

Oct. 9, 1962 I. BREGMAN 3,057,255
COMBINATION PHOTOGRAPH-DISC RECORD UNIT AND AUTOMATIC
EXHIBITING AND PLAYING MEANS THEREFOR
Filed Nov. 14, 1957 5 Sheets-Sheet 1

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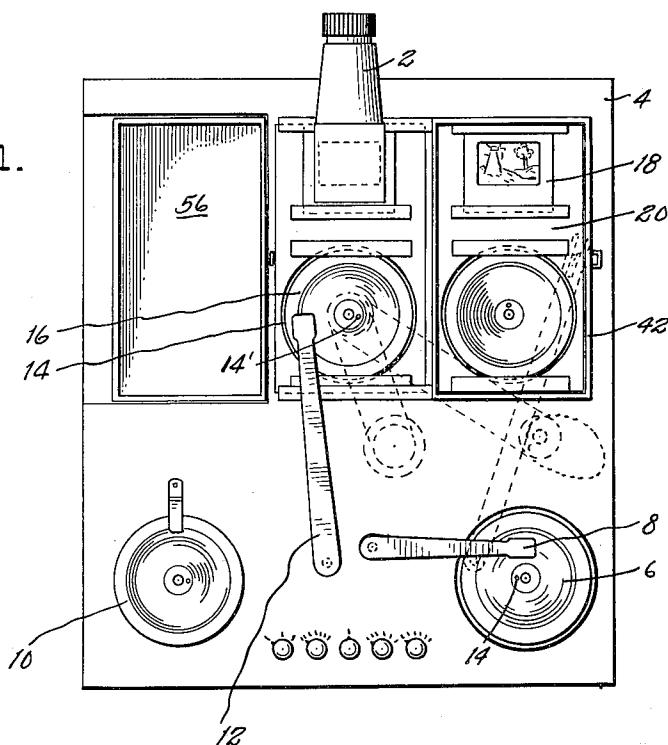
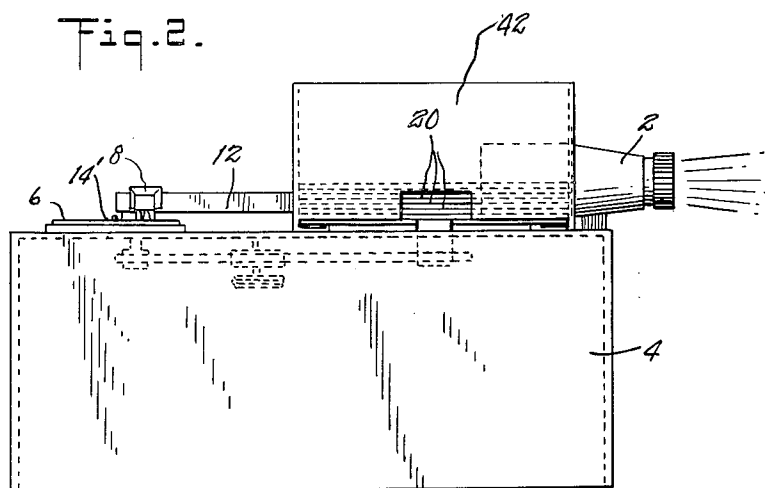
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Fig. 5.

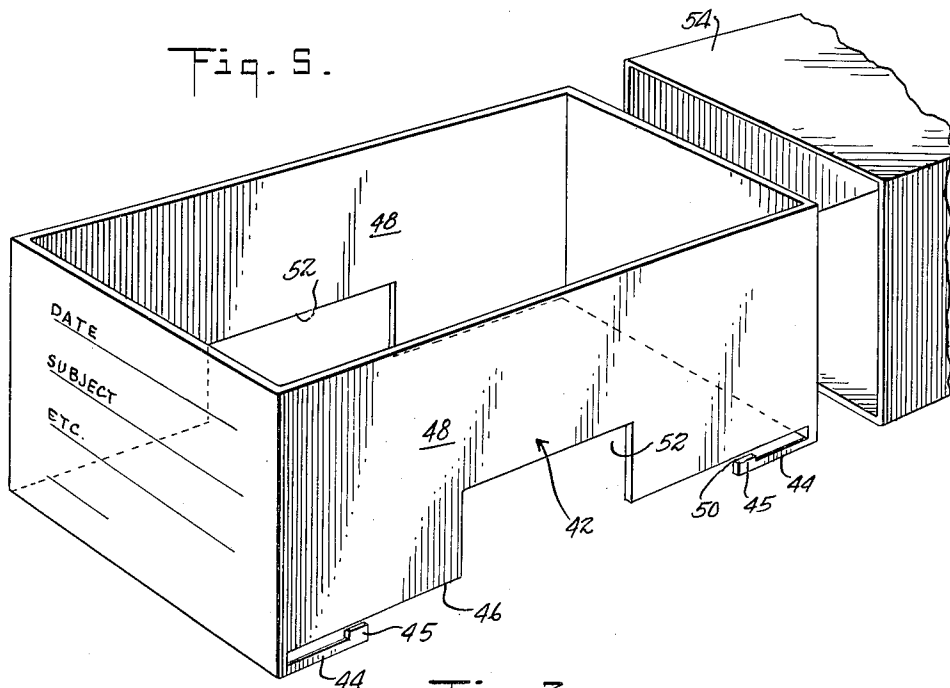
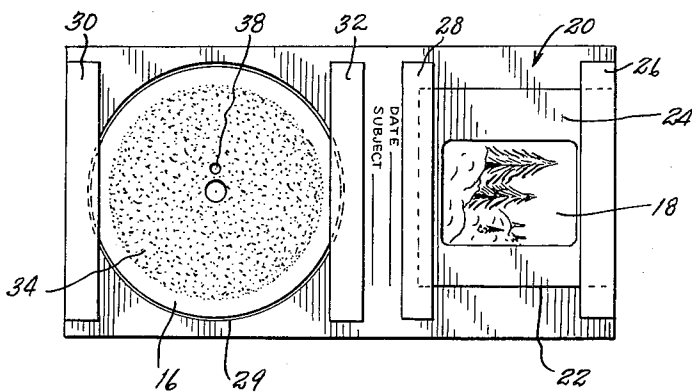
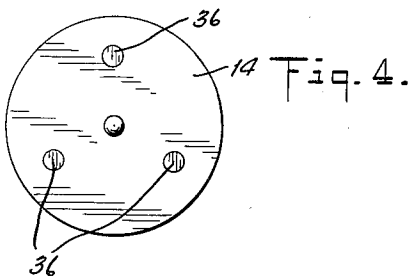


Fig. 3.



