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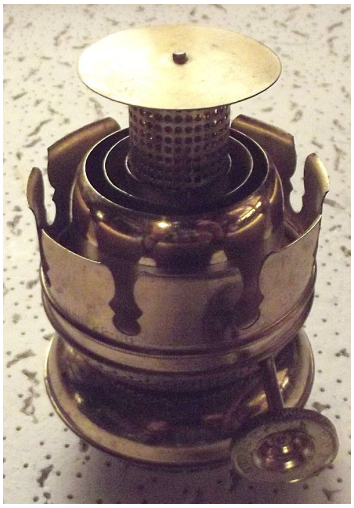
# INSTALLING WICKS IN A BARTHOLDI BURNER

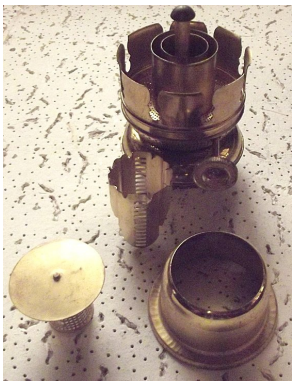
**The Bartholdi burner is very unique early burner which predates American-made center draft lamps but has features which later became familiar with center draft lamps. The Bartholdi burner at right has patent dates of Dec. 12, 1882 and June 22, 1886. In addition to the flame spreader the Bartholdi burner also utilized a wick sleeve with a single-wind gear wick raising system.**

**The acknowledged starting date of American center draft lamps was Jan. 14, 1884, the date Leonard Henkle received U.S. patent No. 292,114 for a thimble flame spreader. Dr. Bill Courter states the Henkle patent specified a burner with a draft tube; the Bartholdi burner is a side-draft burner and thus does not have a draft tube, but the flame spreader certainly appears very similar to Henkle's. This exact burner is illustrated on page 415 in Dr. Courter's book "Center-draft Lamps, 1884 - 1940."**



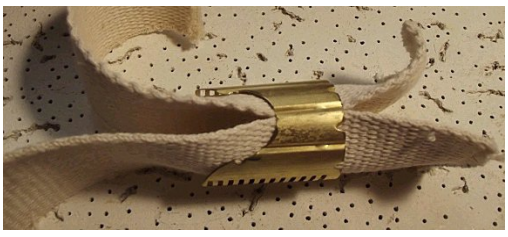
**The photo at right shows a Bartholdi burner with the flame spreader, burner cone and wick sleeve removed.**

**It should be noted that Dr. Courter lists three sizes of Bartholdi burners, a "Mays" burner which uses a 2 ½" diameter slip-fit chimney; a No. 2 burner which requires a 2 3/8" chimney; and a No. 3 burner which uses a 3" slip fit chimney. The burner in these illustrations requires a 2 ½" slip-fit chimney and therefore may be the "Mays" burner. There may well be differences with the other Bartholdi burners including the width of wick required. For purposes of identification, this burner's wick sleeve's outside diameter is 1.24".**



**Remove old wicks by removing the wick sleeve from the TOP of the burner.**

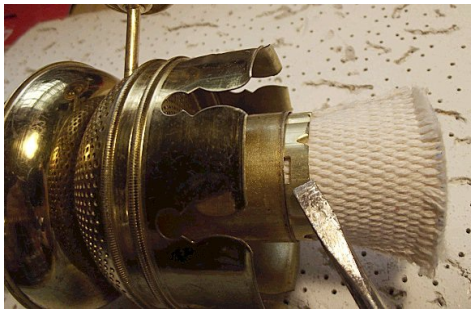
**This Bartholdi "Mays" burner requires two 1 3/4" wide, flat wicks of 0.085" to 0.090" thickness. Note on the photo at right there is a deep groove in the wick sleeve at the mid point on the narrow part of the sleeve where the wicks meet. The wicks should be installed so the curl is outward at the base so the wick can be lowered, the wicks curling out and up.**



**The wick sleeve CANNOT be removed through the bottom of the burner.**

**The photo at right shows the width of the wicks (1 3/4") exceed the inside diameter of the threads for screwing the burner to the font and thus must "curl" to fit through the threaded opening and thus the wick sleeve with wicks installed must be installed from the TOP of the burner, not the usual system of installing flat wicks from the bottom of the burner. Forceps or needle nose pliers really help to reach up inside the burner to pull the wicks down.**

**The photo at right shows the top of the wick sleeve after it has been lowered into the burner. Note the gear slots on one of the wide sides of the wick sleeve must align with the gear wheels inside the burner. When fully raised with the wick knob, the wick sleeve displays a nice little slot on each side, as pointed out by the medium size flat blade screwdriver. The point of the screwdriver is gently inserted into the slot to hold the sleeve in place while each wick is pulled down from the bottom of the burner so that only ONE INCH of wick is exposed above the wick sleeve.**

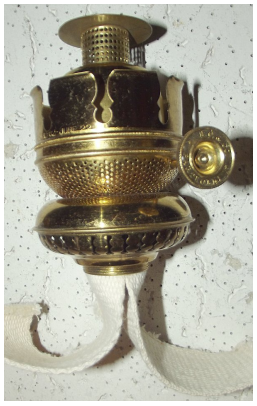


**All wick removal and installation procedures MUST be done from the TOP of the burner.**

**At right is the Bartholdi burner with wicks installed, ready for installing on the EMPTY font so the wick can be burned level. With the wicks installed so only an inch of wick is exposed WHEN THE WICK IS FULLY RAISED IN THE BURNER, when retracted the wick is just barely below the top of the wick tubes.**

**With the font EMPTY, remove the flame spreader and raise the wick so 1/8" of wick at the lowest point is exposed above the wick sleeves.**

**Using sturdy scissors or surgical shears, trim the wick as evenly as possible, level with the wick sleeves.**



## LEVELING THE WICK

**Reinstall the flame spreader. Move the heater into an area with good ventilation but which is not drafty. Using an eyedropper or small funnel, pour about a teaspoon of fuel or alcohol on the top of the wick, evenly spread around the entire wick. Set wick so 1/8th of wick is exposed. Light the wick, put on the chimney and allow the fuel to burn out. When the fuel burns out, the cotton wick itself will burn down... exactly level with the top of the wick sleeves! Raise the wick a little, remove the flame spreader, and rub the char on the top of the wick once around in one direction only. Then retract the wick as far as possible: it should retract 1/4" or so below the top of the wick sleeve. If the wick does not retract far enough to extinguish the flame or is not level on top, burn it down again as mentioned above. Total vertical wick movement is about one inch. When the wick burns down over time with use, raise the wick in the wick sleeve so 1" is again exposed, then burn the wick top level again as mentioned above; failure to burn the wick level results in flame spikes.**

**The wicks for the Bartholdi "Mays" burner are custom made - Extending Wick Life.**
**When the wicks are raised too high to reach the bottom of the fuel tank, sew or staple strips of 1/16" thick felt to the bottom of the wicks. Felt has excellent capillary qualities and will bring fuel up to the wick itself. This trick can be used once and provides an additional inch of wick to burn.**