Miles Stair's Wick Shop

Quality Kerosene Items since 1999

www.MilesStair.com
Miles@RuralOregon.net

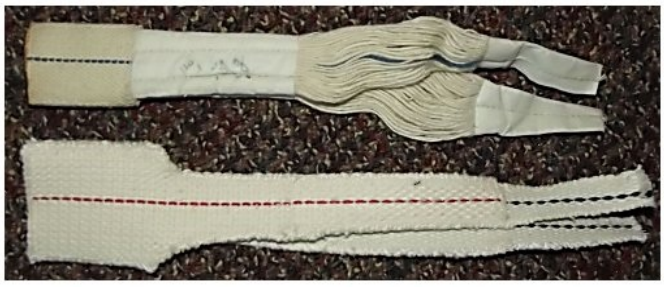
Central Vulcan Wicks

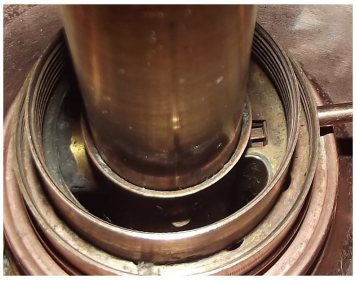
Original 14"' wick in burner.

The "tails' on the wick limit the length of the tubular burning section of the wick.

14"' Burner apart and original wick.
Made by Wild & Wessel for Cattersons.
Note the tab pointed to by the <<<< . That little tab, one on each side of the burner, were designed for retracting the wick. The thin brass tabs are over a century old and the design itself was weak.

The old wick must be pulled up past the tabs to be replaced. If those tabs actually worked to hold the wick from being pulled up, they must be defeated, disengaged from the wick by sliding a thin piece of flexible plastic between the draft tube and the wick. With the thin strips of plastic between the wick and the tabs the wick may then be pulled up and out of the burner without damaging the tabs or wick.





Left: Comparison: original 14"' above, new hand-made 18"' wick below.

Right: Note the side of the burner with the wick raiser is wider than the slot in the burner on the other side. The wick also has one side of the tails wider to fit that gap. The blue spot on the belt should go over the wick winder.

New wick installed in wick sleeve, the tails pulled through the wick sleeve/pockets until the split is above the toothed gear rod - pulling the wick lower will interfere with lowering the wick. There can be more wick exposed than shown, but that is to ensure there is more than enough wick to fully seat as shown at left while still having the full length of wick to burn as the design allows. The excess will be trimmed (see next page).

[Note: Replacement wicks may vary in appearance due to size and capillary requirements.]

Outer wick sleeve installed over new wick. Note the excess wick exposed, ready to be trimmed and burned down level with alcohol so it will burn without flame spikes. Vulcan wicks are thick and the outside edge of the wick will not burn down level and must be trimmed by hand. The design of Vulcan wicks demands they be assembled in sections and the sewn seams are more compressed than the surrounding wick: The area immediately above each seam should be trimmed a little lower so the flame is even.

The tabs designed to retract the wick (see photo above) are often too weak or not adjusted properly to perform wick retraction: the wick will rise but will not retract properly. The lower wick guide can be used to retract the wick if your lamp has this problem. Lower the wick raising system completely, then pull the new wick down as far as it will go. Pinch the wick against the wick guide, then raise the wick about 1/8" or so. Using a needle and thread, sew through the wick guides on both sides and wick as illustrated at left. The wick is then "captured" by the wick guides and will reliably rise and lower with the wick knob as normal.

<<< Once tied in place to the wick guides, the wick will raise fully as shown at left and also retract completely.

Assemble the burner on the lamp. Do not put fuel in the font! Raise the wick about 1/8" with the wick knob (any exposed wick at that point is must be trimmed off). Trim the wick level with the top of the draft tubes using shears or a razor. Put a teaspoon of fuel or alcohol on the top the wick, raise the wick 1/16" of an inch, replace the flame spreader, light the wick, and replace the chimney. The wick will burn down level with the draft tubes. Remove the flame spreader and rub the wick once around, one direction only, to remove ash from the burning-level procedure. The wick should now retract about 1/4" down into the draft tubes so the lamp can be turned off . Vulcan wicks are thick and the outside edge of the wick will not burn down level and must be trimmed by hand. The design of Vulcan wicks demands they be assembled in sections and the sewn seams are more compressed than the surrounding wick: The area immediately above each seam should be trimmed a little lower so the flame is even. Replace the flame spreader, fuel the lamp, wait a half hour for the wick to completely absorb the fuel, and lamp is ready to burn. Trim stray strands of cotton fibers and trim the area above each seam a little lower to avoid flame spikes.

The photo on the right shows an 18"' Globe Vulcan burning with a steady flame, even all around. Light the lamp with a relatively low flame and give it a chance to warm up. As the lamp warms the fuel also becomes warm and thinner. At first there will be a 'V' gap in the flame above the cutouts for the tails because the fuel must travel further to reach the top of the wick in the sections of the wick above where there are no tails. More fuel will fill into the circular top burning section of the wick and the flow will become even with a nice, steady flame without high spots and the 'V' gaps will fill in. At that point the chimney is warm, the fuel is warmer and stabilized at that higher temperature, and the wick can be raised to have a flame higher than the flame spreader. Wait a few minutes for the flame (and therefore heat) to stabilize, then the wick can be raised for a curling flame for maximum light output without flame spikes, smoking or sooting, and will burn steadily for hours without any fumes nor should there be any need for adjustment until desired. Raising the wick slowly in increments to allow the lamp, chimney and fuel to adjust to the increased temperatures is easier on both the lamp and the chimney.