

[54] **PARTIALLY NESTABLE
PHARMACEUTICAL CONTAINERS**

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206/56 AB, 65 K, 42**

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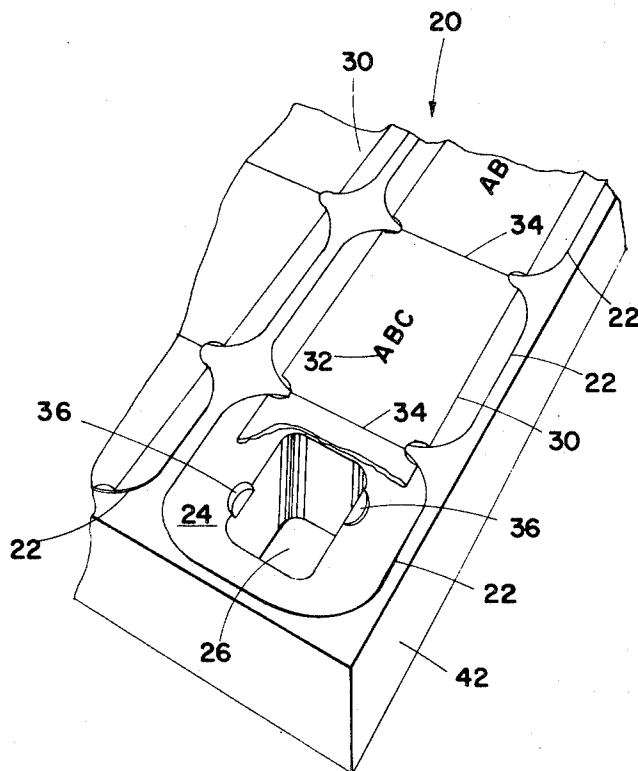
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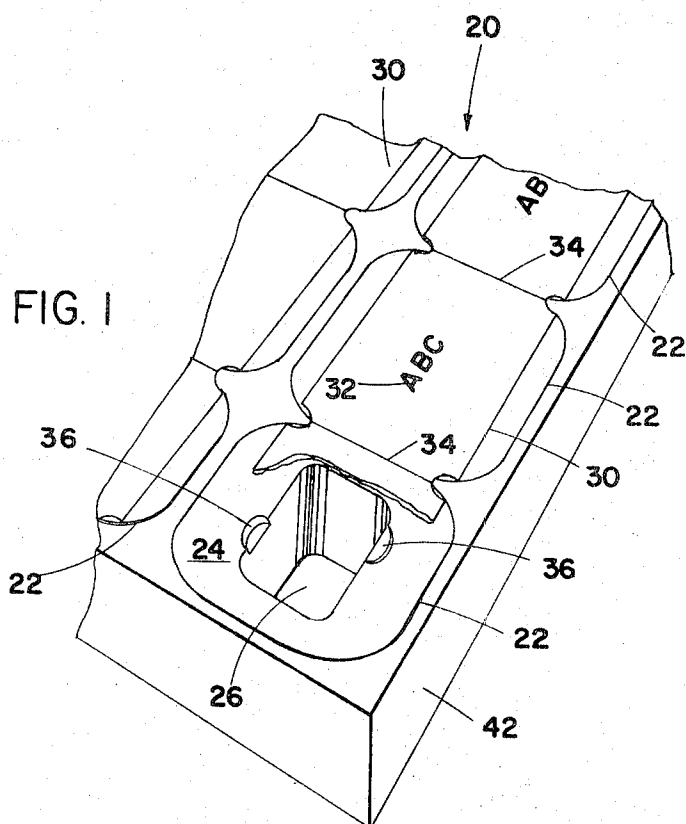
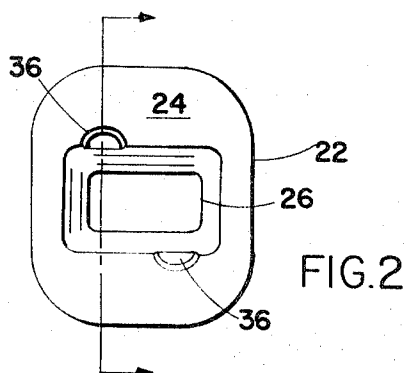
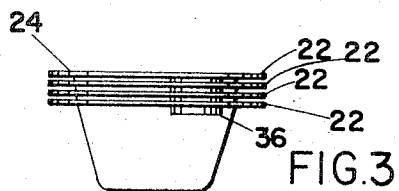
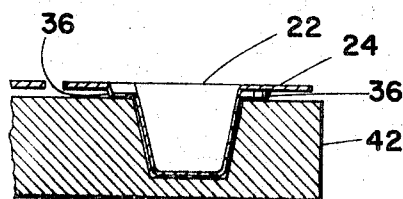
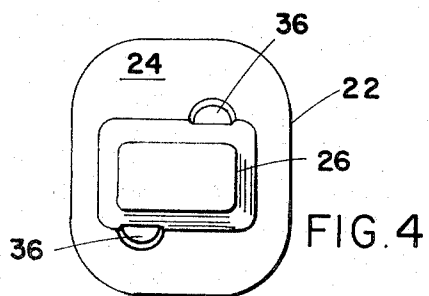
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[57] **ABSTRACT**

