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"Magnetic-tape cassette".

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The invention relates to a magnetic-tape cassette comprising a housing having parallel first and second major walls and a plurality of peripheral walls extending between the major walls, and two tape spools which are arranged in the housing for rotation about parallel axes
5 perpendicular to the major walls and on which is wound a magnetic tape having a portion extending between the spools which passes across the front of the housing for cooperation with a part or parts of a recording and/or playback apparatus, each tape spool being rotatable in one
10 direction for winding the tape onto that spool and in the opposite direction for unwinding the tape from that spool, and each spool comprising a hub with a first flange at the end of the hub which is nearer the first major wall and a second flange at the other end of the hub, the spools being supported in the housing in positions such that the first flanges of the two spools lie substantially in a first plane
15 parallel with the planes of the major walls and the second flanges lie substantially in a second plane parallel with the planes of the major walls, and the cassette further comprising a brake device for the tape spools, which device comprises a first pawl which is cooperable with ratchet teeth on the periphery of the first flange of one of the
20 spools and a second pawl which is cooperable with ratchet teeth on the periphery of the second flange of the other spool, the teeth on the two flanges being orientated in opposite directions about the axes of rotation of the spools, viewed from the same side of the spools, and the pawls being carried by a mount which is slidably guided in the
25 housing for movement in a direction perpendicular to a plane containing the axes of rotation of the spools between an inoperative position in which the first and second pawls are disengaged from the ratchet teeth on the respective first and second flanges of the tape spools to permit rotation of the spools to wind the tape onto one spool and
30 unwind it from the other, and an operative position in which each pawl engages a tooth on the respective first or second flange to prevent rotation of the spool comprising that flanges in a direction to unwind the tape from that spool, and the mount being urged by spring means

towards the operative position and being arranged during movement from the inoperative position to the operative position to bring each pawl into engagement with a tooth on the respective first or second flange and then to move the pawls to rotate each spool through a limited angle in a direction to wind the tape onto that spool so as to tension the portion of the tape which extends between the spools.

Such a cassette is known from British Patent Specification 2 114 952A. This specification discloses an arrangement in which one flange of each tape spool is provided with ratchet teeth around its periphery and the other flange has no teeth and therefore a slightly smaller diameter. This arrangement has a drawback in the assembly of the cassette during manufacture in that the two spools of the cassette cannot be interchanged without inverting them. Consequently, on a production line two flows of spools are required, one with the toothed flanges of the spools at the top and the other with the toothed flanges at the bottom. This necessitates vigilance on the part of the operative to ensure that the spools from the two flows are placed in the correct positions in the cassette housings. To check this optically during assembly is difficult since the flanges are usually all transparent. There is mention in Specification 2 114 952A of the possibility of providing ratchet teeth on both flanges of each spool and constructing each pawl to cooperate with the teeth on both flanges of the associated spool. Since this would require the teeth on both flanges of each spool to be orientated in the same direction about the axis of the spool, viewed from the same side of the spool, it would still not be possible to interchange the spools without inverting them.

It is an object of the invention to provide a magnetic-tape cassette which does not suffer from the above drawback.

According to the invention the flanges of the spools all have the same diameter and ratchet teeth are provided on both flanges of each spool with the teeth on one flange orientated in the opposite direction about the axis of rotation of the spool to the teeth on the other flange, viewed from the same side of the spool.

This arrangement of ratchet teeth on both flanges of each tape spool, with the teeth on one flange of each spool orientated in the opposite direction to the teeth on the other flange, greatly facilitates the assembly of the cassette, since it allows each spool to be placed in the cassette housing with either of its flanges uppermost,

and the two spools can be interchanged without having to be inverted. The spools can thus be supplied in one flow on a production line and there is no danger of spools being incorrectly positioned in the cassette housings.

