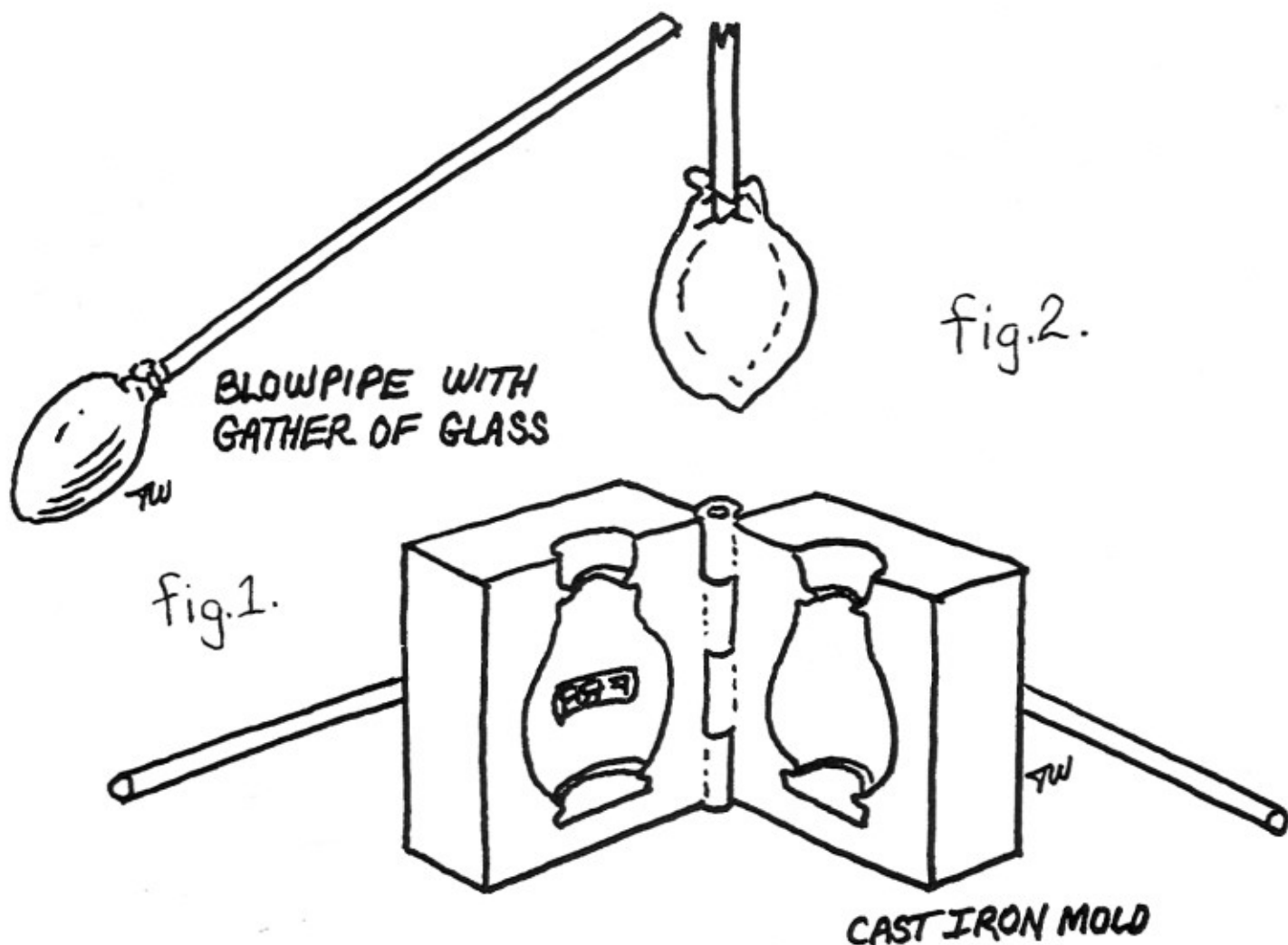


WHY "CAST" GLOBES ARE NOT CAST AT ALL

By Thomas Walsh



Glass is not cast like molten metal. Casting involves a liquid flowing into a mold cavity and solidifying upon cooling. Glass is seldom worked in a true liquid state. Even when glass is pressed, it is of a paste-like consistency similar to the viscosity of thick peanut butter. Hollow glass containers such as bottles, jars, lightbulbs and railroad globes are blown into a mold and referred to as mold-blown. Even today these objects are made in an automatic blowing machine, they are not pressed. Railroad globe production has always been on such a limited basis that they have been and continue to be hand blown.

Hand-blown globes are made as follows:

1 - The glassblower goes to the furnace and gets a "gather" of glass on his blowpipe.

2 - He may inflate the gather and tool it to a basic shape shown in Fig. 1.

3 - The blowpipe would be inserted into a cast iron mold, positioning the gather in the mold cavity. See Fig. 2. (In early days, wooden molds made of apple heartwood were sometimes used)

4 - A helper closes the mold and the blower inflates the gather which takes the shape of the mold.

5 - The helper opens the mold. The glass (still attached to the blowpipe) looks like Fig. 3a. Note that the globe now has a bottom just like a jar.

