

Acc. No.:		Conservation No.:	07-6-2423
Cat. No.:	FC-7.66	Date Examined:	July 31, 2007
Owner:	Shelburne Museum	Date Completed:	September 21, 2007
Title:	Carousel panel: Uncle Sam	Conservator:	Nancie Ravenel, Suki Fredericks, Kim Crozier, Betsy Bogner
Structure:	painted wood, painted and varnished canvas		
Artist/Country:	Gustav Dentzel Company		
Signature/Date:	c.1902		

Accessories:**Labels/Legends:****Digital Photographic Documentation:**

File Name	Description of Image
CO2007062423A1	Before Treatment, overall, recto
CO2007062423A2	Before Treatment, overall, verso
CO2007062423B1	During Cleaning, detail
CO2007062423B2	During Cleaning, detail
CO2007062423B3	During Cleaning, detail
CO2007062423B4	During Cleaning, detail
CO2007062423D1	After Treatment, overall, recto
CO2007062423D2	After Treatment, detail of sky
CO2007062423D3	After Treatment, detail of Uncle Sam

Reason for Treatment: Clean for exhibition in Round Barn, 2008 season
Building Location: Pleissner Storage

EXAMINATION:

The pierced strainer/frame is decorated with painted scrolls. A painted canvas is nailed to the reverse side of the large opening. The canvas is painted to depict Uncle Sam holding a bundle of switches and holding the ear of a small figure dressed as a matador. "Spain" is written on the figure's cummerbund. The paint thickness ranges from a wash on the canvas to a low impasto. Under-drawing is evident under the matador dressed figure's hands. There is an ink overdrawing over top the outlines of the figures and ships in the background.

The varnish appears to have been applied to the canvas after it was placed in the frame since varnish is puddle at the bottom of the canvas and is present on the inside edges of the frame. Under ultraviolet light, this material appears turbid and yellow in color. Comparison of this varnish with a known set of resins showed that boiled linseed oil has the closest appearance under ultraviolet light.

CONDITION:

The frame and canvas are dusty and grimy. The varnish is yellowed and has beaded up, possibly as a result of heat. The paint is in generally good condition on the canvas and frame, but some reticulation of the paint is

noted, particularly in the brown paint on the scrolled decoration on the frame and the yellow paints on the matador costume.

The canvas is a bit slack on the frame and there are marks and abrasions to the canvas from the horizontal member of the strainer.

TREATMENT PROPOSAL:

1. Vacuum canvas and frame.
2. Remove yellowed varnish from canvas. Tests showed that this material is soluble in ethanol and in a 1:1 mix of ethanol and isopropanol. This material is insoluble in isopropanol and deionized water. Some success in removal was noted in tests with a 3% solution of ammonium citrate in deionized water. No success was noted in tests with the gel containing triethanolamine and citric acid currently being used to remove maintenance linseed oil from a carousel horse.
3. Clean painted frame.
4. Apply a protective varnish.

TREATMENT

1. Both sides of the canvas and frame were vacuumed with a brush attachment on a variable speed HEPA vacuum. This work was undertaken by Nancie Ravenel.
2. In the course of consulting conservator Richard Wolbers' visit, a number of cleaning solutions were tried and were found to be successful for removing the yellowed varnish. A benzyl alcohol gel (100 mL benzyl alcohol, 20 mL. Ethameen C25, 2 g. Carbopol 934) was very successful in removing the varnish from thinly painted areas. The gel was cleared with a 1:1 solution of isopropanol and petroleum benzine. Benzyl alcohol and water emulsified with Pemulen (200 mL. deionized water, 20 mL. triethanolamine, 2 g. Pemulen T2 as a stock gel; 30 mL. stock gel mixed with 3 mL. benzyl alcohol) was successful at removing the varnish from more thickly painted areas. The emulsion was cleared from the painted surface with deionized water. The yellow paints on the matador's costume were found to be sensitive to the Pemulen emulsion of benzyl alcohol and water, but an emulsion of water, citric acid, triethanolamine, Vanzan NF-C and benzyl alcohol (1 g. Vanzan mixed with 100 mL deionized water, triethanolamine added until pH was at 8, 5% citric acid in deionized water added until pH was brought to 7, and then 1 mL. benzyl alcohol added) was found to be effective enough to remove the varnish, but gentle enough to not affect the yellow paint. The emulsion was cleared from the surface with deionized water on cotton swabs. Some black lines in the painting were very sensitive to any cleaning solution. Care was taken to avoid them. Consulting conservator Suki Fredericks tested the Pemulen and Vanzan emulsions on the matador and cleaned much of that portion of the painting. Conservation intern Kim Crozier cleaned the proper left side of the sky. The rest of the painted canvas was cleaned by staff conservator Nancie Ravenel.
3. Benzyl alcohol and water emulsified with Vanzan NF-C (1 g. Vanzan in 100 mL. deionized water mixed with 1 mL. benzyl alcohol) was found to be effective on the grime on the painted frame without over cleaning. The emulsion was cleared with deionized water on cotton swabs. The lower member of the frame was cleaned in this manner by conservation volunteer Betsy Bogner. Staff conservator Nancie Ravenel cleaned the proper left member of the frame using this method but, with further testing, found that a 2% solution of ammonium citrate in deionized water was equally effective. The rest of the frame was cleaned in this method.
4. Painted canvas and frame were varnished with a mixture of Golden MSA varnishes (75% Satin to 25% Gloss, by eye) and petroleum benzine (1 part resin mixture to 1 part solvent). The varnish was applied with a brush.
5. Sheets of Coroplast corrugated polyethylene board were attached to the back of the frame with screws to provide some protection to the back of the canvas. D-ring hanging hardware was screwed to the back of the frame.

Total Treatment Time: 60 hours

MATERIALS

Ammonium Citrate: Aldrich Chemical, Milwaukee, WI

Benzyl Alcohol: Aldrich Chemical Co., Milwaukee, WI

Carbopol 934: Conservation Materials, 240 Freeport Blvd, Box 2884 Sparks, NV 89431

Ethomeen C-25: Conservation Materials, 240 Freeport Blvd., Box 2884 Sparks, NV 89431

Isopropanol, petroleum benzine, triethanolamine: Fisher Scientific, Fair Lawn, NJ

Pemulen T2: Protameen Chemicals, Totowa, NJ

Vanzan NF-C: R.T. Vanderbilt Co., Norwalk, CT

Conservator's Signature: _____ Date: _____

Approved by:

Director, Preservation & Conservation: _____ Date: _____

Curator: _____ Date: _____