

(No Model.)

W. H. BERGER.
STOVE PIPE DAMPER.

No. 464,846.

Patented Dec. 8, 1891.

Fig. 1.

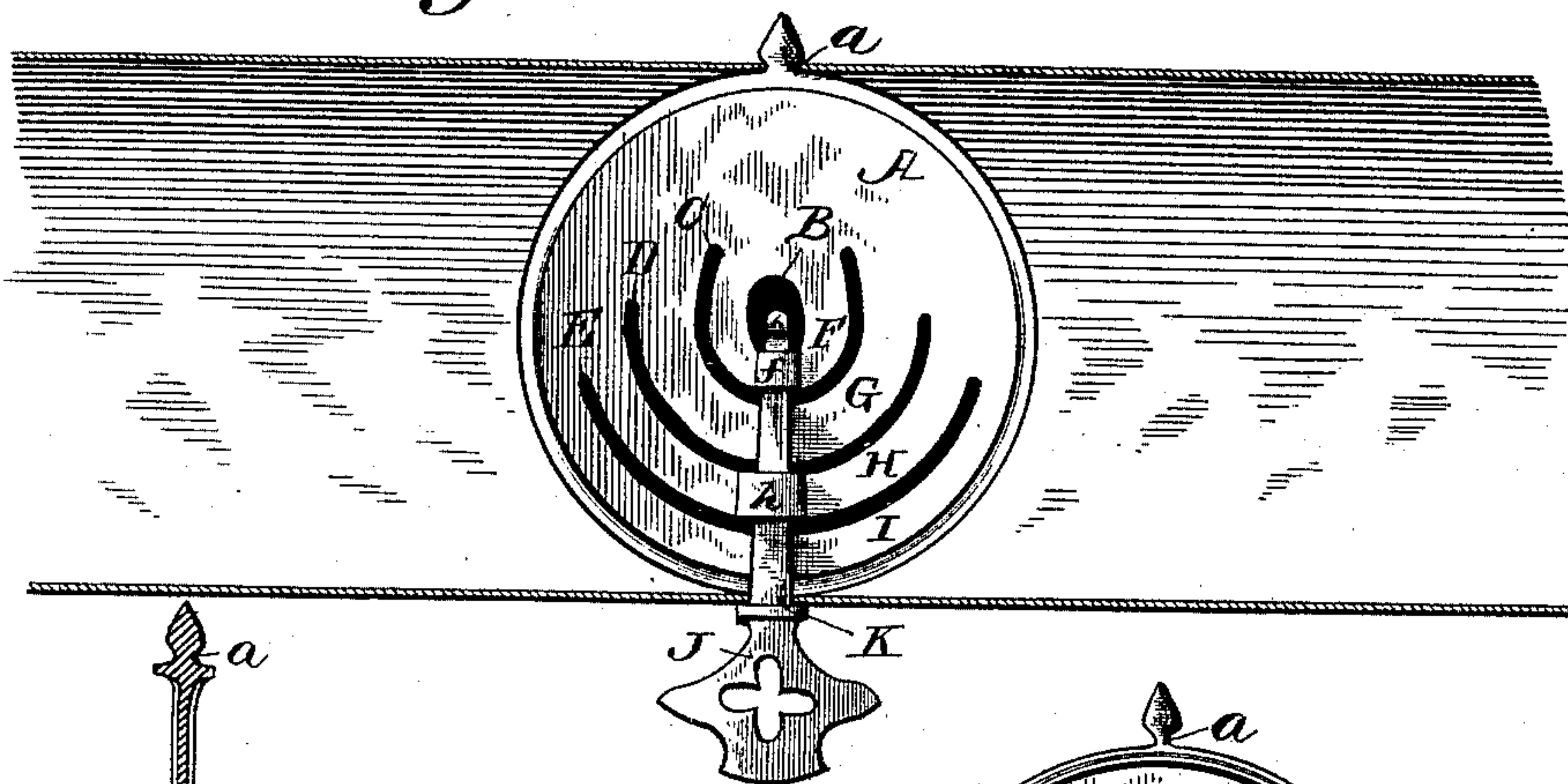


Fig. 2.

