

## Virginia Arts of the Book Center

2125 Ivy Road, Suite 5 — Charlottesville, Virginia 22903  
"Beneath the Art Box" in the Ivy Road Shopping Center  
[www.virginiabookarts.org](http://www.virginiabookarts.org)

### The A.P.S. Storage Folder

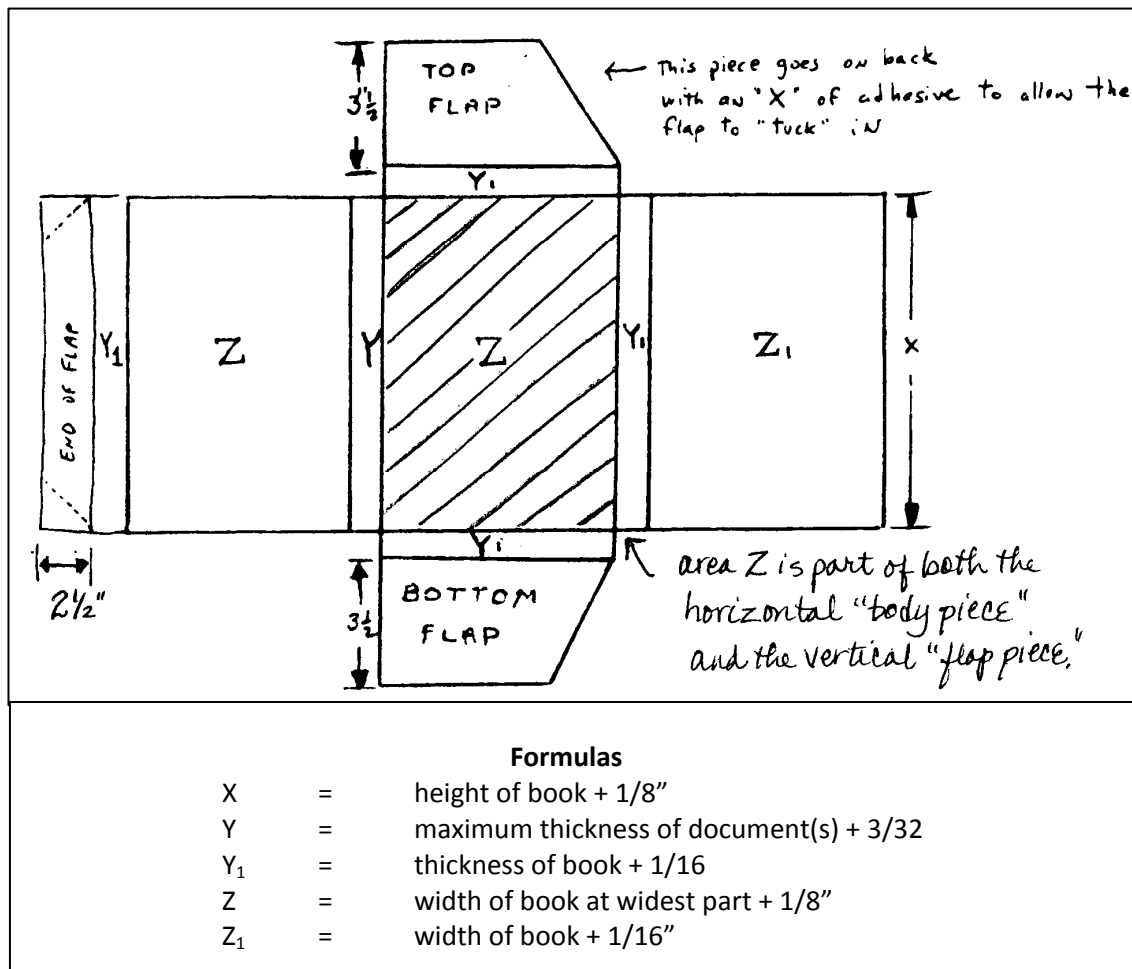
This folder was designed by Willman Spawn, conservator at the American Philosophical Society Library (Philadelphia, Pennsylvania, U.S.A.) in 1957 for the temporary storage of disbound pamphlets. It may be used for volumes or loose documents.

