

[54] **PRINT ALBUM STORAGE CASE INSERT**[75] Inventor: **Gerald B. Zinnbauer**, Carmel, Ind.[73] Assignee: **Eli Lilly and Company**, Indianapolis, Ind.[22] Filed: **July 26, 1973**[21] Appl. No.: **383,010**[52] U.S. Cl. **206/73; 206/311; 206/449; 211/40; 211/41**[51] Int. Cl. **B65d 1/34**[58] Field of Search **220/22; 206/311, 449, 309, 206/73, 454-456; 211/40, 41; D6/185**[56] **References Cited****UNITED STATES PATENTS**

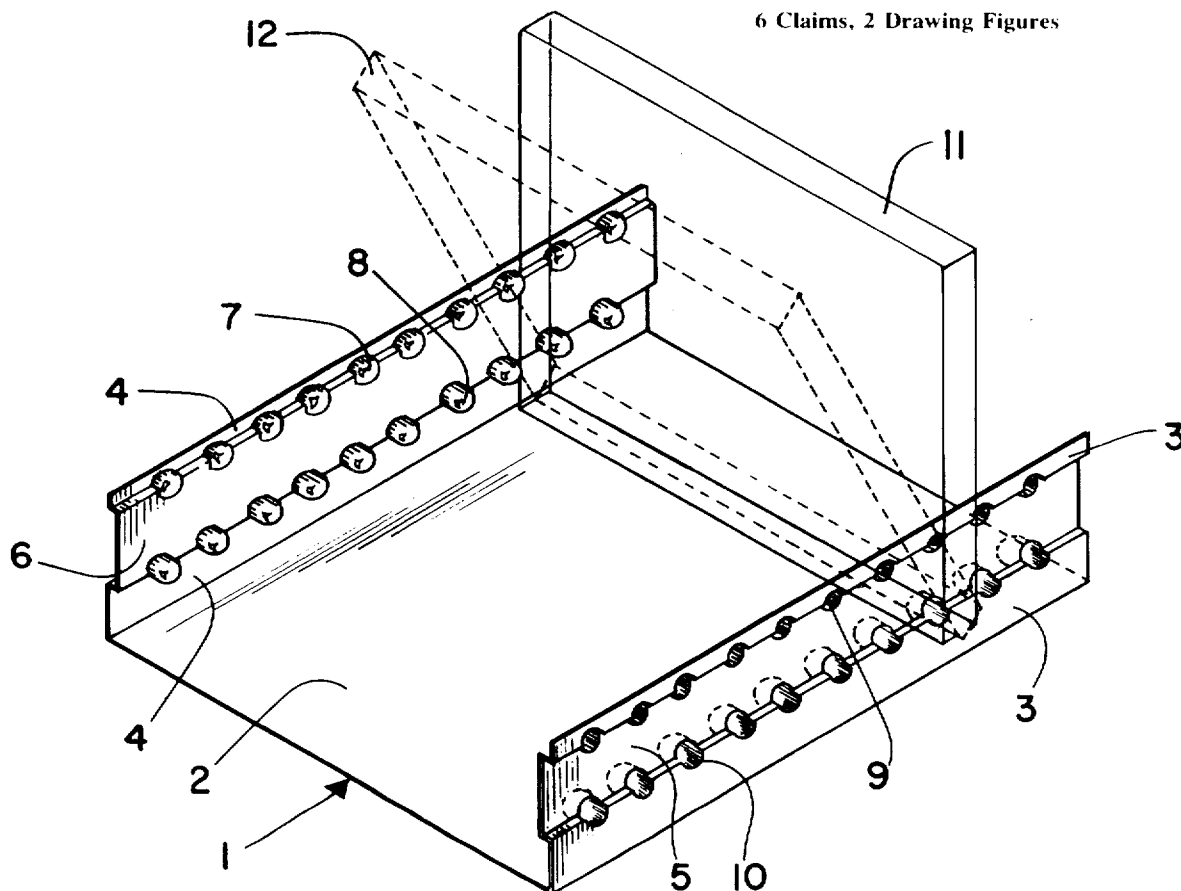
1,237,010	8/1917	Adams	211/40
1,480,043	1/1924	Blakeslee	211/41
2,169,562	8/1939	Lombardini	220/22
2,247,637	7/1941	Lombardini	220/22
2,572,355	10/1951	Kintz	211/41

