

April 4, 1961

W. J. JESTER
REVOLVABLE TRAY

2,978,285

Filed July 2, 1959

2 Sheets-Sheet 1

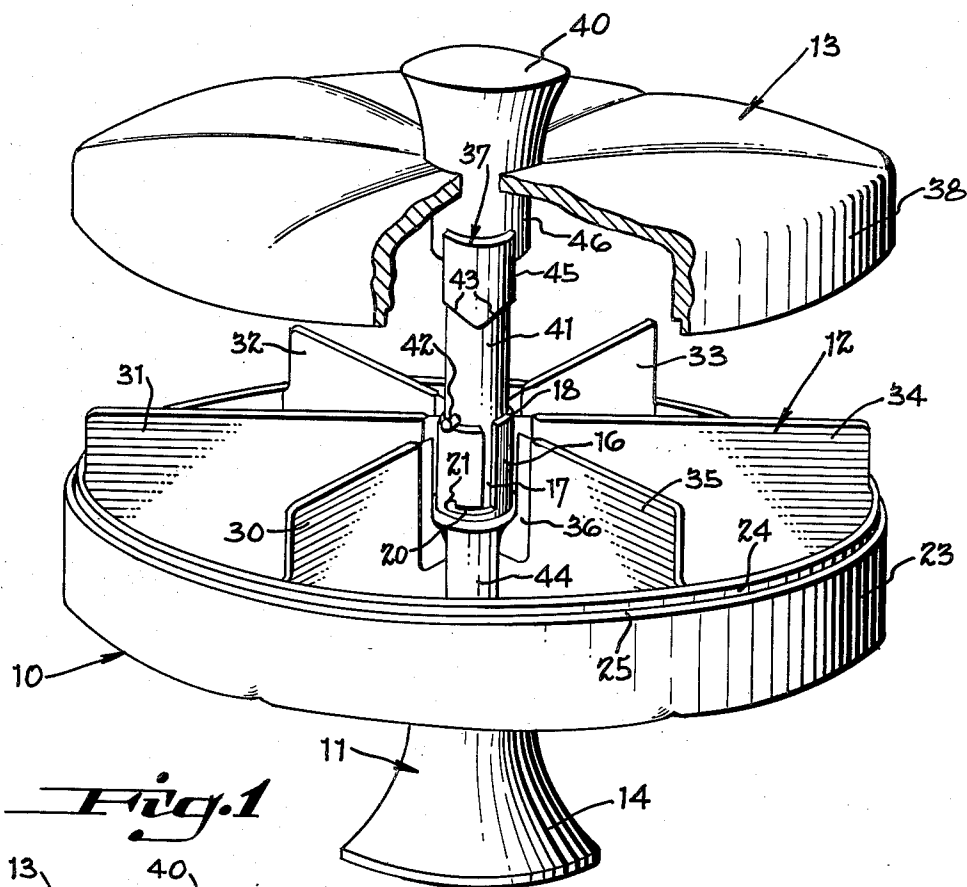


Fig. 1

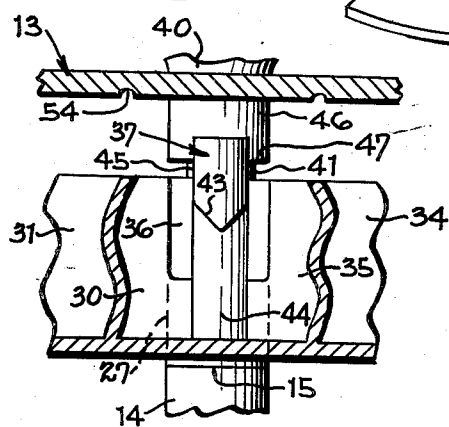


Fig. 5

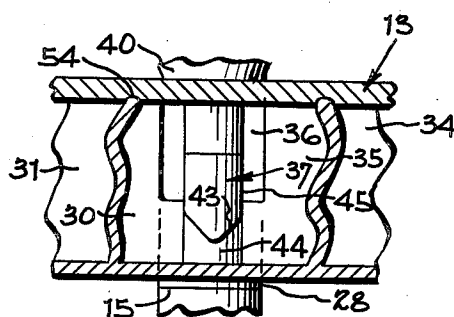


Fig. 6

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2 Sheets-Sheet 2

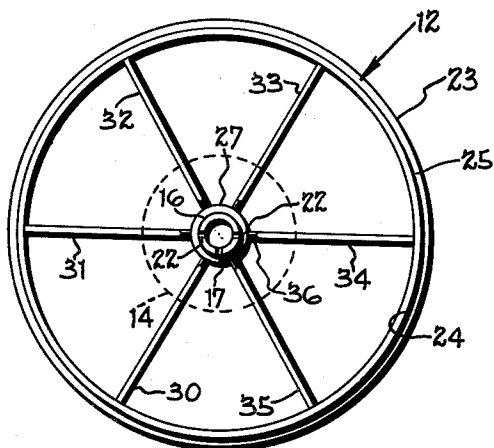


Fig. 3

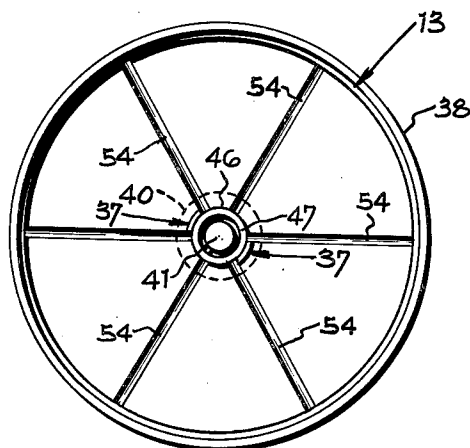


Fig. 4

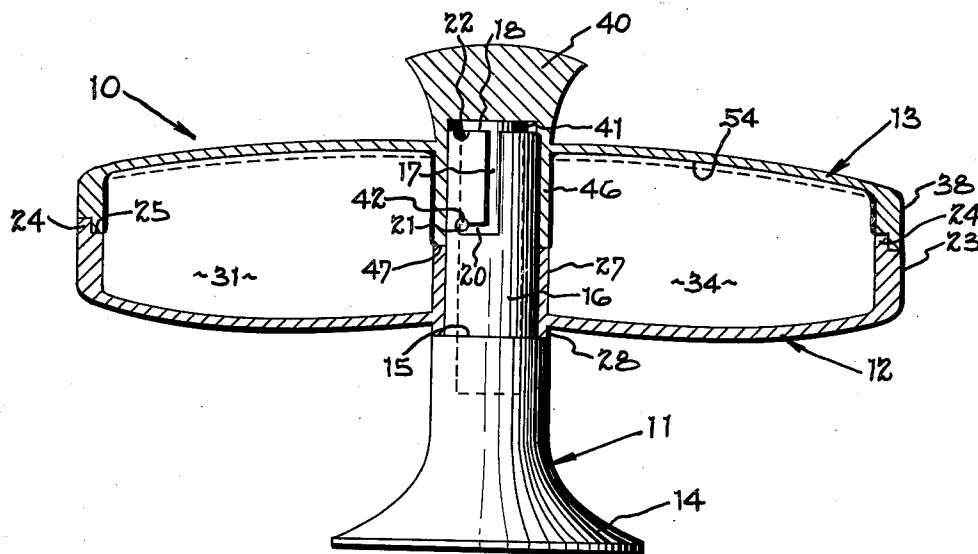


Fig. 2

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1

2,978,285

REVOLVABLE TRAY

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8 Claims. (Cl. 312-284)

This invention relates to revolvable trays of the Lazy Susan type and is particularly directed to a novel compartmented tray construction including a lid shiftably mounted so that in one position it is adapted to tightly seal the contents of the tray and in another position is supported a substantial distance above the tray, providing a ready access to the contents of the tray compartments.

It is becoming increasingly common practice for individuals and even entire families to supplement their daily diets by means of food supplement tablets, vitamin pills, or the like. It is customarily recommended that these tablets or pills be taken regularly at meal times. There are additional numbers of people required to take various mineral capsules, or other preparations at meal times.

The principal object of the present invention is to provide a novel tray particularly adapted to be placed on a dining table, or the like, for storing food supplement tablets, vitamin pills, mineral capsules, and the like. More particularly, the present invention contemplates a revolvable tray of the Lazy Susan type having a plurality of individual compartments adapted to receive and maintain in separate groups large numbers of tablets, pills, or capsules.

