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"Improvements in and relating to storage containers"

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The invention relates to a storage container, especially for magnetic tape cassettes or other information carriers, having a slide member which is movable by spring force out of a housing and into a removal position, which slide member accommodates the information carrier and has a front part that has a front panel and is pivotable in the removal position and that engages, by means of a pin located at a distance from the pivoting axis of the front part, in guides formed on both sides of the housing.

Such a storage container is known from DE-OS 32 16 889. In that specification there is described, inter alia, a storage container in which a pin formed on the front part engages in an approximately S-shaped groove. The shape of the groove determines the pivoting movement and, especially, the angle through which the front part pivots. However, a precisely defined end position for the pivoted front part and for the slide member is not achieved by that arrangement.

It is an object of the invention to provide a storage container for information carriers, especially for magnetic tape cassettes, with a pivotable front part which is moved in the removal position into a defined open position by means of the spring force that operates the slide member.

The invention provides a storage container

comprising a slide member for accommodating a stored item, slidably received within an open-fronted housing and resiliently urged forwards into a removal position projecting from the front of the housing, and a front part pivotably mounted on the slide and pivotable in the removal position into a position in which such an item can be removed from the container, the front part having pins guided in substantially straight guides in both sides of the housing, and wherein in the removal position the pins abut first stops, preventing forward movement of the pins, further forward movement of the slide member causes pivoting of the front part, and the pivoting movement is limited by at least one stop member on the front part engaging a second stop.

There can thus be obtained a reliable, stable pivoting means which positions the slide member precisely in the removal position. Because the front part pivots away, the front portion of the stored item, which may be an information carrier, for example, a magnetic tape cassette, which is located on the slide member is released for removal. The cassette can easily be removed from the housing.

It is especially advantageous to construct the stop member as a projection which extends radially with respect to the pivoting axis of the front part in the direction towards the rear wall of the housing, and which has an upper and a lower stop face, which stop faces converge at an acute angle. The stop faces then preferably slope in such a manner that, in the removal position, at least the

upper stop face lies flat against a corresponding contact face of the associated cutout.

Each guide may be a straight groove or cutout that extends in the sliding direction, and the first stops may then be closed front ends of the grooves or cutouts.

One form of storage container constructed in accordance with the invention will now be described by way of example only with reference to the accompanying drawings, in which:

Figure 1 is a perspective view of a storage container; and

Figure 2 is a cross-sectional view from one side of three storage containers arranged one on top of another.

Referring to Figure 1, one form of storage container comprises an open-fronted housing 1 and a slide member 2 having a front part 3 which is pivotable downwards, with respect to a usual orientation of the storage container with its greatest extent in a

horizontal plane. Located on the slide member 2 is shown a standard-sized magnetic tape cassette 4 which substantially fills the container and which, in the removal position as shown, can be gripped at the sides 5 with the fingers and removed from the housing 1.

In each side wall of the housing 1 there is provided a slot-like cutout 5 which extends in the longitudinal direction and forms a guide for a respective pin 6 arranged on the front part 3 at a 10 small distance from the pivot axis 7 thereof. In the closed condition of the storage container the pins 6 are directly below the pivot axis 7. Also formed on the front part 3 is a stop member 8 which extends radially away from the axis 7 towards the back of the housing 1 15 and an upper stop face 9 of which rests, in the removal position, on a facing contact face 10 (forming the above-mentioned second stop) of a cutout 11 provided in the slide member 2.

The operation of the pivotable front part 3 will 20 now be described with reference to Figure 2. In that Figure, three storage containers 12, 13, 14 arranged one on top of the other are shown in section, the slide member 122 of the upper storage container 12 being in the closed position. In that position, a catch member 25 (not shown) engages in a corresponding socket in the housing 1 and can be unlocked by operation of an operating member 16 (see Figure 1) located on a front panel 15. The front panel 15 is part of the front part

3 and, in the closed position, substantially closes off the front of the housing 1.

After unlocking, a spring member 17 first moves the slide member into the position shown at 132 in the middle housing 13, where the pin 136 comes to rest in its end position, engaging the front end of the slot 5 (which forms the above-mentioned first stop). Because of the spring force acting on the slide member 132, the latter is moved further in the longitudinal direction until it occupies the removal position as shown at 142 in the lower housing 14. Because the pin 146 is prevented by the end of the slot 145 from moving further forward, while the pivot axis 7 is carried forward by the pivots into the position shown, the pin 146 entering a recess 18 in the top of the slot-like cutout 5, which recess is best seen in the upper storage container 12. The recess 18 is necessary in order to accommodate the upward movement of the pin 146 as the pin is constrained to move in a circle round the pivot axis 7, which remains in a predetermined horizontal plane.

claims

1. A storage container comprising a slide member for accommodating a stored item, slidably received within an open-fronted housing and resiliently urged
5 forwards into a removal position projecting from the front of the housing, and a front part pivotably mounted on the slide member and pivotable in the removal position into a position in which such an item can be removed from the container, the front part
10 having pins guided in substantially straight guides in both sides of the housing, and wherein in the removal position the pins abut first stops, preventing forward movement of the pins, further forward movement of the slide member causes pivoting of the front part, and the
15 pivoting movement is limited by at least one stop member on the front part engaging a second stop.

2. A storage container as claimed in claim 1, wherein the stop member engages in a cutout provided in a lateral wall of the slide member.

20 3. A storage container as claimed in claim 1 or claim 2, wherein the stop member is a projection which extends radially with respect to the axis of pivoting of the front part towards the rear of the housing, and which has an upper and a lower stop face, which stop
25 faces converge at an acute angle towards the rear.

4. A storage container as claimed in any one of claims 1 to 3, wherein the guides are straight grooves or cutouts, and the first stops are closed front ends



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of the grooves or cutouts.

5. A storage container as claimed in claim 4, wherein the guide grooves or cutouts are recessed adjacent to the first stops to permit the pins to leave the grooves as the front part pivots.

6. A storage container as claimed in any one of claims 1 to 5, wherein the front part comprises a front panel that in a closed position of the container substantially closes the front of the housing.

7. A storage container as claimed in any one of claims 1 to 6, for storing an information carrier.

8. A storage container as claimed in claim 7, which is so dimensioned as to receive a standard-sized tape cassette, the cassette substantially filling the container and a front end portion of it being exposed to be grasped by the fingers in the removal position.

9. A storage container substantially as hereinbefore described with reference to, and as shown in, the accompanying drawings.
