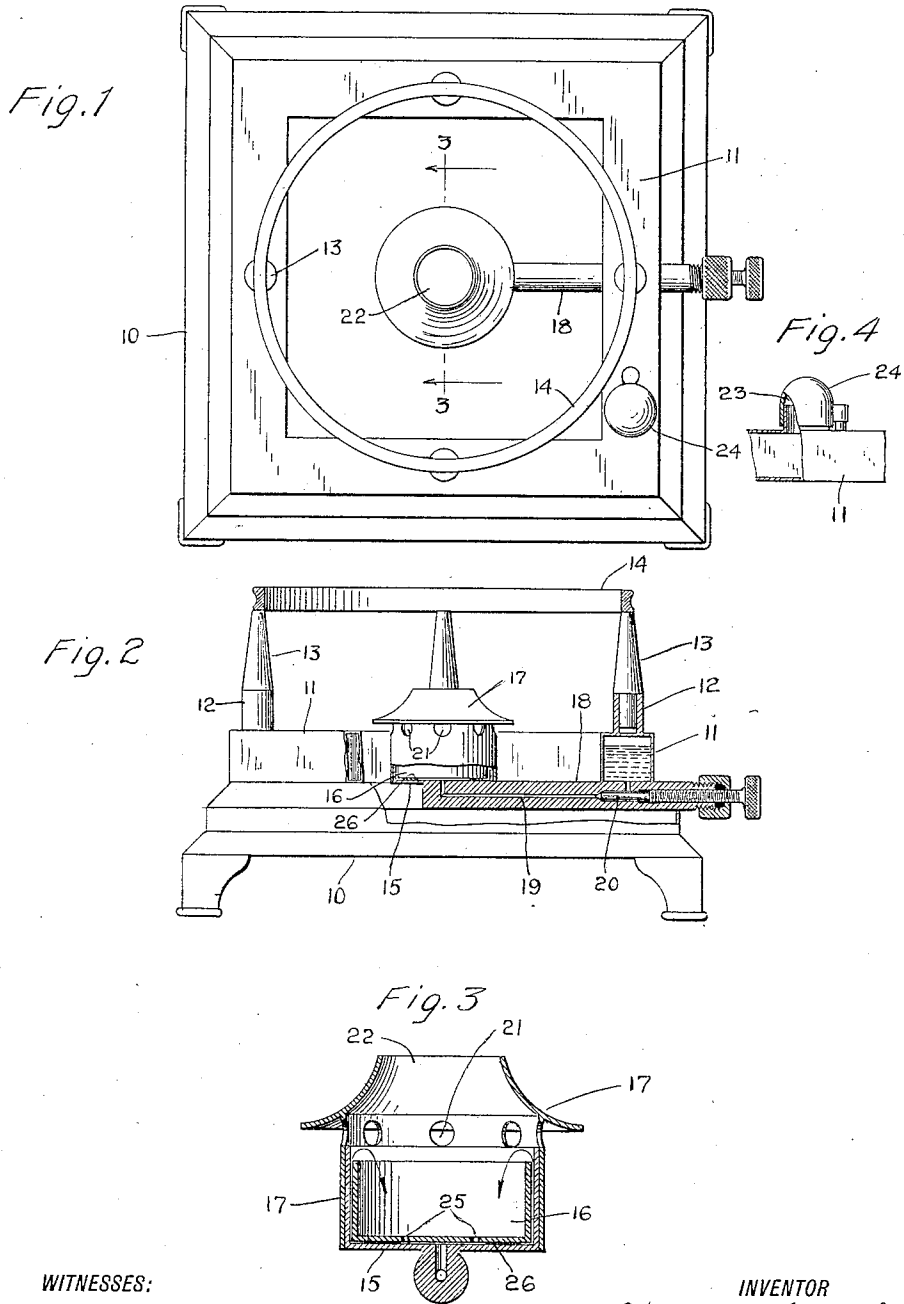


H. V. SMITH.
ALCOHOL BURNER.
APPLICATION FILED FEB. 14, 1912.

1,041,893.