A further object of the present invention is to provide a tray unit including a movably mounted lid adapted to tightly seal the pills or tablets carried by the tray to protect them against contamination or deterioration. The support for the lid is constructed so that the lid can be shifted and held in a position in which it is spaced a substantial distance above the tray so that the contents of the tray can readily be removed.

One advantage of the present tray construction is that it provides an attractive means to store food supplement tablets and other pills right at the point where they are normally consumed; i.e., the dining room table. Thus, the present tray completely eliminates the need for maintaining a number of unsightly bottles or boxes right in the dining area.

Another advantage of the present invention is that the lid member is an integral part of the tray construction and is never completely disengaged from the tray unit even when the tray contents are exposed. Thus, there is no possibility that the lid can become misplaced or accidentally dropped and broken.

A still further advantage of the present tray unit is that it is of extremely simple construction comprising only three elements; a base member for rotatably supporting a tray and a lid.

More particularly, in a preferred embodiment of the invention, a tray is rotatably supported on a base member. The tray is provided with a plurality of generally radial partitions dividing the tray into a number of compartments. A lid member is mounted above the tray and is both rotatably and telescopically mounted upon the base. The lid member includes radial grooves corresponding in number to the partitions of the tray. These radial grooves are adapted to tightly receive the upper-

2

most ends of the partitions when the lid is clamped in its closed position over the tray. The lid is also provided with a peripheral lip adapted to receive in nested engagement a similar lip formed in the outer wall of the tray.

These lips provide a double seal around the periphery of the tray. Thus, when the lid is clamped in its closed position, the contents of the various compartments of the tray are not only sealed from the atmosphere, but are also sealed from one another.

One of the objects of the present invention is to provide means for automatically aligning the grooves in the lid with the partitions on the tray when the lid is shifted to its closed position. In a preferred embodiment, these means comprise a plurality of downwardly facing guide member carried by the lid and adapted to enter the spaces between adjacent compartment partitions of the tray. If the tray is not properly aligned relative to the lid, the downward motion of the lid causes these guide fingers to rotate the tray until the tray partitions are brought into proper alignment with the lid grooves.

These and other objects and advantages of the present invention will be more readily apparent from a further consideration of the following detailed description of the drawings illustrating a preferred embodiment of the invention.

In the drawings:

Figure 1 is a perspective view of a tray unit constructed in accordance with the principles of the present invention, a portion of the lid being broken away to show details of construction.

Figure 2 is a vertical cross-sectional view through the tray and lid showing the lid in its closed position.

Figure 3 is an elevational view of the tray with the lid removed.

Figure 4 is a bottom view of the lid.

Figure 5 is an enlarged view of the lid and tray aligning means, the lid being partially lowered into its closed position.

Figure 6 is an enlarged cross-sectional view similar to Figure 5 showing the lid in its closed position.

As is shown in Figure 1, a preferred form of tray unit constructed in accordance with the principles of the present invention comprises a base member 11, a compartmented tray member 12 rotatably supported on base 11, and a lid member 13 rotatably and telescopically mounted on base member 11. The tray member 12 is adapted to hold food supplement tablets, pills, capsules, or the like, while lid 13 is adapted to be supported in a closed position, such as shown in Figure 2 to form a sealed container for these items or is adapted to be supported in an elevated position, such as is shown in Figure 1 providing ready access to the contents of the tray compartments.

More particularly, as is best shown in Figures 1, 2, and 3, base member 11 is formed of any suitable material, such as molded plastic, ceramic, metal or the like. Base member 11 comprises a flared pedestal portion 14 having an upwardly facing shoulder 15 surrounding a hollow sleeve 16 which extends upwardly beyond the shoulder. Sleeve 16 is press-fit or otherwise firmly mounted within an opening in base member 11. The sleeve is provided with a pin receiving groove 17. This groove extends vertically from the uppermost edge 18 of the sleeve downwardly to a point above shoulder 15. The groove includes a horizontal portion 20 terminating in a retaining recess 21. The upper edge 18 of the sleeve is provided with two spaced pin retaining recesses 22.

