July 5, 1960 D. L. ARNOLD 2,944,124

DISPENSER PACKAGE

Filed Oct. 16, 1959 2 Sheets-Sheet 1

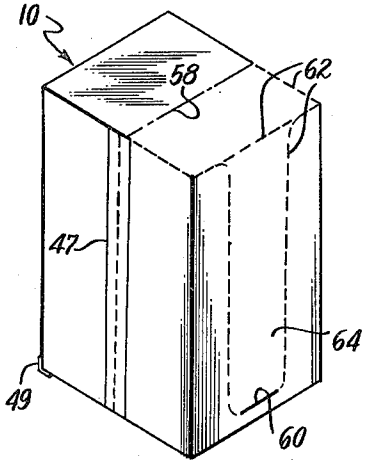


Fig. 1.

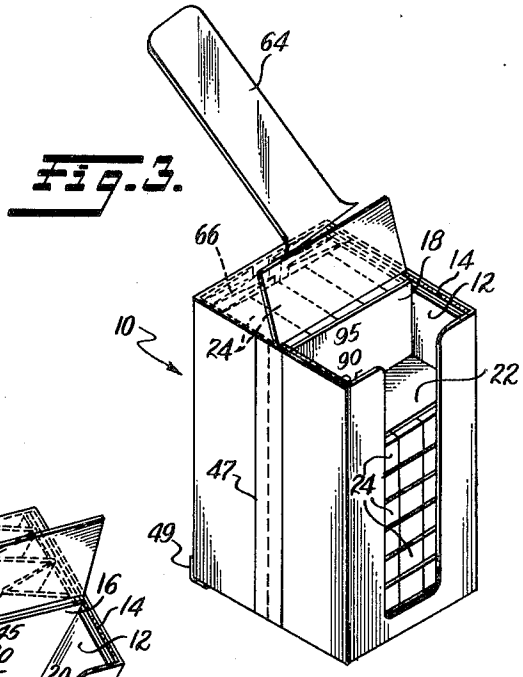


Fig. 3.

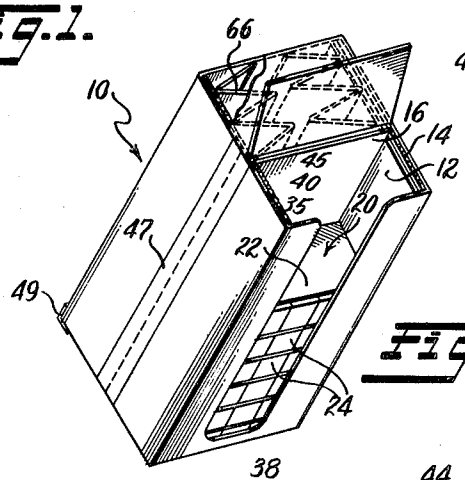


Fig. 4.

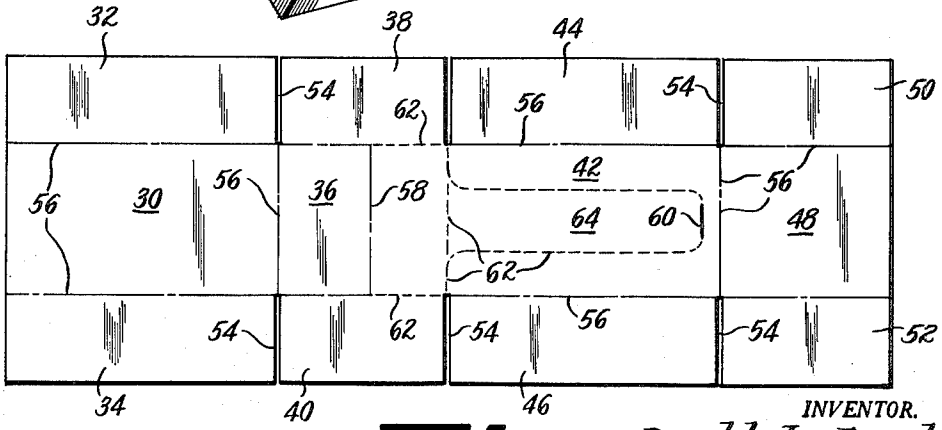


Fig. 5.

