No. 649,881. Patented May 15, 1900.

C. R. SUTTON.

HYDROCARBON BURNER.

(Application filed Nov. 23, 1899.)

(No Model.)

Fig. 1.

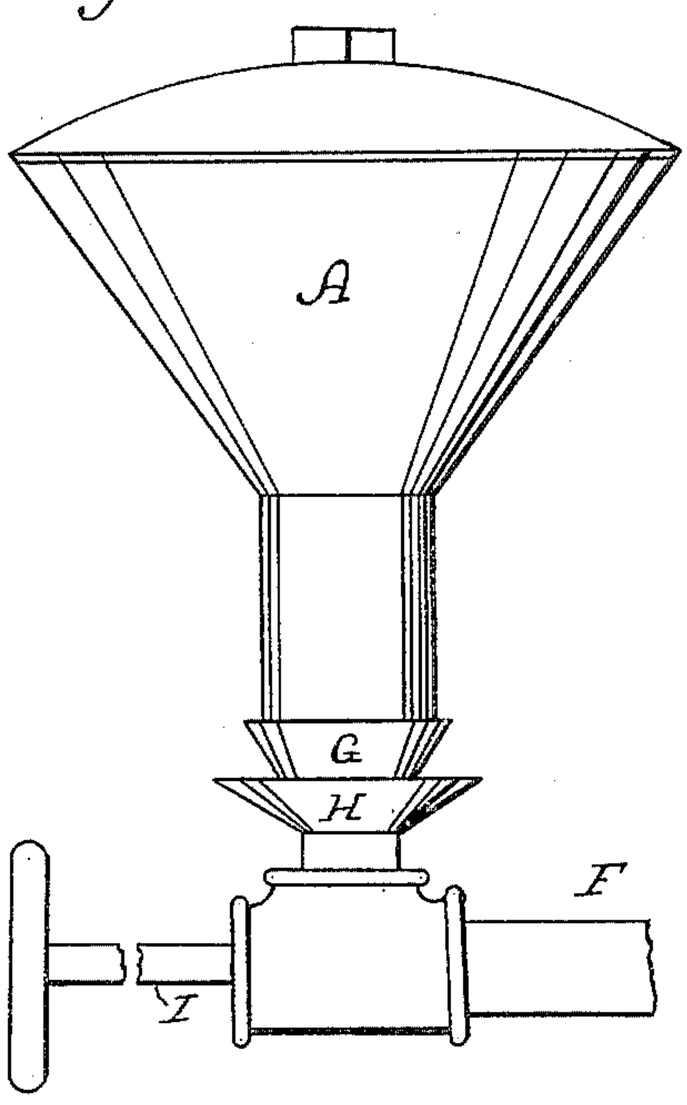
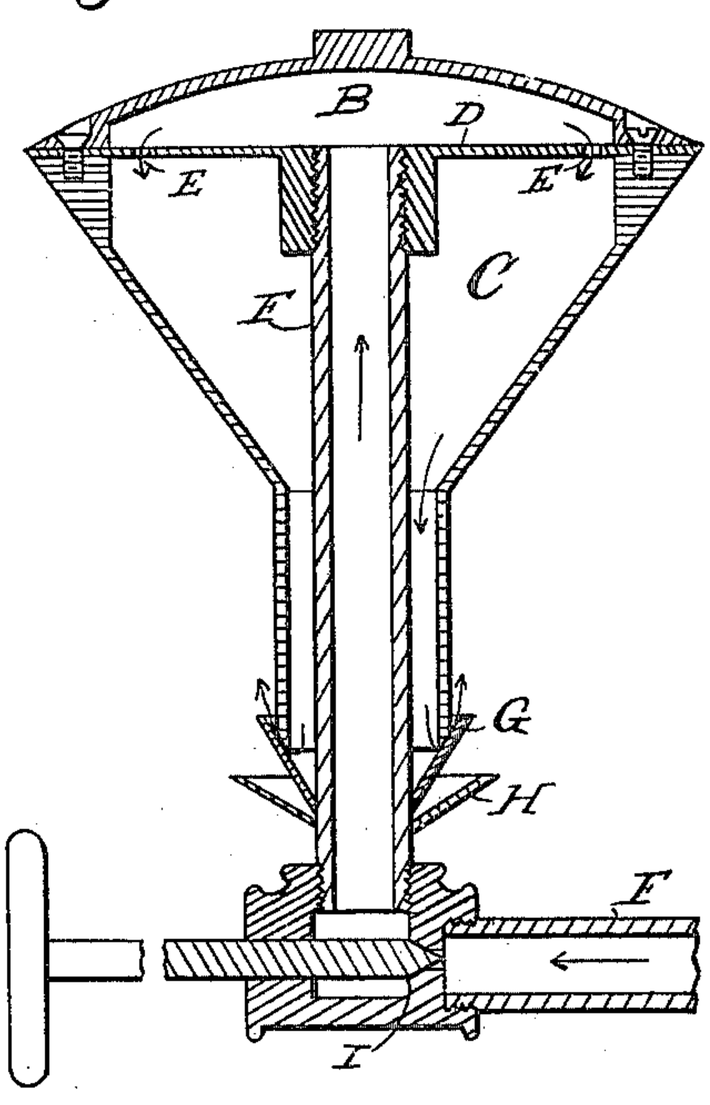


