May 26, 1959 W. I. PORTER 2,888,185

COMPARTMENTAL BOX

Filed Oct. 29, 1956 2 Sheets-Sheet 1

FIG. 1

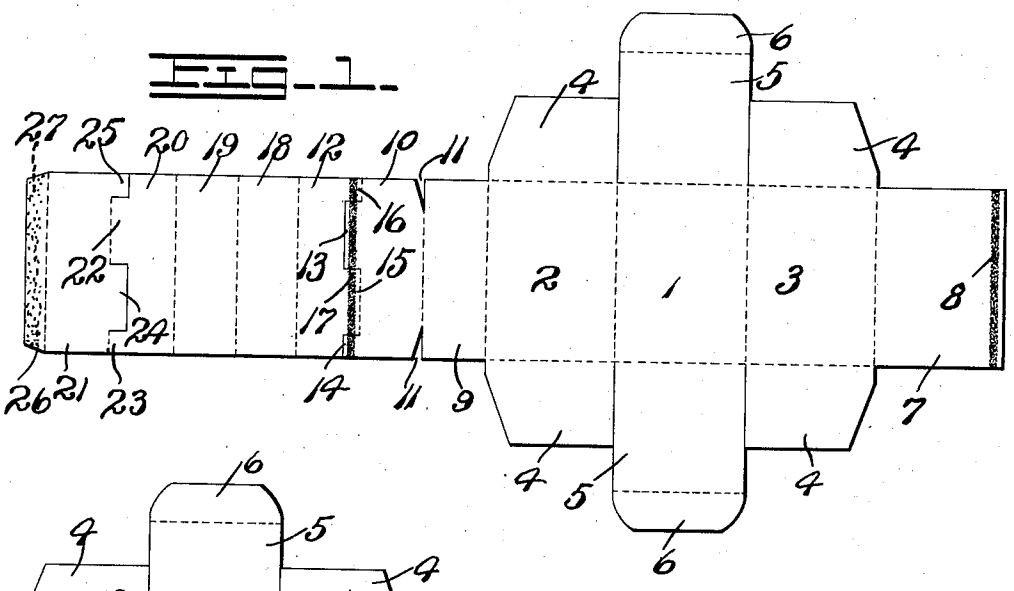


FIG. 2

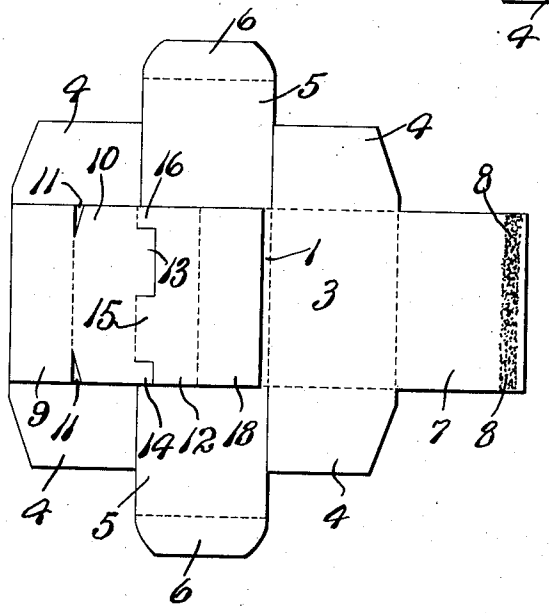
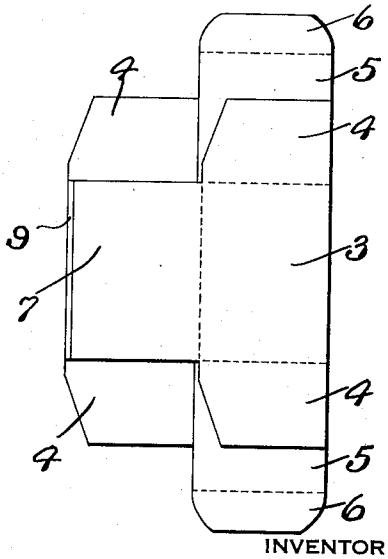


FIG. 3



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Filed Oct. 29, 1956 2 Sheets-Sheet 2

