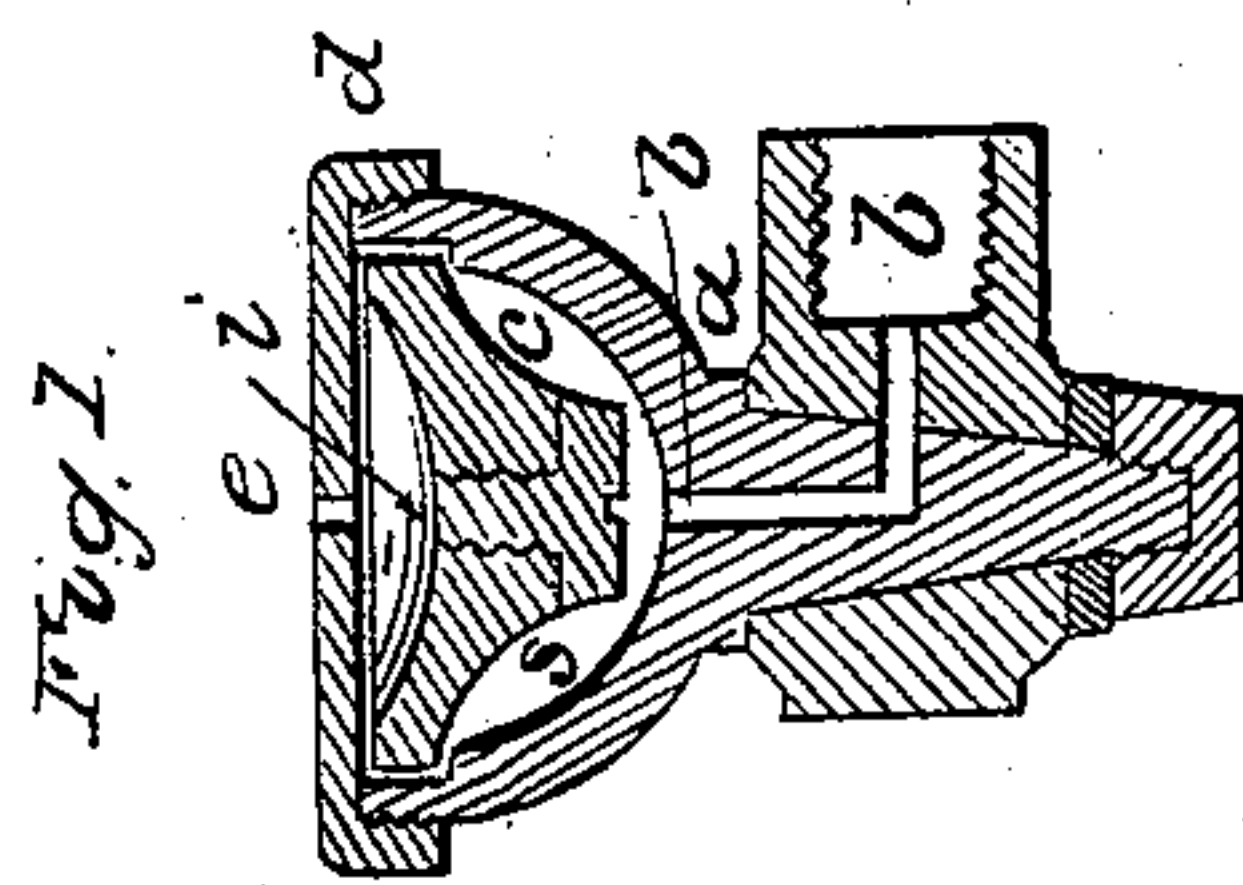
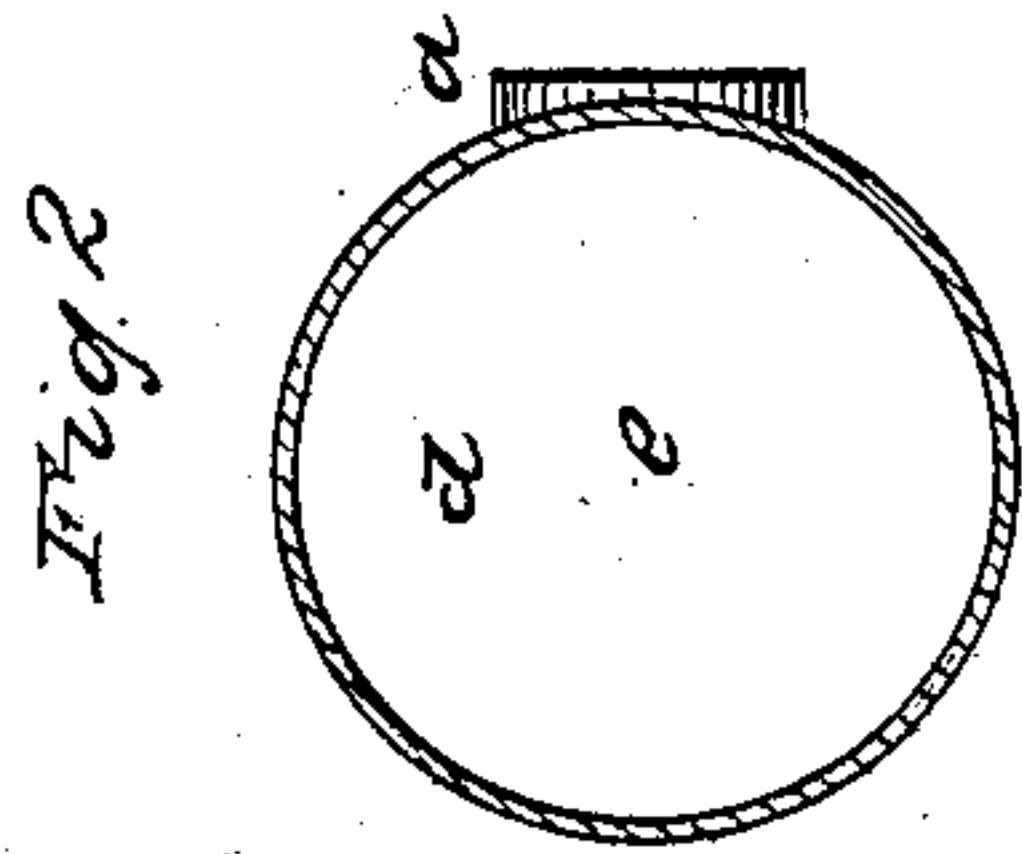