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Fig. 6.

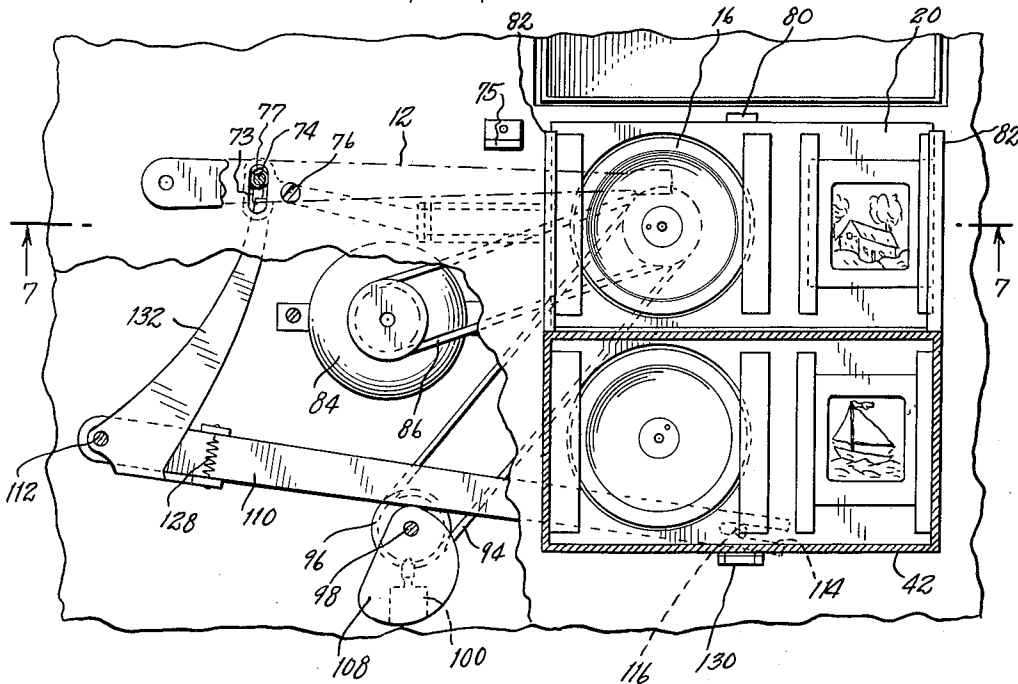
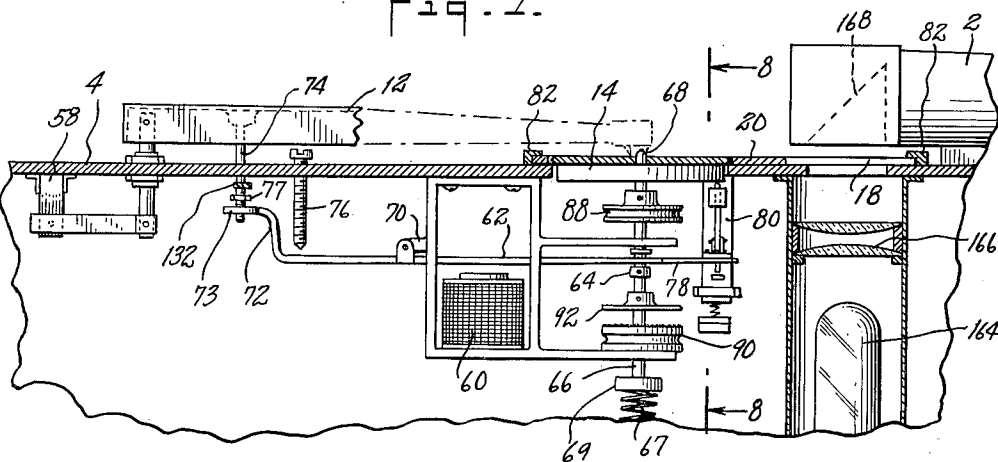


Fig. 7.



