D. & S. SWEENEY.

Stovepipe Damper.

No. 54,976. Patented May 22, 1866.

Fig: 1.

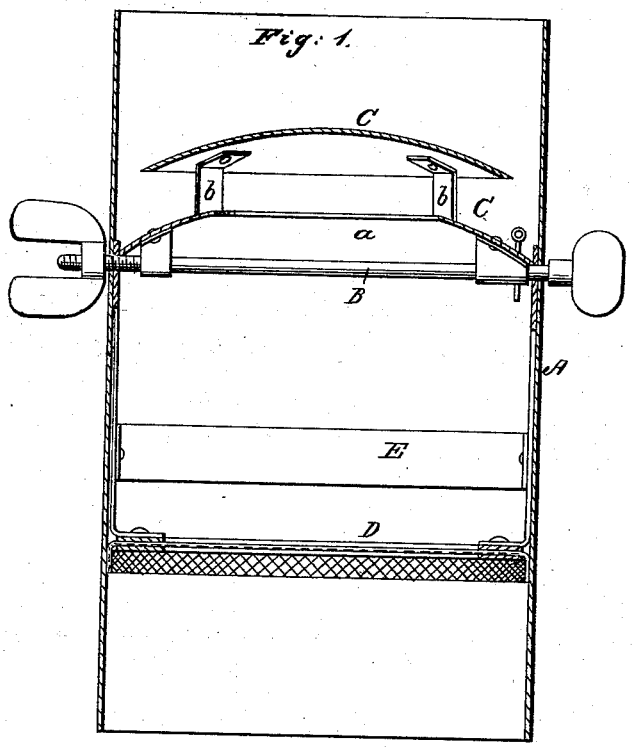
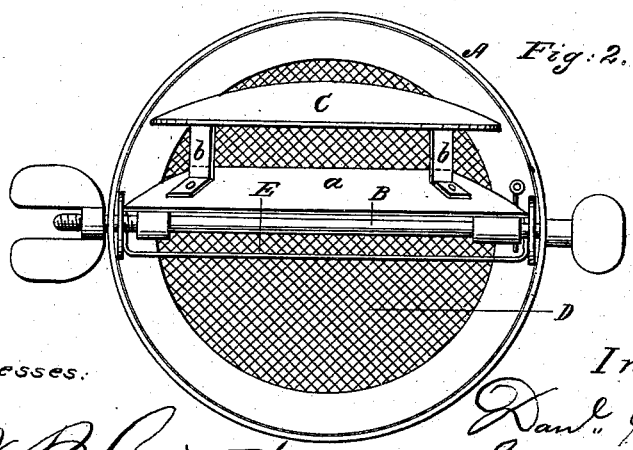


Fig: 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

DANIEL SWEENEY AND STEPHEN SWEENEY, OF CONSTABLEVILLE, N. Y.

STOVE-PIPE DAMPER.

Specification forming part of Letters Patent No. **54,976**, dated May 22, 1866.

To all whom it may concern:

Be it known that we, DANIEL SWEENEY and STEPHEN SWEENEY, of Constableville, Lewis county, State of New York, have invented a new and Improved Stove-Damper; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others 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 represents a longitudinal central section of this invention. Fig. 2 is a transverse section of the same.

Similar letters of reference indicate like parts.

This invention relates to a stove-damper which is composed of a concave annular disk surmounted by a concave cap, and secured to a suitable spindle in such a manner that the heated gases and products of combustion on striking the annular concave disk are concentrated toward the center of the pipe, and after passing through the opening in said disk said gases strike the cap and are thrown out against the inner periphery of the pipe, and by these means all the heat, or nearly all, is transmitted to the pipe and through the pipe into the room. In turning this damper to a vertical position it permits the gases to escape freely, and in this position it bears against a cross-bar in the pipe, so that by knocking it against said cross-bar it (the damper) can be freed from dust and ashes. The escape of sparks up through the pipe is prevented by a diaphragm of wire-cloth or perforated sheet metal.

A represents a stove-pipe, which forms the bearings for the spindle B, on which our damper C is molded. This damper is made of sheet or cast metal, and it is composed of a concave annular disk, *a*, from the upper concave surface of which rise four (more or less) brackets, *b*, which support the cap *c*. The outside diameter of the disk *a* is equal, or nearly so, to the inside diameter of the pipe; but the diameter of the cap is smaller, so that the heated gases and products of combustion on striking the concave surface of the disk are concentrated toward the center, where they ascend through the central opening until they strike the cap, which compels them to spread and to pass up through the annular space between the circumference of the cap and the pipe. By this circulation of the gases in the pipe all the heat contained in them, or nearly all, is transmitted to said pipe and through it to the room.

When the damper is turned down to the position shown in Fig. 2 of the drawings it offers very little obstruction to the draft, and to prevent sparks from passing up through the pipe we have inserted into the pipe a diaphragm, D, of wire-gauze or perforated sheet metal. In turning the damper to an upright position it meets the cross-bar E, and by releasing the spindle the damper can be repeatedly knocked against this cross-bar for the purpose of freeing it from dust and ashes, which are liable to accumulate on the same. This damper is simple in its construction, it is easily made, it can be cast without difficulty, and it gives a very good effect.

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

1. The damper composed of the annular concave disk *a* and cap *c*, in combination with the cross-bar E, constructed and operating substantially as and for the purpose described.

2. The perforated diaphragm D, in combination with the damper C and cross-bar E, constructed and operating substantially as and for the purpose set forth.

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STEPHEN SWEENEY.

Witnesses:
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