2 Sheets—Sheet 1.

G. H. SIMON.

Stove-Pipe Drum.

No. 207,560. Patented Aug. 27, 1878.

Fig. 1.

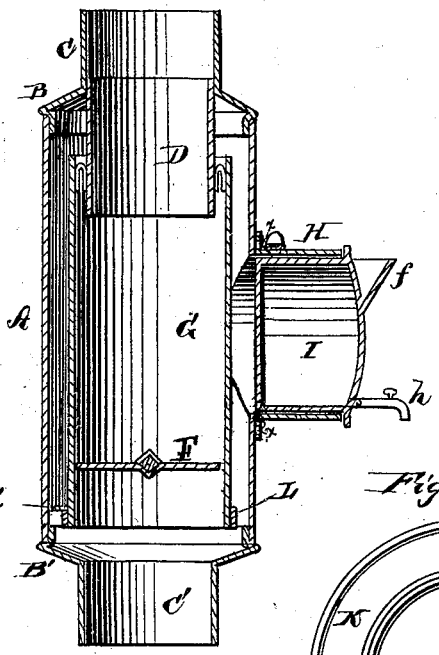


Fig. 4.

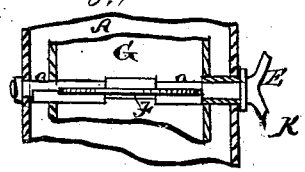


Fig. 3.

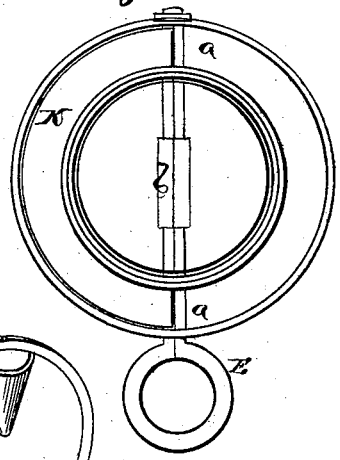
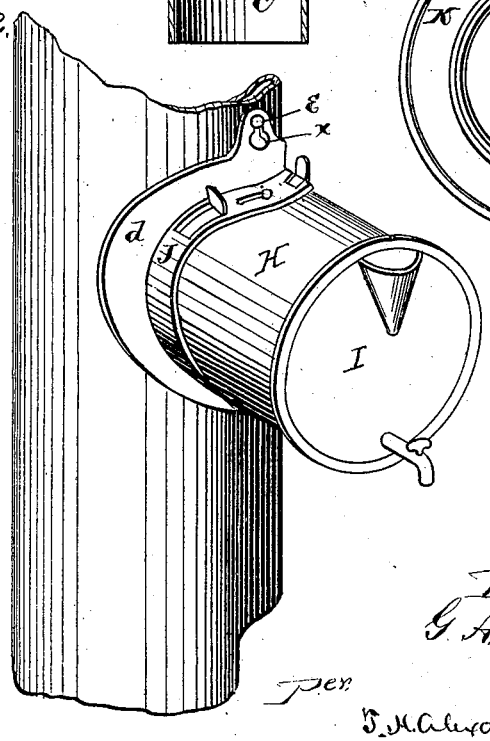


Fig. 2.



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2 Sheets—Sheet 2

G. H. SIMON.

Stove-Pipe Drum.

No. 207,560. **Patented Aug. 27, 1878.**

Fig. 5.

