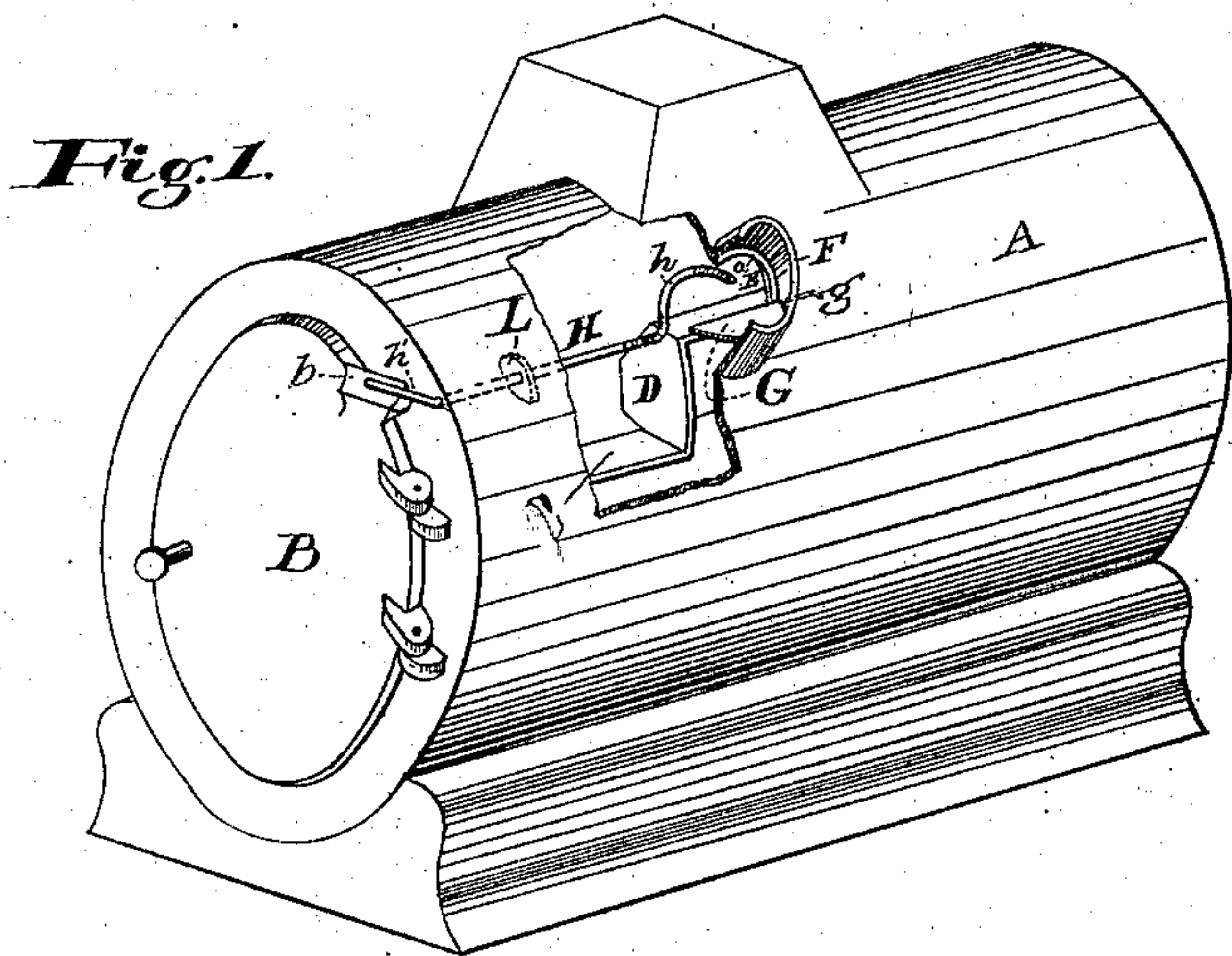


