

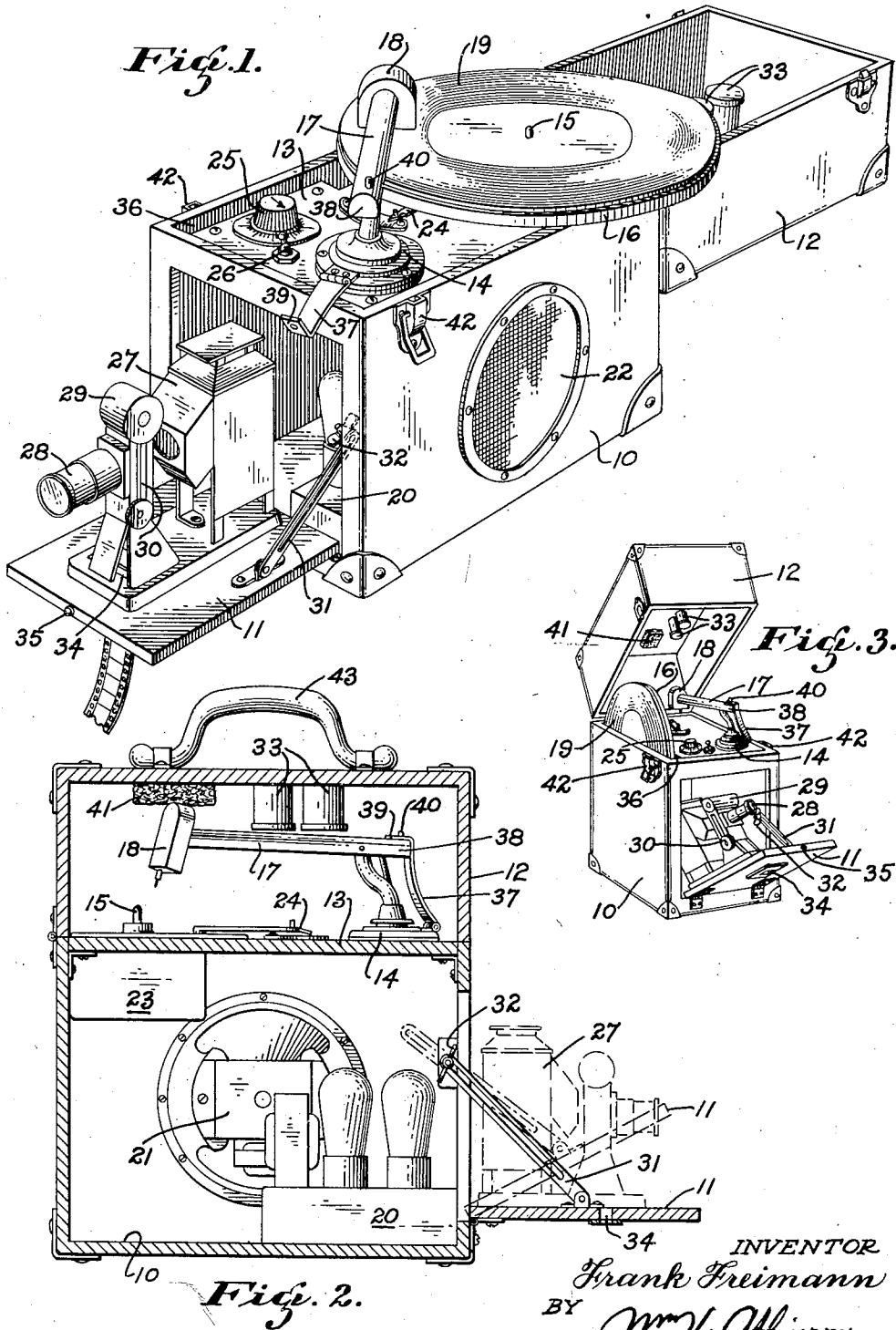
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CARRYING CASE

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CARRYING CASE

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The present invention relates to sound reproducing and picture projecting apparatus and more particularly to a novel arrangement of parts and a carrying case therefor, by means of which the apparatus may be conveniently transported from one place to another.

An object of the invention is to provide a carrying case for a combined sound reproducing and picture projecting apparatus which is compact and novel in construction.

