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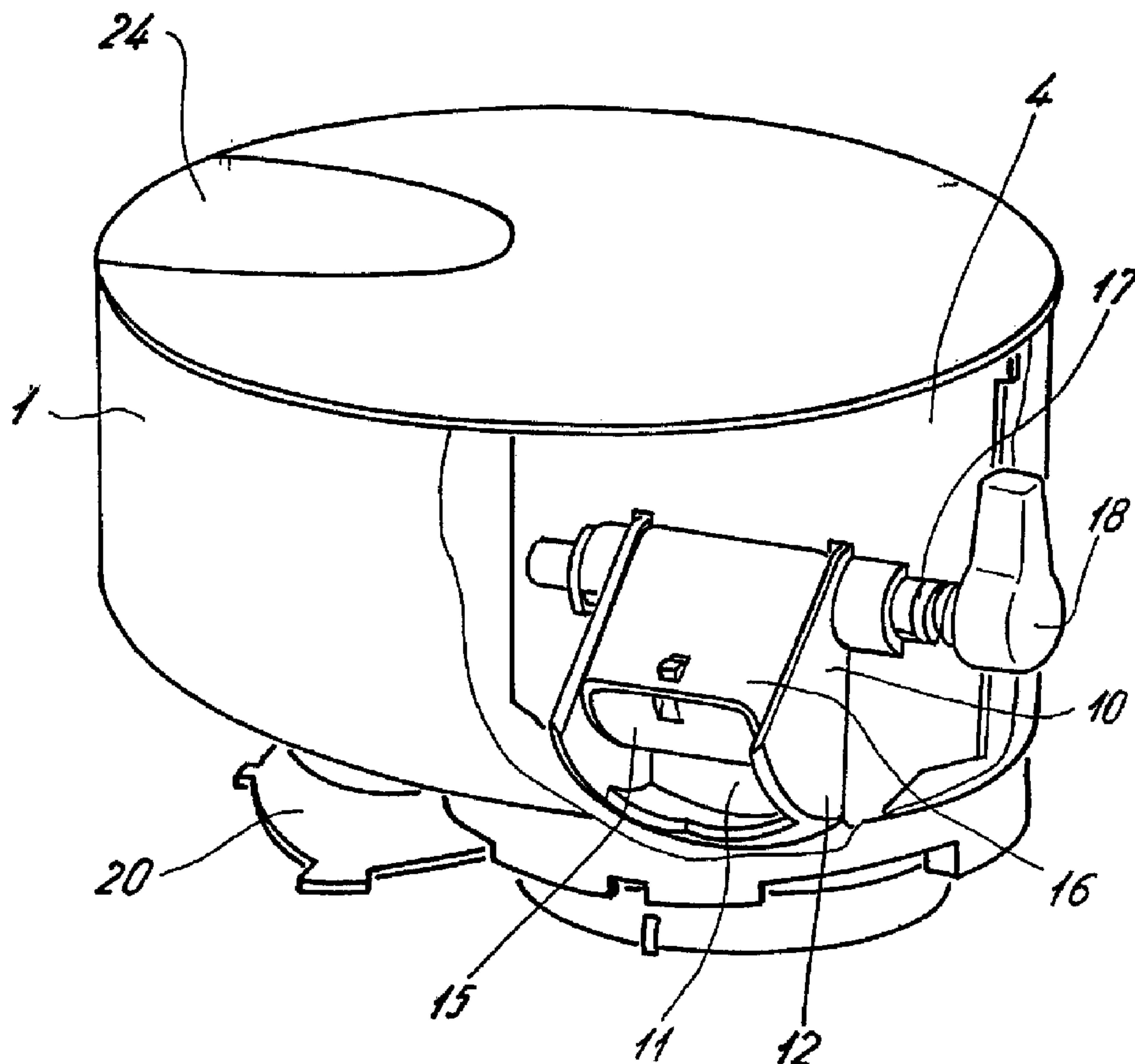
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(54) Title: DEVICE FOR GRINDING COFFEE BEANS



(57) Abrégé/Abstract:

A device for grinding coffee beans includes a grinding mechanism and a storage container arranged above the latter, in which storage container are formed at least two compartments for different coffee beans, said compartments being separated by a

(57) **Abrégé(suite)/Abstract(continued):**

partition, wherein in the bottom of the storage container an opening closable by a swingable flap is provided for the selection of the feeding of coffee beans from one of the compartments and/or for the closing of the opening. Here, the flap is preferably supported on the partition in a swingable manner. Thus, by means of the storage container different types of coffee beans can be selectably fed to the grinding mechanism.

