

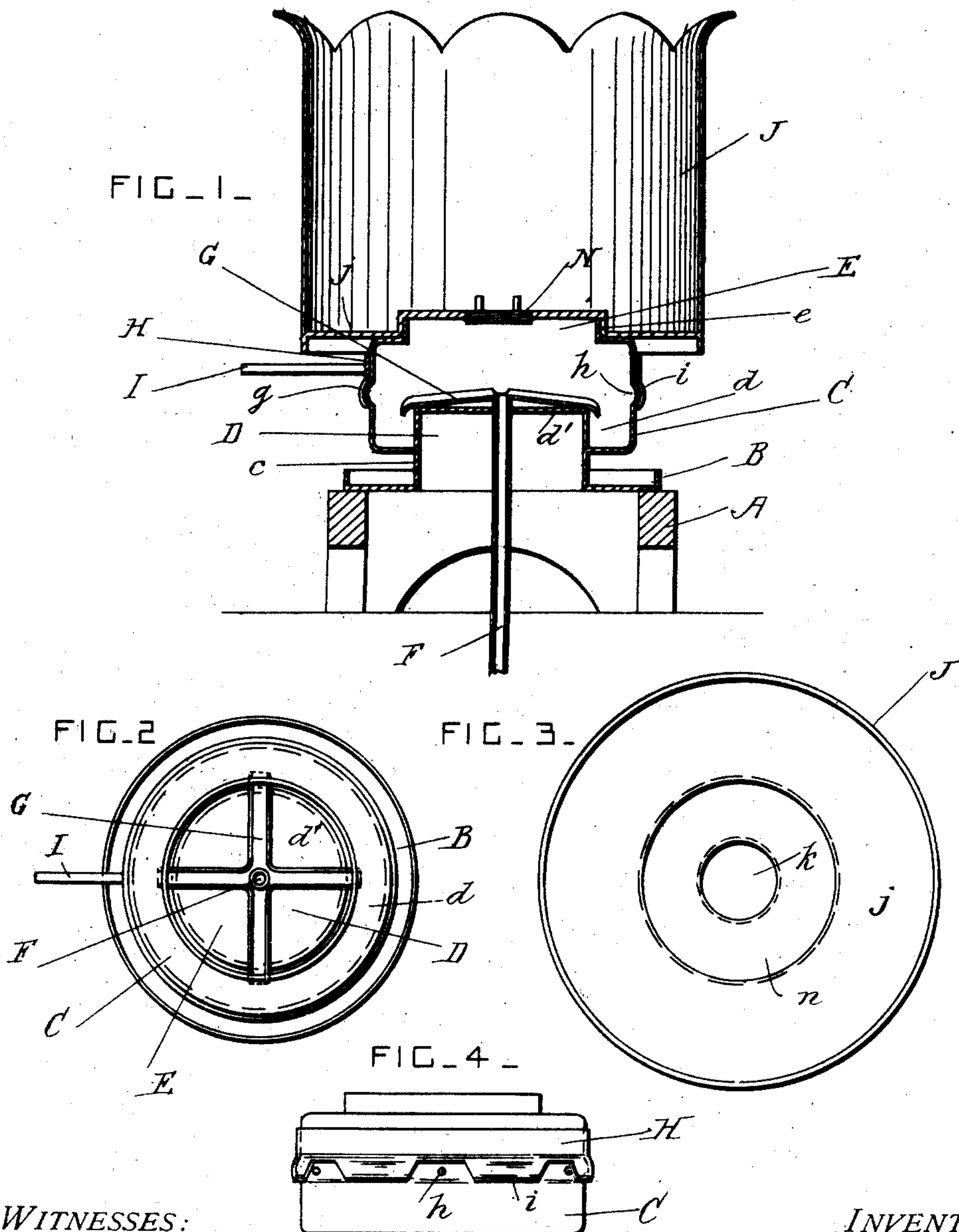
No. 864,629.

PATENTED AUG. 27, 1907.

M. DYER & R. C. ELLIOTT.

OIL GAS BURNER.

APPLICATION FILED APR. 9, 1907.



WITNESSES:

Walter Allen

H. H. Byrnes

INVENTORS

Marcus Dyer and
Robert C. Elliott

BY

Herbert W. Jenner

Attorney

UNITED STATES PATENT OFFICE.

