

## Reinforcements for Support Strips

by Hugh Phibbs



**F**olded paper strips can be used to support a work of art, eliminating the need for hinging and providing safe, steady support if the art on paper is stiff enough that it would stand if it were rolled into a tube. An assessment of the stiffness of the paper must be made without actually rolling the art, of course, and this kind of support can only be used if, in addition, the edges of the paper can be covered.

Last month, the use of tabs was described as a means of maintaining support across the center of the strip as the size of the support grows. These tabs were cut out of the back side of the bottom strip and linen taped to the back mat below the lower edge. This can ensure that the bottom strip will serve as a steady ledge without sagging and will spread the impact of a blow away from the corners if the frame is dropped.

The use of these tabs should be confined to the lower strip since they will impede the expansion of the paper being supported in the event of a rise in relative humidity. The strips themselves are designed to allow for expansion since they are taped to the four-ply back mat outside the point at which they cross and the paper of which they are made will also expand if the humidity rises.

When the strips are installed around the art, they can be drawn snug from end to end as the linen tape is applied to each end. This will provide a modicum of restraint against the front edges of the paper in the support. The longer the strips are, the less this restraint will be, especially at the center of each strip. This problem is compounded by the fact that the stiffness of the back mat will decrease as its size increases. It would be possible to address this last problem by substituting six and then eight-ply for the ordinary four-ply of the back mat as the size increases, but they introduce considerable expense and weight.

Any adhesion of the back mat to a rigid support will remove whatever chance it has to expand and contract along with the art it is supporting and if the attachment is confined to the edges of the back mat, it can be expected to warp.

A means of restraining the edges of the paper in the support so they will not pop out of the support strip if the back mat is flexed is called for. This must not confine the expansion of the supported paper's edges, nor should it have the potential of embossing the edges of the paper if pressure is applied to the front of the window mat.

Any support which covers only a fraction of the edge has the potential of concentrating pressure on the portion of the paper it covers. This problem

Figure 1

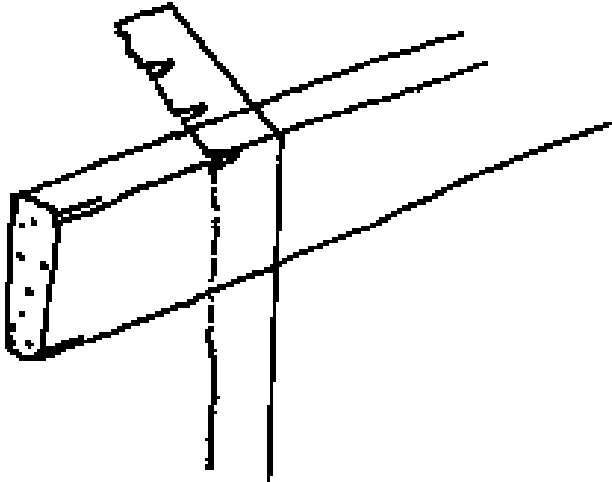


Figure 2



does not occur for the tabs described last month because the gap which they produce in the back of the strip receives less pressure than the rest of the edge.

The difficulty in producing a reinforcement which will provide the appropriate pressure on the front of the strip comes from the fact that material which is rigid enough to produce the pressure will be thick enough to raise the pressure problem. Since the danger comes at the

edge of the reinforcement, the problem may be addressed by eliminating those edges. A model for this can be found in wet cut hinges in which the feathering of their edges diminishes their bulk so gradually as to render the hinges edgeless. Creating a similar edge in a five mil polyester is more difficult than wet cutting Japanese tissue.

If the polyester sheet is folded around a block of wood and the exposed corner is sanded until the

sheet is cut, the edge which results will be graduated. If the wood has a somewhat rounded corner, the graduation will be accentuated.

The production of these reinforcements begins with a long cut sanded into a strip of polyester. When this is completed, the sheet is turned ninety degrees and cuts are made which will be the sides of the reinforcement (Figure 1). When a series of those tabs have been created, they can be cut out in the polyester and holes can be cut in the unsanded rear portion of each tab. These holes will allow the tabs to be secured to the back mat with linen tape (Figure 2).

The tabs should be installed with the sanded side down so the diminished side of the edge will be facing the art. The tabs can be taped to the back mat at a slight distance from the outside edge of the strip to allow for expansion of the paper being supported. They will be rigid enough to provide support from this distance (Figure 3).

They should not be installed on top of the tabs which were described last month to avoid pressure being directed to the area where the gap in the back of the strip is located. These

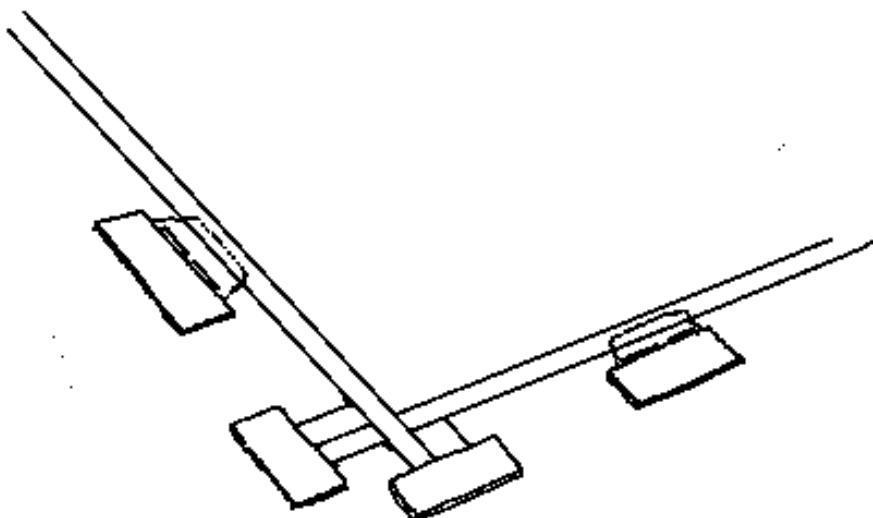


Figure 3

reinforcements can be applied to all the edges of the work since they will not restrict expansion. The work of art which is supported in this manner should be restrained enough to permit normal handling, but it is still wise to place the backing board beneath it whenever it is lifted.

Ultimately, some works will be too large for this sort of support, but most papers which have enough rigidity to stand on their bottom edges, can be considered. The sizes in which window mats can be produced will be one limiting factor and the possibility that the item being framed may be pulled through the window by static from the glazing can be another. As larger subjects are considered it must be remembered that the size of the strips must be scaled up and practicing on scrap materials to gain familiarity with the physics to be encountered is also recommended. This type of support is especially important when unfamiliar materials such as plastic substrates under the art are encountered since hinging options there are limited. Water-activated hinges may not adhere to such plastics and pressure-activated hinges may have plasticizers which can migrate into the plastic of the substrate and they may fail under the pressure of gravity, or from exposure to heat or cold. In time, it can only be hoped that overmatting will be more widely used, allowing more works to be supported on their edges and that better designs to provide this support will be developed. ■