

The examination and treatment of an eighteenth century picture frame, South Tipperary County Museum

Damian Lizun

A technical examination and conservation of the British Carlo Maratta style frame for the painting of Mrs Sheridan as St Cecilia by Lady Diana Perry, belonging to the Hunt Museum in Limerick, was carried out in the fall of 2010. The treatments were executed in the South Tipperary County Museum conservation laboratory. The frame dates back to the 18th century. Its profile is decorated with three elaborate bands of hand carved ornaments like: leading acanthus-and-tongue, olive leaf and ribbon-and-stick. All decorative patterns are centred.



Materials and technique

The dimensions of the frame are as follows: H 161 cm / W 130 cm / D 9.5 cm. The four sections are mitre joined with additional spline added to secure the joint. The joints are additionally strengthened with thick nails. All four sections were assembled before the gesso and gilding were applied. The ornamental decoration was carved and gilded independently and has been added to the frame in the final stage. All bands of the ornaments were originally attached to the frame by means of nails. The microscopic examination of cross sections of the gilded layers revealed that the frame had been renovated on two occasions. The original decorative finish was executed with burnished and matte gold leaf. The real gold was detected in the damaged area where the original was observed. The ornaments were originally gilded in oil gilding technique with real gold. Chalk presence was detected in the original white gesso layer.

Close-up of the frame before conservation

The first renovation treatment was complex and represented a very high standard of workmanship. After application of a new gesso layer the frame with ornaments was gilded in the traditional manner in water and oil gilding techniques. The real gold leaf was identified by micro chemical reaction. The gilder used two colours of bole. The top edge was prepared with a coat of a grey bole. The surfaces intended to be matte gilded, were brushed with a yellow bole. After gold application all surfaces except the decoration were brushed with a layer of reddish glaze which had both a protective and a decorative function. The subsequent renovation consisted of partial bronze over-painting of the top-edge.

