

TAPE RECORDER DEVICEBACKGROUND OF THE INVENTIONField of the Invention

5 This invention relates to a tape recorder device,
and more particularly to a tape recorder device of the
double cassette type wherein reproducing operation by a
second tape driving mechanism can be automatically
started continuously after completion of reproducing
10 operation by a first tape driving mechanism.

Description of the Prior Art

A tape recorder device of the double cassette
type is already known wherein reproducing operation by a
second tape driving mechanism can be automatically
15 started continuously after completion of reproducing
operation by a first tape driving mechanism. In a tape
recorder device of this type, normally a first tape
driving mechanism includes an automatic reversing
mechanism and a mode selection operating member by means
20 of which a mode can be selected in which the automatic
reversing mechanism selectively operates only once, that
is, the first tape driving mechanism is stopped after
reproduction of opposite A and B surfaces of a tape
while a second tape driving mechanism includes a pause

selection operating member which holds the second tape driving mechanism to a reproducing operation stand-by position and causes the same to start its reproducing operation in response to stopping of the first tape driving mechanism.

However, a tape recorder device of the type having such a construction as described above has a problem as follows. When continuous reproducing operation is to be effected using first and second tape driving mechanisms, it is necessary to operate a total of 4 operating members including a reproduction operating member and a mode selection operating member of the first tape driving mechanism and a pause selection operating member and a reproduction operating member of the second tape driving mechanism. It is troublesome to operate the four operating members in this manner, and operation of the mode selection operating member particularly is apt to be forgotten. Thus, the conventional tape recorder device is not easy to use in this manner.

Rather, the conventional tape recorder device has a drawback in that operation thereof is complicated and may readily be in error when continuous reproduction is to be effected using both the first and second tape driving mechanisms.

Therefore, it may be advisable, considering that

a pause selection operating member must be operated without fail when a tape recorder is to be used in such a manner as described above, to constitute a tape recorder device such that a mode selection operating member is
5 moved to an actuated position in response to operation of the pause selection operating member. However, if a tape recorder is constructed to achieve such operation, the ease of operating of the pause selection operating member will be lessened and improvement in
10 readiness in use cannot be expected because a load of the mode selection operating member is applied to the pause selection operating member.

SUMMARY OF THE INVENTION

It is an object of the present invention to
15 provide a tape recorder device of the double cassette type wherein reproducing operation on a second tape driving mechanism can be automatically started continuously after completion of a reproducing operation on a first tape driving mechanism and which
20 is greatly improved in operability and allows operation of its operating members by low operating force.

In order to attain this object, according to the present invention, there is provided a tape recorder device, comprising a first tape driving mechanism having
25 at least a reproducing function and normally capable of

performing reproducing operation in a repetitive reversing mode, a second tape driving mechanism having at least a reproducing function, a first reproduction operating member for bringing said first tape driving
5 mechanism into a reproduction operating condition, a second reproduction operating member for bringing said second tape driving mechanism into a reproduction operating condition, first arresting means for arresting said first reproduction operating member in its actuated
10 position, second arresting means for arresting said second reproduction operating member in its actuated position, a reciprocally movable member mounted for back and forth reciprocal movement and operable to move back or forth when a tape comes to its end during reproducing
15 operation of said first tape driving mechanism, a selectively engageable member having a disengaging position to which said selectively engageable member is normally held and in which said selectively engageable member prevents an interlocking relationship between said
20 reciprocally movable member and said first arresting means and an engaging position in which said selectively engageable member allows the interlocking relationship between said reciprocally movable member and said first arresting means and transmits movement of said
25 reciprocally movable member to said first arresting means to release the arrested condition of said first

reproduction operating member by said first arresting means, a change-over operating member for bringing said second tape driving mechanism into a pause condition and simultaneously moving said selectively engageable member
5 to the engaging position, and third arresting means operable for arresting said change-over operating member at its actuated position and for releasing said change-over operating member from its arrested condition to allow said change-over operating member to return to its
10 non-actuated position in response to returning movement of said first reproduction operating member from its actuated to its non-actuated position.

