

Improvements in and relating to reservoirs including a stop valve and a burner for a low boiling-point liquid

Beschrijving van GB936187

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Improvements in and relating to Reservoirs including a Stop Valve and a Burner for a Low Boiling-Point Liquid We, ARNOLDUS MARTINUS JOSEPHUS VAN POPPEL, a Dutch citizen, and ALBERTUS VAN POPPEL, a Dutch citizen, trading as VENOOT- SCHAP ONDA FIRMA HANDELSON DER NERNING GEBR VAN POPPEL, of 58 Jacob van den Borchstraat, Utrecht, The Netherlands, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:- The present invention relates to reservoirs for a low boiling-point liquid primarily intended to hold inflammable low boiling-point liquid's used in cigarette lighters.

Such a reservoir may conveniently be provided with a stop valve comprising a cylindrical sleeve internally provided with a seat, which sleeve is inserted in the filling opening of the reservoir and is so secured to the reservoir by means of screw thread as to be adjustable relative to a sealing disc bearing on an abutment. A burner is preferably mounted in the sleeve opposite the seat, and has an aperture coaxial with the sleeve through which the stem of a valve bearing on the said seat passes.

Reservoirs of the type just described including a stop valve and a burner are intended for use with lighters. The stop valve can be closed by a spring-loaded lever, one end of which bears on the valve stem projecting from the burner opening and presses the valve onto its seat. The reservoir is opened by moving the lever in opposition to the spring, so that the valve is lifted off its seat, by the gas pressure prevailing in the reservoir, the vapour of the low boiling" point liquid flowing along the stem out of the aperture of the burner.

According to the present invention, a reservoir for a low boiling-point liquid is provided with a flow control valve comprising a pad of non-porous material having a resilient fibrous surface located between an adjustably mounted member and an abutment. Adjustment of the position of the adjustably mounted member relative to the abutment provides control over the flow of fluid through the valve.

The pressure exerted on the pad enclosed between the abutment and the adjustably mounted member determines the width of the flow spaces between the fibres and thence the rate of flow through the valve which governs the height of the flame which results when the inflammable gas flowing from such a reservoir is ignited.

In a reservoir provided with a stop valve as described above, the adjustable member may be constituted by -an adjustable sleeve. The pressure exerted on the non-porous pad then depends not only on the screwing home of the sleeve into the reservoir, but also depends on the force with which the spring-loaded lever bears on the stem and thus on the valve and on the abutment.

Seeing that the latter force is relieved when the lever is moved in opposition to the spring the sleeve which owing to its screw- thread connection with the reservoir always has some play relative to the reservoir will exert a varying pressure on the pad during the opening and closing of the valve, the result being that immediately after the opening of the valve the ignited effluent gas will form a flame of a very great height and thereafter the flame will gradually grow smaller until it has the height for which the lighter was initially set, because owing to the reduced pressure exerted on the pad; said disc will expand slightly.

Advantageously, the abutment on which the fibrous, non-porous pad bears consists of an abutment block resting on a resilient member engaged against a fixed seat.

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An embodiment of the invention will now be described, by way of example, with reference to the accompanying drawing the single figure of which is a sectional view of a reservoir indicated at 1 and having a stop valve and a burner. The reservoir is intended for mounting in a cigarette lighter.

The stop valve comprises a cylindrical sleeve 3 internally provided with a valve seat 2. The sleeve 3 is located in the filling opening of the reservoir and is adjustably secured to the reservoir by means of an external screw- thread 4. Opposite the valve seat 2 there is provided in the sleeve 3, a coaxial burner tube