5 Assembly of the cassette is further facilitated with an embodiment of the invention wherein the spools have a limited freedom of axial movement in the housing, and wherein the brake device is constructed to be symmetrical about any plane of an infinite number of planes which all intersect one another along an axis which is defined
10 by the intersection of a third plane extending parallel with the planes of the major walls of the housing and lying midway between the limits of said freedom of axial movement of the spools, and a fourth plane which is perpendicular to the third plane and to the plane containing the axes of rotation of the spools and which lies midway between these axes.
15 As a result of this symmetry, each pawl can serve as either the first pawl or the second pawl, so that inversion of the brake device in the housing has no effect on its operation.

The mount of the brake device may have two surfaces which are mirror images of one another with respect to said third plane and
20 which are inclined to the direction of movement of the mount, and an aperture may be provided in one of the major walls of the housing in a position such that when the cassette is moved onto a magnetic-tape cassette apparatus in a direction perpendicular to the planes of said major walls a member projecting from the apparatus can enter the cassette
25 housing through said aperture and cooperate with one of said inclined surfaces to displace the mount from the operative to the inoperative position.

The mount of the brake device may be supported by two members which are connected one to each of the major walls of the housing and
30 between which are formed guide slots which lie on said third plane and extend perpendicularly to the plane containing the axes of rotation of the spools, the mount being formed with ridges which are slidable in said slots for guiding the mount in its movement between the operative and inoperative positions. This construction further facilitates the
35 mounting of the brake device in the cassette housing and also provides both a simple form of guidance for the mount and a simple means of ensuring accurate positioning of the brake device in the direction perpendicular to the flanges of the tape spools.

The first and second pawls may be movable relative to the mount and against spring force in directions away from the respective first and second flanges of the tape spools and parallel to the planes of the major walls of the housing, and control surfaces for cooperation with the pawls may be formed on further members which are connected to the major walls of the housing, the pawls comprising projections which, during movement of the mount from the operative to the inoperative position, cooperate with said control surfaces to cause movement of the pawls relative to the mount in said directions away from the respective first and second flanges of the spools. By forming these control surfaces on members which are connected to the major walls of the housing, the number of operations required in the assembly of the cassette is reduced.

Between said supporting members and said further members two openings may be formed through each of which one of the pawls extends, the openings each having a wall which forms one of said control surfaces and further walls which inhibit displacement of the respective pawl in directions transverse to said first or second plane respectively.

The pawls may have the form of spring blades and be connected to the mount at a side thereof which is remote from the plane containing the axes of rotation of the spools, the pawls extending towards this plane from said side of the mount.

The pawls may be formed integrally with the spring means which urge the mount towards the operative position, or they may be formed integrally with the mount from a plastics material.

An embodiment of the invention will now be described with reference to the accompanying drawings, in which

Figure 1 is a plan view, partly in section, of a video tape cassette according to the invention,

Figure 2 is a fragmentary sectional view looking in the direction of the arrow II in Figure 1, showing the brake device but omitting the tape spools in the interests of clarity,

Figure 3 is a sectional plan view taken on the line III-III in Figure 2, and

Figure 4 is a sectional view taken on the line IV-IV in Figure 3.

The magnetic-tape cassette shown in Figure 1 comprises a housing having an upper part or lid which comprises a first substantially rec-

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 5 tangular major wall 2 formed with a window 3 which extends over almost the entire length of the housing, and a lower part which comprises a second substantially rectangular major wall 4 extending in a plane parallel with the plane of the first major wall 2. The housing also
 10 has peripheral walls, including two side walls 5 and 6 and a rear wall 7, which extend between the major walls 2 and 4 and which are formed integrally with the upper major wall 2. The upper and lower parts of the housing, including the window 3, may be injection-moulded from a suitable plastics material. In the front of the housing, adjacent
 15 the front ends of the side walls 5 and 6 are apertures 8 and 9 respectively. Also in the front of the housing, between the apertures 8 and 9, is a recess 10, which in the present embodiment is formed by recesses in the front edges of the major walls 2 and 4. The recess 10 is bounded by a wall 11 which extends between the major walls 2 and 4, in order
 20 to inhibit ingress of dust or other contaminants into the interior of the housing and to give the housing adequate flexural strength.

