

June 11, 1946.

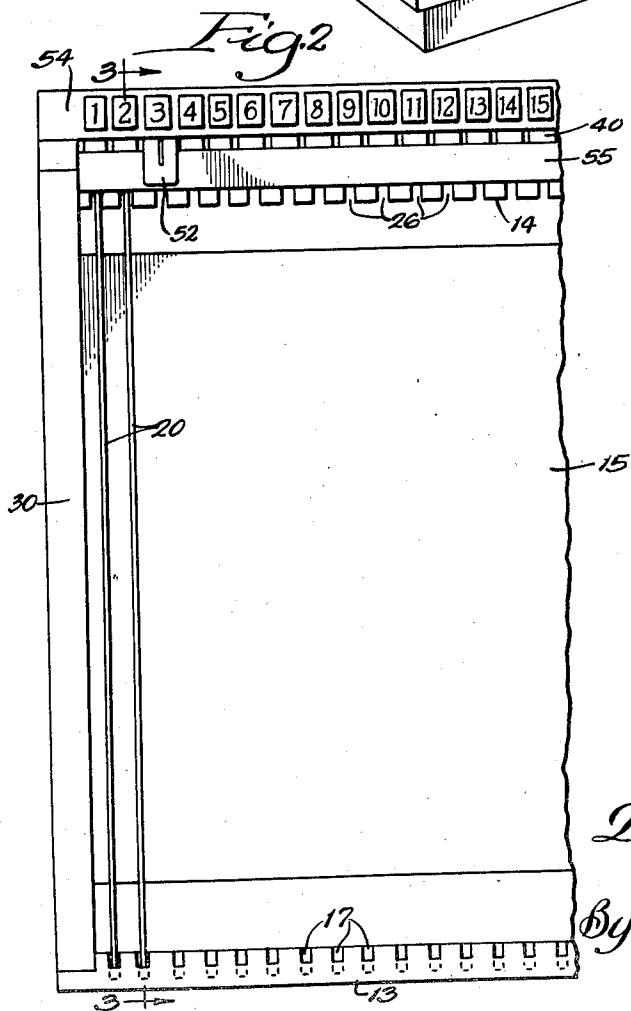
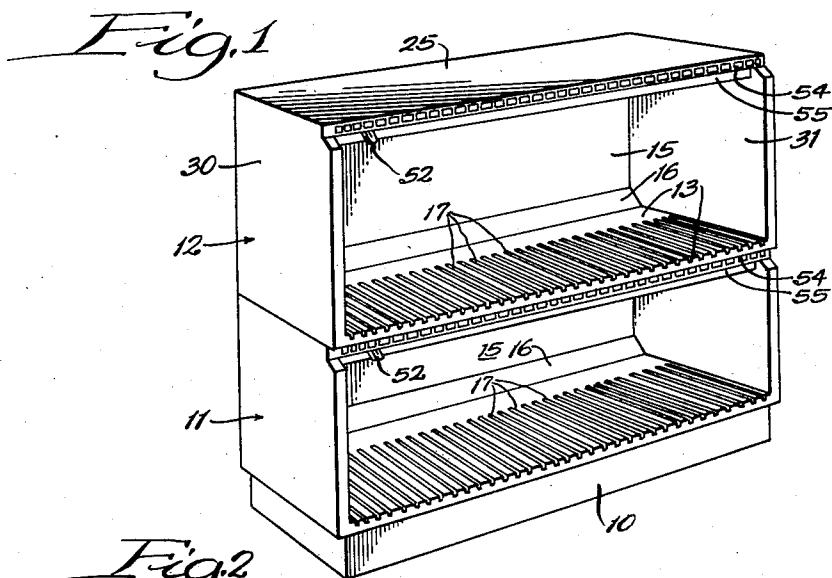
D. L. PAINTER