MARCUS DYER AND ROBERT C. ELLIOTT, OF TERRE HAUTE, INDIANA.

OIL-GAS BURNER.

No. 864,629.

Specification of Letters Patent.

Patented Aug. 27, 1907.

Application filed April 9, 1907. Serial No. 367,262.

To all whom it may concern:

Be it known that we, MARCUS DYER and ROBERT C. ELLIOTT, residing at Terre Haute, in the county of Vigo and State of Indiana, have invented certain new and useful Improvements in Oil-Gas Burners; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to devices for burning crude hydrocarbon oils; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed.

In the drawings, Figure 1 is a vertical section through the burner. Fig. 2 is a plan view of the burner with the cup removed. Fig. 3 is a plan view of the cup with the stopper removed. Fig. 4 is a side view of the regulator ring.

A is a supporting base of any approved material. B is a shallow tray or cup which rests on the said base. C is the vaporizer which consists of a drum-shaped vessel a little smaller than the tray B in diameter, and supported over the said tray by a stem *c*. The vaporizer C has an internal drum D which projects upwardly within it from its bottom for about one-half of its height, and this drum D forms an annular space *d* within the lower part of the vaporizer. The top of the drum D is closed by a plate *d'*. The top of the vaporizer has a large opening E, and an upwardly projecting flange *e* around the said opening.

F is the inlet pipe for the oil which projects centrally within the vaporizer and has its open upper end arranged slightly above the level of the top of the internal drum D.

G are channel-shaped guide troughs secured to the top of the internal drum and projecting radially of the inlet pipe, so that the oil which issues from the said pipe is distributed evenly around the annular space or chamber *d*.

The vaporizer is provided with a concavo-convex projection *g* around its middle part, and *h* are small gas holes in the said projection.

H is a ring which is journaled on the upper part of the vaporizer and provided with a series of tongues *i* at its lower edge. These tongues are bent to concavo-convex form so as to engage with the projection *g*, and the ring can be turned around so that the tongues close the gas holes or leave them open. The ring H is provided with a handle or projection I for moving it back and forth.

J is a cylindrical cup for spreading the flame. This cup is provided with a bottom *j* having a hole *k* which is normally closed.

The bottom *j* is provided with a recess *n* which fits over the flange on the top of the vaporizer, so that the cup is securely supported, but can easily be removed whenever required.

N is a stopper which is screwed into the hole *k*, in order to close it, by means of two lugs on its upper side.

In order to use the burner a little oil is first allowed to flow from the inlet pipe through the holes *h* into the tray, and is ignited in the tray so as to heat the vaporizer. When gas is formed in the vaporizer it issues through the holes *h* and is burned against the outer surface of the cup which spreads the flame.

The burner is intended for use in cooking stoves, heating stoves, furnaces, and all other situations to which it can advantageously be applied.

The oil is preferably forced through the inlet pipe by a pressure device of any approved construction, and a valve of any approved construction is provided which regulates the flow of oil in the inlet pipe.

What we claim is:

1. In an oil gas burner, the combination, with a vaporizer chamber provided with a closed lower part and having a series of small gas-outlet holes at its middle part, of a drum which projects upwardly from the bottom of the said chamber and which forms an annular oil chamber within its lower part, means for opening and closing the said holes, and an inlet pipe for oil which projects through the top of the said drum.

2. In an oil burner, the combination, with a vaporizer having a concavo-convex projection at its middle part provided with gas holes, of a ring journaled on the upper part of the said vaporizer and provided with a series of tongues which engage with the said projection and open and close the holes in it, and an inlet pipe for oil projecting within the said vaporizer.

3. In an oil burner, the combination, with a vaporizer having an internally projecting drum at its lower part which forms an annular chamber within the said vaporizer, said vaporizer having also an opening at its top and gas holes at its middle part; of an inlet pipe for oil at the center of the said drum, radial oil channels on top of the said drum for conducting the oil from the said pipe into the said annular chamber, and a cup for spreading the flame which closes the said opening at the top of the vaporizer.

In testimony whereof we affix our signatures, in presence of two witnesses.

MARCUS DYER.
ROBERT C. ELLIOTT.

Witnesses:

WILLIAM T. LITTLEFIELD,
IRA D. ANDREWS.