Fig. 4

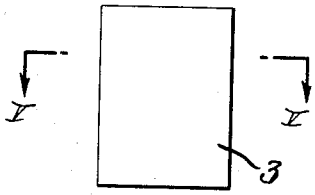


Fig. 5

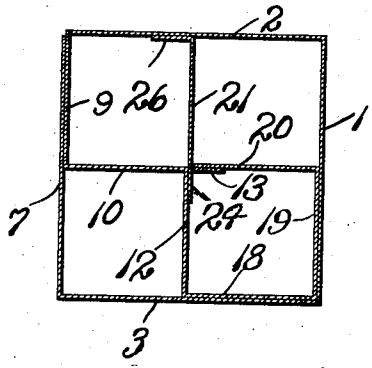


Fig. 6

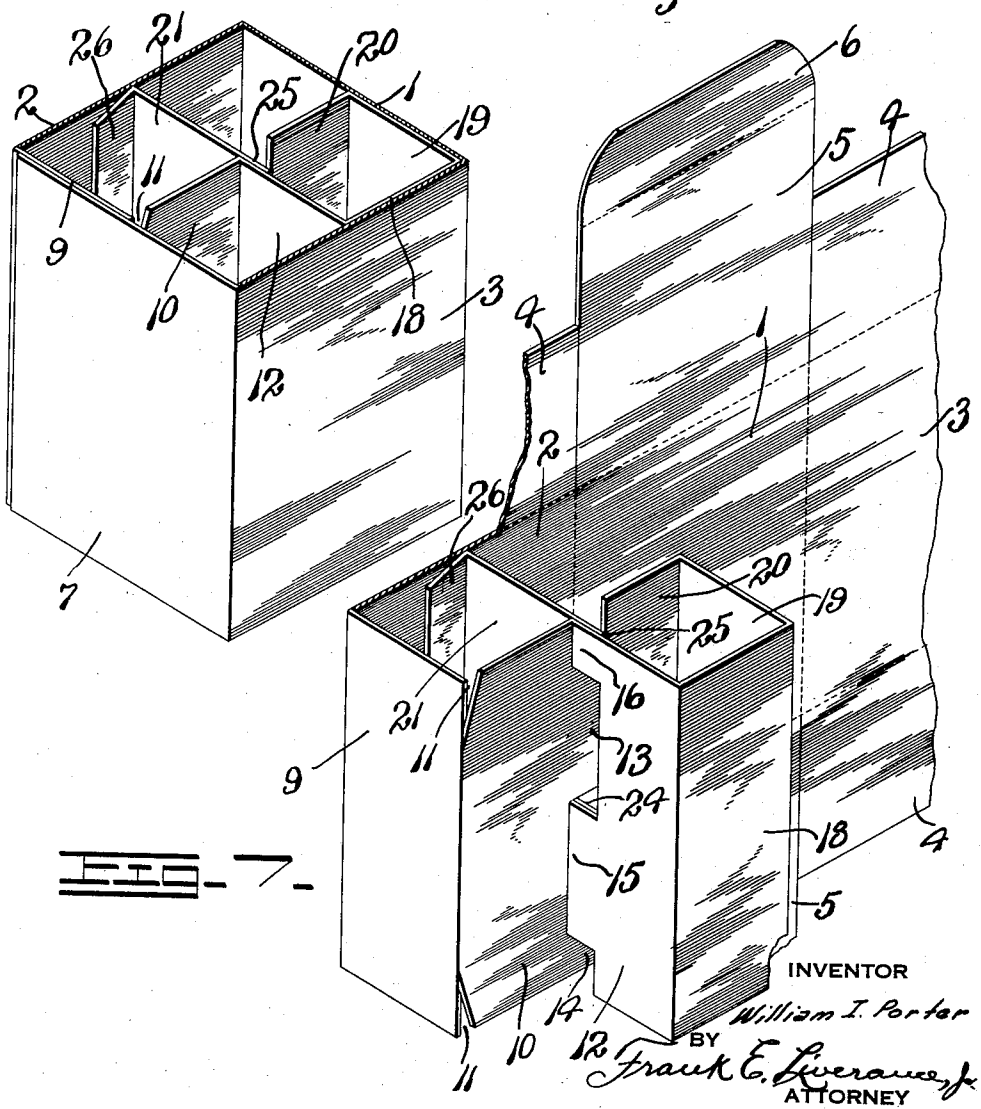


Fig. 7

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COMPARTMENTAL BOX

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Application October 29, 1956, Serial No. 618,779

