Oct. 26, 1943. B. A. PROCTOR 2,332,598

DISK RECORD CONTAINER AND PACKAGE

Filed Nov. 29, 1940 2 Sheets-Sheet 1

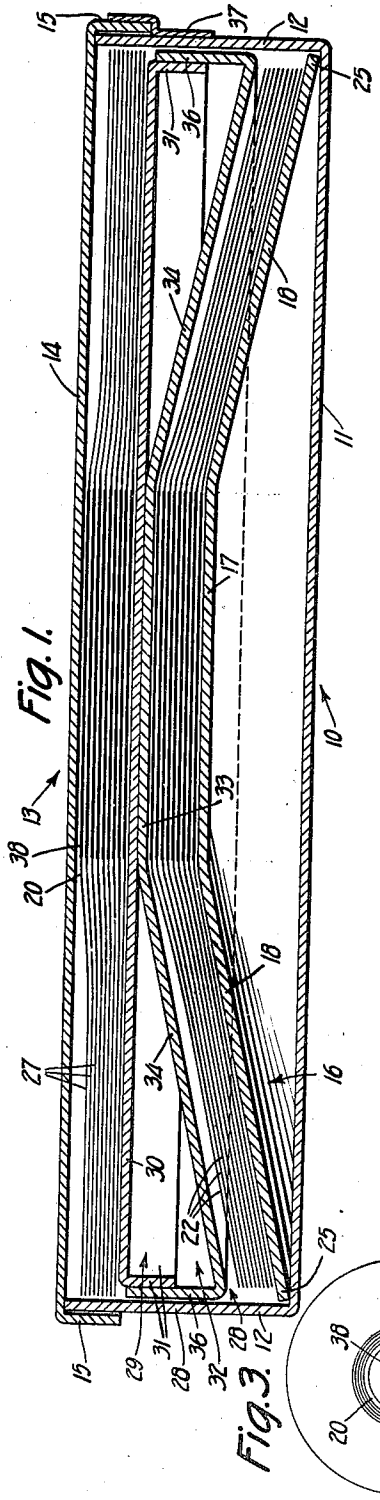


Fig. 1.

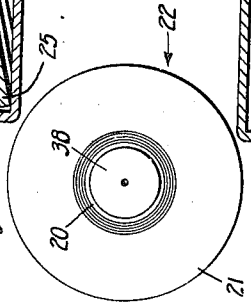


Fig. 3.

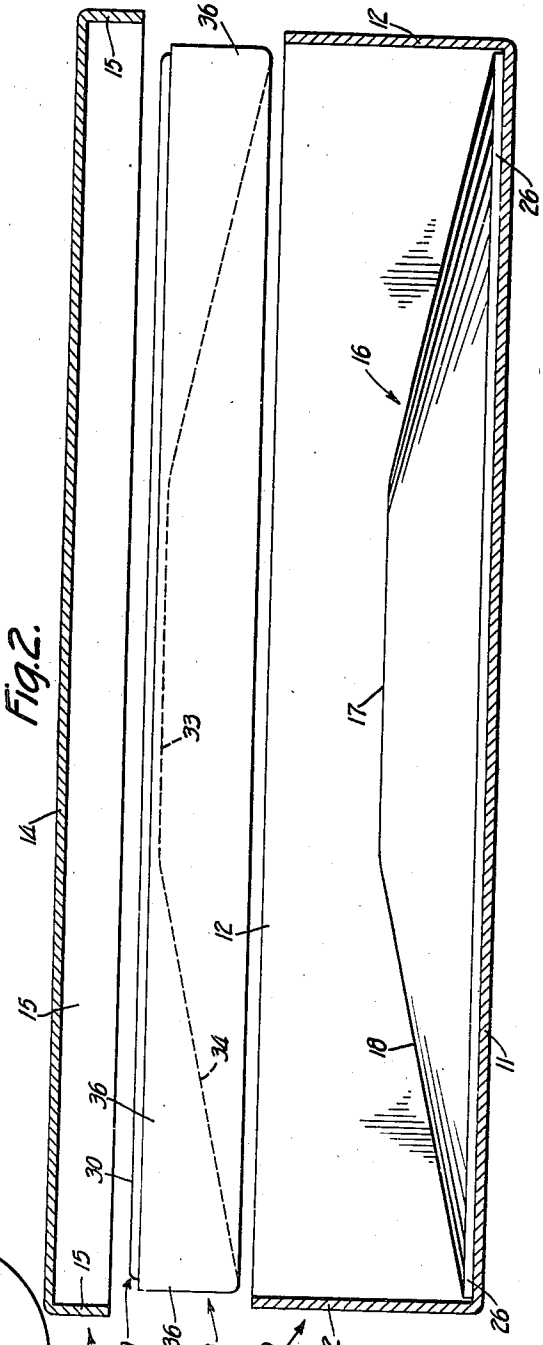


Fig. 2.

