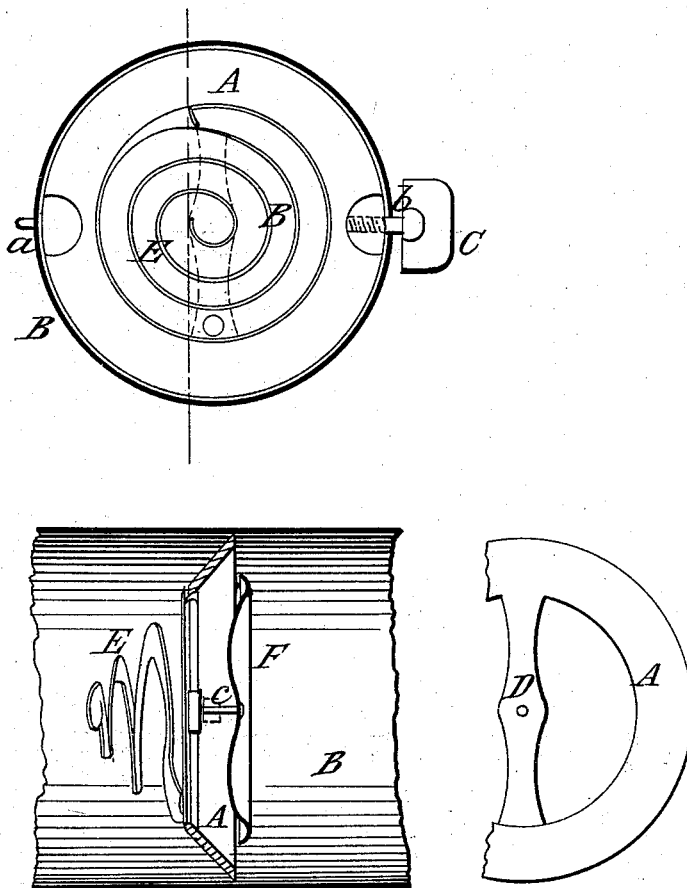


A. V. & A. F. FLETCHER.

Stove Pipe Damper.

No. 48,058.

Patented June 6, 1865.



Witnesses:
Wm. Brown
Thos. Dusch

Inventors
A. V. & A. F. Fletcher
By *[Signature]*
[Signature]

UNITED STATES PATENT OFFICE.

A. V. FLETCHER AND A. F. FLETCHER, OF ATHOL, MASSACHUSETTS.

STOVE-PIPE DAMPER.

Specification forming part of Letters Patent No. **48,058**, dated June 6, 1865.

To all whom it may concern:

Be it known that we, A. V. FLETCHER and A. F. FLETCHER, of Athol, in the county of Worcester and State of Massachusetts, have invented a new and Improved Stove-Pipe Damper; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view of one side of our damper. Fig. 2 is a central section taken in the line *x x*, Fig. 1. Fig. 3 is a view of a portion of the frame of the damper.

Similar letters of reference indicate corresponding parts.

The object of this invention is to provide a damper capable of closing the entire area across the pipe when in one position, and when in a reverse position, to afford a free escape for the smoke, and at the same time prevent as much as possible of the heat from escaping up the chimney.

Our invention consists in the application to a circular frame of a disk on the one side, so arranged that when the said frame is turned in one position the smoke ascending from the stove will cause it to hug closely thereto and prevent the passage of the smoke to the chimney; but when turned in an opposite direction it will fall away from the frame and permit the smoke to pass away into the chimney.

It also consists in attaching to the opposite side of the frame a spiral coil of strips of metal, so arranged that the smoke in passing through the damper will acquire a circular motion, thus economizing the heat that usually accompanies it, as well as to present a barrier against a free escape of the heat when the smoke is ascending from the stove or other heater.

To enable others to make and use our invention, we will proceed to describe it.

A represents the frame of the damper, which is beveled toward the center for the more ready adaptation of the devices we shall presently describe. *a* is a pivot on the one side for holding the damper in the pipe B, and *b* the pivot on the other side, and C the knob by which to turn the damper. D (see Fig. 3) is a piece extending across the opening in the frame A, and is cast therewith or otherwise secured to it.

On one side of this frame A to the cross-

piece D there is attached a coil, E, one of its ends being secured thereto. This coil is represented as being cut out of a plain circular piece of sheet metal by commencing the incision at the circumference and running it inward toward the center, forming a spiral, which is represented in its closed or compressed state in Fig. 1 and in its extended state in Fig. 2. On the opposite side of this frame we fit a disk, F, which has its outward edges bent inward, so as the more closely to fit to the inner bevel of the frame A. This disk is made of a size to fully cover the opening in the frame A, and it is attached to the cross-piece D by a pin, *c*, running through its center. This pin is long enough to allow the disk F to fall sufficiently far from the frame A to permit a free passage for the smoke when the damper is turned with its coil side toward the stove or heater, and to allow it to press up close to the frame A when it is desired to shut off or close the opening through the pipe, and consequently the draft.

From the above description it will be seen that by turning the damper with its spiral portion toward the stove the smoke will assume a circular motion when passing around the said coil in its escape, and thus insure a greater radiation of heat than would occur were the space left open, or partially so, and the disk on the opposite side, while the damper is yet in the same position, will further restrain the smoke, but finally allow it to creep out around its edge, and from thence it passes on toward the chimney, and that by turning the damper in an opposite direction—that is, with the disk toward the stove—the smoke or heated air passing up the pipe will cause the disk to hug up to the frame, and thus effectually close the area across the pipe.

What we claim as new, and desire to secure by Letters Patent, is—

1. The disk F, constructed and arranged substantially in the manner shown and described.

2. The spiral coil E, attached to a stove-pipe damper, substantially as and for the purposes herein specified.

A. V. FLETCHER.
A. F. FLETCHER.

Witnesses:

RUFUS PUTNAM,
CHS. FIELD.