Condition assessment of the frame before treatment

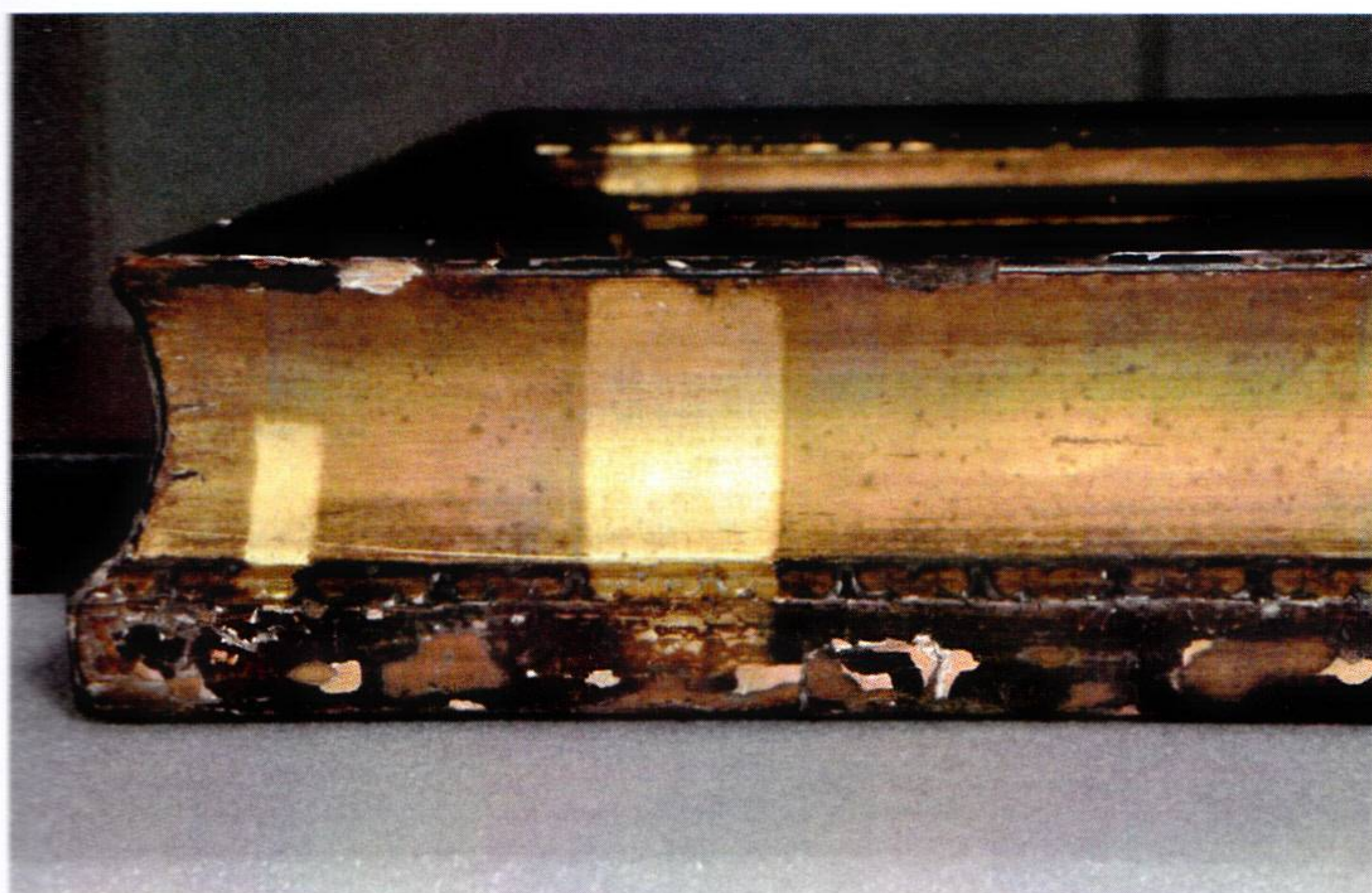
The frame was in a poor state of preservation. The surface of the front of the frame was completely covered with dust and grime which significantly disfigured the gilded finish. All nails securing the ornamental decoration were corroded and became weak resulting in partial detachment of the ornaments from the frame. For example: the overall loss of the olive ornament was around 74 cm. Also the acanthus-and-tongue ornament was detached along the left and right sections and the loose part was around 120 cm long. These damages were very critical as a rapid movement or change of the environmental conditions could break the decoration or completely detach them from the frame. Closer examination revealed that there were several areas of substantial loss in the ornamental decoration. Extensive microflaking of the oil gilded finish was evident on most of the ornaments. The flaking was probably a result of insufficient sealant. Additionally the corroded nails accelerated the deterioration of gesso and gilding layers. Some surfaces had partially lost the original gesso and gilding so that the wooden support was visible. The most severe damages to the gilding finish were observed in the front hollow near the bottom-left corner. The gold finish was severely delaminated with extensive losses and was characterised by a unique pattern of cracks. This type of damage was caused by contraction of the natural glue applied during the previous renovation in order to attach loose, decorative pattern to the frame profile.