A container means for the distribution of predetermined dosage units of pharmaceutical materials comprising a plurality of individual containers removably connected to one another, each of the containers having integrally formed lip portions surrounding the opening of the container and a pair of protrusions to permit partial but spaced nesting of the strips of containers on top one another.

1 Claim, 5 Drawing Figures





PARTIALLY NESTABLE PHARMACEUTICAL CONTAINERS

BACKGROUND

The present invention relates generally to containers and particularly to container means specifically adapted for the efficient distribution of predetermined dosage units of pharmaceutical materials.

The distribution of pharmaceutical materials to bed patients in nursing homes and other similar institutions is usually undertaken by individual pharmacies. The nature of this type of distribution presents many problems both to the pharmacist and to the personnel of the institution. The large number of patients, the frequency of the required dosages, and the inherent importance of accuracy and control in preparing and distributing the proper doses magnifies these problems.

There has been developed a novel distribution system wherein many of the problems inherent in the distribution of pharmaceuticals to large institutions has been substantially reduced. This system is based upon permitting the pharmacist to prepare a large number of dosage units of specific pharmaceuticals in an efficient, accurate manner which also aids the nursing personnel to distribute the dosages to the patients.

However, the container means of the present invention was specifically designed to permit a pharmacist to prepare individual dosage units for delivery to the institutions in an efficient and economically feasible manner to reduce the former time consuming and burdensome task of the nursing personnel and to permit more efficient control over the preparation and distribution of individual dosage units.

SUMMARY OF INVENTION

The container means of the present invention comprises a plurality of containers removably connected to one another to form strips. Each container includes an integrally formed lip portion provided with a downwardly extending recess on opposing sides of the container opening which form downwardly extending protrusions on the lower side of the lip portions. This construction permits the containers to be partially nestable for bulk shipping and storage. However, in cooperation with a tray used for preparing the dosage units or their distribution, the protrusions prevent the container from fully seating in the tray opening for more convenient handling by the pharmacist and the nursing personnel.

In addition, an elongate cover strip with pre stamped or typed indicia is removably disposed over the lip portion after the containers have been filled with the desired dosage unit. Once a strip of containers has been so prepared, individual containers may be easily disconnected from one another.

OBJECTS

It is therefore an object of the present invention to provide containers means for pharmaceutical materials which greatly reduces the time required in preparing and distributing pharmaceutical materials in predetermined dosage units.

It is another object of the present invention to provide container means which greatly reduce the chances of error occurring in the preparation of a predetermined dosage unit and also in the distribution of the proper dosage unit to the patient.

It is another object of the present invention to provide a container means of the type described which may be manufactured at relatively low cost using standard procedure.

It is a further object of the present invention to provide a pharmaceutical container means of the type described in which the construction in cooperation with a suitable tray or holding means provides ease and convenience in handling and yet permits nesting of large bulk quantities of containers for shipping and storage convenience.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a plurality of pharmaceutical containers constructed in accordance with the present invention and shown in use in cooperation with a loading tray;

FIG. 2 is a top plan view of a single container shown in FIG. 1;

FIG. 3 is a side elevational view of a plurality of the containers shown in FIG. 1 illustrated in a stacked configuration;

FIG. 4 is a bottom view of the single container shown in FIG. 2; and

FIG. 5 is a side elevational view in section of a container positioned in a distributing tray, the section taken along line 5—5 as shown in FIG. 2.