**Material.** The A.P.S. folder is made of a neutral, buffered folder stock/card stock. The light-weight stock, 10 mil., is rigid enough to support a volume (or pamphlet or set of leaves) up to 3/8 inch thick; the heavier weight, 20 mil., will support documents up to 3 inches thick.

**Tools.** To make the folders, only the card stock, a mat knife, calipers, ruler and square, bone folder, and ample working space are needed. A pair of calipers is useful but not essential. A pair of sharp scissors can be substituted for the mat knife if necessary. A cutting mat is preferred but not essential.

**Measurement.** The most important requirement is careful measurement according to the formula shown with the diagram; some measurements are in 32<sup>nd</sup> of an inch. The fractional additions are allowances for the thickness of the stock as the case folds over itself.

#### Diagram and formulas for measuring



## Virginia Arts of the Book Center

2125 Ivy Road, Suite 5 — Charlottesville, Virginia 22903

"Beneath the Art Box" in the Ivy Road Shopping Center

[www.virginiabookarts.org](http://www.virginiabookarts.org)

### Measuring and Cutting

1. Measure the height, width, and thickness of the document to be enclosed in the folder.
2. Use these measurements in the formulas to derive measurements for the folder (X, Y, Y<sub>1</sub>, Z, and Z<sub>1</sub>).
3. Using the diagram, determine the total width and height for each of the two pieces to be cut:

- a. The "body piece" is the horizontal piece: wider than tall

$$\text{Width} = \text{end flap} + Z + Y + Z + Y_1 + Z_1 \qquad \text{Height} = X$$

- b. The "flap piece" is the vertical piece: taller than wide

$$\text{Width} = Z \qquad \text{Height} = \text{top flap} + Y_1 + X + Y_1 + \text{bottom flap}$$

SEE THE ATTACHED WORKSHEET FOR DOING THE CALCULATIONS—it may simplify your calculations. The worksheet is at the foot of these instructions.

Measure carefully; check your arithmetic carefully.

4. Cut the two pieces on a board shear or with sharp cutting tool (against a strong straightedge).
5. Using the amounts entered on the worksheet, measure and mark the folds on each piece. For the horizontal "body piece," measure from the Z<sub>1</sub> end (not the flap end).
6. Score each fold firmly with a bone folder, then fold along the score against a strong straightedge. On the horizontal "body piece," begin at the Z<sub>1</sub> end (not the flap end).

*Tip:* For each piece, make the first 2-3 scores as marked; from that point onward, fold the piece around your object (book; stack of loose sheets) and test your measurements before making each successive fold. In this way, you can make small adjustments if the marked fold is not where the score needs to fall in order that the piece will wrap around the object properly.

7. After folding each piece, clip the corners of the flaps. Be careful on the vertical "flap piece" that the two clips are on the same edge of the piece. See diagram on page 1.

### Gluing

1. Position the pieces to match the diagram; they overlap at the center Z piece. Place the flap piece *behind* the body piece. That is, the flap piece is the *outside* piece.
2. Decide whether the folder will be "self closing" (the end flap will tuck into the box) or will use fasteners (such as Velcro). Glue according to separate instructions below in no. 4.
3. Use PVA to glue the two pieces; (Inexpensive "white glue" such as Elmer's may be used but it will not be archival because it will not be acid-free.)
4. Apply glue:

## Virginia Arts of the Book Center

2125 Ivy Road, Suite 5 — Charlottesville, Virginia 22903

"Beneath the Art Box" in the Ivy Road Shopping Center

[www.virginiabookarts.org](http://www.virginiabookarts.org)

- a. *Self closing.* Apply the glue to the Z area of the flaps piece: a large X across the area, then along the top, bottom, and *left* edge; do not apply glue along the edge where the flap will be inserted. *Tip:* You may want to mark the dimensions of the flap on the area to be glued.
  - b. *Fastener.* Apply glue over the entire Z area of the flaps piece.
5. Position the Z area of the body piece on top of the glued area; align carefully. Press together firmly by hand or with a bone folder; cover back and front of glued area with waxed paper and press under weight for approximately 30 minutes.

