Dec. 29, 1953 W. A. WINNEBERGER 2,664,224

CAPSULE COMPUTER AND DELIVERY DEVICE

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Fig. 1.

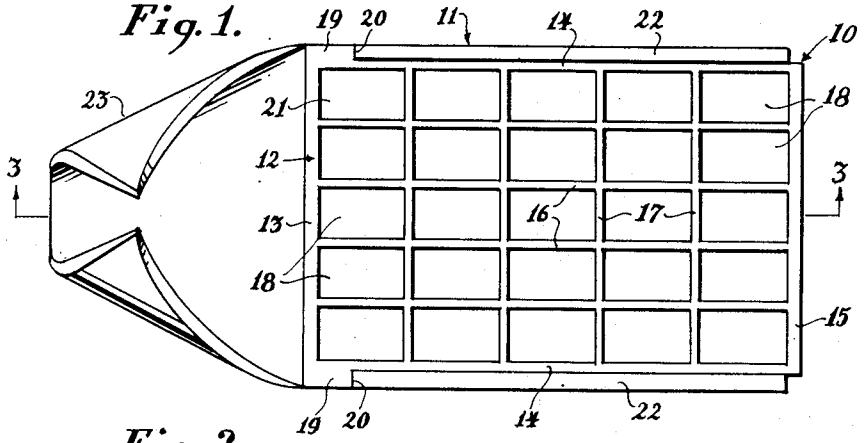


Fig. 2.

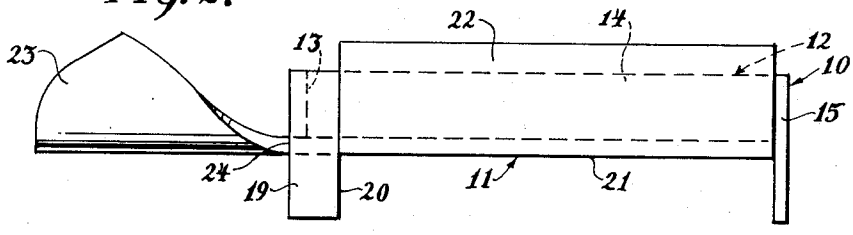


Fig. 3.

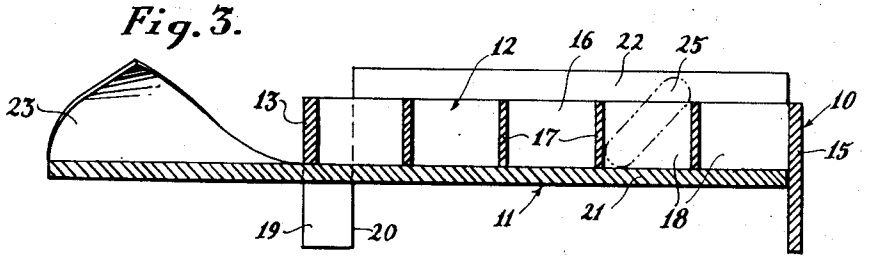
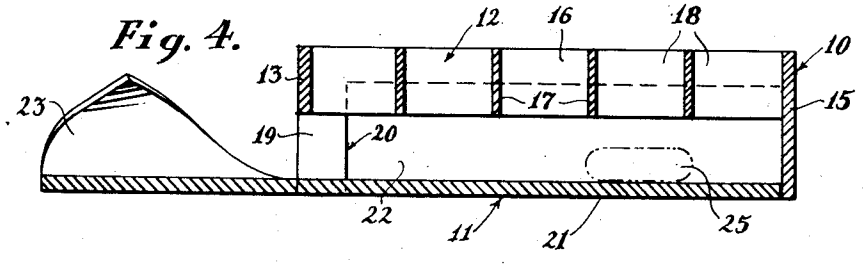


Fig. 4.



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Fig. 5.

