

(No Model.)

A. W. BROCK.
HEATING DRUM.

No. 412,722.

Patented Oct. 15, 1889.

Fig 2

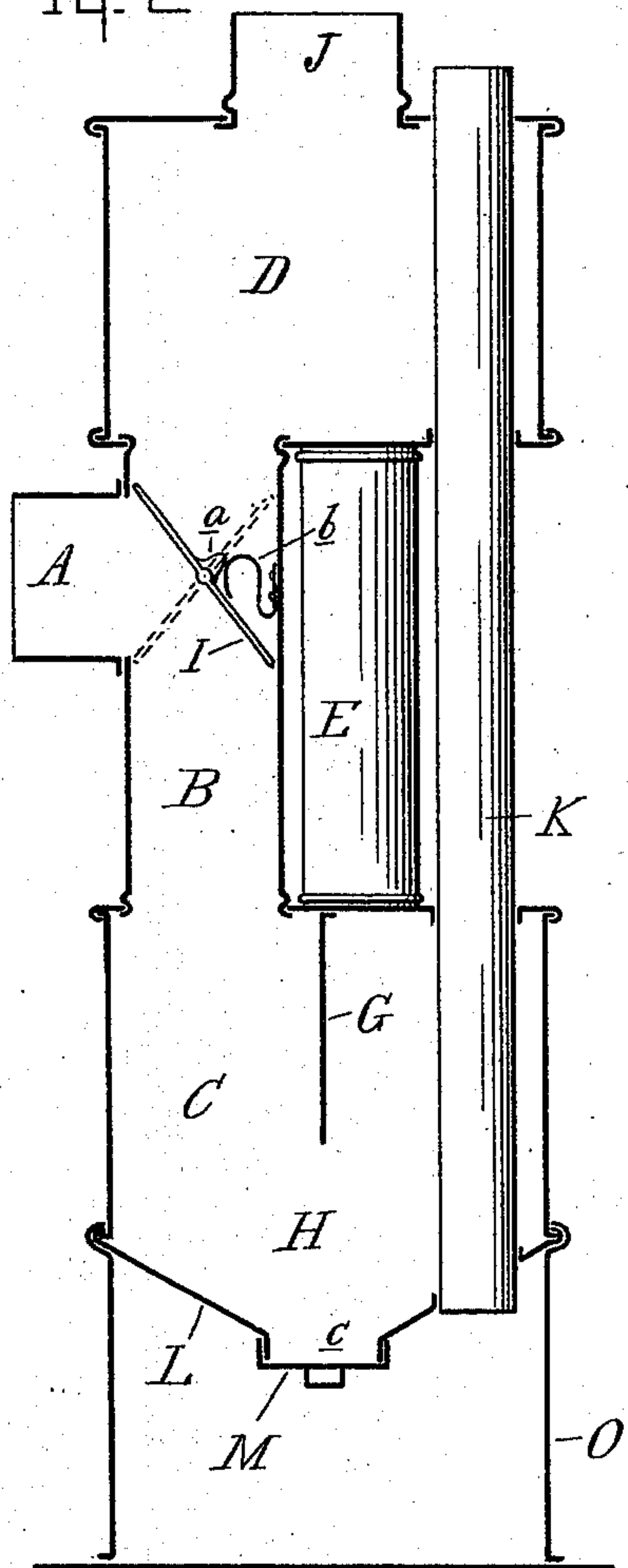


