

Heating-Drums.

No. 141,621.

Patented August 12, 1873.

Fig. 1.

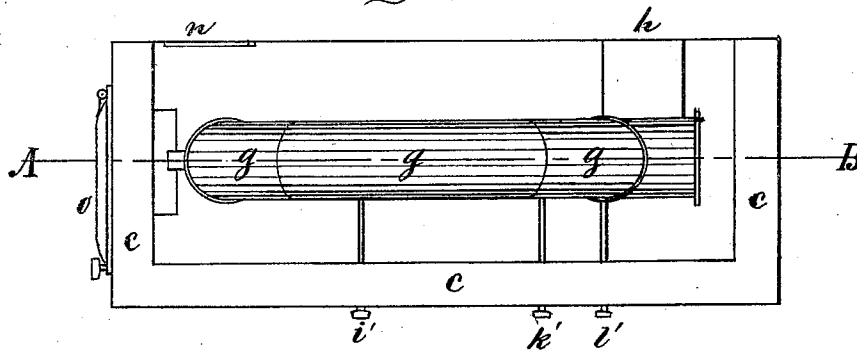
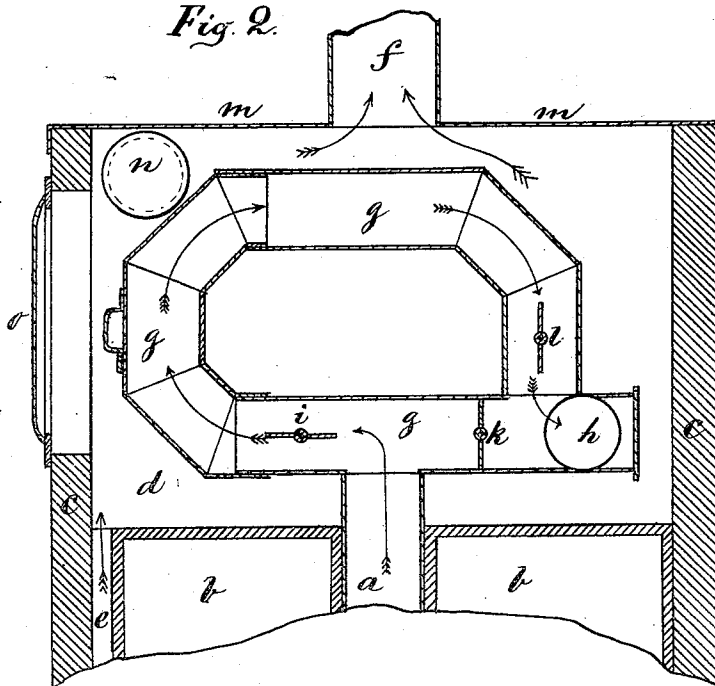


Fig. 2.



Witnesses:

John R. Heard.
Horace M. Sprout

Inventor:

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN HEATING-DRUMS.

Specification forming part of Letters Patent No. 141,621, dated August 12, 1873; application filed May 3, 1873.

To all whom it may concern:

Be it known that I, JOSEPH E. BARTLETT, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Heating Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawing, which forms part of this specification.

My invention relates to improvements in heating apparatus, consisting in the employment of a bent pipe leading from a range or cooking-stove, or other heater, through which the heated products from the fire-place pass, previous to going out through the chimney, thus utilizing the heat that otherwise is wasted. The said bent pipe is inclosed in a suitable air-chamber, having an inlet for the cold air that is to be heated and an outlet for the heated air to the rooms that are to be warmed. The bent pipe is provided with three dampers operated by suitable handles, whereby the heated products from the fire-place can be led through the bent pipe when it is desired to heat the rooms, and be led directly to the chimney when the rooms are not needed to be warmed, as will now be more fully shown and described.

On the drawing, Figure 1 represents a ground plan, and Fig. 2 represents a longitudinal section over the line A B, shown on Fig. 1.

Similar letters refer to similar parts wherever they occur on the drawing.

a is the flue leading from the fire-place of a range or other heater. *b b* represent ovens, usual on a stationary range; and *c c* represent the brick-walls forming an extension of the masonry of the range. *d* represents the hot-air chamber, provided with an inlet, *e*, for the cold air, and an outlet, *f*, for the air that is heated. In the hot-air chamber *d* is placed a bent pipe, *g g g*, in open communication with the flue *a*, as shown. *h* is the chimney, through which the heated products pass after going through the bent pipes *g g g*. Dampers *i*, *k*, and *l* are placed in the bent pipe *g* for the purpose of regulating the direction of the heated products that arise from the flue *a*.

The dampers *i*, *k*, and *l* are operated by means of suitable handles *i'*, *k'*, and *l'* projecting through the masonry, as shown in Fig. 1.

When the dampers *i*, *k*, and *l* are placed in a position, as shown in Fig. 2, the hot gases from the flue *a* pass through the bent pipes *g g g* in a manner and direction as indicated by the arrows on the said figure, and finally pass out through the chimney *h*. The air that is then let into the chamber *d* is heated from the hot pipes *g g g*, and rises up through the outlet-pipe *f*, from which it may be conducted to such rooms or part of a building that is to be heated. But when it is not desired to heat any additional rooms, as, for instance, during the warm season of the year, I close the dampers *i* and *l*, and open the damper *k*, when the hot gases from the flue *a* pass directly to the chimney *h* without passing through the bent pipes *g g g*.

The hot-air chamber *d* is covered on the top with a suitable cover, *m*, as shown. *n* is an opening from the hot-air chamber to a secondary flue or chimney, to which the heated air may be directly conducted when it is not desired to carry it to any room for heating purposes. The opening *n* is covered with a suitable cover when it is desired to convey the hot air from the chamber *d* to the pipe *f* and the rooms that are to be heated. A door, *o*, is made in the wall *c*, through which access may be had to the pipes *g g g* for the purpose of cleaning them, which may easily be done after removing the forward part of the said bent pipes *g g g*.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent, and claim—

In combination with a range or its equivalent, the air-chamber *d*, with its cold-air inlet *e*, hot-air pipe *f*, and the bent pipe *g g g* leading from the smoke-stack *a* to the chimney *h*, and provided with the dampers *i*, *k*, and *l*, as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 17th day of April, 1873.

JOSEPH E. BARTLETT.

Witnesses:

ALBAN ANDRÉN,
JOHN R. HEARD.