A. E. ELMER.

Damper.

No. 50,569. Patented Oct. 24, 1865.

Fig: 3.

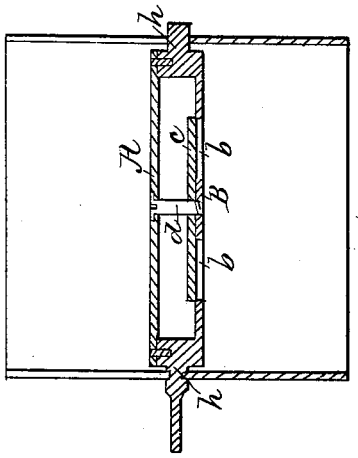


Fig: 4.

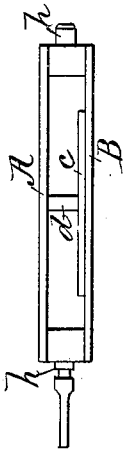


Fig: 1.

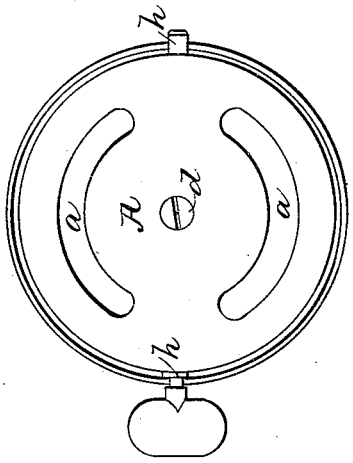
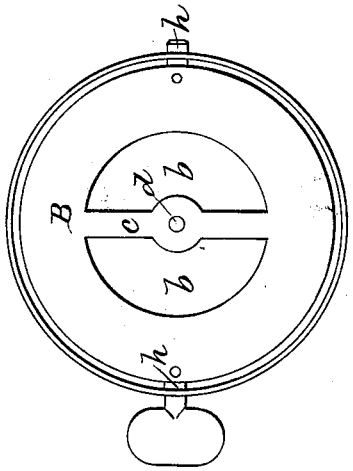


Fig: 2.



Witnesses.
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A. P. Hale Jr.

Inventor
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by
R. A. Abbey
atty

UNITED STATES PATENT OFFICE.

ALBERT E. ELMER, OF SPRINGFIELD, MASSACHUSETTS.

IMPROVEMENT IN DAMPERS.

Specification forming part of Letters Patent No. **50,569**, dated October 24, 1865.

To all whom it may concern:

Be it known that I, ALBERT E. ELMER, a resident of Springfield, in the county of Hampden and State of Massachusetts, have invented an Improved Damper for Smoke Pipes or Flues; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 denotes a top view, Fig. 2 a bottom view, Fig. 3 a longitudinal section, and Fig. 4 an edge elevation, of it.

The nature of my invention consists of two perforated plates and a drop-valve, made, arranged, and combined together and with journals, substantially as hereinafter described.

In the drawings, A denotes the top plate of the said damper, such top plate being a flat circular disk formed with two curved slots or passages, *a a*, made in it concentrically with its periphery, and arranged and formed in manner as exhibited in Fig. 1.

B is the bottom plate, which is also a circular flat disk or annulus, provided with a circular opening, *b*, arranged through it concentrically, and having a cross-bar, *c*, for aiding in supporting a short shaft or pin, *d*, which extends from the central part of the said bar *c* to the central part of the top plate, A, and serves to support a drop-valve or circular plate, C, which is so arranged between the two plates A B and on the pin *d* as to be capable of freely sliding thereon. The said drop plate or valve C has a diameter equal to or a little greater than the opening *b*, but less than that of the passages *a a*, the same being not only so that when the damper is in such position that the plate A is uppermost or above the plate B the said drop-plate shall rest upon the plate B and entirely cover its opening *b*, but so that when the damper is reversed in such manner as to bring the plate B uppermost the drop-plate, although resting on the plate A, shall not cover the openings of the said plate, but leave them open for the free passage of smoke upward through them and into the space between the plates A B, and thence through the opening *b* of the latter plate.

The two plates A and B, arranged and supported at a short distance asunder, are provided with journals *h h*, which, when the damper is placed within a smoke-flue, are to enter holes or bearings made in the opposite sides thereof, so as to enable the damper to be revolved on the axis of the journals and transversely in the flue, as ordinary plate or disk dampers operate.

With the damper so made the draft will be practically closed when the plate A is uppermost; but if the damper be reversed, or turned so as to bring the plate B uppermost, the drop-plate C, during the act of turning the damper, will fall away from the plate B and uncover its opening, in which case the smoke will flow through both plates A B, and the damper will serve as a spark-arrester. Thus, besides answering all the purposes of an ordinary single-plate damper, my said improved damper will operate to arrest sparks and cinders, so that they will fall back from it, the drop-plate operating by its gravitating-power.

I do not claim the damper as represented in Patent No. 34,926, as my damper differs essentially therefrom.

What I do claim is—

My improved damper as consisting of the two perforated plates A B and the drop valve or plate C, made, arranged, and combined together and with journals, substantially in manner and so as to operate as hereinbefore described.

ALBERT E. ELMER.

Witnesses:
R. H. EDDY,
F. P. HALE, Jr.