Another object of the invention is to provide a carrying case for a sound reproducing apparatus which, when opened, will permit a free operation of the apparatus and, when closed, hold the parts thereof out of cooperating relation and against movement in a protected position.

A further object of the invention is to provide, in a carrying case for sound reproducing apparatus of the type having a pivotally mounted sound reproducing tone arm, means which will firmly hold the tone arm against movement in an inoperative position when the case is closed.

For a better understanding of the invention reference should be had to the accompanying drawing wherein there is shown, by way of illustration and not of limitation, a preferred embodiment thereof.

In the drawing:

Figure 1 is a perspective view showing apparatus in a carrying case of the type contemplated by this invention with the case fully opened and with the apparatus in an operative position.

Figure 2 is a vertical sectional view showing the carrying case closed over the sound reproducing apparatus and with its lantern supporting panel open, and

Figure 3 is a perspective view showing the carrying case with its cover and lantern supporting panel partly closed.

As illustrated in the drawing, the present invention is embodied in a new and novel carrying case for transporting a combined sound reproducing and picture projecting apparatus which may be quickly set up for operation in a simple and convenient manner. A feature of the carrying case is that, when closed, it will hold the several elements of the unit in a protected manner so that they will not become damaged or rendered inoperative when transported from one place to another.

The carrying case illustrated comprises a rectangular housing 10 having a horizontally hinged panel 11 at one end thereof and a comparatively deep cover 12 hinged at its other end so as to close over the top of the housing 10. Disposed

across the top of the housing 10, there is a panel 13 which supports a tone arm carrying pedestal 14 and a sound record support. The sound record support comprises an upwardly projecting vertically disposed shaft 15 having a sound record supporting platen 16 thereupon. A tone arm 17 is pivotally mounted upon the pedestal 14 in cooperating relation with the sound record supporting platen 16. At the end of the tone arm 17 there is an electromagnetic pick-up device 18 having a needle which is adapted to engage and reproduce sound from a disc type of record, designated by the numeral 19.

Electrically connected with the electromagnetic pick-up device 18 is a thermionic tube amplifier 20 for amplifying the sound currents generated thereby and connected with the output of the amplifier 20 is an electrodynamic loud speaker 21. The loud speaker 21 is mounted over a sound opening which is preferably formed in one of the sides of the housing 10, so that the sound emanating therefrom will be directed toward the audience when the apparatus is set up at one side of a room, as would be the case where it is to be used for the instruction and/or amusement of a small audience.

As shown in Figure 1 of the drawing, the opening in the side wall of the housing 10 is covered with a protecting grill 22. The platen supporting shaft 15 is driven by an electric motor mechanism 23 which is secured to the underside of the panel 13. A controlling lever 24, by means of which the speed of the shaft 15 may be determined, projects upwardly through the panel 13 and is disposed at a point adjacent the periphery of the record supporting platen 16, where it can be conveniently moved to control the speed of the sound record. Adjacent the lever 24 there is also a knob 25 for controlling the tonal output of the amplifier 20.

The amplifier 20, the electrodynamic loud speaker 21, and the motor mechanism 23 are adapted to be operated from an ordinary house current outlet and, therefore, the apparatus is provided with a suitable lead (not shown) which carries a service outlet plug. Associated with this lead and mounted upon the panel 13, there is a toggle switch 26, by means of which the current supply may be shut off and turned on without pulling the plug from its supply outlet.

In addition to the above described sound reproducing apparatus, the housing 10 is adapted to also support a picture projecting apparatus. As shown in the drawing, this apparatus comprises a picture projecting lantern 27 having a lens sys-

tem 28, a picture film support 29 and an advancing mechanism 30.

The picture projecting apparatus is mounted upon the inside of the panel 11 so that when it is closed this apparatus will be concealed within the housing 10. To provide for a variation in the angle of projection and to determine the elevation at which the picture is to be reproduced, upon a wall or screen, the panel 11 is provided with an adjustable bracket 31 which may be secured by a thumb screw 32 to hold the panel 11 at any desired angle with respect to the housing 10. The picture record contemplated for use with the lantern illustrated may comprise a series of pictures formed upon standard motion picture film. To facilitate the use of such a picture film the advancing mechanism 30 is made so that it will automatically advance the film one frame at a time when it is operated.