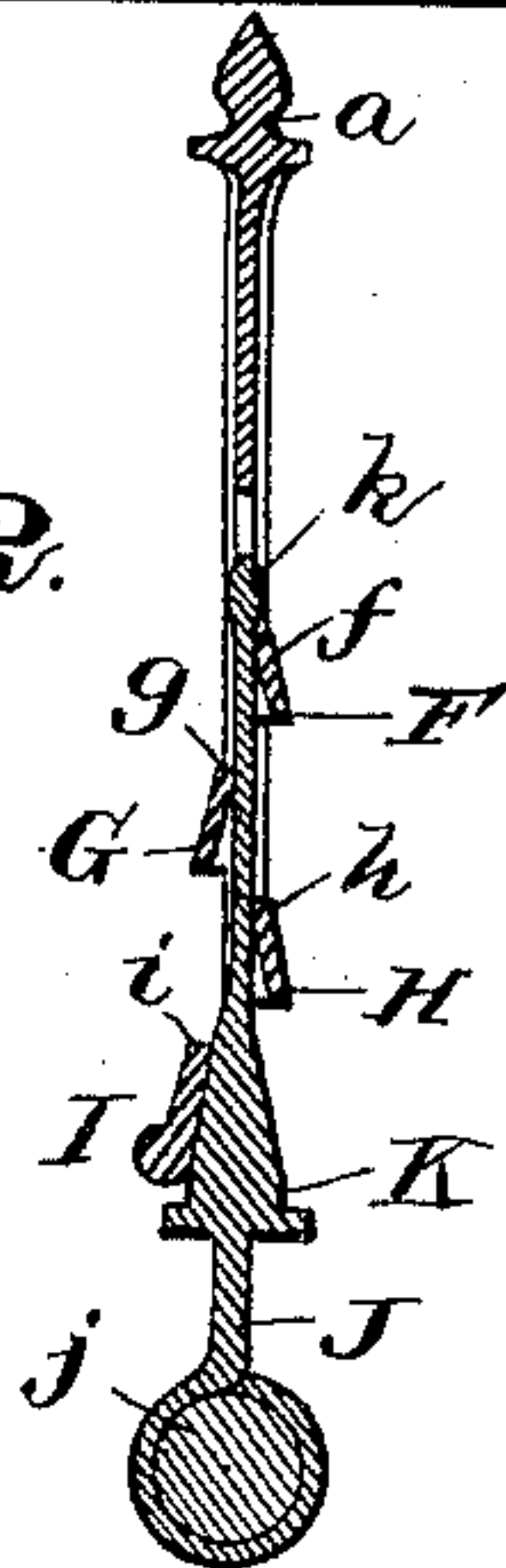


Fig. 3.

