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AUTOMATIC CUT-OFF FOR VAPOR BURNERS.

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UNITED STATES PATENT OFFICE.

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AUTOMATIC CUT-OFF FOR VAPOR-BURNERS.

954,477. Specification of Letters Patent. Patented Apr. 12, 1910.

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To all whom it may concern:

Be it known that I, SIGGE STENBERG, a subject of the King of Sweden, and resident of Sundbyberg, Stockholm, Sweden, have invented an Apparatus for Thermostatic Valves for Vaporizing-Burners, of which the following is a specification.

The present invention relates to an automatic cut-off for vapor burners, and an example of the construction of the device is shown in the accompanying drawing, in longitudinal section.

The usual vaporizing pipe leads to the burner 2. The valve spindle of the thermostatic valve, which latter is arranged and constructed in the usual way, lies in a recess in the body of the valve 4, which lies when closed upon the valve seat 5, thereby making the joint. The valve spindle 3 is connected to the valve body 4 in the following manner. The end of the valve spindle which projects into the valve body has a longitudinal groove cut in it, into which projects a pin 7, fixed to the valve body 4. The arrangement is such that the pin 7, is at the top end of the groove 6, when the thermostatic arrangement is at rest, *i. e.* when the burner is not lighted or being lighted. The valve body 4 must then also lie on the valve seat 5, and make a joint there. This would of course follow as a result of the weight of the valve body, but it is more suitable to insure it by a spring as indicated on the drawing. For this purpose a rod 8, consisting of a material which is a poor conductor of heat, is attached to the bottom of the valve body 4, and is led down through the valve seat. To this rod, a spiral spring is attached, whose tension can be regulated by any suitable arrangement.

The spring 9 and the requisite parts are preferably arranged in a branch of the influx pipe 10. The branch 10 is arranged with a detachable bottom so that the arrangement for adjusting the spring is easily accessible. It is advantageous to make the spindle 8 so long that the spring 9 is some distance from the heat of the burner.

When the burner is to be lighted, the apparatus is heated and the spindle 3 begins to rise. The whole apparatus is so arranged that the lower end of the groove 6, does not come into contact with the pin 7, till the vaporizing pipe 1 has reached the temperature necessary for the vaporizing of the liquid to be burned. As the spindle rises still higher, the tension of the spring 9 is overcome and the valve body 4 is lifted from its seat 5. When the burner is extinguished, all the aforementioned apparatus, in consequence of the cooling-down, and the tension of the spring, return to their original position. The arrangement of the pin 7, and the groove 6, can of course be reversed, so that the pin is provided on the spindle 3, and the groove in the valve body. In this case the pin, when at rest, must be in the bottom part of the groove. The joint between valve spindle 3 and valve body 4, could also be differently carried out. It is essential that these parts are relatively movable, and that the one does not engage with the other before the vaporizing pipe reaches a temperature high enough for the vaporization of the liquid to be burned. Between the burner and the other valve a blowing out opening with plug 11 and cover 12 is provided. By removing the plug and cover, the pipe 1 can be easily cleaned.

Having fully described my invention, what I claim and desire to secure by Letters Patent is:—

1. In an apparatus for thermostatic valves for vaporizing burners, the combination of a supply pipe, a valve seat mounted in said supply pipe, a valve body for closing the valve seat, a valve spindle connected to the valve body and provided with a slot and a pin, which spindle is adapted to slide vertically in said valve body, a branch arranged on said supply pipe with means for fixing a spring, said spring being connected to a rod attached to the base of the valve body, substantially as described and shown.

2. In an apparatus for thermostatic valves for vaporizing burners, the combination of a supply pipe, a valve seat mounted in said supply pipe, a valve body for closing the valve seat, a valve spindle being connected to the valve body and provided with a slot and a pin, which spindle is adapted to slide vertically in said valve body, a branch ar-

ranged on said supply pipe with means for fixing a spring, said spring being connected to a rod attached to the base of the valve body, a blowing out opening, provided for the cleaning of the supply pipe, substantially as described and shown.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

SIGGE STENBERG.

Witnesses:
HUGO PALMQUIST,
JANE WAHLSTEDT.