A. SECHRIST.

SAFETY VALVE.

APPLICATION FILED DEC. 6, 1918.

1,305,747.

Patented June 3, 1919.

Fig. 1.

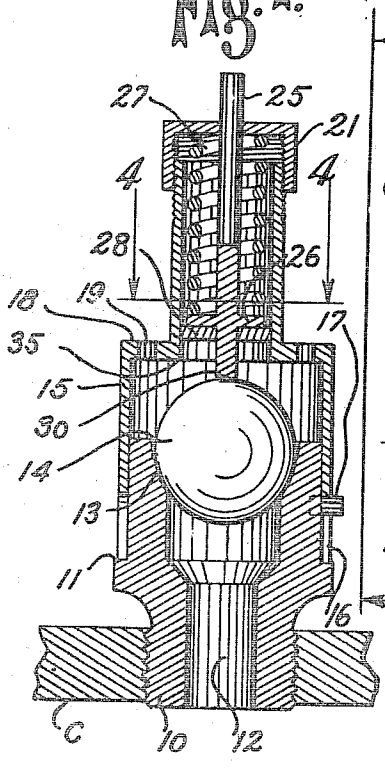


Fig. 2.

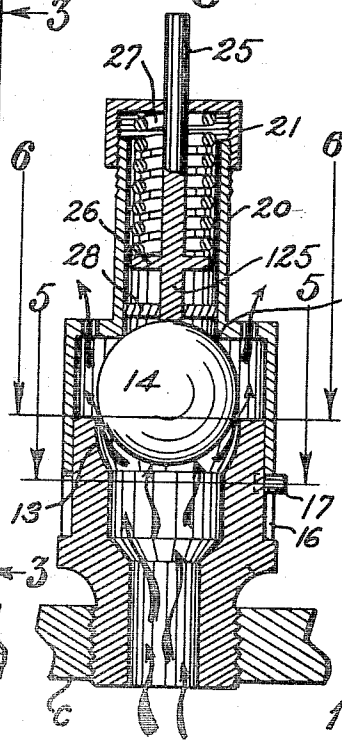
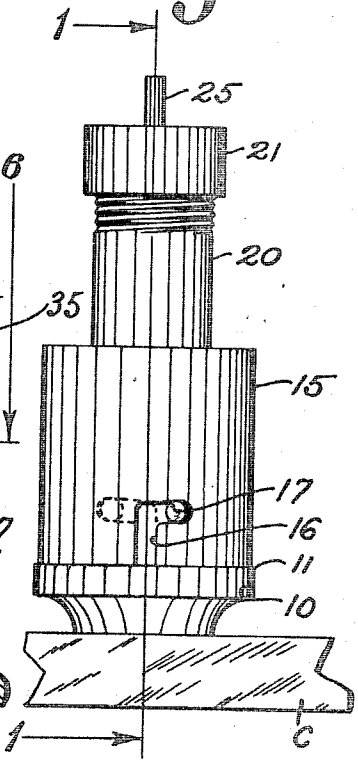


Fig. 3.



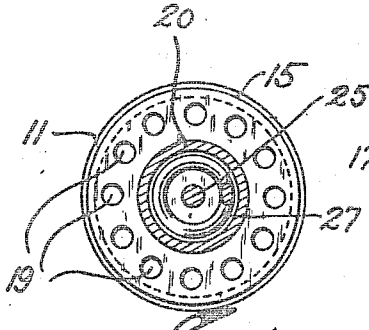


Fig. 4.

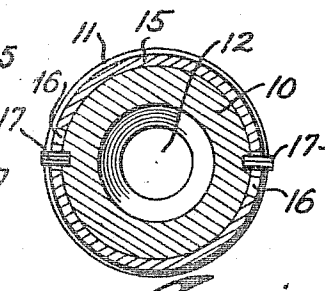


Fig. 5.

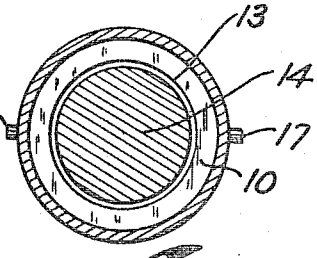


Fig. 6.

Inventor

Albert Sechrist.

By

Attorney.

UNITED STATES PATENT OFFICE.

ALBERT SECHRIST, OF DENVER, COLORADO, ASSIGNOR TO THE ALBERT SECHRIST MANUFACTURING COMPANY, OF DENVER, COLORADO, A CORPORATION OF COLORADO.

SAFETY-VALVE.

1,305,747. Specification of Letters Patent. Patented June 3, 1919.

Application filed December 6, 1918. Serial No. 265,510.