ABSTRACT

A device for grinding coffee beans includes a grinding mechanism and a storage container arranged above the latter, in which storage container are formed at least two compartments for different coffee beans, said compartments being separated by a partition, wherein in the bottom of the storage container an opening closable by a swingable flap is provided for the selection of the feeding of coffee beans from one of the compartments and/or for the closing of the opening. Here, the flap is preferably supported on the partition in a swingable manner. Thus, by means of the storage container different types of coffee beans can be selectably fed to the grinding mechanism.

DEVICE FOR GRINDING COFFEE BEANS**FIELD OF THE INVENTION**

The present invention relates to a device for grinding coffee beans.

BACKGROUND OF THE INVENTION

5 Known from EP 424 326 is a device for grinding coffee beans wherein two storage containers for coffee beans are arranged above a grinding mechanism. Each storage container displays a metering chamber that possesses a displaceable lower metering wall, in order to feed coffee beans from the respective storage containers. Through this arrangement, different types of coffee beans can be fed to the grinding mechanism, but
10 the mechanical structure is complex due to the use of the distinct storage containers and metering devices.

Known from EP 452 214 is a metering and brewing device wherein two bean containers are provided, each of which is associated with a coffee grinder. The desired type of coffee can be selected through actuation of the appropriate grinder. Though a selection
15 of the type of coffee can be made, the structure having two coffee grinders is complex and expensive to produce.

Thus, there is a desire for a device for grinding coffee beans whereby, in a simple structure, a selection among different coffee types is made possible.

20 SUMMARY OF THE INVENTION

According to the embodiment of the invention, arranged above the grinding mechanism is a storage container in which are formed at least two compartments, separated by a partition, for different coffee beans, wherein an opening, closable through a swingable flap, is provided in the bottom of the storage container for selection of the feeding of
25 coffee beans from one of the compartments and/or for closing of the opening. Through this means, at least two different types of coffee can be stored in one storage container and fed to a grinding mechanism. For this purpose, a swingable flap is provided at the bottom, which flap makes possible an appropriate feeding of coffee beans from one of the compartments. The grinding device so configured is especially suitable for coffee

vending machines.

According to an example embodiment form, the flap is swingably supported at the partition. Through this means, the device for grinding retains a simple structure and the flap can form a part of the partition for the coffee selection. Here, the flap can be fixed
5 to a shaft guided through the storage container, so that a rotation of the shaft from outside the storage container produces a corresponding swinging motion.

In order to prevent a jamming of coffee beans between the flap and storage container, the flap preferably has a rounded bottom section that can also be smaller than the opening in the bottom of the storage container. For a separation of the two
10 compartments, the flap has an intermediate wall that, in a central position, can be aligned with the partition installed in the storage container.

Preferably, the flap has side walls extending perpendicularly to the rotation axis, which side walls prevent a passage from forming between the two compartments in an opened position of the flap. This is due to the fact that, in the selection position, the bottom-side
15 opening to the grinding mechanism should be unblocked and thus a gap can be formed between the partition fixedly installed in the storage container and a partition of the flap, which gap is covered by appropriate side walls.

For a simple assembly, the partition can be inserted into the storage container. Further, still additional compartments can be provided in the storage container, for example a
20 third compartment for ground coffee, which can be put through a channel in order to bypass the grinding mechanism.

BRIEF DESCRIPTION OF THE DRAWINGS

In the following, the invention is explained in detail with the aid an embodiment
25 example, with reference to the accompanying drawings, in which:

Fig. 1 shows a perspective, exploded representation of an embodiment example of a device for grinding according to the invention; and

Fig. 2 shows a perspective view of the device for grinding of Fig. 1, in the assembled state.

