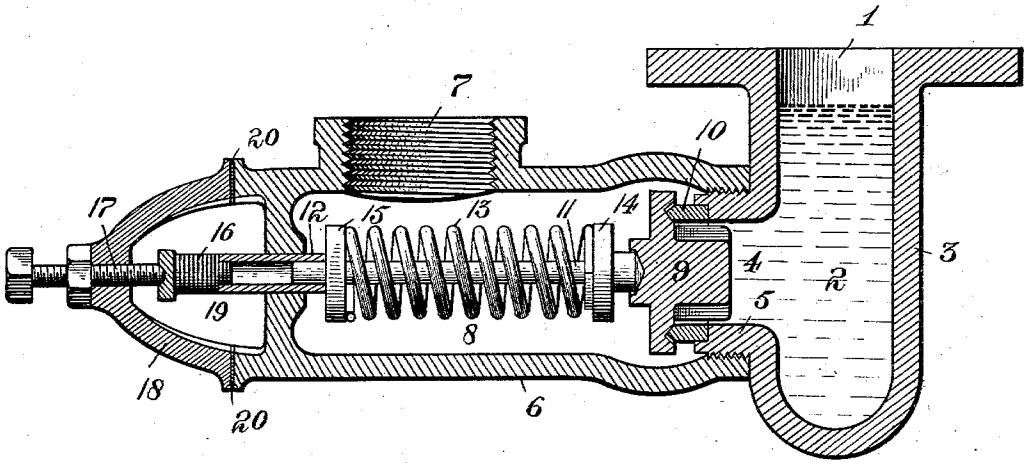
No. 752,099. PATENTED FEB. 16, 1904.

C. C. PALMER.

SAFETY VALVE.

APPLICATION FILED NOV. 3, 1902.

NO MODEL.



Witnesses.

J. B. McGirr.

Walter A. Fanning

Inventor.

Cassius C. Palmer

by Gifford & Bull Attys.

No. 752,099. Patented February 16, 1904.

UNITED STATES PATENT OFFICE.

CASSIUS CLAY PALMER, OF NEW YORK, N. Y., ASSIGNOR TO RAILWAY AND STATIONARY REFRIGERATING COMPANY, A CORPORATION OF DELAWARE.

SAFETY-VALVE.

SPECIFICATION forming part of Letters Patent No. 752,099, dated February 16, 1904.

Application filed November 3, 1902. Serial No. 129,806. (No model.)

To all whom it may concern:

Be it known that I, CASSIUS CLAY PALMER, a citizen of the United States, and a resident of New York city, borough of Manhattan, in the county and State of New York, have invented a new and useful Improvement in Safety-Valves, of which the following is a specification.

This invention constitutes an improvement upon the valve described in my Patent No. 689,512, dated December 24, 1901, in which patent the valve was seated upon a ring composed wholly or in part of fusible material, by the fusion of which under abnormal temperature the escape of pressure was permitted.

In the accompanying drawing I have shown in sectional elevation a valve containing my present invention.

Pressure-passage 1 extends into a pocket 2 in the casting 3, from one side of which extends the passage 4 through the nipple 5, upon which is screwed the casing 6, from the top of which extends the exhaust-passage 7. The casing 6 contains the chamber 4, leading from the passage 4 to the exhaust-passage 7.

Within the chamber 4 are situated the valve 9, whereby the passage 4 is normally closed, and the mechanism whereby said valve is normally held. This valve 9 is seated upon a ring 10, secured to the end of the nipple 5. The stem 11, which bears against the rear of the valve 9, is inserted at its rear end in a guiding-sleeve 12. The spiral spring 13 is interposed between the disk 14, fixed to the head of the stem and the disk 15, through which the tail of the stem is free to move and which rests against the end of the sleeve 12. Thus so long as the sleeve 12 maintains its normal position the valve 9 will be held to its seat by the yielding pressure of the spring 13.

The sleeve 12 extends through the head of the casing 6 with freedom of longitudinal movement therethrough, and against its outer end bears a plug 16, of fusible material, adjustably held by a set-screw 17, mounted in a yoke 18, which fits onto the head of the casing 6. This yoke is provided with lateral openings 19, so that the fusible plug 16 is substantially open to the influence of surrounding heat. The joint between the yoke 18 and the casing 6 at 20 may be made of fusible solder, which is also exposed to surrounding heat.

The pocket 2 is filled, as indicated in the drawing, with a fluid which seals the passage 4 and which may consist of glycerin.

This valve is superior to that shown in my said Patent No. 689,512, for the reason, among others, that the fusible material (by the fusion of which the valve is permitted to open) instead of being located, as in that patent, within the chamber, and therefore removed from the direct influence of surrounding heat, is located substantially outside of the valve-chamber, and therefore in a position where it may remain exposed to the direct influence of the heat, which it is desired should effect the opening of the valve with the least possible delay. This structure also possesses advantages over the structure of said Patent No. 689,512, in that the downwardly-extending pocket 3, from one side of which the valved passage extends, constitutes an improved receptacle for the fluid seal on the pressure side of said valve.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In combination, a downwardly-extending pocket 3 adapted for attachment to a passage for fluid under pressure, a liquid seal in said pocket, a passage 4 leading from one side of said pocket, a valve normally closing said passage and a fusible member and sleeve coöperating with said valve to close said passage.

2. In combination, a downwardly-extending pocket 3 adapted for attachment to a passage for fluid under pressure, a passage 4 leading from one side of said pocket, a valve normally

closing said passage and a fusible member and sleeve coöperating with said valve to close said passage.

3. In combination with the valve-cage 6, the valve 9, the spring 13, the guiding-sleeve 12 and the fusible member 16, substantially as described.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

CASSIUS CLAY PALMER.

Witnesses:

WALTER A. PAULING,

CHARLES J. RATHJEN.