Nov. 26, 1935. A. HILL 2,022,543

PORTABLE COMBINED AUTOMATIC PHONOGRAPH AND RADIO

Filed June 1, 1935

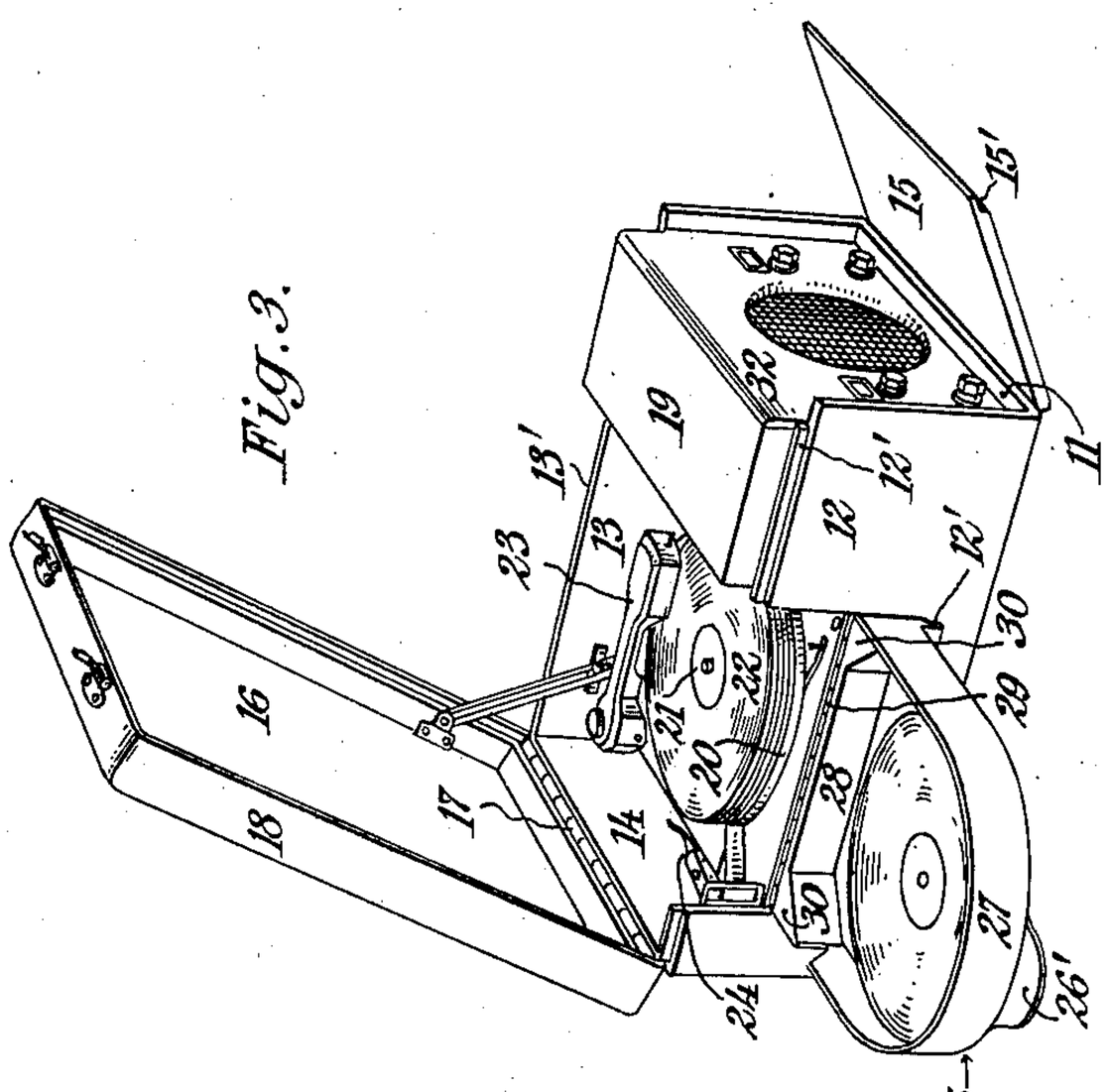

Fig. 3.