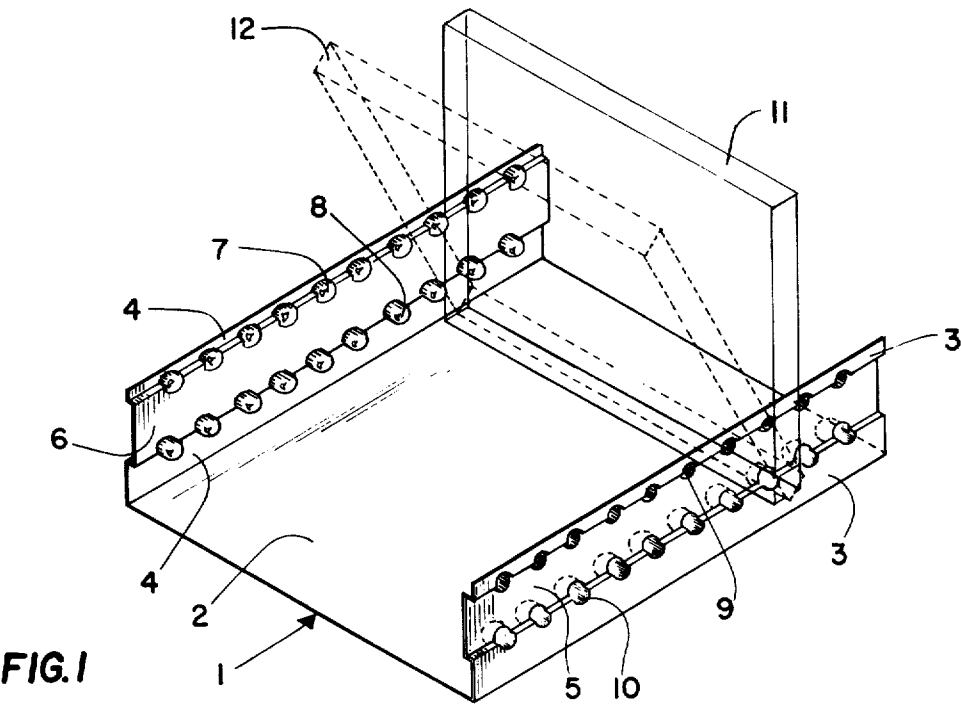
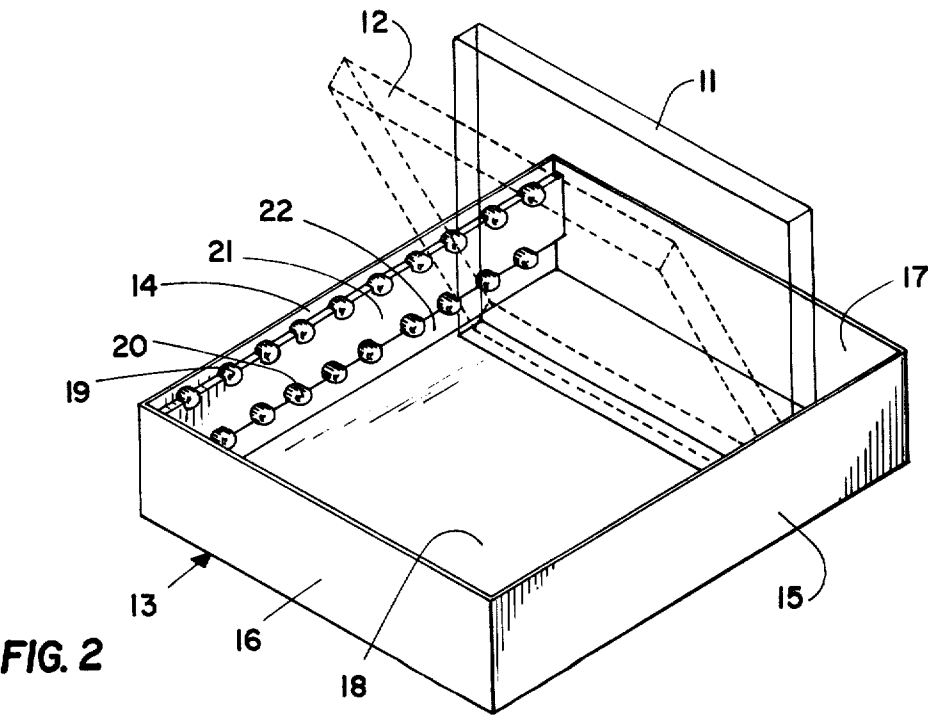
FOREIGN PATENTS OR APPLICATIONS

