

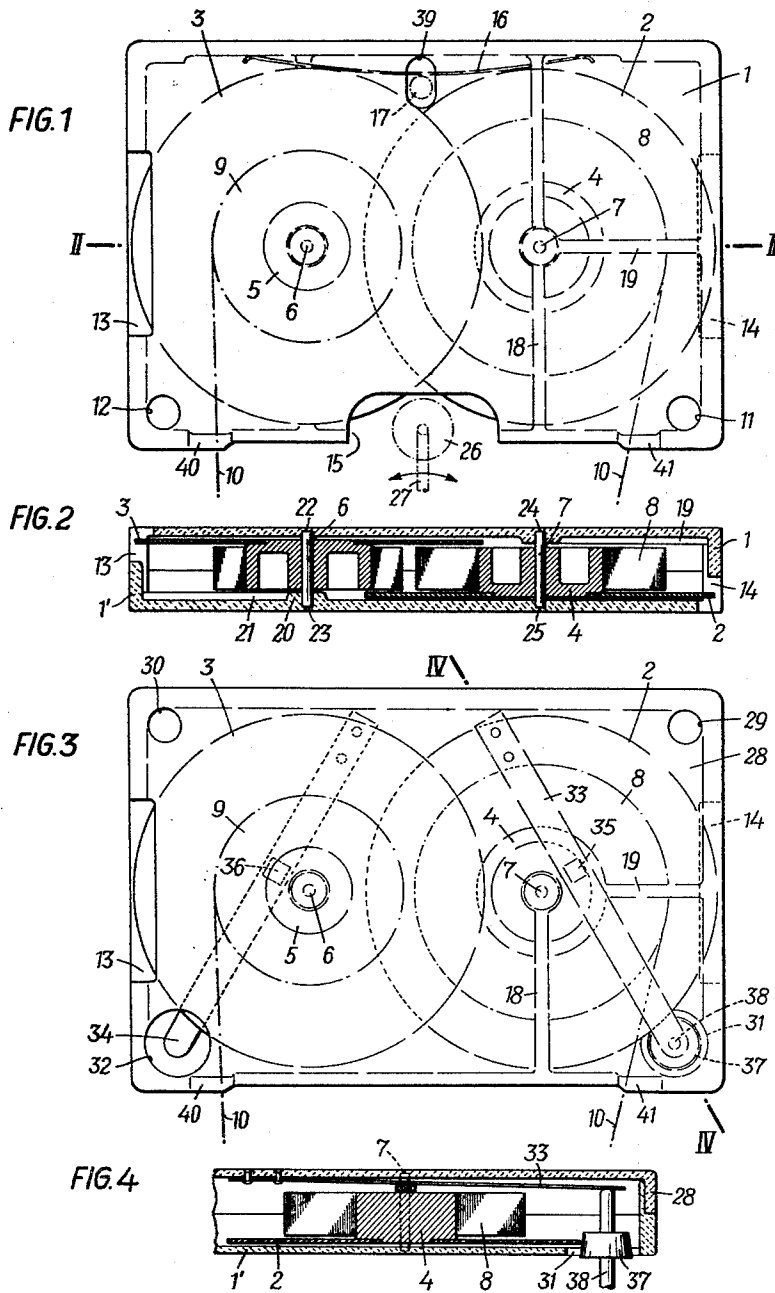
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SOUND TAPE MAGAZINE OR THE LIKE

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SOUND TAPE MAGAZINE OR THE LIKE

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The present invention relates to a sound tape magazine or the like, in general, and to a tape recorder magazine comprising two spools the distance between the axes of which is but a little greater than the maximum sum of the respective radii lengths of the two tape windings, in particular. The spools are mounted in the casing of the magazine with parallel axes, one of the spools being arranged in such a way, that it is reversed relative to the other.

With known arrangements of the above described kind, tape windings were able to enter a gap formed by two adjacent spool flanges resulting in transportation troubles of the tape.

It is an object of the present invention to provide a sound tape magazine or the like, wherein spools are constructed in such manner as to avoid an axial shifting of the tape windings on the spool hub, especially in the range between the two spool axes.

It is a further object of the present invention to provide a sound tape magazine or the like, wherein the casing of the magazine is constructed in such manner, as to make possible a manual drive of the spools, thus facilitating to locate a certain part of the recording on the sound tape.

It is a further object of the present invention to provide a sound tape magazine or the like, which includes an arrangement that prevents the loosening of the tape windings in the magazine.

It is a further object of the present invention to provide a sound tape magazine or the like, wherein the magazine is constructed in such manner as to make possible its production at a minimum expenditure of tools, material, and working time.

With these and other objects in view which will become apparent in the following detailed description, the present invention will be clearly understood in connection with the accompanying drawings, in which:

FIGURE 1 is a plan view of a first embodiment of the sound tape magazine;

FIG. 2 is a section along the lines II—II of FIG. 1;

FIG. 3 is a plan view of a second embodiment of the sound tape magazine, and

FIG. 4 is a section along the lines IV—IV of FIG. 3.

