

WILLIAM J. KEEP.
Stovepipe-Damper.

No. 121,877.

Patented Dec. 12, 1871.

Fig. 1.

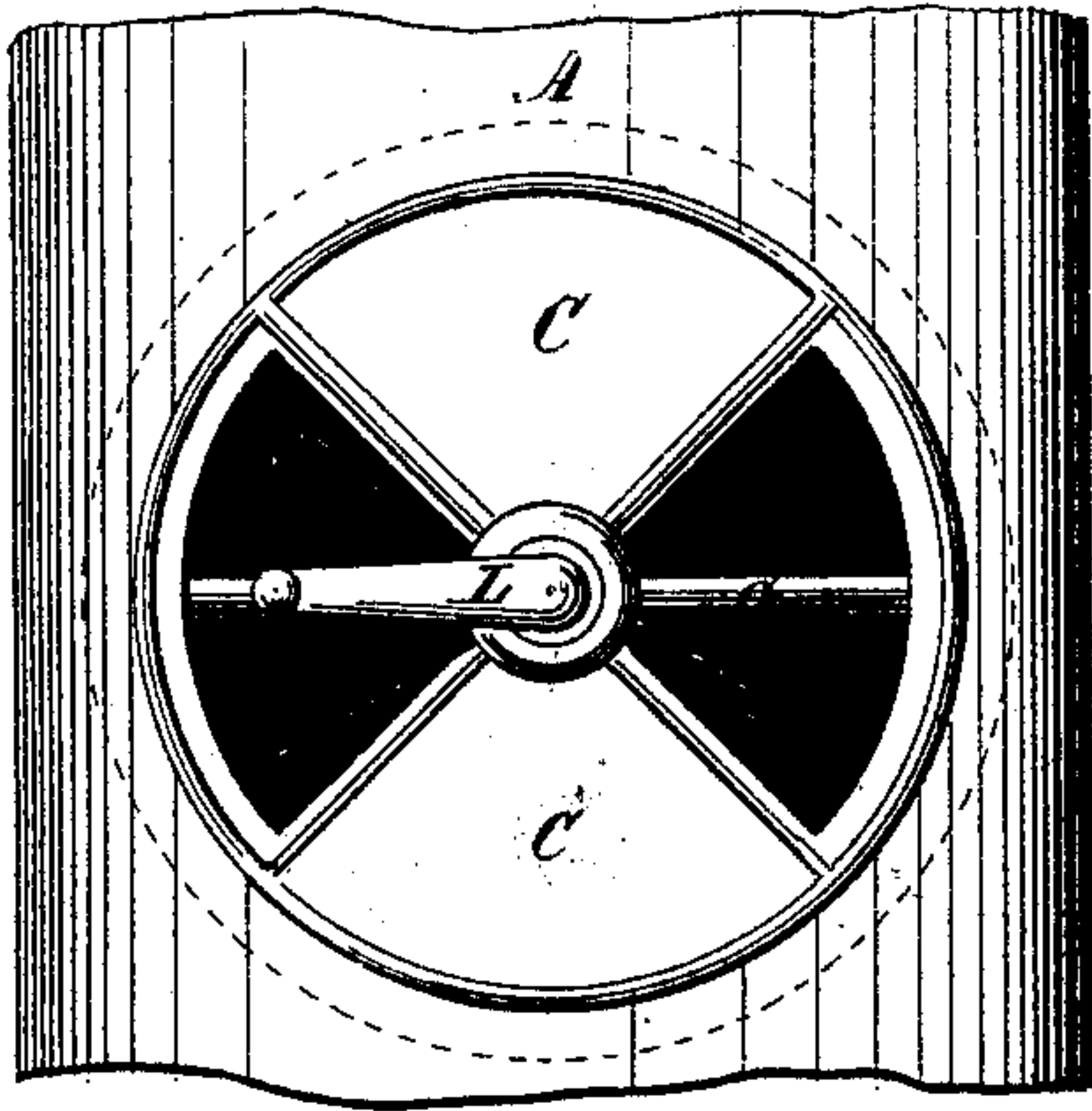


Fig. 2.

