

J. GRABNER.
Heating Drum.

No. 69,798.

Patented Oct. 15, 1867.

Fig. 1.

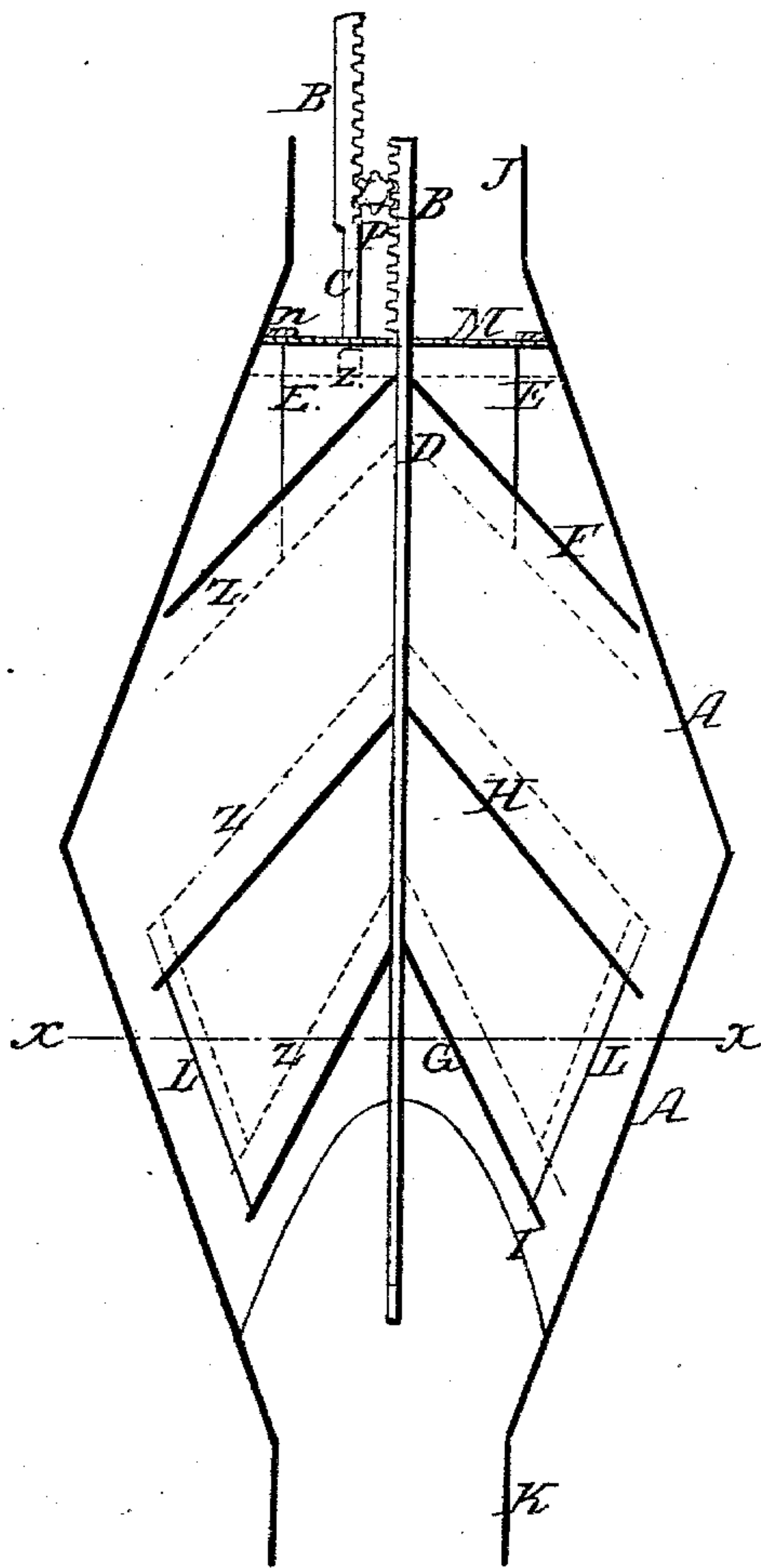


Fig. 2.