### Assembling

1. Fold the folder around the document: fold the top flap and bottom flap over the document; fold the right piece over the document; fold the left piece and end flap over the document.
2. Measure a final fold in the end flap to that it fits around to either (a) tuck into the space along the back or (b) wraps around the back snugly.
3. If using Velcro fasteners, glue two or three inside the final turn of the end flap and along the back of the folder so that the flap is held in place.

*See worksheet for calculations, below.*

The A.P.S. storage folder was taught in the VABC Binding Certification Course by Lindsey Mears and Kristen Adolfsen, Spring 2011; the VABC Book Making Group taught it in a workshop, October 2011. The instruction sheet was revised and the worksheet was created for the October workshop, based on the Spring handout.

## Virginia Arts of the Book Center

2125 Ivy Road, Suite 5 — Charlottesville, Virginia 22903

"Beneath the Art Box" in the Ivy Road Shopping Center

[www.virginiabookarts.org](http://www.virginiabookarts.org)

### Worksheet for A.P.S. folder

—all calculations are in inches—

#### 1. calculations for the body piece / horizontal piece

$$\text{height of body piece: } \frac{\text{height of book/documents}}{\text{height of book/documents}} + \frac{1}{8} = \text{total height}$$

$$\text{width of body piece} = \text{end flap} + Y_1 + Z + Y + Z + Y_1 + Z_1$$

$$\text{end flap} = \underline{2 \frac{1}{2}} \rightarrow \underline{2 \frac{1}{2}}$$

$$Y_1 = \frac{\text{thickness of book}}{\text{thickness of book}} + \frac{1}{16} = \underline{\hspace{2cm}}$$

$$Z = \frac{\text{width of book at widest part}}{\text{width of book at widest part}} + \frac{1}{8} = \underline{\hspace{2cm}}$$

$$Y = \frac{\text{maximum thickness of book/doc.}}{\text{maximum thickness of book/doc.}} + \frac{3}{32} = \underline{\hspace{2cm}}$$

$$Z = \frac{\text{width of book at widest part}}{\text{width of book at widest part}} + \frac{1}{8} = \underline{\hspace{2cm}}$$

$$Y_1 = \frac{\text{thickness of book at widest part}}{\text{thickness of book at widest part}} + \frac{1}{16} = \underline{\hspace{2cm}}$$

$$Z_1 = \frac{\text{width of book}}{\text{width of book}} + \frac{1}{16} = \underline{\hspace{2cm}}$$

$$\text{total of all items} = \underline{\hspace{2cm}} \\ \text{total width of body piece}$$

total dimensions for horizontal / body piece = \_\_\_\_\_ high X \_\_\_\_\_ wide

**Virginia Arts of the Book Center**

2125 Ivy Road, Suite 5 — Charlottesville, Virginia 22903

"Beneath the Art Box" in the Ivy Road Shopping Center

[www.virginiabookarts.org](http://www.virginiabookarts.org)

**2. Calculations for the flap piece / vertical piece**

***width of flap piece***

width = Z =  $\frac{\text{width of book at widest point}}{\text{width of book at widest point}}$  +  $\frac{1}{8}$  = \_\_\_\_\_

***height of flap piece*** = top flap + Y<sub>1</sub> + X + Y<sub>1</sub> + bottom flap

top flap =  $\frac{3 \frac{1}{2}}{3 \frac{1}{2}}$  →  $\frac{3 \frac{1}{2}}{3 \frac{1}{2}}$

Y<sub>1</sub> =  $\frac{\text{thickness of book}}{\text{thickness of book}}$  +  $\frac{1}{16}$  = \_\_\_\_\_

X =  $\frac{\text{height of book}}{\text{height of book}}$  = \_\_\_\_\_

Y<sub>1</sub> =  $\frac{\text{thickness of book}}{\text{thickness of book}}$  +  $\frac{1}{16}$  = \_\_\_\_\_

bottom flap =  $\frac{3 \frac{1}{2}}{3 \frac{1}{2}}$  → =  $\frac{3 \frac{1}{2}}{3 \frac{1}{2}}$

total of all items =  
=====  
*total width of flap piece*

**total dimensions for flap piece = \_\_\_\_\_ high X \_\_\_\_\_ wide**