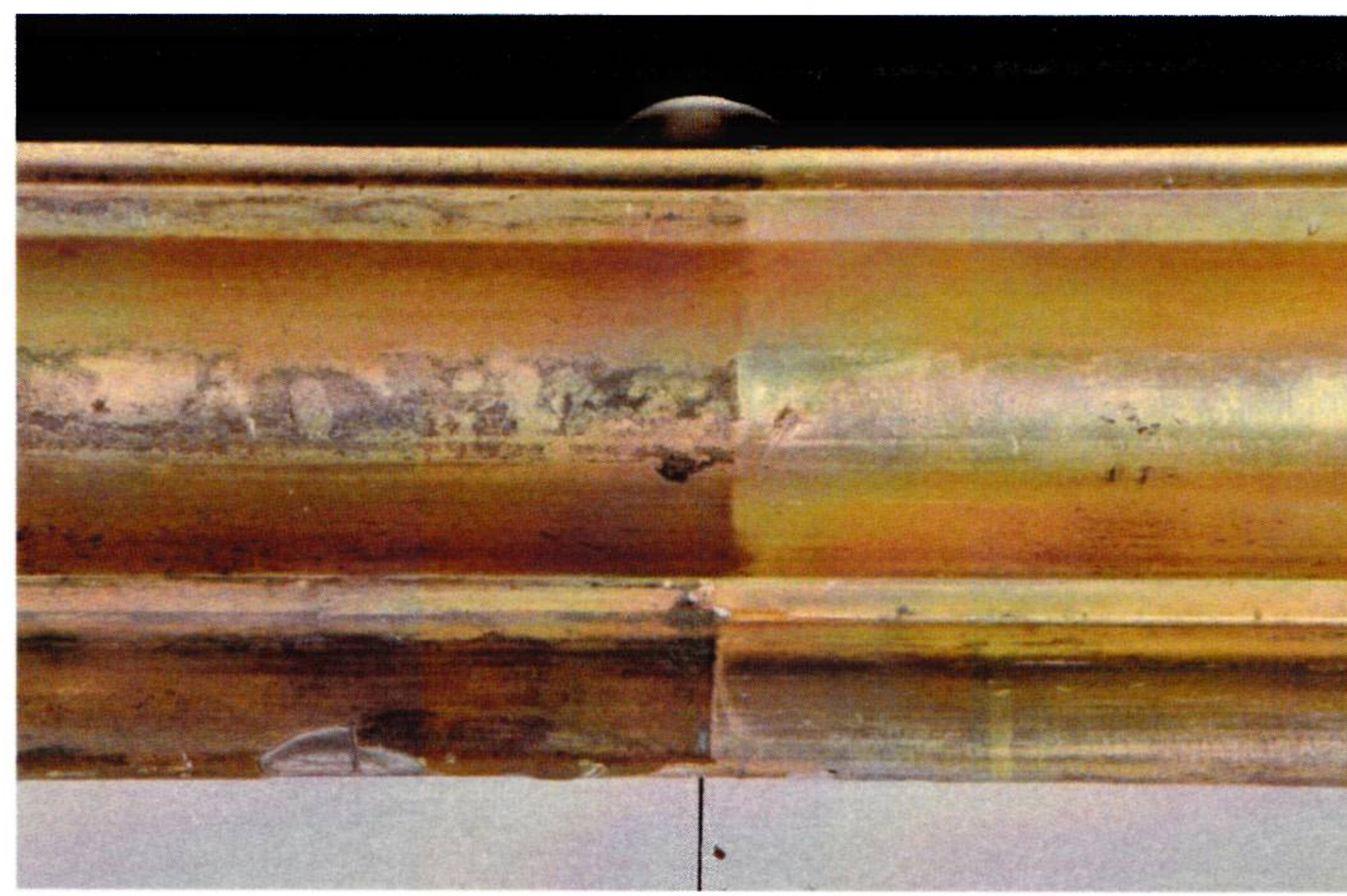
Close-up of the frame before

Conservation treatment

The decision making process was based on the results of the examination of the frame. The important part of the decision making process was in the correct assessment of three decorative finishes of the frame (the original and the first and second renovation). The results of the examination of the original finish weren't conclusive due to the small amount of the material and its poor condition. The condition and quality of the first renovation gildings represented a very high standard of workmanship. The quality of the last renovation was very poor, obscuring the gilded surface. The intention of this restoration was to restore the first renovation decorative scheme of the frame.



