H. J. RUTTAN.

Heating-Stoves.

No. 131,466. Patented Sep. 17, 1872.

Fig. 1.

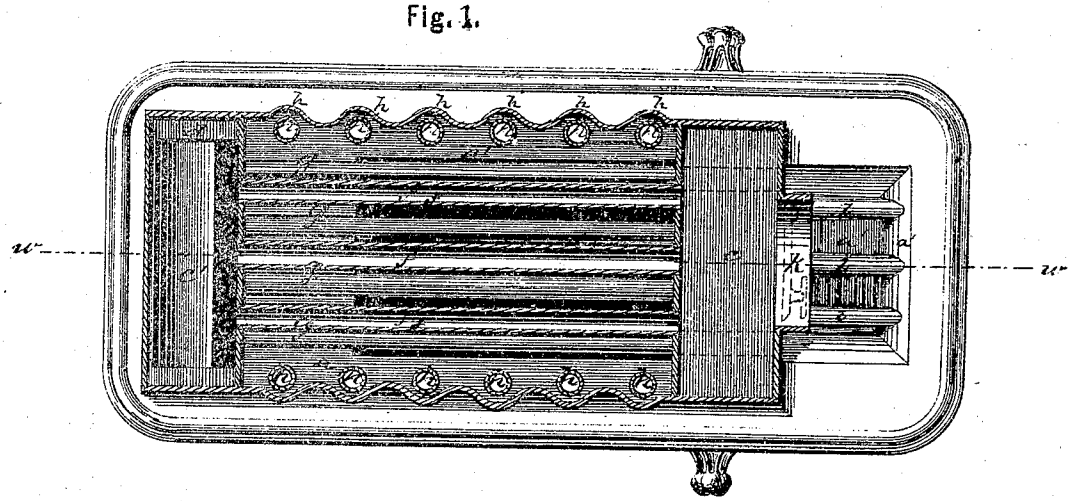
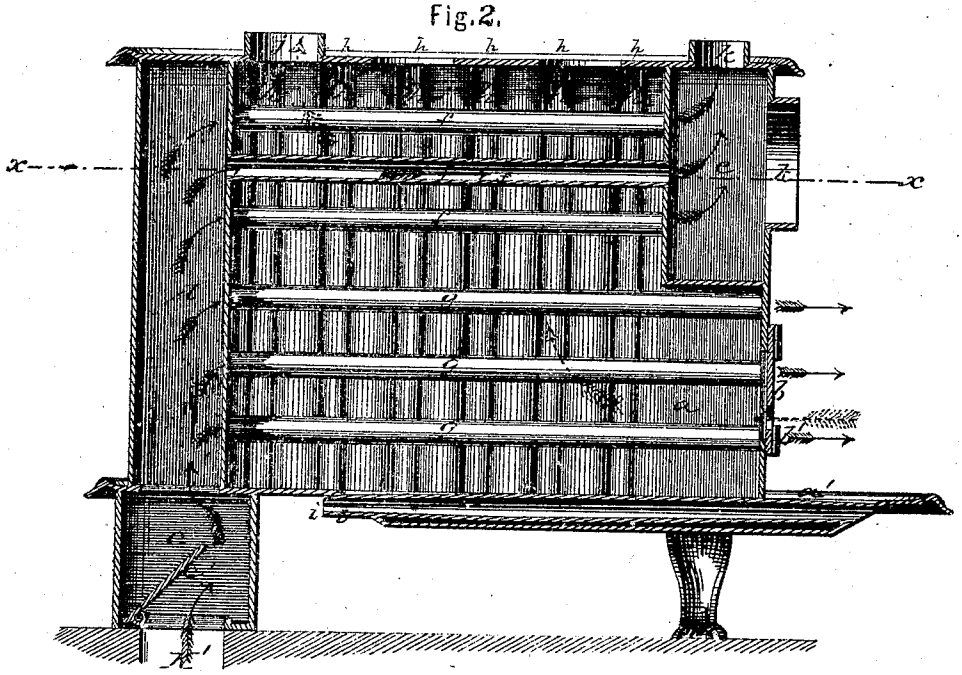


Fig. 2.



WITNESSES.

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UNITED STATES PATENT OFFICE.

HENRY JONES RUTTAN, OF COBOURG, CANADA.

IMPROVEMENT IN HEATING-STOVES.

Specification forming part of Letters Patent No. **131,466**, dated September 17, 1872.

To all whom it may concern:

Be it known that I, HENRY JONES RUTTAN, of Cobourg, in the county of Northumberland, in the Province of Ontario, Dominion of Canada, have invented an Improved Hot-Air Stove or Furnace, of which the following is a specification:

This invention relates primarily to my improved system of warming and ventilating buildings, but is not confined thereto. The invention consists of a superior stove or furnace for heating air, having a pedestal through which to receive external pure air from a flue, and a peculiar arrangement of heating chambers and tubes, as hereinafter set forth.

Figure 1 is a horizontal section of a wood-stove, illustrating my invention. Fig. 2 is a vertical longitudinal section of the same. The lines *x* and *w* indicate, respectively, the planes of Figs. 1 and 2.

My improved stove or furnace may be of square or "box" form, and adapted for burning long wood, as represented; or it may be adapted for other fuel, and its proportions and external shape varied.

a represents a fire-chamber, with ash-pit *a'*; *b*, the door of the same, with draft-register *b'*; *c*, a pedestal or base to receive the cold air, and furnished with a valve, *c'*, for regulating the flow; *d e*, air-chambers within the stove, the former leading from the base *c*; *f f*, tubes extending through the fire-space and connecting said air-chambers; *g g*, tubes extending from air-chamber *d* to the front of the stove; *h h*, tubes extending vertically through the stove at its side; *i i*, tubes extending longitudinally through the ash-pit *a*; *j*, the smoke-discharge collar; and *k k*, apertures for the discharge of the heated air.

This stove may be of cast-iron or cast-iron and gas-pipe. The object is to absorb, as nearly as possible, all the heat for warming air, and this without "burning" it. The air may be conducted to the base or pedestal *c*, a flue or duct, K', leading from without the building, as indicated in Fig. 2. This stove or furnace would be placed in the lower horizontal air duct or chamber in my system of warming and ventilating, before referred to, and discharge the heated air into the same, to be conducted thence to the several compartments by vertical flues. It may, however, be used independently for heating one or more rooms.

I claim—

The heating-stove herein described, constructed with pedestal *c*, air-chambers *d e*, and conducting-pipes *f g h*, flanking and surmounting the fuel-chamber, all arranged to operate substantially as set forth.

HENRY JONES RUTTAN.

Witnesses:

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