

## Tip: Minor Treatment for Chinese Folding Fans

### BACKGROUND

The physical condition of Chinese folding fans can be quite poor because of the heavily applied sizing, coating, and finishing used in the production process. Additionally, their folding function can also result in severe tearing and cracking to the paper support.

A major treatment for Chinese folding fans could address these condition issues and replace the damaged lining; however, it would involve disassembly and reassembly, which is very time consuming and labor intensive. Furthermore, major treatment could adversely affect the undamaged side of the fan. This article includes an explanation of the structure of the Chinese folding fan and offers a tip to mend the tears on the paper-based folding fans without disassembly. It is hoped this tip will be useful for conservators working on similar cases.

### INTRODUCTION

It is said in China that the process of making folding fans takes 72 steps to finish and includes rib preparation and leaf preparation. The ribs are usually made of bamboo. After the bamboo has been cut into standard sizes, steamed and dried, the bamboo sticks are paired (guards and ribs). The guards are carved and polished with wax. The ribs are also carved very thin at their tips and sanded. A horn rivet is used to join the guards and ribs together. The leaf is made of sized Xuan paper that is laminated, and may be decorated with mica, gold flake, or pigment coating. The Xuan paper is cut into the fan leaf shape, then moistened. To prepare the leaf, the fan leaf shape Xuan paper is laid on top of a plastic sheet with a template indicating where the ribs are to be placed underneath, then starch paste is applied evenly overall. Paper strips are placed along the marks of template. Another layer of Xuan paper is added. The paper strips create “pockets” or nonadhered areas within the fan leaf, which allows the ribs to slide between the layers of Xuan paper. After laminating the leaf and letting it dry, the leaf

is ready to paint. The painted leaf is folded and trimmed, then paper or silk is applied along the top edge for both aesthetics and protection. At this stage, the leaf is ready to combine with the ribs. First, the rib (pockets) areas have to be opened up carefully with a bamboo spatula, then the ribs are inserted into these areas, two edges of leaf pasted onto the guards, and the extra leaf trimmed. (The Production of Folding Fans 2017)

The rib pockets can become loose as the fan is used. The ribs then move more within the pocket area causing damage to the Xuan paper layers. Another issue is that Xuan paper decorated with gold flakes or mica/pigment coating is usually heavily sized with a high concentration of alum gelatin. These coatings and the acidic agents released from the bamboo ribs can cause the paper to become brittle and yellow over time. All these characteristics of the folding fan result in the leaf tearing along the edges of ribs and can create further damage such as losses. Therefore, some folding fan paintings or calligraphies that we see today have been altered into other mounting formats such as an album or scroll. For restoration of folding fans, preserving its original format involves disassembling and remounting; it takes an excessive amount of time and labor and also might adversely affect the undamaged side of the fan.

In 2016, three folding fans were acquired for a special Chinese exhibition, *China's 8 Broken: Puzzles of the Treasured Past* at Museum of Fine Arts, Boston. These folding fans all arrived in similar condition with tears and splits along the ribs (figs.1 and 2). To keep these fans in their original format and address the condition issues, minor treatment was designed and undertaken.

### TREATMENT

This section describes the minor treatment for three folding fans (MFA accession nos. 2013.581, 2013.580, and 2017.14) to mend the tears and splits.

The folding fans were photographed before treatment to document conditions under normal light and transmitted light. They were surface cleaned front and back with kneaded eraser as needed. Reinforcement strips were set underneath the tears as support. First, a long piece of mat board folded

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Fig. 1. Cracks, slips, and losses were seen at the lower portion on the front of 2013.581 before treatment.



Fig. 2. Cracks, slips, and losses were seen at the lower portion on the back of 2013.581 before treatment.

into a V shape was prepared as a support platform during treatment (fig. 3). Mylar or a fine bamboo spatula were used to open up the paper layers around the areas with no ribs, and the paper (or silk, if that is the original material) strip was pasted on the Mylar. The end of both the Mylar strip and paper (silk) strip were trimmed into a rounded shape, so that

they could be easily inserted (fig. 4). After pasting a mending strip with Mylar underneath (fig. 5), both the paper (silk) and Mylar strip were inserted in between the paper layers along the ribs and set into place (fig. 6). A fine-tipped bamboo spatula was used to push the paper strip further to adjust if needed (fig. 7). The paper (silk) strips adhered to the paper



Fig. 3. A long piece of V-shaped mat board was placed underneath as a solid support during treatment.



Fig. 6. Placing the paper strip and carrier in between the painting and rib.



Fig. 4. Using a Mylar strip to get through the space between painting and ribs.

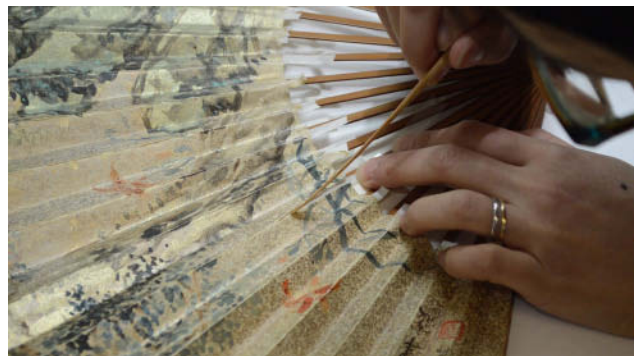


Fig. 7. Once the paper strip and carrier could not be pushed any further, use the bamboo spatula's tip to push paper in more.

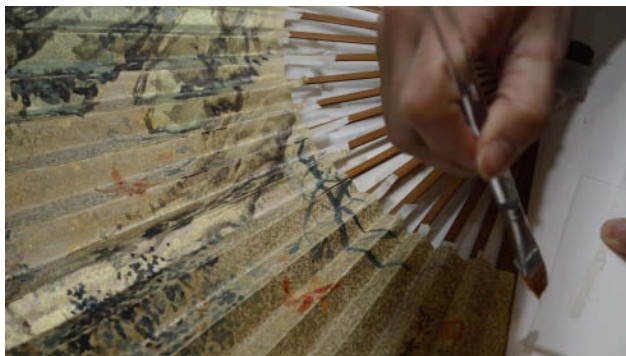


Fig. 5. Pasting paper strips with the Mylar strip underneath as a carrier.

layers and the Mylar carrier was removed. The paper (silk) strips underneath the surface were smoothed to make sure they had good contact. After the strips were dry, any extra papers were trimmed off. Color compensation was done to the repairs as needed. After treatment, these fans could be folded and opened according to their function, and also could be stored folded (fig. 8).



Fig. 8. After treatment, these fans could be folded and opened according to their function, and also could be stored folded in the box.



Fig. 9. The front of 2013.581 after treatment.



Fig. 10. The back of 2013.581 after treatment.

## CONCLUSION

The minor treatment described above addressed the structural issues on the Chinese folding fans to prevent them from further damage during handling. These mending strips also

allowed conservators to color compensate losses addressing aesthetic issues (figs. 9 and 10). In comparison with a major treatment involving disassembly and remounting, this minor treatment is less time consuming with highly acceptable results. This treatment supports the concept of less is more.

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#### REFERENCE

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