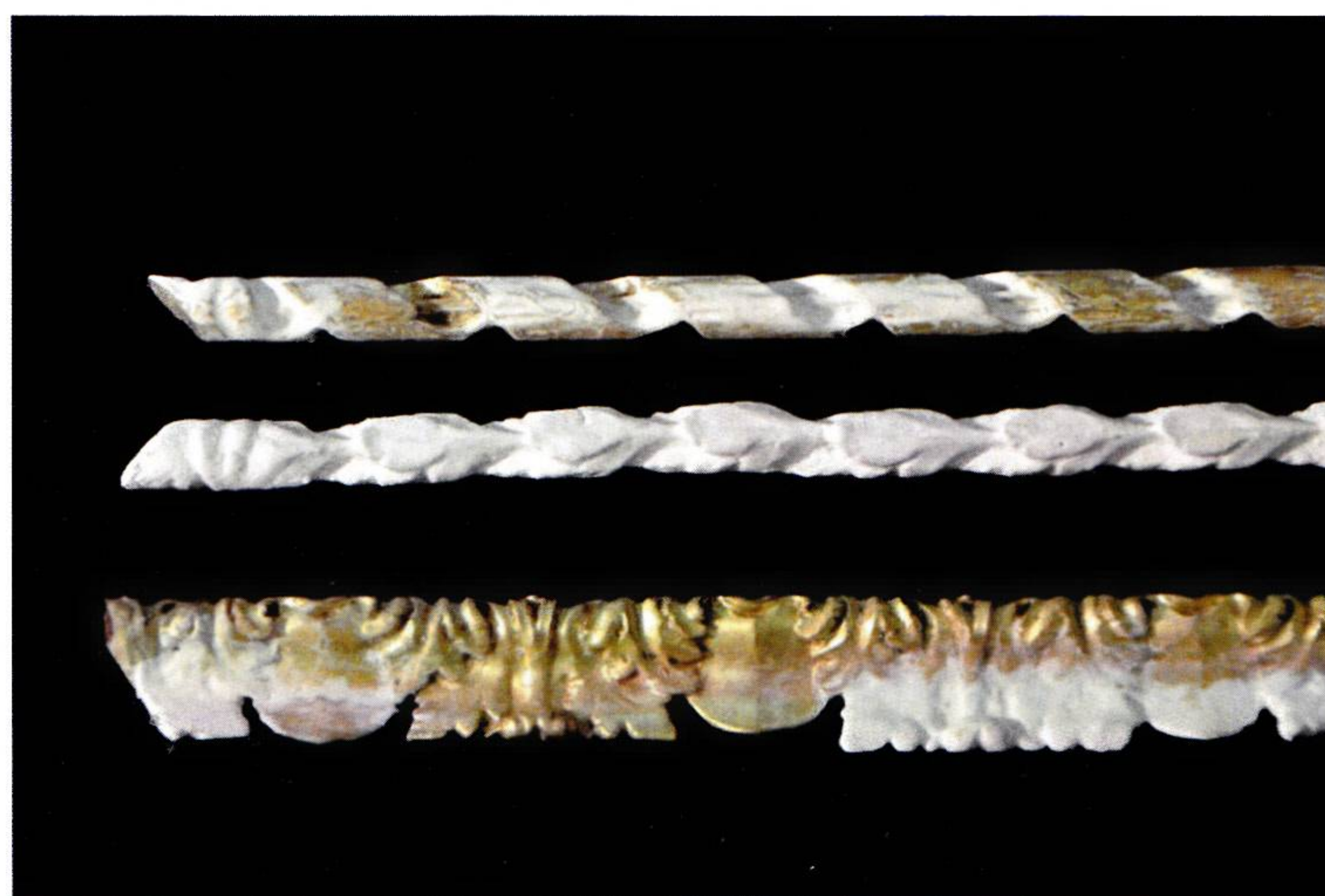
Frame during surface chemical cleaning tests



Frame during dirt and bronze over-painting removal

The conservation treatment began with a gentle cleaning of the frame. Loose surface dust was removed by dry cleaning with a soft brush under low powered vacuum. Next the decoration patterns were gently detached from the frame profiles. All nails were extracted from the frame profiles and decoration. Areas of detached gesso were stabilised using 6% solution of hot rabbit skin glue. Methylated spirit was used as a wetting agent to facilitate the penetration of the consolidant by improving capillary action and thus the ingress of the adhesive into the cracks. Further cleaning of the wooden surfaces of the back of the frame was achieved using 15 % Vulpex Liquid Soap in white spirit. The removal of bronze over-painting from the top edge was achieved using Nitromors Paint Remover which doesn't affect a water soluble surface. The surface dirt from the oil gilded areas was removed with 5% Triammonium citrate in distilled water. Losses of the gesso layer were degreased with acetone. After solvent completely evaporated the losses were then brushed with 3% hot rabbit glue to improve adhesion to the new fills. Next, they were refilled with a new gesso made of calcium carbonate and rabbit glue. In the following stage all fills and selected areas of badly worn gold leaf and grey bole were prepared by application of a similar grey bole in 6% rabbit glue. The prepared surfaces were in-gilded in the traditional manner. Finally the top edge surface was burnished with the agate stone and toned in order to match the adjacent surfaces.

The areas for matte, oil gilding were brushed with yellow bole and insulated by application of a coat of 10% bleached shellac. Then a mixtion was brushed on and new gold leafs applied. Finally all new matte surfaces were toned and a coat of a reddish glaze was applied. The glaze was prepared by mixing dragon's blood pigment with shellac. In the next stage the problems of the applied decoration were addressed. All areas of flaking gold were stabilized with 3% hot rabbit glue.

