ABSTRACT


The painting measures 48 by 36 inches and is executed on a modern wove paper that is adhered to a fine-weave canvas. The canvas is mounted to a quarter-inch plywood panel and is reinforced by a three-quarter-inch four-member wooden strainer. The paint layer exhibited severe cupping in most of the painted areas and there were areas of significant paint loss. In addition, the painting had a streaky, blanched appearance that suggested an inherent paint problem or the presence of a coating.

Infrared reflectography, Fourier-transform infrared radiation (FTIR), scanning electron microscopy (SEM), microprobe, and gas chromatography/mass spectroscopy (GC/MS) all aided in pigment and binder identification. Microscopic examination revealed a top layer of wax that was later confirmed by FTIR. We believe the wax to be a coating or a consolidant, rather than a binding medium, as wax was not found consistently in the paint samples.

In our visits to Ben Shahn’s studio in Roosevelt, New Jersey, we found a recipe tacked to the wall that included the following ingredients: gum arabic, water, honey water, glycerin, carbolic acid. FTIR identified gum and GC/MS identified honey and glycerin.

Treatment options were explored to consolidate the loose paint and to minimize the haziness of the surface. In the end a conservative approach was taken. The painting was surface cleaned with a soft sable brush and the Leister hot air gun was employed to reduce the blanching wax layer. This method also served to consolidate the areas of loose paint enough so another consolidating material was not needed.

Through this research we have a clearer understanding of the complex paint compositions employed by Shahn. Archival research into Shahn’s personal papers was undertaken to try to further understand his working techniques. However, this research is continuing, and we plan to publish this study in the near future.

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