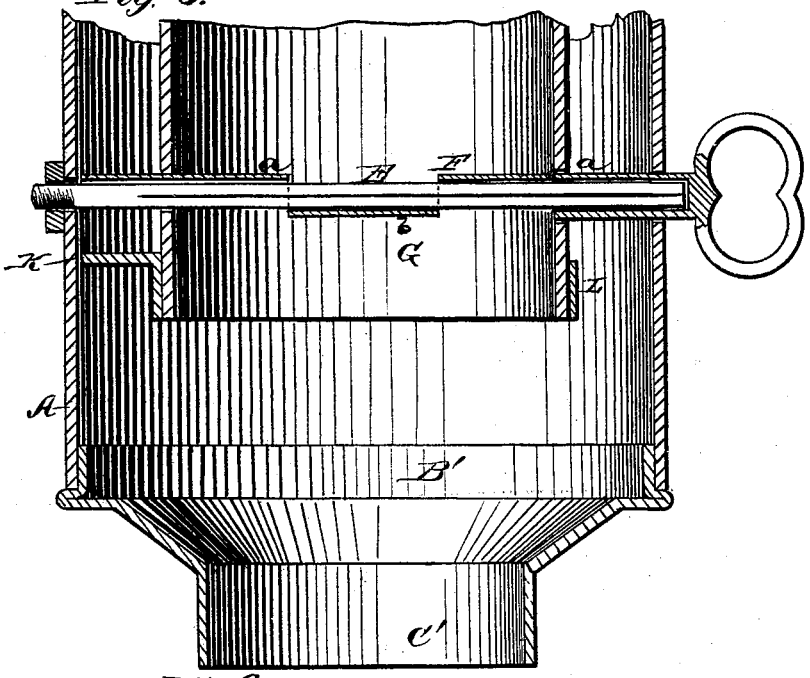
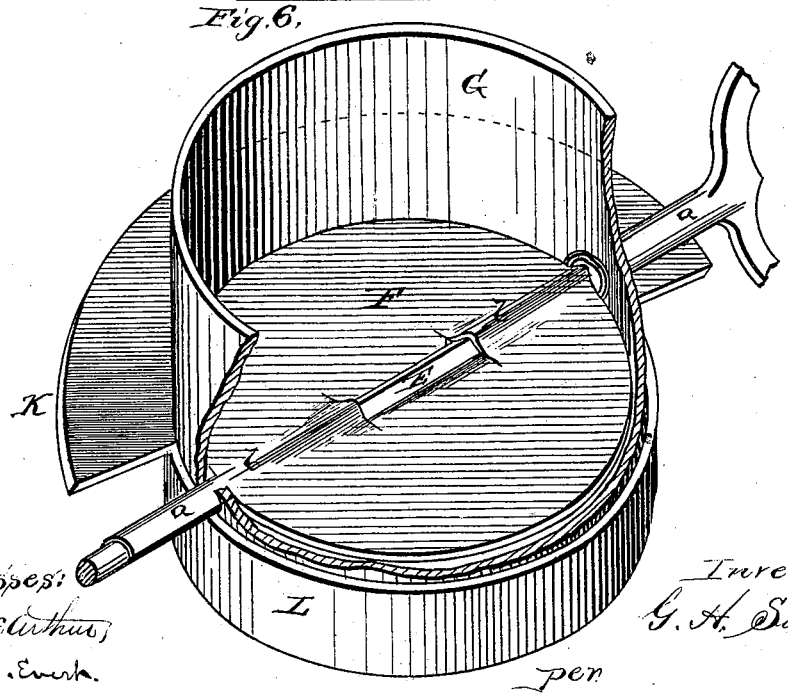


Fig. 6.



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UNITED STATES PATENT OFFICE.

GOTTLIEB H. SIMON, OF KIEL, WISCONSIN.

IMPROVEMENT IN STOVE-PIPE DRUMS.

Specification forming part of Letters Patent No. **207,560**, dated August 27, 1878; application filed January 8, 1878.

To all whom it may concern:

Be it known that I, GOTTLIEB H. SIMON, of Kiel, in the county of Manitowoc, and in the State of Wisconsin, have invented certain new and useful Improvements in Stove-Pipe Drums; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The nature of my invention consists in the construction and arrangement of a stove-pipe drum, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a vertical section of my improved stove-pipe drum. Fig. 2 is a perspective view of a part thereof. Fig. 3 is a bottom view of the main drum. Fig. 4 is a detailed view of a part of the drums and damper. Fig. 5 is an enlarged vertical section of the lower part of the stove-pipe drum. Fig. 6 is an enlarged perspective view of the lower end of the inner drum, a part thereof being broken open to show the damper.

