

(No Model.)

2 Sheets—Sheet 1.

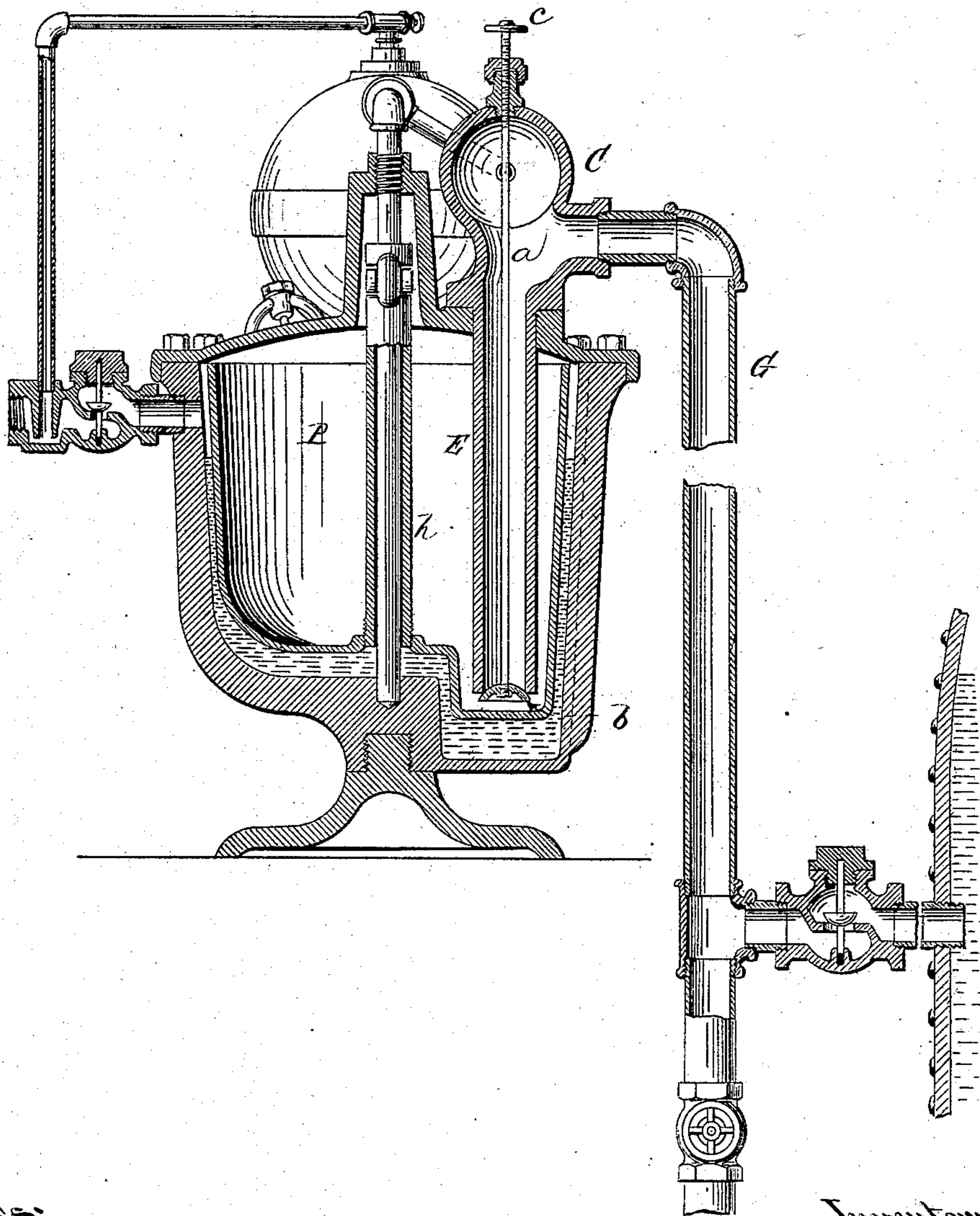
J. H. BLESSING.

