

## How Aladdin Lamps Create Bright, White Light

- Fuel from the **font** soaks into the tails of the cotton **wick**; *capillary action* draws the fuel up to the top of the wick and into the **burner**
- At the same time, **oxygen** is drawn in through the holes on the sides of the **burner** by the draft (or vacuum) created by the **chimney**; *horizontal airstream feeds the outside of the wick*
- Air that enters the burner through the inner wick tube, travels through the holes in the **flame spreader** to feed the inside of the **wick**; *vertical airstream to the inside of wick prevents the horizontal airstream from putting out the flame*
- The air mixes with the fuel (94% air/6% fuel), while the **chimney** continues to pull **used air** up and out of the chimney, which in turn draws more **fresh oxygen** into the **burner** as a continuous flow
- When the top of the **wick** is lit, the fuel is ignited (not the wick) to create a flame, the air from the flame spreader causes the flame to burn hotter as a **blue flame**
- The **heat** from the **blue flame** on the **wick** reacts with the element yttrium found on the **mantle**, causing it to **incandesce** or glow

*Used, heated air draws up and out of the chimney which pulls fresh air into the burner*

*Heat from the blue flame of the wick causes the mantle to incandesce*

*Fresh air enters holes in burner basket and flows up through the outer wick tube and feeds the outside of wick*

*Fresh air enters holes in burner basket, goes up into inner wick tube and out the flame spreader to feed the inside of wick*

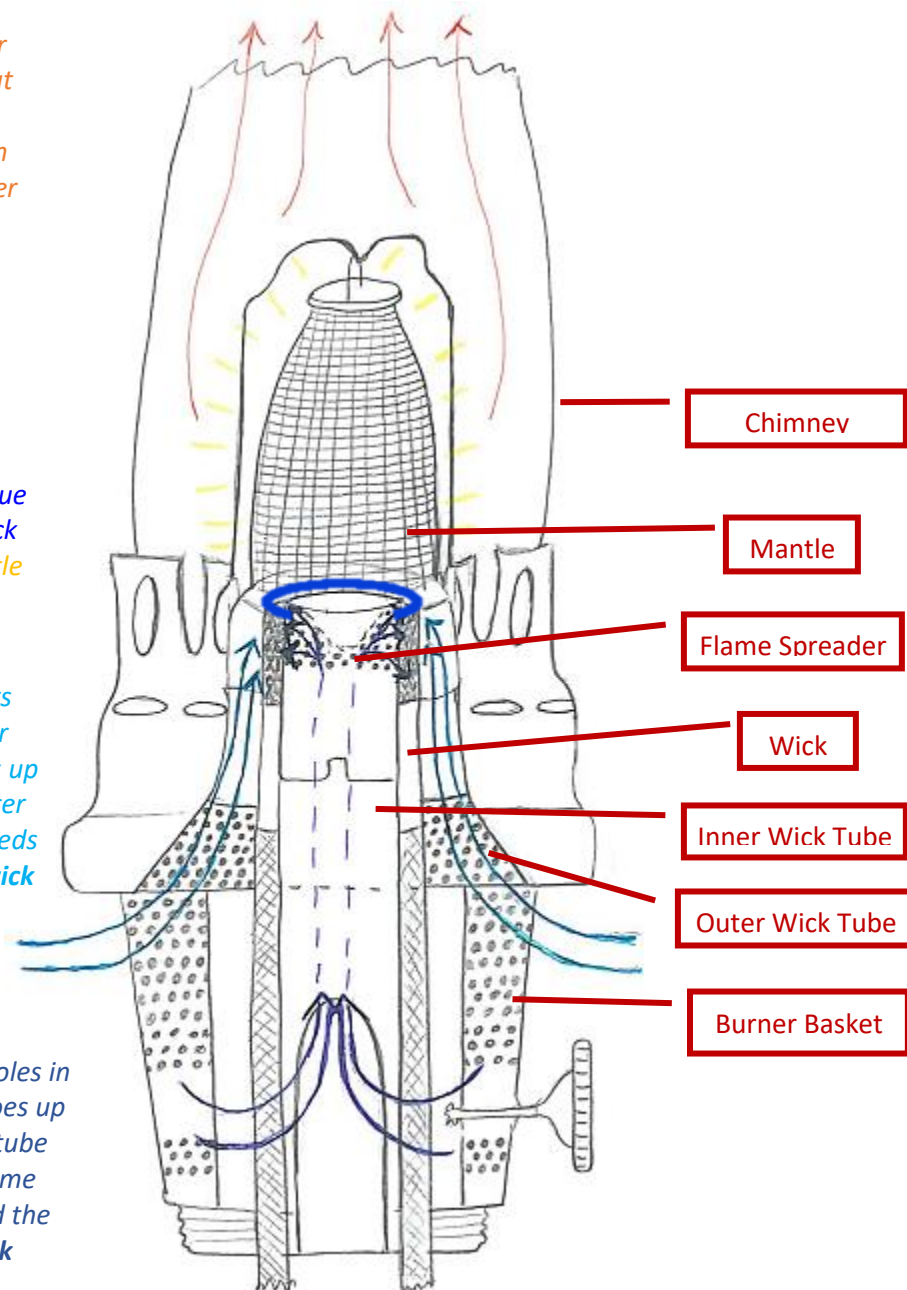


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