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W. SAND LAKE N.Y.

BASIC BOTTLE DATING METHODS

Dip Molded Bottle - Some variation of wooden paddle was commonly used throughout the 19th century to shape the body of the bottle up at the shoulder. These dip molds were most popular in the first quarter of the 19th century.

Three Piece Molded Bottle - While two piece molds were commonly used throughout the 19th century, three piece molds were also commonly used in the early to mid part of the 19th century.

Flared Lip - This lip finish was commonly used on small medicine bottles in the early 19th century.

Applied Lip - In order to form an applied lip, the glassworker added a gather of glass to the finished neck and tooled it into the desired lip style. Applied lip methods were commonly used in the first 3 quarters of the 19th century.

Tooled Lip - Where most of the lip was included in the mold, a tooling tool could be used to finish off the lip. The method required the glassworker to manually add an additional gather of glass for the lip. The tooling method produced the highly uniform and precise lip finishes of the improved mineral bottles developed in the late 19th century.

Sheared Lip - The sheared lip, or rolled, because the molten glass was literally cut away with a pair of shears, was used extensively on American bottles of the early 19th century.


Wooden Mold - Wooden molds were most commonly employed in the first third of the 19th century.
Molded Bottles - Mold blown bottles could be made in fewer steps, faster and more uniformly than could free blown bottles. Mold blown bottles however were still not perfect, revealing faithfully mold defects and gaps between sections of the mold.
Empontiling - *In order to finish the lip of the bottle after forming the body, the bottle had to be held by the base. A pontil rod with a small gather of glass on it served this purpose. Once the pontil was attached, the bottle could be broken free of the blowpipe in preparation for finishing the lip.*
Two Piece Mold - Prior to the mid 19th century the typical two piece mold formed only the body and shoulders of the bottle; the neck and lip had to be drawn out and formed by hand. By the end of the century technology had advanced to the point where nearly the entire bottle, including the lip, was formed in the mold as this example leaving only the top edge of the mouth to be finished.
Improved Pontil Scar - *Around the middle of the 19th century a modified version of the pontil was sometimes used which left a residue much like graphite instead of the sharp glass open pontil scar.*
Smooth Base - *Also developed in the mid 19th century was the snap case, a tool which firmly held the bottle for finishing the lip and left no markings at all. The snap case was quickly adopted and superseded pontil methods by the 1860's.*
Dip Molded Bottle - *Some versions of wooden molds were simply hollowed out cavities which served to form the body of the bottle up to the shoulder. These Dip Molds were most popular in the first quarter of the 19th century.*
Three Piece Molded Bottle - While two piece molds were commonly used throughout the 19th century, three piece molds were most commonly used in the early to mid part of the 19th century.
Flared Lip - This lip finish was commonly used on small medicine bottles in the early 19th century.