DRAIN AND RETURNING STEAM TRAP.

No. 278,390.

Patented May 29, 1883.

Figure 1.



Witnesses:
Anthony Greff
William A. P. Lock

Inventor
James H. Blessing,
By his Attorney
E. M. Dicker

(No Model.)

2 Sheets—Sheet 2.

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Figure 2.

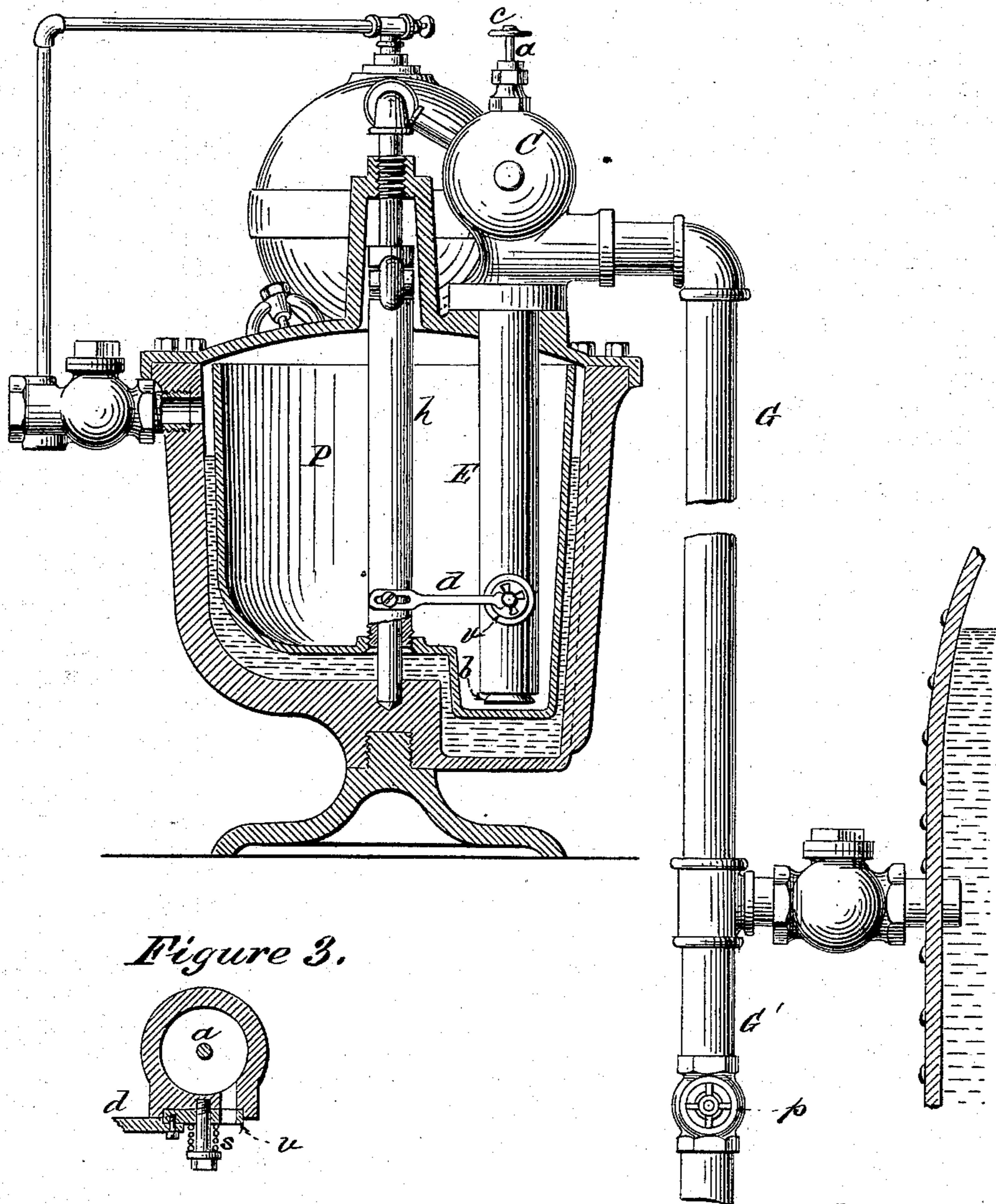


Figure 3.

