Sept. 29, 1925. 1,555,649

L. FERRETTE

BURNER

Filed Dec. 14, 1923

Fig. 1.

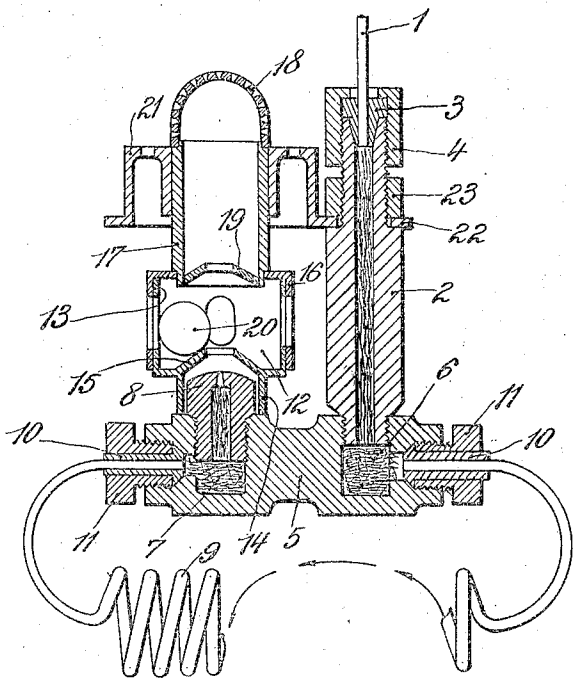
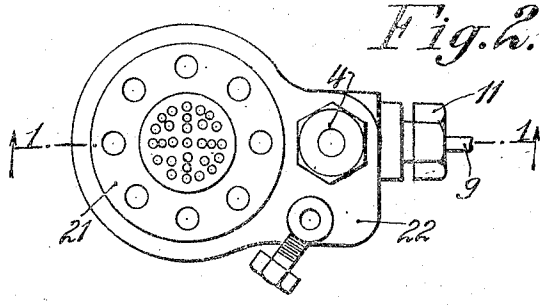


Fig. 2.



Inventor,
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by
atty

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UNITED STATES PATENT OFFICE.

LOUIS FERRETTE, OF PARIS, FRANCE.

BURNER.

Application filed December 14, 1923. Serial No. 680,699.

To all whom it may concern:

Be it known that I, LOUIS FERRETTE, citizen of the Republic of France, and resident of Paris, 41 Rue Vital, in the Department of the Seine and Republic of France, have invented certain new and useful Improvements in Burners, of which the following is a specification.

The object of the present invention is to provide a burner capable of being used with any combustible liquid and applicable to heating devices and lighting devices such, for example, as miners' lamps.

To the attainment of this end, the invention consists principally in the adjunction to a burner of a device for condensing the less volatile portions of the combustible, so as to prevent the soiling of the nozzle of the burner.

The invention is also characterized by the following features:—

The gasifying of the combustible liquid is brought about by the conductibility of the constituent parts of the burner without the provision of special accessory parts and the burner is provided with a ball adapted, should the device be inverted, to engage with a seat thereby extinguishing the burner and eliminating the risk of fire.

On the annexed drawing which represents, by way of example, one constructional form of the invention, Fig. 1 is a sectional elevation, on the line 1—1 of Fig. 2, of the petrol burner, whilst Fig. 2 is a plan view corresponding to Fig. 1.

Referring to the drawing:—

The petrol enters the burner through a pipe 1, passing into a tube 2 filled with asbestos. One extremity of the pipe 1 is mounted in a conical member 3 fitting in a seat of the same form provided in the tube 2, said member being held in the said seat by means of a nut 4 screwed on to the tube 2. The tube 2 is fixed in a member 5 having an expansion chamber 6, within which the tube opens, and an expansion chamber 7 wherein a nozzle 8 is mounted.

The chambers 6 and 7 are connected by a condensation coil 9 whose extremities are arranged within members 10 having conical extremities held on to seats of the same form provided in the member 5 by means of threaded members 11 screwed in the member 5. The nozzle 8 is surmounted by an air regulating device 12, comprising two sleeves fitting one within the other and having corresponding openings. The interior sleeve 13 is mounted on the member 5 by means of a cylindrical base 14 surrounding the nozzle 8 and having a small collar 15, whilst the outer sleeve 16 is turnably arranged on the interior sleeve so as to permit the regulation of the entry of air.

A cylindrical tube 17 is mounted on the exterior sleeve and is terminated at its upper part by a head 18 pierced with holes through which the mixture of gas, petrol and air, passes out, and having at its lower part a conical seat 19 which is engaged, on the inversion of the device, by a ball 20 arranged within the air regulating member 12 and adapted to prevent the flowing of the gases into the tube 17 and, as follows, to extinguish the flame. The tube 17 is centered by means of a ring 21 of U section, pierced at its upper part with holes for the supply of air and having an ear 22 adapted for attachment to the tube 2 by means of a nut 23.

Petrol passes to the burner through the pipe 1 in the liquid state and is vaporized in the tube 2 which is heated by conductibility through the tube 17, the ring 21 and the ear 22. The asbestos in the tube 2 retains impurities which would be carried along by the petrol. The petrol vapour circulates into the chamber 6, where it expands, into the coil 9, where the heavy oils are condensed, into the chamber 7, where it again expands, into the nozzle 8 and into the air regulating member 12 where it mixes with the air. The mixture of air and petrol vapour then passes into the tube 17, passing therefrom through the holes in the head 18 of the said tube, its combustion taking place above said head.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. In a burner, a body formed with a condensing chamber, into which the fuel vapor is delivered, a nozzle communicating with said chamber, an adjustable air inlet member arranged above the nozzle, a burner tube arranged above the air admission member,

and means adapted to close the inlet end of the burner tube on the inversion of the burner.

2. In a burner, a body formed with a condensing chamber, into which the fuel vapor is delivered, a nozzle communicating with said chamber, an adjustable air inlet member arranged above the nozzle, a burner tube arranged above the air admission member, said burner tube being formed with a reduced inlet, and a ball to close said inlet on the inversion of the burner.

Signed at Paris, France, this 30th day of November, A. D. 1923.

LOUIS FERRETTE.