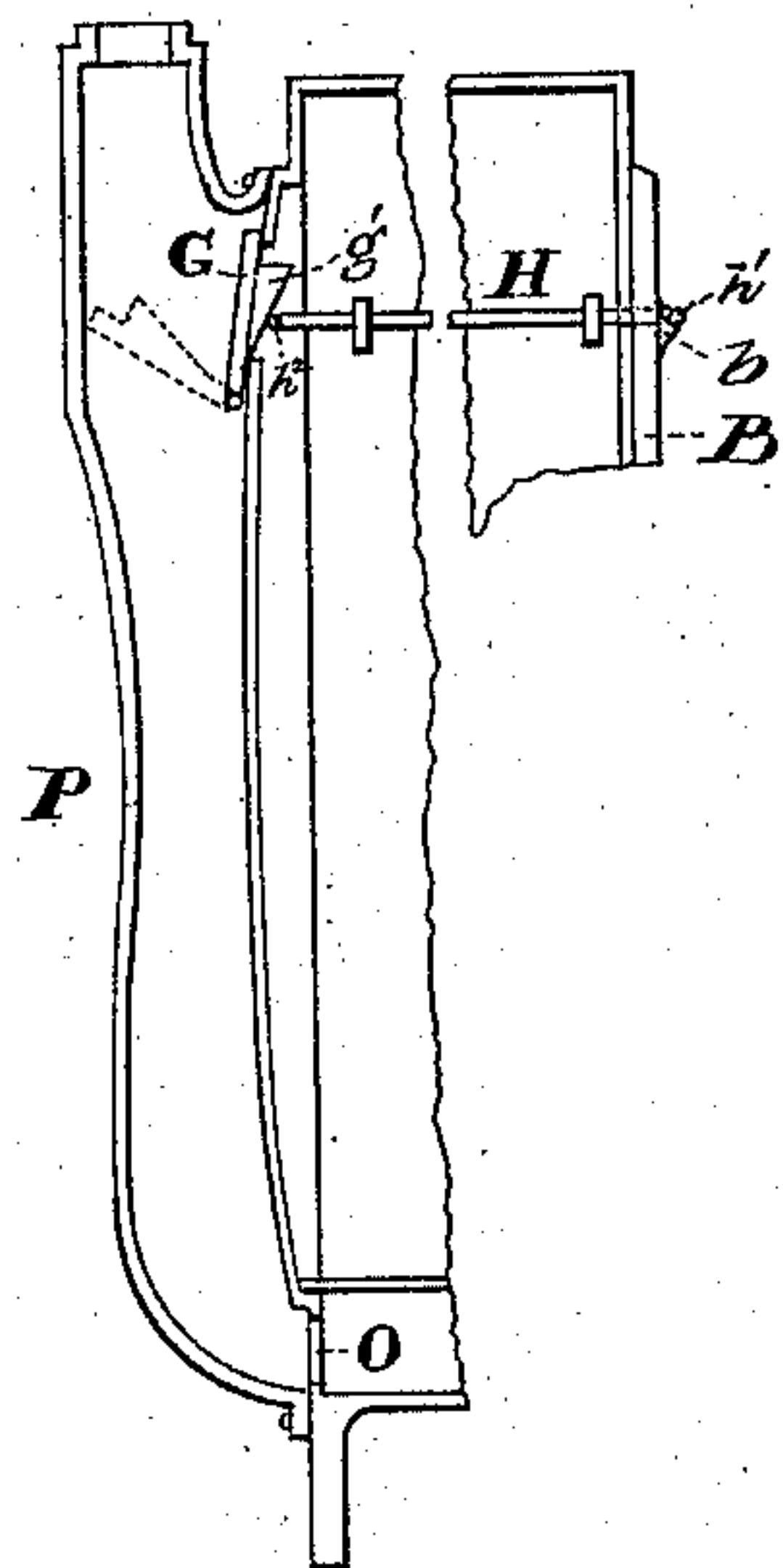
A. J. REDWAY.  
Damper.

No. 214,523.