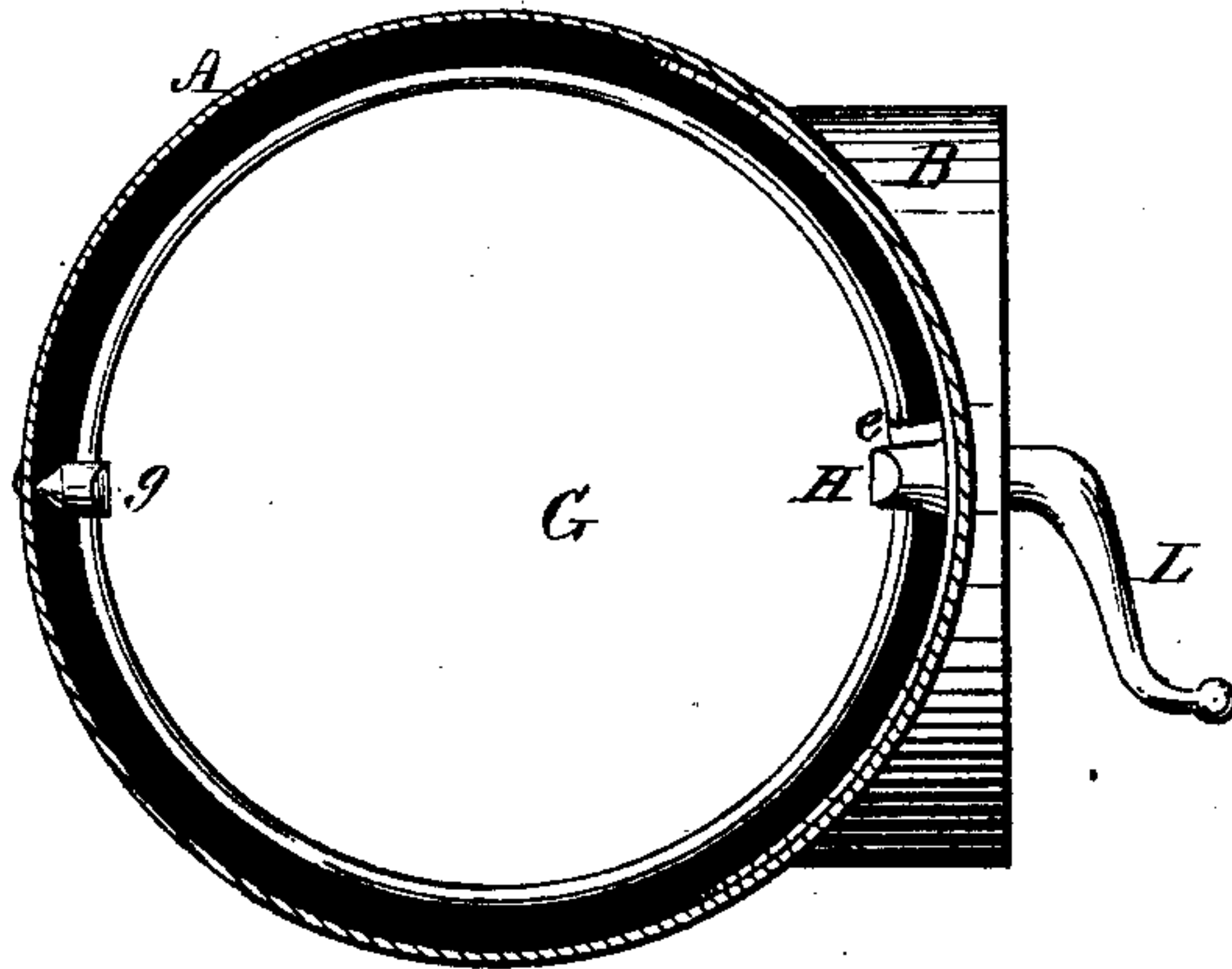


Fig. 3.