Inside the housing 1 are two flanged tape spools 14 and 15 which are arranged adjacent each other between the major walls 2 and 4 and are rotatable about axes 12 and 13 respectively which extend
 25 perpendicularly to the major walls. The lower major wall 4 is provided with the usual openings through which the spools can be driven by drive means (not shown) on a magnetic-tape cassette apparatus. A magnetic tape 16, is connected at its ends to the hubs of the spools 14 and 15 and is wound round these hubs, which are designated 14A and 15A respectively. When the spools are simultaneously rotated in the clockwise
 30 direction, as viewed from the upper side of the spools in Figure 1, tape is unwound from the spool 14 and wound onto the spool 15, and when the spools are rotated in the counter-clockwise direction tape is unwound from the spool 15 and wound onto the spool 14.

Each of the spools 14 and 15 has a flange 17, 19 respectively at the upper end of its hub 14A, 15A respectively and a flange 18, 20 respectively at the lower end of its hub. The spools are supported on the lower wall 4 of the housing 1 with the two upper flanges 17 and 19 lying substantially in a common plane and the two lower flanges 18 and
 35 20 likewise lying substantially in a common plane, the two planes being parallel with the planes of the major walls 2 and 4 of the housing. The flanges 17, 18, 19 and 20 all have the same diameter and are rigidly connected to the respective spool hubs. The upper flanges 17 and 19 are

made of a transparent material so that tape wound on the spools is visible through these flanges and through the window 3 in the upper wall 2 of the housing. To make the tape more conspicuous the lower flanges 18 and 20 can be made of an opaque material, for example, a white plastics material.

5 Each of the flanges 17, 18, 19 and 20 is provided with ratchet teeth around the whole of its circular periphery. Each ratchet tooth has a flank which extends substantially radially of the respective flange and a flank which extends substantially tangentially of an imaginary circle concentric with the flange. The arrangement of the teeth on the
10 four flanges is such that the teeth on the upper flanges 17 and 19, viewed from the same side of these flanges, are orientated in the same direction about the rotational axes 12 and 13 of the spools, and the teeth on the lower flanges 18 and 20, viewed from the same side of these
15 flanges, are also orientated in the same direction about the axes 12 and 13, which direction is opposite to the direction of orientation of the teeth on the upper flanges, viewed from the same side of the spools. In the arrangement shown in Figs. 1 and 3, the teeth on the upper flanges 17 and 19 have their radially extending flanks facing in the counter-
20 clockwise direction about the axes 12 and 13 viewed from the upper side of the spools, and the teeth on the lower flanges 18 and 20 have their radially extending flanks facing in the clockwise direction viewed from the upper side of the spools.

At the ends of the wall 11 of the recess 10 in the front of the housing 1 are two fixed tape supports 21 and 22, which bound the
25 apertures 8 and 9 respectively at one side of each aperture, the apertures each being bounded at the opposite side by the front end of the side wall 5 and 6 respectively of the housing. Passages 23 and 24 in the housing terminate at the apertures 8 and 9 respectively, and
30 through these passages and apertures a portion of the tape 16 which extends between the spools 14 and 15 leaves and re-enters the housing. When the cassette is not in use, this portion of the tape extends tautly across the front of the housing between the tape supports 21 and 22. The passages 23 and 24 are entirely free of any guide means for the
35 tape, so that between the spools the tape touches only the tape supports 21 and 22. These supports are operative only when the cassette is not in use. They thus have only a passive function, namely, to support the portion of the tape which extends across the front of the cassette

housing at the location of the recess 10. This portion of the tape is protected by two covers which are pivotally connected to the cassette housing, namely, an outer cover 25 which shields the tape 16 at the front side thereof and an inner cover 26 which shields the tape in the recess 10 at the rear side of the tape. By means of pins 27 the cover 25 is pivotally connected to the side walls 5 and 6 of the housing 1, and the inner cover 26 comprises pivot pins (not shown) which slide along and turn in guide grooves 25 in the wall 11. The covers 25 and 26 are coupled to each other in such a way (not shown) that when the cover 25 is swung open the inner cover 26 also is swung open.