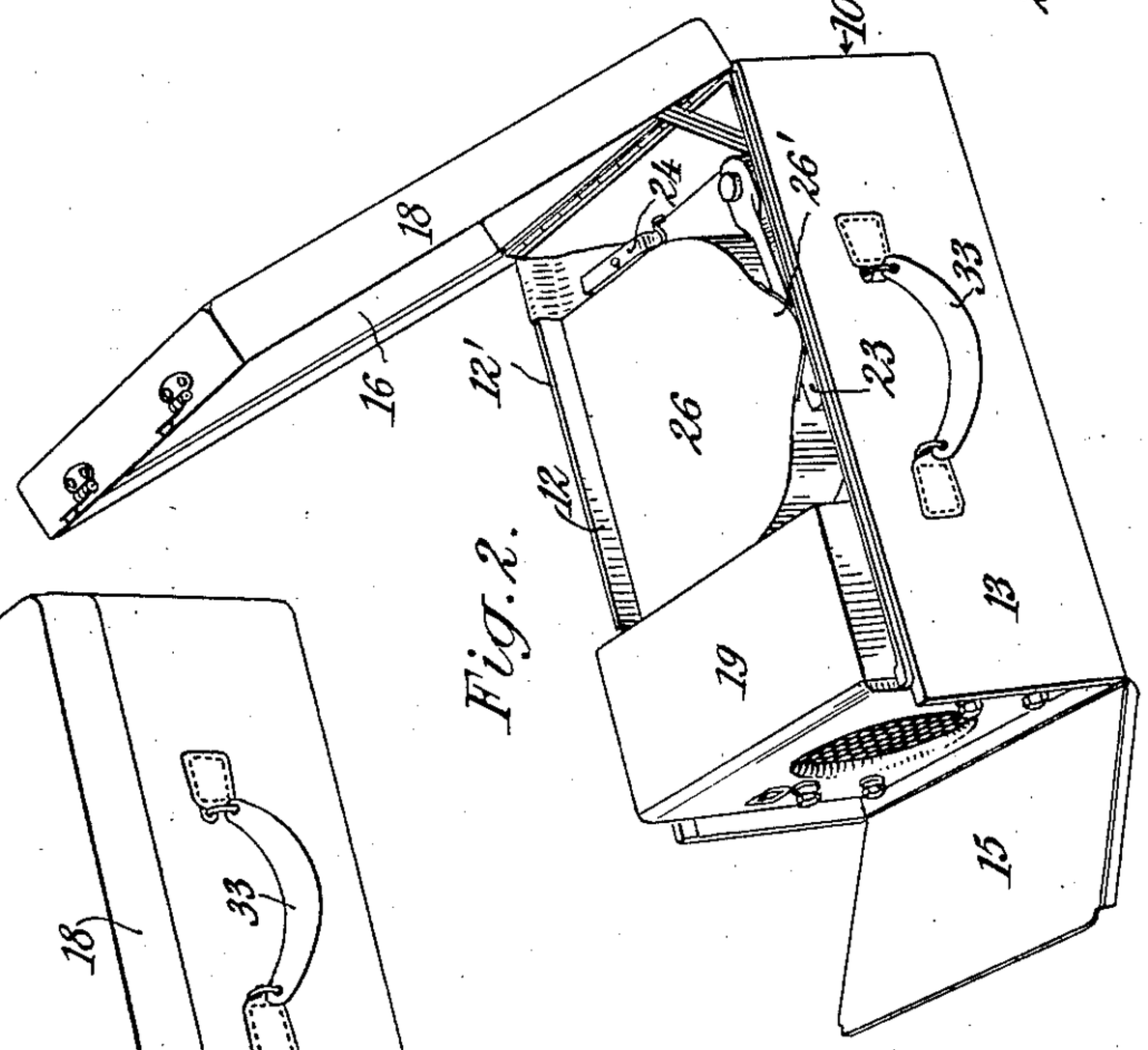

Fig. 2.

