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PATENT SPECIFICATION



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524395

Complete Specification Left: Jan. 25, 1940.

Complete Specification Accepted: Aug. 6, 1940.

PROVISIONAL SPECIFICATION

Improvements in or relating to Blow-lamps, Pressure Oil Stoves and like Apparatus

We, MONITOR ENGINEERING AND OIL APPLIANCES LIMITED, a British Company, of Redhill Road, Hay Mills, Birmingham, and HARRY JAMES MEADS, British Subject, of the Company's address, do hereby declare the nature of this invention to be as follows:—

This invention relates to improvements in blow-lamps, pressure oil stoves and like apparatus which is normally maintained under pressure.

In such apparatus it is desirable to provide a safety valve to limit the pressure which can be applied to the container, but in practice it is difficult to provide a safety-valve which will give a consistent pressure release unless it is fitted with some means for adjusting it, and if an adjustable safety-valve is fitted workmen or other people using the blow-lamp or stove are liable to tamper with it and so destroy its value as a safety device.

According to our invention the setting of a safety-valve for a blow-lamp, pressure oil stove or like apparatus is controlled by an externally screw-threaded member adjustably screwed into the body or housing of the valve and locked by a locking ring which lies in an annular recess in the valve body around the outer end of the adjusting member and engages a shoulder in the body at the inner end of the recess.

The outer ends of the adjusting member and locking ring are provided with spaced openings or notches for engagement by complementary teeth or projections on a two-part tool or key consisting of two relatively rotatable parts of which one is adapted to engage with the adjusting member and the other with the locking ring.

The tool conveniently consists of a spindle having on its end two spaced pegs adapted to engage apertures in the adjusting member and a sleeve rotatably mounted on the spindle and having on its end two spaced projections or pegs adapted to engage with notches in the locking ring, the spindle and sleeve each having a cross-bar or other handle at its other end.

When the tool is engaged with the adjusting member and locking ring the adjusting member can be held by the spindle while the locking ring is slackened by rotation of the sleeve, and the ring is then held by the sleeve while the adjusting member is adjusted by rotation of the spindle, after which the adjusting member is held by the spindle while the locking ring is tightened by rotation of the sleeve.

The depth of the recess in the valve body is preferably such that the outer end of the locking ring when the ring is in the locked position, is substantially flush with or below the outer end of the body.

When the adjusting member has been set and locked it cannot be moved except by a tool which enables the adjusting member and locking ring to be actuated simultaneously, and as in practice this can only be done with the special tool provided for the purpose the setting of the valve cannot be tampered with by any unauthorised person.

Dated the 16th day of January, 1939.

BARKER, BRETTELL & DUNCAN,
Chartered Patent Agents,
75 & 77, Colmore Row, Birmingham, 3.

COMPLETE SPECIFICATION

Improvements in or relating to Blow-lamps, Pressure Oil Stoves and like Apparatus

We, MONITOR ENGINEERING AND OIL APPLIANCES LIMITED, a British Company, of Redhill Road, Hay Mills, Birmingham, and HARRY JAMES MEADS, British Sub-

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ject, of the Company's address, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and

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ascertained in and by the following statement:—

This invention relates to improvements in blow-lamps, pressure oil stoves and like apparatus having a container which is normally maintained under pressure.

In such apparatus it is desirable to provide a safety valve to limit the pressure which can be applied to the container, but in practice it is difficult to provide a safety-valve which will give a consistent pressure release unless it is fitted with some means for adjusting it, and if an adjustable safety-valve is fitted workmen or other people using the blow-lamp or stove are liable to tamper with it and so destroy its value as a safety device.

According to our invention the setting of a safety-valve for a blow-lamp, pressure oil stove or like apparatus is controlled by an externally screw-threaded member adjustably screwed into the body or housing of the valve and locked by a locking ring which lies in an annular recess in the valve body around the outer end of the adjusting member and engages a shoulder in the body at the inner end of the recess.

The outer ends of the adjusting member and locking ring are provided with spaced openings or notches for engagement by complementary teeth or projections on a two-part tool or key consisting of two relatively rotatable parts of which one is adapted to engage with the adjusting member and the other with the locking ring.

The depth of the recess in the valve body is preferably such that the outer end of the locking ring when the ring is in the locked position is substantially flush with or below the outer end of the body.

When the adjusting member has been set and locked it cannot be moved except by a tool which enables the adjusting member and locking ring to be engaged simultaneously, and as in practice this can only be done with the special tool provided for the purpose the setting of the valve cannot be tampered with by any unauthorised person.

One practical design of safety valve in accordance with our invention for use on a blow-lamp, pressure oil stove or the like is illustrated by way of example in the accompanying drawings in which:—

Figure 1 is a side elevation of the complete valve.

Figure 2 is a plan of the valve.

Figure 3 is an inverted plan.

Figure 4 is a vertical section of the valve.