2,402,076

CABINET FOR DISKS AND THE LIKE

Filed April 24, 1944

2 Sheets-Sheet 1



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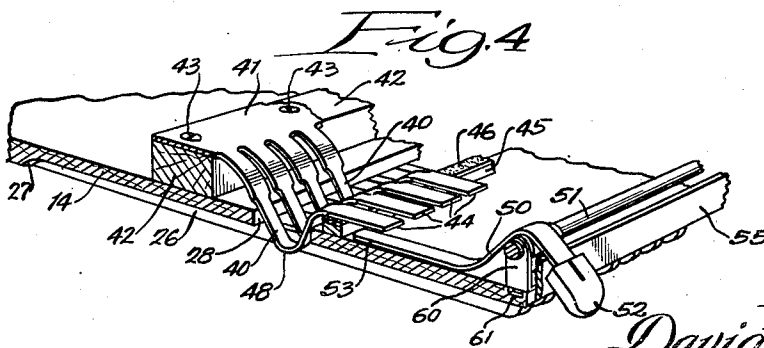
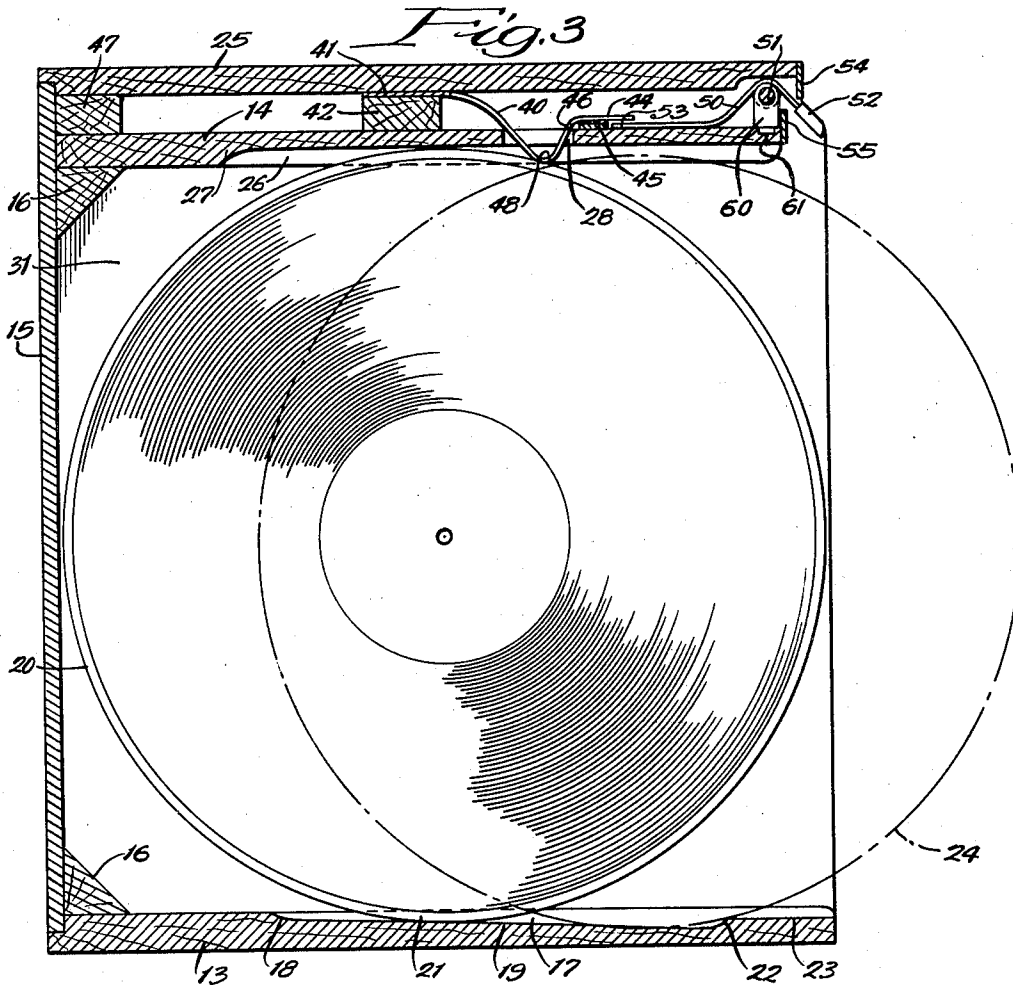
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UNITED STATES PATENT OFFICE

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CABINET FOR DISKS AND THE LIKE

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6 Claims. (Cl. 312-17)

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This invention relates to a cabinet for disks and the like, and more particularly to a cabinet for phonograph disk records.

