

Rigid paperboard packages

This traditional package style performs many functions, but perhaps the most important one is upgrading the product

Rigid (set-up) boxes offer advantages that are highly desirable in today's packaging. These include (1) maximum convenience with minimum in-plant investment; (2) package individuality for upgrading products; (3) extra strength based on rigidity of material and construction; (4) wide choice of materials; (5) ease of loading; (6) shortest of all delivery schedules; (7) small-quantity ordering practical; (8) custom loading and shipping can be done by the box maker; (9) inventory problems are minimized by frequent delivery; and (10) re-usability—the container can be designed for continuing use with product or for second use. In this connection, rigid boxes are saved four times more frequently and thus provide an opportunity for extending the value of the marketer's message on the box.

Basic considerations

The rigid paper box is a container that is produced and delivered in three-dimensional construction ready to be packed with merchandise. As a package, it does more than just identify and/or protect its contents. Besides being functional, the rigid paper box offers merchandising effectiveness and falls within the realm of economic practicality. Its use today centers around advanced ideas in upgrading, displaying and merchandising packaged products. Despite the fact that it offers so much in the way of detail in both appearance and construction, the rigid box manufacturing process is a series of simplified steps, rather than the result of one or a few very complicated machines. It does not require expensive dies or extensive machinery preparation time. Also the processes employed in making boxes lend themselves to variety, craftsmanship and easy adjustability from run to run.

From the packager's point of view, this means great freedom in planning and selecting the package. The design can be individualized readily to fit the product. Appropriateness is now

an increasingly important concept in packaging-merchandising strategy and the rigid box excels in giving a product an environment that will help it put its best sales foot forward. Moreover, the packager has almost complete freedom to choose a range of shapes and sizes. Runs can be small, medium or large and volume can fluctuate without occasioning excessive economic penalties. The rigid box can accommodate unusual requirements in regard to windows, domes, embossing, platforms, hinges, lids, compartments and the like. This versatility is extremely valuable, of course, in meeting many of today's important demands for both merchandising and convenience.

The rigid box deserves consideration if your packaging strategy calls for special emphasis on beauty, display, gift appeal. It is no accident that rigid boxes are so widely and successfully employed in merchandising textiles, cosmetics and fine candies. There are lessons to be learned from the fact that, in product lines where selling arts have been assiduously cultivated for a long time, the rigid box has continually been one of the favored package forms.

Indeed, because this container has been so often associated with tasteful, luxurious and gift-type packaging, there may be a tendency for some packagers to overlook some of its very practical advantages. In an era that acclaims convenience, it should be noted that the rigid box is extremely functional—it provides a superior type of protection; it lends itself to orderly arrangement (and use) of sets or multiples; it is easy to open and close; it excels in stacking, handling and display characteristics; and it is a very good use and re-use package. Also, because it is generally used in the company of quality products, it is a package that consumers accord prestige and ready acceptance.

It is standard practice in ordering rigid boxes to give dimensions in the following order: (1) length, (2) width, (3) depth. Measurements are

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based on inside dimensions (score measure) only. Base measurements normally control the dimensions of the lid but also be sure to state the type of cover—full telescope, hinged, and the like.

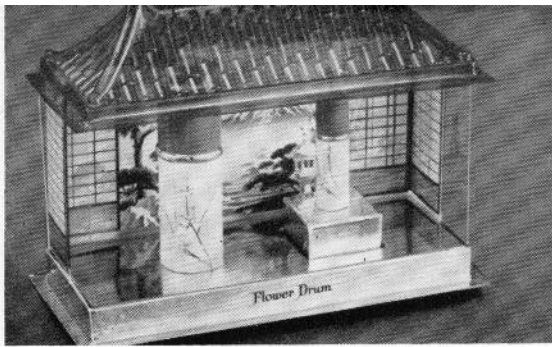
Rigid boxes are made from four basic materials: paperboard, corner stays, adhesive and covering material. The weight and grade of paperboard used depends upon size, weight of article to be packaged and appearance. The choice of board also determines the strength and rigidity of the box.

First, flat sheets of boxboard are cut and scored to size. Individual blanks are separated from the sheet and the corners are cut out. Second, the sides of the blank are folded at right angles to the base to form the sides of a tray. Third, the corners of the tray are stayed (sealed and reinforced) by adhering paper, cloth or metal reinforcements to the corners. It is this process that gives the box its exceptional strength. The same process is repeated for the cover. Fourth, the decorative covering (wrapper) is adhered to the box.

