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Date:	04/17/2021
Invoice:	2021.14(.6)
Client:	
Address:	
Phone:	
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ETA:	4-6 weeks

Meissen Clock: 11.5”h x 6.25”w x 4”d



Figure 1 - Clock before treatment



Figure 2 – Detail of broken ribbon



Figure 3 - Detail of broken wing

CONDITION REPORT

The clock is in overall good condition (Figure 1). There is slight dust throughout and in the recesses. A piece of ribbon is broken from the top of the cherub’s head (Figure 2). The same cherub is also missing the proper left wing (Figure 3). The clock face has a crack in the enamel extending from the 12 down to near the 4 (Figure 4). The cherub on the right has had extensive repair to the lower wing which is missing (Figure 5). UV illumination shows the extent of the old repair on the wing (Figure 6). It is unknown if the clockworks function, winding was not attempted. The brass door has tarnished fingerprints and grime around the edges. The Meissen sword symbol is on the front proper right leg.



Figure 4 - Detail of clock face



Figure 5 - Detail of old repair on wing

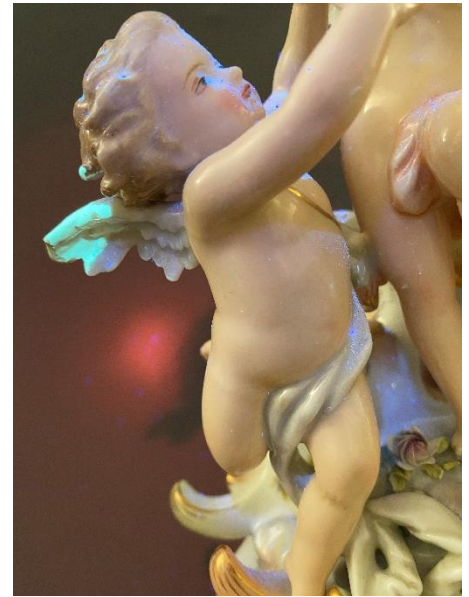


Figure 6 - Detail of old repair under UV

TREATMENT PROPOSAL

It is recommended that the clock be dusted to remove surface dirt. It would be best to attempt to secure the enamel on the clock face to prevent further cracking. The wings and ribbon could be fabricated. The fingerprints could be removed from the door and polished to prevent further etching of the surface. Due to the age and decorative nature of the object, it is not recommended to run the clock and is not addressed in this treatment.

TREATMENT REPORT

The clock was tested for solvent sensitivity. None of the decorative elements reacted to the solvents, thus the old repair was removed with a scalpel and cotton swabs dipped in acetone. A mold was taken from another right-side wing using Alumilite Moldputty¹ and allowed to cure for 24 hours. A mixture of Epotek 301² epoxy was mixed with fumed silica³ and powdered pigments⁴ to match the translucency and color of the angel wing. The mold was then placed onto the broken wing of the top angel. Per the client's request, the end of the ribbon was rounded off with a thicker mixture of the same components and shaped with a paintbrush dipped in acetone. The fabrications were left to cure for two days.

¹ *Alumilite Moldputty*: A two-part silicone putty mixed 1:1 for making molds of objects.

² *Epo-Tek 301*: A 12-hour curing, low viscosity, water-white two-part epoxy with a refractive index (1.538 – 1.540) closely matching that of modern glass. Available from Epoxy Technology, Inc. 14 Fortune Drive, Billerica, MA 01821-3972.

³ *Fumed Silica*: A colloidal form of silica that is a very light, fluffy white powder, made by hydrogen-oxygen furnace combustion of silicon tetrachloride.

⁴ *Powder Pigments*: Insoluble, dry solid that is pulverized to a fine powder.

The mold was removed, and excess adhesive was removed with a scalpel. The edge where the fabrication meets the wing was refined with glass paper⁵. Because the fabrication went smoother than expected and time allowed, the same mold was filled with another mixture of Epotek 301 and placed over the lower cherub's wing and refined once dry. The wings and ribbon were inpainted using Golden Acrylic Paints⁶, Acrysol WS-24⁷, and distilled water.

