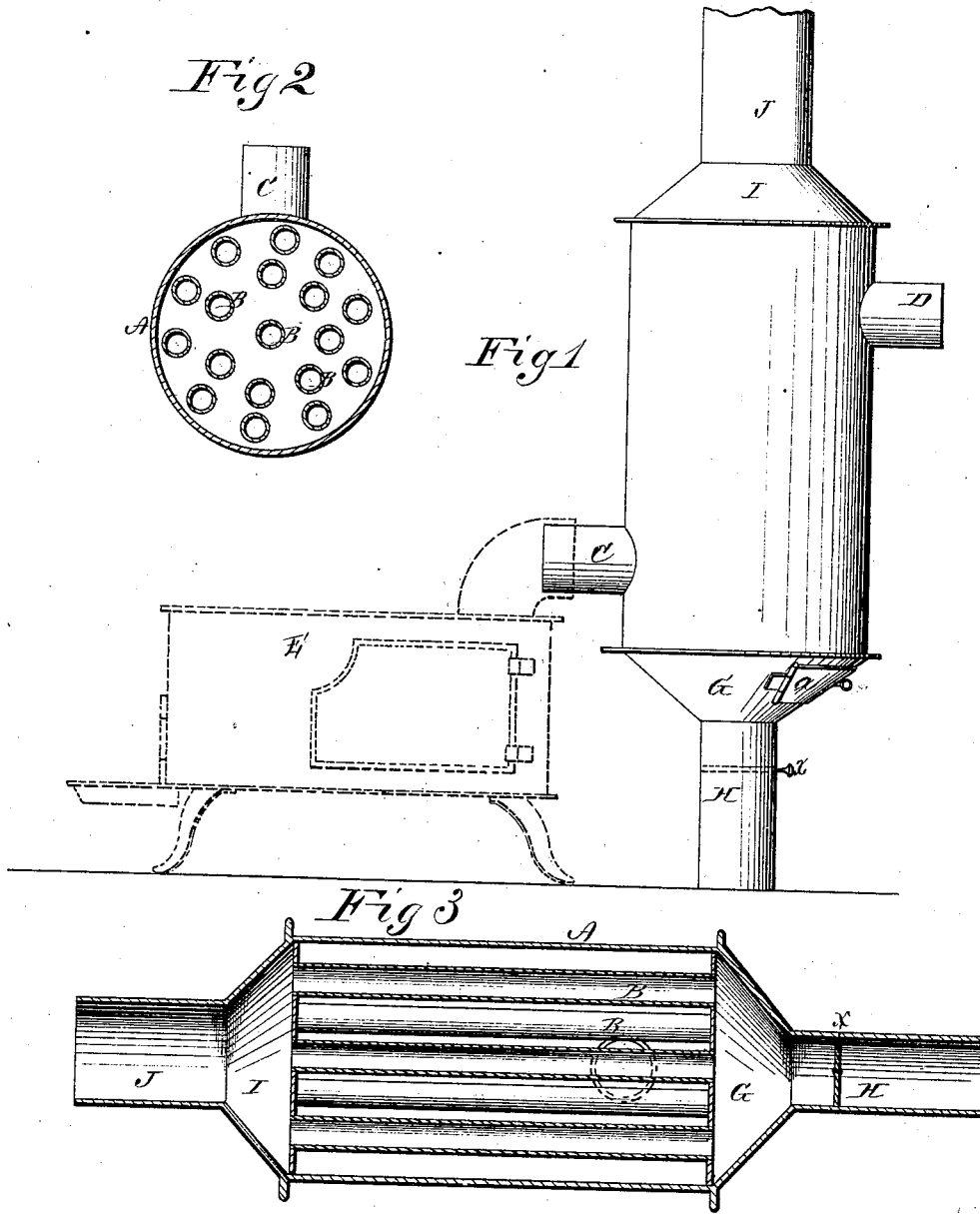


C. SKINNER.
Drum Heater.

No. 167,129.

Patented Aug. 24, 1875.



WITNESSES
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UNITED STATES PATENT OFFICE.

CARLOS SKINNER, OF WATERLOO, CANADA.

IMPROVEMENT IN DRUM-HEATERS.

Specification forming part of Letters Patent No. **167,129**, dated August 24, 1875; application filed February 4, 1875.

To all whom it may concern:

Be it known that I, CARLOS SKINNER, of Waterloo, in the Province of Quebec and Dominion of Canada, have invented certain new and useful Improvements in Drum-Heaters; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of an independent and removable drum-heater attachment for cooking and other stoves, which may be used either in a vertical or horizontal position, as desired, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side view of my invention. Fig. 2 is a cross-section of the same. Fig. 3 is a longitudinal section thereof.

A represents a cylindrical drum of any suitable dimensions, provided with a number of tubes, B B, passing longitudinally through it. On one side of this drum near one end is a pipe, C, for the inlet of the smoke, and on the opposite side near the other end is an outlet-pipe, D. In Fig. 1 I have shown the heater used in a vertical position, the smoke, &c., from a stove, E, passing through the pipe C into the drum, and from thence through the pipe D into the chimney. At the lower end of the drum A is cold-air chamber G with pipe H leading to out of doors to supply cold

air to the heater, which cold air passes up into the chamber G, and through the tubes B B into a cap or chamber, I, formed at the upper end of the drum. This cap is provided with a pipe, J, for conveying the heated air up into the room above or into an adjoining room. But when the air is to escape into the same room the hot-air cap I is dispensed with. In the cold-air duct H is to be placed a damper to regulate the admission of air from the outside.

In the cold-air chamber G is a door, *a*, to admit air from near the floor of the room when the damper in the cold-air duct H is closed.

This heater may be used in any position—vertically or horizontally—and in connection with any stove, range, or furnace.

I am fully aware that a drum-heater composed of a shell, and having a series of interior open-end heating-tubes is not new; hence I disclaim such as being my invention.

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

In the independent and detachable drum-heater for stoves, shown and described, the shell A having tubes B B, chamber I, inlet and outlet pipes C D, cold-air chamber G having door *a*, and the cold-air duct H with damper X, all combined as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 9th day of January, 1875.

C. SKINNER.

Witnesses:

W. N. CALL,
G. FRANCIS.