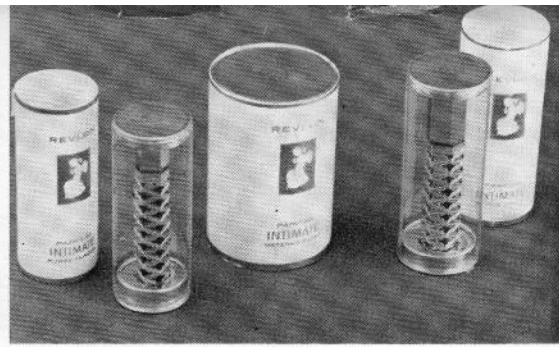
Rigid paper boxes are normally sold closed and wrapped in paper bundles or packed in shipping cartons. However, boxes and covers may be packed separately to facilitate production line flow.

Variations in shape and physical dimensions are obtained by adjusting the slitting and scoring of the sheet stock. Shapes commonly produced include cubes, pyramids, cylinders and cones. Special shapes such as heart, round, oval, triangular and the like can be obtained easily. Variation on the basic construction can produce an infinite range of constructions and designs.

The box can be (1) a single unit or (2) a base and a cover, or (3) it can be made up in multiple or mixed components. The base unit can have a flat lid, box lid, died-out opening, plastics window, a transparent lid or similar variations. The covers can be free hinged, telescoping, slide-on and the like. Shoulders, lips, extension



INDIVIDUALITY. Pagoda-shaped cover, acetate "picture window," scenic backdrop and gold base create unique package for cosmetics. Platform is die-cut. (*Creative Packaging*)



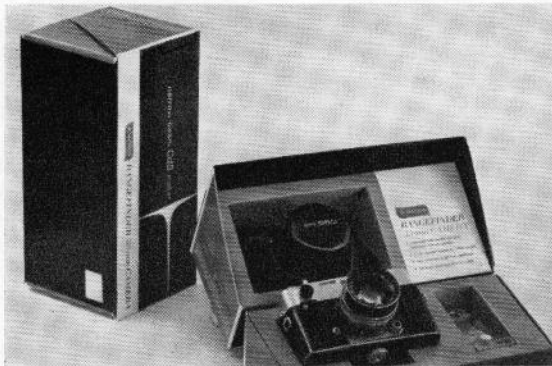
COMBINATION of acetate tube and printed, embossed sleeve offers visibility and protection for the gold bottle of perfume set in die-cut base. (*F. N. Burt Co., Inc.*)



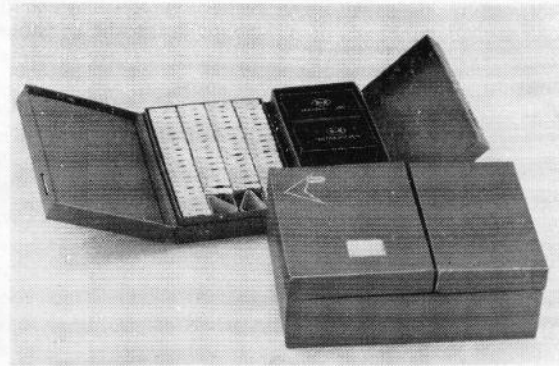
NOVELTY CHEST has two drawers for soap assortment. Box combines simplicity of design with suggestion of luxury. Product identity is clearly shown on lid. (*The Piqua Paper Box Co.*)



FUNCTIONAL BOX has die-cut platform of heavy board. Four-color printing gives extra sales appeal. Cover has metal hinge for added durability. (*Charles H. Sproules*)

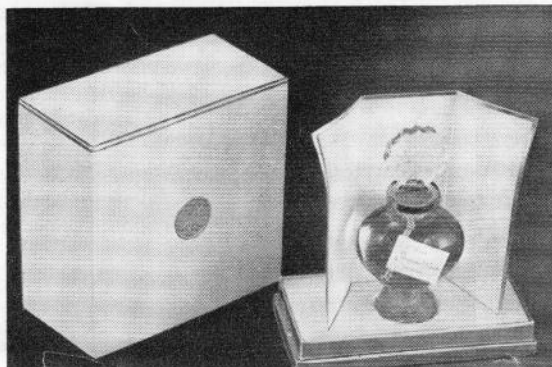


SPECIAL PLATFORMS hold camera and accessories. Slanted sides of hinged box give added display value to camera and provide extra protection. (*Associated Packaging*)