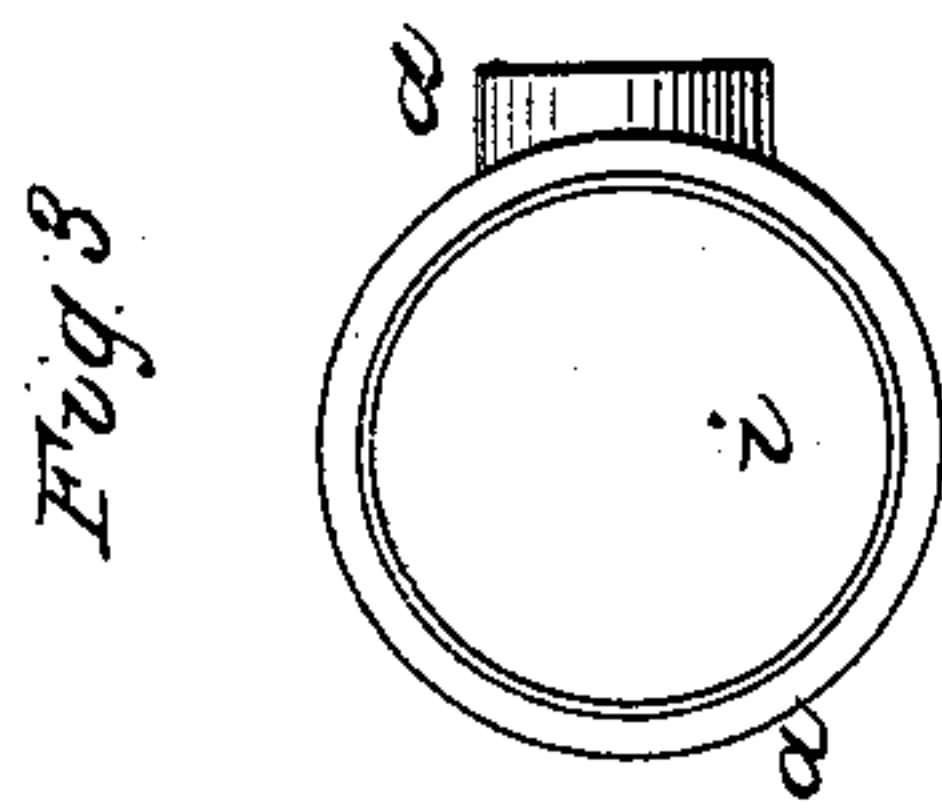


