

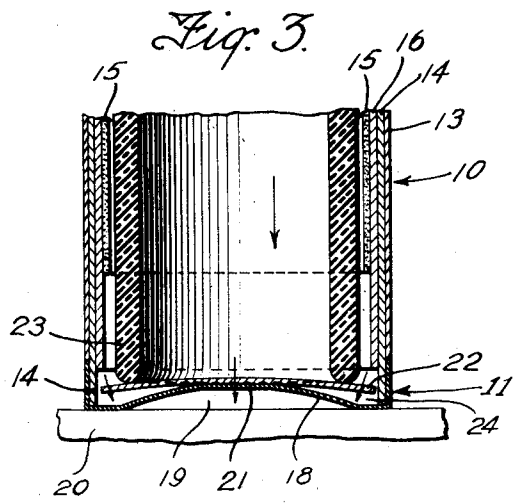
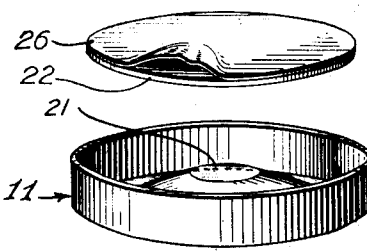
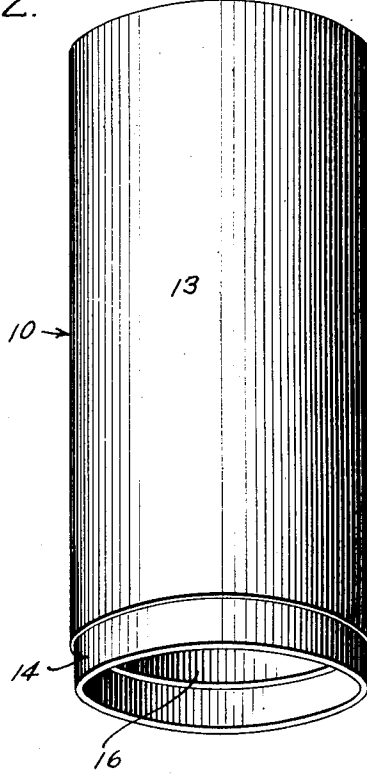
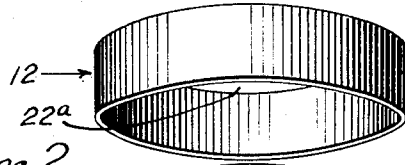
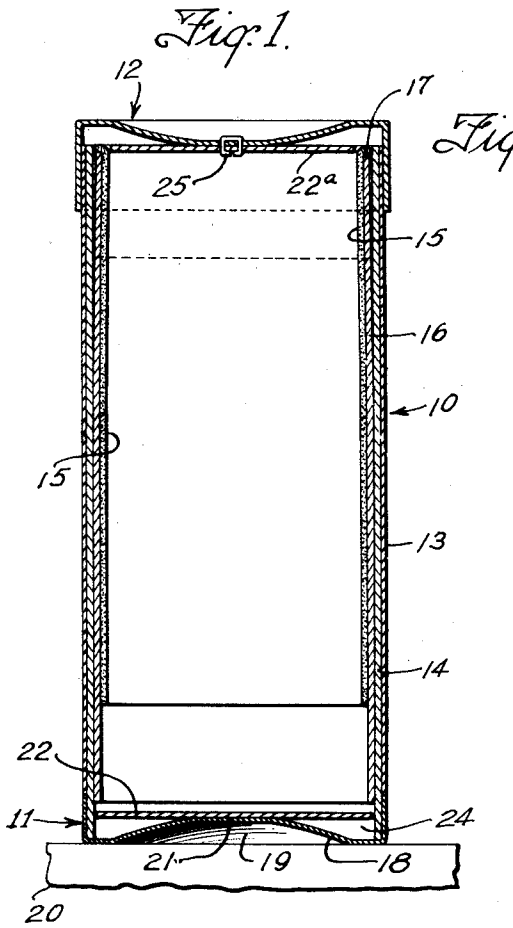
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CONTAINER

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CONTAINER.