DETAILED DESCRIPTION

Referring in detail to the drawings, a strip of pharmaceutical container means, indicated generally at 20 and constructed in accordance with the present invention is illustrated in FIG. 1 and includes a plurality of containers 22, preferably a predetermined number, removably connected to one another.

Each container 22 includes an integrally formed, thin lip portion 24 in surrounding relationship to a cup portion 26.

Lip portion 24 of each container 22 is detachably connected to an adjacent container 22 in tearaway fashion to permit convenient removal of a single container from a strip of containers.

Preferably the container 20 is formed from a clear plastic material such as cellulose acetate or the like using a standard vacuum molding process.

An elongate label strip 30 is preferably placed over the openings of each container 22 to function as a closure after the medicinal dosage has been placed in each row of containers which are placed in a loading tray 42 as shown in FIG. 1.

Label strip 30 preferably is comprised of sheet material such as paper or the like having one side processed with an adhesive material along at least two opposite edge portions approximately coinciding with opposing lip portions 24. The strip 30 is also provided with indicia 32 spaced to coincide with each container 22 to indicate the kind and dosage of the pharmaceutical material disposed in each container.

Strip 30 is also provided with narrowed neck portions 34 positioned between each container to approximately coincide with tearaway portions provided in lip portion 24 to permit the portion of strip 30 between adjacent neck portions 34 to be easily torn away from the adjacent containers 22 comprising container means 20.

Each lip portion 24 of each container 22 includes an integrally formed substantially semi-circular recess 36

on the top surface of opposing side portions which form corresponding protrusions on the underside of the lip portion.

This provides a very important feature in the manufacture, shipping and storage of the containers in addition to providing ease of handling in use by the pharmacist.

In shipment of large quantities of these containers 22, they are readily partially nestable during transit and after receipt by the pharmacist, for storage purposes, as shown in FIG. 3 to provide a substantial economy of space.

The upper adjacent container 22 partially nests in the lower adjacent container with the protrusions of the underside of lip portion 24 on the upper container mating with the recesses 36 on the upper surface of the lower adjacent container.

However, it is important to point out that each container does not fully nest in the lower adjacent container. Therefore a strip of containers may be very conveniently removed from the stack of partially nested containers with great ease and facility. If the container fully nested within one another as do conventional containers, the relatively thin lip portions make it relatively difficult to separate one strip of containers from another. This is time-consuming and frustrating to the user in dealing with a large volume order. A saving of a small amount of time and the added convenience become important factors throughout a working day.

However, when a strip of containers 22 are removed for placement in a loading tray such as 42 in preparation of a volume order of unit doses of a given pharmaceutical, each container 22 is prevented from fully seat-

ing in the respective recess in the tray by the protrusions 36 on the lower side of lip portion 24. Therefore the lip portion 24 is raised slightly above the top surface of the tray for convenient removal by the user as best seen in FIG. 5.

This same feature is very convenient when the filled containers are disposed in distributing trays, similar to the loading trays, for distribution of individual dosage units to patients by the nursing personnel of a large institution.

What is claimed is:

1. A container means for predetermined unit dosages of pharmaceutical materials adapted to be received in a loading tray means provided with spaced container receiving openings disposed on the upward facing surface of the tray comprising, in combination, a plurality of open-mouth containers, each provided with a surrounding integrally formed lip portion removably connected to the lip portion of the next adjacent container, each of said lip portions being provided with an upwardly facing recess having a substantially semi-circular configuration formed integrally with the opposing upper edge portions of the mouth of said container, said recesses forming protrusions of complementary shape on the underside of the lip portions which are adapted to be resiliently seated within a recess of a like container disposed in nested relationship below; and a flat elongate strip of material removably disposed over each of said containers and carrying indicia identifying the contents of each container, said elongate strip including breakaway connections disposed between each container.

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