

How did it get there?

How Heisey Made Their Etches and Carvings for Great Plains Heisey Club, May 2022

Glass decoration can be additive—applying enamels, colorful coatings, etc. Or it can be subtractive—taking away some of the glass to leave a design. With rare exceptions, Heisey only did subtractive decorating.

Heisey's three basic types of subtractive decorations:

Type	Method	Limitations	Enhancements
Cuttings or Engravings	Glass is physically cut or ground away	In the case of Heisey, nearly always done completely by hand, one at a time	Left grey (unenhanced), hand-polished highlights, or dipped in weak acid (rock crystal)
Etchings	Acid eats away glass	Many can be done at one time but for some techniques each piece must be prepared separately	In the case of Heisey, usually no further treatment
Carvings	Sand-blasting removes glass particles	Many can be done at one time but each piece must be prepared separately	In the case of Heisey, usually no further treatment

“Etching” is often misused to describe engravings or cuttings.

Generally Heisey did not combine cutting and etching on the same piece. There are exceptions, such as silhouette etchings with simple miters or flutes cut (possibly by machine) below the etching. #414 Oxford, a rare early etching, was sometimes combined with cutting.

All etchings involve immersing the glass in a bath of strong acid, generally *aqua regia* (a mixture of hydrochloric and nitric acids), leaving it in for a few seconds (less than 20 seconds is typical). Beeswax or paraffin coats the parts of the glass that are not to be etched. The coating is called the **resist**. Many pieces can be etched all at once by placing them on racks for their acid bath. After the acid bath, the glassware is bathed in hot water to remove the wax, which can then be recycled.

When the Heisey factory number is unknown, HCA numbers are often used, starting at 9000.



#33 Tatting

Needle etching (ca. 1916–1935)—**Characteristics:** Continuous, unbroken bands of lines completely encircling the piece. Lines may be straight, wavy, or looped. Loops are always smooth without sharp turns. Sometimes the shapes can be elaborate, but they are always continuous, never skipping. **Technique:** A machine rotated the glass beneath movable needles to trace a design into the resist. Up to several dozen pieces could be racked up at a time. Probably the least expensive method of etching. **Remarks:** The

etching machine could be used with designs furnished by the machine manufacturer or custom made for the glassmaker. Since many companies used the same machines, they often produced the same needle etchings. For that reason, the most common needle etchings are not very helpful for distinguishing which company made a given piece. There are several known needle etchings not listed in the Etchings and Carvings book, especially on #3394 Saxony. **Range:** Heisey's needle etchings are all numbered less than 100. **Examples:** #9001 Trefoil and #33 Tatting; both also used by many other companies. (Trefoil probably had a Heisey number, but it is unknown, so an HCA-assigned number is used for it.)



#160 Osage

Pantograph etching (ca. 1918–1932)—**Characteristics:** Similar to needle etching, but more complex designs. Still consisting of lines and outlines, no solid areas. There can be isolated, broken lines in pantographs. Continuous lines may have sharp points and turns.

Technique: Multiple pieces can be done at once. The pantograph machine does not contain the design, unlike the needle-etching machine. Instead, a human traces a large-scale version of the design.

The pantograph machine scales the design down to the proper size for the piece. **Remarks:** Pantograph designs are more reliable to identify a

piece. However, a frequently seen design nearly identical to #152 Apollo was used by Bryce Bros. on pieces similar to Heisey. The easiest difference to notice is that Heisey repeats the design six times around the bowl of stemware; Bryce repeats the design four times. #170 Cleopatra was copied and used as a frit etch on stems resembling #3304 Universal by another maker. (A “frit etch” is not a true etch at all and was never used by Heisey. Tiny pellets of melted glass are applied to make a design. Because of the way they are made, frit etches are raised above the surface of the glass, not etched into the surface.) **Range:** Numbered between 151 and 172, with the possibility of a few unknown numbers beyond 172. **Examples:** #160 Osage, #163 Monticello.



#366 Peacock

Plate etching (ca. 1916–1957)—**Characteristics:** The designs can be as elaborate as desired. Design elements can be totally isolated from one another. Solid areas of etching are possible, but are not usually very large.

Technique: Design totally applied by hand, without machine intervention. A negative image of the design is printed on tissue paper using beeswax colored with lampblack, so the design can be more easily seen by the worker. The worker applies the printed tissue to the glass. A solvent allows the tissue to be peeled off, leaving the black beeswax as the resist. Then the piece is dipped in the acid bath, leaving a positive image of the design. Then the hot water bath removes the beeswax. **Remarks:** This technique allows for designs that fill in some of the open spaces, so they aren’t just outlines. It also means a

design does not have to completely encircle a piece; it can be on just one side, or repeated as many times as appropriate. Because the designs are applied by hand, occasionally finished pieces have misaligned designs. **Range:** Numbered 300 up through the low 500’s. **Examples:** #325 California Poppy, #366 Peacock, #447 Empress, #480 Normandie, #507 Orchid.