478,400	1/1938	United Kingdom	211/41
684,282	4/1964	Canada	211/41
702,647	2/1941	Germany	206/73

Primary Examiner—William I. Price*Assistant Examiner*—Joseph Man-Fu Moy*Attorney, Agent, or Firm*—Ralph W. Ernsberger, Eyeret F. Smith[57] **ABSTRACT**

An insert for converting a predesigned container into a print album storage case provides a means for storing said print albums in separate independent essentially parallel positions from which each print album in sequence can be moved to an inclined attitude to expose the frontpiece of the next in sequence print album for noting the contents thereof. Said insert is comprised of a base section and two opposing side sections integrally connected to said base section, each side section having thereon, in equal numbers, a plurality of inwardly extending protuberances, said protuberances on each side being disposed in two rows essentially parallel to the connection between said base and said side section and essentially equispaced aligned pairs at right angles to said connection, with the two side sections being essentially mirror images of each other. A plurality of protuberances integrally molded in similar positions into the sides of a predesigned container also converts such container into a print album storage case having similar characteristics.

6 Claims, 2 Drawing Figures



PRINT ALBUM STORAGE CASE INSERT**BACKGROUND OF THE INVENTION****1. Field of the Invention**

This invention relates to an insert which can be fitted into a predesigned container to convert such container into an especially useful print album storage case wherein said print albums can be stored between pre-spaced protuberances in oppositely facing sides of said insert and readily moved in an arc from a position essentially vertical to the bottom of said case to an inclined attitude and back again.

2. Description of the Prior Art

Containers for holding and storing print albums, cassette cases and the like have been developed in many different forms. One common holding and storage container accepts print albums in a horizontal position by providing opposed slots in the sides into which said albums can be inserted. This configuration can be adapted to vertical storage, back to back storage, storage in a carrousel, and the like. Variations have been provided on the slot principle, but in every case the storage is in a fixed position and there is a requirement that identification must be provided on the narrow exposed edge of the album or cassette, or the retrieval conducted by a search procedure that involves removing the albums from their storage position to identify the contents.

Accordingly, it is an object of this invention to provide a means for storing print albums, cassettes, and the like in a spaced flat orientation which will permit the identification of the contents of an album without removing the latter from the storage space in which it is held.

Another object of this invention is to provide a print album storage case insert adapted to be fitted into a pre-designed container which will convert said container into a print album storage case wherein the contents of said print album can be identified without removing said album from said case.

Still another object of this invention is to provide a print album storage case wherein print albums can be stored and the contents of each album identified without removing said albums therefrom.

SUMMARY OF THE INVENTION

It has now been discovered that an insert can be provided for fitting into a predesigned container which will hold print albums in a flat spaced relationship within said container and allow for the identification of the contents of each print album, said insert having equispaced oppositely facing pairs of resilient protuberances extending inwardly from that portion of said insert which partially covers two opposed sides of said container, said pairs being aligned at essentially a right angle to the end edge of said insert. The lower of the said protuberances in each of said aligned pairs extend inwardly farther than the upper protuberances in said pairs. The upper protuberances yield to a moderate force exerted against the print album and allow the print album to override said upper protuberances and come to rest against the next adjacent upper protuberances whereupon the face of the next following print album in sequence is exposed for identification.

The same configuration of protuberances in oppositely facing sides of a molded container provides a

print album storage case wherein a similar storage orientation is effected.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a top perspective view of a print album storage case insert.