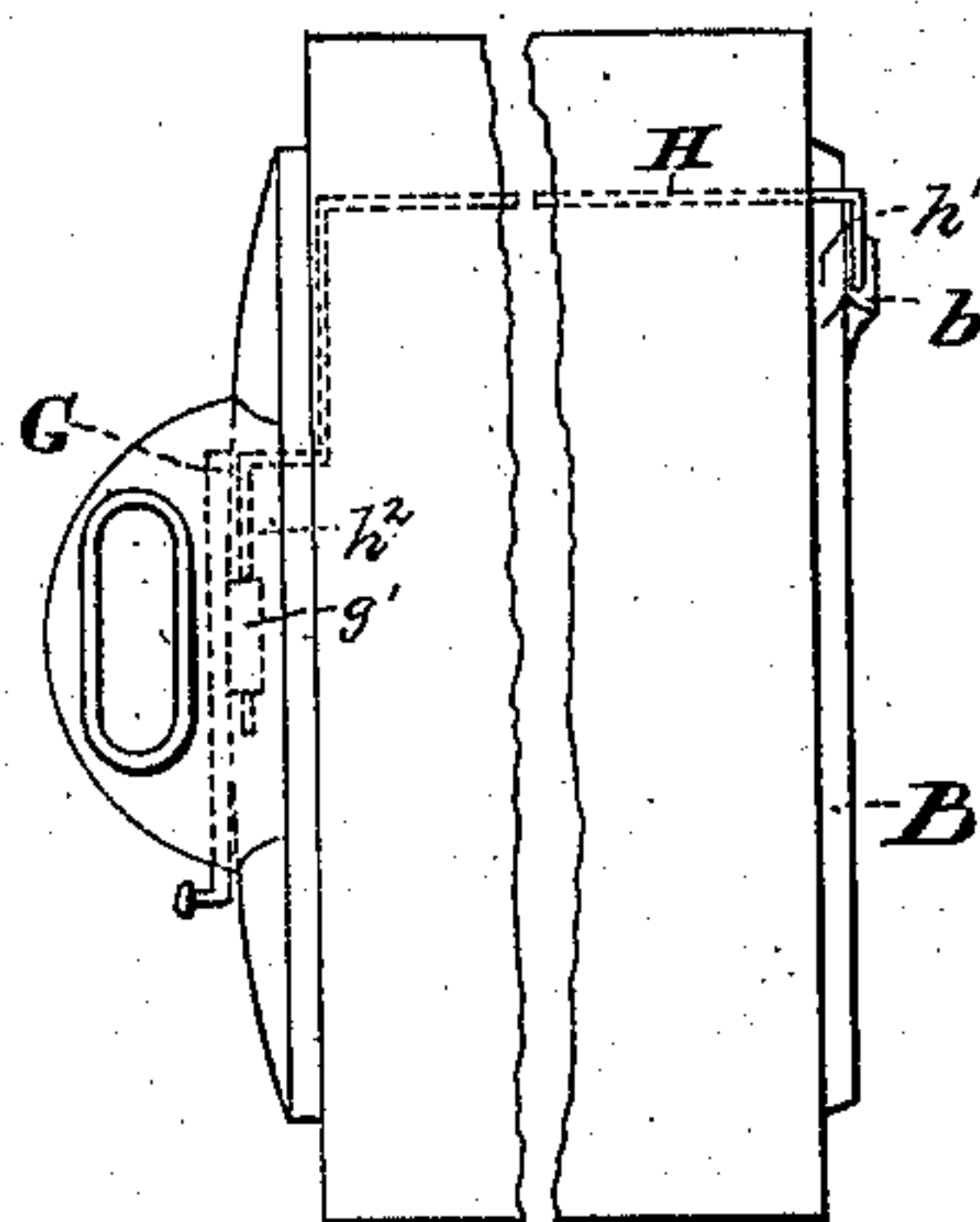
Patented April 22, 1879.



*Fig. 2.*



*Fig. 3.*



Attest:

W. S. Christopher  
Geo. W. Strehli

Inventor:

Albert J. Redway  
per Wm. Hubbell Fisher,  
Attorney.



# UNITED STATES PATENT OFFICE.

ALBERT J. REDWAY, OF AVONDALE, ASSIGNOR TO REDWAY & BURTON,  
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## IMPROVEMENT IN DAMPERS.

Specification forming part of Letters Patent No. **214,523**, dated April 22, 1879; application filed  
July 2, 1878.