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Fig. 4.

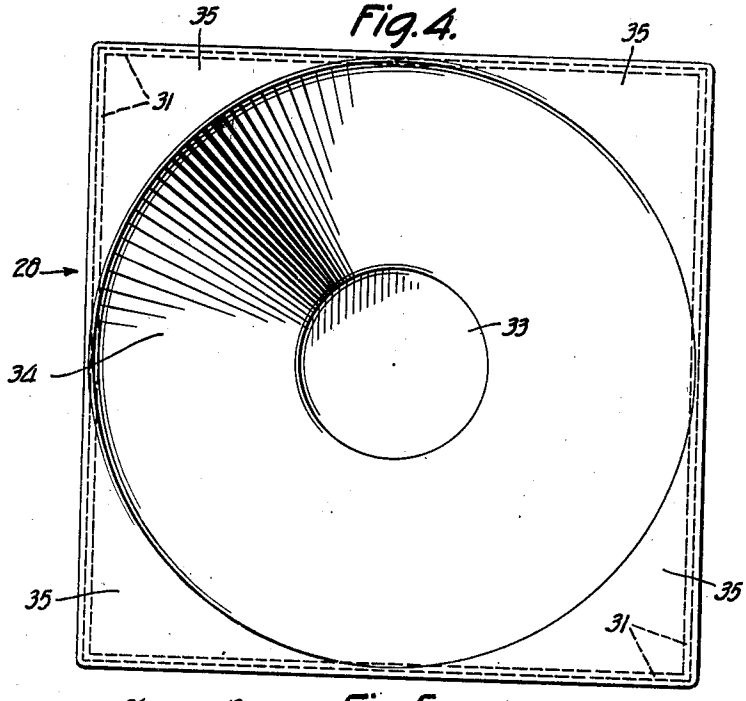
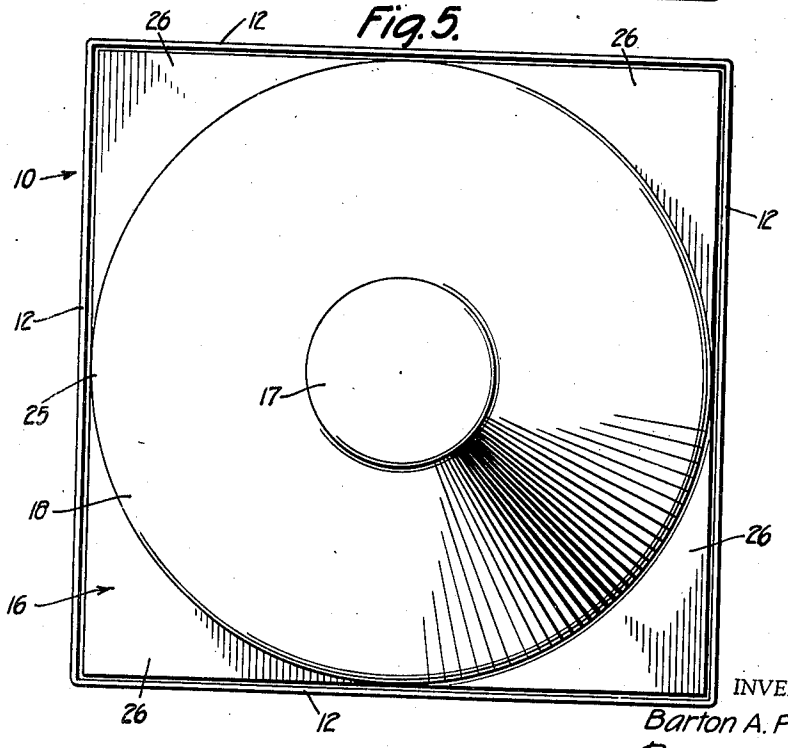


Fig. 5.