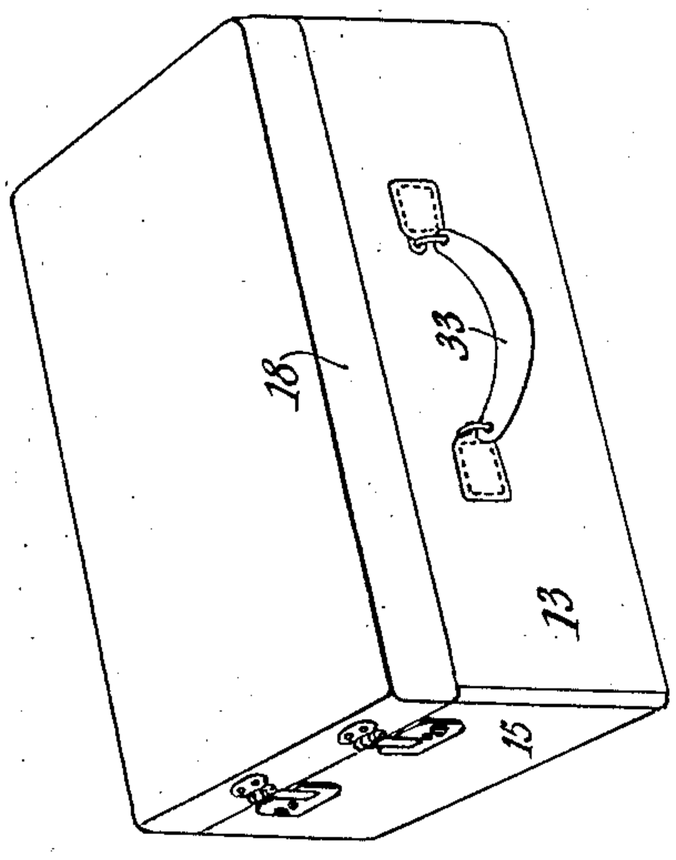

Fig. 1.

INVENTOR
Arthur Hill,
BY
Abraham Engel
ATTORNEY

Patented Nov. 26, 1935 2,022,543

UNITED STATES PATENT OFFICE

2,022,543

PORTABLE COMBINED AUTOMATIC PHONOGRAPH AND RADIO

Arthur Hill, New York, N. Y.

Application June 1, 1935, Serial No. 24,481

9 Claims. (Cl. 274—2)

My present invention relates to a portable combined automatic phonograph and radio and constitutes an improvement upon the apparatus disclosed in my co-pending application, Serial No. 16,418, filed April 15, 1935.

Primarily my present invention differs from that disclosed in my aforesaid application in that the record receiving means is made as a constituent part of one of the sides of the portable cabinet thereby simplifying the construction without destroying the capability of the record receiving means from operating as a guard for holding the records on the turntable when the instrument is being transported from place to place. With my present construction I am also enabled to play the phonograph while the lid of the cabinet is closed without interfering with the successive automatic discharge of the records on completion of the playing thereof. I am also enabled to make use of a self-contained radio receiving set unit and install it into the portable cabinet with a minimum expenditure of time and effort. The construction and cooperative arrangement of parts are also such as to permit the use of a larger loud speaker and a larger speaker baffle board, thus increasing the tonal qualities of the instrument without increasing the height dimension of the portable cabinet.

My invention will be more fully understood from the detailed description which follows when considered in conjunction with the accompanying drawing, wherein:

Figure 1 is a perspective view of a portable cabinet in closed condition embodying the combined automatic phonograph and radio of my invention.

Fig. 2 is a perspective view of the cabinet of Fig. 1 with the lid thereof raised and the end wall which constitutes a closure for the front of the radio in open position.

Fig. 3 is a perspective view of the apparatus with the parts in the same respective relation as in Fig. 2 and showing the record receiving tray in its record receiving position.