FIG. 2 is a top perspective view of a print album storage case.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The novel structure of one embodiment of this invention is comprised of a flat sheet into which is molded, or cut, a crimp, or crease, line inboard from each end edge of said sheet and essentially equidistance from said edges and parallel thereto. The portions of said sheet which are disposed between said crimp lines and the respective end edges of said sheet constitute the sides of the novel print album storage case insert of this invention. Into each of said sides are integrally molded a plurality of protuberances which extend inwardly from the said sides when the latter are turned upwardly from the base of said sheet facing each other at an angle of about 90° with said base. Said protuberances are arranged in pairs which are essentially at right angles to the crimp line which separates said base from said sides. Both the upper and lower protuberances in said pairs are in rows which are parallel to the end edge of said sheet, or the top of said sides, and have essentially the same cross-sectional area. The protuberances in the lower row extend inwardly significantly farther than the protuberance in the upper row. Each of the aligned pairs of protuberances are separated from the next adjacent aligned pair by a distance slightly greater than the depth of the print album to be disposed between said aligned protuberances, and the lower row of protuberances are positioned above the base of said insert by about the same distance that separates the vertical pairs of said protuberances.

The distance between the lower and upper rows of protuberances is determined by the height of the sides (height in said insert) of said print album storage case insert, generally being about one-sixth to one-third of such dimension. The height of the sides of said print album storage case insert is determined by width and depth respectively of the container into which said insert is to be fitted.

In another embodiment of the present invention, the protuberances are integrally formed in the sides of a print album storage case essentially as described for the print album storage case insert.

In either case, it is imperative that said protuberances, particularly those in the upper row, have sufficient resiliency to allow the print album, when positioned between opposite facing pairs of said protuberances, to easily, but with some resistance, override the upper protuberances in said opposite facing pairs when some force is applied to said print album. When the latter occurs, the print album remains in position between the lower protuberances in said opposite facing pairs, and comes to rest against the next adjacent upper protuberances in said opposite facing pairs in the direction in which said force is applied.

The print album so moved is no longer essentially vertical and the face or top of the next print album in the sequence is exposed and the contents thereof can

be noted without removing said print album from said container.

The structure of the embodiments of this invention can be more readily understood by reference to the drawing attached.

In FIG. 1 the novel print album storage case insert 1 is shown in the contour it has when fitted into said container. The bottom 2 of said insert is a flat surface having outside dimensions which are slightly less than the inside dimensions of the container into which said insert is to be fitted. One side of said insert 1 is shown as side 3 and the other side is shown as side 4. Both inside surfaces of sides 3 and 4 of said insert 1 are alike, and are represented by the view of side 4 in FIG. 1. Similarly, both outside surfaces of sides 3 and 4 of said insert 1 are alike, and are represented by the view of side 3 in FIG. 1. Upper protuberances 7 are shown in a row parallel to the top edge of side 4, and lower protuberances 8 are shown in a row parallel to the row of upper protuberances 7. Each upper protuberance 7 is in alignment with a lower protuberance 8 at essentially a right angle to the junction of said base and said side. Each aligned pair of protuberances is separated from the next adjacent aligned pair of protuberances by a distance that is slightly greater than the thickness of the print album which is to be vertically positioned in said insert. Each individual upper and lower protuberance, 7 and 8, is matched by an opposite facing upper and lower protuberance, the back sides of which are shown as 9 and 10 respectively in side 3. These horizontal facing protuberances are aligned in both the same horizontal and vertical planes.

The lower protuberances, 8 and 10, extend inwardly from the inside surface of sides 3 and 4, a distance which is sufficient to prevent the print album 11 positioned between adjacent opposite facing protuberances from being moved in an arc without the application of moderate force to said print album.

The upper protuberances, shown as 7 from the front side and as 9 from the back side, extend inwardly from the inside surface of sides 3 and 4, a distance which is sufficient to hold the print album 11 snugly between adjacent opposite facing upper protuberances 7, but at the same time allowing the upper part of said print album 11 to be moved in an arc overriding one set of opposite facing upper protuberances 7 with the application of only a moderate amount of force.

A print album 11 is shown in place, in insert 1 disposed between two adjacent aligned pairs of opposite facing protuberances. The same print album 11 is shown as print album 12 when the former is moved forward in an arc overriding the immediately adjacent upper opposite facing protuberances and coming to rest against the next adjacent upper opposite facing protuberances. The print album 12 remains disposed between the two opposite facing lower protuberances, and assumes a position that is inclined with reference to the next adjacent print album.