Open Pontil Scar - A sharp jagged glass scar was left on the base of the bottle when the pontil rod was broken off after forming the lip. The empontiling method became obsolete by the mid 19th century.
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Forming the Lip - After securing the body of the bottle, via pontil rod or snap case, the glassworker would sever the blowpipe from the neck of the bottle and proceed to finish off the lip.
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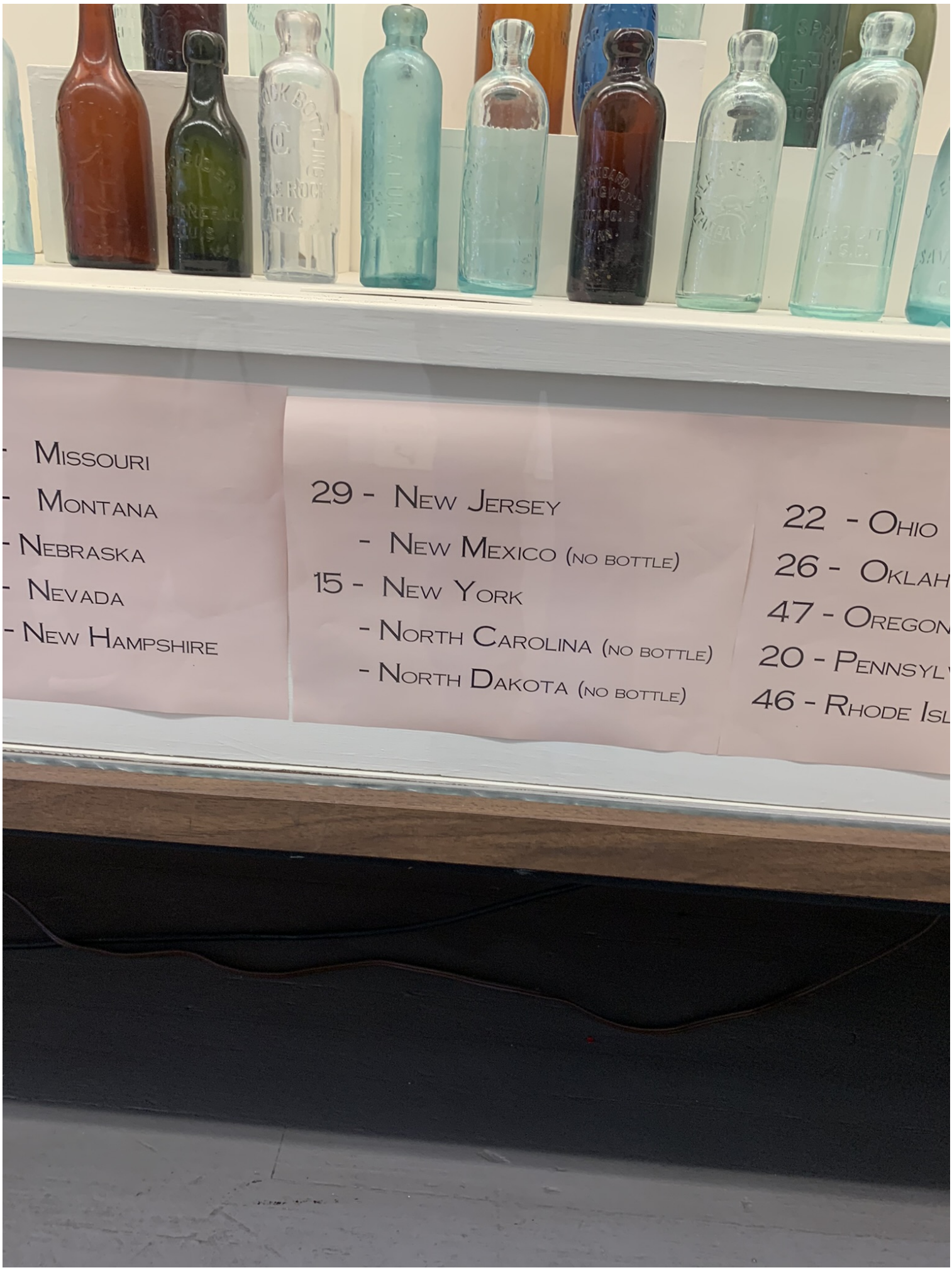
Flared Lip - *This lip finish* was commonly used on small medicine bottles in the early 19th century.
Applied Lip - In order to form an applied lip the glassworker added a gather of glass to the severed neck and tooled it into the desired lip style. Applied lip finishes were commonly used in the first 3 quarters of the 19th century.
Sheared Lip - The sheared lip, so called because the molten glass was literally cut away with a pair of shears, was used extensively on historical flasks of the early 19th century.


LATE 19TH CENTURY
BOTTLE PRODUCTION TOOLS
Steel Jack (Puchellas) — A steel tool used to widen or reduce the size of opening or to elongate a piece of hot glass.
Blowpipe — Hollow iron tube usually 4 to 5 feet long, slightly flared at the gathering end and used to blow-up the molten glass similar to blowing-up a balloon.
Snap Case — A mechanical device to hold glassware for finishing by hand. The snap case replaced the pontil rod around 1850.
Carrying Device — Device for carrying newly made bottles from the mold to the annealing oven. Similar devices sometimes called "lassets" were even inserted into the bottle's neck to carry them to the oven.
Shears — Scissors used to cut molten glass during shaping.
SECTION OF THE GLASS FURNACE FLOOR FROM THE CONGRESSVILLE GLASS FACTORY, SARATOGA SPRINGS, NEW YORK


Wooden molds were hand carved and in use prior to iron molds.
The mold was soaked in water before use in an effort to prevent the hot molten glass from charring the wood.
Wooden molds typically produced 1000 pieces at most.
Iron molds were created by a multiple step process.
Step 1- Create a wooden pattern of the bottle
Step 2- Create a mold of sand, called a sand core.
Step 3- Heat the sand core to harden it and create the interior
Step 4- Pack sand into a metal molding box creating the exterior.
Step 5- Suspend the sand core in the middle of the molding box and pour molten iron into the space between the exterior and the sand core.
Step 6- Turn mold over to a diemaker who will finish the design using hand tools.
Slug Plates
"Whittled" Bottles
Bottles with a whittled or dimpled appearance were likely blown in an iron mold that was not properly heated before blowing the bottle. The cool iron mold would "shock" the hot glass, causing a rippled effect.
Mouth Blown Bottles
Molds were used to create mouth blown bottles using the blow pipe until the invention of the Owens Automatic Bottle Machine in 1903. The Owens machine revolutionized bottle making and made bottle production cheaper and faster.


- Missouri
- Montana
- Nebraska
- Nevada
- New Hampshire
29 - New Jersey
- New Mexico (no bottle)
15 - New York
- North Carolina (no bottle)
- North Dakota (no bottle)
22 - Ohio
26 - Oklah
47 - Oregon
20 - Pennsyl
46 - Rhode Isl