

Jan. 14, 1936.

C. PERDRISAT

2,027,699

BURNER FOR LIQUID FUELS

Original Filed Jan. 31, 1934

Fig. 1.

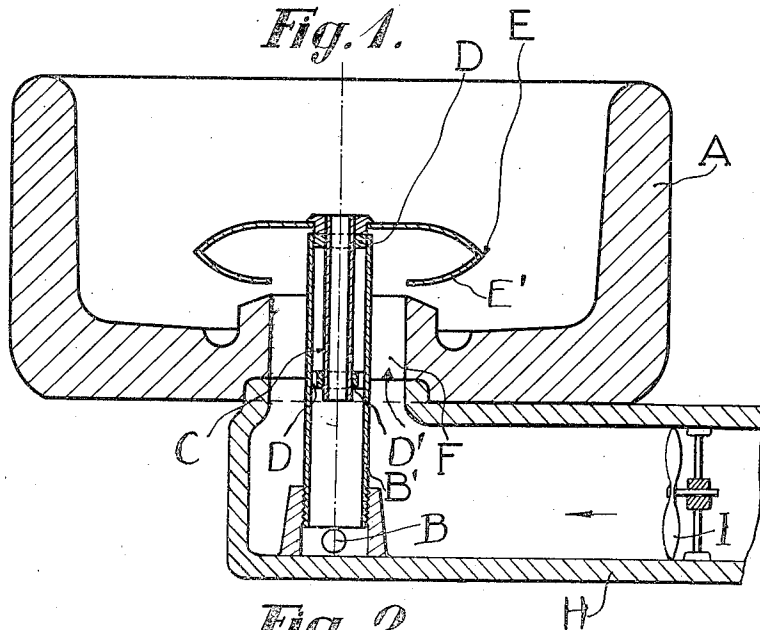
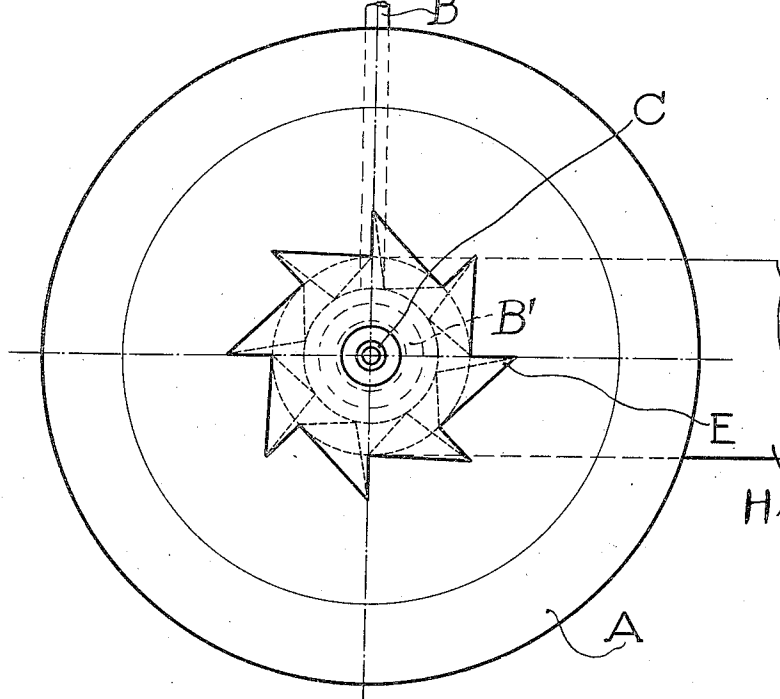


Fig. 2.



Inventor:
Charles Perdrisat
By *Samuel Meyer*
Attorney

UNITED STATES PATENT OFFICE

2,027,699

BURNER FOR LIQUID FUELS

Charles Perdrisat, Geneva, Switzerland

Application January 31, 1934, Serial No. 709,180.
Renewed October 16, 1935. In Switzerland
February 8, 1933

2 Claims. (Cl. 158—77)

This invention relates to an improved burner for liquid fuels such as oil.

The annexed drawing illustrates an example of construction of the invention.

Fig. 1 is a vertical section of the improved burner and

Fig. 2 a plan thereof.

A is a fire pot having a central orifice F in its base which is connected to a conduit H which conveys air to the burner under a certain amount of pressure produced by a fan or blower I. In the center of the orifice F is arranged a tube B for the feed of the oil to the burner. This tube is mounted in support B' within conduit H.

In the tube B are arranged two bearing rings D and D' in which a hollow axle C is rotatably mounted. On the upper end of said hollow axle a vane wheel or turbine rotor E of suitable shape is fixed. The vane wheel or rotor E is provided with vanes or fluid reactive surfaces E' which serve to effect rotation of the wheel or rotor when a current of air is caused to flow thereover.

The air entering the burner through the central orifice F of the fire pot rotates the vane wheel or turbine rotor E at a speed which is sufficient to cause the oil, which is fed through the axle C of the wheel onto the upper surface of the wheel, to be atomized and projected onto the inner wall of the fire pot A, thereby producing a mixture which assures the complete combustion of the liquid fuel.

The mounting of the vane wheel or turbine rotor on a hollow axle arranged vertically within a tube conveying fuel oil assures the constant lubrication of the bearing rings of which the lower one D' is provided with holes D'' for passage of the oil.

What I claim as my invention and desire to secure by Letters Patent of the United States is:—

1. A burner for liquid fuel comprising a cup-shaped fire pot having an air-inlet orifice in the center of its base, a tube of lesser diameter than said orifice for the supply of liquid fuel extending through the center of said orifice, a tubular axle, axially and rotatably mounted within said tube, a turbine rotor fixed on said tubular axle within said fire pot, and a conduit communicating with said air inlet orifice for supplying a current of air to said fire pot to effect rotation of said rotor and provide combustion supporting air, said tubular axle communicating with the liquid fuel supply tube for distributing liquid fuel onto said rotor for atomization and projection onto the wall of said fire pot.

2. A burner for liquid fuel comprising a cup-shaped fire pot having an air-inlet orifice in the center of its base, a vertical tube of lesser diameter than said orifice for the supply of liquid fuel extending through the center of said orifice, a bearing ring mounted within said tube, a second bearing ring mounted within said tube, a tubular axle mounted within said tube and rotatable in said bearing rings, a turbine rotor fixed on the upper end of said tubular axle within said fire pot, and a conduit communicating with said air inlet orifice for supplying a current of air to said fire pot to effect rotation of said rotor and provide combustion supporting air, said tubular axle communicating with the liquid fuel supply tube for distributing liquid fuel onto said rotor for atomization and projection onto the wall of said fire pot.

CHARLES PERDRISAT.