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DISPENSER PACKAGE

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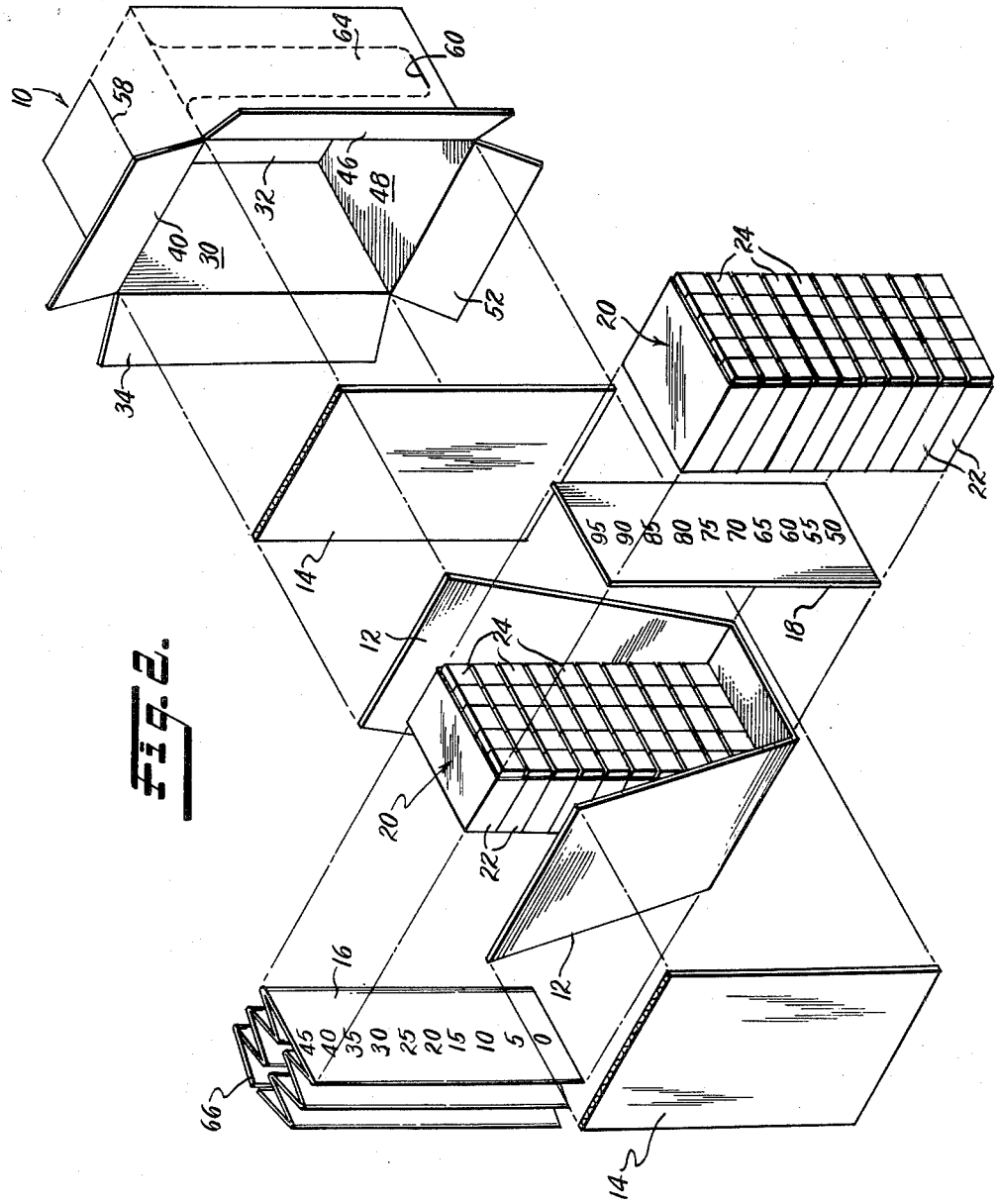


Fig. 2.

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DISPENSER PACKAGE

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9 Claims. (Cl. 206—55)

The present invention relates to dispenser packages, and more specifically to those packages which are provided with indicia uncovered by removal of articles from the package to denote the number of units remaining in the package.

In particular, the invention relates to a package with articles arranged therein in stacked relation, and with at least one other stack of articles arranged in back of the first stack, there being a movable partition or pad behind each stack.

It is an object of the invention to provide a package including at least two stacks of articles, arranged one stack behind the other, with a partition or pad between the stacks and with the partition behind the rearmost stack in the form of a follower which is urged forwardly to shift the rearmost stack forwardly when a front stack has been removed from the package.

It is a further object of the invention to provide the partitions or pads with indicia, to be exposed by article removal, to indicate to an observer the number of articles remaining in the package.

By way of illustration of the invention, and not as limitive thereof, the articles here shown are kits or packets of five cartoned electron tubes, the packets being stacked on one another, with two stacks of packets, one behind the other. Obviously, as will be apparent upon further reading of the specification, more than two stacks of articles may be provided in following the teachings of the invention.

In the illustrated embodiment of the invention,

Fig. 1 is a perspective view of an unopened package.

Fig. 2 is an exploded view of the package.

