O. BALDWIN.

Combined Radiators and Dampers.

No. 147,544. Patented Feb. 17, 1874.

Fig. 1.

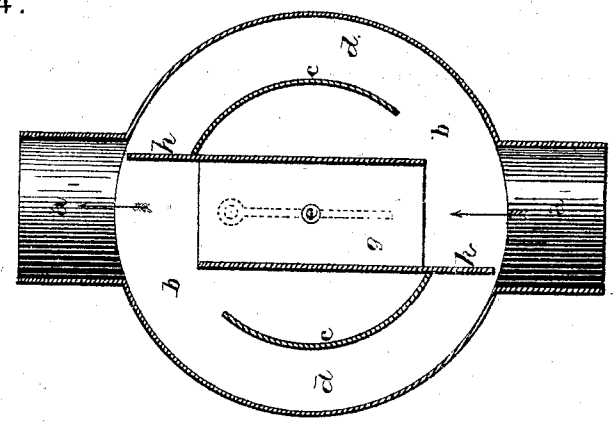


Fig. 2.

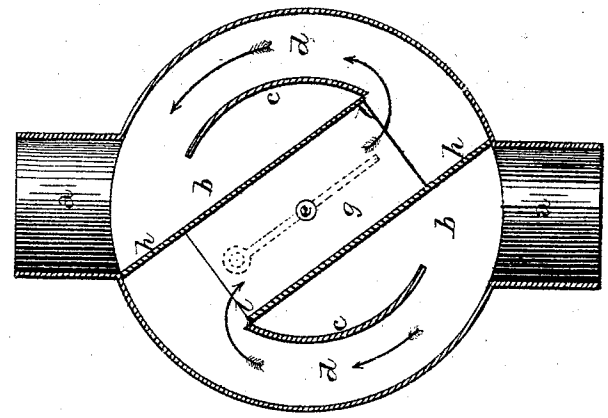
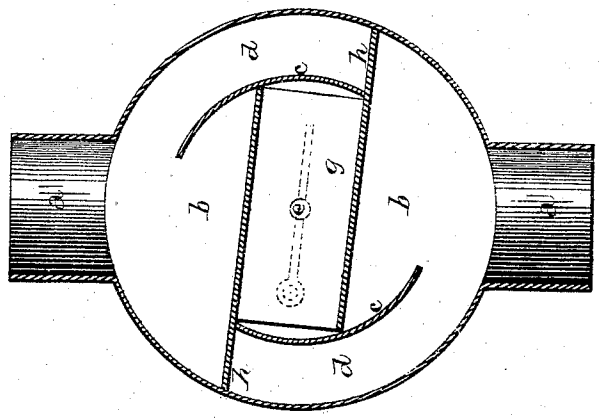


Fig. 3.



WITNESSES.

J Wm. Garner

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INVENTOR.

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per

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UNITED STATES PATENT OFFICE.

OREN BALDWIN, OF KEOKUK, IOWA.

IMPROVEMENT IN COMBINED RADIATORS AND DAMPERS.

Specification forming part of Letters Patent No. 147,544, dated February 17, 1874; application filed December 6, 1873.

To all whom it may concern:

Be it known that I, OREN BALDWIN, of Keokuk, in the county of Lee and State of Iowa, have invented certain new and useful Improvements in Combined Radiators and Dampers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

The nature of my invention relates to an improvement in radiators and dampers; and it consists in a radiator having internal walls, which form passages for the smoke, in combination with a hollow damper, which can be so turned as to form a passage for the free escape of the smoke, change the current of the smoke from side to side in the radiator, or entirely check its escape, as may be desired. It also consists in a hollow damper having an extension at each end on opposite sides, which extensions abut against the ends of the internal walls and regulate the distance which the damper shall turn, as will be more fully described hereafter.

The accompanying drawings represent my invention, showing the damper in various positions.

a represents the stove-pipe, to which the radiator *b* is attached. Inside of the radiator are two curved walls or partitions, *c*, on opposite sides, one of which extends above the level of the other, and which form the curved passages *d* up the sides of the radiator, through which the smoke and products of combustion pass. In the center of the radiator, upon the pivot-pin *e*, is hung the hollow oblong damper *g*, which has an extension, *h*, formed at each end, on opposite sides, which are long enough to reach the side of the radiator as the damper is turned around. While the damper is turned so as to be in a line with the pipe, the two extensions resting against the upper end of one of the curved partitions on one side, and the lower end of the other on the opposite side, as shown in Fig. 1, the smoke passes freely through the damper itself, and each of the curved passages *d*, and escapes. When the damper is turned at an angle, as shown in Fig. 2, so that the ends *l* rest against the upper end of one partition and the lower one of the other, the extensions *h* close the passages, as shown, and compel the smoke and products of combustion to pass up one passage, then downward through the damper and out up the passage on the opposite side. When the damper is turned from a half to three-quarters of a right angle to the pipe, so that the two extensions abut against the ends of the curved partitions, as shown in Fig. 3, the two passages and damper are both closed, so as to completely shut off the exit of the smoke. Attached to the damper, on the same plane, is a small rod or handle, by which the damper is turned, and which indicates the position in which the damper may be. The shape of the radiator and damper may be such as is here shown, or any other that may be desired.

Having thus described my invention, I claim—

1. A hollow damper, having an extension at each end, in combination with a radiator having partitions or walls on its inside to form passages for the smoke, all constructed substantially as set forth.

2. The combination of a hollow damper and a radiator, the parts arranged substantially as shown, whereby the damper will form a passage, through which the smoke can escape, will divert the smoke from one side to the other, or will entirely check its escape, substantially as specified.

3. The combination of the pipe *a*, radiator *b*, and partitions *c* with the hollow damper *g*, having an extension, *h*, at each end, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 22d day of November, 1873.

OREN BALDWIN.

Witnesses:

CLINTON M. SHULTZ,

WILLIE T. JONES.