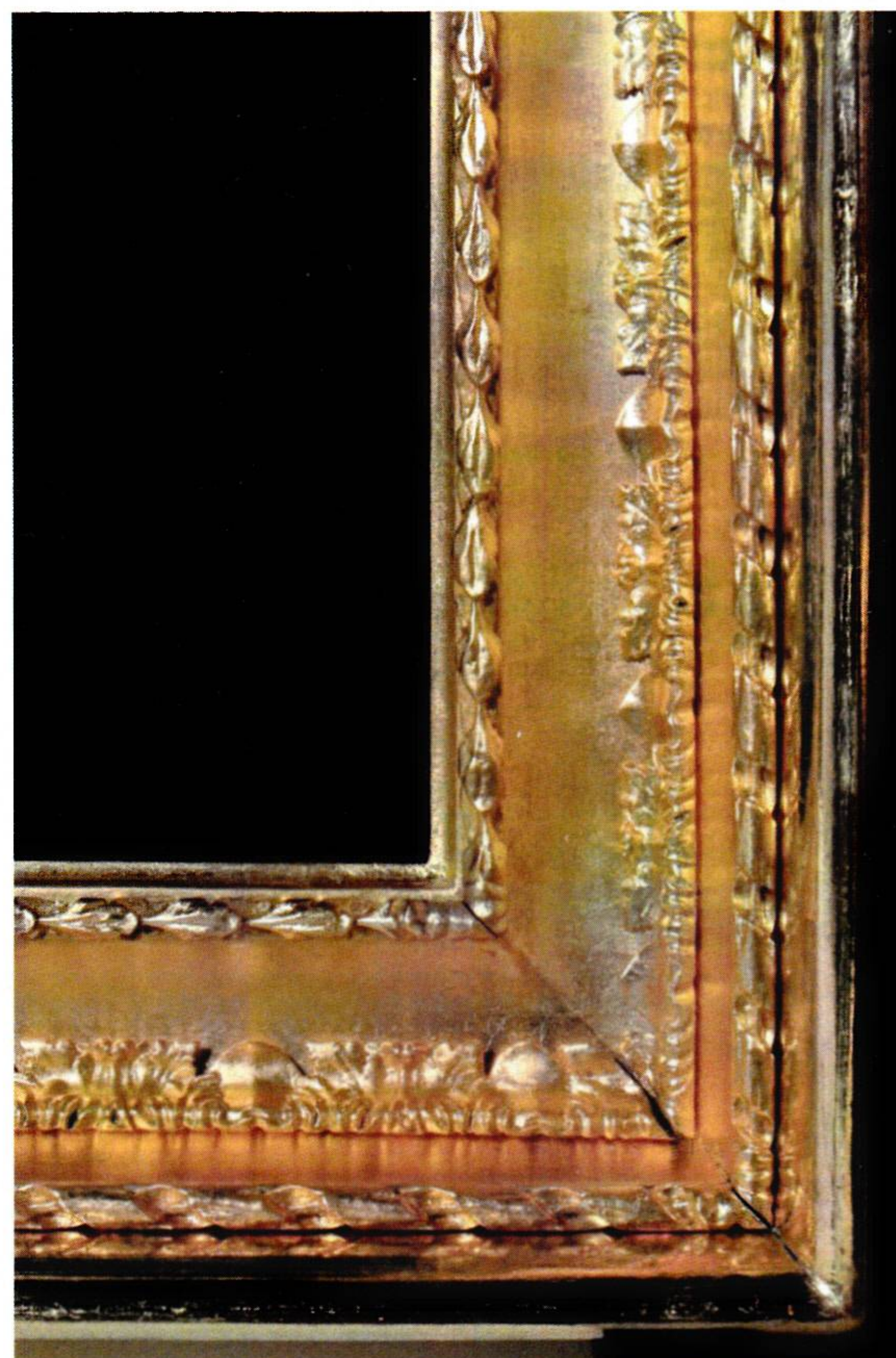
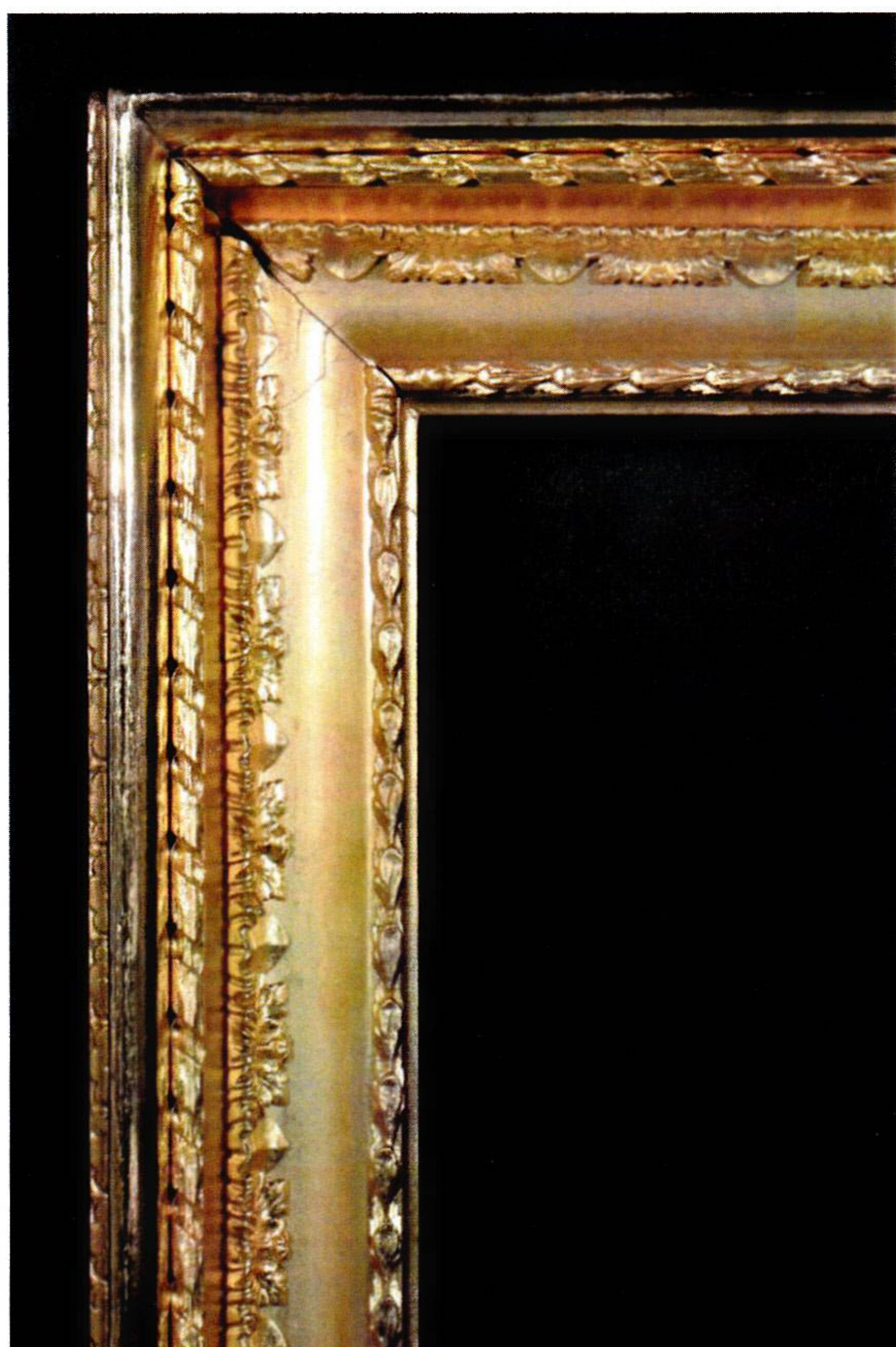


Close-up of the ornamental decoration after reconstruction works

The surface dirt was removed with 5% Triammonium citrate. Broken and loose fragments of the decoration were joined together using two-part epoxy resin Araldite AY 103 with hardener HY 956.

Missing details of the ornaments were replicated by carving and making silicone rubber moulds of the ornaments. Araldite 1253 epoxy paste was cast into the moulds to produce replacement parts.

All replicated elements were given one coat of gesso and smoothed in preparation for gilding. Then the areas intended for gilding were brushed with acrylic paint yellow ochre and then sealed with shellac. A mixtion was brushed on and new gold leafs applied. Finally the ornaments were re-installed on the frame.



Close-up of the frame after re-gilding of missing areas

Conclusion

The technical examination was crucial in understanding the history of the original finish and the later renovations. The results of the examination helped to design the list of treatments and making the correct conservation decisions. The conservation treatments have greatly enhanced the frame's appearance. The frame with painting is now on display in the Hunt Museum, Limerick.