An object of the invention is to provide a cabinet adapted to contain disks, such as phonograph records, and which permits the ready selection of any desired disk with ease and convenience.

A further object is to provide such a cabinet wherein the disks are firmly and securely held without danger of scratching or breaking when not in use and which in response to a simple manual movement, such as pressing a lever, will present to the operator a selected one of the disks contained in the cabinet.

Another object is to provide a cabinet into which the disks, such as phonograph records, may be easily inserted without attention to any mechanism. A further object is to provide a cabinet for disks which is adapted to utilize the force of gravity for moving a selected disk to a position within easy grasp of the operator.

Further objects and advantages will be apparent from the following detailed description taken with the accompanying drawings, in which—

Figure 1 is a perspective view of one embodiment of the invention; Fig. 2 is an enlarged broken front elevational view showing one end of a compartment; Fig. 3 is an elevational sectional view taken as indicated at line 3-3 of Fig. 2; Fig. 4 is a detail perspective view showing the spring holding means with the top cabinet board removed.

As illustrated, the improved cabinet includes a base 10 and sections 11 and 12. The base may be of any suitable form or construction and may be omitted if desired. The sections 11 and 12 are intended for use in connection with ten and twelve-inch phonograph records, but any number of such sections may be used and the sections may be adapted for any size of record disks.

The section or compartment 12 is illustrated in more detail in Figs. 2 to 4. It comprises end pieces 30 and 31, a bottom piece 13, a top piece 14, and a back piece 15, the front being preferably left open, though a door might be used at the front if desired. Corner pieces 16 are employed in the illustrated form to give increased strength.

The bottom piece 13 is provided with a number of parallel grooves 17 which extend from a point 18 to the front of the compartment. The bottoms of the grooves provide inclined surface means which serves to cause the disks to roll forward. As more clearly seen in Fig. 3 of the drawings, the bottom surface 19 of the groove 17 is inclined downwardly towards the front of the com-

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partment, and with the disk 20 standing with its bottom edge 21 on this bottom surface of the groove, the tendency is for the disk to roll down the incline of the groove toward the front of the compartment.

The downwardly-inclined surface 19 of the groove 17 terminates at about 22 near the front of the compartment and the bottom of the groove has a front raised portion 23 which serves as a stop and contacts the edge of the disk to prevent it from moving on out of the cabinet. When the disk has reached the position where it comes against the stop 23 and rests in the edge of the cabinet, its front edge portion 24 protrudes from the front of the compartment, as shown in Fig. 3 of the drawings, so that it is in convenient position for the operator to pick up.

The top piece 14 is also provided with grooves which are designated at 25 in the drawings. These grooves 25 are directly over the grooves 17 and extend from the point 27 to the front of the compartment. The grooves 25 receive the upper edges of the disks and guide them as the disks move in and out of the compartment.

The means for holding the disks in position within the compartment includes a series of spring detents 40 which extend downwardly through the opening 28 in top plate 14. These detents each have one end integral with the piece 41 which is secured to the top of a supporting member 42 by the screws 43, the supporting member 42 being in turn secured to the top of the piece 14 about midway between the front and back of the compartment. The supporting piece or strip 42 extends longitudinally of the compartment transverse with the direction of the grooves 25. Though the detents 40 are, in the illustrated embodiment, integral at one end with the base piece 41, this need not be true, and one end of each may be secured to the top portion of the compartment by any suitable means. The detents 40, as here illustrated, extend from the base piece 41 downwardly through the opening 28 to a point sufficiently below the piece 14 to provide adequate contact with the top edges of the disks as they are moved in or out, and then are turned upwardly, their other end portions 44 extending horizontally over and beyond the strip 45. The strip 45 is provided with a top padding material 46 so as to provide a cushion on which the end portions 44 may rest.