A scalpel was used to lightly probe the crack on the enamel clock face. No ledge could be determined, indicating that the crack originates between the metal underlayer and the layers of glass enamel, but not extending to the surface. Epotek 301 was prepared with a small amount of white powdered pigment and applied to the crack on the clock face in an attempt to secure it. However, it did not appear to absorb any adhesive and was removed. Because of the delicate nature of the enamel and decorative flowers, further attempts to repair the face were deemed excessive and not attempted.

The brass door was rubbed with Micro-mesh 12000 grit⁸ and further refined with 100,000 grit diamond paste⁹ for a high shine. The door was cleaned with acetone and a soft cloth to remove the paste residue. A fine coat of renaissance wax¹⁰ was rubbed onto the door with a soft cloth and allowed to dry to a haze. A clean cloth was used to buff the wax, leaving a fine layer to protect the metal from tarnishing.

AFTER CARE INSTRUCTIONS

It is recommended that the clock be used for decorative purposes only. The clock may be lightly cleaned with a soft brush with extra care taken for the delicate flowers, fingers, and other protrusions. It is not recommended that the clockworks be wound, except by an experienced horologist.

⁵ *Glass or Cabinet paper*: strong paper faced with pulverized glass and used in abrading or smoothing slight irregularities in surfaces, used in the repair of ceramic surfaces.

⁶ *Golden Acrylics*: 100% acrylic emulsion paints manufactured by Golden Artist Colors, New Berlin, NY 13411.

⁷ *Acrysol WS-24*: acrylic dispersion of polyacrylic acid mixed with acrylic copolymers or sodium polyacrylate in water. AKA Primal WS-24. Rohm and Haas.

⁸ *Micro-mesh*: A cloth-backed abrasive in grades 1500 through 12,000. Grades 1500 to 6000 are silicon carbide crystals on a cloth backing, while grades 8,000 and 12,000 are aluminum oxide crystals on a cloth backing. Micro-Surface Finishing Products, Inc., 1217 West Third Street, P.O. Box 818, Wilton, Iowa 52778.

⁹ *Diamond paste*: a polishing compound using diamond grit suspended in a paste used for high shine.

¹⁰ *Renaissance Microcrystalline Wax Polish*: Blended Cosmolloid 80H microcrystalline wax and BASF Wax A polyethylene wax in mineral spirits, approximately 20% solids. Picreator Enterprises Ltd., 44 Park View Garden, Hendon, London, NW4 2PN, England.

BEFORE



Figure 7 - Clock before treatment

AFTER



Figure 8 - Clock after treatment



Figure 9 - Detail of ribbon before treatment



Figure 10 - Detail of ribbon after treatment

BEFORE



Figure 11 - Detail of top wing before treatment

AFTER



Figure 12 - Detail top wing after treatment



Figure 13 - Detail of lower wing before treatment

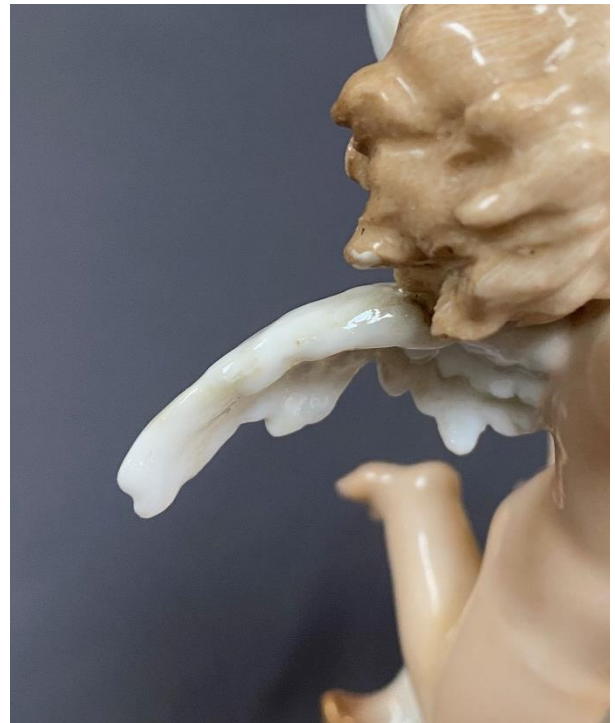


Figure 14 - Detail lower wing after treatment