Referring to the several figures of the drawing wherein the same reference characters are employed to designate the corresponding parts, the numeral **10** designates a portable substantially rectangular cabinet comprising a body portion consisting of a bottom **11**, side walls **12** and **13**, end walls **14** and **15** and a lid **16** hingedly connected to the end wall **14** by a piano hinge or the like **17**. The side walls **12** and **13** and the end wall **15** have their top edges rabbeted to form upstanding ribs or flanges **12'**, **13'** and **15'** respectively, which seat within the rabbeted free edges of the depending walls **18** of the lid **16**. The end wall **15** which may be considered as the front wall of the cabinet or as the closure wall for the radio receiving set **19** is hingedly connected to the bottom wall **11** by the fabric covering of the casing or by other suitable means so that said wall when not held in closing relation by the lid of the cabinet will drop down by the action of gravity into open position to render available for adjustment the control dials of the radio and when the cabinet is mounted on a horizontal surface said wall in open position will normally assume the position shown in Figs. 2 and 3 and function as a sounding board or deflector for the sounds issuing from the loud speaker of the radio.

Within the body of the cabinet there is mounted an automatic phonograph of any approved design including a turntable **20** disposed below the top edges of the body portion of the cabinet having a central pin **21** adapted to accommodate a plurality of sound records **22** in superposed relation, a tone arm **23** and automatic mechanism comprising a pivoted arm **24** adapted to successively remove each record from the turntable after it has been played. The specific contruction of the automatic phonograph does not constitute a part of the present invention, but is of the type that comprises an electric motor and operative record discharge mechanism (not shown) which will remove each record in succession after being played by raising said record to clear the top of the pin **21** and giving to it a motion of translation which will discharge it from the turntable. Such automatic phonograph mechanism is shown and described in the patent to Mitchell et al. No. 1,936,335, November 21, 1933.

To receive the records **22** when discharged by the automatic mechanism I have provided a record receiving tray **25** which has a flat bottom **26** of somewhat greater than semi-circular form and an upstanding surrounding wall consisting of a substantially semi-circular portion **27** and a flat portion **28**. The flat portion **28** of the wall preferably constitutes a part or a section of the side wall **12** and is hinged to the main section of said side wall by a piano hinge or the like **29** along a line which is parallel to and preferably below the plane of the turntable **20**. The record receiving tray **25** may have its upstanding wall portions at their juncture reinforced by triangular reinforcing pieces **30**. The tray **25** when in record receiving position e. g., in the position shown in Fig. 3 with the tray extending laterally from the side wall **12** is braced in its horizontal

laterally extending relation to the cabinet by the engagement of the wall 28 with the outer face of the side wall 12. Preferably, the tray 25 is of such dimensions with respect to both area and depth as will adapt it to engage over the group of records 22 on the turntable and extend down into encircling relation to the turntable to constitute a holding and confining means for said records when the hingedly connected side wall section by which said tray is carried is in its normal side wall relation. The bottom of the tray 26 may be provided with an overhanging lip or projection 26' which when the tray is in turntable encircling position engages over the tone arm 23 to hold said tone arm against accidental movement toward the lid when the cabinet is being carried from place to place.

The phonograph unit of the apparatus is preferably mounted within the rear of the body of the cabinet and the radio receiving set 19 in the front of the cabinet. As herein shown the radio receiving set 19 is in the form of a self-contained unit which may be mounted within the cabinet with but little expenditure of time and effort. As shown the casing of the radio is of greater height than the side walls and end walls of the cabinet 10, thus permitting of the use of a larger loud speaker unit and a large baffle board for the radio whereby the total qualities thereof may be improved. This increased height of the radio casing, however, does not necessitate any increase in the height dimension of the cabinet, since the projecting portion of the radio casing above the sides of the cabinet seats within the lid of the cabinet. The radio receiving set 19 as is conventional includes an electromagnetic unit provided with a diaphragm (not shown) and electric amplifying means (not shown), and per se constitutes no part of the present invention. It is desirable, however, that the electromagnetic unit of the radio receiving set be so mounted as to direct the sound waves produced therein toward the baffle board 32 so as to impinge upon the end wall 15 so that the latter may function as a sounding board. In order that the advantageous qualities of the electronic amplifying means and the electro magnetic unit of the radio receiving set may be utilized for reproducing sound from the phonograph records, the tone arm of the phonograph is connected up with the aforementioned means in any well known manner.