S. J. GOLD.
Steam Heater.

No. 14,312.

Patented Feb. 26, 1856.



UNITED STATES PATENT OFFICE.

STEPHN. J. GOLD, OF NEW HAVEN, CONNECTICUT.

AIR-COCK FOR STEAM-HEATING APPARATUS.

Specification of Letters Patent No. 14,312, dated February 26, 1856.

To all whom it may concern:

Be it known that I, STEPHEN J. GOLD, of New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Apparatus for Warming Buildings by Steam; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, forming part of this specification, in which—

Figure 1 represents a longitudinal section of the cock regulating the admission of air to the radiators, and the discharge of air therefrom, the improvement here considered being confined to that part. Fig. 2 is a head view of the cock with cap in position. Fig. 3 is a similar view with cap removed.

Similar characters of reference in the several figures denote the same part.

The invention here considered is designed to be used in connection with my apparatus for warming buildings by steam, secured by Letters Patent dated October 3, 1854, and January 29th, 1856.

It consists in automatically opening and closing the cocks, regulating the admission of air to, and discharge of air from the radiators, the action of which cocks when operated by hand is specified in my patent of October 3d, 1854.

The following description and reference to the drawing, will fully set forth this invention, and its connection with the parts of the apparatus previously secured by Letters Patent:

a, main body of cock, screwing upon the radiator as described in patent of Oct. 3d, 1854, and discharging air through the channel *b*. The upper portion of the cock is bell shaped, and in the cavity thereof is a cup *c* fitting loosely as shown in the drawing, so that the air will pass around this cup and find its way out the perforation *e* in the

cap *d*. *c*, cup, formed with a flexible metallic top piece *i*, and closed by a screw *s*, so that the contents of the cup are thus hermetically sealed. This cup is made to fit loosely in the cavity of the cock, as shown in the drawing. The cup is filled with alcohol or other fluid which vaporizes at a low temperature on which the automatic action of the cock depends. *d*, cap, screwed upon the cock so as to be steam tight.

The operation of the invention is as follows: The channel *b* being open for the passage of air from the radiator, as described in former patent above referred to, the radiator will fill with steam and the air escape from perforation *e*. When the radiator is entirely full, steam will issue from channel *b*, and coming in contact with the bottom of cup *c* will at once vaporize the fluid contained therein causing it by expansion to lift the center of the flexible cover *i* and force it against the inner face of the cap *d*, so as entirely to close the perforation *e* and prevent the escape of steam. The radiator is thus permitted to fill with steam, and the air opening automatically closed. The cooling of the radiator reopens the cock.

The advantage of this improvement is, that all attention to the filling of the radiator is dispensed with.

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

The automatic regulation of the air cock by the secondary action of a fluid which vaporizes at a low temperature, substantially as set forth.

In testimony whereof, I have hereunto signed my name before two subscribing witnesses.

STEPHEN J. GOLD.

Witnesses:

GEO. PATTEN,

JOHN S. HOLLINGSHEAD.