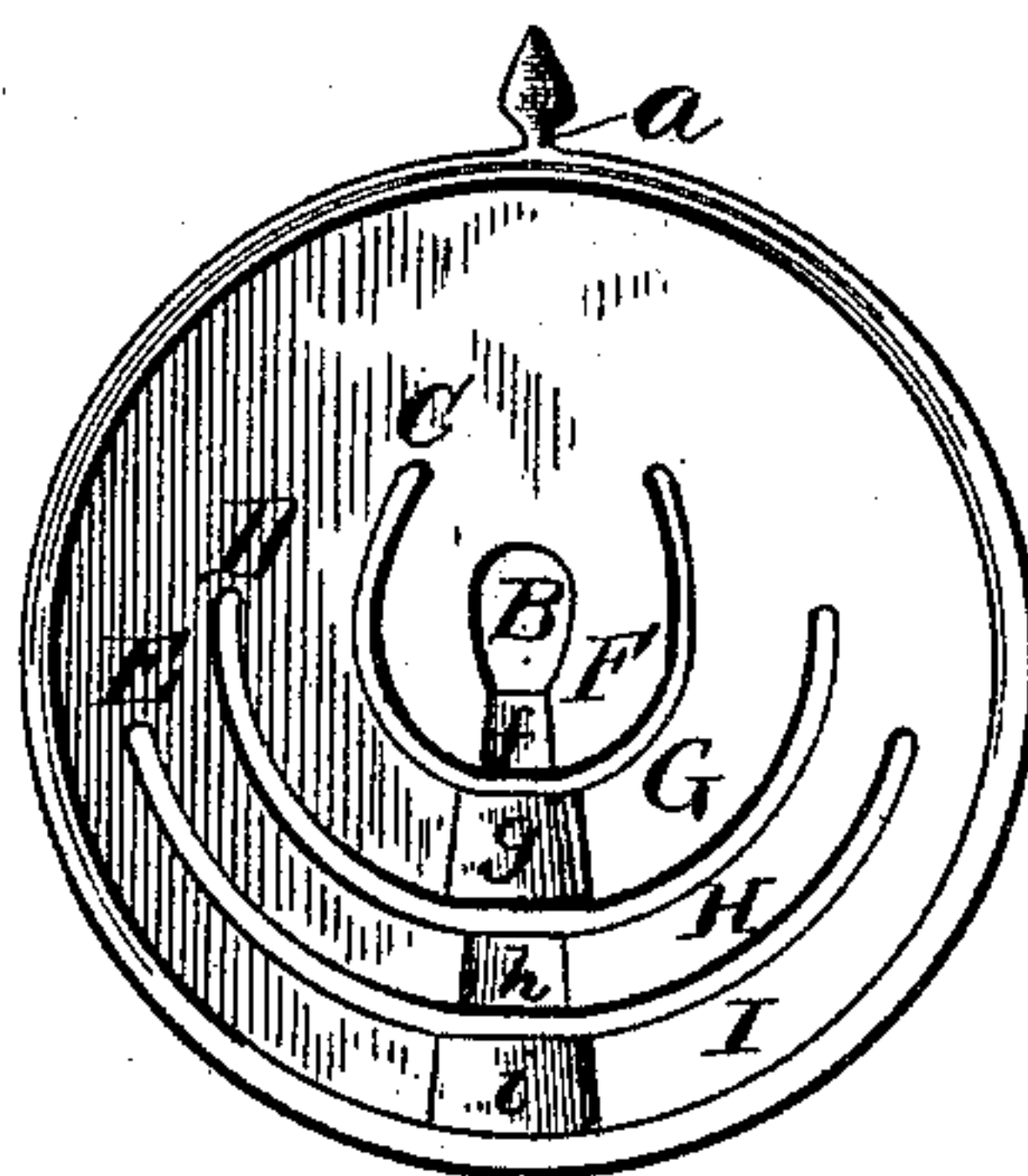


Fig. 5.

