

No. 707,001.

Patented Aug. 12, 1902.

C. T. PEPPER.
HYDROCARBON BURNER.
(Application filed Mar. 10, 1902.)

(No Model.)

FIG-1-

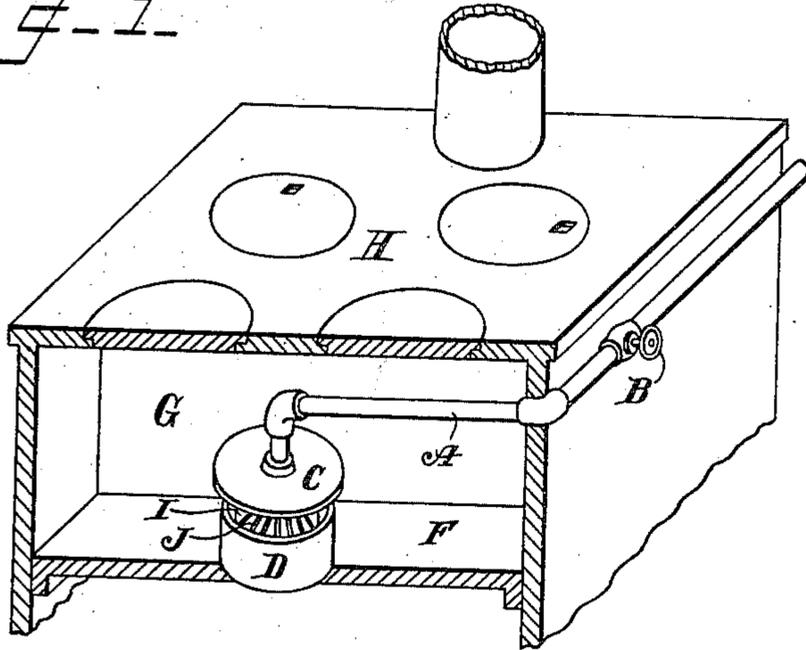


FIG-2-

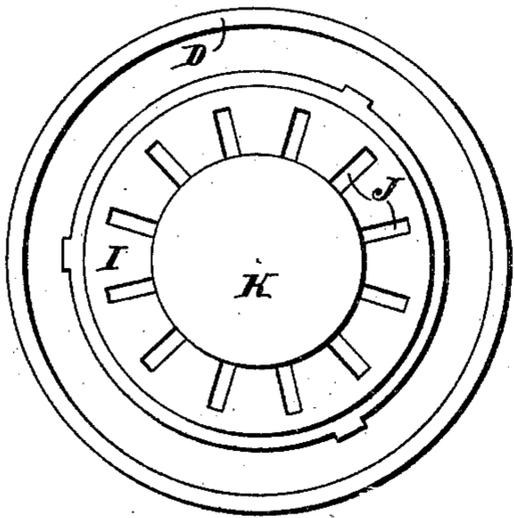
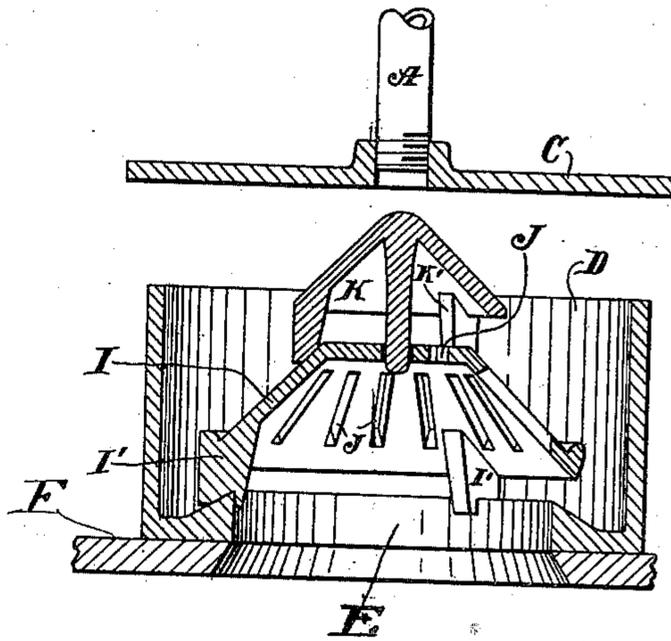


FIG-3-



WITNESSES

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HYDROCARBON-BURNER.