*To all whom it may concern:*

Be it known that I, ALBERT J. REDWAY, of the village of Avondale, county of Hamilton and State of Ohio, and doing business in the city of Cincinnati, county and State aforesaid, have invented certain new and useful Improvements in Dampers, of which the following is a specification.

One great trouble with the stoves heretofore in use has been that on opening the door smoke issues from the interior. This trouble may be avoided, or at least mitigated, by always opening the direct draft before opening the stove-door; but this operation is not always known, or remembered when known, nor is it at all times convenient or even possible.

My invention consists in providing a stove with an automatic damper, which will always open the direct draft when the stove-door is opened.

In the accompanying drawings, Figure 1 represents a perspective view of a stove embodying my improvement, a portion of the side of the stove being broken away to show the parts connected with the automatic damper. In this view the pipe and damper are placed at the side of the stove.

Fig. 2 is a vertical sectional view of a portion of a stove, showing my invention as adapted to a stove in which the pipe and damper are placed at the rear. Fig. 3 is a top view of the stove shown in Fig. 2.

A represents a stove, having a door, B. The stove is provided with an inner lining, forming a flue, which begins at the left-hand side of the stove in Fig. 1, passes downward and up on the other side of the stove, the top on this latter side being closed by any suitable cap, C, except where the bonnet D rises and laps over the lower portion of the opening E, surrounded by the neck F, over which the pipe fits. The opening E extends above the top of bonnet D, forming the direct draft of the stove. The inner or straight edge of the damper G rests on the edge of the top of bonnet D, as shown in Fig. 1. The damper is provided with two handles, *g*, which project through the neck F on each side, one only being shown in the drawings, and form the axis about which the damper moves.

When the damper G is raised it covers the upper half of opening E, resting on the ledge *a*, leaving the indirect draft through the flue open. When the damper is down, as shown in Fig. 1, it leaves the direct draft through the upper half of opening E open, and closes the indirect draft by forming a diaphragm across the lower part of neck F, as shown in Fig. 1.

A rod, H, held by suitable supports L, passes along the upper portion of the stove, on the inside, as shown in Fig. 1, and terminates in a finger, *h*, whose extremity is normally opposite the center of the upper half of opening E, and within said opening. The other end of rod H passes through the front of the stove, and is bent at right angles, forming the arm *h'*, which rests on the cam *b* cast on the door B. The cam *b* is of the general shape of an elongated wedge, sharp edge up, as shown in the drawings.

The damper is ordinarily operated by the handles *g*. However, whenever the door is opened the cam *b* raises the inner end of arm *h'*, which rotates the rod H, forcing the finger *h* against the damper G, if it happens to be raised, and throwing the said damper down into the position shown in Fig. 1, thus always securing a direct draft whenever the door is opened, which is the object of the invention.

When the pipe proceeds from the rear of the stove the arrangement is as shown in Figs. 2 and 3. The flues commence on each side, and communicate, by means of the opening O, with the space formed by the hood P.

The damper G is provided with a beveled projection, *g'*, against which the arm *h<sup>2</sup>* of rod H strikes, when the door opens and rotates the rod H, thereby opening the direct draft of the stove. As the damper G is provided with handles *g*, it can always be operated by hand independently of the automatic device, which is evidently a great advantage.

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

1. The combination of rod H, having finger *h*, and arm *h<sup>1</sup>*, and cam *b*, as a device for automatically opening a damper.

2. The cam *b*, arm *h<sup>1</sup>*, and rod H, rotating in the stove, in combination with appropriate

independent means for actuating the damper.

3. The rod H, having finger *h*, in combination with an arm adapted to be operated by the stove-door, substantially as and for the purposes set forth.

4. The cam *b*, arm *h*<sup>1</sup>, and rod H, rotating in the stove, in combination with a damper, substantially as and for the purposes specified.

5. For the purposes specified, the rod H, rotating in the stove, and provided with arm *h*<sup>1</sup>,

in combination with the stove-door, provided with a suitable device for moving the arm *h*<sup>1</sup>, and the hinged damper, whose journal-shaft is provided with a short free arm, whereby said damper may be rotated independently of the door.

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Attest:

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W. S. CHRISTOPHER.