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DISK RECORD CONTAINER AND PACKAGE

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Application November 29, 1940, Serial No. 367,681

12 Claims. (Cl. 206—15)

This invention relates to improvements in containers and packages, and is especially directed to container and package constructions provided with upper and lower compartments separated by a movable partition.

The invention is particularly advantageous for the packaging of disk records used for the recording and reproduction of sound, of the type disclosed in the application of Barton A. Proctor for United States patent, Ser. No. 218,082, filed July 8, 1938. Such records are preferably formed from sheet cellulose acetate, and are flat when in their original blank or unused form. When the sound track is inscribed on a record of this type it has been found that the portion carrying the track is deflected downwardly and the record assumes a dished or frusto-conical form.

This change in contour presents a serious problem in efficient packing, especially with very thin records. Such records must be protected from pressure or distortion that might affect the sound track, by a container that is as compact as possible and which may be manufactured, handled and packed at a minimum cost.

The purpose of the invention is to provide a container and package suitable for either blank or inscribed records of the indicated type, or both. A feature is the provision of a container and package construction provided with two sections or compartments, one suitable for blank records and one for dished inscribed records, so arranged that a blank record may be conveniently removed from one compartment, inscribed and then packed in dished form in the other compartment.

A specific feature comprises an arrangement of this type in which the container will retain the same outside dimensions when packed with a given number of records, and will hold said number of records firmly and safely in place without distortion, regardless of the relative proportion of blank and inscribed records therein.

A further feature of the invention is the provision and utilization of a central slightly thickened portion of each record to hold the records firmly in place when stacked in the container without applying pressure to the inscribed portions of the records. This is accomplished by constructing and arranging the container to exert pressure on such central portions, which serve as spacers. Records of the type described in the above mentioned application are extremely thin; and the prevention of pressure on the sound track portions thereof is especially important. A further specific feature is the utilization of a suitable label of paper or the like centrally affixed to each record to provide the requisite thickening at this point. This arrangement dispenses with the necessity for providing a specially thickened central structure on the record and utilizes the label for three purposes, as a writing label, as a stacking spacer, and as a drive reinforcement, thus making it possible to form the records from standard sheet material and to stack such records safely.

Another purpose is to provide a container and partition structure that may be made economically from ordinary materials without sacrificing strength or convenience in handling and using the container.

Other objects and advantages of the invention will appear from the following description considered in connection with the accompanying drawings in which:

Fig. 1 is a transverse vertical sectional view through a package comprising a closed container packed with both blank and inscribed records;

Fig. 2 is an expanded side elevation of the container shown in Fig. 1 with the front portions of the lid and body broken away;

Fig. 3 is a top plan view of a record of the type above indicated;

Fig. 4 is a bottom plan view of the movable partition separating the container compartments; and

Fig. 5 is a top plan view of the container body with the bottom support member in place.

In the illustrated embodiment the container comprises a body 10 formed with a bottom 11 and connected side walls 12, and a cover 13 including a top 14 and depending connected sides 15 fitting over the body walls 12 in the usual manner. In the form shown the body 10 and cover 13 are generally square in horizontal section; but the invention is not restricted to this contour, since it is equally applicable to containers having other polygonal or circular forms.

A suitable support arranged to engage the central portion of a dished record or the like is mounted in the container body 10 and suitably held in place, as by fitting it snugly against the side walls 12 thereof. In the illustrated embodiment a support member 16 of sheet material is employed for this purpose, and includes a flat central support section 17 and a side wall or skirt 18 extending downwardly and outwardly from support section 17 to the side walls 12 of the container body. Section 17 is circular and side wall 18 is frusto-conical, inclining relative to section 17 at an angle not less than, and ad-

vantageously the same as or slightly greater than, the angle between the central portion 20 and the marginal portion 21 of an inscribed disk record 22 of the type disclosed in the above-mentioned Proctor application. The arrangement is such that when a record 22 or a plurality of such records in stacked position are placed upon the support member 16 the central portion 20 of the lowermost record will rest upon the support section 17 and the flexible marginal portion 21 of the lowermost record will rest partially or entirely upon the side wall 18 of said member and be supported thereby without being distorted, the marginal portions 21 of superposed records being sufficiently flexible so that they will be more or less supported by similar marginal portions of subjacent records to an extent sufficient to prevent distortion, but without pressure on such marginal portions 21.