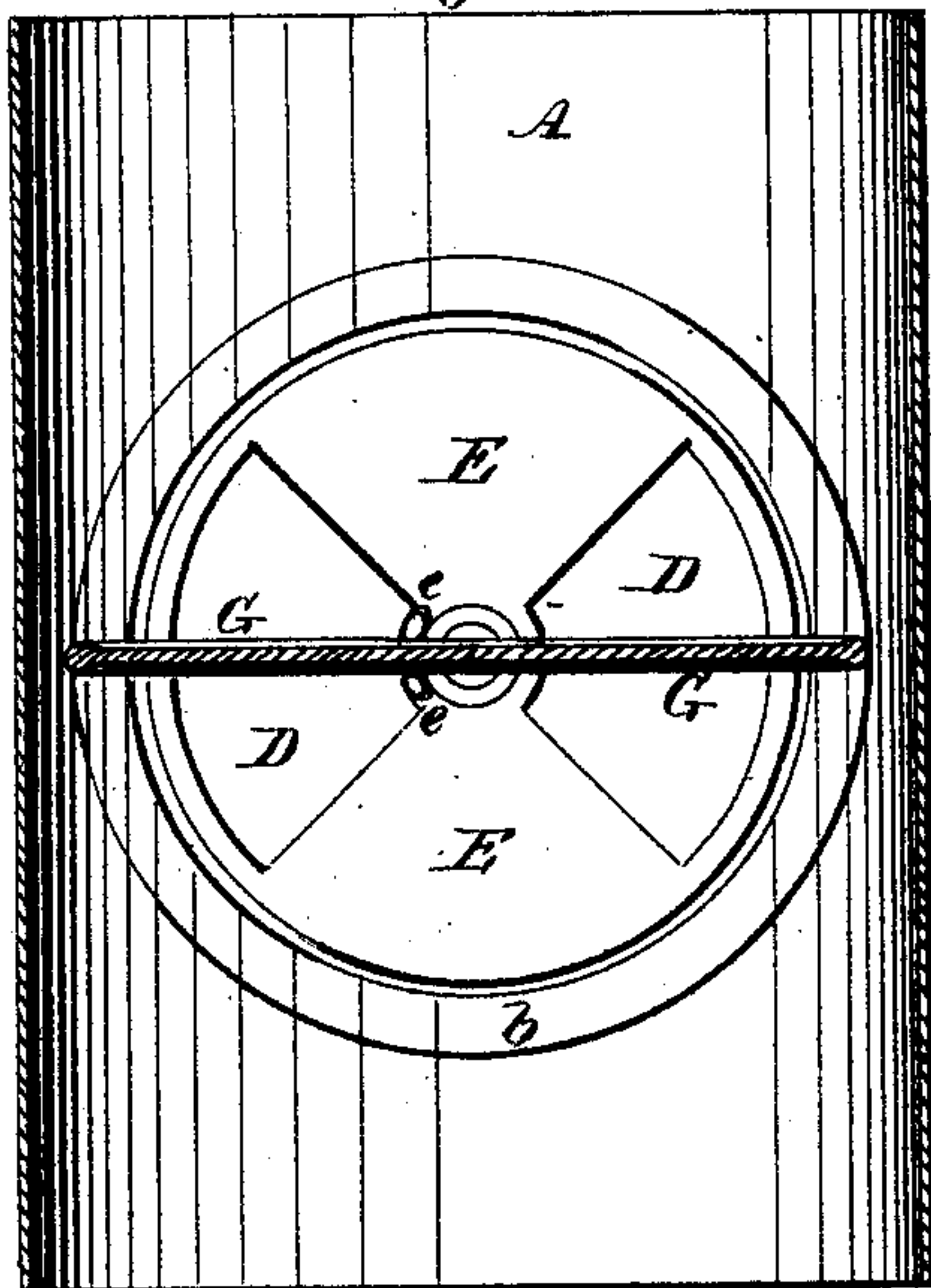


Fig. 4.

