

G. C. DUNKLEE.  
Stove-Pipe Damper.

No. 208,800.

Patented Oct. 8, 1878.

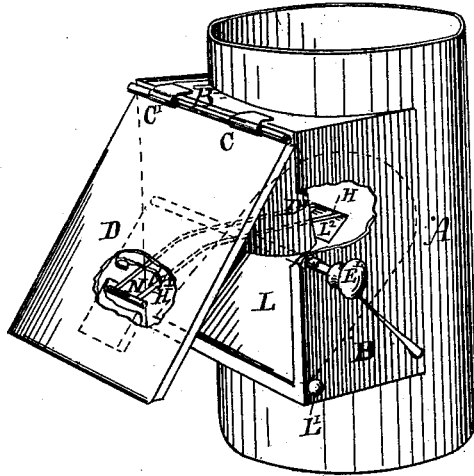


Fig. 1.

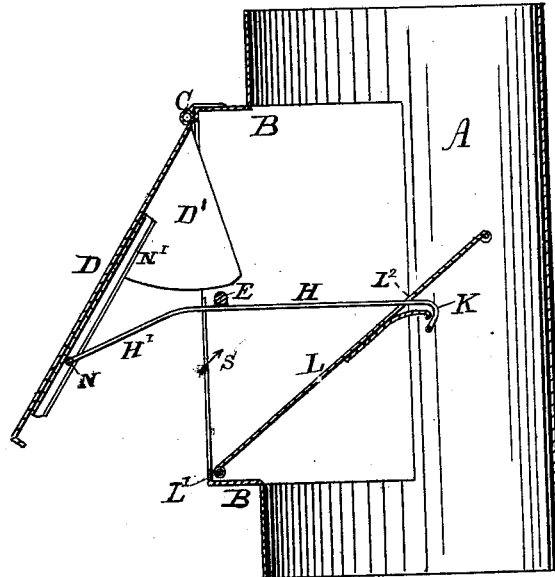


Fig. 2.

WITNESSES

Frank G. Parker  
Charles H. Fogg

INVENTOR

Galuska C. Dunklee  
Per William Edson Atty

# UNITED STATES PATENT OFFICE.

GALUSHA C. DUNKLEE, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN STOVE-PIPE DAMPERS.

Specification forming part of Letters Patent No. **208,800**, dated October 8, 1878; application filed February 28, 1878.

*To all whom it may concern:*

Be it known that I, GALUSHA C. DUNKLEE, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Stove-Pipe Dampers, of which the following is a specification:

My invention relates to that class of stove-pipe dampers in which the draft from the fire is partly cut off and a current of free air admitted to the pipe from the outside, this arrangement having proved in practice to be very efficient in regulating the fire. But it, as heretofore devised, has been open to this very serious objection—namely, in allowing a current of fresh cold air to suddenly mingle with the products of combustion in the pipe, the fresh cold air will so reduce the temperature of upflowing gases that the carbonic-acid gas and the carbonic oxide therein contained will become so condensed as to no longer have any ascensive force. On the contrary, it will have so much gravity as to sink through the opening in the damper and escape into the room, thus becoming not only offensive, but in many cases fatally dangerous.

The object of my invention is to obviate this defect; and it consists in so arranging the deflector and its side wings with the damper and the stove-pipe that as the deflector opens the damper in closing maintains a parallelism with it, and the whole forms an inclined flue, (the dimensions of which vary as the damper is more or less open,) which leads the incoming air into the stove-pipe in an upward direction, at the same time heating it, so as to give it ascensive force. By this arrangement I obviate all danger of a downward and outward flow of carbonic-acid gas from the pipe when the inner damper is partly closed and the deflector open.

Referring to the drawings, Figure 1 is a perspective view of my invention. Fig. 2 is an elevation of the same, a part of the pipe being represented as broken away to show more clearly the internal construction of the damper.

In the drawings, A is intended to represent a part of the stove or furnace pipe, which may be made of cast or sheet metal. B B is a rectangular casing, inclosing a corresponding opening in the pipe.

The damper proper, L, is pivoted at L<sup>1</sup>, so that it may be turned inward, as shown in the drawings.

D is an air-deflector, hinged at the top at C C'. This opens outwardly, as seen, and is provided with side wings D', one of which is shown. The deflector D and its wings D' serve to throw the incoming fresh air into contact with the heated parts of the device, and also give it an upward direction, so that the heat injected to it and its impulse will prevent an escape downward of the products of combustion.

This device has also the advantage that the fresh cold air cannot directly enter the pipe, as it could in case no deflector was used.

For convenience in operating this device by a single movement, I affix to a cross-rod, E, a piece or pieces, H H', which extend in both directions, the end H passing through a small opening, L<sup>2</sup>, in the damper L, and terminating in a hook, K, Fig. 2. The other end, H', has a cross-head, N, attached, which slides in ways N', made on the inner side of the deflector D.

By simply turning the rod E (which may be done by use of the handle or knob E', Fig. 1) in the direction indicated by the arrow S, Fig. 2, the damper L is thrown upward, leaving a free passage for draft in the pipe, and the deflector D is closed. A reverse of this action will close the damper and open the deflector.

Having now described the construction and operation of my invention, what I claim, and desire to secure by Letters Patent, is as follows:

In combination with a stove-pipe, the damper L, hinged at its lower end, and the deflector D, provided with the side wings, D', hinged at its upper end, with the operating-rod E and the pieces H H', all operating together substantially as described, and for the purpose set forth.

GALUSHA C. DUNKLEE.

Witnesses:

W. EDSON,  
NATL. EVANS.