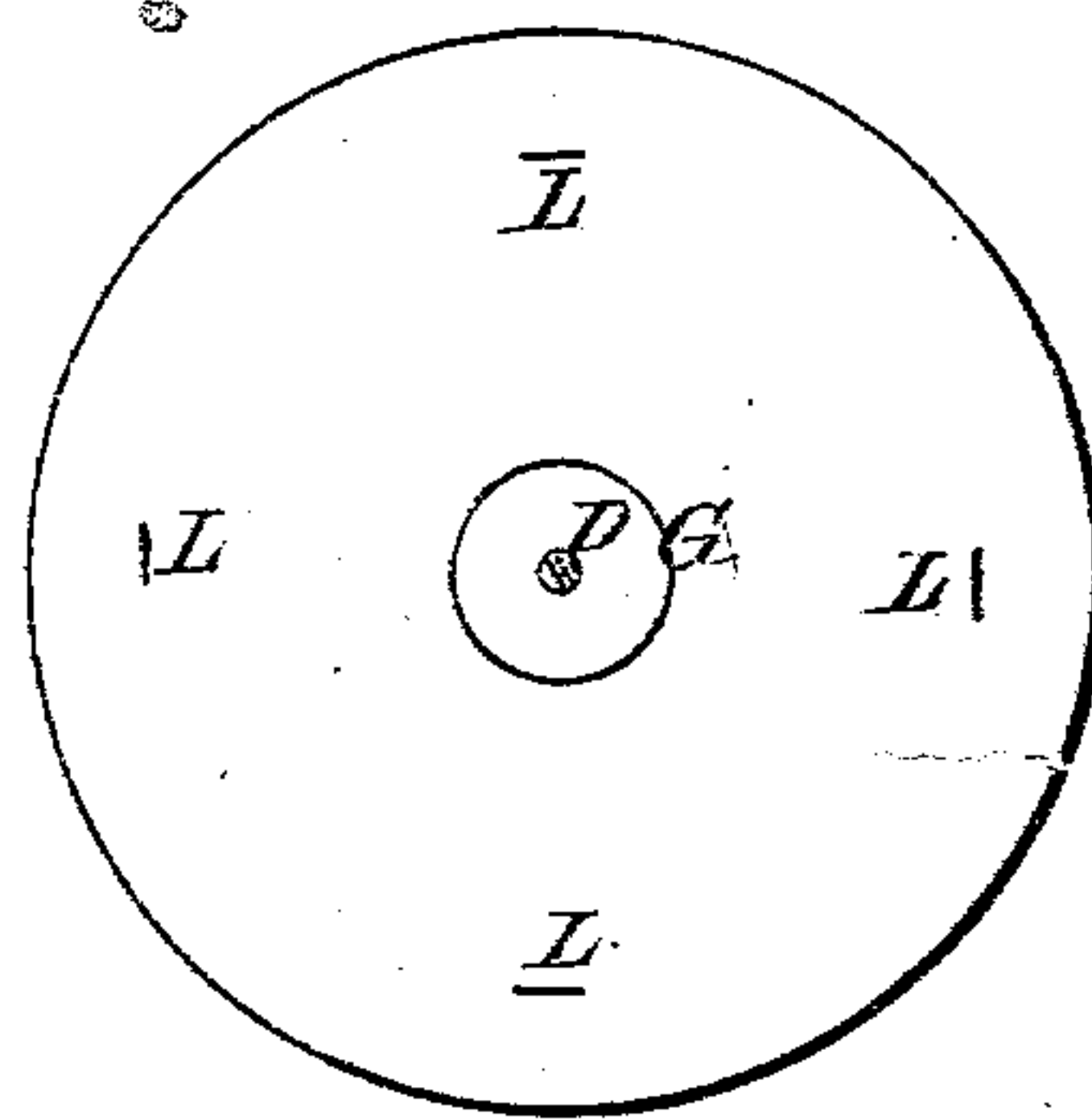
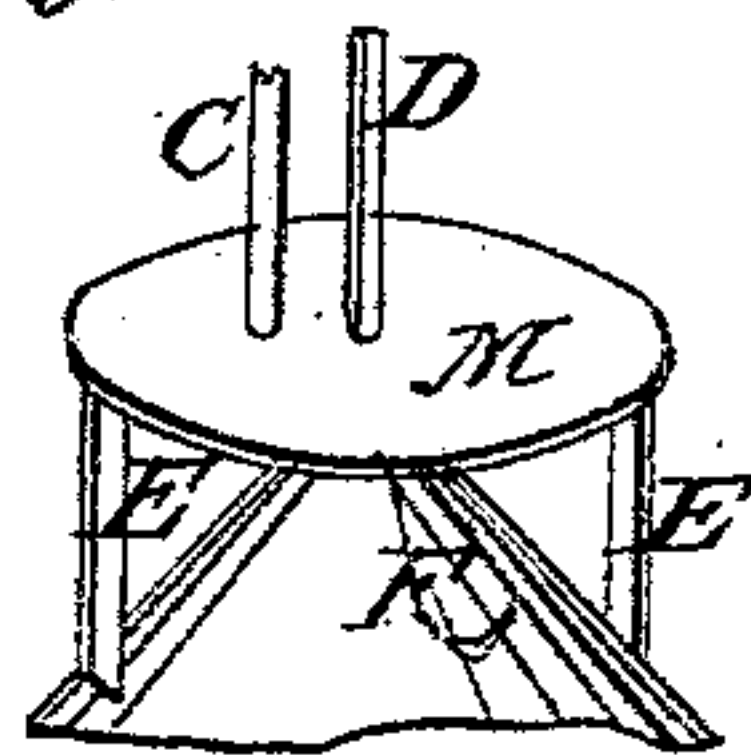


Fig. 3.



witnesses.

