(No Model.)

G. H. BURLEY.

RADIATOR LOOP.

No. 468,640. Patented Feb. 9, 1892.

Fig: 1.

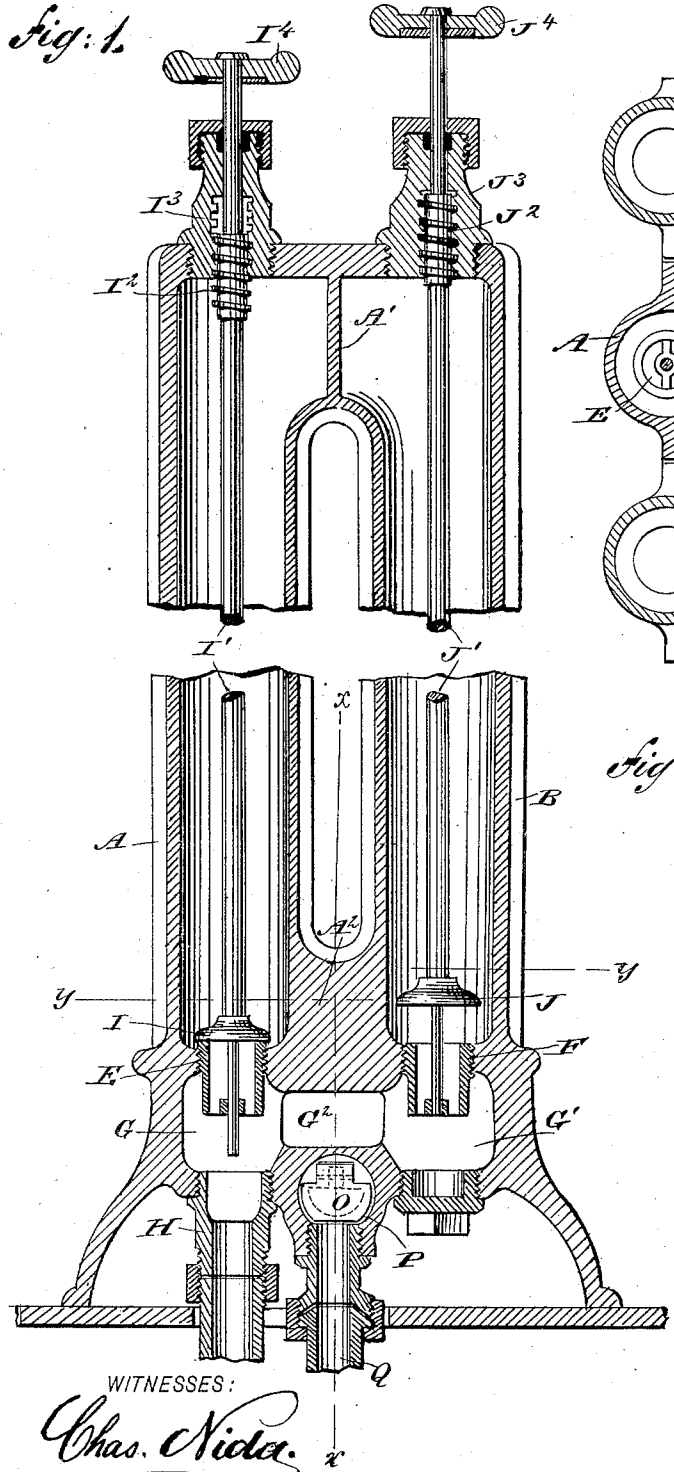


Fig: 3.

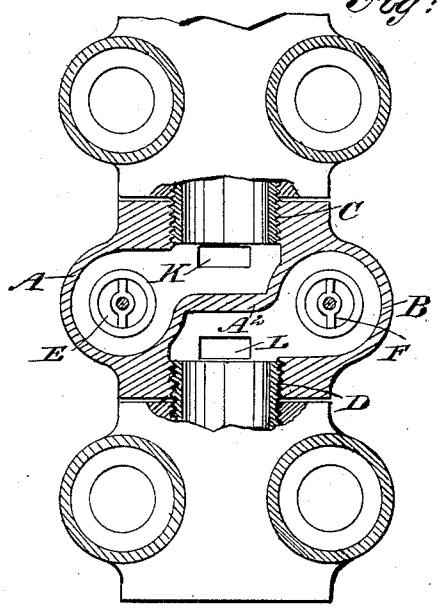
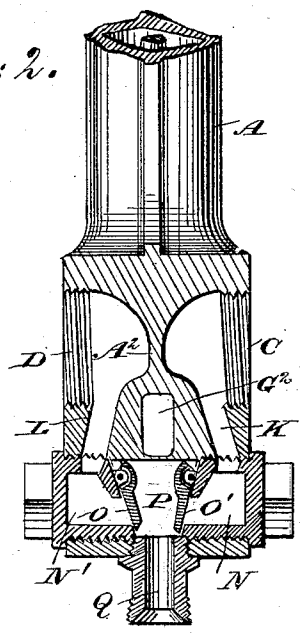


Fig: 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE H. BURLEY, OF TYRONE, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO JOSHUA BURLEY, OF SAME PLACE.