#445 Trojan

Double-plate etching (ca. 1918–1955)—**Characteristics:** A subset of plate etchings. As the name implies, two plates were combined. Typically, a central or prominent part of the design was on one plate and lesser grey background parts of the design on another plate. Look for figures in frames or bold flowers on leafy or geometric backgrounds. **Technique:** Works just like plate etching, except there are two cycles of resist/acid bath/washing involved. The part of the design to be emphasized is etched separately and left in acid longer to give a deeper image. The weaker background parts of the design are etched with a lesser amount of time in the acid bath. **Remarks:**

It is not always easy to distinguish double-plate etchings from single-plate ones. The distinction is not important for identification. **Range:** Double-plate etchings numbers were interlaced with single-plate etchings, so fall in same

range. **Examples:** Earliest identified is #387 Augusta. Latest is #503 Minuet. Others include #413 Renaissance, #439 Pied Piper, and #445 Trojan; not a complete list.



#462 Fox Chase

Silhouette etching (ca. 1932–1945, to 1952 for #467 Tally Ho and #517 Winchester)—**Characteristics:** Large solid areas in the design and few finely-drawn lines. Deeper etching than plate etchings, with variable depth within the solid areas. **Technique:** A form of plate etching. Silhouette etchings are left in the acid bath longer than plate etchings. This makes them deeper. The acid eats away the glass in an irregular way, leaving the distinctive variable depth and texture. **Remarks:** Since there is no delicate detailing, silhouette etching is a more forgiving process, and therefore cheaper. This makes it more suitable for custom work. Many companies and organizations ordered their own designs on standard pieces of glass for advertising, awards, and promotions. The Etchings and Carvings book lists only a small sampling of the custom work known. **Range:** Silhouette etches were numbered in the same series as other plate etches. #455 Sportsman is the earliest numbered one. **Examples:** #455 Sportsman, #462 Fox Chase, #469 Mermaids, #9012 Victory.



#603 Bandelino

Matte etching (Satin or Frosting) (ca. 1915–1957)—**Characteristics:** Bands, large portions, or entire pieces are given a smooth, frosty surface.

Technique: Resist is applied to any portions not to be frosted. In the case of banding, applying the resist was probably a mechanized process. The piece is dipped in a weak acid bath. **Remarks:** This technique was used to imitate the finish of frosted Lalique glass. However, it had been used earlier, either overall, as in some puff boxes, or on some baskets, nappies, and vases, where alternate panels were frosted to highlight a plate etch. Occasionally, such as on the #441 Grape Leaf Square ashtray, some areas were lightly polished after frosting. #441 is an almost exact copy of Lalique's Vezelay ash tray. "Satin" is sometimes used to mean a silky surface texture and is also called "camphor" glass, while "frosted" means a slightly coarser texture, but the terms are often

used interchangeably. **Range:** 600–607. In addition, many pieces were offered frosted overall without giving a number to the frosting itself. **Examples:** #600/601 stem, foot, handle, etc., frosted on various pieces such as #4044 New Era; #605 frosted chevrons on #1483 Stanhope; many figurines and stoppers.



#9020 Wild Rose

White Line etching (1950)—**Characteristics:** Floral designs using heavy lines for outline and shading but with little detail inside the outlines.

Technique: Another form of plate etching, but with heavier lines than in typical plate etching. **Remarks:** Specimens are rare. #9020 Wild Rose could be confused with #515 Heisey Rose, but Wild Rose is simpler, a single sprig with three leaves, an open blossom, and a bud, and looks as though it were drawn with a broad-tip pen. **Range:** If the white line etchings were ever assigned numbers by Heisey, the numbers are unknown. **Examples:** Two white line etchings are listed in the Etchings and Carvings book as #9019 Lily and #9020 Wild Rose. A third design is also known, showing an English iris, but it has never been assigned an HCA number. Other designs are possible.



#5003 *Nimrod*

Carving (1934–1942, a few isolated pieces as late as 1955)—

Characteristics: Large, bold designs, deeply incised into the piece. The designs have a frosty appearance, sometimes as smooth as in a matte finish.

Technique: Completely different than cutting or etching. A rubber mask is fitted to the item with the design cut out. Then it is subjected to sandblasting, to “carve” out the design. A few pieces were sandblasted overall, which may be difficult to distinguish from matte etching. **Remarks:**

Most carvings involved no additional work. #5020 *Waterlily*, however, has polished highlights and some cutting to accent leaves. Because of their dramatic impact, carvings are popular with collectors. Most are not common and some are rare. See below for additional remarks on carvings. **Range:**

5000 to 5020. **Examples:** #5003 *Nimrod*, #5011 *Chevy Chase*, #5013 *Nymph and Satyr*.

Carving was used by other decorators. Three notable decorators using it were Dorothy Thorpe, Frank Oda, and Franz Grosz. Most Dorothy Thorpe carvings on Heisey will be marked with her DTC monogram. In at least one case, Louise Ream mistook a Thorpe design for a Heisey carving, even though it was marked with the DTC monogram. (But not all Dorothy Thorpe decorations are marked; for example, the amethyst-tinted #5064 *Hydrangea* stems made by Heisey for her did not have her monogram on the tinted pieces or the crystal ones.) Frank Oda’s work is often confused with Dorothy Thorpe’s, but will not be marked and is always Hawaiian floral motifs. (Any of Thorpe’s tropical designs on Heisey will be monogrammed.) Oda’s work most often appears on #1489 *Puritan* ware. Franz Grosz did not work on Heisey, but he did work on Tiffin pieces from the Art Moderne period that can be confused with Heisey patterns of the 1930’s and 40’s. Grosz typically included light cutting or polishing to enhance some details of the carved designs, much like seen in #5020 *Waterlily*, and his pieces are often signed.