Near its two rear corners the housing 1 is formed with a plurality of detection apertures which can be sensed by sensing means on a magnetic-tape cassette apparatus. These apertures may be used for detecting, for example, the type of tape contained in the cassette, the operating speed of the tape, the tape length and whether the magnetic tape carries a prerecording. For this purpose a detection aperture 29 is formed which can be opened or closed by means of a slide, not shown. A bifurcated leaf spring 30 which is attached to the inner side of the upper wall 2 of the housing 1 at 31 presses downwardly on the tape spools 14 and 15 to urge them against the lower wall 4 of the housing. The spools have a slight freedom of axial movement in the housing 1 so that they can be lifted off the lower wall 4 against the action of the spring 30 by the drive means of a tape cassette apparatus when the cassette is placed in position on the apparatus. This freedom of movement is limited by the lower wall 4 of the housing and by projections 53 and 54 formed on the inner side of the upper wall 2. The lower wall 4 is formed with a circular aperture 32 to receive a light source on the cassette apparatus. The purpose of this light source is to emit a beam towards the side walls 5 and 6 of the cassette housing for detection outside the cassette by a photosensitive cell in the cassette apparatus. When a transparent end portion of the tape passes between the photosensitive cell and the light source, the cassette apparatus is automatically stopped.

As is shown in more detail in Figures 2 to 4, the cassette comprises a brake device 33 for the tape spools, which device comprises two pawls 35 and 36 which are cooperable with the ratchet teeth on the upper flange 19 of the spool 15 and the ratchet teeth on the lower flange 18 of the spool 14 respectively. The pawls are carried by a mount 34 which is situated in an area of the housing 1 lying between the

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spools 14 and 15 and between the rear wall 7 of the housing and a plane 42 (Fig.1) containing the rotational axes 12 and 13 of the spools. The mount 34 is movable in this area in directions away from and towards the wall 7 between an inoperative position in which the pawls 35 and 36 are disengaged from the ratchet teeth on the respective spool flanges to permit free rotation of the spools, and an operative position (shown in Figures 1 and 3) in which the pawls 35 and 36 each engage a tooth on the spool flanges 19 and 18 respectively to prevent rotation of the spools 15 and 14 respectively in directions to unwind tape from the spools. The pawls have the form of spring blades. They are disposed one of each of two opposite sides of the mount 35 and are each connected at one end to the mount at the side thereof which faces the rear wall 7 of the housing. The pawls extend forwardly from this side of the mount, parallel to the upper and lower walls 2 and 4 of the housing, and at their forward ends 39 and 40 respectively are free for engagement with the teeth on the spool flanges 19 and 18. The pawl 35 is disposed close to the upper wall 2 of the housing and the pawl 36 is disposed close to the lower wall 4. The mount 34 is urged towards the operative position by spring means which in the present embodiment are formed integrally with the pawls 35 and 36 from resilient sheet metal and comprise a central portion which is riveted to the rear side of the mount 34 and two resilient limbs 37 and 38 which extend in opposite directions from the central portion and at their distal ends bear against the rear wall 7 of the housing. The brake device 33, consisting of the mount 35, which may be made of a plastic material, and the one-piece component comprising the spring means 37,38 and the pawls 35 and 36, is pole-symmetrical, i.e. symmetrical about any plane of an infinite number of planes which all intersect one another along a given axis. In this case the axis is defined by the intersection of a first plane 41 (Figures 2 and 4) extending parallel with the planes of the upper and lower walls 2 and 4 of the housing 1 and lying midway between the wall 4 and a plane 41a contiguous with those surfaces of the projections 53 and 54 which act to limit in one direction the freedom of axial movement of the tape spools, and a second plane which is perpendicular to the first plane 41 and to the plane 42 containing the rotational axes 12 and 13 of the spools and which lies midway between these axes.