A film record of the above character can be made up with any number of pictures and used without supporting reels, the film being rolled up in a free coil which can be inserted in the film support 29. In operation the film passes through the lens system 28 and after it is used it can be rolled up by hand and placed in a suitable container. Two of these containers, designated by the numeral 33, are shown as fixed to the inside of the cover 12.

In order that the film may progress freely through the advancing mechanism 30, it is threaded through a slot 34 formed in the hinged panel 11. The projection of the film through the slot 34 permits it to hang free of the apparatus where it can not become entangled therewith or coil up in front of the lens system 28 and interfere with the projection of subsequent pictures.

Should the record 19 relate to a lecture or a sales talk, which is to be illustrated by pictures arranged in a proper sequence upon the picture film, it is intended that the record will be provided with a sound signal which will indicate when the picture film is to be advanced. In practice it has been found that a musical note interspersed with the spoken program may be resorted to for this purpose.

Instead of the still picture projecting apparatus, described above, the panel 11 may be provided with a moving picture projecting machine. In this latter event it will be possible to reproduce synchronized action pictures and sound by starting the picture film and sound record at the proper synchronizing points.

When the hinged panel 11 is in its closed position, the weight of the picture projecting apparatus secured thereupon will operate, because of its weight, to hold the panel 11 in its closed position. However, for safety the panel 11 has a spring pressed bolt 35 which will engage the top of the opening when the panel 11 is closed. With this latter described arrangement, it will be seen that the picture projecting apparatus can be placed in an operative position by merely opening the hinged panel 11 and adjusting it for the proper angle of projection by tightening the thumb screw 32 upon the bracket 31. The patentable aspects of the picture projecting features of this disclosure are fully described and claimed in my co-pending application entitled Carrying case for picture projecting apparatus, Serial Number 31,632, filed July 16, 1935.

As shown, the sound record supporting platen 16 is of a larger diameter than the width of the housing 10. For compactness, the sound record supporting platen 16 is made so that it can be

removed from the shaft 15 and placed, together with one or more records, in a vertical compartment 36 provided at one side of the housing 10. After the sound record supporting platen 16 has been placed in the compartment 36 the cover 12 can be closed upon the housing 10. When the sound record supporting platen 16 is thus removed from the shaft 15 some means must be provided for securing the tone arm 17 and the pick-up device 18 against movement and in a position where they will not become damaged due to rough handling in transporting the apparatus from one place to another. This is accomplished, in accordance with the present invention, by providing a hinged clevis 37 which will engage a rearwardly projecting end 38 of the tone arm 17 and hold the pick-up device 18 in an elevated position. As shown in the drawing, the clevis 37 has an overhanging portion 39 which will engage a pin 40 upon the overhanging end of the tone arm 17. With this arrangement the tone arm 17 will be held against any swinging movement about its supporting pedestal 14. Secured against the inside of the cover 12 at a point where it will engage the pick-up device 18, there is a pad 41 of felt or sponge rubber.

As shown in Figure 2 of the drawing, when the cover 12 is closed, this pad 41 will exert a downward pressure upon the pick-up device 18 and thus hold the overhanging portion 39 of the clevis 37 in tight engagement with the pin 40 upon the rearwardly projecting end of the tone arm 17.

A pad similar to the pad 41, which does not appear because of the character of the drawing, is also provided upon the under side of the cover 12 at a point where it will engage the upper edge of the platen 19 when the latter is disposed in the carrying compartment 36, as shown in Figure 3 of the drawing.

After the cover 12 has been closed over the tone arm 17, as above described, it is secured in its closed position by two oppositely placed spring clasps 42. The cover 12 also has a suitable grip or handle 43 at the top thereof, by means of which the carrying case may be easily handled.

While I have, for the sake of clearness and in order to disclose my invention so that the same can be readily understood, described and illustrated a specific device and arrangement, I desire to have it understood that this invention is not limited to the specific means disclosed but may be embodied in other ways that will suggest themselves to persons skilled in the art. It is believed that this invention is new and it is desired to claim it so that all changes as come within the scope of the appended claims are to be considered as part of this invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. In a device of the character described, the combination of an apparatus containing case, a sound record driving mechanism mounted within said case, a tone arm support upon said case, a tone arm pivotally mounted intermediate its ends upon said support and in cooperating relation with said sound record driving mechanism, a sound record pick-up device upon one end of said arm, a cover for said case adapted to enclose said tone arm and pick-up device when not in use, and means engaging the other end of said tone arm adapted to hold said pick-up device in an elevated position and cooperate with said cover to firmly hold said tone arm and pick-up device against movement in a protected position when said cover is in its closed position.