Side wall 18 is proportioned so that its outer margin 25 rests on the body bottom 11 and is in contact with each flat side wall 12 of the container body 10, whereby the support member 16 is held in centered position; but to assure registry and strength the side wall 18 may be provided with corner extensions 26 resting on the body bottom 11 and extending into the corners of the container body 10, the side margins of extensions 26 fitting against side walls 12, the support member 16 with extensions 26 being generally square.

Suitable support means is provided within the container for supporting one or more flat uninscribed disk records 27 above the inscribed records 22 resting on support member 16 and for covering said records. The support means is advantageously provided in the form of a partition or spacer 28 extending transversely across the container, having a central portion positioned to rest upon section 17 or the central portion 20 of the uppermost record supported on said section, and an outer portion slidably engaging body walls 12 and adapted to support the peripheral portions 21 of unused records 27 stacked above the partition to the extent necessary to prevent distortion or deflection thereof. Partition 28 advantageously includes also means for preventing substantial upward deflection of the marginal portions 21 of inscribed records 22, which might be caused by agitation or inversion of the container. This partition 28 also serves as a cover for the lower stack of records 22, is seated on this stack, and thereby holds the central portions of said records against edgewise displacement.

A suitable partition or spacer construction for this purpose is disclosed, consisting of an upper member 29 having a flat square top 30 and depending side flaps 31, and a lower member 32 having a flat central section 33, a downwardly deflected frusto-conical side wall 34 and corner extensions 35 similar in proportions and arrangement to section 17, wall 18 and extension 26 of the support member 16. Side flaps 36, projecting from the margins of corner extensions 35 and of side wall 34 intermediate such extensions, are bent upwardly to bear against flaps 31 of the upper member, to which they are suitably attached by adhesive or otherwise to form a unitary partition 28, with the central section 33 of the lower member 32 in contact with the central portion of top 30 of the upper member 29. The set of overlapping flaps positioned on the outside, which in the form illustrated consists of flaps 36, fits slidably against side walls 12 of the body.

With this arrangement the partition 28 is supported in place by central section 17 of the support member 16 or by the central portions 20 of inscribed records resting on said section 17, and unused records 27 may be stacked on the top 30 of the partition with their central portions 20 registering with similar portions of the records 22 and their peripheral portions 21 held against excessive downward deflection by said partition top 30. The top 14 of cover 13 is arranged so that it will rest upon the central portion 20 of the uppermost record 27 when a predetermined number of records has been placed in the container. This arrangement avoids direct pressure on the marginal portions 21 of records 27, while preventing such portions from being unduly deflected.

A hinge 37 connecting cover 13 to the body 10 may be provided, and advantageously consists of one or more strips of tough flexible material such as cloth or kraft paper, overlying the junction between a side 15 of the cover and the subjacent side wall 12 of the body and adhesively attached to said cover side and body side wall.

A label 38 is suitably attached to the central portion 20 of each record, as by adhesive, and is formed of paper or other suitable material of sufficient thickness to serve as a spacer between adjacent stacked records. It has been found that with thin records of the type indicated above, the label 38 may be formed from standard grades and weights of paper suitable for printing by standard methods without sacrificing the effectiveness of the label as a suitable spacer between stacked records.

It will be noted that in the construction described herein the distance between the bottom support section 17 and the container top 14 is fixed, and the total available space above and below the central portion of the spacer 28 is always the same. Consequently, when the proper number of records is placed in the container their central portions will be held firmly in place when the cover 13 is in closed position by pressure on the central section 20 and labels 38, regardless of the proportion of such records above and below the spacer 28. The construction is likewise designed to provide the same support and protection for records above and below the spacer, regardless of the number of records in either position, as long as the total number of records is substantially that for which the container is designed.

The various parts of the container may be constructed from any suitable sheet or formed material, such as metal, plastics or the various fibrous sheet materials made from wood and other pulps. The form illustrated and modifications thereof within the scope of this invention are adapted for construction from the cheaper grade of such pulp products, being designed and arranged to provide the necessary strength and stiffness when made from cheaper grades of such materials.

While the shaped elements of the structure, including particularly the bottom support member 16 and the lower member 32 of the spacer, may be constructed in sections appropriately connected as by adhesive, they have been designed for integral construction, and may be suitably shaped from flat sheets to impart the desired frusto-conical contour by known methods, whether formed from metal, plastics or the cheaper grades of pulp products without serious increase in cost.