Fig. 3 is a view of the package opened for dispensing of tube cartons and of packets, a number of front packets having been removed.

Fig. 4 is a perspective view of a package with all of the front packets, a pad, and a number of rear packets removed, parts being broken away, and

Fig. 5 is a plan view of the blank from which the outer container is formed.

Now referring to the drawings in greater detail, at 10 is shown the outer container, housing within it a smooth faced tripartite filler sheet 12, a pair of corrugated buffer sheets 14, a back partition 16 in the form of a follower, a front partition 18, and packets 20 consisting of open ended boxes 22 and cartons 24 each containing, for example, an electron tube.

The blank from which the outer container is formed is shown in Fig. 5. It is made of corrugated cardboard, as thick as may be desired. The corrugated cardboard has a back panel 30 with two wing portions 32 and 34 to form parts of the sides of the container, a top panel 36 with side wing portions 38 and 40, a front panel 42 with two wing portions 44 and 46 to cooperate with wing portions 32 and 34 to complete the sides of the container and a bottom panel 48 with side wing portions 50 and 52. In the completed closed carton, the side portions 38, 40, 50 and 52 lie within and are in glued contact with the side portions 32, 34, 44 and 46, and paper or fabric ribbons 47 are taped over the abutting edges of the side wing portions of the carton as well as over the junction between the free edge of the bottom panel and the lower edge of the rear panel, as indicated at 49. The blank is slotted as indicated at 54 to facilitate bending back of the respective flaps and is scored at the lines 56, also to facilitate such bending. It is further scored substantially midway of the top panel as indicated at 58. To provide an access opening to the completed container, the blank is slit at what will be the lower portion of the front panel, as indicated at 60, and perforated vertically of the front panel as well as along the upper edge of the front panel and part way back on the top panel edge, as indicated at 62, all to provide a tongue 64. When it is desired to gain access to the contents of the closed package, the lower end of the tongue is brought out at the slit portion 60, as by inserting a blade in the slit and pulling the tongue, and the tongue is ripped up to the top panel, whereat it is torn off. Then the forward half of the top panel is torn at the perforated lines 62 and bent back about the score line 58 in the top panel, as will be clear from a consideration of Fig. 3.

To protect the tubes in the cartons against breakage due to lateral pressures, there is positioned within the container and in juxtaposition to each of the side panels of the container, the corrugated buffer cardboard sheet 14, the same being equal in size to the inner dimensions of the side panels and of suitable thickness. Then to provide for ease in assembling an entire group of packets within the container there is provided the stirrup like smooth surfaced tripartite cardboard sheet 12 having a bottom portion substantially equal to the inner forward to back dimension of the bottom panel and two vertical side portions to substantially lie against and cover the inner faces of the buffer sheets. If desired the assembly of sheets 14 and 12 may be replaced by a single tripartite corrugated sheet bent like the sheet 12 and provided with an inner smooth face.

The cartons 24 are parallelepipeds and are arranged five in a horizontal row in a box 22, each box being rectangular in vertical cross section and provided with an open front. Each of the boxes is of a size to accommodate five of the cartons with tubes therein, and the cartons are of a depth front to back greater than the forward to rear dimension of the box 22 so that a tube carton can easily be grasped by the fingers to be pulled from the box. In between the front and rear stacks of packets is the vertical partition plate or pad 18 of corrugated cardboard of a size to slide forward easily between the vertical walls of the tripartite cardboard 12 and marked with a vertical column of indicia. Where there are five cartons laterally in a box and ten boxes in a vertical stack to fill the vertical height of the container, there would be fifty cartons in a stack. In two stacks, one back of the other, there would be a hundred cartons. With such an arrangement the partition or card 18 would have the numbers 95, 90, 85 down to 50 arranged thereon in arithmetical progression and with the indicia spaced apart so that they are centrally behind backs of each of the packets 20. Thus while originally there are 100 tube cartons in the container, when the first available packet is removed, i.e. the front top packet, the number 95 would be exposed indicating that there are 95 cartons left in the container. Obviously the complements of the number with respect to 100 may be used instead of the numbers actually shown to advise one how may tubes have been removed, rather than how many remain. When the last of the front packets have been removed, the bottommost number on the card or partition 18 indicates that 50 cartons

remain in the container. Now the front card **18** may be removed.

