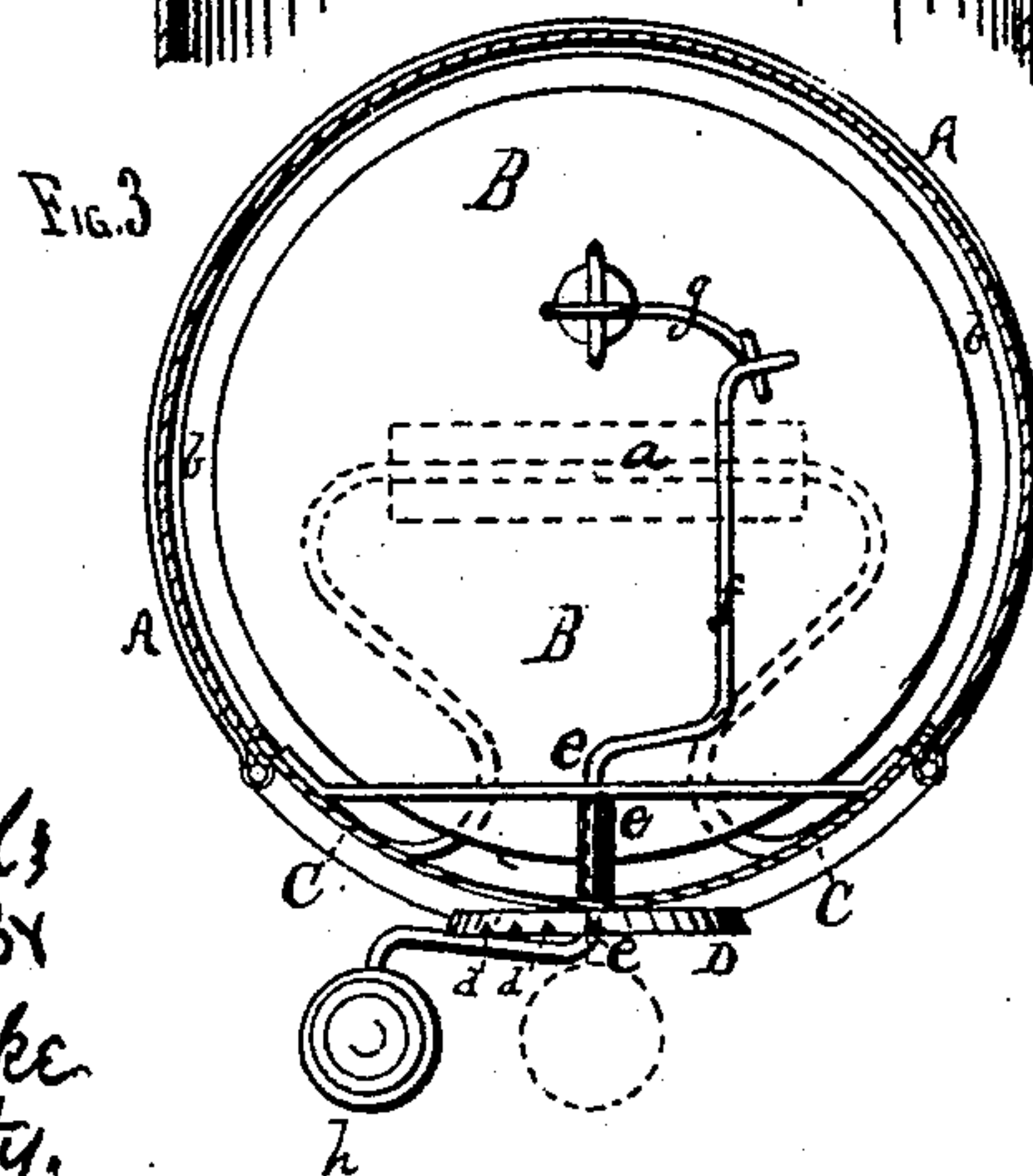
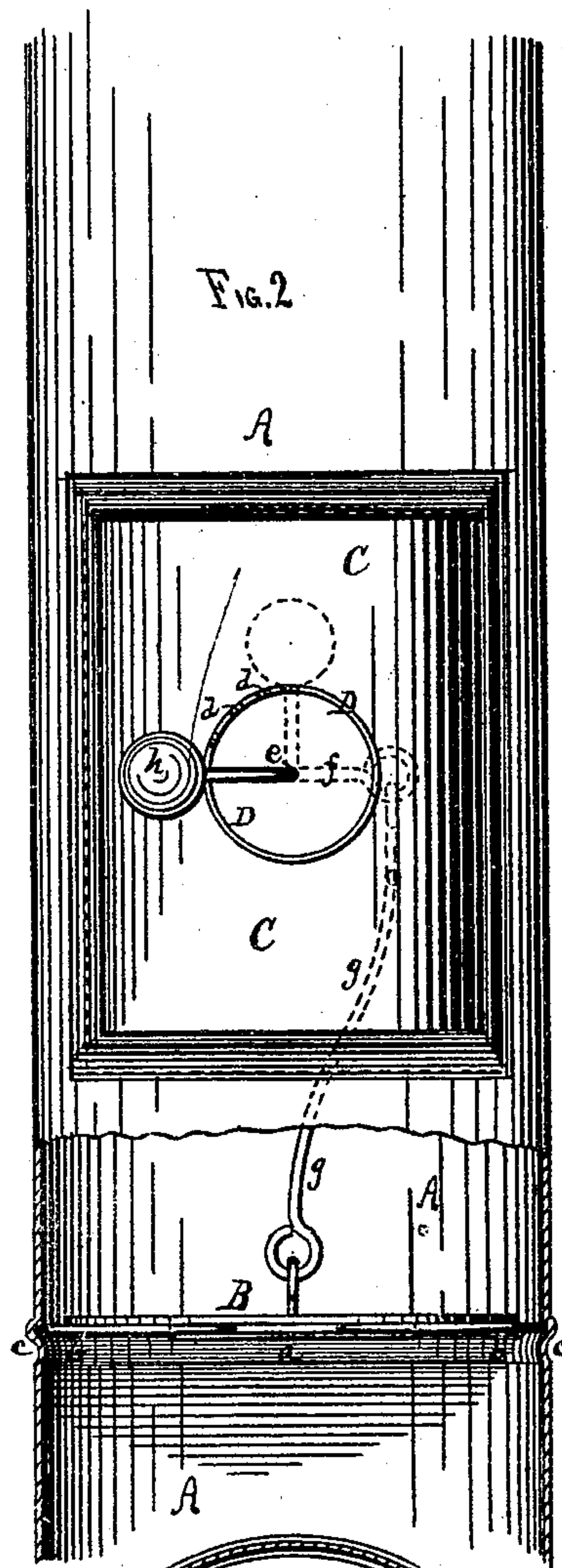