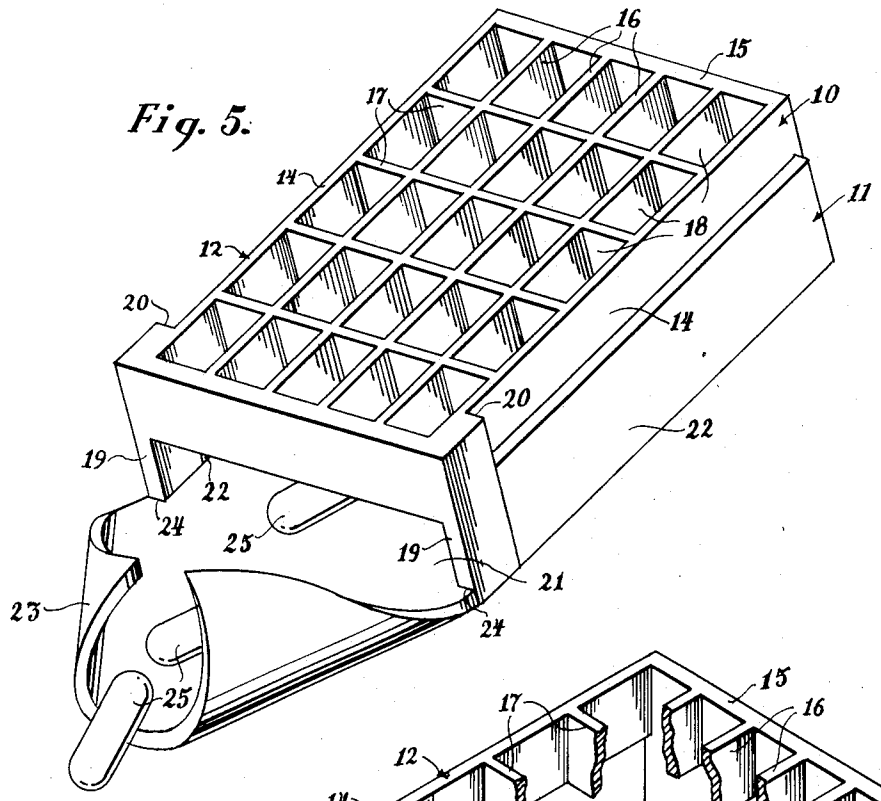
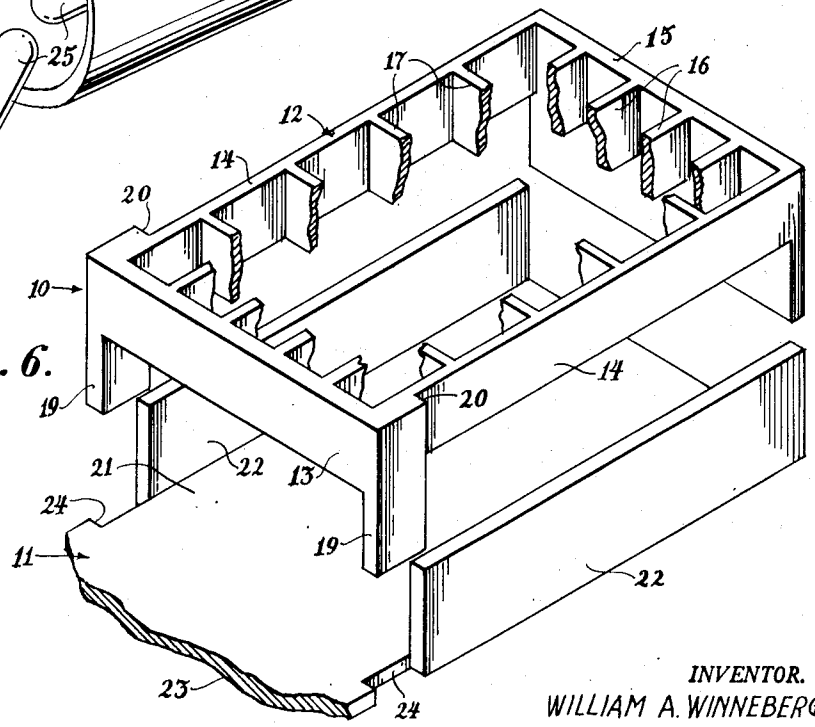


Fig. 6.



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CAPSULE COMPUTER AND DELIVERY DEVICE

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5 Claims. (Cl. 222—9)

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My invention relates to a new and useful capsule computer and delivery device and has for one of its objects to provide an exceedingly simple and effective device which is relatively small, compact, light in weight and readily portable whereby it may be employed by a druggist upon his prescription bench, when compounding capsules, tablets, pills and the like, to expedite his work and reduce to a minimum the likelihood of making and dispensing more or less than the required number of articles ordered.