2. In a device of the character described, the combination of an apparatus containing case, a sound record driving mechanism mounted within said case, a rotatable tone arm support upon said case, a tone arm pivotally mounted intermediate its ends upon said support in cooperating relation with said sound record driving mechanism, one end of said tone arm being adapted when in operation to swing with said support in a horizontal path over said sound record driving mechanism and be elevated when not in use, a cover for said case adapted to enclose said tone arm, a latching means engaging the other end of said tone arm for holding the swinging end of said tone arm in an elevated position and against movement in its horizontal path, and means carried by said cover engaging the elevated end of said tone arm and cooperating with said latching means to firmly hold said tone arm against movement and in a protected inoperative position when said cover is in its closed position.

3. In apparatus of the character described, the combination of a carrying case, a sound record driving mechanism mounted within said carrying case adapted to drive a sound record supporting platen, a tone arm support upon said carrying case, a tone arm mounted for universal movement upon said support having a pick-up device at its end and on one side of said support, an extension upon said tone arm projecting to the other side of said support, means engaging said extension for holding said tone arm and pick-up device in an elevated position, and a cover for said carrying case adapted to engage said pick-up device when in its elevated position and cooperate with said means to secure said tone arm and pick-up device against movement when the cover is in its closed position upon said carrying case.

4. In apparatus of the character described, the combination of a carrying case, a panel secured horizontally across the upper part of said carrying case, a pedestal mounted upon said panel, a tone arm having a free end and a rearwardly extending counterbalancing portion pivotally mounted intermediate its ends upon said pedestal, a sound reproducing pick-up device at the free end of said tone arm, a latching means adapted to engage the counterbalancing portion upon said tone arm and hold the free end with said sound reproducing pick-up device in a raised position, a cover for said carrying case adapted to enclose said panel and said tone arm, and means carried by said cover adapted to engage the raised sound reproducing pick-up device at the free end of said tone arm and cooperate with said latching means to hold said tone arm against movement when said cover is in its closed position.

5. In apparatus of the character described, the combination of a carrying case, a panel secured horizontally across the upper part of said carrying case, a swivel forming pedestal mounted upon said panel, a tone arm pivotally mounted intermediate its ends upon said pedestal, a sound reproducing pick up device at one end of said tone arm, a latch engaging means at the other end of said tone arm, a latch upon said panel adapted to cooperate with the latch engaging means upon said tone arm, a cover upon said carrying case for enclosing said tone arm, and means carried by said cover adapted to engage the other end of said tone arm and cooperate with said latch to hold said tone arm against movement when said cover is in its closed position.

6. In apparatus of the character described, the combination of a carrying case, sound reproducing apparatus within said case having a record supporting platen, a tone arm support upon said carrying case, a tone arm mounted intermediate its ends upon said support having a sound reproducing pick-up device at one end adapted to cooperate with a sound record upon said platen and a rearwardly projecting portion extending in an opposite direction, a cover for said carrying case adapted to enclose said tone arm and sound reproducing pick-up device, and means engaging the rearwardly projecting portion of said tone arm and cooperating with said cover for holding said one end of the tone arm with the sound reproducing pick-up device in an elevated and immovable position when said cover is secured upon said case.

7. In apparatus of the character described, the combination of a carrying case having a horizontally disposed top panel, sound reproducing apparatus within said case having a record supporting platen disposed above said panel, a tone arm support upon said panel adjacent said platen, a tone arm mounted intermediate its ends for universal movement having a portion extending away from said platen and a sound reproducing pick-up device upon another portion adapted to extend over a sound record upon said platen, a cover for said carrying case adapted to enclose said panel, the tone arm, and said sound reproducing pick-up device, means carried by said case engaging the first mentioned portion of said tone arm for holding the other portion of said tone arm and the sound reproducing pick-up device in an elevated position when not in use, and means carried by said cover adapted when said cover is secured upon said case to cooperate with said last means and firmly hold said tone arm with its sound reproducing pick-up device in a protected and immovable position.

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