An upper top member 25 extends over the top piece 14 and substantially encloses the detents 40 and the accompanying mechanism, this top member being spaced from the top piece 14 by

the strips 42 and 47. The rear edge of the top member 25 joins with the top edge of the back piece 15.

The lever means for selecting and operating the detents includes a rod 51 which extends from one end of the compartment to the other and is disposed at the front of the structure between the members 25 and 14. The lever 50, which is pivotally mounted on the rod 51, is in the form of a strap having its one end portion provided with a thumb piece 52 and having its other end portion extending rearwardly and resting on the top of the member 14. The end 53 of the rearwardly-extending portion of the lever lies directly under the portions 44 of the detent members. The lever 50 is slidable along the rod 51 so that the end 53 may be located under any selected one of the detents, and when the thumb piece 52 is pushed downwardly, the selected detent will be moved upwardly against the tension of its spring. If desired, a suitable bracket 60 may be mounted for sliding movement along the rod 51 and supported at its lower end by engagement with the piece 14. The bracket thus slides with the thumb piece 52 and provides a support for the rod 51 which lies under the pivotal mounting of lever 50. In fact, the piece 14 may be provided with a groove 61 beneath the rod for receiving a depending portion of the bracket. The bracket serves to support the rod 51 against bending downwardly as a result of repeated downward movements of the thumb piece 52. Bracket 60 is secured to lever 50.

On the front edge of the top member 25 is a strip 54 which, as more clearly shown in Fig. 2 of the drawings, is adapted to carry indicia of a suitable type for identifying the particular record disk lying directly under the corresponding detent. Such indicia may be of any suitable type and may be carried in any suitable way on the edge of the strip 54. Also a strip 55 may be carried on the front edge of the piece 14 to conceal more fully from view at the front of the cabinet the apparatus carried between the top members 25 and 14.

The construction of the section or compartment 11 may be substantially the same as the compartment 12 just described. Any other sections of like construction for the same or different sized disks may be assembled below or above the described section 12.

Instead of forming grooves for the disks out of integral pieces of wood or other material, the grooves may be formed by securing spaced strips to the interior surfaces of members corresponding with pieces 14 and 13, and the grooves formed in this way. The groove structure may be any type of structure which will guide and hold the lower edge of the disk in position on the inclined surface means as the disk is moved in and out of the cabinet. Also, instead of having individual grooves with bottom surfaces which are inclined downwardly toward the front, the same function may be obtained by tilting the bottom member 13 toward the front, or suitably the structure forming the whole compartment may be tilted and the inclined bottom surface formed in this way.

In the operation of the improved device, the operator may fill the disk compartment merely by inserting the disks edgewise into the compartment, passing the upper edge of the disk in an upper groove 26, and the lower edge of the disk in a groove 17 directly under. When the disk has been pushed in far enough, the top edge will engage a detent 40 at its bottom rounded portion

48 and will push it upwardly, permitting the disk to pass on toward the back of the compartment. When the disk is past the detent 40, it may be released by the operator and the detent then holds the disk in this rearward position with its bottom edge resting on the inclined surface 19. As many disks may be individually held in the compartment as there are slots 17, and for each there is a detent 40 which holds it in place within the cabinet. It will be observed that with the several disks thus stored in the compartment, they will have their axes substantially aligned and will appear in neat order.

When the operator desires to select one of the disks for use, he may simply look along the strip 54 for the indicia corresponding with the disk which he wants, then move the lever 50 sideways along rod 51 to a position directly under the selected indicia, and press the thumb piece 52.

The depression of the thumb piece 52 causes the lever end 53 to be raised against the portion 44 of the detent so as to raise the detent against the tension of its spring, and this permits the disk 20 to roll forwardly with its bottom edge rolling down the inclined surface 19 at the bottom of the groove 17. The selected disk is thus caused to roll forwardly out of line with the remaining disks in the compartment to the position indicated by dotted lines in Fig. 3. In this position, it will be observed that the forward portion of the disk extends beyond the front of the compartment and may be easily grasped by the operator in removing the disk from the cabinet.

