

VERBECK & WALKER.

Damper.

No. 38,776.

Patented June 2, 1863.

Fig. 1

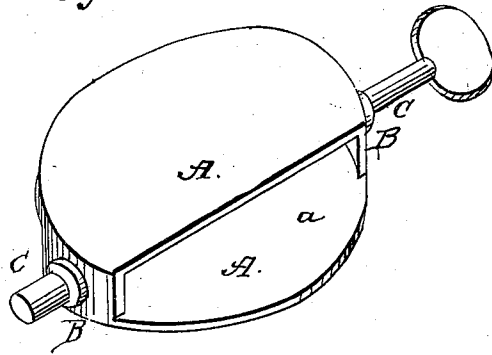


Fig. 3

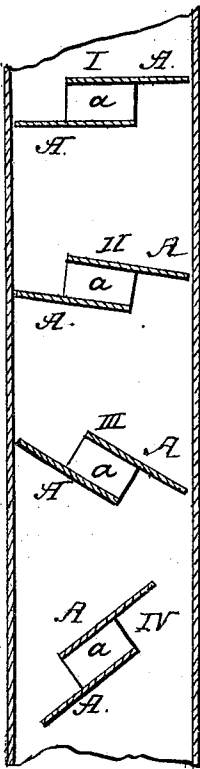
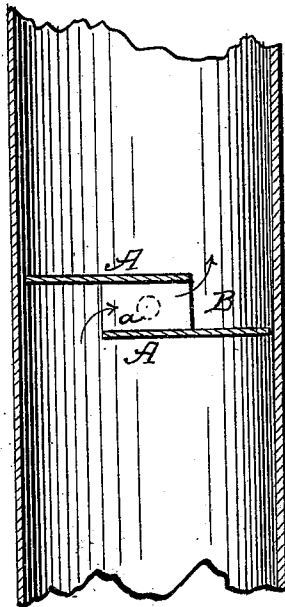


Fig. 2



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# UNITED STATES PATENT OFFICE.

P. VERBECK AND O. T. WALKER, OF NEENAH, WISCONSIN.

## IMPROVEMENT IN DAMPERS.

Specification forming part of Letters Patent No. 38,776, da'ed June 2, 1863.

*To all whom it may concern:*

Be it known that we, P. VERBECK and O. T. WALKER, of Neenah, in the county of Winnebago and State of Wisconsin, have invented a new and useful Improvement in Dampers; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a perspective view of our invention. Fig. 2 is a vertical central section of the same, showing its position in a stove-pipe when perfectly closed. Fig. 3 is a diagram, showing our damper in various positions.

Similar letters of reference in both views indicate corresponding parts.

The object of this invention is a damper which, when perfectly closed, will retain all the heat and still permit the smoke and gas to ascend.

The invention consists in the combination of two segmental disks united by end pieces which are provided with gudgeons in such a manner that the whole damper can be readily cast out of one piece, and no further labor is required to finish the same up, and at the same time the desired object of stopping the heat and allowing the smoke to ascend is fully obtained.

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

A A are two segmental disks, which are united by upright end pieces, B, and these end pieces are provided with gudgeons C, on which the damper turns when the same is inserted in a stove-pipe. The disks A are made to form a portion of a circle, the diameter of which is equal to the inside diameter of the stove-pipe in which the damper is to be used, and the end pieces, B, are curved to correspond to the inner surface of said pipe, so that when the damper is brought in the position shown in Fig. 2, or in the position I in the diagram, Fig. 3, the edges of the disks and the end pieces fit close to the inner circumference of

the pipe, and the heat is retained, leaving at the same time a channel, *a*, between the disks, through which the smoke can ascend. The disks A A and end pieces, B, are cast out of one piece so that the damper can be made cheap, and requires no finishing after it comes from the foundry. It can be made of cast or malleable iron, or of any other suitable material, and it can be furnished for the same price as an ordinary disk-damper.

The channel *a*, between the disks, is so arranged that the smoke passes readily through the same when the damper is turned from left to right to the position II and III in the diagram; but when the damper is turned from right to left to the position IV it acts precisely like an ordinary disk-damper, throwing all the heat and smoke toward the circumference of the pipe. Thus, if it is desired to cool off the stove rapidly, the damper is turned to the position III, and a large quantity of the heat and smoke passes up through the channel and through the center of the pipe; but if it is desired to obtain the best possible benefit from the heat, giving at the same time the required draft to the fire, the damper is turned in the position IV and the heat is all thrown toward the circumference of the pipe.

The advantages of our damper, therefore, are, first, that it can be made cheap and without requiring any extra labor; and, second, that it allows of regulating the heat and the draft more perfect than any other damper now in use, being superior in this respect and in regard to cheapness to a damper patented by H. B. Thomas, April 8, 1862.

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

A damper consisting of two segmental disks A, which are connected by end pieces, B, provided with gudgeons C, as and for the purpose shown and described.

P. VERBECK.  
O. T. WALKER.

Witnesses:

C. C. TOWNSEND,  
GEO. J. VERBECK.