Dec. 14, 1937. M. W. ROMIG 2,102,094

BOX

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FIG. I.

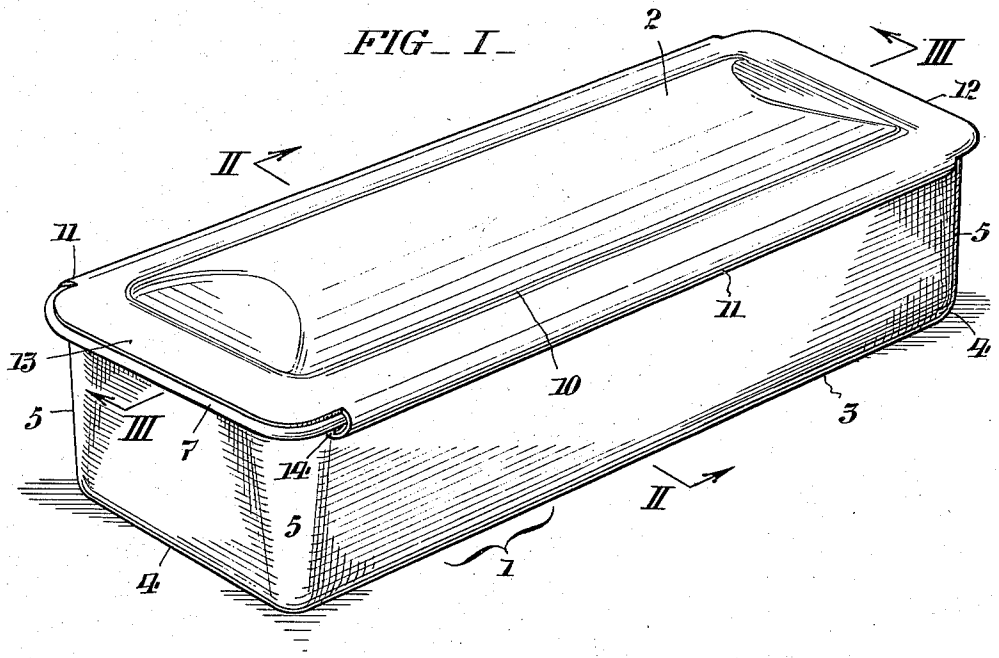


FIG. II.

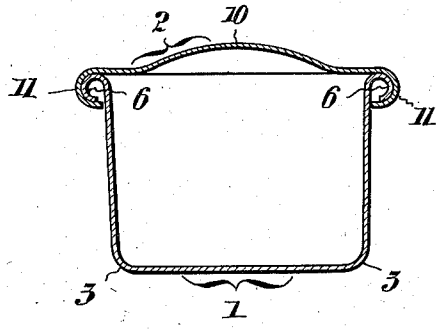


FIG. IV.

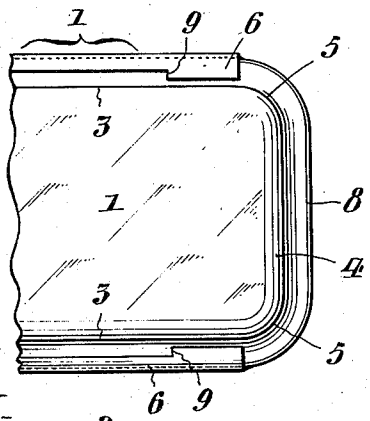
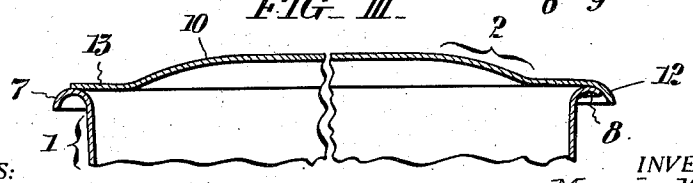


FIG. III.



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BOX

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FIG. V.