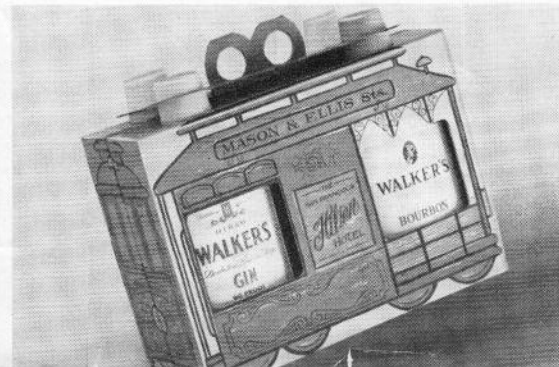


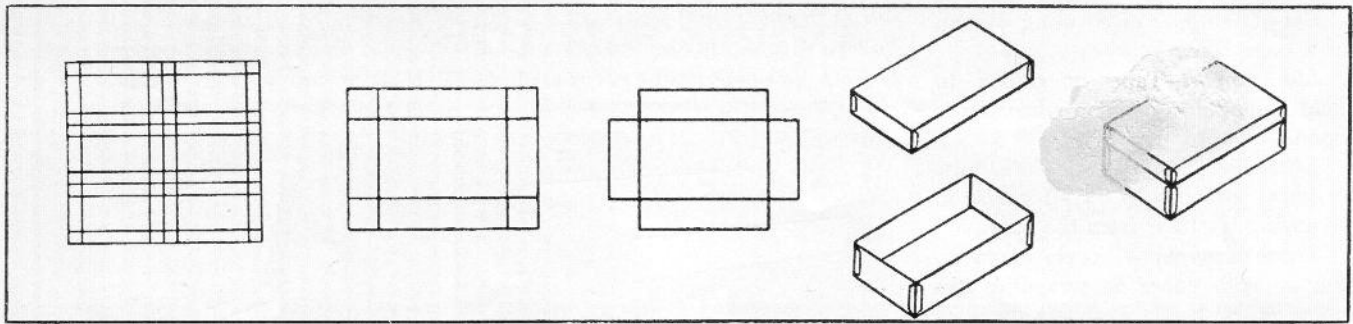
CONSTRUCTION assures product accessibility. One tray holds dental burs; another, tools. Plastic slide in double-hinged lids provides locking feature. (*Creative Packaging*)

FLARED BACKDROP and pedestal give stage setting to perfume. Shoulder-style base has die-cut platform. (*Heminway*)



GIFT ITEMS need no further wrap. Package promotes sale and carry-home of four half-pints. (*Boxcraft*)





BASIC STEPS in producing a set-up box. Sheets of boxboard are scored and cut to size. Individual blanks are broken from sheet and corners cut. Sometimes intricate designs are "died out." Box

shape is formed and corners are stayed. Lid is similarly processed. Fancy wraps, platforms or other special effects may be added. (Diagrams courtesy National Paper Box Manufacturers Assn.)

edges, domes, ridges and special panel effects can be obtained. The interior of the box can be fitted with partitions, platforms, inner trays or special linings in accordance with the need.

The full telescope box gives complete protection at nominal cost. Tight wrapped and loose wrapped covers lend themselves to this most basic style. The hinged cover is easily opened and permits good product display. The 2-piece slide style offers endless possibilities for product display, with windows and top decorations. Variations of the 3-piece box with the platform will accommodate a product of any size, shape or number. Extension edges, top or bottom or both, will add a decorative touch to any of the styles. These styles can be ordered in many combinations and work well with other packaging media.

The box-in-box construction protects or adds to the appearance of a particular product. Interior partitions may be formed by inserting one or more trays—platforms of various sizes and shapes with die-cut opening used to fit the product in the box.

Many plastics are suited to combine with rigid boxes to make effective packages. The window box, with a die-cut opening covered with a transparent film and cellophane overwrapped trays, offers protection and product visibility. Delicate products may be protected by plastics molded to the shape of the item. Plastics are available in many colors and textures, and advances in thermofforming make possible their use as inserts.

Coverings or wraps are selected from a very wide range of fancy papers which provide virtually every protective and decorative effect that the designer or packager could possibly wish to use. Obviously this latitude in choosing constructions, mate-

rials and functional characteristics places great responsibility on the designer and the packager to make wise use of their choice.

When the wrap is designed, the importance of accurate size and proportion cannot be overemphasized. A border, or panel, with sides parallel to the edges of the box reduces the size effect of the box. There is also a risk that the border, or any lines parallel to the edges, will not be parallel if the wrap is not applied in perfect register. No line or color separation should occur exactly at the edge of the box. Horizontal lines running around the sides of the box will seldom meet exactly at the corners.

