Dec. 24, 1957 K. DANIEL 2,817,516

SOUND TAPE CONTAINER

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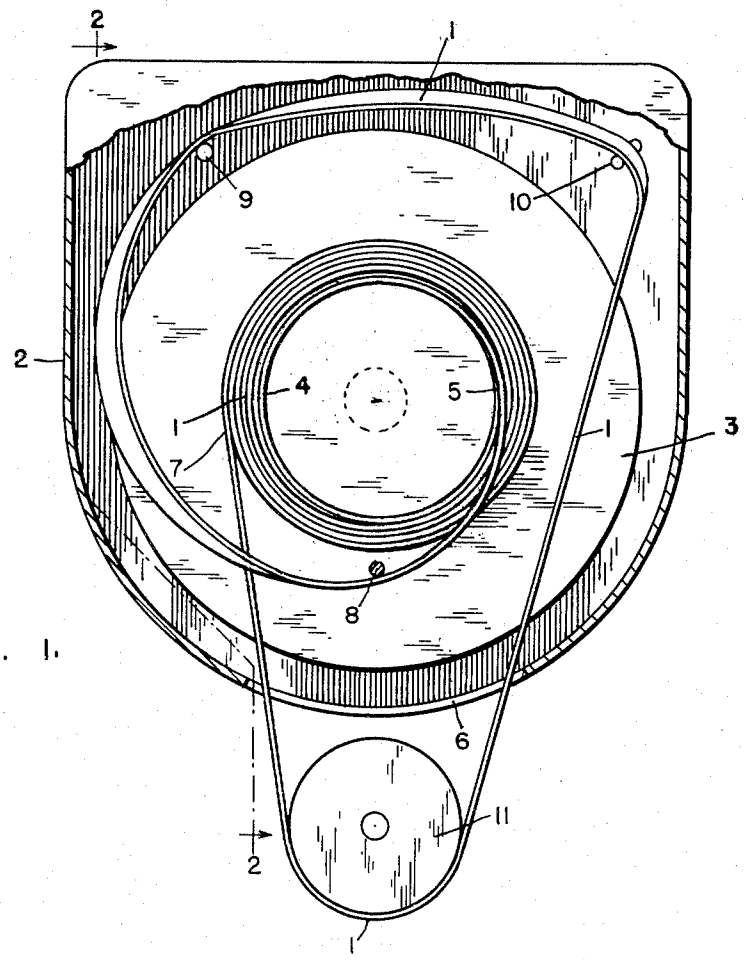
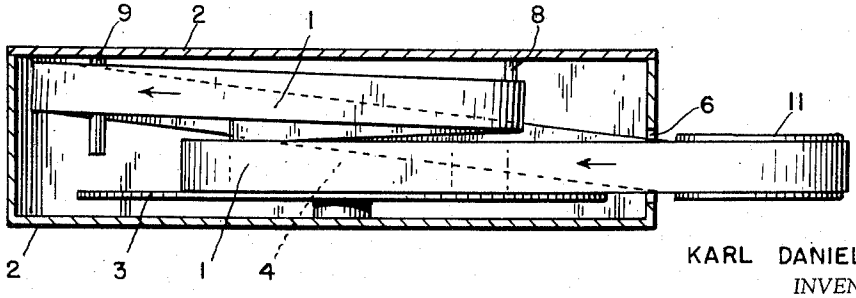


FIG. 1.

FIG. 2.



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SOUND TAPE CONTAINER

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2 Claims. (Cl. 271—2.18)

This invention relates to sound-inscribed tapes and refers more particularly to endless sound-inscribed tapes wound in the form of a roll and located in a casing which encloses the tape completely and which is provided with an opening for a loop of the tape used for sound reproduction.

The roll of tape is usually mounted upon a rotary plate which is located within the casing.