Accordingly, if the change-over operating member is brought to its actuated, arrested position while the
15 reproduction operating member of the first tape driving mechanism is arrested in its actuated position irrespective of presence or absence of a mode selection operating member, the selectively engageable member is changed over to the one-time reversing side. Since an
20 operation to bring the second tape driving mechanism into a pause condition is essentially required when continuous reproducing operation is to be performed using the first and second tape driving mechanisms, even if operation of a mode selection operating member is
25 forgotten or even if a specific member for mode selecting operation is not provided in the tape recorder

device, continuous reproduction can be performed smoothly. Even where a specific mode selection operating member is provided, since only the selectively engageable member is actuated to change over by the
5 change-over operating member, no load of the mode selection operating member is applied to the change-over operating member and hence a high operating force is not required for operation of the change-over operating member.

Specific embodiments of the present invention
10 will now be described in detail by way of example with reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a plan view of a tape recorder device
15 according to the present invention;

FIG. 2 is a plan view, to a somewhat enlarged size, showing a reciprocally movable plate of an automatic reversing mechanism;

FIG. 3 is a plan view of a locking operating
20 plate for arresting individual operating members;

FIG. 4 is a perspective view, to a somewhat enlarged size, of a change-over mechanism for changing over the device from a repetitive reversing condition to a one-time reversing condition;

25 FIGS. 5(a) to 5(c) show relative positions of a

release member and associated parts, FIG. 5(a) being a rear perspective view, FIG. 5(b) being a side elevational view and FIG. 5(c) being a side elevational, vertical sectional view of the release member; and

5 FIG. 6 is a similar view but illustrating a reversing condition change-over mechanism according to another embodiment of the invention;

DESCRIPTION OF THE ILLUSTRATED EMBODIMENTS

With reference to the accompanying drawings and
10 first to FIG. 1, the tape recorder device there shown includes in combination a first tape driving mechanism on which recording, reproduction and dubbing can be achieved, and which normally effects an automatic reversing operation, and a second tape driving mechanism
15 which is constructed only for reproduction and is automatically stopped by an end of a tape.

The first tape driving mechanism is denoted at 1 and the second tape driving mechanism is denoted at 2. The first and second tape driving mechanisms 1, 2 are
20 mounted commonly on a base plate 3. It is to be noted, however, that the common base plate 3 may be otherwise replaced by a pair of base plates 4, 71 for the first and second tape driving mechanisms 1, 2 respectively, which are connected to each other directly

or indirectly by way of a connecting member.

The first driving mechanism 1 includes a pair of capstan shafts 5, 6 and a pair of reel shafts 7, 8 all mounted on the base plate 4 and connected to be driven in rotation by a motor not shown. The first driving mechanism 1 further includes a pair of pinch rollers 9, 10 and a magnetic head 11. The pinch rollers 9, 10 are supported for rotation on one end portions of a pair of pinch arms 12, 13 which have the other end portions supported for pivotal motion on arm shafts 14, 15 respectively, erected on the base plate 4. The magnetic head 11 is secured to a head supporting plate 16 mounted for back and forth movement on the base plate 4. A pair of rod springs 17, 18 have one end portions thereof supported on the head supporting plate 16 so that a pressing force may be applied from the opposite ends of the rod springs 17, 18 to urge the pinch arms 12, 13 toward the capstan shafts 5, 6 respectively, when the head supporting plate 16 is advanced. The first driving mechanism 1 further includes, starting from the left side in FIG. 1, a reproduction operating member 19, a rewinding operating member 20, a fast feeding operating member 21, a stopping operating member 22 and a recording operating member 23 all mounted for back and forth movement relative to the base plate 4 and urged

forwardly from "pushed in" positions toward, and held in, their respective forward positions shown in FIG. 1 by respective springs not shown.

5 A reciprocally movable plate 24 is located below the pinch arms 12, 13 and the head supporting plate 16 and is moved rightwardly or leftwardly in response to a detecting operation of a tape end detecting mechanism not shown. Referring also to FIG. 2, the reciprocally movable plate 24 is movable only in directions indicated
10 by double-headed arrow 29 under the guidance of a pair of elongated holes 25, 26 co-operating with a pair of pins 27, 28, and if a driving force is applied thereto from the tape end detecting mechanism, the plate 24 is quickly moved rightwardly or leftwardly and
15 thereafter held in its rightward or leftward position by the action of a toggle spring connecting mechanism 30. The reciprocally movable plate 24 has a pair of holes 33, 34 formed therein, and a pair of pins 31, 32, projectingly mounted on lower surfaces of the pinch arms
20 12, 13 extend through the holes 33, 34 respectively. The holes 33, 34 of the reciprocally movable plate 24 are partly defined by inclined curved surfaces 33a, 34a, one or other of which is alternatively engaged with the pin 31 or 32, when the reciprocally movable plate 24 is
25 moved leftwardly or rightwardly while the head supporting