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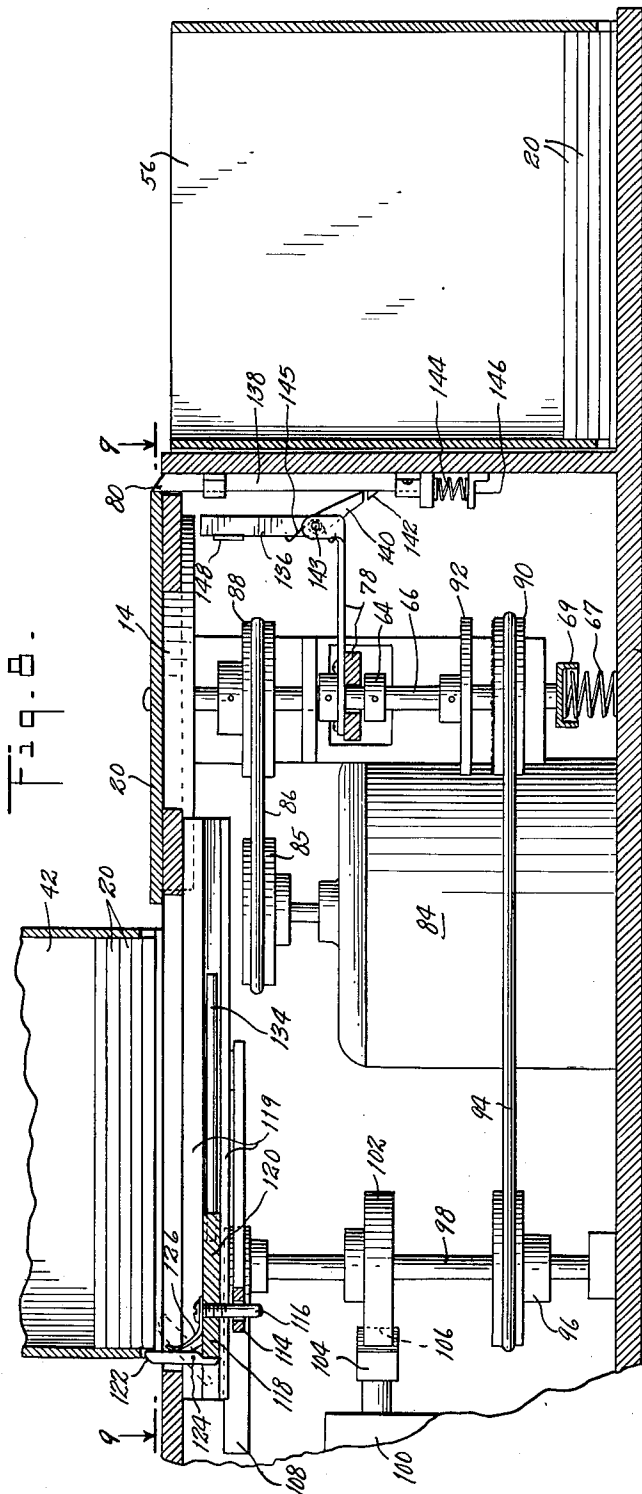
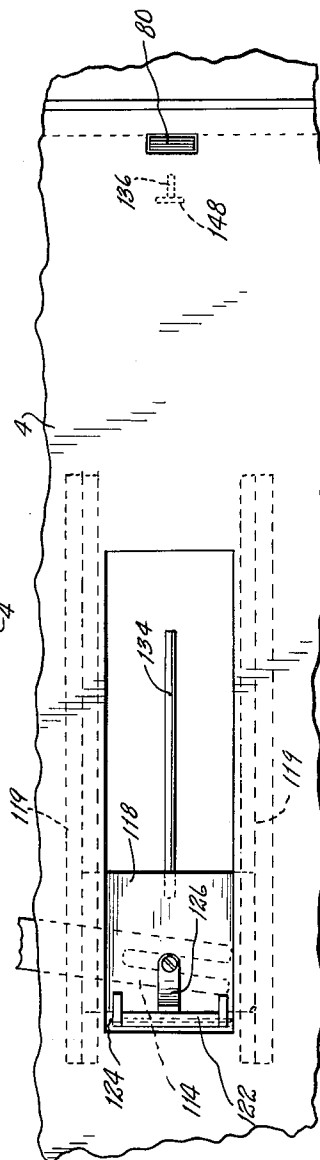


Fig. 9

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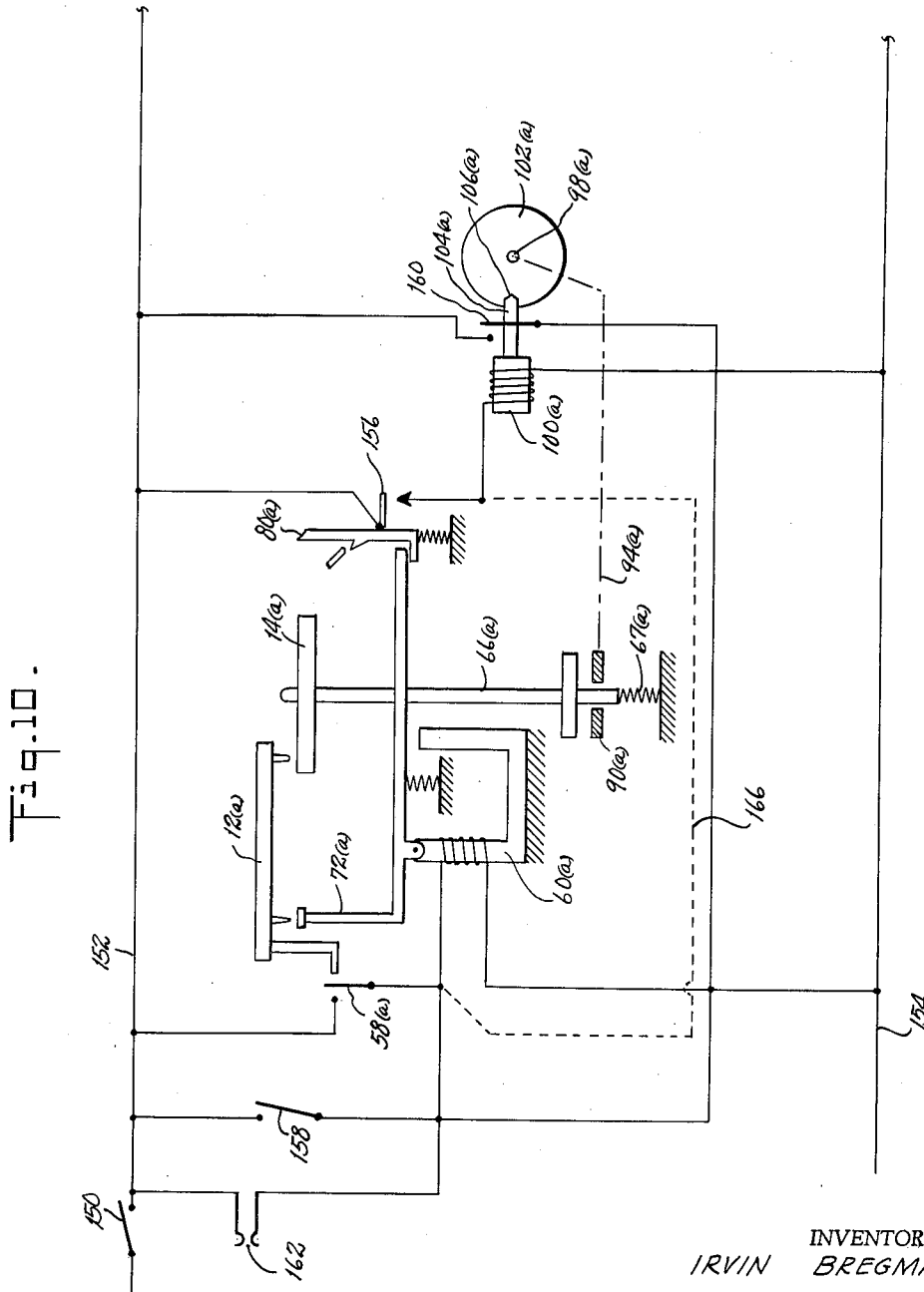
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COMBINATION PHOTOGRAPH-DISC RECORD UNIT AND AUTOMATIC EXHIBITING AND PLAYING MEANS THEREFOR