The major walls 2 and 4 of the housing carry members 43 and 44 respectively for supporting the mount 34, which members are preferably integral with the major walls and abut each other in the plane 41. As

shown in figure 3, the supporting members 43 and 44 are U-shaped, and as shown in figure 2, between the side walls of the two members are two slots 45 and 46 which lie on the plane 41 and extend perpendicularly to the plane 42 containing the rotational axes of the spools 14 and 15.

5 Ridges 47 and 48 on the mount 34 slide in these slots to provide guidance for the mount so that as it moves between the inoperative and operative positions it follows an accurately defined straight path perpendicular to the plane 42 and is positioned correctly while in the operative position. This positioning is important in order to ensure
10 that the free ends 39 and 40 of the pawls 35 and 36 can correctly engage the ratchet teeth on the spool flanges 19 and 18.

Near their free ends 39 and 40 the pawls 35 and 36 comprise projections 49 and 50 respectively, which extend obliquely outwards from the pawls towards the axes of rotation 13 and 12 of the spools
15 15 and 14 respectively and at their free ends extend substantially parallel to the pawls 35 and 36 respectively. As shown in figure 3, in the engaged positions of the pawls the free ends of the projections 49 and 50 are just out of the range of the ratchet teeth on the spool flanges 19 and 18. Extending between the upper and lower walls 2 and
20 4 of the housing 1, adjacent the supporting members 43 and 44 at the sides thereof, are members 51 and 52, of which the member 51 is formed wholly on the upper wall 2 and the member 52 is formed partly on the upper wall 2 and partly on the lower wall 4. Between the members 51 and 52 and the supporting members 44 and 43 respectively are openings 56
25 and 55 respectively, through which pass the pawls 36 and 35 respectively. The walls 57 and 58 of the openings 55 and 56 respectively which face the supporting members 43 and 44 respectively, form control surfaces which, during movement of the mount 34 in the direction of the arrow A (Fig. 3) from the operative position to the inoperative position to
30 disengage the pawls 35 and 36 from the ratchet teeth on the spool flanges 19 and 18 respectively, cooperate with the projections 49 and 50 respectively on the pawls to deflect the pawls inwardly against their own spring force towards the mount 34 in the directions of the arrows B and C so that the free ends 39 and 40 of the pawls are moved
35 well clear of the ratchet teeth on the spool flanges 19 and 18 and consequently cannot interfere with the rotation of the spools. The mount 34 is moved in the direction of the arrow A by cooperation between an inclined surface 60 (Fig. 4) on the mount and a pin 62 on

the tape cassette apparatus when the cassette is placed on the apparatus. The surface 60 is inclined to the direction of movement of the mount 34 and is formed on the rear wall of an opening 59 which extends right through the mount. As the cassette is moved downwards onto the cassette apparatus, the pin 62 on the apparatus enters the opening 59 in the mount through a slot 63 in the lower wall 4 of the cassette housing, and an inclined surface on the upper end of the pin 62 engages the inclined surface 60 on the mount and cooperates therewith to displace the mount rearwardly (to the right in Fig. 4) from the operative to the inoperative position. A second inclined surface 61 which is a mirror image of the surface 60 with respect to the plane 41 is provided on the rear wall of the opening 59 in the mount at the opposite end of the opening from the surface 60 to preserve the symmetry of the brake device 33. Instead of having a fixed pin 62 for cooperation with the lower of the two inclined surfaces on the mount 34, a pin may be provided on the cassette apparatus which is long enough to engage the rear wall of the opening 59 in the mount between the inclined surfaces 60 and 61 and which, when such engagement has been effected, can be moved rearwardly to displace the mount in the direction of the arrow A.