plate 16 is in its advanced position to move the pinch roller 9 or 10 away from the capstan shaft 5 or 6. In the position shown in FIG. 2, the reciprocally movable plate 24 is in its rightward position and thus the pinch roller 10 is held in contact with the capstan shaft 6 while the pinch roller 9 is held away from the capstan shaft 5. It is to be noted that, in the position shown in FIG. 2, a tape is controlled to move in a rightward direction. On the contrary, if the reciprocally movable plate 24 is in its leftward position, the pinch roller 9 is contacted with the capstan shaft 5 with a tape held therebetween, and thus the tape is controlled to move in a leftward direction. The reciprocally movable plate 24 has a recess 35 formed adjacent a left end portion thereof.

Referring now to FIG. 3, located below the reciprocally movable plate 24 is a locking operating plate 41 acting as a first arresting means for selectively arresting the operating members 19, 20, 21, 23 except the stopping operating plate 22 in their respective "pushed in" positions. The locking operating plate 41 is movable only in a leftward and rightward direction in FIG. 3 under the guidance of a pair of elongated holes 42, 43 co-operating with pins 44, 45 respectively, and is urged in a leftward direction in

FIG. 3 by means of a spring 46. The locking operating plate 41 has holes 52, 53, 54, 55, 56 formed at positions corresponding to the operating members 19, 20, 21, 22, 23 and projections 47, 48, 49, 50, 51 formed on the operating members, 19, 20, 21, 22, 23 extend through the holes 52, 53, 54, 55, 56 respectively, of the locking operating plate 41. The locking operating plate 41 has hooks 57, 58, 59, 60 extending into the holes 52, 53, 54, 56 thereof. The hooks 57, 58, 59, 60 have inclined camming surfaces 57a, 58a, 59a, 60a for slidable engagement with the projections 47, 48, 49, 51 of the operating members 19, 20, 21, 23 to move the locking operating plate 41 rightwardly, and arresting surfaces 57b, 58b, 59b, 60b for arresting the operating members 19, 20, 21, 23 in their pushed in or actuated positions, respectively. Thus, if, for example, the reproduction operating member 19, is pushed in, the projection 47 thereof first slides along the inclined camming edge 57a to move the locking operating plate 41 rightwardly and then clears the hook 57 to allow the locking operating plate 41 to be returned to its home position by the spring 46. Accordingly, as the reproduction operating member 19 is released, the projection 47 thereof is engaged by the arresting surface 57b of the hook 57 of the locking operating plate 41 to arrest

the locking operating plate 41 to its actuated position. If one of the other operating members 20, 21, 23 is pushed in, it will be arrested in its actuated position in a similar manner. It is to be noted here that

5 no hook is formed extending into the hole 55 of the locking actuating plate 41 corresponding to the stopping operating member 22 and the hole 55 is partly defined by an inclined camming surface 55a. Accordingly, if the stopping operating member 22 is pushed in to

10 its actuated position, it will not be arrested in its actuated position. It is also to be noted that as the reproduction operating member 19 is pushed in to its actuated position, the head supporting plate 16 is advanced thereby to its advanced position in

15 which the magnetic head 11 is slidably contacted with a surface of a tape. If the stopping operating member 22 is pushed in while any one of the remaining operating members 19, 20, 21, 23 for example, the reproduction operating member 19, is arrested in its actuated

20 position, the locking operating plate 41 is moved rightwardly by camming engagement of the inclined camming surface 55a thereof by the projection 50 of the stopping operating member 22 whereupon the reproduction operating member 19 is released from its actuated

25 position and allowed to return to its home position. A selectively engageable member 61 is supported for

pivotal motion at a left end portion of the locking operating plate 41 by means of a pin 62 and is urged in a clockwise direction as seen in Figs. 1 and 3 by a spring 63 extending thereto from the left end of the locking operating plate 41.