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This invention relates to containers and more particularly to containers for fragile articles such as sound-record tablets and the like.

5 An object of the invention is to provide a container which absorbs shocks transmitted to the article which it contains by external force, so as to prevent the damaging of the article in the container.

10 Another object is to provide a container which absorbs shocks caused by the article violently striking the bottom of the container when the article is allowed to fall by gravity into the container or when it is
15 pushed therein by hand.

Another object is to provide a container which prevents damage of the article it carries when the container is forcefully placed upon a hard body, such as a table.

20 A further object is to provide a container which holds the article for which it is intended securely at both ends irrespective of variations due to irregularity of manufacture or temperature changes of either the
25 article or the container.

A still further object is to provide a container having a built-in shock absorber forming a permanent part of the container.

30 And a still further object is to provide a container which has sufficient shock-absorbing ability to obviate the use of a shock-absorbing member which is usually used in packing the containers with their articles in them for shipment.

35 Yet another object is to provide a container having one or more of the above advantages and yet being simple and economical to manufacture.

40 And yet another object is to provide an improved cloth-lined container for sound-record tablets and the like in which provision is made for catching dust and particles of grit falling into the container, in such a manner that the surface of the article will
45 not be damaged thereby.

Other objects and advantages will hereinafter appear.

In the accompanying drawings:

Figure 1 is a sectional view showing one

embodiment of this invention, the container 50 being one for sound-record tablets.

Fig. 2 is a disassembled perspective view of the parts of the container shown in Fig. 1.

Fig. 3 is a sectional view similar to Fig. 1 but showing the parts in the positions they
55 assume when absorbing the shock of a record tablet which was allowed to drop into the container.

As shown in the accompanying drawing, the container, when made in accordance with this invention for carrying circular or cylindrical articles, such as sound-record tablets and the like, comprises a tubular side portion 10, a bottom end-closing cap 11 and a top cap or cover 12. The tubular side portion 10 is, as usual, formed of a plurality of layers 13, 14 of cardboard or like material and the outside layer 13 is cut away at the bottom to allow the bottom cap 11 to be secured to the inside layer 14 and to
70 be flush with the outside layer 13.

The article to be carried by the container—the sound-record tablet, in the embodiment shown—is protected against being scratched by the side of the container by
75 a lining 15 of canton-flannel or the like. The lining is secured to a cardboard strip 16 which is then secured to the wall portion 10 by a suitable adhesive. Preferably, the lining 15 is carried over the top edge 17 of the
80 strip 16 so that the entrance edge of the container is prevented from scratching the article when the latter is being placed in the container. This is also done so that a bevel-like edge will be produced at the mouth of the container to facilitate the insertion of the
85 article.

Heretofore, the lining 15 was brought to the bottom of the container, but according to this invention, the bottom edge of the
90 lining is removed a substantial distance from the point where the end of the article is located in the ordinary use of the container. This is done so as to provide a pocket or trap for particles of dust or other
95 foreign matter so that they may fall out of reach of the article and so they can not be carried up into the soft lining 15 by the

movement of the article into and out of the container. This is an extremely advantageous feature, for when particles of grit become lodged in the canton-flannel lining, they sometimes cause the surface of the article to be seriously scratched. In the case of a sound-record tablet, this is a serious difficulty, for it impairs the recording and reproducing of the sound.