Tray member 12, as is best shown in Figures 1 and 2, is formed of any suitable material such as molded plastic or ceramic and is generally round in configuration. The tray includes a vertical peripheral wall 23 having an inwardly spaced upstanding lip 24 forming a shoulder 25

for receiving the bottom edge of lid 13. The tray member also includes an inner cylindrical sleeve portion 27 adapted to telescopically receive sleeve section 16 of the base member. Sleeve 27 of the tray terminates in a bottom shoulder 28 adapted for rotatable engagement with shoulder 15 of the base section.

Tray member 12 is further provided with a plurality of spaced radial partitions 30, 31, 32, 33, 34 and 35. These partitions extend outwardly from inner sleeve 27 to outer vertical wall 23, are of a height substantially greater than the height of the wall 23, and are effective to divide the tray into six compartments. As is best shown in Figures 1 and 3, the innermost end of each of the partitions 30-35 is preferably relieved as at 36 to form an upwardly sloping camming notch adapted to cooperatively engage a guide finger 37 associated with lid member 13.

Lid member 13 is also formed of any suitable material, such as molded plastic, and is of a generally inverted dish shape including a peripheral depending wall 38 adapted to snugly fit around upstanding lip 24 formed on wall 23 of the tray member. Lid member 13, as is best shown in Figures 1, 2 and 4, further includes an integral knob portion 40 disposed on the upper surface of the lid. The lid also includes a depending center stem 41 adapted to be telescopically received within sleeve 16 of the base member. Stem 41 carries a radially extending locking pin 42 spaced upwardly from the lower end of the stem, the pin being adapted to be received within slot 17 and to rest upon retaining recesses 22 formed on the upper shoulder of the sleeve.

Lid member 13 also carries one or more downwardly facing guide fingers 37. Each of these guide fingers includes two downwardly sloping, angulated cam faces 43 forming a downwardly projecting V adapted to enter the space between the adjacent partitions; e.g., the space 44 between partitions 30-35 of the tray member. Each of the guide fingers 37 also includes two vertical parallel side edges 45 spaced apart substantially the same distance as the innermost portions of adjacent partitions.

The lid member 13 further includes a central sleeve like portion 46 which, as is shown in Figure 2, is of the same radius as sleeve member 27 of tray member 12 so that when the lid is lowered to its closed position, as is shown in Figure 2, the lowermost rim 47 of sleeve 46 abuts the uppermost edge of sleeve 27. As is best shown in Figure 4, a plurality of radially extending downwardly opening grooves 54 extend between sleeve 46 of the lid and peripheral wall 38. These grooves correspond in number and in spacing to the partitions 30-35 of the tray member 12. Each of the grooves 54 is adapted to receive the upper rim of the adjacent partition when the lid is in the closed position, as shown in Figure 2.

In use, the compartments in the tray member 12 are filled with the desired food supplement tablets, pills, capsules, or the like, the partitions being effective to maintain the various types of tablets separate from one another. While the compartments are being filled, the lid is supported in the position shown in Figure 1 with pin 42 residing in engagement with one of the notches 22 formed on the upper edge of sleeve 16 while stem 41 is telescopically received within base sleeve 16. As is shown in Figure 1, the lid when supported in this position is spaced a substantial distance above the tray member allowing ready access to the tray. The lid is also supported in this uppermost position when the tablets, or the like, are to be removed from the tray compartments.

The tray unit is preferably placed upon a dining room table and the various people at the table can easily reach the particular tablets desired by rotating the tray 10 about sleeve 16. After the compartments have been filled, or the desired contents withdrawn, the user rotates knob 40 to bring pin 42 into registry with vertical groove 17. Thereafter the lid is lowered. Assuming that the

partitions 30-35 of the tray are not in alignment with the downwardly facing grooves 54 of the lid, one of the angulated camming faces 43 of guide finger 37 engages one of the angulated notches 36 of the partitions 30-35 in the manner shown in Figure 5. Thereafter as the lid is lowered further the cooperative engagement of the guide finger and partitions causes the tray member to rotate until the corresponding partitions and webs are aligned and vertical side edges 45 of the guide member pass between the opposed walls of the adjacent partitions as is shown in Figure 6.