FIG. 4 illustrates relative positions of the selectively engageable members 61, a left end portion of the locking operating plate 41, a left end portion of the reciprocally movable plate 24 and the reproduction operating member 19. The selectively engageable member 61 has an upwardly bent engaging lug 64 and a downwardly bent engaging piece 65 formed thereon. When the reciprocally movable plate 24 is in its rightward position (FIG. 4), the engaging lug 64 of the selectively engageable member 61 lies opposite a portion 66 of the reciprocally movable plate 24 which extends, in a direction opposite to the pushing in direction of the operating members 19 to 23, from the left end of the reciprocally movable plate 24 and defines a recess 35, but when the reciprocally movable plate 24 is in its leftward position, the engaging lug 64 lies opposite the recess 35. The reproduction operating member 19 has an arm 67 positioned to engage with the engaging piece 65 of the selectively engageable member 61 to prevent pivotal motion of the selectively engageable member 61 clockwise toward the reciprocally movable plate 24 when

the reproduction operating member 19 is not in its actuated or pushed in position.

Referring again to FIG. 1, the second tape driving mechanism 2 includes a capstan shaft 72 and a pair of reel shafts 73, 74 all mounted on the base plate 71 and connected to be driven to rotate by the motor. The second tape driving mechanism 2 further includes a pinch roller 75 and a magnetic head 76. The pinch roller 75 is supported for rotation at an end portion of a pinch arm 77 which is supported for pivotal motion on an arm shaft 78 erected on the base plate 71. A pressing piece 79 is provided in an integral relationship at the other end of the pinch arm 77. The magnetic head 76 is secured to a head supporting plate 80 mounted for back and forth movement on the base plate 71. An end portion of a rod spring 81 bears against the head supporting plate 80 so that a pressing force toward the capstan shaft 72 may be applied to the pinch arm 77 by the other end portion of the rod spring 81 when the head supporting plate 80 is advanced. The second tape driving mechanism 2 further includes, starting from the left side in FIG. 1, a reproduction operating member 82, a rewinding operating member 83, a fast feeding operating member 84 and a stopping operating member 85 which are mounted for back and forth movement relative to the base plate

71 and urged forwardly from "pushed in" positions toward, and normally held in their respective forward or home positions as shown in FIG. 1 by respective springs (only a spring 86 for the reproduction operating member 82 is shown in FIG. 1). The operating members 82, 83, 84 are selectively locked or arrested in their respective "pushed in" or actuated positions by a locking operating plate 87 acting as a second arresting means which is similar to the locking operating plate 41 for the first tape driving mechanism 1 described above.

A change-over operating ^{member} ~~plate~~ 88 is also mounted for back and forth movement on the right side of the stopping operating member 85 and is normally urged forwardly toward, and held in, a position as shown in FIG. 1 by a spring 89. The change-over operating member 88 has a pivoted hook 92 mounted at an end portion thereof. The hook 92 co-operates with a pin 90 erected on the base plate 71 such that when the change-over operating member 88 is pushed in for the first time, the hook 92 hooks on to the pin 90 to hold the change-over member 88 in its pushed in or actuated position and then when the change-over operating member 88 is pushed in for the second time, the hook 92 thereof is released from the pin 90 to allow the change-over operating member 88 to be returned to its home position by the spring 89. Thus, the

hook 92 of the change-over operating member 88 and the pin 90 constitute a third arresting means 91. The change-over operating member 88 further has a projection 93 formed thereon for pressing against the pressing piece 79 of the pinch arm 77 to pivot the pinch arm 77 in a direction to displace the pinch roller 75 away from the capstan shaft 72 when the change-over operating member 88 is first pushed and is arrested by the third arresting means 91. The change-over operating member 88 additionally has an arm 94 which prevents pivotal motion of the selectively engageable member 61 in a similar manner to the arm 67 of the reproduction operating member 19 when the change-over operating member 88 is in its home position as seen in FIG. 4.

A release member 95 is located between an engaging bent lug 19a at an end of the reproduction operating member 19 of the first tape driving mechanism 1 and the hook 92 of the change-over operating member 88 for releasing the change-over operating member 88 from its arrested condition by the hook 92 and the pin 90 when the reproduction operating member 19 is moved in its returning direction. The release member 95 is in the form of a bail and is supported at opposite ends thereof for pivotal motion around an axis 95a by the first tape

