

J. S. Speakman.

Steam Heater.

N^o 58,496.

Patented Oct. 2, 1866.

Fig. 1.

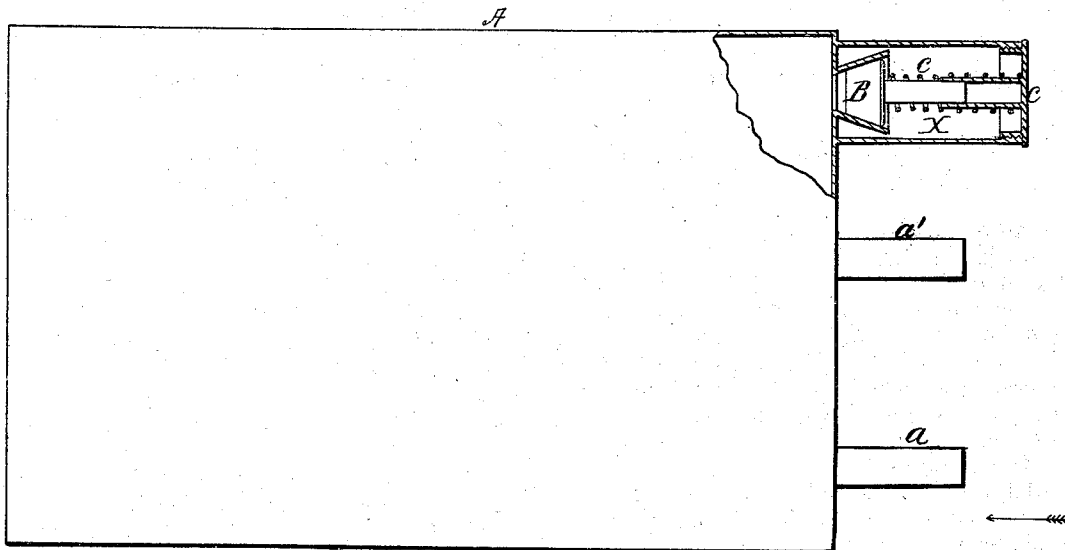
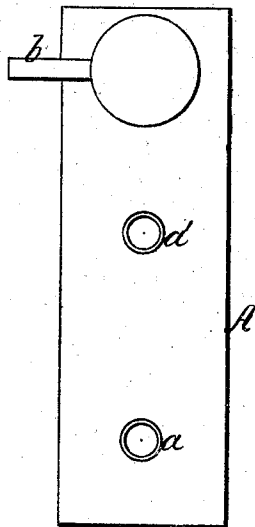


Fig. 2.



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UNITED STATES PATENT OFFICE

T. S. SPEAKMAN, OF PHILADELPHIA, PENNSYLVANIA.

SAFETY-VALVES IN WATER-BACKS FOR RANGES.

Specification forming part of Letters Patent No. 58,496, dated October 2, 1866.

To all whom it may concern:

Be it known that I, T. S. SPEAKMAN, of Camden, New Jersey, have invented an Improvement in Water-Backs for Ranges, &c.; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists of a water-back to which a valve is applied, substantially as described hereinafter, so that should the supply-pipe become obstructed the valve will rise and allow the water or steam to escape from the water-back before the pressure within the latter or in the hot-water reservoir becomes so great as to rupture the same.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a front elevation, partly in section, of the water-back of a range with my improvement, and Fig. 2 an end view, looking in the direction of the arrow, Fig. 1.

A is an oblong cast-iron box or case, which is similar to any of the usual water-backs of cooking-ranges, and with this case communicate two pipes, *a* and *a'*, the former admitting cold water to the case, and the latter communicating with the reservoir into which the heated water flows.

At one end of the case is a chamber, X, with which communicates a pipe, *b*, and to an opening which forms a communication between

the chamber and the interior of the case A is fitted a conical valve, B, which is raised in its seat by a spring, *c*, the latter being confined between the top of the valve and a screw-cap, C.

It is well known that in the ordinary water-backs, if the water in the supply-pipe *a* is frozen, or the pipe becomes otherwise obstructed, and that in the reservoir is not withdrawn, the pressure in a short time becomes so great as to rupture either the reservoir or the water-back, the explosions resulting from this cause sometimes being attended with loss of life and much damage to property.

In the improved water-back above described the valve B yields when the pressure within the case becomes excessive, and permits the water or steam to escape into the chamber X, from which it is conducted by the pipe *b* into any suitable receptacle.

The degree of pressure at which the valve B shall yield can be regulated by means of the screw-cap C, by turning which the spring *c* can be compressed to any desired extent.

I claim as my invention and desire to secure by Letters Patent—

The combination, substantially as described, of the valve B with a water-back, A, for the purpose specified.

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

THOMAS S. SPEAKMAN.

Witnesses:

CHARLES E. FOSTER,
JOHN WHITE.