Fig 1

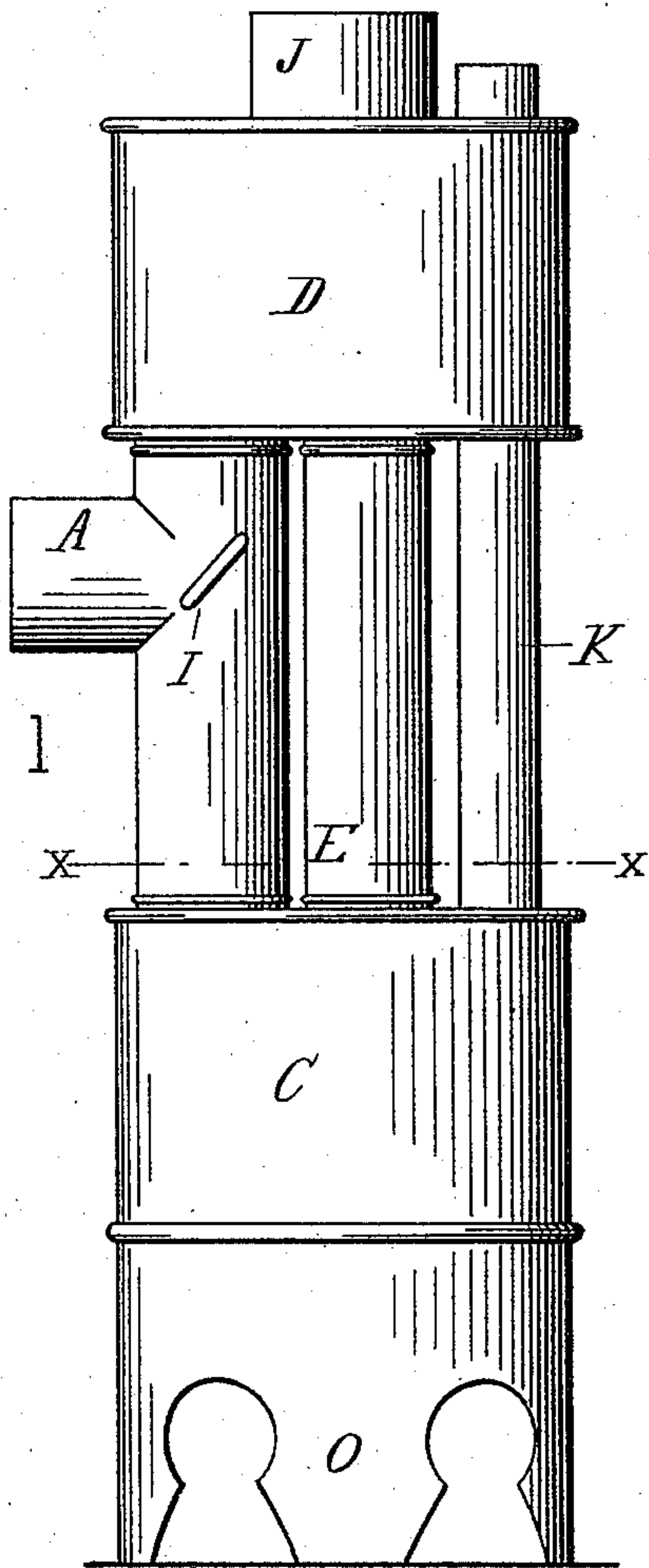


Fig 3

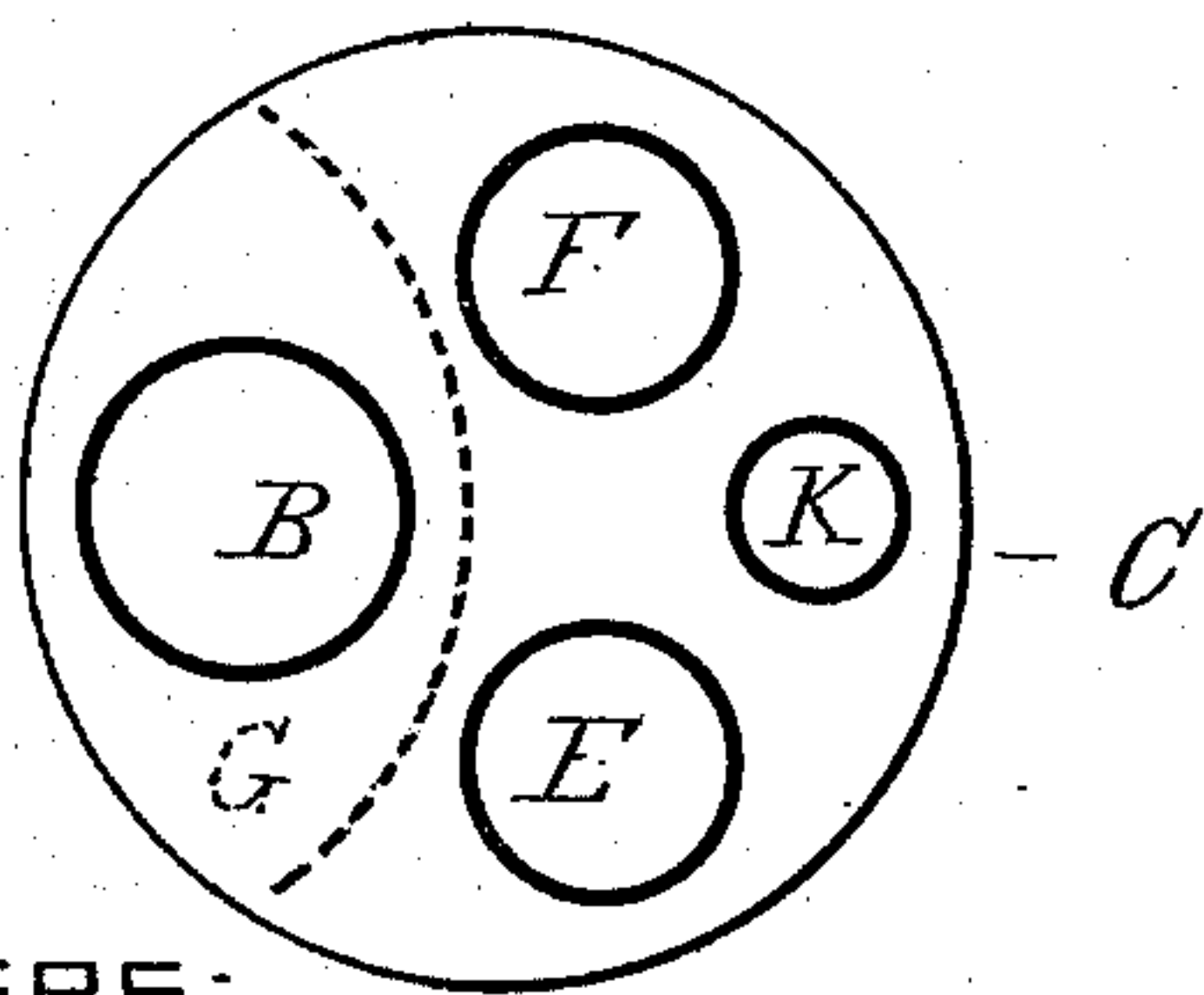
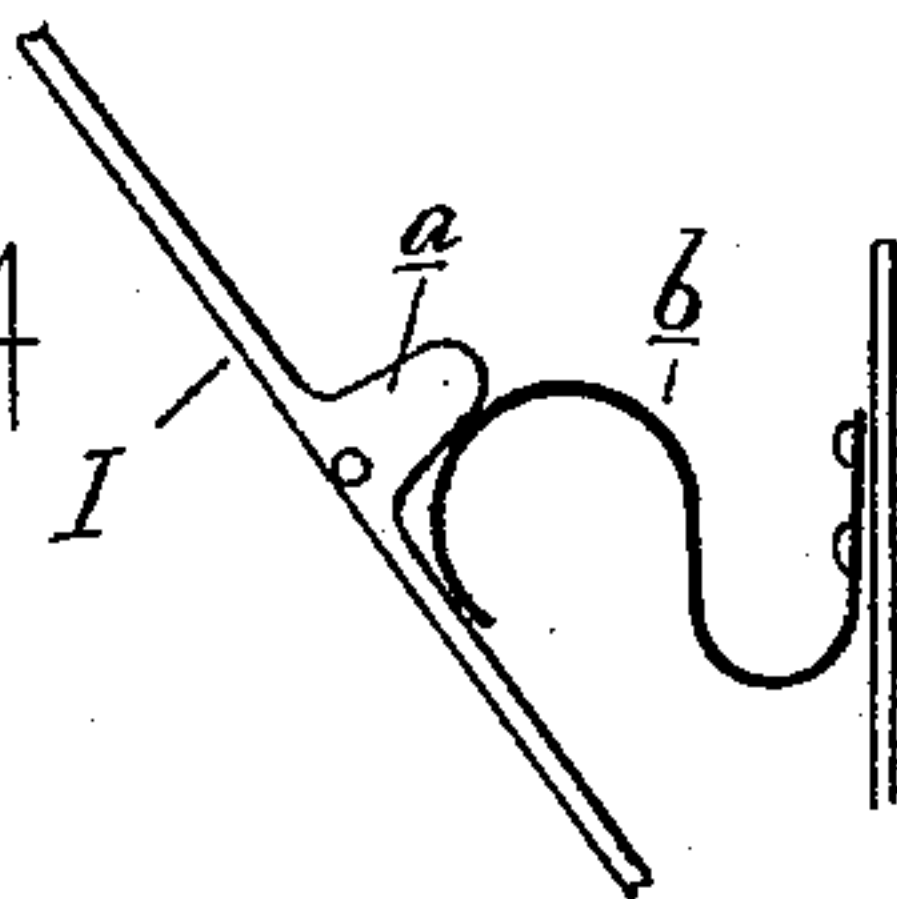


Fig 4



Witnesses:

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UNITED STATES PATENT OFFICE.