While the bottom support 16 in the form illus-

trated is simply inserted in the container 10, this disclosure is intended to be illustrative and not by way of limitation; for the central bottom support for the central portions of the stacked records may be provided in other forms and mounted in other ways in the container. Furthermore, while such bottom support 16 is shown as separate from the container bottom 11, such support may be formed as a part of the bottom, and specifically the bottom may be suitably shaped or distorted upwardly to provide such support.

I have described what I believe to be the best embodiments of my invention. I do not wish, however, to be confined to the embodiments shown, but what I desire to cover by Letters Patent is set forth in the appended claims.

I claim:

1. A container comprising a body having side walls, a flat bottom connected to the side walls, an upwardly projecting central bottom support comprising an upwardly convex member formed of sheet material and having lower marginal portions engaging the bottom, a cover for the body and a movable transverse partition having a relatively thin central portion in register with the bottom support and a marginal portion slidably engaging the side walls and substantially thicker than the central portion, the partition being constructed with a substantially flat upper surface and a concave lower surface.

2. A container as set forth in claim 1 in which the partition is formed of sheet material.

3. A container comprising a body having a flat bottom and connected sides, a bottom support of sheet material resting on the bottom with marginal portions engaging intersections between the bottom and sides of the body to hold the support in place, the central portion of the support being spaced from the bottom; a removable cover for the body; and a movable partition extending transversely across the body between the bottom support and the cover and slidably engaging the side walls of the body, said partition comprising a lower member having upturned marginal portions and an upper member having downturned marginal portions connected to said marginal portions of the lower member, the upper member being centrally supported by the lower member and marginally spaced from said lower member.

4. A package for disk phonograph records and the like including flat records and convex records, comprising a container having a lower compartment provided with a bottom support fitting within the concave side of the concave records and in supporting engagement with the central portion of such records, a movable partition having a central portion arranged for support by said central bottom support or the central portion of records stacked thereon, a removable cover forming the top of the upper compartment, and a plurality of records in the container, the arrangement being such that flat records located above the partition are centrally supported by said partition, and convex records located in the lower compartment are centrally supported by the bottom support.

5. A package as set forth in claim 4 in which the partition extends horizontally beneath the marginal portions of the records in the upper compartment in supporting relationship thereto.

6. A package as set forth in claim 4 in which the outer portion of the lower face of the partition extends downwardly and outwardly, being arranged to extend adjacent the upper face of an uppermost convex record on the bottom support.

7. A package as set forth in claim 4 in which the records in the container fill the space between the bottom support and the cover except for the space occupied by the partition, the arrangement being such that said records and partition are held firmly in place between said cover and bottom support regardless of the proportional number of records above and below the partition.

8. A package for disc records comprising a container, a plurality of disk records arranged in stacked position in the container, said container including a support engaging the central portion of the bottom of the stack, each of said records being provided with a thickened central portion, the arrangement being such that the stacked records are supported by said central portions, a cover for said stack extending adjacent to the periphery of said container whereby said cover is confined by said container against edgewise movement and seated on the central portion of the top record, whereby the stacked central portions of said records are confined under pressure between the central section of said support and the central section of said cover, the marginal portion of said cover being spaced from the marginal portion of said support a sufficient distance whereby said marginal cover portion does not bear on the marginal portions of said records.

9. A package as set forth in claim 8 in which said thickened central portion of each record is formed by a label applied to the record.

10. A package as set forth in claim 8 in which each record is made of flat sheet material and the central portion is formed solely by a label and the subjacent sheet material.

11. A package comprising a container, a stack of downwardly dished disk records in said container, each of said records being provided with a thickened central portion, a frusto-conical support in said container tapering upwardly and having its flat top supporting the central portion of the bottom of the stack, a cover for said stack of records extending adjacent to the peripheral wall of said container and having its central section seated on the central portion of the top record whereby the central portion of said stack is closely confined under pressure between said flat support top and said central cover section, the marginal portions of said support and said cover being interspaced sufficiently whereby the marginal portions of said records are loosely retained between said support and said cover.

12. A package comprising a container, two superposed stacks of disk records in said container, each of said records being provided with a thickened central portion, means for supporting the central portion of the bottom record above the bottom plane of said container, a partition cover between said stacks seated on the central portion of the lower stack and extending adjacent to the periphery of said container, the marginal portion of said lower stack being free from the weight of the marginal portion of said partition cover, and a top cover for said container over the top stack and confining the central portion of said top stack while leaving the marginal portion of said top stack free from the weight of said top cover.

BARTON A. PROCTOR.