Patented Oct. 22, 1912.



WITNESSES:

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HENRY V. SMITH, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR OF ONE-HALF TO
EUGENE H. H. SMITH, OF BRIDGEPORT, CONNECTICUT.

ALCOHOL-BURNER.

1,041,893.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HENRY V. SMITH, a citizen of the United States, residing at Bridgeport, county of Fairfield, State of Connecticut, have invented an Improvement in Alcohol-Burners, of which the following is a specification.

This invention has for its object to provide a simple, inexpensive, easily controlled and thoroughly efficient alcohol burner adapted for general use and especially adapted for use as a chafing dish lamp.

With these and other objects in view I have devised the novel alcohol burner of which the following description in connection with the accompanying drawing is a specification, reference characters being used to indicate the several parts:

Figure 1 is a plan view showing my novel lamp as in use; Fig. 2 a view partly in side elevation and partly in vertical section, showing the construction and operation of the lamp; Fig. 3 a section of the burner on an enlarged scale on the line 3—3 in Fig. 1; and Fig. 4 is a detail view illustrating the filling opening and the cap therefor.

10 denotes a frame which may be of any ordinary or preferred construction and which supports a tabular reservoir 11, which may be of any suitable design or configuration, and which is shown as inclosing the burner.

12 denotes sockets secured to the upper side of the reservoir which receive and support the detachable standards 13 of a carrying ring 14 for a cooking utensil.

The burner comprises an outer cup 15, an inner cup 16 and a cap 17. The outer cup is carried by a bar 18 which is secured to the under side of the reservoir and contains a duct 19 leading from the reservoir to the cup, a needle valve 20 being provided to control the flow of alcohol. Within cup 15 and loosely fitting therein is the inner cup 16. The inner cup is made shorter than the outer cup and is enough smaller than the outer cup to leave a thin space between the cups through which a film of alcohol may rise. The cover fits closely over the outer cup, extends above the outer cup and is provided above said cup with air holes 21 and with a dome-shaped top which is provided with a central flame opening 22. 23 de-

notes a filling opening in the reservoir which is provided with a swinging cover 24.

In use, when the valve is opened the alcohol will pass through the duct and into the outer cup and will rise in the thin space between the inner and outer cups and pass into the inner cup, as indicated by the arrows in Fig. 3. The upper portion of the cap now becomes a mixing chamber where the alcohol vapor becomes mixed with air entering through holes 21 and forms a highly inflammable mixture which will ignite and produce an intensely hot flame when a match is applied to the opening. If preferred, holes may be provided in the bottom of the inner cup, as at 25, and a washer, as 26, (see Fig. 3) may be placed under said cup. The effect will be to cause a small quantity of alcohol to pass into the inner cup the instant the valve is opened, vapor will rise therefrom into the mixing chamber and the burner may be lighted without waiting for the alcohol to rise up between the cups and over the top of the inner cup.

Having thus described my invention I claim:

1. An alcohol burner comprising an outer cup, an inner cup shorter than the outer cup and of a diameter to leave a thin space between said cups and a cap provided with a flame opening and air holes above the outer cup whereby a mixing chamber is formed.

2. An alcohol burner comprising an outer cup, an inner cup shorter than the outer cup and of a diameter to leave a thin space between said cups, for the purpose set forth, and a dome-shaped cap having a flame opening and air holes above the outer cup.

3. A lamp comprising an outer cup, a bar supporting said cup and provided with a fuel feeding bore communicating with the interior of said cup, an inner cup shorter than the outer cup and of a diameter to leave a thin space between said cups and a cap having air openings above the outer cup and a central flame opening.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY V. SMITH.

Witnesses:

G. P. ITTIG,
WALTER H. BULLARD.