Letterpress and offset are the processes most used in printing wraps. Embossing is another form of wrap decoration. Top quality dies for embossing are etched and hand engraved on brass. They are expensive but well worth their cost. Less known is the machine-etched metal die, which offers a fair substitute.

Ordinarily, box wraps or labels are printed on 60- to 70-lb. No. 1 white litho paper (basis ream 25 by 38 per ream of 500 sheets). Uncoated paper usually weighs 20 to 22 lb. per ream; basis size, 20 by 26. Good glazed and flint-coated papers are made from special 28-lb. book stock with about 6 lb. of coating added, making a finished sheet of 34 lb. per ream of 500 sheets.

Board is bought by the ton, but the number of standard size sheets of board per ton can vary tremendously. Standard size sheets are 26 by 38 or 25 by 40 inches. The strength and quality of the board are among the important considerations in specifying board stock. These characteristics are known as "basis" and "finish."

Basis is the number of sheets of standard size 26 by 38 (988 sq. in.) or 25 by 40 (1,000 sq. in.) in a

standard bundle weighing 50 pounds. Thus 120 sheets weighing 0.42 lb. per sheet make a 50-lb. bundle of 120 basis board.

Finish is the smoothness of the board regulated by the pressure exerted on the calenders under which the board passes during manufacture. Finish basically refers to density. For example, a standard sheet of 50 basis board weighs 1 lb. per sheet, but it can caliper 0.36 to 0.52 in. depending on the density or finish. A sheet compressed to 0.36 in. is, of course, stronger and smoother than a 1-lb. sheet that is 0.52 in. thick. There are four designations for standard finish in the rigid box field:

No. 1 rough dry, a low-density, rough-surface stock that gives greatest number of sheets for weight.

No. 2 medium water, a stock for ordinary printing and general utility.

No. 3 smooth water, used where better printing surface is required.

No. 4 very smooth, a stock with slick surface and firmly compacted fibre. Yields fewest number of sheets per 50-lb. bundle.

Terminology

Base—The lower or receptacle portion of a set-up box.

Box—A complete paper box, including base and lid.

Dividers—Loose strips of paper or boxboard used to separate commodities placed side by side.

Dutch top—Lid in which padded top is slightly less in length and width than lid, which is set up with shell.

Easels—Supports attached to box to sustain box upright for display.

Flap lid—Lid having no sides or ends and hinged to the base of box.

French lid—Lid with extension edge and with sides and ends of lesser height than sides and ends of base, and fitting outside of base.

Lid—The upper or covering portion of a paper box.

Lid support—Tape or ribbon to hold hinge lid in position when box is open.

Lifts—Pieces of ribbon, cloth, tape or paper attached to trays for ease in removing the trays from the base.

Loose wrapping—Process of covering lid with paper on wrapping machine or by hand, wrappers being in one piece and having adhesive at edges only.

Neck—A shell inserted in base of shoulder box, attached by adhesive, and extending above the base into the lid when box is closed.

Padded top—Extra top, covered with paper or cloth and having one or more layers of wadding or other padding material, and attached to lid top.

Partitions (loose)—Slotted pieces of boxboard fitted together to form a series of compartments, and placed in base without being attached thereto.

Partitions (solid)—Any construction of boxboard or other material attached to interior of base and forming subdivisions therein.

Pulls—Metal handles or pieces of tape or ribbon attached to base of shelf or file boxes for convenience in removing shelves.

Scoring—Making knife cut on boxboard (score marks) for purpose of forming bending line; also, feeding boxboard sheets through scoring unit.

Set-up paper box—A paper box of rigid construction formed or set up, ready for use, as distinguished from a folding carton or shipping container.

Shoulder box—Box having glued neck inserted so base ends, sides form shoulder upon which lid rests.

Slide box—Box in which lid is in shell form and into which base is inserted at side or end.

Stay—Material used for reinforcing corners of base, lid or tray. This may be paper stay, cloth stay, combination stay (combination of cloth and paper), wire stay or metal stay.

Telescope box—A box in which the sides and ends of lid slip over the base either partial or full depth.

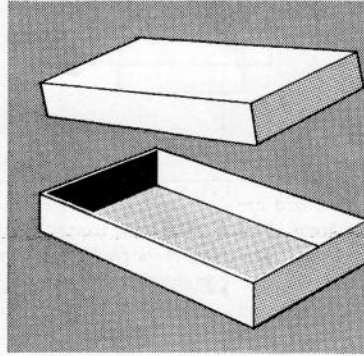
Tight wrapping—Process of covering base, lid or tray with paper on wrapping machine or by hand; wraps being in one piece and having entire surface covered with adhesive.