In practice, where the print album to be held in said insert 1 is up to 9 or 10 inches long, the lower protuberances 8 will extend inwardly from about three-sixteenths to about three-eighths inch, and the upper protuberances 7 will extend outwardly from about three-thirty-seconds to about three-sixteenths of an inch. For print albums longer than about 9 to 10 inches, the lower protuberances 8 will extend inwardly from about three-eighths to about five-eighths inch and the

upper protuberances will extend inwardly from about three-sixteenths to about three-eighths inch. The ratio will be about 2 to 1. In any case, the lower protuberances 8 will always extend inwardly farther than the upper protuberances 7.

The cross-sectional design of the protuberance can be of any geometric configuration, but an essentially round form is preferred and a convex end is useful, particularly on the upper protuberances, but not essential to the operation of the invention.

It is important that both the upper and lower protuberances, 7 and 8, are resilient. It is essential that the upper protuberances 7 are resilient. The necessary resiliency can be provided in a number of different ways.

One way is to vacuum form the protuberances in a sheet of plastic so that said protuberances are hollow on the back side, 9 and 10, in back side 3 of said insert 1. In this case, the wall thickness of the protuberances, 7 and 8, is essentially the same as the wall thickness of the plastic sheet in which they are formed. In FIG. 1, the protuberances, 7 and 8, are shown as being of such a character and, in addition, channels 5 and 6 are shown as integral parts of the two sides in which the protuberances are formed. The channels add firmness to the sides without sacrificing resiliency. As shown in FIG. 1, the protuberances, 7 and 8, are disposed partly in the inwardly extending channels of the sides of said insert 1, and partly in said sides, which are extensions of the base 2 of said insert 1. This design is not essential to the present invention, but is a preferred configuration. The invention is also operative when the sides of said insert 1 are extensions of said base 2 and there is no other deformation than the protuberances hereinbefore described.

The resiliency required in the upper protuberances 7 can be provided by molding the entire insert 1 in the configuration shown in FIG. 1, or as a flat sheet which is later scored or debossed at the location where the sides, 3 and 4, are turned at right angles to the base 2, and the sides turned upwardly to obtain the configuration of FIG. 1. In this case, the protuberances are generally solid and the resiliency is provided by selecting an elastomeric material of an appropriate firmness. The sides of such a molded article can have stiffening channels, such as 5 and 6 shown in FIG. 1, with the protuberances partially disposed in said channels and in said side surfaces on both sides of said channel.

The spirit of this disclosure contemplates that all such modifications in the design of the sides in which the protuberances are disposed are within the scope of the present invention. The important element is the resiliency of the upper protuberances which allows for a deformation of such protuberances under force of from about 50 to about 100 percent with a subsequent return to the original configuration as the print album overrides them under force applied to move said print album in an arc to an inclined position.

In another embodiment of this invention, shown in FIG. 2, the protuberances from the sides of the print album storage container are molded integrally with the container itself. A print album storage container is shown as 13 in FIG. 2. Such a container can be of any size, have side walls of any height above the section wherein the protuberances are disposed, and have a hinged lid or a telescoping top or any other closure adaptable to such container, or none at all. The heart of this embodiment is the protuberances which are op-

posite facing, inwardly directed, on opposing sides of the container.

The same characteristics and relations of one element to another apply in this embodiment as those described hereinbefore for the protuberances associated with the print album storage case insert shown in FIG. 1.

The two sides of said container in which protuberances are disposed are shown as 14 and 15, and the two ends of said container are shown as 16 and 17. The ends 16 and 17 are plain inside and out. The bottom of the container is shown as 18, and compares with the bottom, or base, 2 in FIG. 1. Upper protuberances 19 and lower protuberances 20 are disposed in aligned pairs and are positioned in opposite facing mirror image relationships in the same horizontal and vertical planes. A stiffening channel 21 is shown in FIG. 2, and as with such channel, 5 and 6 in FIG. 1, such a construction is beneficial to the resiliency of the molded protuberances 19 and 20, however, it is not a requirement for the operation of this embodiment. When the protuberances 19 and 20 are integrally molded with the sides 14 and 15 of said container, such protuberances will be solid, and it is necessary that the required resiliency come from the elastomeric properties of the material from which said container is molded.