When other disks in the compartment are desired, the operator need only move the lever 50 to another position along rod 51, being guided by the indicia on the strip 54, and again depress the thumb piece 52 to cause another disk to be released and moved toward the front of the cabinet where it may be easily grasped by the operator.

The foregoing detailed description of the invention is given only for the purpose of explanation, and is not intended in a limiting sense. It is expected that the invention may be constructed in various embodiments, and many changes may be made, all within the spirit of the invention.

I claim:

1. A cabinet comprising a compartment open at its front and adapted to house a plurality of disks therein, said compartment being provided with inclined surface means at the bottom thereof adapted to support the disks, said means being inclined downwardly toward the front of the compartment, releasable means for holding the disks in a predetermined position within said compartment with their lower edges supported on said inclined surface means, said releasable means including a series of spring detents extending downwardly from the top of said compartment and adapted to engage the top edges of the disks, said spring detents being resiliently movable upwardly to permit the disks to be moved forwardly and rearwardly thereof in the compartment, and manually operable means for moving the one of said detents which holds a selected one of the disks to an upper position so as to permit the selected disk to move forwardly within the compartment with its bottom edge supported on said inclined surface means, said manually operable means including a rod and a lever pivoted thereon, said lever being slidable along said rod for selecting the one of said spring detents which is to be moved upwardly to thereby permit the release of the disk being held by the selected detent.

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2. A cabinet comprising a compartment open at its front and adapted to house a plurality of disks therein, said compartment being provided with inclined surface means at the bottom thereof adapted to support the disks, said means being inclined downwardly toward the front of the compartment, releasable means for holding the disks in a predetermined position within said compartment with their lower edges supported on said inclined surface means, said releasable means including a series of detents extending downwardly from the top of said compartment and adapted to engage the edges of the disks, said detents being resiliently movable upwardly to permit the disks to be moved forwardly and rearwardly thereof in the compartment, and manually operable means for moving the one of said detents which holds a selected one of the disks to an upper position so as to permit the selected disk to move forwardly within the compartment with its bottom edge supported on said inclined surface means, said manually operable means including a lever having its one end portion extending under portions of said detents whereby one of said detents is raised when said lever is operated to raise said portion of the lever, and means for mounting said lever on said cabinet, said mounting means being adapted to permit lateral movement of the lever whereby the lever may be moved to engage a selected one of said detents.

3. A cabinet as set forth in claim 2 wherein said mounting means includes a rod and said lever is in slidable pivoted engagement with said rod, and including a slidable member beneath said lever and having its lower portion bearing against said cabinet whereby it supports said rod against bending movement toward said cabinet.

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4. A cabinet as set forth in claim 2 wherein said detents are springs having their rear ends secured to said cabinet and have their front ends extending over said portion of said lever, said springs each having a central portion extending downwardly for engagement with said disks.

5. A cabinet comprising a compartment having a top and a bottom wall and being open at its front, said compartment being adapted to house a plurality of disks therein and being provided with a series of grooves in its top wall and a series of grooves in its bottom wall, said bottom grooves having their bottom surfaces inclined toward the front of said compartment, a series of springs mounted at the top of said compartment and having portions thereof extending downwardly so as to resiliently hold disks in a rearward position within the compartment with their top edges within said top grooves and their bottom edges within said bottom grooves, a rod extending in a direction transverse with respect to said grooves, a lever pivotally mounted on said rod and slidable therealong, said lever having one portion which is adapted to be manually depressed and having another portion which extends below portions of said springs and which is adapted to rise when said one portion is depressed to thereby contact and raise a selected one of said springs and so permit the disk held by the selected spring to be released for forward movement within the cabinet, the selection depending on the position of said lever along said rod.

6. A cabinet as set forth in claim 5 wherein said one portion of the lever is exposed to view from the front of the cabinet and the remainder of said lever is enclosed within the cabinet.

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