Referring now to the drawings, the magazine casing is formed of two uniform shells 1 and 1' of transparent plastic. In these two shells are mounted the two tape spools, each having a spool flange 2 and 3 respectively, and a spool hub 4 and 5, respectively. The hubs 4 and 5 are freely rotatable on respective shafts 6 and 7, which are held in blind holes 22, 23, 24 and 25 in the casing shells. Spring plates may be provided between the casing wall and spool hub, to prevent an axial movement of the spools. The spools are symmetrically arranged in the magazine and are so closely adjacent that the tape windings 8 and 9 are led on both sides through the spool flanges 2 and 3 in the range between the two spools. In order to assure a control of the tape winding in the periphery of the spools, the inside wall of the magazine is provided with ribs 18 and 19, 20 and 21 respectively, the height of which corresponds with the height of the spool flanges 2 and 3 above the inside wall of the magazine. Therefore, even with a relatively loosely wound tape a lateral shifting of the winding is prevented. During operation, the sound tape 10 is drawn off from the

strip winding 9 and led through an opening 40 to the sound heads. When returning to the magazine the sound tape 10 passes through an opening 41 and is wound on the strip winding 8. The openings 11 and 12 serve for receiving the centering pins which are arranged on the sound tape recorder. To facilitate manual rotation of the spools, the side wall of the casing is provided with openings 13 and 14 through which the spool flanges 2 and 3 are accessible. The spools are normally driven by a friction wheel 26, which can be arranged to bear against the circumference of the spool flange 2 through a recess 15 in the magazine casing. As this friction drive permits a certain slippage the arrangement of a special slipper clutch for compensating of alterations of the winding diameter is superfluous.

By rotating the lever 27 the frictional wheel 26 can be urged into engagement with the spool flange 3. In this switch position the tape is rewound. In order to prevent a loosening of the strip winding with the magazine which is separate from the sound tape recorder, a curved flat spring 16 is provided in the magazine, the spring 16 supporting itself against an inside wall of the magazine and lying against the circumference of the spool flanges 2 and 3, and exerting a braking action on the same. This brake spring 16 may be lifted by means of a pin 17 which is arranged on the sound tape recorder and extends into the magazine through an opening 39. When the recorder is switched on, the pin 17 can be pressed against the spring 16 so that the same is lifted from the spool flanges 2 and 3, for example.

According to the embodiment shown in FIGS. 3 and 4 two openings 31 and 32, respectively, are provided in the magazine 28. The spools are driven by a conical friction wheel 37 which extends through one of the openings 31 or 32 and engages the circumference of the corresponding spool flange 2' or 3'. The shaft 38 is co-extensive of the friction wheel 37 and bears against a flat spring 33 and 34, respectively, whereby the brake lining 35 and 36, respectively, is removed from the corresponding spool hub and the brake of the driven spool is lifted. With this arrangement the brake of the second spool is not raised, a tape tension resulting thereby which is required for a trouble-free operation of the recorder. The magazine is centered on the tape recorder by means of openings 29 and 30 similar to the openings 11 and 12 in the embodiment of FIGS. 1 and 2.

The present invention is not restricted to the illustrated embodiments and may also be applied e.g. to substandard film casings.

While I have disclosed two embodiments of the present invention, it is to be understood that these embodiments are given by example only, and not in a limiting sense, the scope of the present invention being determined by the objects and the claims.

1. In a sound tape magazine a casing, two spools disposed adjacent each other, each of said spools comprising

a hub and a single flange secured to one side of said hub, windings of sound tape provided on each of said spools, said spools being mounted within said casing with parallel axes and the distance between said axes being slightly greater than the maximum sum of the respective radii lengths of said two sound tape windings on said spools, the radius of the flange of each spool being greater than the difference of the distance between said axes and the radius of said hub, one of said spools being mounted reversed with respect to the other of said spools, and said flange of each of said spools covering at least partially the hub of the other of said spools.

2. The sound tape magazine, as set forth in claim 1, wherein said casing comprises walls running parallel to said spool flanges, guide ribs arranged on the inside of

3

said walls on parts facing the free winding of each of said spools, said guide ribs running about radially and outwardly with respect to the axis of said spools, the height of said guide ribs corresponds approximately with the height of said flange of the adjacent spool above the inside of said wall of said magazine casing, so that a shifting of said tape winding is prevented.

3. In a sound tape magazine a casing, two similar shells of plastic material, two spools disposed in said casing adjacent each other, each of said spools comprising a hub and a single flange, secured to one side of said hub, windings of sound tape on each of said spools, said spools being mounted within said casing with parallel axes, the distance between said axes being slightly greater than the maximum sum of the respective radii lengths

4

of said two sound tape windings on said spools, the radius of the flange of each of said spools being greater than the difference of the distance between said axes and the radius of said hub, each of said spools being mounted reversed with respect to the other of said spools, and said flanges covering at least partially said hub of the other of said spools.

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15