The row of lower protuberances 20, identified as the first row, is positioned at a distance from bottom 18 of said container that is about the same as the distance between each of said protuberances 20, and is adjacent to and parallel to the junction between said sides and said bottom. This distance provides an opportunity for said print album to pivot between two adjacent lower protuberances 20 as it overrides an upper protuberance 19 in a second row of protuberances parallel to said first row and separated therefrom by a distance greater than the inward extension of said protuberances in said first row, when sufficient force is exerted to move said print album 11 to the position shown as 12 in FIG. 2. An extension 22 of the side 14 of said container 13 in which the protuberances 19 and 20 are disposed illustrates the relative height of said protuberances 20 above the bottom 18 of said container 13.

Alternatively, a strip of plastic 21 in which protuberances 19 and 20 are disposed can be molded or vacuum formed and then sealed to opposite sides of said container 13 by inserting such strips in a specially fabricated cavity in the mold used to form the container before the container itself is molded, thereby providing a container into which said protuberance bearing strips are integrally molded, or simply cementing said strips in the appropriate location to the inside surface of the container. In either of these alternatives the material of construction of the protuberance bearing strips can be the same as that from which said container is molded or of a different composition. In the latter case, greater flexibility is possible as the container can be molded from a semi-rigid or rigid material such as polystyrene, and the protuberance bearing strip can be fabricated from a more resilient material such as polyvinylchloride.

What is claimed is:

1. A print album storage container insert comprising:

- a. a base section;
- b. a first side section integrally connected to said base section, said first side section having a plurality of resilient protuberances extending inwardly there-

from, said protuberances being formed in two essentially parallel rows, said rows disposed essentially parallel to the top edge of said first side section and containing equal numbers of equispaced protuberances disposed in aligned pairs at essentially a right angle to said top edge, the row of protuberances nearest said top edge having a resiliency which allows for from about 50 to about 100 percent deformation under force with a subsequent return to the original configuration and form when said force is removed; and

c. a second side section integrally connected to said base opposite said first side section, said second side section having a plurality of protuberances similar in number to the protuberances in said first side section and disposed similarly thereto and in a mirror image thereof, said protuberance also having resiliencies similar to those in said first side section.

2. The insert of claim 1 wherein said two parallel rows of inwardly extending protuberances in each of said side sections are constituted of a first row which is adjacent to and parallel to the top edge of said side sections, and a second row which is separated from said first row by a distance greater than the inward extension of said protuberances in said second row, said protuberances in said second row extending inwardly at least half again as far as said protuberances in said first row thereof.

3. The insert of claim 1 wherein the distance between each of said protuberances in each row is substantially the same.

4. A print album storage container comprising:

a. a container having a first and a second side, a first and a second end, and a bottom connected with said sides and said ends at essentially a right angle;

b. a plurality of resilient protuberances extending inwardly from said first side, said protuberances being formed in two essentially parallel rows, said rows disposed essentially parallel to the junction of said side with said bottom and containing equal numbers of equispaced protuberances disposed in aligned pairs at essentially a right angle to said junction between said side and said bottom, the uppermost row of protuberances having a resiliency which allows for from about 50 to about 100 percent deformation under force with a subsequent return to the original configuration and form when such force is removed; and

c. a plurality of protuberances extending inwardly from said second side, said protuberances being similar in number to the protuberances in said first side and disposed similarly thereto and in a mirror image thereof, said protuberances also having resiliencies to those in said first side.

5. The container of claim 4 wherein said two parallel rows of inwardly extending protuberances in each side are constituted of a first row which is adjacent to and parallel to the junction between said sides and said bottom, and a second row which is separated from said first row by a distance greater than the inward extension of said protuberances in said first row, said protuberances in said first row extending inwardly at least half again as far as said protuberances in said second row thereof.

6. The container of claim 4 wherein the distance between each of said protuberances in each row is substantially the same.

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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 3,897,871

DATED : August 5, 1975

INVENTOR(S) : Gerald B. Zinnbauer

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 3, line 30, "horizontal" should read --opposite--.

Signed and Sealed this

Twenty-fourth **Day of** May 1977

[SEAL]

Attest:

RUTH C. MASON
Attesting Officer

C. MARSHALL DANN
Commissioner of Patents and Trademarks