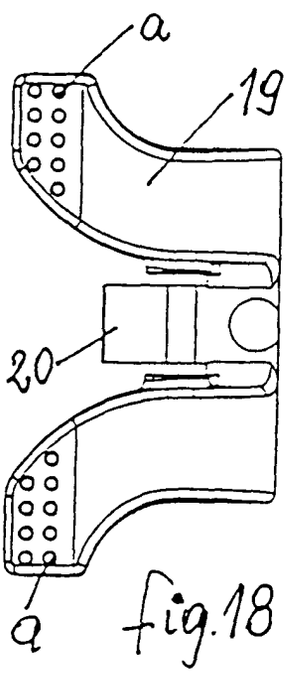


fig.18

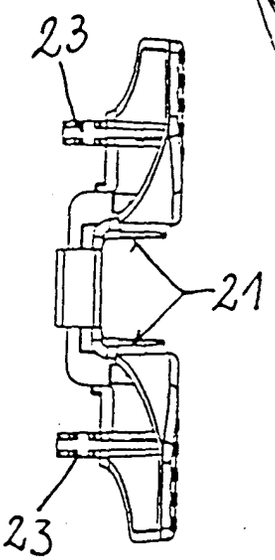


fig.19

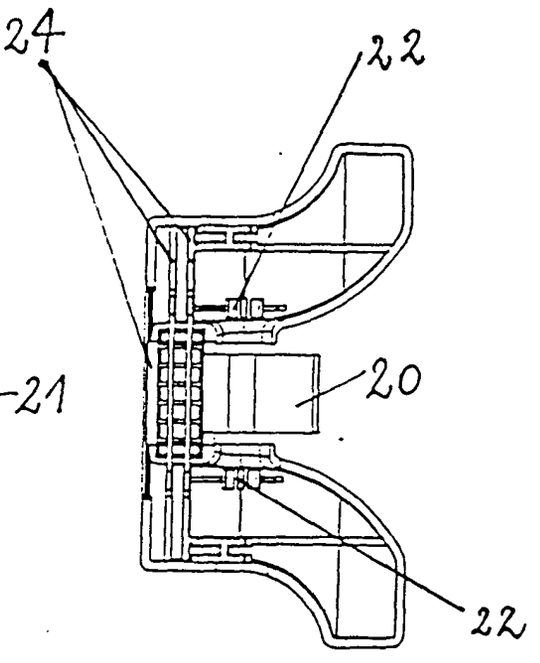
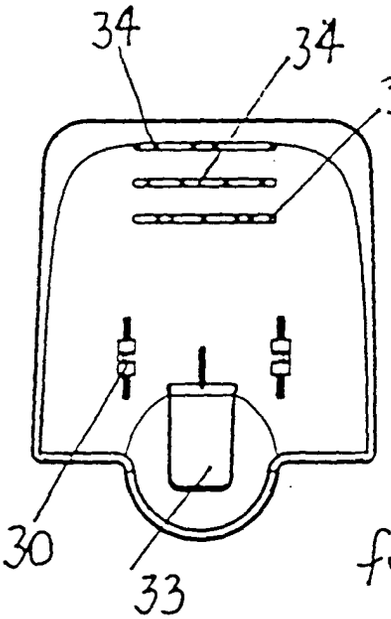


fig.20



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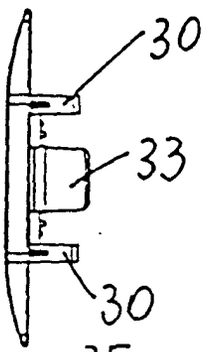

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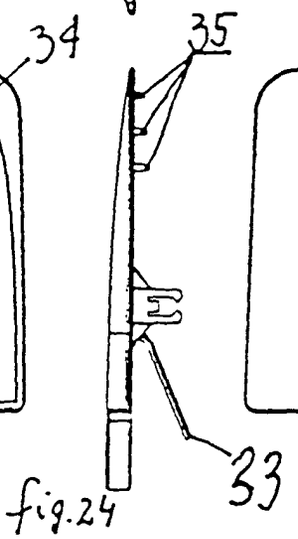

fig.24

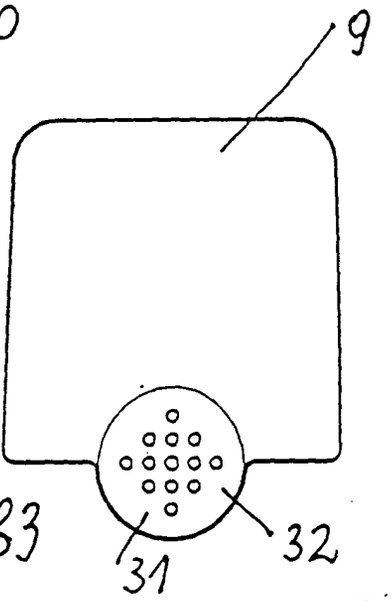

fig.25

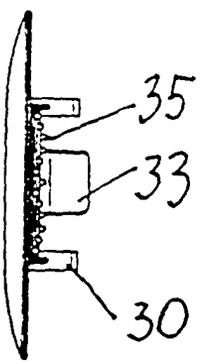

fig.22