7 Claims. (Cl. 229—29)

The present invention relates to a novel box or receptacle with dividing partitions in it to make a compartmental box, all made from a single length of material in a particularly novel and practical manner which, when folded and glued or cemented together at certain areas, provides a flat structure which is instantly changed to its useful form making a box having four vertical sides surrounding an interior, which interior is divided by transverse partitions to make four compartments of equal size. Preferably also there will be integral with three of the four sides used closure flaps for each end of the box. The invention can be embodied without such closure flaps and separate closures, for example, separate closure caps used without departing from the invention. An understanding of the invention may be had from the following description taken in connection with the accompanying drawings, in which,

Fig. 1 is a plan of the sheet of material as it is processed prior to the folding and gluing thereof as mentioned to complete the compartmental box.

Fig. 2 is a similar view after two of the operations of folding have been done.

Fig. 3 shows the compartmental box when the folding and gluing has been completed, it being in a flat form so as to be readily shipped to its place of use, each box occupying a minimum of space.

Fig. 4 is an elevation view of the box as it is generally used.

Fig. 5 is an enlarged horizontal section therethrough looking downwardly on the plane of line V—V of Fig. 4.

Fig. 6 is a perspective view looking in a downward direction at the upper end of the box with the closure flaps removed, and

Fig. 7 is a fragmentary enlarged perspective view showing the interior compartment partitions of the box, portions of the box being removed and broken away for clearness of interior disclosure.

Like reference characters refer to like parts in the different figures of the drawings.

The elongated blank of suitable paper stock material, shown in plan in Fig. 1 and of the form there shown, by means of the about to be described folding and bending lines and cuts and slots therein provides three integrally connected vertical sides **1**, **2**, and **3** of rectangular form which are outlined by the short dash lines which are also lines of folding. From the ends of each of the sides **2** and **3** which are at opposite edges of the side **1**, closure flaps **4** extend outwardly and from the side **1** longer closure flaps **5** extend outwardly each terminating in a lip **6**, the folding line between the flaps **5** and lips **6** being indicated by the dashed line shown.

The section **7** which will make substantially the fourth vertical side of the box is integral with and extends outwardly from the side **3**. Adjacent its outer edge is a dotted representation of a gluing or cementing surface **8** which extends the full length or height of the section **7**. The flaps **4** and **5** and lips **6** are preferably used as they, with all of the remaining sides and partitions of the box

may be cut from paper stock in a single sheet, though as mentioned the closure of the compartmental box at both its upper and lower ends may be made in other ways.

From the vertical edge of the side **2** opposite where it is attached to the side **1** is a section **9** of the same length and approximately half the width of the side **2**, integrally connected with which is a like dimensioned section **10** which is notched at the corners where it is connected with the section **9**, as indicated at **11**. A section **12** is integrally connected with the section **10** and is foldable thereon on the dashed lines shown. By the cuts shown made through the material, separated tabs **13** and **14** of the section **10** and tabs **15** and **16** from the section **12** project, being integrally connected on the lines of folding with the said sections. A second glued surface **17** extends lengthwise of the sections and across the tabs **13**, **14**, **15** and **16**. Three succeeding sections **18**, **19** and **20** of the same height and substantially the same width as the sections **9**, **10** and **12** are continued in the same direction from the section **12** with vertical folding lines between them.

A succeeding section **21** is integrally connected with the section **20** at the dotted lines shown which are also lines of folding and is otherwise separated therefrom so that there are provided the tabs **22** and **23** similar to the tabs **13** and **14** previously described which are integral with the section **20** and connected with the section **21** at the lines of folding, while other tabs **25** and **24** are integral with section **21** but separated from the section **20**. Section **21** has a continuation in a lip **26** which at its opposite or under side has a surface receiving a glue or cementitious coating indicated at **27**. Such coating is indicated as at the under side and hidden from view.