When the cassette is removed from the cassette apparatus and the mount 34 is consequently no longer held back by the pin 62, the mount moves forward to the operative position (Fig. 3) under the influence of the spring means 37, 38. During the initial part of this movement the projections 49 and 50 on the pawls 35 and 36 move off the control surfaces 57 and 58 respectively and the pawls immediately resile outwardly away from the mount 34 and rapidly engage the ratchet teeth on the spool flanges 19 and 18 respectively. During the remainder of the forward movement of the mount 34 the pawls 35 and 36 act on the respective ratchet teeth to impart a rotational movement to each of the spools 15 and 14 respectively on the direction of the arrow D and E respectively, which is the direction in which tape is wound onto the respective spool, so that the portion of the tape 16 which extends between the spools is tensioned. The large amount of deflection of the pawls 35 and 36 allows a correspondingly large rotational movement to be imparted to the spools before the mount 34 reaches the limit of its forward movement, which is determined by the supporting members 43 and 44. Without the projections 49 and 50 on the pawls, such a large deflection would leave the free ends 39 and 40 of the pawls close to the

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ratchet teeth on the spool flanges 19 and 18 in the inoperative position of the mount 34, which would necessitate close tolerances in the lateral positioning of the spools in the housing 1. This is avoided by the provision of the projections 49 and 50 on the pawls, which deflect the pawls well away from the spool flanges 19 and 18 during the final part of the movement of the mount 34 to the inoperative position. In the operative position of the mount the pawls 35 and 36 lock the spools 15 and 14 respectively against rotation in the directions to unwind tape from the spools, which rotation would produce undesirable slackening of the tape between the spools.

Due to their thinness and consequent torsional flexibility there is a possibility that the pawls may be distorted by their interaction with the ratchet teeth into positions in which their free ends 39 and 40 slip above or below the spool flanges 19 and 18. To prevent this the openings 55 and 56 through which the pawls extend have walls at the top and bottom which maintain the pawls in the correct positions in directions transverse to the planes of the spool flanges 19 and 18. The bottom wall of the opening 56 is formed by the lower wall 4 of the housing 1. This risk of distortion of the pawls is reduced in a modification of the brake device 33 in which the pawls are made of a plastics material and are formed integrally with the mount 34.

The assembly of the cassette is greatly facilitated by the particular arrangement of the ratchet teeth on the flanges of the tape spools, whereby the teeth on one flange of each spool are orientated in the opposite direction to the teeth on the other flange, in combination with two pawls arranged one for cooperation with the ratchet teeth on the upper flange of one spool and the other for cooperation with the ratchet teeth on the lower flange of the other spool. As a result of this, each spool can be arranged in the cassette housing with either of its flanges uppermost and the two identical spools are interchangeable, with or without inversion of either spool. Assembly is further facilitated by the asymmetry of the brake device 33, which allows the device to be placed in the housing in the position shown or in an inverted position with the pawl 36 adjacent the upper wall 2 of the housing and the pawl 35 adjacent the lower wall 4. The construction of the guide means for the mount 34 of the braking device, namely, the guide slots 45 and 46 and the ridges 47 and 48 cooperating therewith, also simplifies the mounting of the brake device in the housing.

The above magnetic-tape cassette is very suitable for mass-production as a comparatively small cassette for use in portable video tape recorders, such as those used in conjunction with video cameras.

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Obviously, the invention is not limited to video cassettes; it is equally applicable to audio cassettes.

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CLAIMS:

1. A magnetic-tape cassette comprising a housing having parallel first and second major walls and a plurality of peripheral walls extending between the major walls, and two tape spools which are arranged in the housing for rotation about parallel axes perpendicular to the major walls and on which is wound a magnetic tape having a portion extending between the spools which passes across the front of the housing for cooperation with a part of parts of a recording and/or playback apparatus, each tape spool being rotatable in one direction for winding the tape onto that spool and in the opposite direction for unwinding the tape from that spool, and each spool comprising a hub with a first flange at the end of the hub which is nearer the first major wall and a second flange at the other end of the hub, the spools being supported in the housing in positions such that the first flanges of the two spools lie substantially in a first plane parallel with the planes of the major walls and the second flanges lie substantially in a second plane parallel with the planes of the major walls, and the cassette further comprising a brake device for the tape spools, which device comprises a first pawl which is cooperable with ratchet teeth on the periphery of the first flange of one of the spools and a second pawl which is cooperable with ratchet teeth on the periphery of the second flange of the other spool, the teeth on the two flanges being orientated in opposite directions about the axes of rotation of the spools, viewed from the same side of the spools, and the pawls being carried by a mount which is slidably guided in the housing for movement in a direction perpendicular to a plane containing the axes of rotation of the spools between an inoperative position in which the first and second pawls are disengaged from the ratchet teeth on the respective first and second flanges of the tape spools to permit rotation of the spools to wind the tape onto one spool and unwind it from the other, and an operative position in which each pawl engages a tooth on the respective first or second flange to prevent rotation of the spool comprising that flange in a direction to unwind the tape from that spool, and the mount being urged by spring means towards the operative



