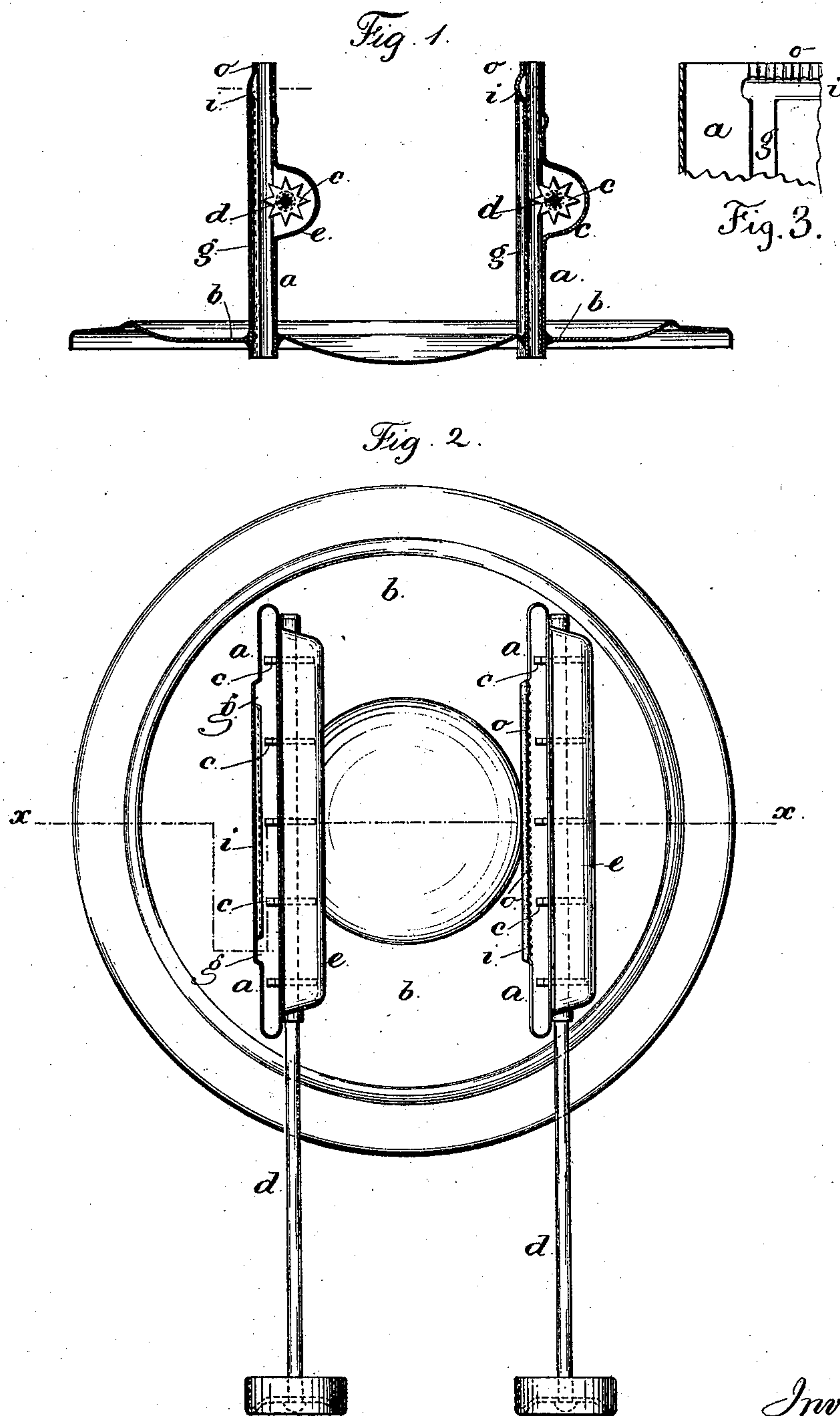


(No Model.)

L. J. ATWOOD.
OIL BURNER.

No. 360,843.

Patented Apr. 12, 1887.



Witnesses

Chas H. Smith
Harold Ferrell

Inventor

Lewis J. Atwood
per Lemuel W. Ferrell
att'y

UNITED STATES PATENT OFFICE.

LEWIS J. ATWOOD, OF WATERBURY, CONNECTICUT, ASSIGNOR TO THE
PLUME & ATWOOD MANUFACTURING COMPANY, OF SAME PLACE.

OIL-BURNER.

SPECIFICATION forming part of Letters Patent No. 360,843, dated April 12, 1887.

Application filed February 10, 1882. Serial No. 52,311. (No model.)

To all whom it may concern:

Be it known that I, LEWIS J. ATWOOD, of Waterbury, in the State of Connecticut, have invented an Improvement in Burners for Kerosene-Stoves, of which the following is a specification.

Burners have been made for oil-stoves with broad wicks and with wick-raisers in a housing at the side of the wick-tube.

My invention relates to the combination, with the wick-tube and housing, of the devices hereinafter described, whereby the vapors from the reservoir are conveyed directly into the flame, and the disagreeable odor arising from such stoves largely prevented.

In the drawings, Figure 1 is a vertical section of the burner at the line *xx*. Fig. 2 is a plan with one of the wick-tubes in section, and Fig. 3 is a section showing the interior surface of part of the wick-tube.

The wick-tubes *a a* pass through and are secured in the top plate, *b*, of the petroleum-stove, and the wick-raisers *c* are upon shafts *d*, and *e* is the housing at the side of each wick-tube that forms an inclosure for the wick-raisers. These parts, except in the particulars hereinafter named, correspond generally with known devices.

In order to prevent the escape of unconsumed vapors into the atmosphere, I make use of one or more vapor-passages, *g*, leading up from the reservoir to the flame. These lead the gases and vapors into the flame, so as to avoid the smell heretofore arising from oil-stoves.

Along the broad wick-tube, near the upper edge, there is a vapor-chamber, *i*, into which the vapors from the passages *g* pass. This chamber insures a uniform distribution of the vapors to the flame, and prevents the unequal burning of the stove.

I prefer to employ corrugations *o* at the top edge of the wick-tube above the vapor-chamber *i*, to form numerous openings that allow

the vapors to pass into the flame. The corrugations, channels, and vapor-chamber, being in the inner surfaces of the wick-tube, serve to equalize the action of the liquid and vapors as they pass up to the flame, because the great width of the wick employed in petroleum-stoves renders it difficult to obtain uniformity of flame along the top thereof. Some parts of the wick-tube set closer to the wick than others, and the gases cannot pass up equally, and parts of the wick become hotter and drier than others. The horizontal vapor-chamber and the channels to it avoid this difficulty, equalize the flame, and also stiffen the wick-tube.

I claim as my invention—

1. The combination, in a wick-tube for petroleum-stoves, of a housing projecting at one side in the metal of the wick-tube, a shaft passing through the housing and wick-raisers thereon within such housing, vertical corrugations forming channels in the inner surface of the wick-tube, and a vapor-chamber at the upper ends of such corrugations and near the top edge of the wick-tube, substantially as set forth.

2. The combination, in a wick-tube for petroleum stoves, of a housing projecting at one side in the metal of the wick-tube, a shaft passing through the housing and wick-raisers thereon within such housing, vertical corrugations forming channels in the inner surface of the wick-tube, a vapor-chamber at the upper ends of such corrugations and near the top of the wick-tube, and small corrugations at the top edge of the wick-tube above the vapor-chamber, substantially as set forth.

Signed by me this 3d day of February, A. D. 1882.

L. J. ATWOOD.

Witnesses:

R. T. LATTIN,
IRVING L. ATWOOD.