VoyJour 1986

PROTECTIVE ENCLOSURES - GBW '86
Supply Sources, Construction Forms. S. Kellar

Addresses & tool descriptions:

Foamular, a/f fom-cor, Hot Wire

FOME-BORDS
2211 N. Elston Ave.
Chicago, IL 60614

Foamular mfg. (UC Ind., Inc.)
1-800-255-4646

Charette All-Purpose Hot Wire Cutter
#32-7160-247 $63.96
Charette Corp.
31 Olympia Ave., P.O. Box 4010
Woburn, MA 01888

Acrylite FF acrylic sheet
CYRO Indust. 1-800-631-5384

Plastic and rubber magnet (3M .060. w/adhesive)

ADAMS MAGNETIC PRODUCTS
4547 West Addison
Chicago, IL 60641

Acryl-Hinge and tools for acrylic fabrication
CRAFTICS, INC.
2701 N. Pulaski Rd.
Chicago, IL 60637 (312) 235-3307

Plexiglas & UF3, tools, adhesive
CADILLAC PLASTIC & CHEMICAL CO.
1924 N. Paulina
Chicago, IL 60622 (312) 342-9200
(& other U.S. branches)

Tools, etc.: Black & Decker 1½ hp Router #7616, Scorer (General #821)
Carbide tipped "V" grooving bit (Stanley #85219 3/8"), KEETON Mat Cutter
(S & W FRAMING SUPPLIES #1330A). Sears Kromedge 7½" sawblade (for acrylic).

FORMULA FOR DROP-SPINE BOX USING ROUTED JOINTS

BOX #:

BOOK DIMENSIONS HEIGHT: ____ WIDTH: ____ THICKNESS: ____

+2 Times Thickness ____ +Thickness ____

CLOTH COLOR:

	+ 6/16		+ 3/16	+	1/16
Small Tray____	LENGTH: ____		WIDTH: ____	SCORE:	____
	+ 8/16		+ 5/16	+	2/16
Large Tray____	LENGTH: ____		WIDTH: ____	SCORE:	____

STAMPING INFO:

CASE Boards: Height = large tray + 4/16
Width = large tray + 2/16
Spine: large tray + two board thicknesses (compressed)
SPINE LINING = (book height - 3/16) x (book th. + 2½")
TRAY LINING (lge.) = (book ht.+1/16) x (b.w. - 1/16)
(sm.) = (book ht.-3/16) x (b.w. - 4/16)

Board: trays- Davey acidphree .074 case- Davey a/f .098, gld label .098

ADAPTED FOR DBL-WALL SM. TRAY W. PARTIAL INS. WALL
FORMULA FOR DROP-SPINE BOX USING ROUTED JOINTS

BOX #:

BOOK DIMENSIONS HEIGHT: ____ WIDTH: ____ THICKNESS: ____

+2 Times Thickness ____ +Thickness ____

CLOTH COLOR:

*Small Tray_____ + 10/16 LENGTH: ____ + 8/16 WIDTH: ____ + 1/16 SCORE: ____

Large Tray_____ + 8/16 LENGTH: ____ + 5/16 WIDTH: ____ + 2/16 SCORE: ____

* walls are built up on inside w. .095 gld label, step-joint-- partial ins. wal the same.

CASE Boards: Height = large tray + 4/16
Width = large tray + 2/16
Spine: large tray + two board thicknesses (compressed)
SPINE LINING =(book height - 3/16) x (book th. + 2½")
TRAY LINING (lge.) = (book ht.+1/16) x (b.w. - 1/16)
(sm.) = (book ht.-3/16) x (b.w. - 4/16)

Board: trays- Davey acidphree .074 case- Davey a/f .098, gld label .095

ADAPTED FOR FORE-EDGE MAGNET FASTENER
FORMULA FOR DROP-SPINE BOX USING ROUTED JOINTS

BOX #:

BOOK DIMENSIONS HEIGHT: ____ WIDTH: ____ THICKNESS: ____

+2 Times Thickness ____ +Thickness ____

CLOTH* COLOR:

Small Tray_____ + 6/16 LENGTH: ____ + 3/16 WIDTH: ____ + 1/16 SCORE: ____

Large Tray_____ + 12/16 LENGTH: ____ + 7/16 WIDTH: ____ + 2/16 SCORE: ____

*(use A-C grade) fill in outside of sm. tray, inside of lg. tray w. 4-ply/mated magnets-- cover w. cloth

CASE Boards: Height = large tray + 4/16
Width = large tray + 2/16
Spine: large tray + two board thicknesses (compressed)
SPINE LINING =(book height - 3/16) x (book th. + 2½")
TRAY LINING (lge.) = (book ht.+1/16) x (b.w. - 1/16)
(sm.) = (book ht.-3/16) x (b.w. - 4/16)

Board: trays- Davey acidphree .074 case- Davey a/f .098, gld label .095

ADAPTED FOR DBL-WALL SM. TRAY W. PARTIAL INS. WALL

FORMULA FOR DROP-SPINE BOX USING ROUTED JOINTS

BOX #:

BOOK DIMENSIONS HEIGHT: ____ WIDTH: ____ THICKNESS: ____

	+2 Times Thickness		+Thickness			
		+ 10/16		+ 8/16	+ 1/16	
*Small Tray_____	LENGTH: ____		WIDTH: ____		SCORE: ____	
		+ 8/16		+ 5/16	+ 2/16	
Large Tray_____	LENGTH: ____		WIDTH: ____		SCORE: ____	

CLOTH COLOR:

* walls are built up on inside w. .095 gld label, step-joint-- partial ins. wa the same.