With the lid in its closed position, the upper edges of each of the divider partitions is received within one of the grooves 54 of the lid. Also, the peripheral wall 38 of the lid is in engagement with the lip 24 of the tray member and the shoulders of sleeve members 27 and 46 are in abutment. Thus the lid not only effectively seals the compartments from the outside atmosphere, but also each of the compartments is sealed from the adjacent compartments. When the lid is completely lowered to the position shown in Figure 2, the lid is again rotated slightly (together with the tray) to force pin 42 into horizontal leg 20 of groove 17 and finally into the retaining notch, or recess, 21 at the end of this leg. The lid member preferably is slightly resilient so that it forces pin 42 upwardly slightly into the recess locking the lid firmly in place.

To again raise the lid, the lid is first pressed downwardly then is rotated to bring pin 42 into registry with the vertical portion of slot 17. Thereafter the lid is raised to disengage pin 42 from slot 17. Finally the lid is again rotated slightly until pin 42 is brought to rest in one of the supporting notches 22 formed on the upper edge of sleeve 16. The lid can be released and is self-supported in this position spaced a substantial distance above the tray to provide ready access to the contents of the tray.

From the foregoing disclosure of the general principles of the invention and the above description of a preferred embodiment, those skilled in the art will readily comprehend various modifications which can be made in the embodiment shown without departing from the invention. Therefore, I desire to be limited only by the scope of the following claims.

Having described my invention, I claim:

1. A tray unit comprising a base member, a tray member, and a lid, said base member including an upwardly extending hollow sleeve having a vertical slot formed therein, said tray member having a central opening receiving said sleeve and being rotatably mounted upon said base member with said sleeve projecting upwardly beyond said tray member, said lid having a depending stem telescopically receivable within said sleeve, a radial projection on said stem, said projection being spaced upwardly from the lowermost end of said stem and being adapted to be received within said slot when said lid is disposed in a closed position in engagement with said tray member, said pin also being adapted to engage the upper edge of said sleeve to support the lid in an upper position spaced from the tray.

2. A tray unit comprising a base member, a tray member, and a lid, said base member including an annular shoulder, an upwardly extending hollow sleeve extending above said shoulder and having a vertical slot formed therein, said tray member having a peripheral wall, a central opening receiving said sleeve and being rotatably mounted upon said shoulder with said sleeve projecting upwardly beyond said tray member, said lid including a depending peripheral wall having a depending stem telescopically receivable within said sleeve, a radial projection on said stem, said projection being spaced upwardly from the lowermost end of said stem and being adapted to be received within said slot when said lid is disposed in a closed position with the depending wall thereof in

5

engagement with the peripheral wall of the tray member, said pin also being adapted to engage the upper edge of said sleeve to support the lid in an upper position spaced from the tray.

3. A tray unit comprising a base member, a tray member, and a lid, said base member including an upwardly extending hollow sleeve having a vertical slot and a connecting horizontal slot, said sleeve terminating in an upper edge having a recess formed therein, a shoulder surrounding said sleeve, said tray member having a central opening receiving said sleeve and being rotatably mounted upon said shoulder with said sleeve projecting upwardly beyond said tray member, said lid having a depending stem telescopically receivable within said sleeve, a radial projection on said stem, said projection being spaced upwardly from the lowermost end of said stem and being adapted to be received within said horizontal slot when said lid is disposed in a closed position in engagement with said tray member, said pin also being adapted to engage the recess in the upper edge of said sleeve to support the lid in an upper position spaced from the tray.

4. A tray unit comprising a base member, a tray member, and a lid, said base member including an upwardly extending hollow sleeve having a vertical slot formed therein, a shoulder surrounding said sleeve, said tray member having an upstanding peripheral wall, a central opening receiving said sleeve and being rotatably mounted upon said shoulder with said sleeve projecting upwardly beyond said tray member, said tray member being provided with a plurality of radially extending partitions effective to divide said tray into a plurality of compartments, said lid having a depending peripheral wall and a plurality of radially extending grooves disposed to receive said partitions, said lid being provided with a depending stem telescopically receivable within said sleeve, a radial projection on said stem, said projection being spaced upwardly from the lowermost end of said stem and being adapted to be received within said slot when said lid is disposed in a closed position with said depending wall in engagement with the upstanding wall of the tray member and with said grooves in engagement with said partitions, said pin also being adapted to engage the upper edge of said sleeve to support the lid in an upper position spaced from the tray.