Witnesses:
Anthony Gref
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UNITED STATES PATENT OFFICE.

JAMES H. BLESSING, OF ALBANY, NEW YORK.

DRAIN AND RETURNING STEAM TRAP.

SPECIFICATION forming part of Letters Patent No. 278,390, dated May 29, 1883.

Application filed April 6, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. BLESSING, of Albany, county of Albany, and State of New York, have invented a new and useful Improvement in Drain and Returning Steam Traps, of which the following is a full, true, and exact description, reference being had to the accompanying drawings.

Two kinds of traps have hitherto been known as connected with the ends of coils used for heating buildings and other purposes—one known as a “drain-trap,” by means of which, when water arrived at the end of the system, it was allowed to escape to the atmosphere, but when steam followed it was prevented from escaping, the other kind known as “automatic return steam traps,” for which I have obtained numerous patents in the United States, by means of which the water returning from a closed system of coils is automatically returned to a boiler, under pressure, by opening an equalizing-valve connecting with the steam in the boiler.

My improvement relates to a combined return steam trap and drain trap, by means of which the same apparatus can be used at will to accomplish the results hitherto accomplished by these two different contrivances.

My invention will be readily understood from the accompanying drawings, in which Figures 1 and 2 represent sections through my apparatus, Fig. 1 being taken on a line a little farther back from the eye than the section shown in Fig. 2. Fig. 3 represents a detailed view of the register-valve shown at Fig. 2.

The apparatus shown in these drawings was patented to me on the 5th day of December, 1882, No. 268,384, with the exception of the additional contrivances enabling the apparatus to be used at will as a drain-trap. I shall therefore only describe these additional contrivances, the apparatus being otherwise made as described in my previous patent.

In pipe E, which descends into the tank T, is placed a screw-stem, *a*. To the bottom of this stem the valve *b* is attached. By turning the handle *c* the valve *b* can be opened and closed. Attached to the tube *h*, forming part of the bucket P, is the lever *d*. This lever is slotted at the end and connected by a pin

to the tube *h*. To the other end of this lever *d* is attached the register-valve *v*. The detail of this is shown in Fig. 3. The register-valve is closed against its seat by a spring, *s*. The pipe G, which, in the ordinary operation of the contrivance, passes the return-water to the boiler, is continued, as shown at G'; which pipe is provided with a valve, *p*. In the ordinary operation of the apparatus the valve *p* is closed and the valve *b* is opened. The contrivance will then operate, as detailed in my previous patent, as an automatic return steam trap. In practice this valve may be lower, if desired.

When it is intended that the apparatus shall operate as a drain-trap the valve *b* is closed and the valve *p* is opened. In this condition of the apparatus, whenever the bucket P is floated the valve *v* is closed, and consequently no escape through the pipe G' to the sewer is possible; but whenever the apparatus becomes filled with water and the bucket P sinks the valve *v* is opened and the water is forced upward through the pipe E, the pipe G, and the pipe G' to the sewer.

The pipe G' may connect, as described, with the sewer, or may connect with any suitable water-receptacle of less pressure than the coils, thereby allowing the water to be forced into said receptacle.

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

1. The combination of an automatic return-trap and an automatic drain-trap in one apparatus, whereby the apparatus may be used either for feeding the water of condensation into the boiler or discharging it into a suitable receptacle, substantially as described.

2. An automatic steam-trap provided with a valve connected to the delivery from the trap and operated by the motion of the trap, and an independent pipe connected to said return-pipe from the steam-trap to the boiler and delivering to the sewer or a water-receptacle, substantially as described.

JAMES H. BLESSING.

Witnesses:

ANTHONY GREF,
WM. A. POLLOCK.