Figure 5 is a sectional elevation of the component parts of the valve separated, and an elevation of a suitable tool for setting the valve.

In the valve illustrated the body 10 is made of brass or other suitable metal and has an external screw-thread 11 by which it can be screwed into a socket on the reservoir of a blow-lamp or stove, a shoulder 12 being provided above the screw-thread to engage with a washer and a seat on the socket. An axial bore 13 of substantial diameter and length is formed in the upper part of the socket and is internally screw-threaded, and an axial bore 14 of relatively small diameter extends through to the lower end of the body. The upper end of this bore 14 is enlarged and an annular seating 15 surrounds the bore 14 at the bottom of the bore 13. A valve 16 having a resilient cork or other washer 17 inset in its lower face is adapted to engage with the seating 15 against which it is urged by a helical compression spring 18. The lower end of this spring fits over a spigot 19 on the top of the valve and its upper end fits over a spigot 20 on an externally screw-threaded sleeve 21 which is adjustably screwed into the upper part of the body and forms the adjusting member of the valve. Two spaced holes 22 are provided in the upper end of the sleeve to receive pegs on a tool by which the sleeve can be rotated to vary the compression of the spring and so vary the pressure at which the valve will open. The sleeve is locked in the set position by an internally threaded locking ring 23 which is screwed on to the upper end of the sleeve and is adapted to abut against a shoulder 23¹ at the bottom of an annular recess 24 in the upper end of the body. Two opposed notches 25 are cut in the upper face of the ring for engagement by a tool. The depth of the recess 24 is preferably equal to or slightly greater than the depth of the ring 23 so that in the locked position of the ring its upper surface lies flush with or slightly below the upper end of the body and the notches 25 cannot be engaged by a knife blade or flat bar.

A headed pin 26 is preferably located in the bore 14 in the lower end of the body in which it fits loosely, and the lower end of the pin projects from the body so that it can be used for pushing up the valve to make sure that the valve is free.

A suitable tool for setting the valve is shown in Figure 5. A spindle 28 having at its upper end a cross handle 29 has at its lower end a head carrying a pair of pegs 30 adapted to engage in the holes 22 in the sleeve 21. A sleeve 31 slidable and rotatable on the spindle has a cross-handle 32 at its upper end and at its lower end has a pair of projections 33 adapted to engage the notches 25 in the locking ring.

To adjust the valve the sleeve 21 is held by the spindle 28 while the locking ring 130

is slackened off by rotating the sleeve 31, and the locking ring is then held while the sleeve 21 is adjusted by rotating the spindle, after which the sleeve is again held while the locking ring is tightened.

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

1. A safety valve for a blow-lamp, pressure oil stove or like apparatus in which the setting of the valve is controlled by an externally screw-threaded member adjustably screwed into the body or housing of the valve and locked by a locking ring which is screwed on to the adjusting member and lies in an annular recess in the valve body around the outer end of the adjusting member.

2. A safety valve as claimed in Claim 1 in which the locking ring when locked engages a shoulder at the bottom of the

annular recess and the depth of the recess relative to that of the locking ring is such that the outer end of the locking ring lies flush with or below the outer end of the valve body.

3. A safety valve as claimed in Claim 1 or 2 in which the outer ends of the adjusting member and locking ring are provided with spaced openings or notches for engagement by complementary pegs or projections on a two-part tool consisting of two relatively rotatable parts of which one is adapted to engage with the adjusting member and the other with the locking ring.

4. A safety valve for a blow-lamp, pressure oil stove or like apparatus substantially as described with reference to the accompanying drawings.

Dated the 3rd day of January, 1940.

BARKER, BRETTELL & DUNCAN,

Chartered Patent Agents,

75 & 77, Colmore Row, Birmingham, 3.

[This Drawing is a reproduction of the Original on a reduced scale.]

FIG. 1

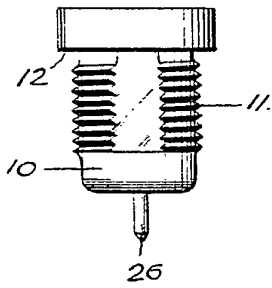


FIG. 2

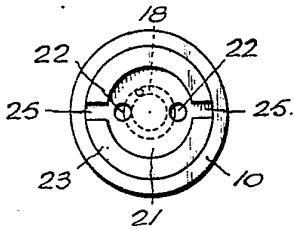


FIG. 3

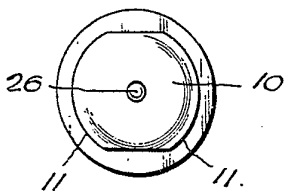


FIG. 4

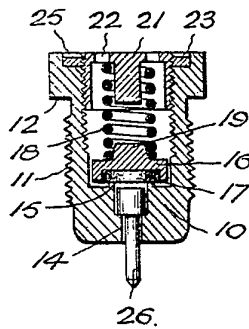


FIG. 5