In back of the last stack of packets, in the illustrated species of the invention, in back of the second stack of packets, is the partition **16** with numbers in arithmetical progression thereon, as 45 to 0, corresponding in spacing to the numbers 95 to 50 on the front card or partition **18**. The partition **16** is in the nature of a follower and continuously urges the packets in the package toward the front of the container. For this purpose, conveniently, the back partition **16** may be made integral with a pleated corrugated cardboard as shown at **66**, with sufficient springiness at the edges of the pleats to continuously urge the packets and interleaved vertical cards, as card **18**, toward the front of the container. The free edges of the pleated portions of the cardboard react against the back panel **30** of the container while the forward face of the cardboard presses against the backs of the boxes **22** in the rearward stack of packets. When the forward stack of packets is dispensed completely, the back partition plate is thrust forward, pushing the packets of the rearward row and the front partition toward the front of the container. The forward thrust of the packets is arrested by engagement of the front partition, or if the partition has been removed, by engagement of cartons in the then forward stack, with the flange portions of the front wall of the container.

Having thus described the invention, what is claimed is:

1. A package comprising an outer container, vertical stacks of front and rear packets within the outer container, a vertical partition between the front and rear stacks of packets, said partition being unattached to the container and the packets, a rear vertical follower partition behind the rear stack of packets, and means urging said follower partition against the rear stack of packets.

2. A package containing packets, said package comprising an outer container in the form of a parallelepipedon, the front wall of the container having an opening extending from the bottom thereof to the top of the wall, the sides of the opening of the front panel forming abutment walls, the top of the package being partially open to permit removal of packets from the container, said packets being arranged in vertical stacks one behind the other, an unattached vertical partition between the front and rear stacks of packets, a rear follower partition behind the rear stack of packets, and means urging said rear partition against the rear stack of packets.

3. A package comprising an outer container, vertical stacks of front and rear packets within the outer container, a vertical unattached partition between the front and rear stacks of packets, and a rear follower partition behind the rear stack of packets, said rear follower partition comprising a pleated resilient sheet of cardboard reacting within the outer container between the rear wall of the container and the rear stack of packets.

4. A package comprising an outer container, vertical stacks of front and rear packets within the outer container, said container having an open front wall to expose the container contents, an unattached partition between the front and rear stacks of packets, said partition having arranged thereon in a vertical column on the front face thereof a series of numbers in arithmetical progression with the numbers spaced vertically apart the height of the packets, and means urging the packets and partition toward the front of the container.

5. A package comprising an outer container, vertical stacks of front and rear packets within the outer container, said container having an open front wall and an open top near the front of the container to enable easy removal of packets from the container, an unattached partition between the front and rear stacks of packets, said partition having arranged thereon in a vertical column, on the front face thereof, a series of numbers in downward arithmetical progression with the numbers spaced vertically apart the height of the packets, and means urging the packets and partition toward the front of the container.

6. A package comprising an outer container, vertical stacks of front and rear packets within the container, said container having an open front wall to expose the container contents, an unattached partition between the front and rear stacks of packets, said partition having arranged thereon in a vertical column, on the front face thereof, a series of numbers in arithmetical progression with the numbers vertically spaced apart the height of the packets, and a follower partition having on its front face a similar spaced series of numbers, said follower partition resiliently reacting between the rear wall of the container and the rear stack of packets to urge the stacks of packets and unattached partition toward the front of the container.

7. A package comprising an outer container, vertical stacks of front and rear packets within the container, said container having an open front wall to expose the container contents, an unattached partition between the front and rear stacks of packets, said partition having arranged thereon in a vertical column on the front face thereof, a series of numbers in arithmetical progression with the numbers vertically spaced apart the height of the packets, a follower partition having on its front face a similar spaced series of numbers, said follower partition resiliently reacting between the rear wall of the container and the rear stack of packets to urge the stacks of packets and unattached partition toward the front of the container, and a smooth faced sheet, U shaped in vertical cross section, interposed between the packets and walls of the container, to enable easy sliding of the stacks of packets within the container.

8. A package comprising an outer container, vertical stacks of front and rear packets within the container, said container having an open front wall, the wall providing at least side portions against which side portions of the packets within the container may bear and the area between the side portions being open to expose the front packets, an unattached partition between the front and rear stacks of packets, and a follower partition, said follower partition resiliently reacting between the rear wall of the container and the rear stack of packets to urge the stacks of packets and unattached partition toward the front of the container until motion is arrested by abutment with the side portions of the front wall.

9. A package comprising an outer container, vertical stacks of front and rear packets within the container, said container having an open front wall, at least side portions against which side portions of the packets within the container may bear and the area between the side portions being open to expose the front packets, an unattached partition between the front and rear stacks of packets, said partition having arranged thereon in a vertical column on the front face thereof, a series of numbers in arithmetical progression with the numbers spaced apart the height of the packets, and a follower partition having on its front face a similar spaced series of numbers, said follower partition resiliently reacting between the rear wall of the container and the rear stack of packets to urge the stacks of packets and unattached partition toward the front of the container until motion is arrested by abutment with the side portions of the front wall.

No references cited.