Lily: A Low Cost Alcohol Burner and Stove

Paul S. Anderson, PhD psanders@ilstu.edu
Lily Emma Anderson leander@ilstu.edu

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The “Lily Burner”

- A steel “tin-can” variation of the aluminum “beverage-can” alcohol burner.

Principles of non-pressurized alcohol burners

- The burning flame causes the fuel canister to be warm for sufficient vaporization of the liquid alcohol.
- The “top-to-bottom conduction” of heat is facilitated by aluminum, brass, and metal-to-metal contact of stove parts.
- The steel “tincans” of the Lily burner are poor conductors of heat, so vertical aluminum posts are added inside the cans.

Construction of a Lily Burner

Stove Structures

- Several designs of stove structures are compatible with the Lily burner.

With tongs or holders, the user slides the needed number of burners under the application (shown is a griddle). The lower gap is important for ignition and intensity control.

Lily burners with a larger diameter (6” or 15 cm) are being developed for increased duration or more heat from one loading of alcohol fuel.

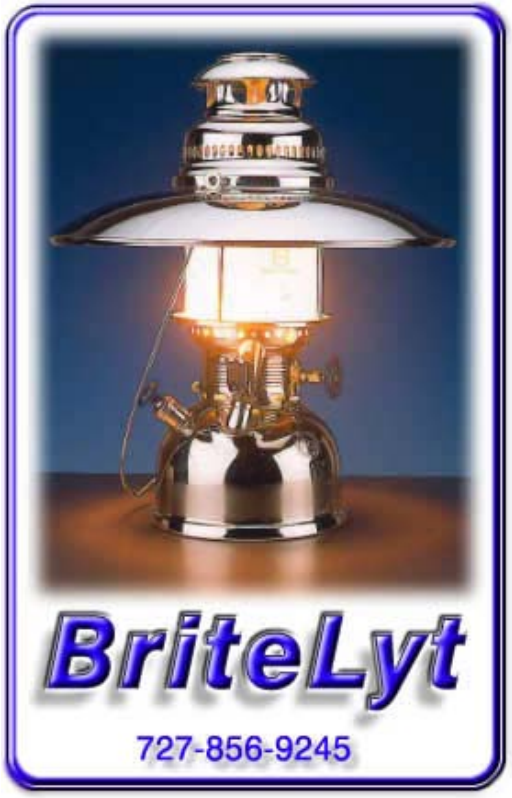
Advantages

- Low cost, low tech, long-lasting construction
- Clean-burning, well-controlled, safe combustion
- Costs of renewable alcohol fuels are significantly decreasing

References

- Find out more about “beverage can stoves” at:
  - http://wikipedia.org/wiki/Beverage_can_stove
  - http://zenstoves.net

Petromax Lanterns



BriteLyt lanterns run on a variety of fuels... **kerosene**, alcohol-based fuels, **mineral spirits**, **citronella oil**, **gasoline**, **Biodiesel**, **diesel fuel, Coleman fuel,** & almost every flammable fuel available on the market, including **Methanol**, **Ethanol** and all **Alcohol Fuels**.

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