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position and being arranged during movement from the inoperative position to the operative position to bring each pawl into engagement with a tooth on the respective first or second flange and then to move the pawls to rotate each spool through a limited angle in a direction to wind the tape onto that spool so as to tension the portion of the tape which extends between the spools, wherein the flanges of the spools all have the same diameter and ratchet teeth are provided on both flanges of each spool with the teeth on one flange orientated in the opposite direction about the axis of rotation of the spool to the teeth on the other flange, viewed from the same side of the spool.

2. A magnetic-tape cassette as claimed in Claim 1, wherein the spools have a limited freedom of axial movement in the housing, and wherein the brake device is constructed to be symmetrical about any plane of an infinite number of planes which all intersect one another along an axis which is defined by the intersection of a third plane extending parallel with the planes of the major walls of the housing and lying midway between the limits of said freedom of axial movement of the spools, and a fourth plane which is perpendicular to the third plane and to the plane containing the axes of rotation of the spools and which lies midway between these axes.

3. A magnetic-tape cassette as claimed in Claim 2, wherein the mount of the brake device has two surfaces which are mirror images of one another with respect to said third plane and which are inclined to the direction of movement of the mount, and wherein an aperture is provided in one of the major walls of the housing in a position such that when the cassette is moved onto a magnetic-tape cassette apparatus in a direction perpendicular to the planes of said major walls a member projecting from the apparatus can enter the cassette housing through said aperture and cooperate with one of said inclined surfaces to displace the mount from the operative to the inoperative position.

4. A magnetic-tape cassette as claimed in Claim 2 or 3, wherein the mount of the brake device is supported by two members which are connected one to each of the major walls of the housing and between which are formed guide slots which lie on said third plane and extend perpendicularly to the plane containing the axes of rotation of the spools, the mount being formed with ridges which are slidable in said slots for guiding the mount in its movement between the operative and



Inoperative positions.

5. A magnetic-tape cassette as claimed in Claim 4, wherein the first and second pawls are movable relative to the mount and against spring force in directions away from the respective first and second flanges of the tape spools and parallel to the planes of the major walls of the housing, and wherein control surfaces for cooperation with the pawls are formed on further members which are connected to the major walls of the housing, the pawls comprising projections which, during movement of the mount from the operative to the inoperative position, cooperate with said control surfaces to cause movement of the pawls relative to the mount in said directions away from the respective first and second flanges of the spools.

6. A magnetic-tape cassette as claimed in Claim 5, wherein between said supporting members and said further members two openings are formed through each of which one of the pawls extends, the openings each having a wall which forms one of said control surfaces and further walls which inhibit displacement of the respective pawl in directions transverse to said first or second plane respectively.

7. A magnetic-tape cassette as claimed in any of the preceding claims, wherein the pawls have the form of spring blades and are connected to the mount at a side thereof which is remote from the plane containing the axes of rotation of the spools, the pawls extending towards this plane from said side of the mount.

8. A magnetic-tape cassette as claimed in Claim 7, wherein the pawls are formed integrally with the spring means which urge the mount towards the operative position.

9. A magnetic-tape cassette as claimed in Claim 7, wherein the pawls are formed integrally with the mount from a plastics material.

10. A magnetic-tape cassette substantially as herein described with reference to the accompanying drawings.