A represents a drum or cylinder of any suitable dimensions, provided with heads B B′, respectively, at the upper and lower ends, said heads being provided with collars C C′ to form connection with the stove-pipe. In the upper collar, C, is secured a tube or cylinder, D, extending downward a suitable distance into the main drum A. G represents a loose interior cylinder, the upper end of which surrounds and extends above the lower end of the tube D, leaving, however, a space between them, as shown in Fig. 1. F represents a damper of circular form, to fit inside of the cylinder G. This damper is formed with extended shoulders *a a* on opposite sides, one of said shoulders being in one piece with the damper, and the other attached to it, or both made separate and attached to the damper. These shoulders or journals are hollow, and are passed through the sides of the cylinder G, and the damper-key E is passed through them, as shown, and also through the sides of the main drum A. The center of the key E is made square and passed through an angular half-socket, *b*, formed in the center of the damper F. The hollow journals *a* are shouldered to keep the cylinder G from moving sidewise.

In the drawing I have shown one of these shoulders disconnected from the damper and attached on the damper-key.

It will be seen that the cylinder G is entirely supported upon the damper-key, and the weight of the cylinder resting on said damper and damper-key shoulders holds the damper in any position to which it may be desired to turn it without a spring or key-nut to keep it in place. When the damper F is open the smoke and heat pass directly upward; but when the damper is closed the smoke and heat will pass around the inner cylinder, G, and down over the upper end thereof, and then out through the tube D and collar C.

In one side of the drum A is an opening for the attachment of a projecting collar or cylinder, H. This collar is, around its inner end, provided with a rim, *d*, to fit against the drum A around the opening in the same. In this rim are holes *x x*, as shown, to fit over headed pins *e e* in the drum, whereby said collar or cylinder can be attached and detached as required, without loosening any screws or bolts.

I represents a water-vessel, provided on its front with an inlet, *f*, and faucet *h*, as shown in Fig. 2. This water-vessel is of such formation as to be inserted in the collar or cylinder H and close the outer end thereof. By this means the heat passing up through the drum is utilized for heating water, &c. In the inner end of the collar or cylinder H is a sliding damper, J, whereby the heat may be regulated to any degree for heating and boiling.

A deflecting-plate, K, is used between the drum A and inside cylinder, G, which plate is fastened to a band, L, around the lower end of said cylinder G, so that said plate can be moved to any side to force the heat to take the course to the side where the boiler or kettle is attached. The adjustment of the deflecting-plate K by means of its band L must, of course, be made before the drum and its various parts

are placed in position, because after the parts are once arranged in the desired position no further adjustments are necessary.

It will readily be seen that the smoke and heat passing up around the lower end of the cylinder G will strike the deflecting-plate K on one side, and by it be deflected to the opposite side, where the boiler is located.

I do not broadly claim one or more tubes arranged within a drum to form different passages for the smoke, as I am aware that such is not new.

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

1. The combination of the loose interior cylinder G, damper F, shouldered journals *a a*, and damper-rod E passing through the outside drum, A, whereby the weight of the cylinder holds the damper in place, as herein set forth.

2. The collar or cylinder H, provided with the rim *d*, having holes *x x*, in combination with the drum A and pins *e*, for the purposes set forth.

3. The combination of the drum A, the removable collar H, boiler I, and the sliding damper J, all constructed substantially as and for the purposes herein set forth.

4. The deflecting-plate K and band L, in combination with the cylinder G and drum A, for the purposes set forth.

5. In a stove-pipe drum, the combination of the exterior drum, A, inside cylinders, D G, damper J, deflector K, removable collar H, with damper J and boiler I, all constructed substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

G. H. SIMON.

Witnesses:

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FERDINAND KRIEGER.