It will be observed from the description of the box blank as thus described that it comprises an elongated strip of material of the same width throughout from the free edge of the section **7** to the free edge of the lip **26** and that the scoring lines indicated by the dash lines will, upon the sections being folded as hereafter described, permit locating all of the sections vertically. If the box is made without the integral closure flaps **4** and **5** the upper and lower edges of the elongated strip will be parallel to each other. Such elongated blank of material as outlined provides the essential structure of the invention which may be practically made either with or without the connected closure flaps **4** and **5** shown.

The blank as shown in Fig. 1 is first folded on the folding line between sections **19** and **18** whereupon the section **19** lies over the section **18** and the tabs or tongues **25** and **16**, **22** and **13**, **24** and **15**, and **23** and **14** are glued or cemented together by reason of the glue or cement at **17**. It is then again folded in the same manner on the folding line connecting sections **9** and **2**, whereupon sections **9** and **10** lie over the side **2** with the section **21** between section **10** and the side **2** and the glued surface at **27** of the tab **26** against the inner side of the side **2**. The final step of operation is to fold on the folding line between sections **1** and **3** for the parts to take the position as in Fig. 3, the glued surface at **8** coming against the outer side of the section **9** and cementing thereto. The closing flaps **4** and **5**, the latter with their end tabs **6**, will extend outwardly in opposite directions as in Fig. 3.

With the parts thus connected, upon shaping the flat structure in Fig. 3 to make a rectangular box having vertical sides **1**, **2**, **3**, and **7** as in Fig. 6, partitions are provided inside the box dividing them into compartments. One partition will consist of the sections **12** and **21** in substantial alignment and the other of the sections **10** and **20** at right angles to the first mentioned. Such sections are securely connected at the center of the box through

the glue connection of the several tabs or tongues 13 to 16 on sections 10 and 12, and 22 to 25 on sections 20 and 21. The section 9 will lie at the inner side of the vertical side 7 over substantially half the width thereof and sections 18 and 19 at the inner sides of the sides 3 and 1, respectively, over one-half of the areas, while the terminal tab at 26 is cemented at the inner side of the side 2.

As thus positioned the box is a rectangular box having four vertical compartments of equal size therein. The slots or notches at 11 are cut so that when the two closure flaps 4 at each end are turned inwardly toward each other from both the upper and lower ends of the sections 2 and 3 and, thereafter, the flaps 5 turned at right angles to cover such flaps 4 the terminal tabs 6 fold downwardly at the upper end of the box and upwardly at the lower end of the box, entering said box. If the closure flaps 4 and 5 are not used but instead separate cap closures used, the notches 11 will be eliminated as they will not serve any useful purpose under such condition.

The structure of compartmental box shown and described is one which is economically produced and provides a box with compartments which is of a sturdy and dependable character. Such compartments may be used to contain any desired articles, bottles, wrapped elongated cylindrical packages of the proper diameter or the like. The sale when it is of a quantity, at least four in number, of the articles which are in a compartment may be made by delivering the whole package. But when one, two or three of such articles within the compartments are wanted the box is opened at its upper end and the contents of one, two or three of the compartments, as the case may be, are removed and handed to the customer. Such type of box has become quite desirable, particularly for retail merchandising and my invention is directed to the production of the novel, sturdy, dependable and economically constructed box disclosed in the drawings and description thereof with which there is substantially no waste of material stock and little or no liability of the compartmental box becoming damaged in shipment and handling.

The invention is defined in the appended claims and is to be considered comprehensive of all forms of structure coming within their scope.

I claim:

1. A receptacle of rectangular cross section comprising, four sides integrally connected at the corners thereof having overlapping portions adjacent one corner permanently connected together, the inner of said overlapping portions being continued as a partition dividing the interior space of said receptacle into four compartments; the end of said partition forming portion being permanently affixed to the inner face of one of said sides and overlapping complementary tabs provided within said partition forming portion and secured to space defining panels thereof at their intersection.

