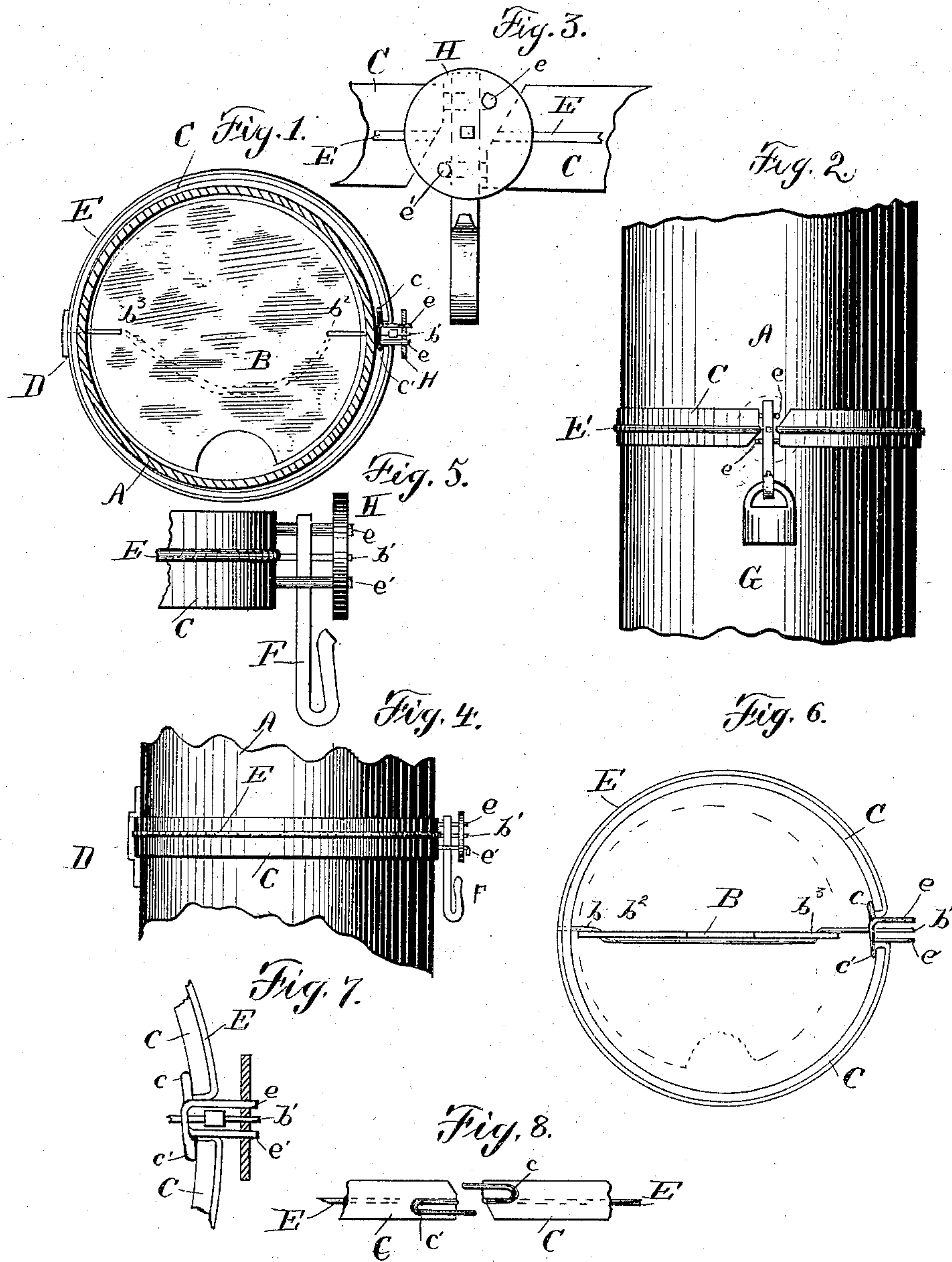


(No Model.)

J. GRIMM.  
STOVE PIPE DAMPER.

No. 317,992.

Patented May 19, 1885.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOSEPH GRIMM, OF QUINCY, ILLINOIS, ASSIGNOR OF PART TO MILLER T. GREENLEAF, OF SAME PLACE.

