The invention relates to a container for magnetic tape cassettes.

Many containers for magnetic tape cassettes have been known previously. A container marketed under the designation "cbox" is disclosed in DE-C-22 48 408. It comprises a housing having an opening at the front through which a transporter for a cassette can be moved. When the slider member is in the inserted position, its front wall covers over the housing opening. An ejector spring arrangement biases the slider member into its outer end position, and a locking arrangement holds the inserted slider member in the housing against the bias of the ejector spring; the locking arrangement can be unlocked manually.

These features are also provided in the container according to the present invention.

In a further type of construction of a container which is known from FR-A-2 297 478, there can be moved relative to a housing a slider member having a front wall which can be folded down relative to a guide portion of the slider member. Such an alternative form can also be provided in the case of the container according to the present invention.

Particularly when a container offers space for a plurality of cassettes, it is desired to be able to determine which places are occupied and which are free. A cassette container which has such a system is known from US-A-3 603 478.

The container comprises a housing made of plastics material and divided by means of ribs into compartments, each for one cassette. Each compartment can be closed by means of an associated fold-down cover. A tongue integrally formed with the cover carries a projection which can be felt. If there is a cassette in a compartment, the cassette is pressed towards the housing opening by a second tongue integrally formed with the rear

wall of the container. If the cover is now folded upwards, the sensing tongue can be bent outwards slightly. The user can feel such outwardly-deformed tongues in order to ascertain which compartments are occupied. This type of construction is less suitable for optical indication of the state of occupation, since in the most important viewing direction, namely at the front, the indication permits scarcely any difference between empty and occupied compartments to be perceived. Furthermore, it is called for that a special, expensive plastics material be used, which also remains elastic under permanent load, and therefore has no cold flow property, since otherwise the means for indicating the state of occupation fails after a short time.

The problem on which the invention is based is that of providing a magnetic tape cassette container which is convenient to operate and in particular also has an unequivocal optical means for indicating the state of occupation.

This problem is solved by means of the combination of features set out in Patent Claim 1; the subsidiary Claims define suitable developments of the concept underlying the invention.

Other solutions are disclosed in Patent Application No. 89 100 214.9, which according to Rule 25 (2) was deleted from the original Application, on which the present Application is also based.

Portions of an exemplary embodiment of the subject of the invention are shown in the accompanying drawings, and explained in greater detail hereinafter with reference to the latter, in which:

Fig. 1 shows, in a view from inside, the lower front region of a transporter, which in this case is in the form of a slider member with a fold-down front wall,

Fig. 2 is a section approximately in the plane 47-47, which is marked in Fig. 1,

Fig. 3 is a sectional view in the plane 46-46, which is marked in Figs. 1 and 2, and

Fig. 4 shows the indicating slider in perspective.

The housing and the ejector spring arrangement are not shown in the drawing; reference should be made in this respect to the documents cited initially.

The front wall of the transporter, in this case a slider member cover 1101, is pivoted in the direction of the arrow 1102 in order to close the container. In the base 1103 of the cover there is pivotably supported about a journal bearing 1104 a control lever 1105 which is pressed by a weak leaf spring 1106 into the position shown in Figures 1 to 3, in which it comes to rest in the cut-out 1107 in a strut 1108 of the cover. When there is a cassette in the container, the wedge-like surface 1109, on pivoting in the direction of the arrow, meets an edge of the cassette and is deflected against the spring bias.

On the side of the wall 1110 of the strut 1108 remote from the inside of the container there is a release button 1111 with an extension 1112 which runs parallel to the slider member strut 1108, is slidably guided in the latter, and has a U-shaped cross-section, the limbs of the U-shape facing towards the strut. In front of the base of the U-shape there is a transparent window 1114 with an upper space 1115 to receive a label, and a lower indicator window 1116.

In the space bordered by the U-shaped cross-section of the button extension there is inserted a slider 1117 which is shown in perspective in Figure 4. It is held so that it is slidably movable between an upper stop member 1118, moulded on the slider member strut, and the control lever 1105, on which it "rides"; if the control lever is deflected downwards as described, the slider 1117 follows under the influence of gravity, and its signal strip 1119 becomes visible behind the indicator window 1116. The slider 1117 is loosely guided by means of its arms 1120 in

the U-shaped cross-section of the button extension, and by means of shorter arms 1121 on ribs 1122 which are moulded on the inside of the button. The end 1123, remote from the inside of the container, of the bearing journal 1124 of the control lever 1105 also bears against such a rib 1122. The bearing 1104 is formed by two bearing half shells 1125 moulded on the base 1103 of the cover, and by a lower bearing half shell 1126 which - when the parts are injection-moulded from plastics material - can be unmoulded by means of an opening 1127 left free.

If the control lever 1105 is pressed downwards by the cassette, the slider 1117 follows under the influence of gravity. Its signal strip is then visible through the indicator window 1116.

If, because of the friction conditions, or in order to be able also to use the container in another position, it is not wished to rely on gravity for the movement of the slider, the control lever can be made with two arms and the slider can be allowed to sit on the lever arm remote from the wedge-like surface and be subjected to a downwardly-directed spring bias. This spring then not only holds the slider constantly against the control lever, but also biases the latter into the empty indicating position, so that no additional spring is required for this purpose. The signal strip then of course indicates that the container is empty, since the slider, when the wedge-like surface of the control lever runs up on a cassette, is not lowered but raised.

PATENT CLAIMS

1. Container for magnetic tape cassettes having a housing and at least one transporter for each cassette which by means of an ejector spring arrangement can be conveyed out of the housing through an opening in the front of the housing, can be locked in the housing against the spring bias and unlocked manually, and has a front wall (1101) which in the locked position covers the opening in the housing, and also having an arrangement at the front for indicating whether each transporter is loaded, each indicating arrangement comprising:

(a) a window (1116) surrounded by wall portions,

(b) an indicator slider (1117) mounted so as to be movable parallel to the front wall and having a signal section (1119) which is optically contrasted with respect to the wall portions and in a first indicating position appears in the window, while in a second indicating position it disappears from the window, behind the wall portions,

(c) a control lever (1105) which is in operative connection with the indicator slider and is biased by a spring (1106) into a first end position, in which it projects with an inclined surface into the space in the transporter intended for the cassette and directs the signal section into one of its indicating positions, and from which it is moved, against the spring bias, into a second end position, in which it moves the signal section over into the other of its indicating positions.

2. Container according to Claim 1, characterised in that the control lever forms a separate component, distinct from the indicator slider and coupled to the latter.

3. Container according to Claim 1 or 2, charac-

terised in that there is an articulated connection between the front wall (1101) and the transporter, and the control lever is mounted in the front wall.

4. Container according to Claim 3, characterised in that, when the front wall is pivoted, the control lever comes, as the case may be, into or out of sensing contact with a cassette introduced into the transporter.

5. Container according to one of the preceding Claims, characterised in that the front wall encloses a hollow space in which the indicator slider is guided.

6. Container according to one of the preceding Claims, characterised by a window covering (1114, 1116) of transparent plastics material.

7. Container according to one of the preceding Claims, characterised in that at least one of the end positions of the control lever is defined by means of a stop member (1107).

8. Container according to one of the preceding Claims, characterised in that at least one of the indicating positions of the indicator slider (1117) is defined by means of a stop member (1118).

9. Container according to one of the preceding Claims, characterised in that the spring (1106) is inserted as a separate component into the container, which container consists of plastics material.

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