Tray—A receptacle without lid.

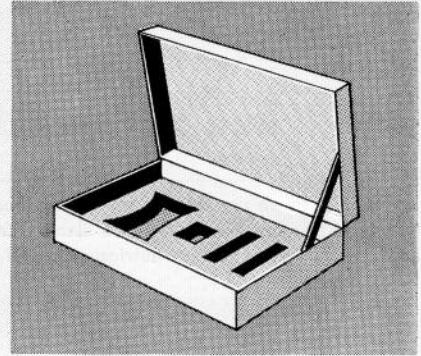
Trim—Paper or cloth used to strengthen or form decorative covering for base edges and for lid, or extension edges.

END

FULL TELESCOPE. Gives complete protection at nominal cost. Affords full accessibility. Various decorative effects available. For candy, shirts, blouses, cosmetics.

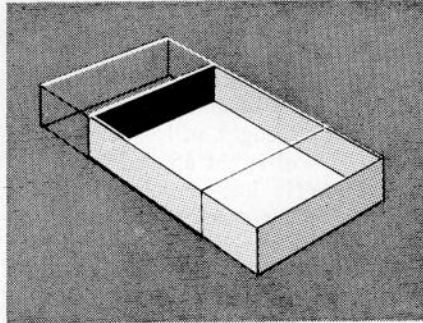


HINGED COVER. Offers good display; opens, recloses easily. Die-cut platform holds product securely. Designed for display of cosmetic sets, stationery, tools.

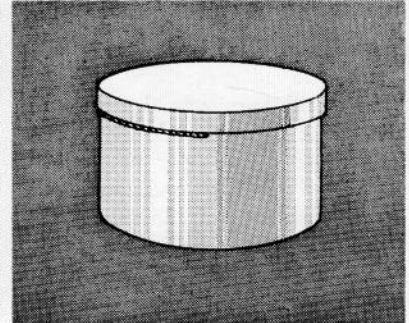


DRAWINGS, COURTESY OF NATIONAL PAPER BOX MANUFACTURERS ASSN.

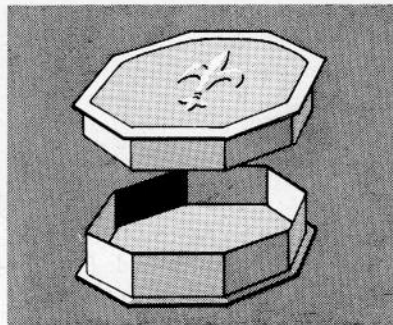
TRAY STYLE. Sleeve can be transparent or decorative. Excellent dispensing. Offers convenience, novelty, display features. For drugs, small office or hardware products.



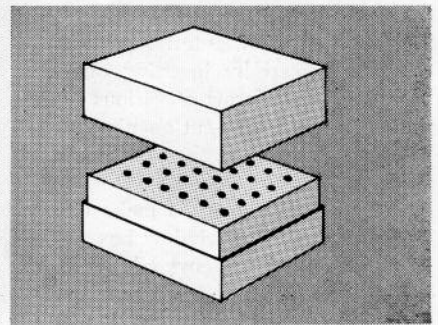
ROUND OR OVAL. Ends are set into paperboard cylinders, then overwrapped in decorative papers. Used most frequently for millinery, novelty gifts.



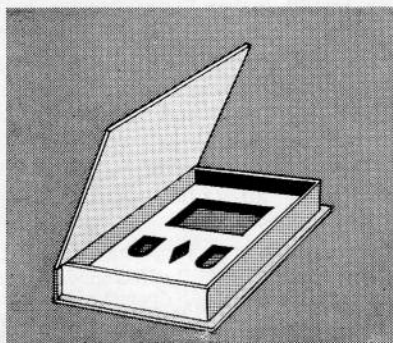
SPECIAL SHAPE. Adapts to holiday or other special motifs. Embossing adds elegance to lid. Offers re-use value. Used for gift items, especially candy.



THREE-PIECE BOX WITH PLATFORM. Offers added protection for electronic parts, other fragile products. Variations can hold product of any size, shape, number.



BOOK STYLE. Box tray glued between covers is often used to upgrade product. Platforms may be removed and box re-used. Ideal for gift items, novelty themes, etc.



NECK OR SHOULDER STYLE. Semi-telescope lid with short shoulder inset on base offers double-wall strength. Slotted partitions separate units in sets or fragile items.

