

H. A. WHITE.

Dampers.

No. 158,875.

Patented Jan. 19, 1875.

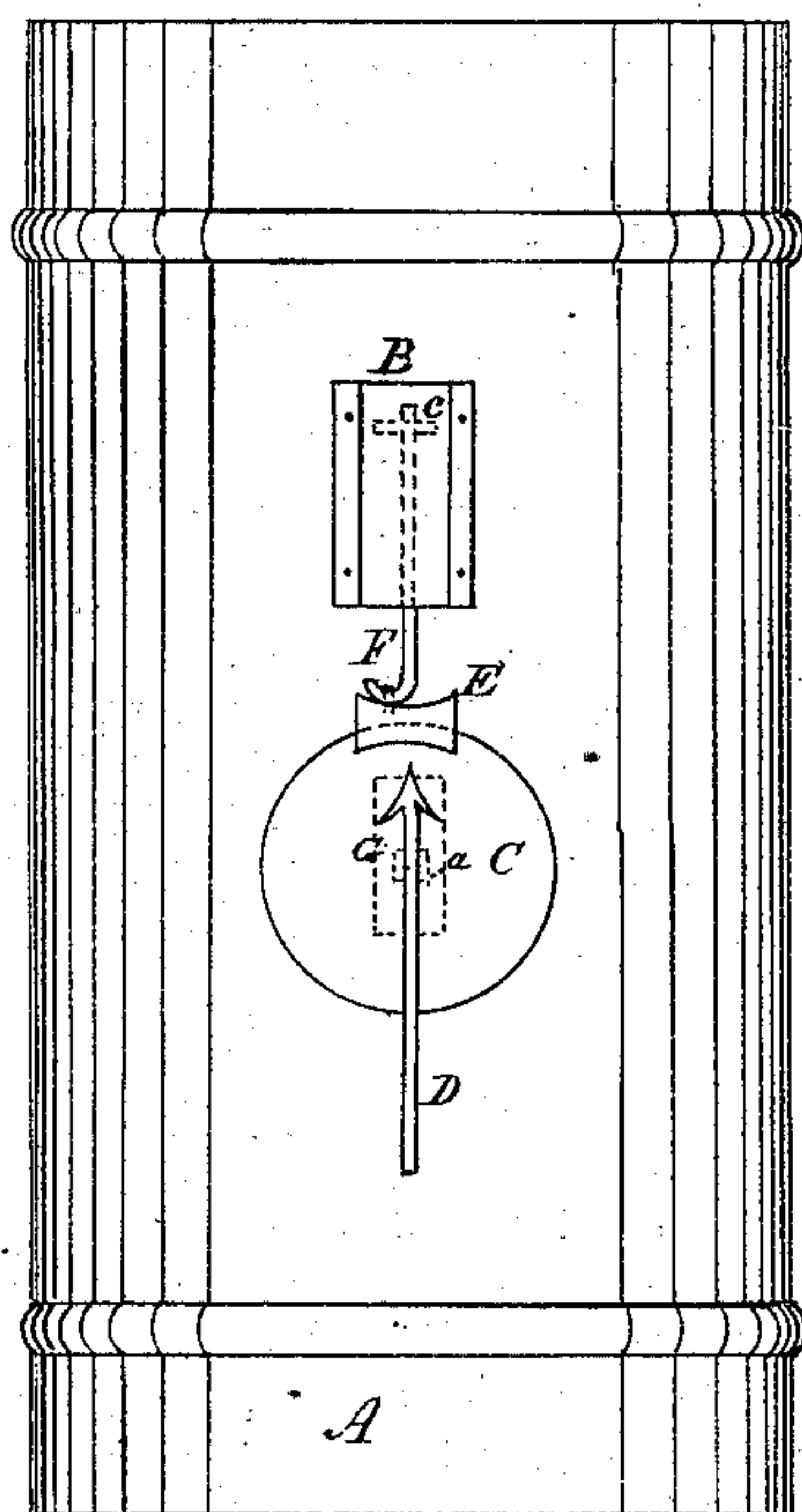


Fig. 1

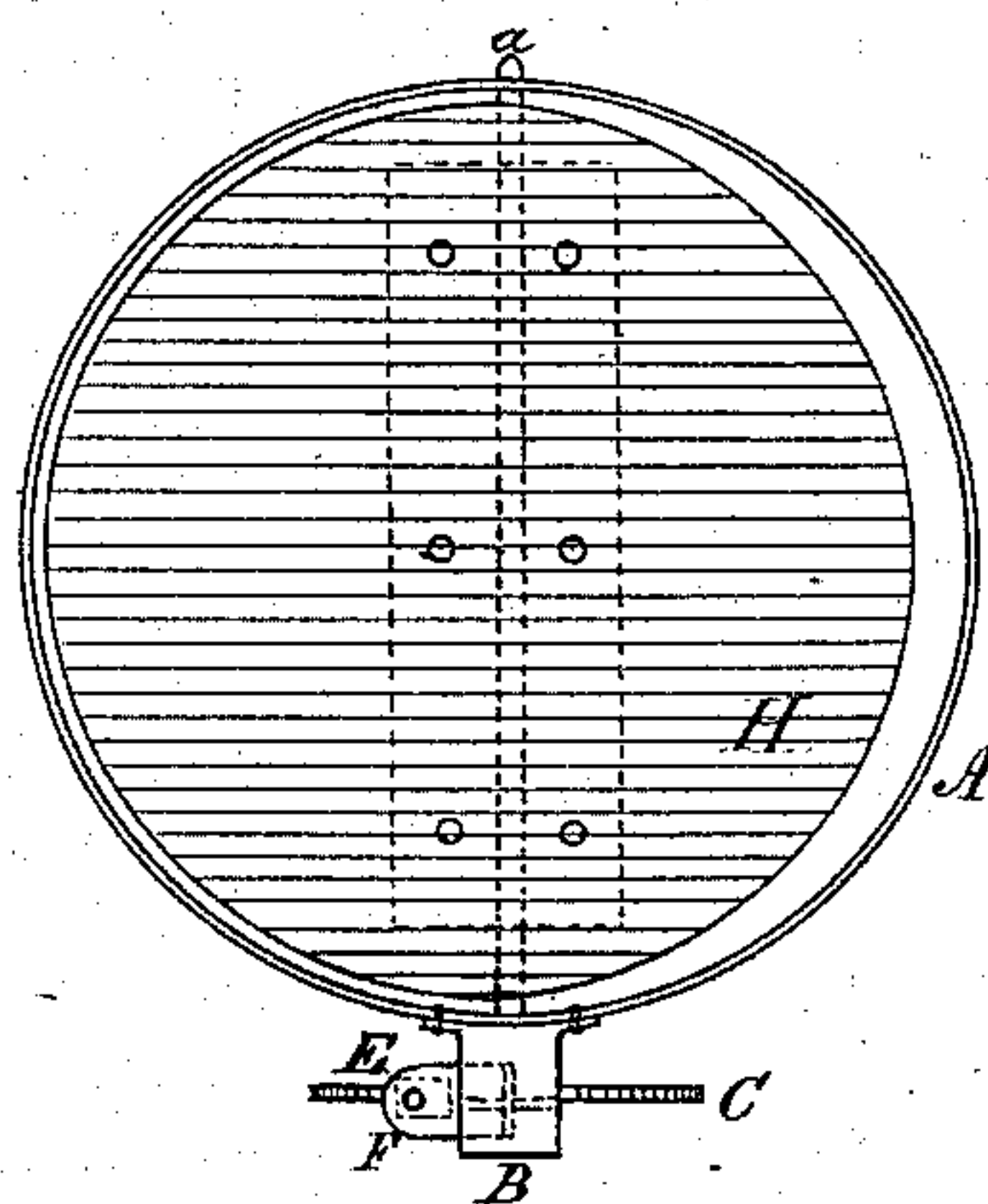


Fig. 2

Witnesses

Wm. B. Bruce
P. L. Scriven

Inventor

Henry A. White
By Wm. Bruce

att'y

UNITED STATES PATENT OFFICE.