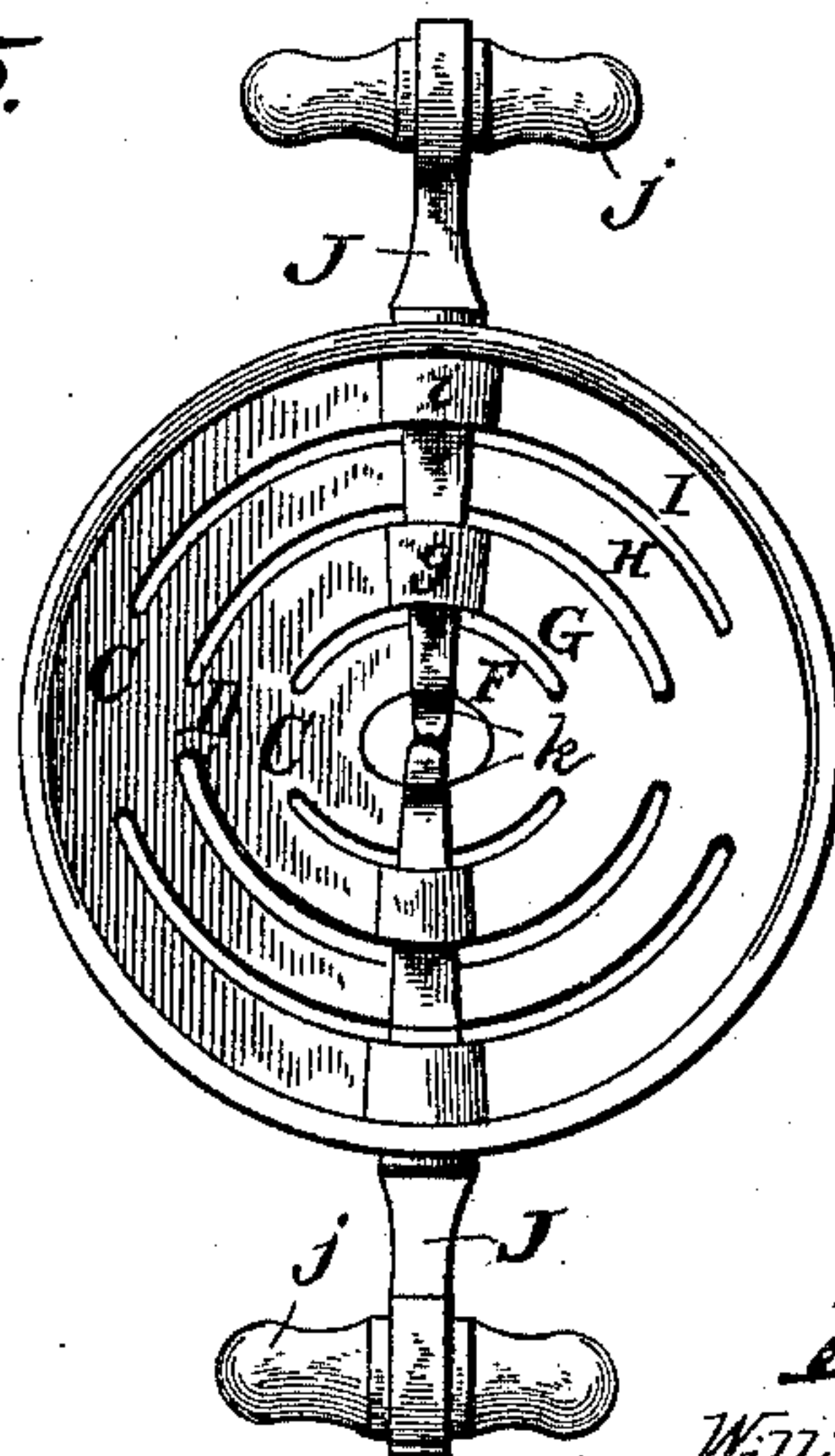
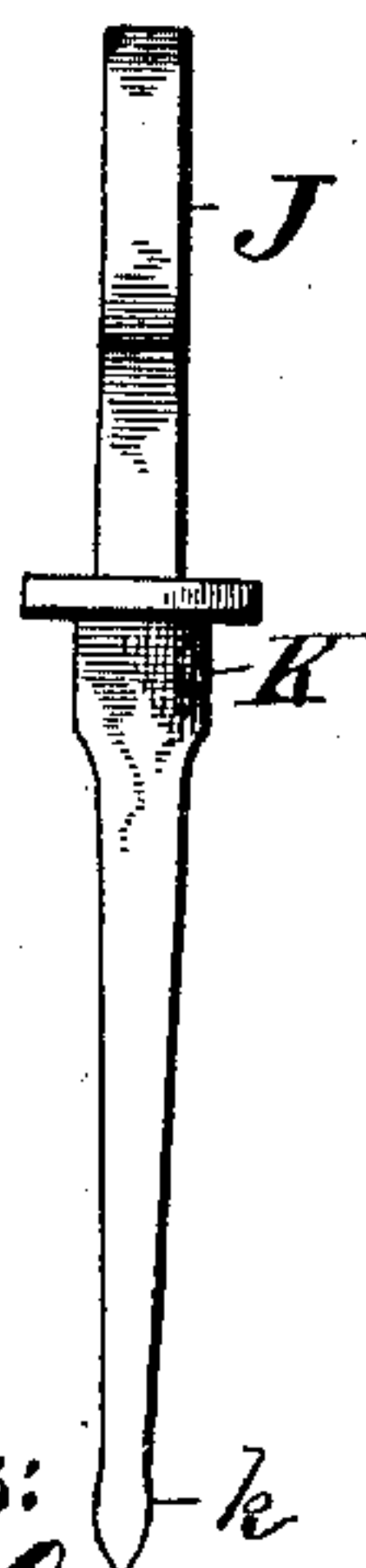


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM H. BERGER, OF WYNCOTE, PENNSYLVANIA.

STOVE-PIPE DAMPER.

SPECIFICATION forming part of Letters Patent No. 464,846, dated December 8, 1891.

Application filed September 10, 1891. Serial No. 405,315. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. BERGER, a citizen of the United States, residing at Wyncote, in the county of Montgomery and State of Pennsylvania, have invented certain new and useful Improvements in Stove-Pipe Dampers; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form part of this specification.

My invention has relation to dampers for stove-pipes, and has for its object the provision of a damper of novel construction adapted to be placed in position in a pipe speedily and easily and without the use of special tools or the nuts, springs, turn-buckles, and such like contrivances ordinarily employed.