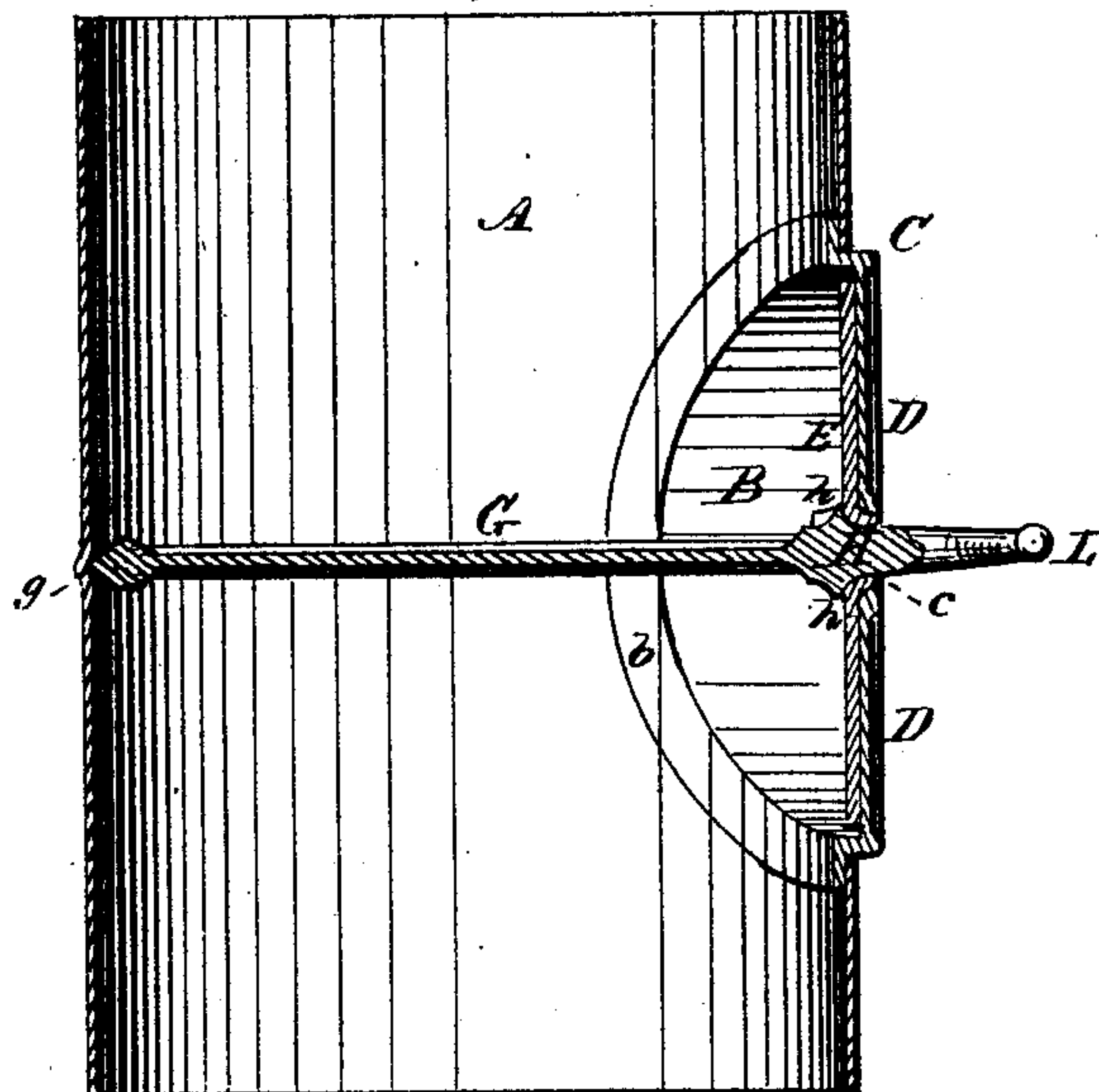


Fig. 7.