SPECIFICATION forming part of Letters Patent No. 707,001, dated August 12, 1902.

Application filed March 10, 1902. Serial No. 97,630. (No model.)

To all whom it may concern:

Be it known that I, CHARLES T. PEPPER, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles, State of California, have invented new and useful Improvements in Hydrocarbon - Burners, of which the following is a specification.

My invention relates to a burner designed to burn the lighter grades of crude petroleum and light distillate produced from the distillation of crude petroleum after the illuminating-oils are removed therefrom without the use of steam; and the object thereof is to produce a burner of simple construction and efficient operation. I accomplish this object by the burner described herein and illustrated in the accompanying drawings, forming a part hereof, in which—

Figure 1 is a view showing my burner applied to a cook-stove, parts of which are broken away. Fig. 2 is a plan of a portion of my burner. Fig. 3 is a vertical section of the burner and a fragment of the supporting-plate.

In the drawings, A is the fuel-supply pipe, having the cock B to regulate the supply of fuel supplied therethrough. On the end of the supply-pipe is the flame-spreader plate C, which is supported over combustion-cup D, having a central draft-opening E in the bottom thereof. This cup rests upon a bed-plate F, which extends from end to end and from side to side of the fire-box G of the stove H and is provided with a central draft-opening with which the draft-opening in the combustion-cup registers. Within the combustion-cup is a conical-shaped fuel-spreader I, having legs I', which rest upon the bottom of the combustion-cup to elevate it slightly to permit air to pass thereunder into the cup. The fuel-spreader is provided with a number of slots or perforations J in the sides and top to permit air to pass therethrough to aid combustion in the cup. Above the perforated spreader and supported by legs K' is an imperforate conical fuel-spreader K, which is situated directly below the outlet of the fuel-pipe, upon which the liquid fuel drops and spreads over the surface thereof and flows down upon the perforate plate.

In the operation of my device the cock on

the supply-pipe is opened sufficiently to permit a limited quantity of oil to flow there-through, which oil is lighted by a torch or other means held at the opening in the bottom of the combustion-cup. The different parts soon become heated and more oil is turned on to suit the fire required in the stove. The draft being through the perforate spreader causes the air to commingle with vaporized oil, and flame is produced with little, if any, smoke. In practice I find that the draft through the openings J is so strong that any oil which drips from the imperforate spreader K will be prevented by such draft from falling through said openings.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A hydrocarbon - burner comprising a flame-spreader on the end of the fuel-supply pipe; a combustion-cup disposed below said flame-spreader, said cup having a central draft-opening in the bottom thereof, a perforated conical-shaped fuel-spreader in said cup having legs to hold it elevated above the bottom of the cup; a smaller imperforate conical-shaped fuel-spreader having legs to hold it elevated above the perforate spreader.

2. The combination of an imperforate bed-plate, having a central draft-opening therethrough, adapted to extend across the combustion-chamber of the structure in which the burner is to be used; a combustion-cup having a central draft-opening in the bottom thereof registering with the draft-opening in the bed-plate and resting thereon; a perforate conical-shaped fuel-spreader, having legs, in said combustion-cup; an imperforate conical-shaped fuel-spreader having legs adapted to rest upon the perforate spreader; a flame-spreader above said imperforate-spreader having a central opening extending therethrough.

In witness that I claim the foregoing I have hereunto subscribed my name this 4th day of March, 1902.

C. T. PEPPER.

Witnesses:

G. E. HARPHAM,
HENRY T. HAZARD.