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United States Patent Office.

JOHN GRABNER, OF WARSAW, INDIANA.

Letters Patent No. 69,798, dated October 15, 1867.

HEAT-RADIATING ATTACHMENT FOR STOVE PIPES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN GRABNER, of Warsaw, in the county of Kosciusko, and State of Indiana, have invented an improved Heat-Radiator; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings and letters of reference marked thereon, making a part of this description, in which—

Figure 1 is a central sectional elevation of my heat-radiator.

Figure 2, a horizontal section of the same, taken through line X X, fig. 1.

Figure 3, a perspective representation of the elevating-cap, used to close the draught of radiator.

The nature of my invention consists in the use of a double conical exterior or drum, having arranged internally a series of conical radiators conforming to the size and contour of said exterior, and are elevated or lowered, as the case may require, to control the heat, by means of racks and a pinion, the latter having a shaft extending through to the outside of the radiator for the convenience of operating said inside cones. By this arrangement the escape of heat from a stove, furnace, or drum can be controlled to a much better advantage than when the cones are made a permanent fixture to the inside of the radiator, and the heat can be shut off entirely, or allowed wholly to escape up the pipe, as required, by simply raising the elevating-cap so as to strike against a flange projecting inward from the top of radiator.

Another advantage consists in the inner cones being readily raised and lowered with such rapidity as to loosen and shake off soot, cinders, ashes, and dirt, or other extraneous matter which usually accumulates inside of drums, radiators, &c.

In order to give a correct understanding of my invention, I have marked corresponding parts with similar letters, and will now give a detailed description.

A A represents a double conical drum, made of common sheet iron, or any kind of suitable metallic plate, and terminating in a suitable pipe, J, for the convenience of attaching the stove pipe, and a pipe, K, for fitting on to a stove, range, furnace, &c., as the case may require. This part of the radiator is not considered new, but is used as a matter of convenience. A flange, *n*, fig. 1, is made to project inward from the upper part of the radiator A A, for the purpose of forming a stop for an elevating-cap, M, to strike against when the draught is to be shut off. This cap M is attached to cone F by means of metallic straps E, fig. 1, and has holes, through which a connecting-rod, D, is made to pass, and a rod, C, is fitted and rigidly attached. The cones H and G are attached to rod D, and made to move up and down when racks B B are operated by pinion P, fig. 1. The upper cone F is made to slide on rod D, by which means all of the cones mentioned may be drawn to the centre of radiator A A, when it is desirable to open the draught to its utmost capacity, as seen by dotted lines Z Z Z, &c. By this description it will be seen that cones H G are made to run upward when cone F is made to run downward, and that, when the elevating-cap M is shut against the flange *n*, the cones H G will occupy a position near the lower part of A A, fig. 1. By means of this arrangement the lower cones H G and the upper cone F are opened or closed by the same movement of racks B B. These racks may be cast solid to the rods C D, as most convenient, or may be attached by screws, bolts, or rivets, the object being to place and arrange them so as to be conveniently operated by pinion P. I am not particular as to the number of cones H G F used in the radiator, only so that the general features are retained, and the pinion P and racks B B are used as set forth. A curved strap, I, is rigidly attached to the lower part of outside A A, and has a hole through which the rod D is made to pass in its upward and downward motion, and is very important in guiding the lower end of said rod, otherwise the inner cones would have no support, resulting in their striking against plates A A, and preventing the racks from working as well as would otherwise be the case, as can be plainly seen. The shaft for operating pinion P is not shown in the drawings, it being a very simple arrangement passing through the part J, similar to a damper-rod.

Operation.

The radiator can be adjusted for use by means of the short pipes J K, arranged to connect with a stove and stove pipe in the usual manner. The draught can be controlled by turning pinion P, which will raise or lower cones F H G, giving a greater or less space between them and the outside A A, and when the draught is to be shut off the cap M can be drawn up against flange *n*, as seen at fig. 1.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

The combination of racks B B, pinion P, cap M, flange *n*, and rod D, arranged to operate the damper-cones F G H, substantially as and for the purpose set forth.

Witnesses:

GEO. L. CHAPIN,
A. HAYWARD.

JOHN GRABNER.