To all whom it may concern:

Be it known that I, ALBERT SECHRIST, a citizen of the United States, residing at No. 2233 Albion street, in 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 for pressure cookers. The object is to construct a valve which is comparatively simple and may be readily taken apart for cleaning, thus making it a sanitary valve.

Briefly, the invention comprises a member having a passage therethrough and a seat for a ball valve. Detachably connected with this seat member is a casing carrying a removable spring pressed plunger, the inner end of which bears against the ball and controls the pressure in the cooking vessel. The spring is so housed that steam or water escaping through the valve will not come into contact with it, the upper part of the casing being arranged to provide a seat for the ball valve when in its upper position, thus cutting off passage of steam or water above the valve and into the spring housing. Steam escapes through apertures in the casing at the side of said housing.

In the drawings:

Figure 1 is a vertical section taken on line 1—1 of Fig. 3, the ball valve being in lowermost position.

Fig. 2 is a vertical section showing the ball valve in elevated position, arrows indicating the passage of the steam.

Fig. 3 is an elevation indicated by line 3—3 of Fig. 1.

Fig. 4 is a horizontal section on line 4—4 of Fig. 1; and

Figs. 5 and 6 are horizontal sections on lines 5—5 and 6—6 of Fig. 2.

A fragment of a cooker top is represented by C, and into this the valve body 10 is threaded. The body is shouldered externally at 11 and has a passage 12, the upper part of which is expanded and constitutes a seat 13 for the valve ball 14. A casing 15 normally incloses the ball 14 and the body 15, resting upon the shoulder 11 and being removably held in position by means of bayonet slots 16 on the casing and pins 17 projecting from the body.

The casing is offset at 18 and provided with a row of apertures 19 for the escape of steam. Above the casing 15 the extension 20, having a cap 21, houses a plunger 25 which is provided with a spring seat or flange 26 between which and the cap 21 an expansion spring 27 is placed. The upper end of the plunger extends through the cap 21, while the lower end 125 thereof below flange 26 extends through a plate or washer 28 and rests upon the top of the ball 14. It has been found that for best results the lower extremity of the plunger should be cut square across as shown at 30. The plate or washer 28 is swaged into position and proper positioning of it may be employed for setting the tension of the spring 27. The tension of the spring may be regulated by means of the cap 21 which is threaded onto the housing 20; this provides a simple means for setting the valve to operate at any desired pressure.

The lower portion 125 of plunger 25 is made to fit plate or washer 28 rather snugly to protect the spring in its housing from escaping steam, and to more definitely accomplish this object the internal annular shoulder 35 is proportioned to provide a seat for the ball 14 when the latter is in elevated position as shown in Fig. 2. Under these conditions, when the valve pops and steam (and possibly water also) is expelled, the seating of the ball on the shoulder 35 and the fitting of the plunger in plate 28, effectually cut off the housing 20 from the escaping fluids.

Protecting the housing 20 tends to keep the valve sanitary. In addition casing 15 may be removed by twisting it to free the slots 16 of the pins 17, the ball 14 taken out, and the cap 21 removed to take out the spring 27 and the plunger 25. These parts may then be thoroughly cleaned and reassembled.

I claim:

1. A sanitary valve comprising a body member having a seat, a valve member in said seat, a casing to retain said member, and a second seat above the seat in the body member, the valve member being adapted to engage in said second seat when in its uppermost position and fit said seat, and a

spring pressed plunger above said valve member and engaging the top thereof.

2. A sanitary safety valve comprising a body member having a seat, a valve member in said seat, a removable casing to retain said valve member and having a second seat above the first seat for said valve, and spring-pressed means in said casing engaging said valve member.

3. A sanitary valve comprising a body member having a seat, a valve member in said seat, a casing to retain said member, said casing having steam outlets and a second seat above the seat in said body member, the valve member being adapted to engage in said second seat when in its uppermost position and fit said second seat, a housing above said second seat, a plunger in said housing and engaging the top of said valve member, a spring in the housing forcing said plunger into engagement with the valve member.

4. A sanitary valve comprising a body member having a seat, a valve member in said seat, a casing to retain said member, a housing on said casing above said valve member, an apertured partition adjacent the bottom of said housing, a plunger extending from said housing through said member, slidably fitting in the same and engaging the top of the valve member, and a spring in the housing forcing said plunger into engagement with the valve member.

5. A sanitary valve comprising a body member having a seat, a valve member in said seat, a casing to retain said member, a housing on said casing above said valve member, an apertured partition adjacent the bottom of said housing, a plunger extending from said housing through said member, slidably fitting in the same and engaging the top of the valve member, and a second seat adjacent the bottom of said housing, below said partition and above said valve member, in which the valve member is adapted to engage and close when said valve member is in its uppermost position.

In testimony whereof I affix my signature.

ALBERT SECHRIST.