2. A receptacle of rectangular cross section comprising, four vertical sides integrally connected at the corners of said receptacle and having overlapping portions adjacent one of said corners permanently connected together, and two partitions at right angles to each other extending across between opposed vertical sides of said receptacle permanently connected together at a point spaced from all of said sides, said partitions being formed of an integral continuation of the inner of said overlapping portions, the end of said continuation having permanent connection at the inner face of a vertical side of said receptacle and complementary interlocking tabs formed from said partition forming continuation within intersecting of the space defining panels thereof and extending beyond said panels for securement to other of said intersecting panels at their mutual intersection.

3. A receptacle of rectangular cross section made from a continuous length of stock; said length of stock forming four sides joined together at a corner of said receptacle; said receptacle having a pair of partitions intersecting at an axis spaced from all sides thereof; said pair of partitions being formed of an integral extension of said stock forming said sides and at the free end thereof being permanently joined to one of said sides; said partitions each including complementary tabs permanently joined to the other of said partitions at said axis of intersection for engaging said partitions together throughout substantially the full length thereof.

4. A blank for a rectangular carton having internal partitions dividing said carton into four compartments, said blank comprising: a continuous length of stock having in the following order, a first adhesively coated flap, first, second, third, fourth, fifth and sixth partition panels, a transition panel, a first, second, third and fourth side panels, a second adhesively coated flap, the joints between each of said panels and between said panels and flaps being scored for folding; a first tab extending into and cut from said second partition panel and joined to said first partition panel; a second tab complementary to said first tab cut from said fifth partition panel and joined to said partition panel; said first and second tabs being offset from each other laterally of said blank and each having one edge at the same distance from a side margin of said blank whereby when said blank is folded said tabs are immediately adjacent each other; a laterally extending line of adhesive coating crossing said second tab and the aligned portion of said fifth partition panel.

5. A receptacle of rectangular cross section made from a continuous length of stock, said stock forming in progressive order a first side, a second side, a third side and a fourth side; said stock at the juncture of said first and fourth sides extending along a portion of the inner face of said first side and permanently secured thereto; said stock then extending normal to said first side to an axis of intersection spaced from all of said sides; said stock then extending at a right angle to said second side, along said second side to said third side, along said third side to a joint aligned with said axis of intersection and then normal to said third side to said axis of intersection and then to said fourth side for dividing the interior of said receptacle into four compartments; the free end of said stock being permanently secured to said fourth side; said stock along said axis of intersection having a plurality of complementary anchor tabs cut therein which extend from said axis normal to the portion of the stock from which cut and permanently secured to an adjacent portion of said stock, alternate ones of said tabs extending at right angles to each other.

6. A blank for a rectangular carton having internal partitions dividing said carton into four compartments, said blank comprising: a continuous length of stock having in the following order, a first adhesively coated flap, first, second, third, fourth, fifth and sixth partition panels, a transition panel, first, second, third and fourth side panels, a second adhesively coated flap, the joints between each of said panels and between said panels and flaps being scored for folding; a first plurality of tabs extending into and cut from said second partition panel and joined to said first partition panel; a second plurality of tabs complementary to said first tabs cut from said fifth partition panel and joined to said sixth partition panel; said first and second tabs being alternately arranged laterally of said blank whereby when said blank is folded said tabs are immediately adjacent each other; a laterally extending line of adhesive coating crossing said second tabs and the aligned portions of said fifth partition panel.

7. In a receptacle having four continuous outer side walls providing a closed wall compartment space, a partitioning wall for dividing said compartment space into four separate and distinct smaller compartment spaces, said partitioning wall being formed from a continuous member having multiple fold lines and being foldable to provide intersecting non-overlapping compartment space defining walls, complementary tabs formed from different of said compartment defining walls and connected to other

of said compartment defining walls, said tabs providing accesses in said different compartment defining walls as removed from the plane thereof and being received through one of said accesses provided by another of said tabs in the folding of said partition wall to provide said smaller compartment spaces, one of said tabs and the different compartment defining wall from which said one tab is formed having a continuous glue line on the same sides thereof and near the fold line therebetween for securing said one tab to the other of said different compartment defining wall and for securing the other of said tabs to said different compartment defining wall from which said one tab is formed.

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