DETAILED DESCRIPTION

A device for grinding coffee beans includes a storage container 1, which is arranged above a grinding mechanism (not represented). The storage container 1 defines an internal space 2 that is separated from a compartment 3 for ground coffee. In order to form two compartments in the storage container 1, a partition 4 is provided, which is insertable into the storage container 1 and fixable there by means of laterally protruding projections 5.

The partition 4 defines in its lower region a cutout 6 that is enclosed by two side pieces 7. Provided in the right side piece 7 in Fig. 1 is an opening 8 and on the opposite side a cutout 9, through which a shaft 17 can be guided and supported.

In order to make possible a selection in the feeding of coffee beans, arranged on the partition 4 is swingable flap 10 that has a central partition 11, which in a centered position of the flap 10 is aligned with the plane of the partition 4. At two opposite sides the flap 10 has side walls 12 extending perpendicularly to a rotation axis, which side walls extend from a rotation axis to a bottom section 13. Formed on the partition 4 in the region of the flap 10 are walls 16 running diagonally downward, which prevent a user from inadvertently reaching into the grinding mechanism from above. Formed under the walls 16 is a hollow space 26 that is closed by a cover 15 that can be wedged into cutouts 27 by means of catch tabs 28. Through this means, no or only a few coffee beans can accumulate on the flap 10 immediately above an opening 19 in a central region under the partition 4.

The flap 10 has further openings 14 in the side walls 12 for the passing through of a shaft 17. The shaft 17 is passed through an opening 25 in a wall of the storage container 1 and through the partition 4 and the openings 14 in the flap 10. At the outer end of the shaft 17, a turning knob 18 is fixedly press-fitted onto the shaft 17.

At the top side, the storage container 1 is closed by a lid 22, in which a cutout 23 is arranged. Arranged in the cutout 23 is a cover 24, which closes the compartment 3 for ground coffee.

Provided at the bottom side of the storage container is a coupling element 20 that is connectable to the storage container 1 and defines a larger opening 19 for the feeding of coffee beans to a grinding mechanism and a smaller opening 21 for the connection to a channel for bypassing the grinding mechanism.

- 5 If no ground coffee is arranged in the compartment 3, the feeding of coffee beans from one of the compartments formed in the storage container 1 takes place, a selection being made by means of the flap 10. The coffee beans can be fed to the grinding mechanism through the opening 19 according to the position of the flap 10.

10 The invention is not limited to the represented embodiment example. In the embodiment example, two compartments are formed through an installable partition 4 and a third compartment for ground coffee is arranged separately. It is also possible to provide three different compartments that are separated from each other by means of a swingable flap and to make possible a selectable feeding of coffee beans to a grinding mechanism. Here, the geometry of the storage container 1 can also be adjusted, for
15 example a wedge-shaped, upwardly broadening geometry can be chosen.

For a cost-effective production of the device for grinding, the storage container 1 and the corresponding components for selection of the coffee-bean feeding can be produced from plastic.

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CLAIMS

What is claimed is:

1. A grinding device for coffee beans, comprising:

a grinding mill; and

a storage container positioned above the grinding mill, the storage container including a separating wall defining at least two compartments for different types of coffee beans, the storage container having a bottom with an opening and including a pivoting flap that pivots about a pivot axis, wherein the pivoting flap one of (a) selects a feeding of coffee beans from one of the compartments to the opening or (b) closes the opening and includes side walls that extend perpendicular to the pivot axis to prevent the creation of a passage between the two compartments if the flap is in an opened position.

2. The grinding device according to claim 1, wherein the flap is positioned on the separating wall.

3. The grinding device according to claim 1, further including a shaft extending through the storage container, and wherein the flap is secured on the shaft.

4. The grinding device according to claim 1, wherein the flap includes a rounded bottom section.

5. The grinding device according to claim 1, wherein the flap includes an intermediate wall which separates the compartments from each other.

6. The grinding device according to claim 1, further including two walls extending at a slant away from the separating wall to define a hollow space above the closable opening and a bottom section of the flap.

7. The grinding device according to claim 6, further including a cover positioned to close off a bottom of the hollow space.

8. The grinding device according to claim 1, wherein the separating wall and the storage container are

adapted to be pushed into the storage container.