ARTHUR W. BROCK, OF SHEPHERD, MICHIGAN.

HEATING-DRUM.

SPECIFICATION forming part of Letters Patent No. 412,722, dated October 15, 1889.

Application filed April 25, 1889. Serial No. 308,532. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR W. BROCK, a citizen of the United States, residing at Shepherd, in the county of Isabella and State of Michigan, have invented certain new and useful Improvements in Heating-Drums, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in heating-drums; and the invention consists in the peculiar construction, arrangement, and combination of the various parts, whereby the most effectual radiation is obtained from the products of combustion passing through the drum, together with great simplicity of construction, and also means provided for a direct draft when the heat in the room is not required, all as more fully hereinafter described.

My invention belongs to that class of heating-drums which are used in connection with furnaces or stoves, and through which the products of combustion are passed for the purpose of obtaining the benefit by radiation of the heat therefrom, and it is applied in any of the well-known manners, either in a room above the stove or furnace or in the same room, as may be desired.

In the drawings which accompany this specification and form a part thereof, Figure 1 is a side elevation of my improved heating-drum. Fig. 2 is a vertical longitudinal section thereof. Fig. 3 is a cross-section on line X X, and Fig. 4 is a detached view of the damper and its spring-connection.

A is the inlet-pipe for the products of combustion, which enter into the apparatus by the flue B, which is connected at the bottom to the chamber C and at the top with the chamber D. These two chambers are also connected by the flues E and F.

G is a partition which divides the lower chamber into two parts, and is provided at its lower edge with the aperture H.

I is a damper secured in front of the inlet-pipe in any suitable manner, and provided with the usual handle for operating the same. This damper is so arranged that when thrown into position, as shown in full lines in Fig. 2,

the draft passes downward through the pipe B into the chamber C, thence under the partition G and upward through the pipes E and F and into the expanding-chamber D, and thence out through the exit-pipe J. When the damper is in the position shown by the dotted lines in Fig. 2, the draft entering through the inlet-pipe A passes directly into the chamber D, and thence out through the exit-flue J. To adjust this damper in either of these positions, I preferably employ the device shown in Fig. 4, the spindle or pivot of the damper being provided with the abutment *a* and the spring *b*, which is secured to the side of the pipe B in any suitable manner, all so arranged that when the damper is turned in either of these adjusted positions the spring will press upon one side of the abutment and hold it firmly from displacement unless turned by the hand of the operator.

K is an open-ended circulating-tube extending through the upper and lower chambers D and C. It will be seen that the products of combustion in entering the chamber C have impact upon this circulating-tube, and the same is the case in the chamber D. At the same time the central portion of this tube has a radiating-surface in the room, while a draft of heated air continually passes from the bottom out into the top, forming a rapid circulation.

L is an inverted-cone-shaped bottom for the chamber C, provided with the aperture *c*, which is closed by the detachable cover N, secured thereto in any suitable manner.

It will be seen that the projection of the deflector G will receive the force of the draft, and will act to deflect any soot or other substance, to a large extent, down into the cone-shaped bottom, where they may readily be removed by placing a suitable receptacle underneath the device and removing the cap M, and thereby the entire drum may be cleaned without removing it from its position.

O is a lower extension, which may be constructed in any suitable manner to give an ornamental and finished appearance to the base of the device, such as shown in the drawings, and provided with suitable open-

ings to allow of a free entrance for the air, which is designed to be circulated upward from the tube K.

What I claim as my invention is—

5 1. In a heating-drum, the combination, with the inlet-pipe A and the flue B, formed with chambers C and D, of the reversible damper I, the flues E and F, connecting the two chambers, and the circulating-flue K, arranged
10 substantially as shown and described.

2. In a heating-drum, the combination of the inlet-pipe A, the flue B, provided with the reversible spring-controlled damper, the
15 chamber C, provided with the inclined bottom and the removable cap and with the partition G, the flues E and F and chamber D, and

the circulating-flue K, the parts being arranged to operate substantially as described.

3. In a heating-drum, the combination, with the inlet-pipe, of the vertical flue B, provided 20 with the damper having the abutment *a* and the spring *b*, arranged to hold it in either one of its adjusted positions, substantially as and for the purpose described.

In testimony whereof I affix my signature, in 25 presence of two witnesses, this 14th day of February, 1889.

ARTHUR W. BROCK.

Witnesses:

J. PAUL MAYER,
A. B. EATON.