

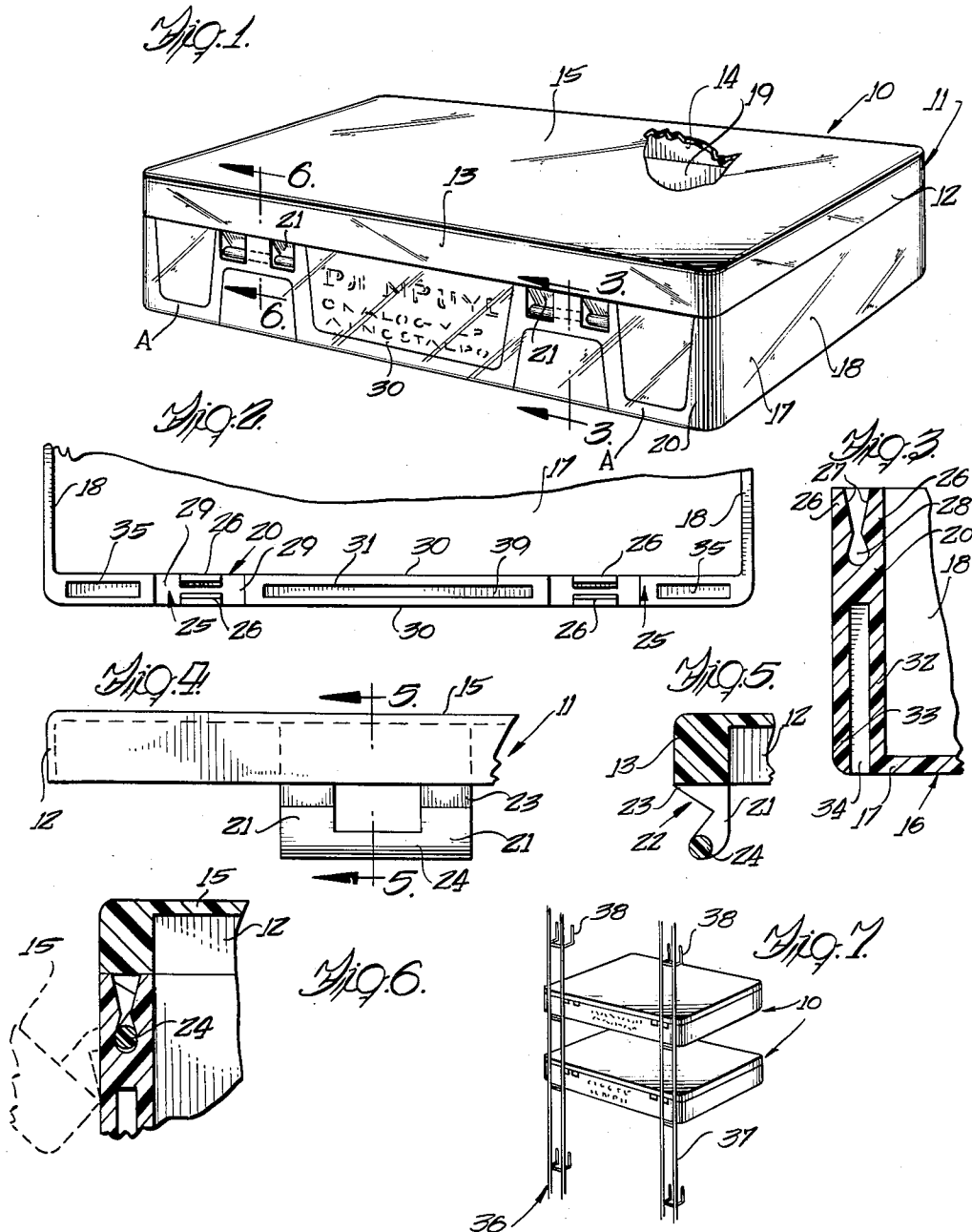
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PLASTIC RECEPTACLE WITH FLUSH-TYPE HINGE CONSTRUCTION

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PLASTIC RECEPTACLE WITH FLUSH-TYPE HINGE CONSTRUCTION

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1 Claim. (Cl. 220—31)

This invention relates to plastic boxes and receptacles. More specifically this invention relates to a plastic receptacle having a flush-type of permanent hinge construction.