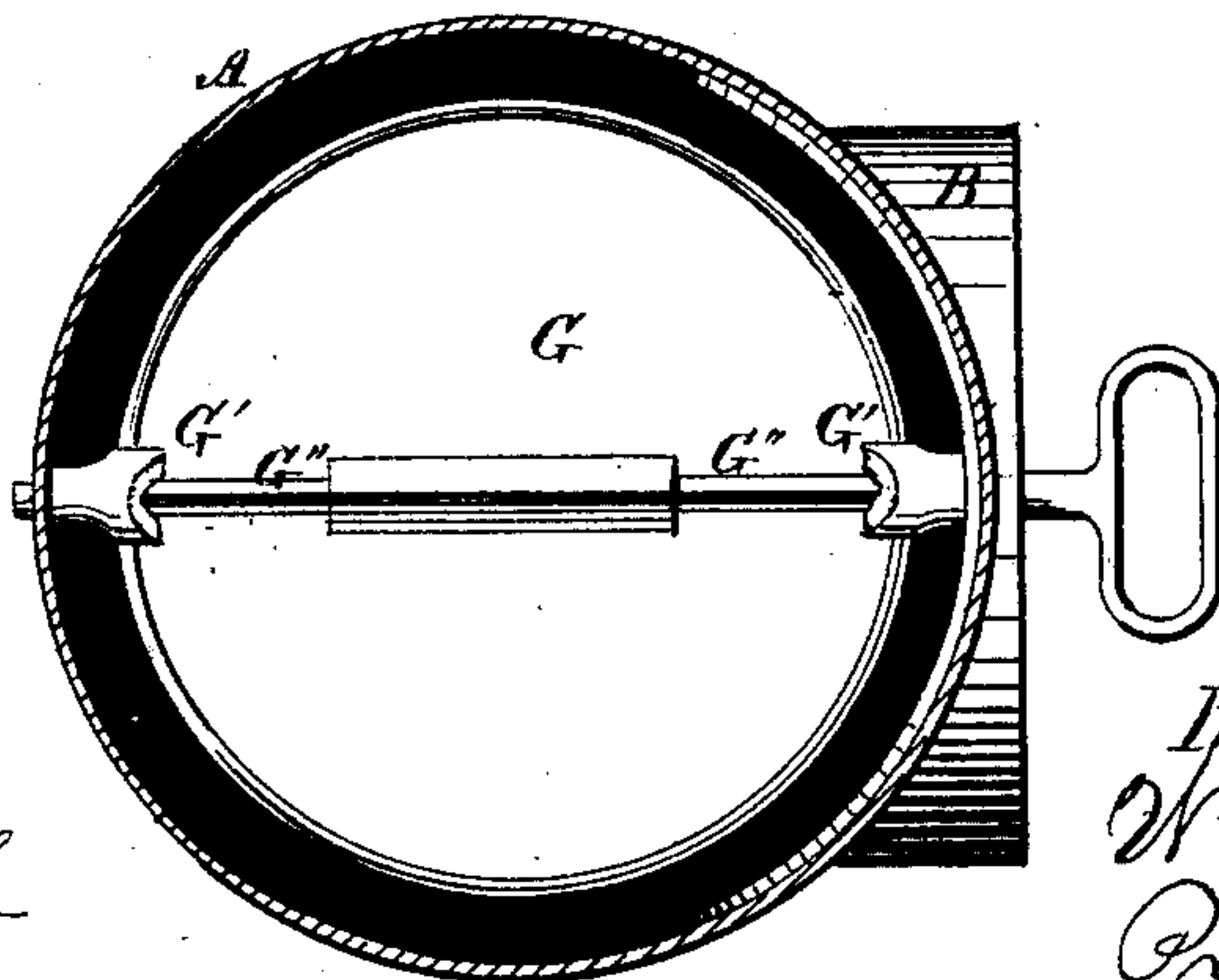


Fig. 5.