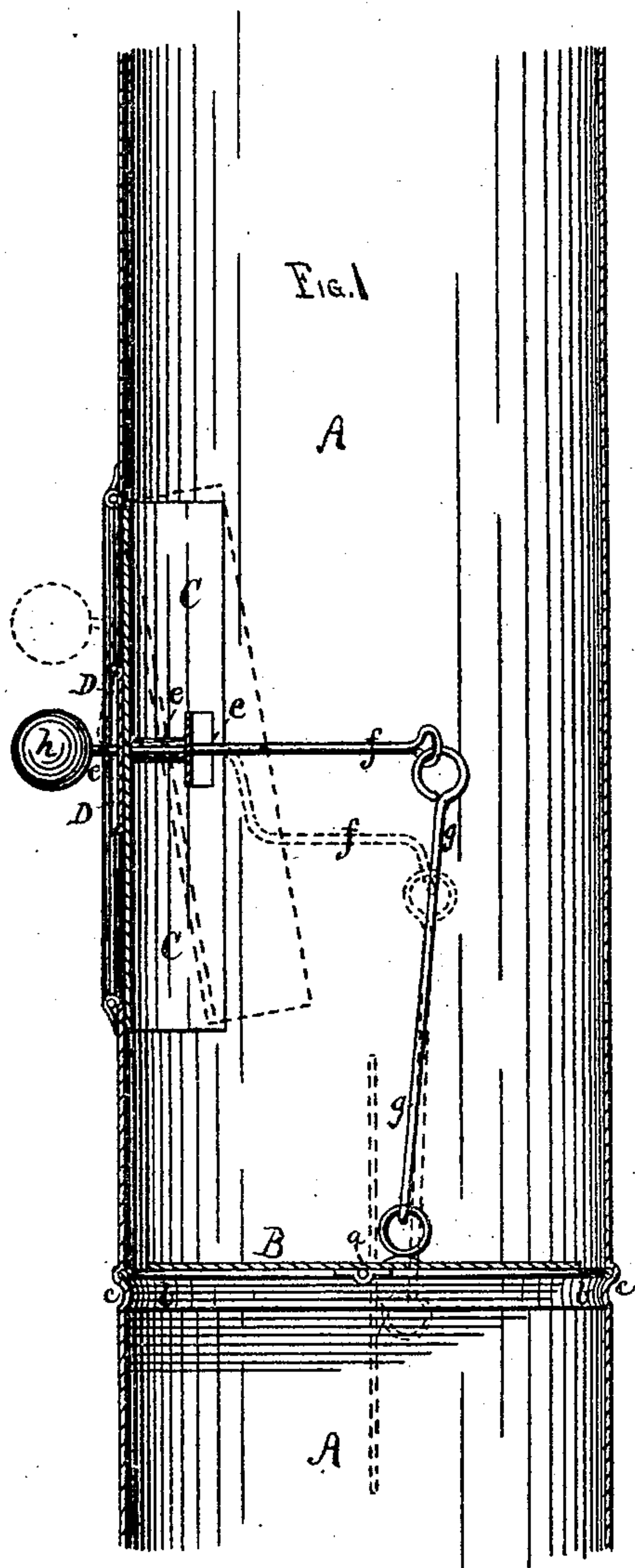