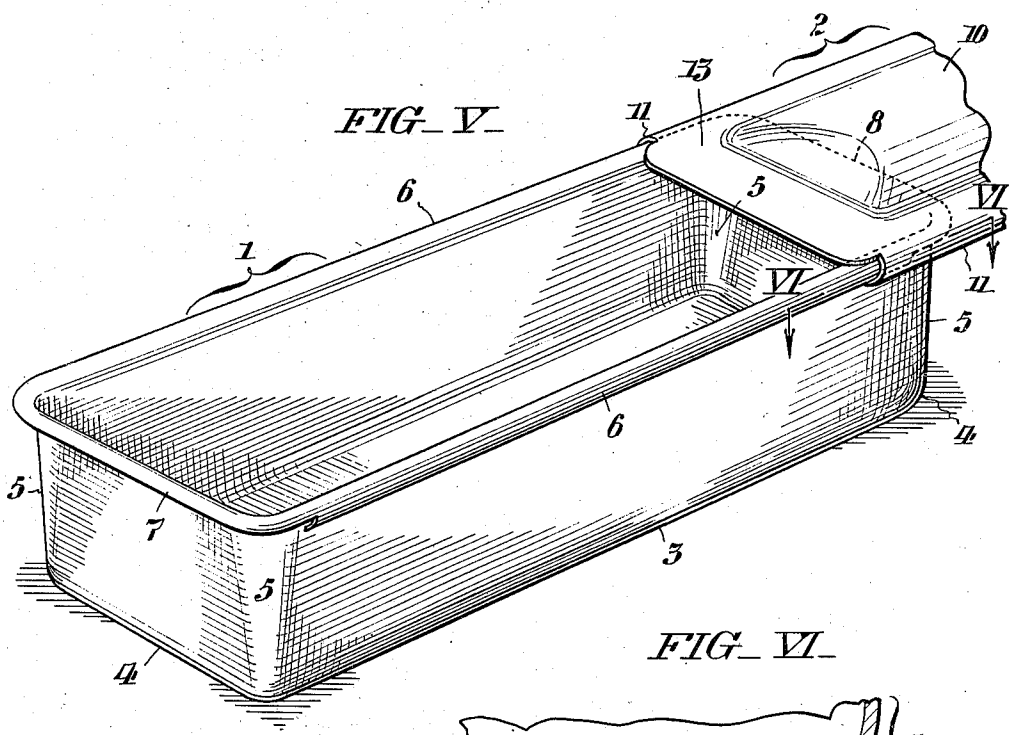


FIG. VI.

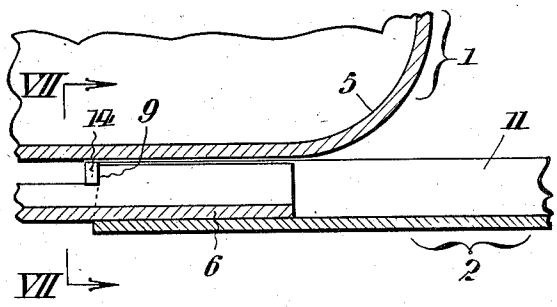


FIG. VIII.

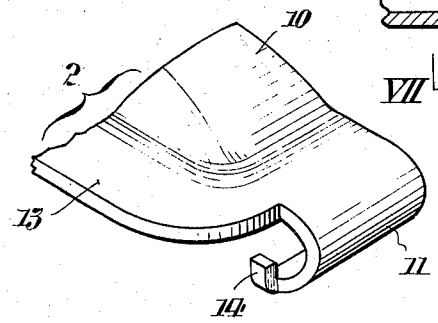
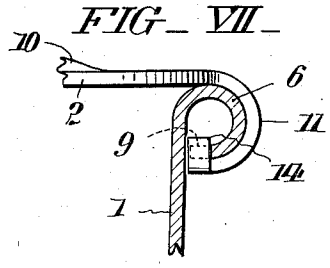


FIG. VII.



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UNITED STATES PATENT OFFICE

2,102,094

BOX

Morris W. Romig, Allentown, Pa., assignor to L. F. Grammes & Sons, Inc., Allentown, Pa., a corporation of Maryland

Application March 12, 1936, Serial No. 68,463

5 Claims. (Cl. 220—41)

This invention relates to receptacles or boxes made from sheet metal or other sheet material; and it has reference to small receptacles or boxes, which, for example, may be conveniently carried in traveller's kits and the like, as well as to larger receptacles or boxes useful for other purposes. My invention is directed toward the provision of a receptacle or box which lends itself readily to economical manufacture in quantity, and which, moreover, is strong and capable of resisting deformation notwithstanding construction from relatively light sheet material.

In connection with a receptacle or box characterized as above and comprising a bottom component and a sliding lid component, it is a further object of my invention to provide integrally incorporated means for limiting the opening movement of said lid component and prevent its complete detachment from said bottom component.

Another object of my invention is to provide in a box of the character above referred to, stop means for limiting the closing movement of the lid component and determining coincidence between the contiguous peripheral edges of the two components.

Other objects and attendant advantages will appear from the following description of the accompanying drawings, wherein Fig. I is a perspective view of my improved box with its lid component in closed position.

Fig. II is a cross sectional view taken as indicated by the arrows II—II in Fig. I.

Fig. III is a fragmentary broken out longitudinal sectional view of the box taken as indicated by the arrows III—III in Fig. I.

Fig. IV is a fragmentary view showing the right hand end of the bottom component of the box in inverted plan.

Fig. V is a perspective view of the box with the lid component in open position.

Fig. VI is a fragmentary detail sectional view, on a larger scale, taken as indicated by the arrows VI—VI in Fig. V.

Fig. VII is a fragmentary sectional view taken as indicated by the arrows VII—VII in Fig. VI; and,

Fig. VIII is a perspective view of one of the front end corners of the lid component.