When the lid 16 is closed down over the top edges of the end wall 15 and the side walls 12 and 13 it serves to hold said end wall in closed relation to the cabinet and to hold the record receiving tray 26 in its record confining relation over the turntable. When the lid of the cabinet is closed the cabinet as a whole will have the appearance of a travelling case as shown in Fig. 1 and may be carried from place to place by the carrying handle 33 mounted on the side wall 13.

For operation as a radio or an automatic phonograph the lid 16 is first raised and the connecting cord (not shown) for supplying electric current for the phonograph motor and the radio receiving set is plugged into an electric socket or outlet. If the device is to be used as an automatic phonograph the receiving tray 25 is brought into record receiving position by being turned about its hinge 29 and the phonograph operated in the usual manner. The tray 25 in its record receiving position being below the bottom of the turntable it will be appreciated that as the records are discharged from the turntable they will be gracefully slid into said tray. In view of the tray construction, e. g. with one wall thereof formed as a section of the side wall 12, it will be appreciated that an opening will be provided in the side wall 12 through which the records may be successively discharged upon the completion of the playing thereof, even though the lid 16 be closed down upon the top edges of the body of the cabinet. The radio may be operated when the tray 26 is in its record receiving position or in its record confining position with either the lid of the cabinet open or closed.

Although I have shown and described a preferred embodiment of my invention I do not wish to be limited to the precise details of construction disclosed since changes may be made therein within the realm of mechanical skill without departing from the spirit of the invention as claimed.

What I claim is:

1. A portable automatic phonograph comprising a cabinet having side walls and a lid, said cabinet having therein a turntable adapted to support a plurality of records in superposed relation, mechanism including a tone arm for reproducing sounds from a plurality of records in succession when mounted on said turntable and for removing each record after it has been played from the turntable, one of the side walls of the cabinet comprising hingedly connected sections, one of said sections having a record receiving means which in the normal position of said side wall section overlies the turntable to confine the records on the turntable and which when said side wall section is turned on its hinge outwardly of the cabinet, extends laterally from the cabinet and is adapted to receive the records from the turntable as they are discharged therefrom by the discharge mechanism.

2. A portable automatic phonograph according to claim 1 wherein the record receiving means has an element for engaging and holding down the tone arm when the side wall section by which it is carried is in its normal side wall relation.

3. A portable automatic phonograph according to claim 1, wherein the record receiving means is a walled tray adapted to encircle the turntable when the side wall section by which it it is carried is in its normal side wall relation.

4. A portable automatic phonograph according to claim 1, wherein the turntable is set below the top edges of the side walls and the hingedly connected side wall sections are connected along a line substantially parallel to the plane of the turntable and no higher than the turntable.

5. A portable automatic phonograph according to claim 1, wherein the turntable is set below the top edges of the side walls and the hingedly connected side wall sections are connected along a line substantially parallel to and below the plane of the turntable.

6. A portable automatic phonograph according to claim 1, wherein the lid of the cabinet when closed is adapted to engage over the top edge of the upper of the hingedly connected side wall sections to hold said side wall sections in their normal flat side wall relation.

7. A portable automatic phonograph according to claim 1, wherein the turntable is set below the top edges of the side walls and the hingedly connected side wall sections are connected along a line substantially parallel to and below the plane of the turntable whereby to provide an opening in said side wall when the side wall section which carries the record receiving means

is turned outwardly into record receiving position and the lid is closed, through which opening the records from the turntable may be discharged by the automatic means.

8. A phonograph comprising a portable cabinet having side walls and a lid, a turntable within the cabinet below the top edges of the side walls, one of said side walls comprising hingedly connected sections normally disposed in a common plane, one of said sections having means carried thereby which in the normal relation of said side wall sections overlies the turntable and is adapted to confine a plurality of records positioned thereon and said side wall section when turned on its hinge is adapted to overlie the outer wall of the other side wall section to which it is connected and have its record confining means extend laterally outwardly from the cabinet in which position it is adapted to support a plurality of records.

9. A phonograph according to claim 8 wherein the lid when closed is adapted to engage over the top edges of the side walls and hold the sections of the hingedly connected side wall in their normal flat relation.

ARTHUR HILL.