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Filed Nov. 14, 1957, Ser. No. 696,435
8 Claims. (Cl. 88—28)

This invention relates to a photograph-disc record combination unit and means for projecting the photograph and playing the disc record simultaneously.

It is an object of this invention to provide a device combining a photograph and individual phonographic transcription commenting on the photograph in a single inexpensive and convenient unit.

Another object is to provide a device for projecting an individual photograph, playing a recorded comment thereon and automatically changing the photograph-disc record unit at the end of the recorded commentary.

Other objects and features may be inferred from the following description of this invention.

In the drawings illustrating this invention:

FIG. 1 is a plan view of the projector-phonograph combination of this invention;

FIG. 2 is a side elevation view of the projector-phonograph combination shown in FIG. 1;

FIG. 3 is a bottom view of an embodiment of the photograph record unit of this invention;

FIG. 4 is a plan view of the phonograph turntable of this invention;

FIG. 5 is a perspective view of the storage box for the photograph-disc record units of this invention;

FIG. 6 is a partial plan view of the projector-phonograph combination of FIG. 1 in partial section and broken away in part to show portions of the operating mechanism of this invention;

FIG. 7 is an elevation view in section taken on the line 7—7 of FIG. 6;

FIG. 8 is a partial front end view in section of the projector-phonograph shown in FIG. 1;

FIG. 9 is a partial elevation view on the line 9—9 of FIG. 8; and

FIG. 10 is a schematic wiring and mechanical diagram of the projector-phonograph combination in FIG. 1.

There are many well known devices for combining the projection of a photograph and sound transcription. The normal motion picture film with the sound track as an integral part thereof is an example. The problems that arise due to synchronizing the picture and the sound have been satisfactorily solved by large motion picture producers. The procedure involved is highly technical and quite expensive so that the average amateur photographer does not have the skills or the means required to produce a satisfactory motion picture film with sound. Other devices have been proposed which involve the automatic changing of the photographs on a film strip in synchronization with a record or tape. Such devices are expensive since the synchronization involves the use of complicated electric circuitry or mechanical devices. The expense and technical skill required have placed such devices out of the reach of the average amateur photographer.

This invention makes possible an inexpensive and simple photograph-disc record unit which may be employed by any photographer to obtain a device which may be used to project the photograph and at the same time play a recorded comment thereon. Further an inexpensive and simple device is provided which will make possible the simultaneous projection and sound reproduction and will automatically change the photograph-disc record unit. In addition there is provided a compact assembly which

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makes possible the steps of recording a comment on a record, projecting the photograph and playing the recorded comment thereon, and automatically changing the photograph-disc record unit at the end of the recorded comment or sooner if desired.

There is illustrated in the above-mentioned figures and described in detail below a single embodiment of this invention. It will be apparent to those skilled in the art that there are many modifications possible other than the ones illustrated and described which may accomplish the above-mentioned results. For this reason it should be kept in mind that the embodiments are illustrative of this invention only and that so long as modifications do not depart from the scope of the appended claims and the spirit of this invention such modifications come within this invention.

In FIG. 1 there is illustrated a projector-phonograph-recorder combination. In this device there is illustrated a projector lens system 2 positioned on the forward part of a case 4. Also included in the case 4 is a recording turntable 6 and a recording tone arm 8 which may be connected to a suitable recording unit (not shown) built into the case 4. In addition there is provided a disc record storage area 10 which may be used to store blank disc records. There is also provided a tone arm 12 and a turntable 14. The sound picked up by the tone arm 12 from a disc record 16 may be reproduced in any suitable manner by a separate unit (not shown) placed within the case 4. A disc record 16 and a photograph 18 are mounted in a photograph-disc record card-like unit 20 as shown in FIG. 3. The photograph 18 is mounted on the front end of the unit 20 and is adapted to be projected by the projection lens system 2. The disc record 16 is mounted in the opposite end of the photograph-disc record unit 20 in such a manner so that it is free to turn when engaged by the turntable 14.

In the device as illustrated in FIG. 3 the photograph 18 is in the form of the familiar 35 mm. transparency slide. While the remainder of the discussion will refer to the type of photograph it will be understood that by the use of a suitable optical system any size transparency or positive prints of photographs could be projected easily.

The photograph-disc record unit 20 may be made of any suitable material such as cardboard, plastic or metal. The material chosen should have sufficient stiffness so that it will not be damaged in use. As shown in FIG. 3 the material is relatively thick cardboard. While the thickness of the material used will depend on the type of photograph to be placed in or on the unit 20 and the thickness of the disc record 16, the weight of a combined unit should be kept as low as possible and at the same time have the stiffness required so that the automatic changing operation may be accomplished without the necessity for using a great deal of force. For example I have found that for a disc record approximately .030 inch thick, a card of from .060 to .075 inch thick made from cardboard or stiff plastic sheet works quite well.