It is a prime object of this invention to provide an improved receptacle and hinge construction, the said receptacle having a recessed hinge to provide a box having flush surfaces which expedite the wrapping of the box by automatic wrapping machines and which provide an improved appearance.

A still further object is the provision of an improved plastic box having a comparatively light but substantial construction.

A still further object is the provision of an improved molded plastic box or receptacle having a hinge construction which permits the hinge parts to be assembled easily immediately after the molding operation the said hinge construction however after assembly and in use being permanent and not detachable.

A further object of this invention is to provide an improved hinge and rear wall construction for receptacles the said hinge and wall having great strength and including a double-wall provision whereby advertising or other such material may be inserted between the walls for the purpose of enhancing the sale and acceptability of the product contained in the box.

A still further object of this invention is to provide an improved plastic box having a substantially strong rear wall construction which permits the construction of a strong adequate flush-type hinge and also includes provisions or openings adapted to receive supporting portions of a display stand whereby the boxes may be adequately supported for display purposes.

A still more specific object is the provision of an improved flush-type hinge assembly for the receptacle part and cover of a plastic box the hinge assembly comprising hinge arms which are so formed as to provide stops for the cover and permit the cover to be opened adequately and to be maintained in said position by said stops whereby the stops engage the rear wall of the receptacle and amply support the cover and box in said opened position without the likelihood of breaking of the hinge or cover from said box.

These and other objects will become readily apparent from a reading of the description when examined in connection with the accompanying sheet of drawing.

In the drawing:

FIGURE 1 is a perspective view of an improved plastic box;

FIGURE 2 is a plan view of a portion of a receptacle part of the plastic box shown in FIGURE 1;

FIGURE 3 is a cross-sectional view taken substantially along the line 3—3 of FIGURE 1;

FIGURE 4 is an enlarged fragmentary view of a rear portion of a cover for the plastic box shown in FIGURE 1;

FIGURE 5 is a cross-sectional view taken substantially along the line 5—5 of FIGURE 4;

FIGURE 6 is a cross-sectional view taken substantially along the line 6—6 of FIGURE 1; and

FIGURE 7 is a perspective view showing the improved plastic box supported on a display rack.

Referring to the drawing, a plastic box is generally

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designated by the reference character 10. The box 10 is of clear transparent plastic construction and is constructed of a thermosetting plastic material. The box 10 comprises a cover generally designated at 11 which includes opposed side walls 12, a rear wall 13, and a front wall 14. The cover also is provided with a top wall 15.

The box further includes a receptacle generally designated at 16 including a bottom 17, side walls 18, a front wall 19 and a rear wall 20. The rear walls 13 and 20 are constructed of relatively thicker plastic than any of the other walls the purpose of this construction providing for an improved plastic box design having a rear double wall construction.

Referring particularly to FIGURES 4 and 5, a pair of hinge brackets are laterally spaced and project downwardly from the lower end of the rear wall 13. Each hinge bracket comprises a pair of laterally spaced hinge arms 21 having each at their portion a V-shaped recess 22 which provides a stop 23. A hinge pin 24 integrally connects the hinge arms 21.

The box 10 is shown as a double-hinge type of box though a single hinge construction can, of course, also be utilized. The receptacle 16 and particularly the double rear wall 20 is provided with a pair of cut-out portions 25 which are relatively laterally spaced. Each cut-out portion has centrally located thereon a pair of laterally spaced upwardly extending flanges 26 having inner surfaces 27 which converge downwardly or are tapered as best indicated in FIGURE 3. The lower ends of the flanges 26 provide a cylindrical pin receiving groove or socket 28. The flanges 26 are centrally located in the cut-outs 25 and provide on opposite sides thereof hinge arm receiving spaces 29.