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

CHESTER R. SUTTON, OF CARPENTERIA, CALIFORNIA, ASSIGNOR OF ONE-HALF TO JOEL R. FITHIAN, OF SANTA BARBARA, CALIFORNIA.

HYDROCARBON-BURNER.

SPECIFICATION forming part of Letters Patent No. 649,881, dated May 15, 1900.

Application filed November 23, 1899. Serial No. 738,103. (No model.)

To all whom it may concern:

Be it known that I, CHESTER R. SUTTON, a citizen of the United States, and a resident of Carpenteria, in the county of Santa Barbara, State of California, have invented a new and useful Improvement in Hydrocarbon-Burners, of which the following is a specification.

My improvement relates to a new construction in burners for burning high-grade crude petroleum or distillate obtained from petroleum or other fuel of a like nature; and the object thereof is to provide a burner which will burn such fuel without the use of steam. I accomplish this object by the mechanism described herein and illustrated in the accompanying drawings, in which—

Figure 1 is a side view of my burner. Fig. 2 is a vertical section of the same.

In the drawings, A represents the vaporizer, which is divided into an upper chamber B and a lower chamber C by a partition D, having perforations E, preferably placed near the point of contact with the upper wall of chamber B, which provides a passage for fuel, either in a liquid or gaseous state, from chamber B into chamber C. Vaporizer A is screwed upon the upper end of the fuel-supply pipe F, so that by the rotation thereof the bottom of the casing of chamber C may be tightly seated or raised from valve-seat G, affixed to pipe F, to prevent or permit the passage of the fuel from chamber C. Pipe F is connected with a reservoir (not shown) located at some point higher than the burner to produce a gravity-feed, no other pressure being necessary. Surrounding and affixed to pipe F immediately below valve-seat G is a conical-shaped fuel-pan H to hold a small amount of liquid fuel for use in starting. By using a torch this fuel-pan may be dispensed with. The admission of the liquid fuel into the vaporizer is controlled by valve I.

My burner, perferably placed in a stove, is operated as follows: Pan H is filled with liquid fuel and set on fire to heat the vaporizer, so that the liquid fuel passing therein will be turned into vapor. As soon as the vaporizer is sufficiently heated valve I is opened to permit the required quantity of liquid fuel to flow into chamber B of the vaporizer, where it is turned into vapor. At the same time that valve I is opened vaporizer A is rotated on pipe F to withdraw the bottom of chamber C off valve-seat G sufficiently to permit the vapor to escape from chamber C. As it emerges therefrom it is ignited and burns in a circular flame around the bottom of chamber C, and the heat therefrom will keep the vaporizer sufficiently heated to generate into vapor the required amount of liquid fuel which is admitted into chamber B.

I have shown in the drawings the shape which I prefer to use in the construction of the vaporizer; but other forms may be used, if preferred, the essential feature being an upper chamber in which the liquid fuel is converted into gaseous fuel by heat and a conduit, preferably a chamber, to carry the gaseous fuel to an outlet, where it is burned, said outlet being so situated that the heat from the flame will keep the chamber so hot that the liquid fuel will be converted into gaseous fuel before it emerges therefrom.

Having described my invention, what I claim is—

1. A hydrocarbon-burner comprising a fuel-supply pipe, terminating in the upper chamber of a vaporizer, a vaporizer divided into an upper and a lower chamber by a perforated partition; a perforated partition in the vaporizer screwed upon the upper end of the fuel-supply pipe, and adapted to be rotated thereon to cause the lower part of the vaporizer to rise off or be seated firmly on the valve-seat, a valve-seat surrounding the fuel-supply pipe immediately below the bottom of the vaporizer, substantially as described herein.

2. A hydrocarbon-burner, comprising vaporizer A divided into chambers B and C; perforated partition D separating said chambers; fuel-supply pipe F screwed into partition D; valve-seat G on pipe F and valve I adapted to control the passage of the fuel through pipe F.

In witness that I claim the foregoing I have hereunto subscribed my name, this 17th day of November, 1899, at Los Angeles, California.

CHESTER R. SUTTON.

Witnesses:

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M. MCGINNIS.