RADIATOR-LOOP.

SPECIFICATION forming part of Letters Patent No. 468,640, dated February 9, 1892.

Application filed February 5, 1891. Serial No. 380,310. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. BURLEY, of Tyrone, in the county of Blair and State of Pennsylvania, have invented a new and Improved Radiator-Loop, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved radiator-loop designed to be used in any loop-radiator for conveniently controlling the steam and water of condensation, so that the entire radiator or only part of the same is used, as desired, to regulate the heat of the room.

The invention consists of certain parts and details and combinations of the same, as will be hereinafter fully described, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of the improvement. Fig. 2 is a transverse section of the same on the line *x x* in Fig. 1, and Fig. 3 is a sectional plan view of the same on the line *y y* in Fig. 1.

The improved radiator-loop is provided with two members A and B, separated from each other on the top and bottom by partitions A′ and A^2, respectively, as is plainly shown in the drawings. The lower ends of the members A and B are provided at opposite sides with inlet-openings C and D, respectively, connected in the usual manner with the next loops of the radiator. In the bottom of the members A and B are held valve-seats E and F, leading to chambers G and G′, connected with each other by a passage G^2, and of which the chamber G is in communication with the steam-inlet or supply-pipe H of the radiator.

On top of the valve-seats E and F are adapted to be seated the valves I and J, respectively, secured on the valve-stems I′ and J′, respectively, extending through the members A and B and provided near their upper ends with screw-threads I^2 and J^2, screwing in guides I^3 and J^3, respectively, secured in the top of the said members. The outer ends of the valve-stems I′ and J′ are provided with hand-wheels I^4 and J^4, respectively, for conveniently manipulating the valves I and J.

From the inlet-openings C and D extend downward passages K and L, leading to plugs N and N′, screwing in the lower part of the loop and carrying at their inner open ends hinged valves O and O′, respectively, opening inwardly into a chamber P in communication with the water-return pipe Q. The inner ends of the plugs N and N′ are slightly inclined, so that the valves O and O′ seat themselves thereon. (See Fig. 2.)

The operation is as follows: The loop is preferably employed in any desired loop-radiator and arranged at or near the middle, the openings C and D being connected with adjacent loops, as shown in Fig. 3. Now when it is desired to use the entire radiator for heating purposes, both valves I and J are unseated from their valve-seats E and F, respectively, so that the steam has free circulation through the several loops of the radiator, the water of condensation passing through the passages K and L into the plugs N and N′, past the valves O and O′ into the return water-pipe Q. The steam entering the pipe H can pass from the chamber G through the passage G^2 into the chamber G′ and from the latter through the open valve-seat F into the member B and through the opening D into the next loop. The steam can also pass through the valve-seat E and the open valve I into the member A and through the opening C to the adjacent loop. Now when it is desired to cut off one-half of the radiator, the operator shuts one of the valves I or J, so that steam communication with the next adjacent loop is cut off thereby, steam being only retained in one-half of the loops of the radiator.

By opening or closing the valves I or J the steam can be sent to either half of the radiator on the right or left of the improved loop. Then the heat in the room can be conveniently regulated by either opening one of the valves I or J, or both, or closing the same, as desired.

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

1. In a radiator-loop, the combination, with two members separated from each other on

top and bottom and having inlet-openings on opposite sides, of valve-seats arranged in the lower ends of the said legs, valves adapted to be seated on the said valve-seats, plugs held in the lower ends of the said loop and in communication with the outlet-openings and discharging into a common pipe, and valves arranged on the inner ends of the said plugs, substantially as shown and described.

2. A radiator-loop comprising two members separated from each other at the top and bottom and provided at their lower ends with valve-seats leading to chambers connected with the steam-supply pipe, valves adapted to be seated on the said valve-seats, plugs screwing in the lower part of the said loop discharging into a common pipe and in communication with the lower ends of the said members and with the openings connected with adjacent radiator-loops, and valves arranged on the inner end of the said plugs, substantially as shown and described.

3. A radiator-loop comprising two members separated from each other at the top and bottom and provided at their lower ends with valve-seats leading to chambers connected with the steam-supply pipe, valves adapted to be seated on the said valve-seats, plugs screwing in the lower part of the said loop and in communication with the lower ends of the said members and with the openings connected with adjacent radiator-loops, self-closing valves arranged on the inner ends of the said plugs, and a water-return pipe connected with the said valves, substantially as shown and described.

GEORGE H. BURLEY.

Witnesses:
THOS. F. LUCKART,
J. JOSHUA BURLEY.