10 In the use of an article, such as a sound-record tablet, the latter is stored in the container until it is removed and placed upon the machine for use. After the tablet is used, it is placed in the container by the user, where it is stored until again wanted. 15 In re-placing the tablet after use, the operator usually allows the tablet to drop in place in the container without special care, and it frequently occurs that the record is cracked or otherwise damaged by the shock which it receives when it strikes the bottom of the container. This difficulty is not so pronounced in the case of a new tablet which closely fits the container, for there is a sufficient friction between the lining 15 and the record to prevent tablet from forcibly striking the bottom. But after the record has been repeatedly used and shaved the lining 15 offers no resistance to its movement, and the tablet can freely fall until it strikes the bottom of the container with the resulting danger of damage. It is with these shaved tablets that these difficulties are greater, since they are substantially thinner and more liable to be broken. 35

To overcome these difficulties and to prevent breakage of even the very thinnest tablets, or similar article, the present invention provides a shock-absorbing bottom for the container. For this purpose, the bottom closure part 11 is pressed upwardly to extend into the container so as to form a convex recessed portion 18 which forms an air-pocket 19 between the bottom 11 and a body 20 such as a table or stand, upon which the container rests. The recessed portion 18 acts as a diaphragm and compresses the air contained in the pocket 19 when a force is applied to its central table-like raised portion 21 and thus absorbs the shock produced by the falling record or other article. This force may be transmitted to the air-pocket or to the table-like portion 21 in any suitable manner. But, according to this invention, this is done by means of a disc 22 resting upon the portion 21 and extending into close proximity with the inside layer 14 of the wall 10 of the container. The disc 22 is so positioned, as will be seen in Fig. 1, as to receive the end 23 of the tablet and to space the same from the bottom end of the container, so as to allow movement of the tablet when the recessed portion 18 yields under a blow. 60

65 The disc 22 may be made of rigid mate-

rial, if desired. However, in order that all of the shock is not transmitted to the recessed portion 18 the disc 22 is made of flexible, yielding material, such as cardboard, for instance, which sufficiently yields as to flex under the impact of the falling record and yet retains its shape sufficiently for the purpose. 70

When the record or other article is dropped into the container the disc 22 flexes, as shown in more or less exaggerated form in Fig. 3, and at the same time, transmits part of the force to the central table-like portion 21 of the recessed bottom 11. If the container rests upon a table or desk, the air in the pocket 19 is compressed and offers moderate resistance to the movement of the recessed portion 18 which, as explained above, absorbs part of the shock. Substantially the same thing happens when the disc 22 yields, for the air in the annular air-pocket 24 formed between the disc 22, the wall portion 10 and the bottom 11 must be compressed or displaced to allow movement of the disc 22. This effectively acts as a snubber to retard the movement of the disc 22. The disc 22 is held in position parallel to the base of the container by engagement with the table-like portion 21 of the bottom 11 at its center and with the lower edge of the cardboard strip 16, carrying the lining 15, at its edges. Thus, the disc can flex downwardly at its edges when it receives the blow of the falling tablet. 85 90 95

The disc 22 may be dropped into the container after the tubular walls and bottom 11 are secured together and before the strip 16 with the lining 15 is secured in position. It automatically finds its place and requires no special adjustment and cannot fall out or be removed from the container without disassembling the same. 100 105

To avoid any tendency of the disc 22 to warp downwardly at its periphery due to moisture or other like causes, it may be provided with a covering 26 of paper having characteristics which are different from the characteristics of the main portion of the part 22 and which are such as to cause the disc to tend to curl upwardly and thus counteract or compensate for any tendency of the body portion of the disc to curl downwardly under the influences above referred to or the weight of the tablet. 110 115

When the cover 12 is applied to the container after the tablet is placed therein, the latter is securely held against free movement in the container by the slight upward pressure of the disc 22 which is flexed by the operation of forcing the cover in place with its incident downward movement of the tablet. Thus, rubbing of the tablet against the wall of the container is substantially reduced. Yet, the tablet can move slightly to allow any shock transmitted to it, when 120 125 130

the container is dropped or forcibly placed upon a hard surface, to be absorbed.

The shock-absorbing end-closure 11, of the container is sufficiently effective to allow the packing of the containers with their tablets in a shipping case, without the use of corrugated board or other shock absorbing media at the end of the containers, which has been the practice heretofore, thus making for a saving apart from that of preventing breakage of records.