HENRY AUGUSTUS WHITE, OF HAMILTON, CANADA.

IMPROVEMENT IN DAMPERS.

Specification forming part of Letters Patent No. 158,875, dated January 19, 1875; application filed June 15, 1874.

To all whom it may concern:

Be it known that I, HENRY AUGUSTUS WHITE, of the city of Hamilton, in the county of Wentworth, in the Province of Ontario, Dominion of Canada, have invented certain new and useful Improvements in Dampers for Stove-Pipes and Furnaces; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same.

The first part of my invention relates to the combination of an even-edged disk or plate attached to the spindle of the damper-valve, and turned by means of an arrow-headed lever attached to the same, and which arrow-head indicates the position of the valve in the pipe. The second part of my invention relates to the arrangement of a steel spring fitted in a box attached to the pipe, (directly over the disk,) and to the curved (or lower) end of which there is riveted a saddle, which, pressing on the disk, keeps the damper-valve in any required position.

Reference being had to the annexed drawing, it will be seen that Figure 1 represents a side view of a stove-pipe with the disk C fitted on it; D, arrow-headed lever; E, saddle attached to spring; F, curved end of spring.

Fig. 2 is a top view looking down the stove-pipe, showing the valve closed.

In the stove-pipe the usual damper-valve H is fixed, (the spindle passing through the pipe.) Upon the spindle there is an even-edged disk, C, fitted, instead of the notched disk now used, and upon which disk is attached an arrow-headed lever, D, or a plain bar, for the purpose of turning it, and which arrow-head or bar indicates the position of the valve in the pipe. There is fitted to the outside of the stove-pipe a box, B, and inside of which is fitted a steel spring, F, directly in the center of it, and being secured by a pin, c, through the top of the box. The said box B is filled with a composition for the purpose of protecting the spring from the action of heat and rust. The spring is held firmly in its upright position in the box, and no part of the spring or pin is acted upon by heat from the pipe. The composition in the box, being a non-conductor, prevents it, and the elasticity of the said spring is always preserved. Attached to the bottom of this spring F there is a saddle fitted, hav-

ing its edges bent down on each side of the disk or plate, thereby preventing the spindle of the damper-valve from moving back or forward in the pipe. This saddle having an equal bearing on the even circumference of the disk by means of the spring, it holds it firmly in any position required for the adjustment of the damper-valve. The spring-box can be made either open or closed on top and bottom, (for appearance.) The even-edged circumference of the disk working smoothly around in the saddle, the damper-valve is turned to any angle and firmly held in that position.

This invention differs from other dampers in the following respect, viz: The disk has an even edge working in an even-bottomed spring-saddle. It can be turned either backward or forward to any degree; but the ordinary dampers having a notch-edged disk, can only be set at two points between full open and full shut, and the only means of holding the valve in its place being by means of a catch or holder working in a box pressing, by its own weight, on the notched plate; and in case of strong draft the weight of the catch or holder is insufficient to keep this valve in its place, and in course of usage the spindle cannot be held in its place either. This damper is adapted to horizontal as well as vertical pipes, as the action of the spring-saddle on the even-edged disk operates equally with the momentum of the valve. G is a plate fastened to the pipe A, through which the spindle passes, to take the wear of said spindle from the pipe.

Disclaiming all other parts of the damper and pipe,

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

1. The spring-box B, open or closed, fitted to the stove-pipe A, in combination with the spring F, saddle E, and spindle-plate G, substantially as specified.

2. The circular even-edged disk C, attached to the spindle of the damper, in combination with the saddle E and spring F, all operating substantially as and for the purpose specified.

Dated at Hamilton, Canada, this 28th day of May, A. D. 1874.

HENRY AUGUSTUS WHITE.

Signed in the presence of—

WM. BRUCE,
P. L. SCRIVEN.