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J. H. JACOBS

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SAFETY VALVE

Filed May 5, 1923

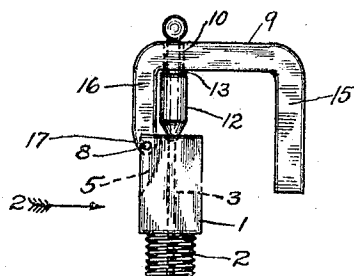


Fig. 1.

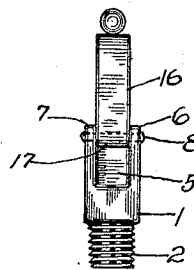


Fig. 2.

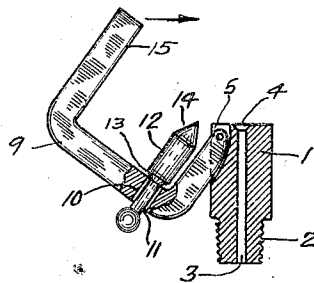


Fig. 3.

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JOSEPH H. JACOBS, OF DENVER, COLORADO.

SAFETY VALVE.

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To all whom it may concern:

Be it known that JOSEPH H. JACOBS, a citizen of the United States, residing at Denver, the city and county of Denver and State of Colorado, have invented certain new and useful Improvements in Safety Valves; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings and to the characters of reference marked thereon, which form a part of this specification.

This invention relates to safety valves of the type employed in connection with steam cookers.

The use of steam pressure cookers is becoming more and more general as the advantages of this method of cooking and canning is becoming better understood and more universally recognized.

In order to operate a steam cooker successfully and with complete safety it is essential that the cooker shall be provided with a reliable safety valve that will be absolutely steam tight when the pressure is below the minimum and which will positively relieve the pressure when this exceeds the predetermined value.

I am aware that safety valves have been used in connection with steam cookers but those with which I am familiar are not entirely satisfactory for various reasons which I will not attempt to enumerate.

It is the object of this invention to produce a safety valve of neat appearance and of substantial construction that shall be easy to manufacture and to clean and which will at the same time be absolutely reliable in its operation. In order to better and more clearly describe my invention, I shall have reference to the accompanying drawing in which the preferred form thereof is shown and in which Fig. 1 shows a side elevation of the valve in operative position.

Fig. 2 is a view looking in the direction of the arrow in Fig. 1, and

Fig. 3 is a side elevation with parts broken away, showing the valve in open position.

The same reference characters will be used to designate the same parts throughout the several views. Numeral 1 represents the body member which is preferably made of rectangular cross section and is provided with a threaded end portion 2. An axial

opening 3 extends the entire length of the body member and has the edges of the upper end thereof slightly chamfered as indicated by numeral 4. One side of the body member near the upper end thereof has a notch 5 milled therein. The sides 6 and 7 are perforated for the reception of a pivot pin 8 to which is pivoted the U-shaped lever 9. The upper horizontal portion (Fig. 1) of the lever 9 has an opening 10 for the reception of the reduced portion 11 of the valve member 12. The opening 10 is larger than the part 11 so that the latter may move sidewise therein. The upper end of the valve member 12 is rounded slightly in the manner indicated at 13 and the lower end 14 is conical in shape so as to fit the chamfered upper end 4 of the opening 3. The free end of the lever 9 is bent downwardly as indicated by numeral 15 and serves as the weight which produces the force tending to hold the valve 12 against its seat. It will be noticed that the pivot pin 8 is very close to the opening 3 and since this pin forms the fulcrum of the lever 9 a small weight at the end of the lever will produce a considerable downward pressure on the valve and by this means it becomes unnecessary to make the part 15 very heavy. The entire lever 9 may be made of rectangular stock which is merely bent into the required shape the lower end of the part 16 is perforated for the reception of the pin 8 and curved as indicated by numeral 17 so as to make a pleasing appearance and so as to permit the lever to be turned into the position shown in Fig. 3 which permits all of the parts to be reached for cleaning. When the parts are in the position shown in Fig. 3 and the lever moved in the direction of the arrow the conical point 14 will travel in the arc of a circle whose center is the pivot pin 8 and enters the opening 3 whereby the same becomes sealed against the escape of steam until the pressure exceeds the maximum.

By means of the U-shaped lever and the valve member 12 secured to the horizontal portion thereof, I obtain new and improved results, in the first place the pivot 8 can be placed very near to the opening 3 and this permits me to dispense with springs or weights, in the second place the valve member by being loosely connected to the top horizontal portion of the lever so as to be transversely movable will seat better and form a tighter joint than it would if it were

shorter and deprived of its freedom of movement and then by the arrangement of the parts shown and described the valve can be thoroughly cleaned.

5 Having now described my invention what I claim as new is:

1. A safety valve comprising a body member having a longitudinal opening therein, a U-shaped lever consisting of a single piece
10 of metal having the end of one of its side members pivotally connected to said body member near the top thereof an opening in the base of said lever and a valve member
15 loosely mounted in said opening so as to be movable transversely of said lever and

adapted to seat in the end of the opening and seal the same.

2. A safety valve comprising a body member having a longitudinal opening therein, a U-shaped lever having one of its sides
20 shorter than the other, said shorter side being pivotally attached to the body member near the top thereof, an opening in the base of said lever, and a valve member loosely
25 mounted in said opening so as to be movable transversely of said lever and adapted to fit in the end of said opening to seal the same.

In testimony whereof I affix my signature.

JOSEPH H. JACOBS.