Attempts to place within such containers endless sound-inscribed tapes the ends of which have been twisted by 180° in relation to each other encountered considerable difficulties caused particularly by the fact that the material of the tape is quite elastic while the space available within the container is quite limited. Due to the resiliency of the tape material the twisted tape often adhered to the guides located within the casing, or to the walls of the casing, so that proper movement of the tape can not take place due to friction and tension.

An object of the present invention is to eliminate these drawbacks and to provide an encased tape with twisted ends which is superior in structure and in performance to tapes known in prior art.

In accomplishing the objects of the present invention it was found desirable to arrange the endless tape within the casing in such manner that two complete turns of the tape extend within the container outside the substantially tightly wound roll of the tape and that the twist is spread over a complete turn. Preferably the twist begins where the tape emerges from the coil. If the casing is provided with guides for guiding the turns of the tape then, in accordance with the invention, such guides should be inclined to the axis of the coil corresponding to the location of the twist at the time the tape engages the guide.

The invention will appear more clearly from the following description, taken in connection with accompanying drawing showing, by way of example, a preferred embodiment of the inventive idea.

Fig. 1 of the drawing shows the casing and the tape located therein in top view, with the cover removed and Fig. 2 is a side elevation partly in section on the line 2—2 of Fig. 1.

The tape located in the casing 2 is wound in the form of a roll 1 which is mounted upon a support, or plate, 3. The plate 3 is rotatably mounted on the bottom of the casing. The tape begins to leave the roll 1 at the location indicated by the numeral 4 in the drawing. The tape gradually emerges upwardly from the roll and leaves it completely at the location indicated by the numeral 5, after completing approximately one-half of a turn. Then the tape extends during the second half of the turn, above the roll 1. At that time it may engage a guide pin 8, carried by a suitable support not shown in the drawing. Then the tape extends towards the rear portion of the container and passes around vertical guide pin 9 and inclined guide pin 10 located in the rear of the container. Then the tape is moved towards the front portion of the container and it emerges from the container through the opening 6, forming a loop which is used for sound reproducing purposes. Since such a production does not constitute the subject of the present invention it is not further illustrated in the drawing. The tape reenters the container through opening 6 and rejoins roll 1 at the location which is indicated by the numeral 7 in the drawing. It is apparent that from the time the tape leaves roll 1 at 4 and until it rejoins roll 1 at 7, it extends in two complete turns.

As shown in the drawing, the twist of the tape by 180° is spread over the first one of these two turns. The twist begins at 5 as the tape emerges completely from the roll 1 and it continues gradually until the tape assumes the position which is parallel to the bottom of the container. Then the tape is inclined in the opposite direction and it assumes its final vertical position in the stretch between the guide 10 and the opening 6. It is thus apparent that the twist of the tape by 180° is spread over one complete turn or winding of the tape. Due to this arrangement the tensions, or friction, of the tape are essentially eliminated.

The described casing contains guides 8, 9 and 10, the inclination of which corresponds to the inclination of the twisted tape. It is possible, of course, to eliminate these guides and then the casing may be used conveniently for tapes provided with a twist as well as for tapes which do not have a twist. All such and other variations and modifications are to be included within the scope of the present invention.

What is claimed is:

1. A container for handling an endless roll of sound tape having a twist of 180° comprising a closed casing having a single loop opening in its front wall, a rotary plate mounted on the bottom of the casing to support the roll, a front guide pin on the casing above the roll for the tape leaving the inner part of the roll and two spaced pins at opposite corners of the rear casing-wall for guiding the tape from the front pin circuitously to the opening.

2. A container for handling an endless roll of sound tape having a twist of 180°, comprising a closed casing having a single loop opening in its front wall, a rotary plate mounted on the bottom of the casing to support the roll, a front guide pin on the casing above the roll for the tape leaving the inner part of the roll, a vertical guide pin at one rear corner of the casing-wall and an inclined guide pin at the opposite rear corner of the casing wall, both rear guide pins being above the plane of the roll for guiding the loop of the tape from the front pin circuitously to the opening and back to the outer surface of the roll.

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