Chapter 6: Special Refinishing Techniques
Project Clock: Special Refinishing

The chapter on special refinishing techniques was lengthy covering a number of different special refinishing needs as well as several approaches for each. The project clock will utilize only one of the techniques covered in chapter six: Column gilding.

After study of several examples of the project clock type and the columns in particular it was determined that traditional imitation leaf would produce the finished effect closest to the original columns. Additionally, it was determined that the gilded columns would need to have rings impressed around the column circumference.

The following brief section reviews the restoration and gilding of the project clock columns.

**Gesso:** The columns as received were heavily worn with small damage to the lower cap.

A fresh solution of gesso was prepared using one of the premixed products.

The columns were individually coated with five or six coats of gesso to build enough thickness to allow sanding. The gesso was kept in a pot of hot water throughout the application to ensure that it stayed fluid.

Once several coats of gesso were cured, the columns were measured to determine if adequate thickness had been achieved.
The two columns were temporarily held together and a spacer placed between them to ensure that a true “round” cross section was achieved.

The columns were mounted in a wood lathe using a special fixture to allow easy mounting and centering.

The columns were dry-sanded with progressively finer sandpaper. #220 was used first with the final sanding completed with #400.

The columns were inspected closely for any remaining waves or imperfections.

Low spots were filled with fresh gesso and sanded once cured.

The finish on the columns when completed was an even, but eggshell like matte finish. High polishing was avoided to leave a good surface for the paint to adhere to.
The columns were painted with Krylon gold paint as a base for the gilding. Gold was chosen over the more traditional brick-red because the pressing of rings into the gilding was likely to pierce the gilding in several areas. The use of gold under coating helps to hide excess bleed-through.

**Gilding:** Traditional imitation leaf was chosen for gliding as the color of this leaf looks to be close to that seen in photos of period clocks of this type.

Rolco quick-dry size was used. It applies smoothly and is ready for gilding in 1 to 3 hours. To test the size, allow it to cure for approximately one hour then tap the surface with your knuckles. The tackiness will fell much like that of a common “post-it” note when the size is ready for gilding.

Each column half was mounted in the rotating fixture discussed in chapter 6. This held the column in position for gilding.
After the gilding was applied the entire column was rubbed with a soft cloth to further smooth the surface and remove any remaining loose leaf.

The problem lies in the difficulty of photographing gilded surfaces combined with the inevitable wear found on a clock column that is over 150 years old.

In order to accurately apply the rings commonly seen on this type of clock it was necessary to locate an accurate reference. This proved to be one of the most difficult parts of the restoration.

Once an acceptable photo was located, it was printed on legal sized paper to provide an “almost” full scale reference. Normal scaling techniques were then used to create a full scale drawing of the ring pattern.

While photos of gilded columns can be found from a number of sources, it was difficult to find a photo of the correct clock type that clearly showed the ring pattern.

The rolling tool used in chapter 6 is employed for pressing rings into the columns.
Examination of several ringed columns of the same period indicated that the rings were very shallow in depth. Based on this it was decided that adding rings “after” gilding would be the most appropriate approach. The full sized drawing was placed under the column on the fixture for easy reference.

The location of each ring is measured on the reference drawing then the rolling fixture adjusted as needed.

Once the first column was completed, the second was completed using the same techniques. The resulting ring pattern matches that found on a clock by the same maker and same period.

Photographing gilded surfaces, particularly those with varying (bright/matte) surfaces is difficult. These close-up photos were taken prior to applying sealer to the columns.

Notice in the close-ups that the gilded surface is not perfectly smooth and even. There are several small scratches and flaws that have been left to avoid an “over-restored” look to the columns. Some of these flaws will be hidden by the sealer, but those that remain look correct for a clock of this age. Avoid the temptation to re-gild every small flaw.
The gilding is sealed with three coats of a water-based varnish sealer to prevent tarnishing and darkening of the gilded columns. Shellac was not used as this sometimes softens the gilding size.

The case is almost ready for final assembly and polishing. All that remains is repair of the backboard including restoration and preservation of the all-important clock label.