## STOVE-PIPE DAMPER.

SPECIFICATION forming part of Letters Patent No. 317,992, dated May 19, 1885.

Application filed August 16, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH GRIMM, residing at Quincy, in the county of Adams and State of Illinois, have invented certain new and useful Improvements in Stove-Pipe Dampers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to automatic dampers for stove-pipes or similar metallic flues; and it consists in the details of construction and combination of parts, hereinafter pointed out and claimed.

The object of the invention is to produce a damper of the class named which shall be simple in construction and reliable in operation.

In the drawings, Figure 1 is a horizontal section through the pipe just above the damper and attachments. Fig. 2 is an elevation of the damper mechanism applied to pipe. Fig. 3 is an enlarged face view of the meeting ends of the damper, collar, and connections. Fig. 4 is a side elevation corresponding to Fig. 2. Fig. 5 is an enlarged detail of same. Fig. 6 is a plan of the damper, collar, and rod detached from pipe. Fig. 7 is a detail of same with disk and lever attached. Fig. 8 is an elevation of the collar and looped ends of the wire.

A indicates the stove-pipe, which contains the pivoted damper B. The wire or rod  $b\ b'$ , which forms the pivot, extends through holes in the sides of the pipe, one end,  $b'$ , projecting for a little distance and being flattened. The wire passes through holes  $b^2\ b^3$  in the damper, and extends on opposite sides thereof, being turned to one side on the back side of the damper, (see dotted lines, Fig. 1,) so that the damper will oscillate when the end  $b'$  of the rod is twisted.

An open-sided collar or sleeve, C, preferably of thin brass, goes round the pipe, the two ends of the collar coming near the projecting pivot  $b'$ . The collar may be held to the pipe by a cleat or rivet, as by cleat D.

Outside the collar C a wire, E, passes round the pipe. The wire is looped under the ends

of the collar C at  $c\ c'$ , and the ends of the wire are turned outward at  $e\ e'$ , the end  $e$  being a little above the end  $e'$ .

A lever, F, having a polygonal hole therein, is on rod  $b'$ , so as to turn said rod or pivot when the lever swings. The rod passes to the right of one of the projecting wires  $e\ e'$  and to the left of the other, so that it will draw the wire E tightly around the pipe; but when the wires are pulled the lever F will be swung on its pivot, and will turn the pivot (and consequently the damper) with it.

A weight, G, may be suspended from the lever, should its own weight be insufficient to open the damper.

A disk, H, having three holes therein, is passed over the projecting ends of rod  $b'$  and wires  $e\ e'$ , and serves to hold all in place. The wires may be bent or riveted down outside the disk or not, as desired.

The wire E, being looped with a return-bend around the end of collar C, requires no other fastening thereto.

The damper being open, as in full lines, Fig. 6, an increase of heat will tend to expand the collar C, as well as the wire outside of it. This causes the ends  $e\ e'$  of the wire to draw in opposite directions, and so turns the pivot by means of the pull on the lever. This closes the damper, or tends to close it. As the heat grows less the contraction will permit the weight G to open the damper again.

I claim—

1. The combination, with a stove-pipe, of a pivoted damper therein, one of the pivots projecting outside the pipe, a collar surrounding the pipe, and a lever on the damper-pivot engaged by projections from the ends of the collar to turn the damper, substantially as described.

2. The pipe, the pivoted damper in the pipe, a collar surrounding the pipe, a wire surrounding the collar and secured thereto by return-bends, a lever on the damper-pivot, and projections from the wire engaging opposite sides of said lever, all in combination, substantially as described.

3. The combination, with the stove-pipe

and damper pivoted on a transverse axis therein, of a lever secured to the damper-pivot, and expansion-bars outside the pipe and surrounding the same, and engaging said  
5 lever at opposite sides of the pivot.

4. The combination, with the pipe, of a pivoted damper therein, a lever secured to one pivot of the damper, expansion-rods en-

gaging said lever at opposite sides of the pivot, and a perforated retaining-disk outside to the lever, substantially as described.

JOSEPH GRIMM.

Witnesses:

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