As best shown in FIGURE 2, a portion of the receptacle double rear wall 20 is provided with spaced inner and outer wall portions 30 which provide a space, slot, or compartment 31 open at the top and closed at the bottom. Immediately beneath each of the hinge brackets and flanges 26 there are provided spaced inner and outer wall portions 32 and 33 which provide spaces, slots or compartments 34 extending upwardly into the rear wall 20 of the receptacle 16. The slots 34 are adapted to accommodate the hooks or prongs of a rack for display purposes. As indicated in FIGURE 2 opposite ends of the rear wall 20 are also provided with vertical compartments 35 which are closed at their bottoms and open outwardly at the top. In FIGURE 7 a rack 36 is disclosed, the said rack including upright wire supports 37 and hooks 38. The hooks 38 engage the slots 34 to support a plurality of boxes 10 in a display position.

The slot or compartment 31 is particularly adapted for receiving an advertising card 39 which during the use of a transparent plastic for the construction of the box permits the advertising material to be displayed. In addition the slot or compartment 31 serves the purpose of lightening the box which is also the case by the provision of the slots 35. The compartment or slots 34 provide for receiving the hooks 38 and thus provide the function of supporting the box on a rack in a display position.

The double wall 20 provides a strong yet light construction which permits the hinge brackets and hinging means to be entirely recessed so that a flush box is provided. A box closure latch not shown also may be suitably recessed so that a complete flush-type box is achieved. The letter A in FIGURE 1 designates a reinforcing, spacing and partitioning means which is molded between the inner and outer walls and extends inwardly along the lower edges of the double wall, then upwardly and horizontally below the hinges, then downwardly and along the lower edge of the double wall beneath the compartment 31.

During assembly immediately after the molding of

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the box and cover, the box is assembled by inserting the hinge pins between the surfaces 27 and by forcing them into the pin receiving grooves 28. The tapering faces 27 are so placed that the diameter of the hinge pins 24 is greater than the shortest dimension between the two faces so that the flanges 26 are slightly forced apart immediately after molding whereupon the hinge pins are properly assembled in the grooves 28 and as the material hardens a permanent hinge assembly is provided.

In the closed position of the box the advertising card 39 is retained within the slot 31 since the lower edge of the rear wall 13 closes this slot 31. The box cover 11 may be opened to the position shown in FIGURE 6 whereupon the stops 23 engage the outer surface of the rear wall 20 and thus the box in this position may be completely supported in the hands of a user without the possibility of the hinge parts becoming displaced or breaking. In other words if the box is used as a cigar box, a person may hold the cover of the box in the opened position by gripping the cover and if another person removes a cigar from the box the receptacle is firmly supported without danger of the box cover breaking from the receptacle.

Thus it is believed that the objects of the invention have been fully achieved and that changes and modifications may be made in the invention without departing from the spirit thereof or from the scope of the appended claim.

What is claimed is:

A plastic box comprising a receptacle and a cover therefor, the receptacle and cover having side walls, front walls, and rear walls in substantially the same vertical planes, said rear wall of the receptacle being of double

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spaced wall construction comprising an inner vertical wall and an outer vertical wall respectively horizontally spaced from each other, said double wall including at its upper edge a plurality of first hinge elements spaced inwardly from opposite ends of said double wall, second hinge elements on said rear wall of said cover engaging said first hinge elements, said inner and outer walls forming therebetween a vertically extending space, reinforcing spacing and partitioning means between said inner and outer walls, said partitioning means extending inwardly from the opposite ends of said rear wall of the receptacle along its lower edge thereof, then upwardly and horizontally below said first hinge elements, then downwardly, then horizontally along the lower edge of said double wall and between said first hinge elements to provide a pair of first compartments at horizontally spaced opposed ends of said double wall, a second compartment disposed between said hinges, and third compartments disposed below said first hinge elements, said first and second compartments having closed bottoms and opening outwardly along the upper edge of said double wall, said third compartments having closed upper ends, and opening outwardly along the lower edge of said double wall.

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