

Polishing Silver and Copper Alloy Objects

Notes provided to Heritage Preservation for "Caring For Your Family Treasures"

J. Reilly and D. Long, Ford Conservation Center
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Your object should be examined to make sure it is strong enough to withstand polishing. Examine the structure of your object carefully, looking for cracks, weak areas, old repairs, and loose or missing parts.

It is also important to determine if there is an original organic surface coating on the object before beginning to polish. Paint is a good example of an organic decorative and protective coating material. Other coatings, however, may not be so easily recognized. Transparent organic coatings like shellac are sometimes applied to copper alloy surfaces as part of the manufacturing process. Another important type of decorative and protective surface often applied to silver or copper alloy items is a patina. A patina is a thin chemically induced layer of relatively stable corrosion on the surface of an object. Patina can also form over time from use and handling and can give an object the "patina of age." These organic and patinated surface layers should not be removed by polishing.

If your piece is determined to be strong enough, has no evidence of original organic or inorganic surfaces, and has only minor tarnish, proceed with a cautious and an extremely gentle approach.

Provide a clean work area for the cleaning process. Place a clean piece of cotton flannel, soft muslin or other soft cotton on the table as a work surface. Remove any loose dirt or dust by dusting lightly with a soft brush directed towards a vacuum nozzle. Hakè brushes are good choices for dusting because they are made entirely of wood or bamboo. If a soft artist's brush is used, cover the metal ferrule with tape to avoid scratching the object. Do not use dusting cloths as they will not reach into small crevices, and can scratch objects if trapped grit is rubbed over surfaces.

Old polish residues often contain waxy components and sometimes can be removed by applying a few drops of mild detergent solution (like a 2% solution of Orvus[®] in water) to the spot, waiting a few minutes, and removing with cotton swabs. Be very careful when doing this to avoid scratching the surface with the old polish and accumulated grime. Change swabs often to reduce risk and use a rolling rather than rubbing motion. If the residues are tenacious you can gently agitate them with a soft sable paintbrush to help loosen embedded material, using great caution to avoid

scratching. Rinse thoroughly. Take extra precautions in cases where iron supports may be used to strengthen rims. Do not wet these areas under any circumstance. Do not allow liquids to penetrate hollow handles or other hollow parts that are difficult to rinse or dry. Never immerse the object in a bath of water.

In some cases, light tarnish can be removed simply by washing with warm water and mild detergent. If polishing is necessary, mix a small amount of precipitated calcium carbonate and mild detergent solution together in a shallow dish. Do not substitute ground chalk or whiting for the precipitated calcium carbonate—they are abrasive and will scratch the object's surface. The mixture should be approximately the consistency of cream.

Apply a small amount of the calcium carbonate mixture to the object with a small piece of clean flannel or a wad of loose cotton, rubbing gently in a circular motion. Replace the cotton or flannel often as you work so that you are not merely grinding the removed tarnish and used calcium carbonate back into the surface. It takes very little calcium carbonate to polish an object—a common mistake is to use too much.

Once polishing has been completed, remove residues by rinsing the surface with cotton dipped in clean water. Dry the object thoroughly by wiping with a clean, dry, piece of flannel.

Material Sources:

- Unbleached cotton flannel is available from fabric stores.
- Orvus WA Paste[®] detergent can be purchased from a veterinary supply house or a farm store.
- Precipitated calcium carbonate is available from conservation suppliers like Conservation Support Systems and Talas.
- Distilled or deionized water can be found at hardware and grocery stores.

Additional Information:

If you have any questions or would like any additional information please contact the Ford Conservation Center, phone: 402-595-1180; e-mail: grfcc@radiks.net