Often during the compounding of medicinal capsules, pills and the like, a druggist is so engrossed with his work that he misses count of the articles completed and it becomes necessary to stop, possibly several times, to reckon the number of finished individual items, resulting in considerable loss of time. Therefore, another object of this invention is to produce a device having a plurality of compartments in which individual articles are separately placed for indicating or computing the number of such articles by viewing the device to ascertain the number of filled compartments which may be arranged in rows of predetermined numbers to assist the counting performance. The device may also be utilized in computing the number of any small articles by dropping them one at a time into the compartments until certain ones of said compartments are occupied, as one row, two rows or any certain number of rows and a fraction of another row.

Unless a drug store is especially well equipped with apparatus for handling medicinal items, such as capsules, in particular, pills, tablets and the like, these items are usually placed upon the bench and then picked up, one at a time, or placed in some make-shift pouring appliance and placed or dumped into a container, such as a box or bottle. To overcome these objectionable features, another object of the present invention is to provide a tray to receive the articles after being computed, said tray having a spout whereby the articles may be poured as a group from the tray in one operation.

A further object of this invention is to produce a device of the kind mentioned comprised of a tray, provided with a spout, slidably connected to a footed and compartmented cradle, said tray initially functioning as a bottom for the cradle body and subsequently acting as a gathering and dispensing medium to direct articles formerly within the cradle into a suitable container in which they are delivered to a customer.

A still further object of the invention is to produce an article computer and delivery device consisting of a cradle member including a front end wall, side walls, a rear end wall having a portion extending below the plane of the front end and side walls to function as a leg or foot, front offset from the outside surfaces of their respective side walls and partitions between the end and side walls to form compartments, and a tray member including a bottom and side walls having a normally open rear end closed by the rear end wall of the cradle member and provided with a spout at the forward end, said tray member being vertically slidably connected to the cradle member with a snug force fit whereby the tray member may be held in either an elevated or depressed position relative to said cradle member to function as a bottom for the cradle member or a pouring medium for articles which have descended from said cradle member due to depression of said tray member.

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With the above and other objects in view this invention consists of the details of construction and combination of elements hereinafter set forth and then designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, referring by numerals to the accompanying drawings forming a part hereof, in which:

Fig. 1 is a top plan view of a capsule counter and delivery device constructed in accordance with my invention.

Fig. 2 is a side elevation thereof with the tray elevated so the device is ready for use as a computer and holder for articles in individual separate compartments.

Fig. 3 is a section on the line 3—3 of Fig. 1 with the tray member in the elevated position.

Fig. 4 is a similar view showing the tray member depressed.

Fig. 5 is a view in perspective and looking at the front end of the device while in a tilted position for the pouring operation.

Fig. 6 is an exploded view, in perspective, with portions broken away and shown in section to illustrate the assembling relation of the two members.

In carrying out my invention as herein embodied 10 represents the upper or cradle and supporting member and 11 is the companion or tray member vertically slidably mounted within portions of said cradle member and supported by the latter due to a force fit between the members.

The cradle 10 includes a body 12 comprised of a front end wall 13, parallel side walls 14, a rear

end wall 15, the lower portion of which projects below the plane of the bottom edges of the front end and side walls, and longitudinal and transverse partitions 16 and 17, respectively, dividing the interior of the body into a plurality of rows of separate and individual compartments 18. The tops and bottoms of all of said compartments are normally open and the upper edges of the walls and partitions are, preferably, flush or in the same plane.

The rear end wall 15 extends a sufficient distance below the lower edges of the other walls of the body to also function as one or the rear supporting leg or foot. The front end of the body is supported by front side legs 19 which are offset laterally from the body side walls 14 to form vertical shoulders 20 opposed to the forward or inner face of the rear wall 15 and its lower portion or pendant extension and spaced a definite distance therefrom.

The tray 11 consists of a bottom 21, perpendicular side walls 22 and a forwardly extending spout 23, of any suitable configuration, projecting from the forward portion or end of said bottom. The front and rear ends of the tray are normally open and the rear edge of the bottom 21 is substantially the same distance from the forward edges of the side walls as that between the inner face of the rear wall 15 and the shoulder 20 so that portions of the tray have a force fit with said rear wall and shoulders. In addition the tray side walls 22 telescope on the exteriors of the cradle side walls 14 with a force fit. Also the side edges of the tray bottom may be notched at 24 contiguous the forward edges of the tray side walls whereby the border edges of said notches may engage the forward side legs with a force fit. Thus it will be apparent that the tray bottom snugly but forcibly slidably fits within the legs of the cradle and the tray side walls are similarly arranged with relation to the cradle side walls and the shoulders 20 and said tray side walls are of sufficient height to overlap the cradle side walls whether the tray is elevated, Fig. 3, or depressed as depicted in Fig. 4. When the tray is in the lower position it is level with the bottom ends of the front side legs 19 and that portion of the cradle rear wall which functions as the rear leg.