On the forward end of the photograph-disc record unit 20 there is provided a cut-out portion 22 which is adapted to receive the photograph to be projected. The cut-out portion 22 of the photograph-disc record unit 20 is of the same size as the transparency slide 18 mounted in its normal frame 24. (It will be understood that the processor of the film could mount the transparency directly in the unit 20 itself rather than placing it in the frame 24.) The cut-out portion 22 as shown in FIG. 3 is provided with strips 26 and 28 which overlie the ends of the cut-out portion 22. The strips 26 are secured to opposite sides of the unit 20 at its forward edge so that a slot is provided into which the transparency 18 may be positioned. Strips 28 positioned at the rear end of cut-out portion 22 pro-

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vide a means to support the rear end of the frame 24 of the transparency 18. Thus, there is provided means by which a slide 18 may be positioned accurately within the forward end of the unit 20. The dimensions of the cut-out portion 22 should be such that the transparency 18 is held firmly in place and yet should not be so near to the dimensions of the transparency 18 so that insertion is difficult. Rather than use strips 26, 28, 30, and 32 to hold the photograph 18 and the disc record 16 in place within the unit 20 I have used clear plastic sheathing approximately .010" thick for this purpose on both sides of the unit 20. The cut-out portion 22 with the photograph 18 is covered both to hold the photograph 18 in place and to protect the film from dust. The portion of the sheathing covering the disc record 16 end of the unit 20 is cut out so that the disc record 16 is supported by the overhanging portion since the radius of the cut-out circle of sheathing is less than that of the disc record 16. The top side of the unit 20 with sheathing placed thereon may be cut out in a full circle or in an arc sufficiently large to allow the needle of the tone arm 12 to travel across the disc record. The latter practice would further protect the playing surface of the disc record 16 from scratches in use and dust.

In the rear half of the photograph-disc record unit 20 there is provided a circular cut-out portion 29. Strips 30 and 32 are positioned on opposite sides of the unit in such a manner as to partially overlie the cut-out portion 29. The disc record 16 is positioned within the circular cut-out portion 29 and is supported therein by strips 30 and 32. The cut-out portion 29 has a slightly larger diameter than the diameter of the disc record 16. Thus the disc record 16 is free to rotate within the cut-out portion 29 and between the overlying portions of strips 30 and 32.

The disc record 16 may be of any well known type. The size of the record will be determined by the amount of time necessary for a comment of suitable length to be recorded thereon, the speed of the rotating disc and the fidelity desired. The usual practice of providing an eccentric grooved portion near the center of the disc record 16 may be followed so that the tone arm 12 will be pulled to an inner position and thus provide a means for initiating the automatic changing operation described below.

The disc record 16 may be made of any well known material which may be used to record sound. In particular, the disc record 16 as illustrated has provided on the under side thereof a coating of iron dust 34. Due to the small size of the disc record 16 it will have very little weight. Therefore by providing permanent magnets 36 on the turntable 14 as illustrated in FIG. 4 the magnetic force between the iron dust 34 and the magnets 36 provide an additional means to hold the disc record 16 firmly in position on the turntable during the playing thereof. While the disc record 16 as illustrated has iron dust 34 positioned on the underside thereof it will be understood that any suitable material may be positioned on the under side of the disc record 16 which will be attracted by suitable magnets placed on the turntable 14. For example I have found that steel shim stock .003 to .005 inch thick gives satisfactory results. Also the material from which the record is made could be impregnated with a substance which would be attracted by the magnets 36. Thus there is provided a convenient means for playing a relatively small phonograph record without loss of quality in the transcription due to slipping of the disc record 16 when being played. This is of substantial importance since without some means of fixing the record positively on the turntable while it is being played the drag of the needle of the tone arm 12 might tend to cause slippage and result in unsatisfactory performance.

In addition to the means provided to affix positively the disc record 16 to the turntable 14 there is also provided an offset hole 38 which cooperates with a pin 14' on the recording turntable 6 shown on FIG. 1. The hole 38

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matches with the position of the pin 40 so that when the disc record 16 is being cut by the recording arm 8 the disc record 16 will be firmly fixed against slipping. This is necessary because of the fact that substantially more force is exerted by the cutting needle when the commentary is being recorded on the disc record 16. As a further measure to secure the disc record 16 positively to the recording turntable 6 the iron dust 34 previously discussed above may cooperate with magnets placed on the recording turntable 6 in the same manner as discussed above.

The photograph-disc record unit 20 of this invention may be made up by the photographer when he receives his transparencies or prints after they have been processed. The photograph may be inserted into the cut-out portion 22 as described above. Then a blank record may be positioned on the recording turntable and the photographer may record his commentary thereon. After the disc record 16 is cut the disc record 16 is positioned within the cut-out portion 29 as illustrated in FIG. 3. The recording operation need not be carried out in the same device as illustrated in FIG. 1 but may be carried out on separate recording equipment.

A number of such photograph-disc record units 20 may be positioned in a storage box 42 illustrated in FIG. 5. The storage box 42 may be made of any size convenient to store a number of such photograph-disc record units 20. The length and width of the interior dimensions of the storage box 42 are such as to correspond with the length and width of the units 20, allowing some clearance so that the units 20 may drop without hindrance down through the storage box 42.

The storage box 42 is provided with bottom flanges 44 which are spaced from the bottom edge 46 of the side-walls 48. The space 50 between the flanges 44 and the side-walls 48 is such as to permit only one photograph-disc record unit 20 to be ejected therefrom at a time, while at the same time being large enough to permit the unit 20 to be ejected without being hampered in its side-wise movement therefrom.

A cut-out portion 52 is provided in both side walls 48. The purpose of this cut-out portion 52 is to permit the insertion of a photograph-disc record into the space 50 when it is desired to do so. Thus should it be desired to position a photograph-disc record unit 20 on the bottom of the stack in the storage box 42, all that is required is to insert the fingers into the opening formed by cut-out portions 52, lift the stack and insert the photograph-disc record unit 20 into the space 50. Projections 45 may be provided to prevent a unit 20 from moving out of the storage box the wrong way.

In order to protect the photograph-disc record units 20 while not in use the storage box 42 is provided with a cover 54 which encloses the open top and bottom portions and the side walls 48. The storage box 42 and the cover 54 may be made of any suitable material which will provide for a dust proof container.

Space may be provided on one end wall of the storage box 42 (as shown in FIG. 5) or on the cover 54 to record such information as the subject, date and description of the contents of the storage box 42 for indexing purposes.