My invention has for its object the provision of a novel rod for a damper and of means for attaching the rod and damper together, so as to avoid the necessity of employing screw-threads, nuts, and such like expensive and troublesome devices.

In carrying my invention into effect I provide a damper-plate consisting of a single plate of metal formed with substantially parallel curved slots dividing one side of the plate into parallel curved spring-bands, and I provide a handle or rod consisting of a tapered piece of metal which is forced between or alternately over and under the spring-bands and is held in position by the resiliency of the same. The damper and rod or handle so constructed comprise but two pieces of metal, and while of simple and inexpensive construction can be readily and speedily secured together and in position in a pipe, and will meet every requirement as well as or better than more expensive and complicated devices.

My invention consists in the novel construction, combinations, and arrangements of parts hereinafter described and claimed.

Referring to the accompanying drawings, Figure 1 is a sectional view of a stove-pipe, showing my improved damper in position therein, the damper being shown in plan view. Fig. 2 is a sectional view of the damper. Fig. 3 is a plan view of the damper with the rod or handle removed. Fig. 4 is a plan view of

the rod or handle, and Fig. 5 is a plan view of a modification.

A designates the damper, which consists of a circular plate of metal, preferably cast-iron, and having formed at one side an integral pin or journal *a*, which projects through the side of the stove-pipe and forms a journal for the damper on that side. A hole B is formed near the middle of the plate A, and to one side of said hole are formed three curved slots C D E. These slots are substantially parallel and are concentric with the central hole B; but they spread apart somewhat at the ends, so as to give a greater width of metal between them at that point. The slots C D E divide the plate into four spring-bands F G H I, which, while they are integral with the main body of the damper-plate, are still somewhat elastic and serve, as will be presently described, to hold the rod or handle in position by their resiliency. The bands F and H are formed with loops or bends *f h*, which pass under the rod or handle, and the bands G and I are formed with bends or loops *g i*, which pass over the same. The loops or bends on all the bands are slightly flared on their inner sides and on that edge which is toward the handle, as shown in the sectional view, Fig. 2, and the plan view, Fig. 3, the object of so forming them being to assist in guiding the point of the rod or handle in passing the same into position between the bands. The loop of the outermost band is cored out to receive the round part of the rod or handle, which round part forms the journal on that side of the damper.

J designates the rod or handle of the damper, said rod or handle being preferably a single piece of metal, as shown in Fig. 1, although it may have a non-conducting end *j*, as shown in Fig. 3, if found desirable. This handle or rod is formed with a round portion K, which, as before stated, forms a journal for the damper on one side, the rest of the rod being square or substantially square in cross-section and tapering toward its inner end. The outer end of the rod is of any desired or required form and serves as a handle by means of which the damper may be turned, and the inner end or point is formed with a lug or rounded lump *k*, which, when the rod is in

position, rests within the inner band F of the plate A and in the hole B, the purpose of said lug or lump being to retain the rod against lateral movement due to the ordinary use of the damper.

In the modified form shown in Fig. 5 the curved slots, the spring-bands, and the handle on one side of the damper are duplicated on the other side, the damper being thus provided with two handles, one on each side, and the pin or journal *a* being dispensed with.

To put the handle and damper in position, it is only necessary to place the damper in position inside of a pipe, holes being provided for the passage through the sides of the pipe of the journal *a* and the handle J, and the latter is then pushed into position over the bands F H and under the bands G I and until the lug or lump *k* is beyond the inner edge of the band F. The bands F G H I have considerable elasticity, even if the damper-plate is made of cast-iron, and the resiliency of the bands serves to firmly hold the rod in its proper position.

Having fully described my invention, I claim—

1. In a damper for stove-pipes, the combination, with a damper-plate provided with three or more slots dividing the plate into three or more spring bands or sections, of a handle or rod passing alternately over and under said bands or sections, substantially as described.

2. A damper-plate having curved slots dividing the plate into bands or sections, said bands or sections being provided with loops or bends for the reception of a handle or rod, substantially as described.

3. In a damper for stove-pipes, the combination, with a damper-plate formed with integral spring-sections, of a rod or handle adapted to be passed alternately over and under said sections and having a lump or lug adapted to engage with the edge of one section, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of August, 1891.

WILLIAM H. BERGER.

Witnesses:

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N. F. CLAY.