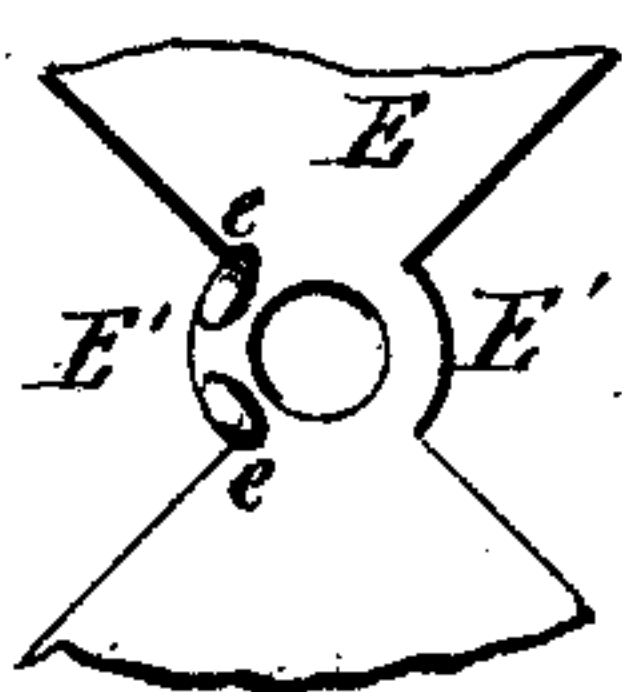
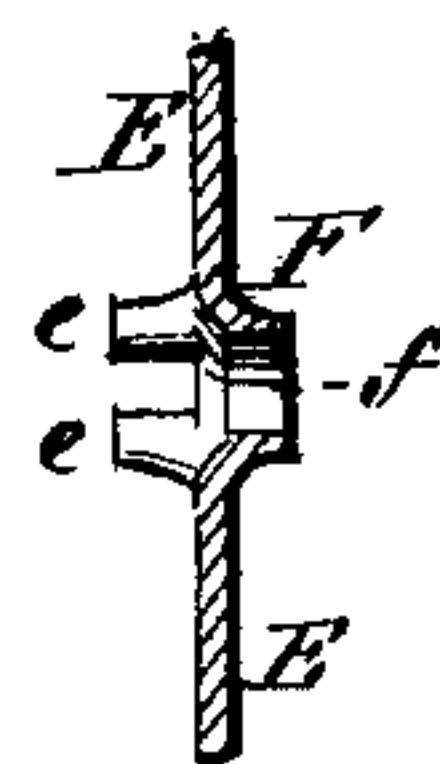


Fig. 6.



Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM J. KEEP, OF TROY, NEW YORK.

IMPROVEMENT IN STOVE-PIPE DAMPERS.

Specification forming part of Letters Patent No. 121,877, dated December 12, 1871.

To all whom it may concern:

Be it known that I, WILLIAM J. KEEP, of Troy, in the county of Rensselaer and in the State of New York, have invented certain new and useful Improvements in Stove-Pipe Dampers; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a front elevation of my improved device. Fig. 2 is a plan view of the upper side of the same. Fig. 3 is a central longitudinal section on the line *x x* of Fig. 2. Fig. 4 is a similar section on the line *z z* of Figs. 1 and 2. Fig. 5 is a plan view of the inner side of the central portion of the register. Fig. 6 is an edge view of the same, and Fig. 7 is a plan view of the upper side of a modification of my entire device.

Letters of like name and kind refer to like parts in each of the figures.

My invention is an improvement in combined dampers and ventilating registers; and it consists principally in a register-collar fitted into its opening from within the pipe, substantially as and for the purpose hereinafter specified. It consists, further, in a register-collar held in position by means of the outward pressure of the damper, substantially as is hereinafter shown and described. It consists, further, in a register having a central hub or boss, which fits into and projects through a corresponding opening in the collar, substantially as and for the purpose hereinafter set forth. It consists, further, in a register held in position against its seat or the collar by means of the pressure of the damper, substantially as is hereinafter shown. It consists, further, in the peculiar construction of the register, by means of which the same is combined with the damper, substantially as is hereinafter specified. It consists, further, in a register and damper so constructed and combined as that both may be operated by one crank-handle, substantially as is hereinafter shown. It consists, finally, in the combined register and damper as a whole, substantially as and for the purpose hereinafter set forth.