In order to provide a convenient means for simultaneously projecting the photograph and playing the recorded commentary thereon the device illustrated in FIGS. 1, 2 and 6 through 10 is provided. While a single unit may be utilized at a time there is shown for convenience a storage box 42 containing a number of such units 20 positioned on the case 4 as illustrated in FIG. 1. There is provided automatic changing mechanism discussed fully below which feeds one unit 20 at a time into the center position in the case 4 so that the photograph 18 may be projected and the disc record 16 played. Further means are provided so that when the commentary on the disc record 16 is completed the changing mecha-

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nism forces the unit 20 in the playing position across the casing 4 into a storage rack 56 on the side of the case 4 as illustrated in FIG. 1. Positioned within the rack 56 there may be provided another storage box 42 into which the unit having been played is pushed by the changing mechanism. In this manner all of the units contained in a storage box 42 may be automatically projected and their commentaries played. When all units 20 have been played they will be positioned within a storage box 42 in the rack 56 and may be removed therefrom.

The automatic changing mechanism discussed below is designed to show an embodiment which will be understood to illustrate only one of the many possible means for accomplishing the automatic changing of the photograph-disc record units 20.

Referring now to FIGS. 6 and 7. When the tone arm 12 reaches the eccentric grooved portion (discussed above) of a disc record 16 a microswitch 58 is activated. The microswitch 58 is connected in series with a solenoid 60 and serves to supply current to the windings thereof. On activation of the solenoid 60 a lever arm 62 is pulled downward. The lever arm 62 cooperates with collar 64 positioned on the shaft 66 of the turntable 14. The shaft 66 is free to move in a vertical direction and when the lever arm 62 moves downward the turntable 14 and its spindle 68 are withdrawn from the disc record 16. A spring 67 is compressed between a cup member 69 and the bottom of the casing 4 when the shaft 66 is forced downward. The spring 67 serves to provide a force to return the shaft 66 and hence the turntable 14 to the upward position when the lever arm 62 returns to its upward position.

The lever arm 62 is pivoted on a bracket pivot 70 and is free to rotate thereon. When the lever arm 62 is pulled downward by the action of the solenoid 60 the extension portion 72 is pushed upwardly. The extension portion 72 has a slotted end portion 73 which surrounds the stud 74 attached to the tone arm 12. A collar 77 rigidly attached to the stud 74, will bear on the upper surface of the extension portion 72 when that portion is raised by the rotation of the lever arm 62. The position of the collar 77 may be made adjustable or not as may be desired. This action serves to raise the tone arm 12 away from the disc record 16. A set screw 76 is provided on the casing 4 which serves to limit the movement of the lever arm 62 and to provide means for adjusting the amount of movement around its pivot 70.

At this stage in the changing operation it will be seen that the turntable 14 and its spindle 68 are withdrawn from the disc record 16 and the tone arm 12 is lifted away from the top surface of the disc record 16.

A yoke 78 is provided on the lever arm 62 which serves to pull down a stop mechanism 80 when the lever arm 62 is moved downward. The stop mechanism 80 (more fully discussed below) as may be seen in FIG. 6 serves to prevent the unit 20 from being forced beyond the playing position. As may be seen in FIGS. 6 and 7 there is provided on the top of the casing 4 guide ways 82 which serve to guide the ends of the units 20 in their motion across the casing 4. Thus while the unit 20 is in the playing position it is longitudinally supported on the casing 4 by the guide ways 82 and its lateral position fixed by the stop mechanism 80.

Shaft 66 of the turntable 14 is driven by a motor 84 through a belt 86 and pulley 88 mounted rigidly on the shaft 66. In addition to providing a motive power for the turntable 14 the motor 84 also provides the motive power for the changing mechanism described below. The motor 84 is provided with a separate switch (not shown) mounted on the casing 4 and runs continuously during the entire operation.

A clutch plate 90 is positioned around the shaft 66 so that it is not rotated except when engaged by the

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bearing plate 92 when the shaft 66 is forced downwardly by the lever arm 62. The upper surface of the clutch plate 90 may be coated with any suitable substance which will prevent the bearing plate 92 from slipping when in contact with the clutch plate 90. When the bearing plate 92 is forced against the clutch plate 90 it is rotated.

A belt 94 connects the clutch plate 90 to a driven pulley 96. Driven pulley 96 is mounted on a shaft 98 which is free to rotate only when the latching mechanism including a solenoid 100 is released. The latching mechanism comprises a circular plate 102 rigidly attached to the shaft 98 and a plunger 104 actuated by solenoid 100. The solenoid 100 (described below) is actuated by a switch mechanism attached to the stop mechanism 80 and will be more fully discussed below in connection with the schematic diagram shown in FIG. 10. When the solenoid is activated the plunger 104 is withdrawn from a notched portion 106 in the plate 102 permitting the shaft 98 to rotate.

Attached to the shaft 98 is a cam 108 which serves to engage a changing lever 110 (see FIG. 6). When the shaft 98 rotates the cam 108 forces the lever 110 which is pivoted on a pivot 112 to rotate. The forked end portion 114 of the changing lever 110 is then forced to move across the casing 4. The forked end portion 114 in turn forces a screw 116 which is attached to the transfer mechanism 118 across the casing 4 to force one unit 20 from the storage box 42 into the playing position.

The transfer mechanism 118 is provided therein with a base 120 which is slidably supported on guideways 119. A finger 122 on pivot 124 is mounted on base 120. The finger 122 is maintained in an upright position by a leaf spring 126. Thus as the transfer mechanism is forced across the casing 4 by the changing lever 110 the finger 122 forces one unit out of the storage box 42 and across into the playing position. The movement of the photograph-disc record unit 20 into playing position will also serve to force the photograph-disc record unit 20 that has been played from the playing position into the storage box 42 located in the rack 56. As the cam 108 continues to rotate the arm 110 reaches a maximum position corresponding to the position at which the photograph-disc record unit 20 is in its proper playing position. At this time a spring 128 serves to provide a force which returns the changing lever 110 and the transfer mechanism 118 to its out of contact position against a stop 130 shown in FIG. 6. The cam 108 and the plate 102 are designed so that when driven pulley 96 makes one complete revolution the plunger 104 latches in the notch 106 so that further rotation of the shaft 98 is impossible.