CASE Boards: Height = large tray + 4/16
Width = large tray + 2/16
Spine: large tray + two board thicknesses (compressed)
SPINE LINING =(book height - 3/16) x (book th. + 2½")
TRAY LINING (lge.) = (book ht.+1/16) x (b.w. - 1/16)
(sm.) = (book ht.-3/16) x (b.w. - 4/16)

Board: trays- Davey acidphree .074 case- Davey a/f .098, gld label .095

ADAPTED FOR FORE-EDGE MAGNET FASTENER

FORMULA FOR DROP-SPINE BOX USING ROUTED JOINTS

BOX #:

BOOK DIMENSIONS HEIGHT: ____ WIDTH: ____ THICKNESS: ____

	+2 Times Thickness		+Thickness			
		+ 6/16		+ 3/16	+ 1/16	
Small Tray_____	LENGTH: ____		WIDTH: ____		SCORE: ____	
		+ 12/16		+ 7/16	+ 2/16	
Large Tray_____	LENGTH: ____		WIDTH: ____		SCORE: ____	

CLOTH* COLOR:

*(use A-C grade) fill in outside of sm. tray, in side of lg. tra w. 4-ply/mated magnets-- cover w. cloth

CASE Boards: Height = large tray + 4/16
Width = large tray + 2/16
Spine: large tray + two board thicknesses (compressed)
SPINE LINING =(book height - 3/16) x (book th. + 2½")
TRAY LINING (lge.) = (book ht.+1/16) x (b.w. - 1/16)
(sm.) = (book ht.-3/16) x (b.w. - 4/16)

Board: trays- Davey acidphree .074 case- Davey a/f .098, gld label .095

FORMULA FOR ROUTED SLIPCASE

BOX #:

BOOK DIMENSIONS HEIGHT: ____ WIDTH: ____ THICKNESS: ____

TRAY SIZE

+ Width: ____

+ Thickness: ____

+ 4/16 + 4/16

LENGTH: ____ WIDTH: ____

CLOTH COLOR:

SCORE Book Width + 1/16 SCORE: ____

After routing, excess material is sanded off. The board is lined with paper which is pushed down into the joints. Other lined boards are cut to form ends. When covering with cloth, a 5/8" guide is used to cleanly cut the turn in.

DROP-SPINE BOOK BOX WITH BUTTED JOINTS

Book height (H) ____ Book width (W) ____ Book thickness (T) ____

Small Tray

Base = (H+6/16) ____ x (W+3/16) ____ = ____ x ____

H wall = (H+6/16) ____ x (T+1/16) ____ = ____ x ____

W walls = (W+1/16) ____ x (T+1/16) ____ = ____ x ____ (2)

Large Tray

Base = (H+12/16) ____ x (W+7/16) ____ = ____ x ____

H wall = (H+12/16) ____ x (T+5/16) ____ = ____ x ____

W walls = (W+5/16) ____ x (T+5/16) ____ = ____ x ____ (2)

CASE Boards: Height = large tray + 4/16 (joints = 3/16)
Width = large tray + 2/16
Spine: large tray + two board thicknesses

SPINE LINING = (book height - 2/16) x (book th. + 2½")

TRAY LINING (lge.) = (book ht.+1/16) x (b.w. - 2/16)
(sm.) = (book ht.-3/16) x (b.w. - 4/16)

PROTECTIVE ENCLOSURES SCOTT KELLAR

Scott started by stating the purpose of using a protective enclosure: to protect the book from the adverse effects of the active and passive environment, in an aesthetic manner. He then gave us his philosophy on protective enclosures: first, they must be separate and identifiable from the book; second, there must be no adhesive or mechanical interaction with the book; third, they must have no adverse chemical or physical effect on the book. Scott said that there are 7 actions to analyze in choosing a protective enclosure. Potential damage to the book and simplicity for the user must be considered for each of these actions:

1) Placing the book into the enclosure
2) Closing and fastening the enclosure
3) Placing the enclosure into storage (as, on a shelf)
4) Leaving the enclosure in storage over time
5) Retrieving the enclosure from storage
6) Unfastening the enclosure
7) Removing the book from the enclosure

Scott showed slides of several types of traditional protective enclosures, which he said, have been diverse. imaginative and sometimes effective:

1) Solander boxes covered with leather. These are used very infrequently now, because of the cost of leather, and its short lifespan, and because of the amount of expensive labor involved. This type of box can cause damage to the book, because of the tightness of the fit and the fingerhole, which is apt to leave scratches.
2) The drop-foredge box, which can cause damage to the leaves.
3) Phase boxes, which are useful, but have drawbacks when used for permanent storage for actively-used materials.
4) The drop-spine rare-book box, which is the standard protective enclosure today, and is first choice for its degree of protection. This comes in two basic types:
   A) The two-piece box with no squares. This leaves a drop-off to the smaller tray, and a consequent weakness in the construction.
   B) The three-piece box with squares.