As herein shown, my improved receptacle has the form of an elongate rectangular box comprising bottom and lid components which are respectively designated comprehensively by the numerals 1 and 2. The bottom component 1 it will be observed, has its lower longitudinal and transverse edges 3 and 4 and its vertical corner edges 5, well rounded, and is provided along its top longitudinal edges with substantially-close, outwardly and downwardly curled bead flanges 6 which are continuous with flanges 7 and 8 respectively at the front (left hand) and rear (right hand) ends of said components. It will however be noted from Fig. III that the front and rear end flanges 7 and 8 are respectively made half-round and somewhat less than half-round in cross section for a reason which will become apparent from further description. Adjacent the rear or right hand end of the bottom component 1, the flanges 6 are formed with shoulders 9 which serve as stops to limit the opening movement of the lid component 2 as more fully explained hereinafter. The bottom component 1 may be conveniently fashioned to the described configuration from sheet metal or the like, by blanking and die stamping operations in a manner obvious to those skilled in the art. By virtue of the liberal rounding of its bottom edges and vertical corner edges, and the flanging of its top edges, the bottom component 1 is effectively strengthened, and can thus be struck from relatively thin sheet material and still have the capacity to effectively resist deformation incident to rough or careless handling.

The lid component 2 is likewise fashioned from thin sheet material preferably of the same gage as that employed for the bottom component 1, and preferably also by blanking and die-stamping operations. As shown in Figs. I, II, III, V, and VIII, the lid component 2 is stiffened through upward offsetting or dishing of its central portion as at 10, and provided along its longitudinal edges with downwardly rolled bead flanges 11 so proportioned as to embrace and engage the longitudinal edge flanges 6 of the bottom component with a sliding fit. The side flanges 11 are continuous with a quarter-round section flange portion 12, see Fig. III, at the right hand or rear end of the lid component 2, which flange portion serves as a stop in cooperation with the rear edge flange 8 of the bottom component 1 to limit the closing movement of said lid component 2 and determine coincidence all around between the contiguous perimetric edge of said two components. Also, as shown in Fig. III, the flange 12 projects slightly below the flange 8 so that it may be employed as a grasp incident to sliding of the lid component 2 to open position. The front end of the lid component 2 is made flat as shown at 13 so as not to interfere with the opening of the box; while adjacent said front end the flanges 11 are formed with up-

turned stop lugs 14, see Figs. VI, VII, and VIII. Thus, as the box is opened, the lugs 14 eventually encounter the shoulders 9 on the bead flanges 6 of the bottom component 1 as shown in Figs. VI and VII, thereby limiting the opening movement of the lid component 2 and preventing its complete detachment from said bottom component. In this connection it will be noted that the end flange portion 12 prevents the lid component 2 from being slid off the bottom component 1 in the opposite direction.

From the foregoing it will be apparent that I have provided a box-like receptacle which is light and sturdy; which can be easily opened and closed with assurance against detachment and loss of its lid component; and which can be very economically produced in quantity from relatively thin sheet material. The construction of the lid component by the method set forth is such as will permit of its decoration either with embossed or etched designs without adding very materially to the cost of manufacture. My improved receptacles may be produced in different sizes and shapes and sold in sets suitable for traveler's kits.

Having thus described my invention, I claim:

1. As a new article of manufacture a box fashioned from sheet material and comprising a bottom component of rectangular configuration with hollow-bead flanges along its upper longitudinal edges continuous with part-round cross-section end flanges; a sliding lid component with side edge flanges embracing and engaging the longitudinal flanges of the bottom component; shoulder and lug stops extending inwardly and upwardly from the respective interengaging flanges, said stops being located so as to limit opening movement of the lid component; and separate cooperative stops for limiting the closing movement of the lid component and determining coincidence between the contiguous perimetric edges of the two components when the box is closed.

2. As a new article of manufacture, a box fashioned from sheet material and comprising a bottom component of rectangular configuration with downwardly-curled hollow bead flanges along its longitudinal upper edges continuous with part-round cross-section end flanges; a sliding lid component with longitudinal edge beads embracing and engaging the edge beads of the bottom component; and opposing inwardly-directed shoulders in one of the component beads adapted to coact with angularly-turned stop lugs in the other component beads in limiting the sliding movement of the lid component and preventing its complete detachment from said bottom component.

3. As a new article of manufacture, a box fashioned from sheet material and comprising a bottom component of rectangular configuration with substantially-closed downwardly-curled side flanges along its upper longitudinal edges continuous with half-round cross-section end flanges; and a sliding lid component also fashioned from sheet material with side flanges slidably embracing and engaging the side flanges of the bottom component, the flanges of the lid component being formed at one end with integral upturned stop lugs adapted to coact with inwardly-directed lateral stop shoulders at the opposite ends of the flanges of the bottom component in limiting the opening movement of said lid component and preventing its complete detachment from said bottom component.

4. A box-like container as defined in claim 1, wherein the lid component has a substantially quarter-round down-turned rear end flange portion, and the bottom component has a correspondingly curved end flange of approximately half-round cross-section, said flanges coacting to limit closing movement of the lid component and determining coincidence between the contiguous peripheral edges of the two components when the box is closed.

5. A box-like container as defined in claim 3, wherein the lid component has a substantially quarter-round section down-turned end flange which coacts with and projects slightly below the correspondingly-curved end flange of the bottom component to define a grasp and limit the closing movement of said lid component as well as determine coincidence between the contiguous peripheral edges of the two components when the box is closed.

MORRIS W. ROMIG.