Attached to the pivot 112 in contact with the changing arm 110 is a tone arm returning lever 132. As may be seen in FIG. 6 when the changing arm 110 is rotating about pivot 112 the tone arm returning lever 132 will force the tone arm 12 back to its starting position by acting on the stud 74. It will be remembered that the tone arm is to be held up by the extension portion 72 of the lever arm 62 which is being held down by the solenoid 60. The extension portion 72 has a slotted end portion 73 which permits the stud 74 to move freely as the tone arm 12 is moved across the disc record 16 under the normal playing conditions. Additionally the slotted end portion 73 permits the tone arm returning lever 132 to act against the stud 74 without affecting the operation of the extension portion 72 which continues to hold the tone arm up until the lever arm 62 is released by the solenoid 60. A stop 75 is provided which prevents the tone arm 12 from being moved further than the starting portion of the disc record 16. The position of the stop 75 may be made transversely adjustable.

As the unit 20 is being forced across into the playing position by the transfer mechanism 118 tripping arm 134

strikes the upright arm 136 on the stop mechanism 80. As may be seen in FIG. 8 when the yoke portion 78 of the arm 62 forces the slide 138 down, it is withdrawn from the surface of the casing 4 allowing the unit 20 to be pushed into the rack 56. This is accomplished by means of a finger 140 acting on a shoulder 142 on the slide 138. The arm 136 is rotatably mounted on a pivot 143 and maintained in an upright position by a spring 145. When the slide 138 is forced downwardly the spring 144 is compressed against a shoulder 146. As long as finger 140 is in contact with the shoulder 142 the slide 138 will remain in the downward position. As the tripping arm 134 attached to the transfer mechanism 118 is pushed across it engages the upper portion 148 of the upright arm 136. On striking the arm 136 the tripping arm 134 rotates the arm 136 and finger 140 out of contact with the shoulder 142. Thus the slide 138 is freed and returned to the upward position under the force exerted by the spring 145. In this manner the unit 20 is prevented from going beyond the proper playing position when it is pushed across by the transfer mechanism 118.

Referring now to FIG. 10, which is a schematic illustration of the wiring and mechanical diagram of the projector-phonograph portions of the combination illustrated in FIG. 1. Power is supplied to all switches and to the motor (not shown in FIG. 10) by the normal household current available. Switch 150 is a normal off and on switch which will be located on the outside of casing 4 in any suitable place. This switch serves to energize all of the internal circuitry of the device. For purposes of simplification the connections to the motor 84 and the projection lamp 164 are not illustrated. It will be understood that the electrical connections to these elements are of the usual type. In addition there will be provided the usual cooling fan (not shown) for the projection lamp 164 which may be driven by the motor 84 through a belt (not shown) connecting the shaft of the motor 84 and the shaft of the cooling fan (not shown). As stated above the motor 84 will run continuously when the switch 150 is closed. Also power will be supplied to the projection lamp 164 at the same time. These connections are not illustrated since it will be apparent to those skilled in the art how this may be accomplished.

When switch 150 is closed power is supplied between lines 152 and 154. Referring back now to the beginning of the changing cycle it will be seen that microswitch 58a is adapted to be closed by the action of the tone arm 12a. With switch 150 closed the effect of closing 58a is to energize the solenoid 60a illustrated schematically in FIG. 10. This causes the turntable 14a to be retracted, lifts the tone arm 12a from the disc record which has been played and forces the stop mechanism 80a downward. A switch 156, which is normally open when the stop mechanism 80 is in its upward position, is closed by the downward movement of the stop mechanism 80. The effect of closing switch 156 is to supply power to the solenoid 100a and serves to withdraw the plunger 104a from the notch 106a in plate 102a and to close switch 160. Thus the shaft 98a is free to be driven by the clutch 90a mounted on the turntable shaft 66a through belt 94a. This, as fully discussed above, operates the unit changing mechanism and serves to place a new unit 20 in the proper playing position.

The release of the stop mechanism 80a, as discussed above, acts to open switch 156. Thus it de-energizes solenoid 100a and permits the plunger 104a to reenter the notch 106 and latch up plate 102a when a complete cycle has been made opening switch 160. It will be remembered that as the shaft 98a rotates, the action of the cam 108 against the changing lever 110, in addition to operating the transfer mechanism 118, also serves to return the tone arm 12a to its starting position. This will serve to open switch 58a. Thus all of the switches are now open and the solenoid 60a is de-energized. On being de-energized lever arm 62a is released allowing the turn-

table 14a to return to its playing position under the force of spring 67a. At the same time the extension arm 72a is rotated downwardly allowing the tone arm 12a to be positioned on the disc record 16.

Rejection switch 158 allows the changing cycle to be accomplished without waiting until the entire disc record has been played. This is true since when switch 158 is closed the solenoid 60 will be activated initiating the change cycle.

In some instances it is not necessary to provide the stop mechanism 80. By providing stop leaf springs (not shown) in conjunction with guide ways 82, the transverse position of the unit 20 could be accurately determined. Thus there would be no need for the yoke 78, stop mechanism 80, tripping arm 134 or switch 156. In place thereof a connection (shown by means of a dotted line 166 in FIG. 10) would be made so that solenoid 100a is energized at the same time solenoid 60a is energized. This would withdraw the plunger 104a from the notch 106a in the circular plate 102a allowing it to rotate and close switch 160. Since switch 58a will be open soon after the change cycle begins only switch 160 serves to supply energy to the solenoids 100a and 60a. Once the cycle is complete the plunger 104a will reenter the notch 106a and the cycle will be complete allowing switch 160 to open again deenergizing both solenoids 60a and 100a. The remainder of the cycle is as described above.

There is also illustrated in FIG. 10 a jack 162 which may be utilized to provide a means for remote control of the changing cycle.