5. A tray unit comprising a base member, a tray member, and a lid, said base member including an upwardly extending hollow sleeve having a vertical slot formed therein, a shoulder surrounding said sleeve, said tray member having an upstanding peripheral wall, a central opening receiving said sleeve and being rotatably mounted upon said shoulder with said sleeve projecting upwardly beyond said tray member, said tray member being provided with a plurality of radially extending partitions effective to divide said tray into a plurality of compartments, said lid having a depending peripheral wall and a plurality of radially extending grooves disposed to receive said partitions, said lid being provided with a depending stem telescopically receivable within said sleeve, a radial projection on said stem, said projection being spaced upwardly from the lowermost end of said stem and being adapted to be received within said slot when said lid is disposed in a closed position with said depending wall in engagement with the upstanding wall of the tray member and with said grooves in engagement with said partitions, said pin also being adapted to engage the upper edge of said sleeve to support the lid in an upper position spaced from the tray, and means for aligning said grooves and partitions when said lid is lowered.

6. A tray unit comprising a base member, a tray member, and a lid, said base member including an upwardly extending hollow sleeve having a vertical slot formed therein, a shoulder surrounding said sleeve, said tray member having an upstanding peripheral wall, a central

6

opening receiving said sleeve and being rotatably mounted upon said shoulder with said sleeve projecting upwardly beyond said tray member, said tray member being provided with a plurality of radially extending partitions effective to divide said tray into a plurality of compartments, said lid having a depending peripheral wall and a plurality of radially extending grooves disposed to receive said partitions, said lid being provided with a depending stem telescopically receivable within said sleeve, a radial projection on said stem, said projection being spaced upwardly from the lowermost end of said stem and being adapted to be received within said slot when said lid is disposed in a closed position with said depending wall in engagement with the upstanding wall of the tray member and with said grooves in engagement with said partitions, said pin also being adapted to engage the upper edge of said sleeve to support the lid in an upper position spaced from the tray, and means for aligning said grooves and partitions when said lid is lowered, said last named means comprising a guide member mounted on said lid adjacent to said stem and having two angularly disposed camming faces adapted to engage said partitions.

7. A tray unit comprising a base member, a tray member, and a lid, said base member including an upwardly extending hollow sleeve having a vertical slot formed therein, a shoulder surrounding said sleeve, said tray member having an upstanding peripheral wall, a central opening receiving said sleeve and being rotatably mounted upon said shoulder with said sleeve projecting upwardly beyond said tray member, said tray member being provided with a plurality of radially extending partitions effective to divide said tray into a plurality of compartments, said lid having a depending peripheral wall and a plurality of radially extending grooves disposed for respective engagement with said partitions, said lid being provided with a depending stem telescopically receivable within said sleeve, a radial projection on said stem, said projection being spaced upwardly from the lowermost end of said stem and being adapted to be received within said slot when said lid is disposed in a closed position with said depending wall in engagement with the upstanding wall of the tray member and with said grooves in engagement with said partitions, said pin also being adapted to engage the upper edge of said sleeve to support the lid in an upper position spaced from the tray, and means for aligning said grooves and partitions when said lid is lowered, said last named means comprising a guide member mounted on said lid adjacent to said stem and having two angularly disposed camming faces adapted to engage said partitions, said partitions having angulated notches for cooperative engagement with said camming faces.

8. A tray unit comprising a base member, a tray member, and a lid, said base member including an upwardly extending hollow sleeve having a vertical slot formed therein, a shoulder surrounding said sleeve, said tray member having an upstanding peripheral wall, a central opening receiving said sleeve and being rotatably mounted upon said shoulder with said sleeve projecting upwardly beyond said tray member, said tray member being provided with a plurality of radially extending partitions effective to divide said tray into a plurality of compartments, said lid having a depending peripheral wall and a plurality of radially extending grooves disposed for respective engagement with said partitions, said lid being provided with a depending stem telescopically receivable within said sleeve, a radial projection on said stem, said projection being spaced upwardly from the lowermost end of said stem and being adapted to be received within said slot when said lid is disposed in a closed position with said depending wall in engagement with the upstanding wall of the tray member and with said grooves in engagement with said partitions, said pin also being adapted to engage the upper edge of said sleeve to sup-

port the lid in an upper position spaced from the tray, and means for aligning said grooves and partitions when said lid is lowered, said last named means comprising a guide member mounted on said lid adjacent to said stem and having two angularly disposed camming faces and two vertical edges adapted to engage said partitions. 5

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