De W. C. BREED.
STOVE-PIPE DAMPER.

No. 184,752.

Patented Nov. 28, 1876.



WITNESSES
C. H. Woodward
T. H. Parsons.

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UNITED STATES PATENT OFFICE.

DE WITT C. BREED, OF BUFFALO, NEW YORK.

IMPROVEMENT IN STOVE-PIPE DAMPERS.

Specification forming part of Letters Patent No. 184,752, dated November 28, 1876; application filed March 1, 1876.

To all whom it may concern:

Be it known that I, DE WITT CLINTON BREED, of Buffalo, in the county of Erie and State of New York, have made certain Improvements in Stove-Pipe Dampers, of which the following is a specification:

This invention relates to an automatically-acting damper placed in the vertical pipe of a stove and acted on by a pneumatic valve; and the invention consists in the construction and arrangement of parts, as fully hereinafter described and claimed.

In the drawings, Figure 1 is a sectional side elevation of a section of stove-pipe with my improved damper therein. Fig. 2 is a front elevation, and Fig. 3 a plan.

A is the pipe, and B the damper, which is the usual circular disk made a little smaller in diameter than the pipe. This damper is hinged at *a* to a bent wire spring or ring, *b*, which is held in place in the pipe by being forced in from one end until it springs into the usual cavity formed by the molding or rib *c* upon the pipe, by which means it is easily but securely held in place without the necessity of cutting through the side of the pipe. C is a door or leaf, which is hinged at the top and swings inwardly, and is so made that it will, when closed, completely cover the opening in the front of the pipe. To the center of this door is secured a disk or plate, D, having its edges turned outward, and provided with notches *d d* at intervals. *e* is a wire or rod, which passes through the center of the disk D, and is turned into a crank at *f*, on the inside of the pipe, back of the door C, as shown. This crank is connected by another wire, *g*, loosely, to the damper, back of the center hinge *a*, so that when the knob *h* is turned the damper may be opened or closed. The shank of the knob *h* will act as a spring in connection with the plate, and will catch into the notches *d* and hold the damper in any position desired.

The object of the door C is this: If the damper is wide open, which will be the case when the knob is at its highest point, the door C, by being pressed in, will of course elevate the end of the crank *f*, and by that means raise the connecting-wire *g* and close the damper. If the door is forced in as far as it will go the damper will be entirely closed, and thus shut off the draft from the fire; or, if only partially opened, the damper will be only partially closed, this being regulated by the distance which the door is moved. By this arrangement the action of the outside air pressing upon the door C will regulate the position or action of the damper B, and thus act as a governor or regulator to the fire and reduce the consumption of fuel. It will be seen that it is self-acting, only requiring to be set on occasions when the draft through the chimney and pipe is regular, and it is regulated according to the force of the draft. When there is a disturbance in the current of air in the chimney the valve operates so that it is closed and the draft is equalized. On the cessation of the disturbing elements the governor opens the valve.

I claim—

1. In combination with pipe A, the disk-damper B, hinged to the wire frame *a b*, and operating the draft-door C by the connecting-rods *g e f*, substantially as specified.

2. The automatically-acting door C, hinged directly in the pipe A, and in combination with the damper B, substantially as and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

DE WITT C. BREED.

Witnesses:

J. R. DRAKE,
W. M. HAWKINS.