In the annexed drawing, A represents a section of stove-pipe, provided in and through one side thereof with a circular opening, through which is inserted from the interior a collar, B, having upon its inner edge a flange, *b*, that bears against the inner side of said pipe adjacent to

said opening and prevents said collar from passing outward. The front side of the collar B is inclosed in the usual manner and provided within its face C with two or more sector-shaped openings, D, and with a round central opening, *c*, for the reception of damper-crank, &c., as is hereinafter explained. Fitted within the collar B, and resting against the inner side of the face or seat C, is a register, E, which corresponds in size and shape to said seat, and is provided with openings E' similar to its sector-shaped openings D. A central hub or boss, F, corresponding in size and shape to the opening *c* within said seat, fits into the same and furnishes a bearing, upon which said register revolves, said revolutions being concentric to the circle of said seat. A round central opening, *f*, provided in and through the boss F, and two lugs, *e*, projecting horizontally inward from the inner face of the register upon either side of a radial line passing through the center of one of the openings, E', completes the register, which is held in position and operated by the hereinafter-described means. A damper, G, provided upon one side with a pointed pivoted bearing, *g*, and upon its opposite side with a second bearing, H, having nearly parallel sides and a shoulder, *h*, at its inner end, is placed in position within the pipe by passing the end of the bearing H through the opening within the register and pressing together the sides of said pipe so as to increase its dimensions from front to rear until the rear pivot will pass freely downward to position, after which a slight blow from a wooden mallet upon the exterior of said pipe immediately over said conical pivot will indent the latter into the wall of the former so as to form a bearing for said pivot. In placing the damper in position its edge is inserted between the lugs *e* so as to loosely connect said damper to or with the register and cause them to maintain the relative positions shown in the drawing, one part being entirely closed when the other part is wholly open. In constructing the damper the distance between the end of the conical pivot *g* and the shoulder *h* of the bearing H is slightly greater than the distance between the inner face of the register at its center and the corresponding opposite portion of the pipe, so that when said damper is in position said pipe will be sufficiently distended to cause an inward pressure upon the bearings of said damper and hold the latter, the register

and the collar, firmly in place while at the same time allowing said damper and register to revolve with sufficient freedom. The end of the forward bearing H, being prolonged and given the form of a crank, L, furnishes a means whereby both damper and register may be operated at one and the same time.

Although the form and construction of the damper above described is preferred, it will be readily seen that those of other construction may be employed without changing the principle of operation. As an instance of one modification, Fig. 7 shows a damper, G, provided with hollow bosses G', through which pass a rod, G'', that forms the axial pivots upon which said damper revolves. By so constructing the bosses G' as that they shall slightly distend the pipe it will be seen that the inward pressure of the latter will not only hold said damper at any desired angle of adjustment, but also will preserve the register and its collar in their relative positions upon or within said pipe. The special advantages obtained by this construction of the device are, first, the several parts are readily cast and require no fitting up before being combined and placed within the pipe; second, the cost of the entire device is materially reduced by reason of the simplicity of its parts; and third, the combined damper can be more easily and quickly applied to a pipe than would be possible in cases where the collar is inserted from without and held in position by rivets or other equivalent means.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. A register-collar fitted from within into an opening in a pipe, substantially as and for the purpose specified.

2. A register-collar fitted from within into an

opening in a pipe and held in position by means of outward pressure, substantially as and for the purpose shown.

3. In combination with a register-collar provided with a central opening, a register having a central boss which corresponds to and fits into said opening, substantially as and for the purpose set forth.

4. A register placed upon or against the inner side of the collar and held in position by the outward pressure of the damper, substantially as and for the purpose shown and described.

5. The register E provided with the central opening f, in combination with the damper G provided with the axial bearing H, substantially as and for the purpose specified.

6. In combination with the register E and damper G, the lugs e, substantially as and for the purpose shown.

7. In combination with the register E and damper G, the crank L, connected with and operating both of said parts, substantially as set forth.

8. The hereinbefore-described device as a whole, consisting of the collar B provided with the face or seat C, openings D and e, and flange b, the register E provided with the boss F, central opening f, and lugs e, the damper G provided with the bearings g and H and the crank L, when the several parts are constructed as shown, and combined with each other and with the pipe, substantially as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of October, 1871.

WILLIAM J. KEEP.

Witnesses:

CHARLES H. VAN ARNAM,
CHAS. H. HAZARD.

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