J. LIMING.

Damper for Flues.

No. 45,508. Patented Dec. 20, 1864.

Fig. 1.

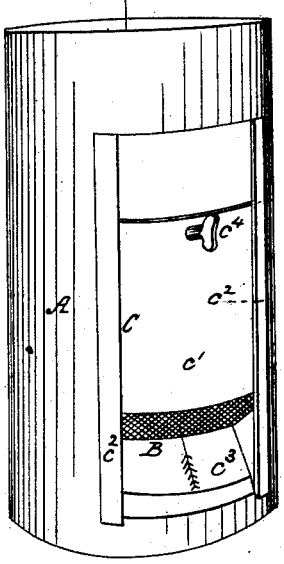
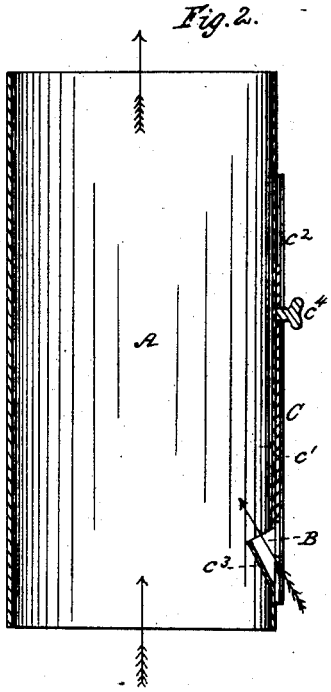


Fig. 2.



Witnesses:

Benj Morrison

Joseph Liming

Inventor:

John Liming

UNITED STATES PATENT OFFICE.

JOHN LIMING, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVED DAMPER FOR FLUES.

Specification forming part of Letters Patent No. **45,508**, dated December 20, 1864.

To all whom it may concern:

Be it known that I, JOHN LIMING, of the city of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Dampers for Flues; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view, and Fig. 2 a vertical transverse section, of the same applied to a short section of stove-pipe.

Like letters of reference indicate the same parts when in both figures.

It is well known that the prevailing modes of diminishing or checking the draft of stoves and other heaters, either by opening the fuel-doors or by closing valves within the escape-flues or chimneys, for the purpose of economizing in the fuel, are always attended either with a very great loss of the heat generated in the fire-chambers or with the escape of smoke or gases into the rooms in which the heaters are located.

The object of my invention is to afford a ready, cheap, and effective means of obviating these objectionable features.

It consists, substantially as hereinafter described and set forth, in making an adjustable opening in the stove-pipe or external escape-flue of a heater in such a manner that when the fire or draft door is closed fresh air can be readily admitted directly into the said escape-flue at a point sufficiently distant from the body of the stove or heater to prevent its entrance therein and cause it to force the smoke and gas along the said pipe or flue.

In the drawings, A represents a short section of a common stove-pipe, and B the adjustable opening therein. The adjustable opening B is produced, in the present instance, by means of a sliding damper, C, secured over a square hole, which is previously cut through the pipe A. The damper C consists of a slide, c', which is secured by means of guides c^2 c^2, so that it can be easily moved to open, diminish, or close the opening B, as occasion may require. At the lower part of the opening B, or that part which is nearest to the fire, there is fixed a deflecting-plate, c^3, which extends a short distance obliquely into the flue A, so as to deflect the smoke or gases away from the opening B as the same arise or pass along the flue from the fire. A small thumb-screw, c^4, is adapted and applied to work in the upper part of the slide c', so that it can be caused to bear sufficiently hard against the plate beneath it to hold the said slide c' at any position that may be required.

It will be readily seen that in the operation of this external damper the opening B may be either readily enlarged, diminished, or closed, and that when opened so as to admit a current of fresh air into the pipe A the gases and smoke from the fire will be carried onward thereby, and thus while a check or diminution of the draft through the fire and a consequent saving of the heat and an economizing of the fuel will be effected, all liability to an escape of smoke or gas into the room in which the stove is located will be effectually prevented.

The device is cheap, easily constructed, and applied to any stove-pipe or external flue.

Having thus fully described my improvement and pointed out its utility, what I claim as new, and desire to secure by Letters Patent, is—

The application to a stove-pipe or other external escape-flue of a heater of an opening, B, adjustable by means of a damper constructed so as to operate substantially in the manner described and set forth, for the purposes specified.

JOHN LIMING.

Witnesses:

BENJ. MORISON,

JOSEPH LIMING.