9. The grinding device according to claim 1, wherein the storage container comprises a third compartment for ground coffee formed separately from the first and second compartments and which includes a bottom with a closable opening leading to a channel that circumvents the grinding mill.

10. A grinding device for coffee beans, comprising:

a grinding mill; and

a storage container positioned above the grinding mill, the storage container including a separating wall defining at least two compartments for different types of coffee beans, the storage container having a bottom with an opening and including a pivoting flap that pivots about a pivot axis, wherein the pivoting flap one of (a) selects a feeding of coffee beans from one of the compartments to the opening or (b) closes the opening and wherein the storage container comprises a third compartment for ground coffee formed separately from the first and second compartments and which includes a bottom with a closable opening leading to a channel that circumvents the grinding mill.

11. A grinding device for coffee beans, comprising:

a grinding mill; and

a storage container positioned above the grinding mill, the storage container including a separating wall defining at least two compartments for different types of coffee beans, the storage container having a bottom with an opening and including a pivoting flap that one of (a) selects a feeding of coffee beans from one of the compartments to the opening or (b) closes the opening, wherein the flap includes a rounded bottom section.

12. A grinding device for coffee beans, comprising:

a grinding mill; and

a storage container positioned above the grinding mill, the storage container including a separating wall defining at least two compartments for different types of coffee beans, the storage container having a bottom with an opening and including a pivoting flap that one of (a) selects a feeding

of coffee beans from one of the compartments to the opening or (b) closes the opening, wherein the storage container includes two walls extending at a slant away from the separating wall to define a hollow space above the closable opening and a bottom section of the flap.

13. The grinding device according to claim 12, further including a cover positioned to close off a bottom of the hollow space.

