

United States Patent Office.

J. A. MARVIN, OF RED WING, MINNESOTA.

Letters Patent No. 71,399, dated November 26, 1867.

HEATERS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, J. A. MARVIN, of Red Wing, Goodhue county, Minnesota, have invented a new and useful Improvement in Heaters; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

Figure 1 is a sectional elevation of the stove with the drum attached, it being through the line *y y* of fig. 3.

Figure 2 is a horizontal section through the line *x x* of fig. 1.

Figure 3 is a top view.

Similar letters of reference indicate corresponding parts.

A represents the stove proper. B is the door for the introduction of fuel. C is the stove-drum. D is the casing or radiator, which is placed around the drum and the flues which connect the drum with the stove. E is the evaporating-vessel. F is an aperture through the drum, in the top of which E is placed. The smoke and heated gases are conducted into the drum by the flues *g*, from which they pass into the smoke-flue H, through the short pipe J direct, or are made to descend through a diving-flue, J', seen in fig. 2, and are conducted into the smoke-pipe H by the short pipe *i*, the direction of the smoke being governed by a damper in the pipe H at *k*. The case or radiator D rests on the top of the stove-plate at *l*, the lower end of which is cut and perforated for the purpose of admitting air from the surrounding air in the room. *m* is a tube, which is connected with the case D at its upper end, as seen in the drawing, the other end of which may extend through the floor and to the outside of the house for the purpose of conducting a current of fresh air within the casing. The air which enters the casing, and is warmed by the flues and drum, is discharged through the pipes *n n*, and through a register, seen at *o*, in the centre of the case. The air which is discharged through the register enters the room; that which passes through the pipes *n n*, or either of them, may also be discharged into the room where this stove is, or be conducted by air-pipes to other rooms in the house, as may be desired. All the air which passes from the casing is moistened by the vapor which rises from the water in the evaporating-vessel E, and the direction of the air is controlled by dampers in the pipes *n n*, and by the register at *o*.

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

1. The evaporating-vessel E, suspended in the central opening F of the drum C by means of a rod from the top of the drum, said rod bearing the register, as herein described for the purpose specified.
2. The arrangement of the annular drum C, supported within the radiator D by the pipes *g*, said radiator resting upon the stove A, diving-flue J, pipe H, tube *m*, evaporating-vessel E, register O, and hot-air pipes *n*, as herein shown and described.

The above specification of my invention signed by me, this 22d day of April, 1867.

J. A. MARVIN.

Witnesses:

FRANK IVES,

J. B. ALEXANDER.