driving mechanism 1 and the second tape driving mechanism 2 as shown in FIG. 5(a). The release member 95 has at an end portion thereof adjacent the first tape driving mechanism 1 a downwardly convex cam face or edge 96 for sliding engagement with the lug 19a of the reproduction operating member 19 and at the other end portion thereof adjacent the second tape driving mechanism 2 an extension 97 which underlies the hook 92 of the change-over operating member 88. Thus, when the reproduction operating member 19 is pushed in from its home position and also when it is returned to its home position, the engaging bent lug 19a thereof is slidably engaged with the cam face 96 of the release member 95 to pivot the release member 95 counterclockwise around its axis 95a as seen in FIG. 5(b). Thereupon, the extension 97 of the release member 95 acts to tilt or lift a free end of the hook 92 as seen in FIG. 5(c). Accordingly, if the hook 92 has been held arrested by the pin 90, it is released from the latter as the release member 95 is pivoted. Consequently, the change-over operating member 88 is released from its arrested condition and hence will be returned to its unactuated home position by the spring 89.

25 With the construction described above, recording, reproduction, fast feeding and rewinding of a tape can

be effected by selectively operating the operating members using the first tape driving mechanism 1.

Reproduction can also be effected using the second tape driving mechanism 2. Further, dubbing can be effected
5 using the first and second tape driving mechanisms 1, 2.

While reproduction is being effected using only the first tape driving mechanism 1, unless the change-over operating member 88 is pushed in, the feeding direction of a tape is automatically changed over each
10 time the tape comes to its end, that is, repetitive reversing operation is performed. Meanwhile, continuous reproduction using the first and second tape driving mechanisms 1, 2 will be conducted as follows.

At first, two tape cassettes are loaded on the
15 reel shafts 7, 8 of the first tape driving mechanism 1 and the reel shafts 73, 74 of the second tape driving mechanism 2. Then, the reproduction operating member 19 of the first tape driving mechanism 1 is pushed in, and then the change-over operating member 88 and the
20 reproduction operating member 82 of the second tape driving mechanism 2 are pushed in in succession. In response to such pushing in operation of the reproduction operating member 19, reproduction of the tape loaded on the first tape driving mechanism 1 is
25 started with its A surface. In this instance, on the side of the second tape driving mechanism 2, the

pressing piece 79 of the pinch arm 77 is pressed by the projection 93 of the change-over operating member 88 to hold the pinch roller 75 to a reproduction stand-by or pause position in which it is spaced a little distance from the tape. Meanwhile, as the reproduction operating member 19 and the change-over operating member 88 are pushed in, the arms 67, 94 thereof no longer prevent pivotal motion of the selectively engageable member 61. Consequently, the selectively engageable member 61 tries to pivot in the clockwise, pushing in direction of the operating members 19, 88 so that, when the reciprocally movable plate 24 is in its rightwardly moved position as shown in FIG. 4, it is stopped in a position in which the engaging lug 64 of the selectively engageable member 61 abuts the portion 66 of the selectively engageable member 61, reciprocally movable plate 24.

When reproduction of the A surface of the tape is completed and the tape comes to its end, the tape end detecting mechanism detects the tape end to cause the reciprocally movable plate 24 to slide leftwardly. As the reciprocally movable plate 24 is moved leftwardly in this manner, the portion 66 of the reciprocally movable plate 24 is brought out of abutting engagement with the engaging projection 64 of the selectively engageable member 61 so that the selectively engageable member 61 pivots in the clockwise direction under

the action of the spring 63 and the engaging projection 64 thereof enters into the recess 35 of the reciprocally movable plate 24. Meanwhile reproduction of the surface B of the tape is started.

5 When reproduction of the surface B of the tape is completed and the tape comes to its end, the tape end detecting mechanism operates again so that the reciprocally movable plate 24 attempts to move rightwardly. However, since the engaging projection
10 64 of the selectively engageable member 61 is fitted in the recess 35 of the reciprocally movable plate 24 as described hereinabove, the reciprocally movable plate 24 and the selectively engageable member 61 are moved rightwardly together. Since the selectively
15 engageable member 61 is connected to the locking operating member 41 via the pin 62, the locking operating plate 41 is also moved rightwardly. As a result, the projection 47 of the reproduction operating member 19 is released from the hook 57 of the locking
20 operating member 41 so that the reproduction operating member 19 is returned to its home position. Thus, reproducing operation on the first tape driving mechanism 1 is ended at this point of time.