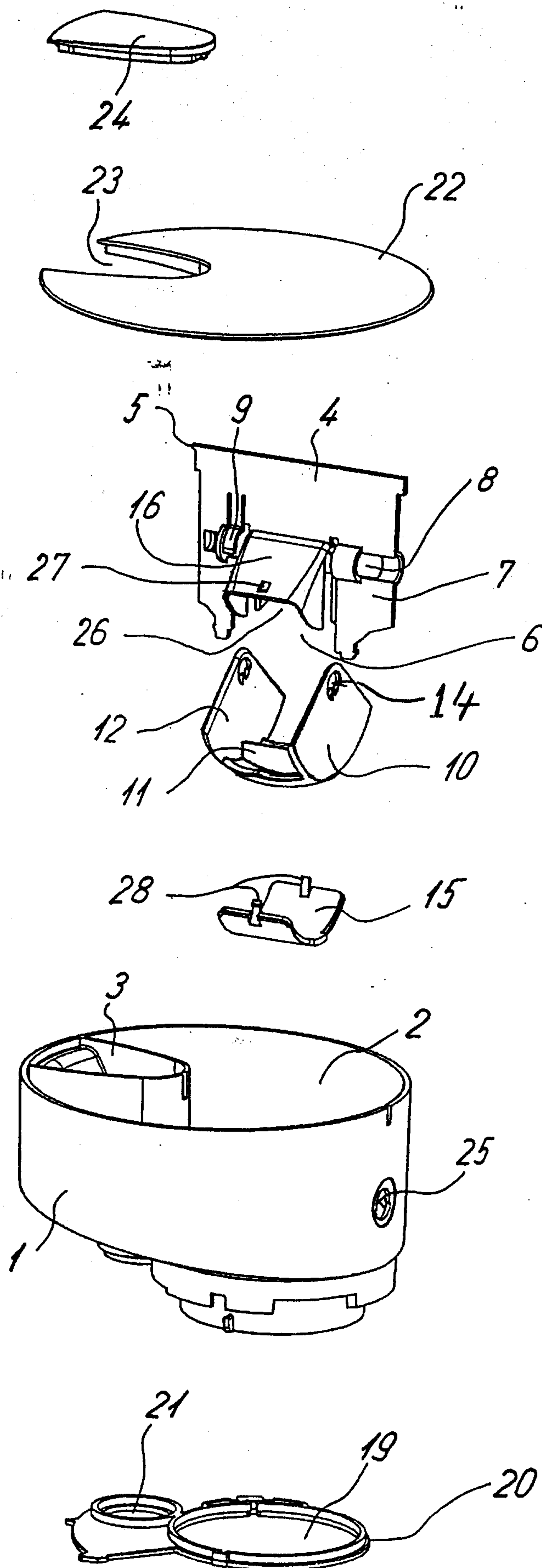
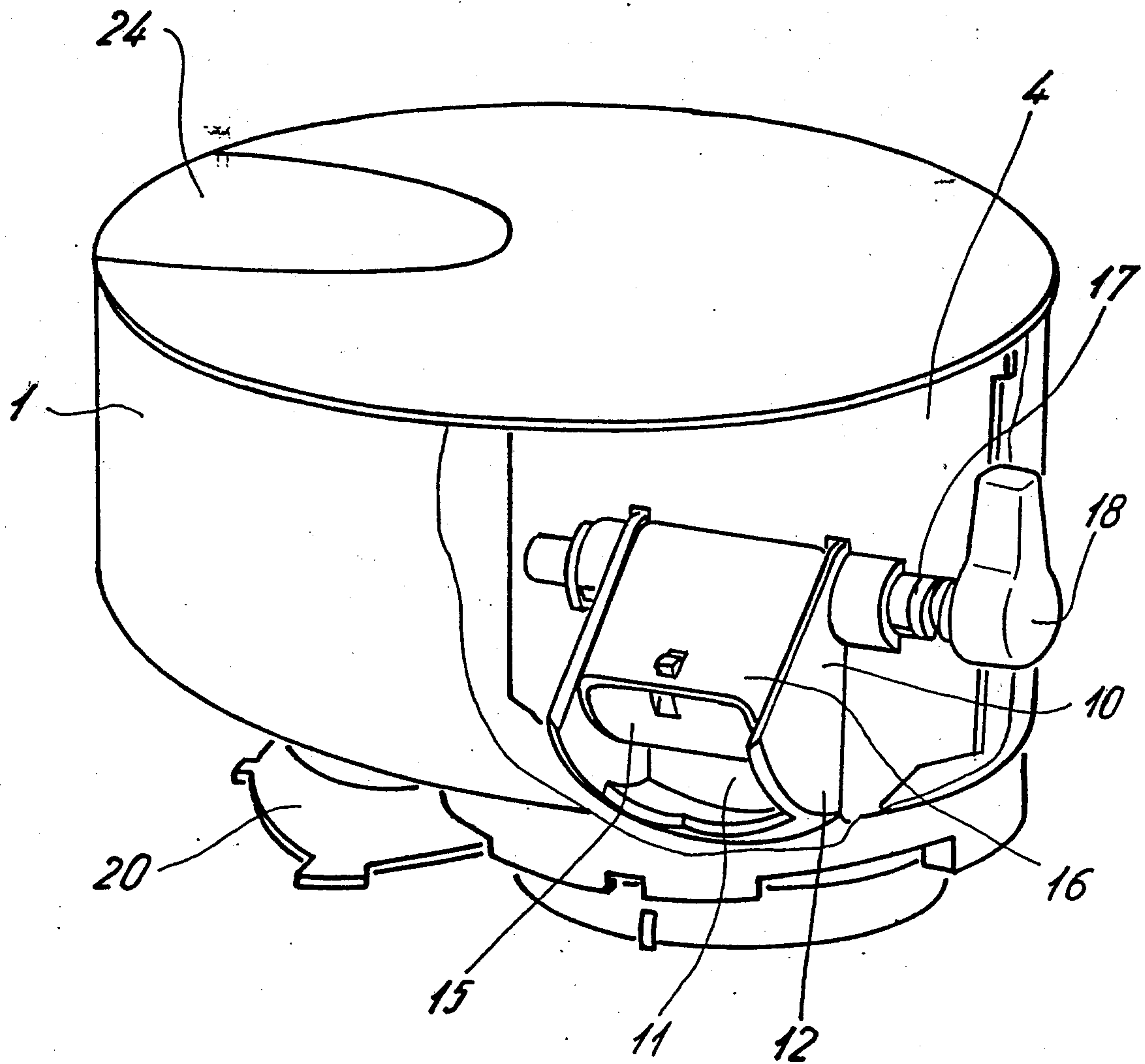


Fig. 1

*Fig. 2*