In practice, the tray is elevated, as shown in Figs. 1, 2 and 3, so that the bottoms of all of the compartments are closed and because of the force fit between the cradle and tray the latter will remain elevated until some outside force is applied thereto. As capsules 25, or other articles, are made up they are individually placed in separate compartments, Fig. 3, until a desired number of the compartments are occupied thus computing or indicating the required number without actually having to count the articles. Upon completion of the order, the tray sides are pushed down by hand until the tray, as a whole, is depressed, Figs. 4 and 5, at which time the articles will descend with the tray bottom and rest thereon as indicated in Fig. 4. As the tray sides are higher than the distance between the bottom of the cradle body and the lower ends of the legs and since the pendent extension of the cradle rear wall is as long as the legs 19, the sides and rear of the tray will be continuously closed. By grasping the sides of the device, especially the tray side walls, between the thumb and fingers and tilting the device with the spout downwardly the articles can be readily poured into a container, such as a bottle or box, without the likelihood of spilling, and delivered to a customer with the full knowledge that the proper number of articles are in the container.

The device can be manufactured from any suitable material and if made from any of the well known plastics it will be neat in appearance, easily maintained in a sanitary condition, light in weight for ready manipulation, and compact so that it may be stored in a small space.

Of course I do not wish to be limited to the exact details of construction herein shown and described as these may be varied within the scope of the appended claims without departing from the spirit of my invention.

Having described my invention what I claim as new and useful is:

1. A capsule computer and delivery device comprising a compartmented cradle having a rear wall also functioning as a rear leg, front side legs at the forward end of said body, and a tray having a spout at the forward end and perpendicular side walls ,said tray forcibly vertically slidably mounted on the cradle in a position whereby the rear end of the tray is closed by the cradle rear wall and the tray side walls overlap the cradle side walls and whereby the tray may be temporarily held in an elevated position to function as the bottom for the compartmented cradle and depressed to provide an exit under the cradle leading to the spout while the sides and rear remain closed.

2. In a device of the character described, a cradle, and a tray cooperatively vertically slidably connected to said cradle, said cradle comprising a compartmented body including a front end wall and side walls all of the same height and a rear end wall having its upper edge in the same plane as the upper edges of said front and side walls and provided with a portion extending below the lower edges of said front and side walls, said extending portion functioning as a rear leg for the cradle, front side legs on the body offset relative to the cradle side walls, and shoulders formed by the rear surfaces of said front side legs and opposed to the inner surface of the cradle rear wall, said tray comprising a bottom wall, perpendicular side walls and a spout at the forward end, both ends of said tray being normally open, the distance between the forward ends of the tray sides and the rear end of the tray bottom being substantially the same as the distance between the shoulders and the inner surface of the cradle rear wall, said shoulders and inner surface snugly and forcibly fitting the forward edges of the tray side walls and rear edge of the bottom, respectively, to maintain the tray in an elevated position whereby the bottom wall acts at a bottom for the cradle body and in a depressed position to cause articles to travel therein towards the spout when the device is tilted, the tray side walls telescoping and overlapping the exterior faces of the cradle side walls.

3. The structure according to claim 2 wherein the tray bottom is notched at both sides contiguous the forward ends of the tray side walls to receive the front side legs of the cradle, the edges of said notches having a force fit with said front side legs of the cradle.

4. The structure according to claim 2 wherein the distance between the exterior surfaces of the cradle side walls is the same as the distance between the interior surfaces of the tray side walls to provide a force fit between the coacting side walls.

5. In a device of the character described, a

cradle including a body having longitudinal and transverse partitions within the same to divide the interior thereof into rows of individual compartments open at the top and bottom, said body including a rear wall extending below the bottom thereof to function as a support for the rear end of the cradle, legs at the forward end of the body to support the forward end of said cradle, said cradle being located above the surface on which the rear wall and legs are resting, and a tray having a spout at one end, said tray being forcibly slidably connected to the rear wall and legs of the cradle whereby the tray is temporarily held in an elevated position to function as the bottom of the cradle and is forcibly depressed while the cradle remains at rest to provide an opening communicating with the spout.

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