The projection lens system 2 may be of any suitable type which will serve to rotate through a 90° angle the light from a projection lamp 164 which passes through a lens 166 through the transparency 18 mounted in the unit 20 in the playing position. For convenience there is illustrated a prism 168 in connection with the device as illustrated in FIG. 7 to accomplish the 90° rotation. It will be understood, however, that the device could easily be adapted to provide for the projection of a photographic print or any other photograph by means well known in the art.

I claim:

1. A combination projector-phonograph device having a case, a photograph projecting lens system, mounted in said case, a phonograph means mounted in said case, said phonograph having a tone arm with a phonograph needle associated therewith, means for converting the vibrations of said needle into sound with said case, a turntable mounted on a shaft which is movably supported within said case, whereby said shaft may move in a limited vertical direction and spring means of the end of said shaft opposite said turntable to restrain the vertical movement of said shaft, electric motor means driving said shaft; said lens system and phonograph means being positioned in the center position of said case, means for receiving a plurality of photograph-phonograph units of the character described on one side of said center position, and receptacle means for receiving said units after the photograph of said unit has been projected and the record of said unit has been played on the opposite side of said case, and changing means for moving said units one at a time from said receiving means position to said center position comprising a solenoid, lever means pivotally mounted within said case and adapted to be rotated when said solenoid is actuated, means associated with said tone arm for actuating said solenoid when said tone arm has reached the centermost position corresponding to the position when the record of said unit has been played, said lever arm having means for forcing said shaft on which said turntable is mounted in a downward direction, means for forcing said tone arm in an upward position, said shaft having a bearing plate rigidly attached thereto and a clutch plate spaced below said clutch plate on said shaft and adapted to be rotated by said shaft only when said bearing plate is forced against said clutch plate by the

downward movement of said shaft; a photograph-phonograph record unit transfer means comprising a transfer shaft, rotatably supported in said case, a fly wheel rigidly attached to said transfer shaft said fly wheel having a notch-portion in the periphery thereof, belt means connecting said clutch plate and said fly wheel, latching means having a plunger adapted to fit into said notch-portion, means for withdrawing said plunger when said lever arm is pivoted by said solenoid, to permit the transfer shaft to rotate when said lever arm forces said turntable shaft downwardly, cam means rigidly attached to said transfer shaft and adapted to turn with said transfer shaft, transfer lever means pivotally mounted in said case in contact with said cam means, said transfer lever means having means associated therewith to force one of said units from the receiving position into the center position and also having means associated therewith for returning said tone arm to its starting position when said cam is rotated; means for de-energizing said solenoid when said unit is in the center position permitting said lever arm to be pivoted by the action of said spring restraining the vertical movement of said turntable allowing said turntable to return to its upward position and said tone arm to its position with said needle in contact with the starting position of the record of said unit; and switch means for independently supplying power to said motor and said projecting lens system.

2. The device of claim 1 having stop means associated with the center position for positioning the photograph-phonograph record unit accurately, and means for releasing said stop means during the changing cycle to permit a unit in the center position to be moved into the receptacle means position.

3. The device of claim 1 having separate reject switching means for actuating said solenoid independently of said tone arm position.

4. The device of claim 1 having recording means in said casing for producing the record of said photograph-phonograph record units.

5. A projector-phonograph device which is constructed to simultaneously project a photograph and play a phonograph record disc disposed in spaced adjacency in a holder, said device comprising in combination: a case, a projector lens system mounted in said case, holder guide means connected to said case for defining a path of travel for a plurality of holders, a retractable stop in said path of travel for engaging one of the holders to define a projecting and playing position wherein the photograph is operatively positioned with respect to said projection lens system, means connected to said case for playing the record disc of a holder in said projecting and playing position, said playing means including means connected to said case for rotating said record and a pivotally mounted tone arm, said tone arm being coactable with the record disc so that said tone arm is moved from a start position to an end position when the record disc is played, means connected between said tone arm and said stop for retracting said stop, said connecting means including a switch that is actuated when said tone arm reaches said end position, said connecting means further including an adjustable stop in contact with said tone arm for moving it away from the record disc when said switch is actuated, a holder feeding arm pivotally mounted on said case for moving holders along a path of travel, actuating means operatively connected between said switch and

said feeding arm for moving said feeding arm when said switch is closed to feed a holder to said projecting and playing position, said feeding arm being operatively engageable with said connecting means to cause said retractable stop to move into said path of travel, and a lever arm carried by said feeding arm, said lever arm being operatively engageable with said tone arm to move it to the start position during feeding movement of said feeding arm.

6. The device as claimed in claim 5 wherein said means for rotating said record comprises a turntable, means mounting said turntable for axial movement toward and away from a record disc of a holder in said projecting and playing position, and wherein said connecting means includes means for moving said turntable away from the record disc when said switch is actuated so that a successive holder can be fed to the projecting and playing position.

7. In combination, a holder for holding a photograph and a record disc in spaced relationship, said holder including a space in which the record disc is disposed for axial and rotative movement and a circular cut-out portion for receiving a turntable in rotatable contact with the record disc, a case, a projection lens system mounted in said case for projecting the photograph, means connected to said case for horizontally locating said holder so that the photograph is in a projecting position and the record disc is in a playing position, said means for horizontally locating the holder including feeding means connected to said case for successively feeding holders to the projection position of the photograph and playing position of the record disc, a turntable for coacting with the record disc when the holder is horizontally located, a vertical, rotatable shaft connected to said turntable, means connecting said shaft to said case for axial reciprocation, motor drive means connected to said shaft for rotating said turntable, a tone arm carried by said case for playing a record disc on said turntable, said tone arm being movable across said record disc to an end position during playing of the record disc, means actuated by the tone arm and connected to said shaft for vertically moving said turntable out of contact with the record disc, and drive connecting means between said shaft and said feeding means, said drive connecting means including means actuated by the shaft when it is vertically moved away from the holder.

8. The combination as claimed in claim 7 wherein said turntable and record disc include means forming an attractive magnetic force therebetween to prevent slippage of the record disc on said turntable, said means comprising a magnet in said turntable.

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