 As the reproduction operating member 19 is
25 returned to its home position, the releasing mechanism 95 releases the arrested condition of the change-over

operating member 88 by the third arresting means 91. Consequently, the change-over operating member 88 is returned to its home position. As the change-over operating member 88 is thus returned, the pinch arm 77
5 is disengaged from the change-over operating member 88 and thus allowed to pivot clockwise in FIG. 1 to press the pinch roller 75 against the capstan shaft 72 via the tape to allow reproduction to be continuously performed on the second tape driving mechanism 2. Then, when the
10 tape comes to its end, the reproduction operating member 82 is released from its arrested condition, and at this point of time, continuous reproduction is completed. It is to be noted that in case reproduction on the first tape driving mechanism 1 is started with
15 the surface B of the tape, when the tape is fed in one direction and comes to its end, reproducing operation is succeeded by the second tape driving mechanism 2.

In this manner, the selectively engageable member 61 which directly changes over between the repetitive
20 reversing condition and the one-time reversing condition of the first tape driving mechanism 1 is changed over to the one-time reversing condition in response to operation of the change-over operating member 88 which is operated without fail when continuous reproduction is
25 to be effected using the first and second tape driving mechanisms 1, 2. Accordingly, when such continuous

reproduction is desired, only three operating members must be operated. Thus, such reproduction can be effected by a reduced number of operations of operating members comparing with operations on conventional tape recorder devices, and hence the operability is improved. Besides, since the selectively engageable member 61 is released for pivot motion by the change-over operating member 88 to change over the selectively engageable member 61 to the one-time reversing condition, a high force is not required for operation of the change-over operating member 88, which improves readiness in use of the tape recorder device.

It is to be noted that the present invention is not limited to the specific embodiment described hereinabove. For example, similar effects to those of that embodiment can be attained if, as shown in FIG. 6, an end portion of an arm 101 is pivotally connected to a mode selecting operating member 100 by a pin 102 while the other end of the arm 101 is bifurcated to receive a projection 93 of a change-over operating member 88 therein, whereby whether pivotal motion of a selectively engageable member 61 is prohibited or allowed is controlled by the arm 101. In this instance, only slight modification of an existing tape recorder device may be required in order to obtain a tape recorder device according to the present invention.

As apparent from the foregoing description given with reference to the drawings, a tape recorder device has been provided having reduced operations subject to error when continuous reproduction is to
5 be effected using both the first and the second tape driving mechanisms and is significantly improved in operability.

CLAIMS:

1. A tape recorder device, comprising a first
tape driving mechanism having at least a reproducing
function and normally capable of performing a reproducing
5 operation in a repetitive reversing mode, a second tape
driving mechanism having at least a reproducing
function, a first reproduction operating member for
bringing said first tape driving mechanism into a
reproduction operating condition, a second reproduction
10 operating member for bringing said second tape driving
mechanism into a reproduction operating condition, first
arresting means for arresting said first reproduction
operating member in its actuated position, second
arresting means for arresting said second reproduction
15 operating member in its actuated position, a
reciprocally movable member mounted for back and forth
reciprocal movement and operable to move back or forth
when a tape comes to its end during a reproducing
operation of said first tape driving mechanism, a
20 selectively engageable member having a disengaging
position in which said selectively engageable member is
normally held and in which said selectively engageable
member prevents an interlocking relationship between said
reciprocally movable member and said first arresting
25 means and an engaging position in which said selectively



engageable member allows the interlocking relationship between said reciprocally movable member and said first arresting means and transmits movement of said reciprocally movable member to said first arresting means to release the arrested condition of said first reproduction operating member by said first arresting means, a change-over operating member for bringing said second tape driving mechanism into a pause condition and simultaneously moving said selectively engageable member to the engaging position, and third arresting means operable for arresting said change-over operating member at its actuated position and for releasing said change-over operating member from its arrested condition to allow said change-over operating member to return to its non-actuated position in response to returning movement of said first reproduction operating member from its actuated to its non-actuated position.

2. A tape recorder device according to claim 1, wherein said selectively engageable member is pivotally connected to said first arresting means.

3. A tape recorder device constructed and arranged to be operated, substantially as hereinbefore described with reference to, and as shown in, Figs. 1, 2, 3, 4, 5(a), 5(b) and 5(c) of the accompanying drawings.



4. A tape recorder device constructed and arranged to be operated substantially as hereinbefore described with reference to, and as shown in, Figs. 1, 2, 3, 4, 5(a), 5(b) and 5(c) of the accompanying drawings
5 when modified substantially as hereinbefore described with reference to and as shown in Fig. 6 of the accompanying drawings.