6 - The bottom is cracked off at the proper point leaving a rough edge on the bottom.

7 - The globe is broken off the bottom leaving a rough edge at the top. The globe now looks like Fig. 3b.

8 - The globe is placed in an oven and is slowly cooled to room temperature over a period of one to two days. This is known as annealing.

9 - The globe is ground at the top and bottom which removes the rough edge. The globe is now finished and looks like Fig. 3c. Sometimes, if the globe was to be fixed in a lantern this last step was omitted and the globe was plastered in, rough edge and all.

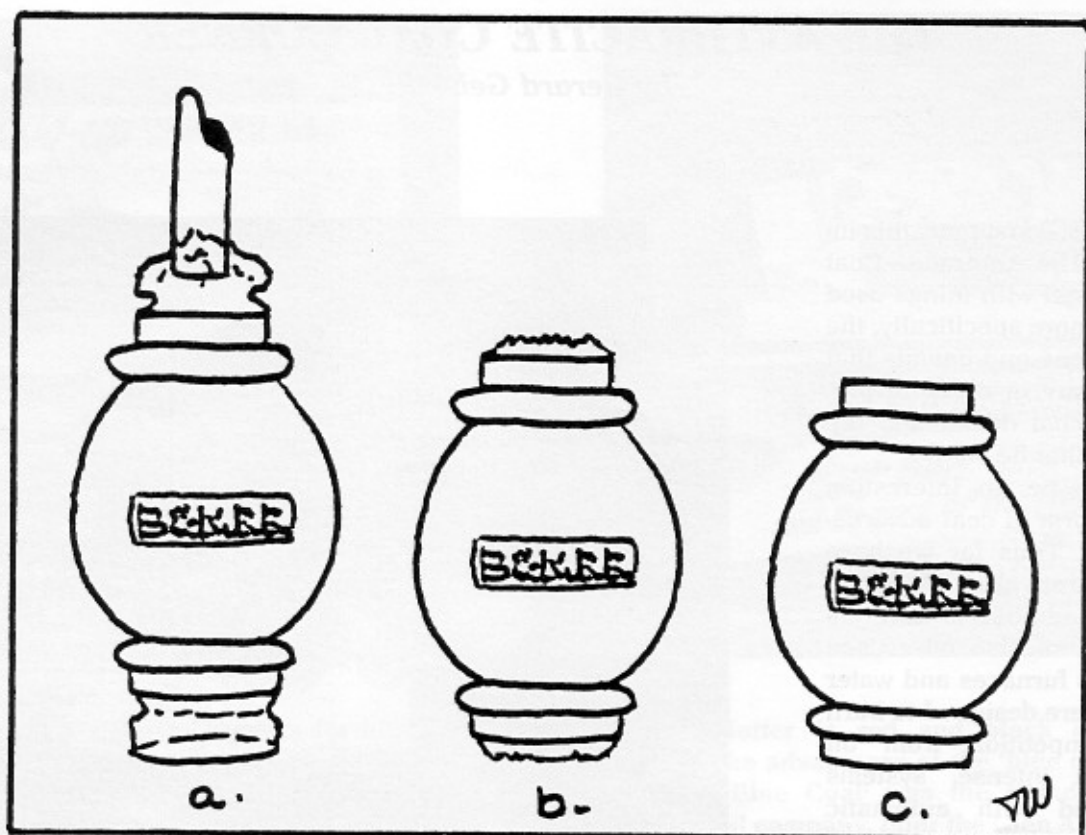


fig. 3.

Variations do exist in mold-blown globes. For example, I have a fixed globe lantern with a globe that has been sheared off at the top and bottom instead of being snapped off. Another option was to "fire-polish" the top and bottom lips smooth. This method was usually used on free-blown globes (globes blown and shaped without a mold) and fancy conductors' type globes.

Most mold-blown globes will have two vertical seam marks where the mold separates. However, sometimes more than two seams are found when a mold of more than two pieces was used. I have a globe in my collection that was made in a four piece mold. The globe resembles Fig. 4. It has two horizontal seams as well as two vertical ones. It is marked L.I.R.R.Co. in a slug plate panel. I have also seen globes just like it marked N.Y.C.&H.R.R.R. They are quite old (circa 1880) and unusual.

No doubt, collectors will continue to call molded globes cast for some time. But, little by little, perhaps the correct term will take hold and be used.

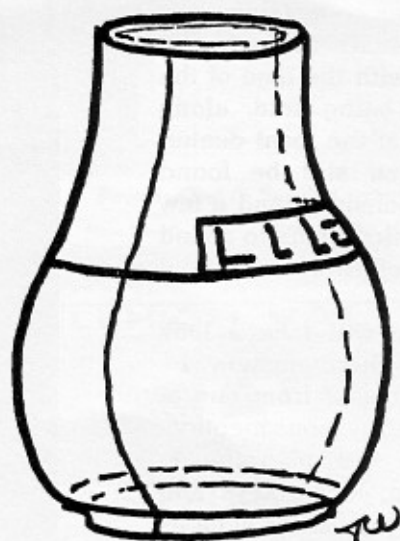


fig. 4.