There are a number of methods of construction of trays. The walls can abut the base piece or they can stand on top of it. The tray walls can be step-jointed, if the walls are at least double thickness. (The step-jointed tray wall is called for in the Library Of Congress standards for boxes). There are also a number of methods of constructing the trays. One method involves scoring and cutting nearly through the board with a scalpel, then folding up the walls and filling in the resulting gap with a glued-out piece of cord. This method of construction is soemwhat weak. Another method involves using a Keaton mat cutter to make two beveled cuts toward each other, resulting in a v-groove, then folding up the sides, which should result in a perferct mitered joint. This method requires a lot of practice to get it right. Another method, used by Mel Kavin of Kater Crafts, utilizes a glued-out

piece of paper. The base is first placed on it, then the three walls, each a board-width away from the base, and the paper is folded up, thus reinforcing they tray while it is being constructed. Scott's method of making trays is based on one developed by Barclay Ogden and Sam Klein at the Newberry Library. It involves a single-piece construction with the piece of board routed out and folded up. No paper lining is required because the resulting tray is very strong. Scott demonstrated this method. He used a carpenter's scorer to mark his lines, then clamped the board in a Keaton mat cutter and used a 1½ horsepower router with a carbide tip to gouge out the scored lines. The rough edges were sanded (a Dremel with a sanding drum may be used for this), and then the sides were folded up and glued. Besides strength, the advantage of this type of construction is that there are not a lot of similar-sized pieces of board lying around the shop, a decided problem when working in volume. It is also quick when making a lot of boxes together. Disadvantages include: Noisiness, dirtiness, and the necessity of working with a dusk mask and goggles on. Scott distributed a form he uses for figuring out the exact size of trays, and the scorer settings.

Scott then showed slides of various methods of covering trays, including the Library of Congress method of cutting the cloth so that it fits neatly into the corners, and a method whereby the tray is assembled and covered in one step. He then demonstrated his own method of covering a tray. After assembling a box, Scott lays it open on a table, and fills it with cloth-covered bricks to dry. It can also be put in a press.

He then showed slides of some unusual drop-spine boxes made for odd-shaped items. and explained in detail how he had made a box for a pipe. The box was available for examination after the presentation. He showed a box for a very heavy book which had a base pad of ½" Fomular (extruded polystyrene) covered with felt. The inner tray and the Fomular pad had handholds cut out to permit both hands to be used to lift the book. For hard-board vellum-covered books, which are apt to warp and cause the box to open, Scott uses an extra inner lid hinged to fold from the foredge side. Scott showed a portfolio with a matted print inside, hinged on the foredge, with the print set into a pocket for protection, a box with a rounded leather spine and headcap, based on a design of Bill Anthony's, a foldout easel stand for a print in a box, and gave some alternative ideas to the Library of Congress methods of making boxes with portfolios or compartments to hold the original covers or other items to be kept with the book. Scott showed some forms that had been cut out of Fomular with a hot wire, which can then be covered and put into a box to hold odd-shaped items.

Scott then moved on to the question of fastenings for protective enclosures, showing slides of fasteners made from magnetic rubber strips, velcro, snaps and double-D rings glued or sewn onto buckram straps, and Oriental peg-and loop-fasteners. He showed two types of wrappers designed by Elaine Schlefer, which fasten with magnetic rubber strips. (Details of construction are in the October issue of the Abbey Newsletter.)

Finally, Scott spoke about acrylic boxes, which he has been experimenting with. He showed several models, and slides of others. One, a double slipcase, kept the fragile spine of the book enclosed but suspended and visible. Another was a double-tray construction where the two separate parts were held together with magnetic rubber strips, and a third was a double-tray case with the two parts held together with acrylic hinges which were glued on. The advantages of acrylic are: it is inert, and therefore archival; it is easy to glue; it is washable; and it may prevent overhandling of books, since the contents are visible; The disadvantages: it leaves the book exposed to light (a problem which may be alleviated somewhat by the use of an acrylic with an ultraviolet filter); it breaks easily if the box is dropped; and it scratches easily. Scott demonstrated scraping of the edges of the acrylic, sanding and buffing them (this is necessary only for exposed edges), and assembling the acrylic box, which is first taped together, then a liquid adhesive (SC 125, available from Cadillac Plastics) is squirted into the joints, almost instantly forming a bond.

Submitted by
Elaine Schleifer
11/19/86