When the article to be carried is not so fragile, the recessed portion 18 may be made, if desired, relatively stiff so as to be substantially inflexible; and in this case, the shock of a falling article, or externally produced, will be absorbed solely by the disc 22. When this provision is made the recessed portion merely becomes a support for the disc. Therefore, if desired, the recessed portion may be omitted entirely in this case, and a block or other support for the central part of the disc 22 may be substituted therefor.

The bottom of the container between the recessed portion 18 and its edge is made flat so that the container will firmly rest upon a table or the like.

The invention also embraces the provision of a cap for the container similar in function and construction to the bottom cap or closure member 11, and varying therefrom only in the fact that the flange of the cover overlaps the outside surface of the container and that the disc 22^a is smaller than the disc 22, so as to fit within the lined edge of the container, and is secured to the cap 12 by a suitable staple 25. Of course, the ordinary and usual cap may be provided, if desired, and in some cases this is preferable. But, when the shock-absorbing cap above described is used, the article contained is more securely protected during shipment.

The container above described is preferably made of paper, but it should be understood that it can be made of any other suitable material within the scope of this invention, as described in the appended claims.

It should also be understood that the invention is not limited to containers for sound-record tablets but that it can be used for any article which it is desired to securely pack. For instance, it may be used for lamp chimneys or other glass ware, candles, electric lights and other electrical units, etc.

Although one form of the invention has been specifically described and is illustrated in the drawing, it should be understood that invention is not limited to this construction and that variations and modifications may be made within the scope of this invention and portions of the improvements may be used without others, all within scope of the appended claims.

Having now described the invention, what is claimed as new and for which Letters Patent of the United States is desired is:

1. A container for fragile tubular articles having a bottom and a member having a pliant edge portion to be engaged by the end of a tubular article received in the container, said member being resilient and being supported on said bottom at a point inwardly removed from said pliant edge portion which yields upon engagement of a tubular article therewith.

2. A container for fragile tubular articles having a bottom and a member having a pliant edge portion to be engaged by the end of a tubular article received in the container, said member being supported on said bottom at a point inwardly removed from said pliant edge portion and said bottom being resilient at the portion engaged by said member.

3. A container for fragile tubular articles having a bottom and a flexible member having an edge portion adapted to be engaged by the end of a tubular article received in the container, said member being resilient and being supported on said bottom at a point inwardly removed from said edge portion and said bottom being resilient at the point of engagement with said member.

4. A container for fragile tubular articles having a bottom and a member having an edge portion to be engaged by the end of the tubular article received in the container, said member being in the form of a flat disk and being supported on said end closure solely at a point inwardly removed from said article engaging edge portion.

5. A container for fragile tubular articles having a bottom and a disk having an edge portion adapted to be engaged by the end of a tubular article received in the container, said disk being resilient and being supported on said bottom upon a bowed portion thereof at a point inwardly removed from said article engaging edge portion.

6. A container for fragile tubular articles comprising a wall formed of a plurality of layers of material; a bottom attached to the wall to close on end thereof, said bottom being bowed inwardly of the wall; a disk supported by the bowed portion of the bottom and confined in operating position between said bowed bottom and the end of one of said layers of which the wall is formed.

7. A container for fragile tubular articles having a bottom having a bowed portion and a disk loosely supported upon the bowed portion of the bottom; and means for holding the disk in operative position when the article to be held in the container is removed therefrom.

8. As a new article of manufacture, a carton comprising side-wall portions formed of a plurality of layers of material; an end

closure member in overlapping relation with the parts of the wall portion and flush with the outside of the wall portion; said closure member having an upwardly bowed portion; and a disc for supporting an article in the container, confined between the end of one of the layers of the wall portion and

the upwardly bowed portion of the closure member.

Signed at New York, in the county of New York, and State of New York, this 31st day of Dec., 1923. ¹⁰

DAVID E. CARPENTER.