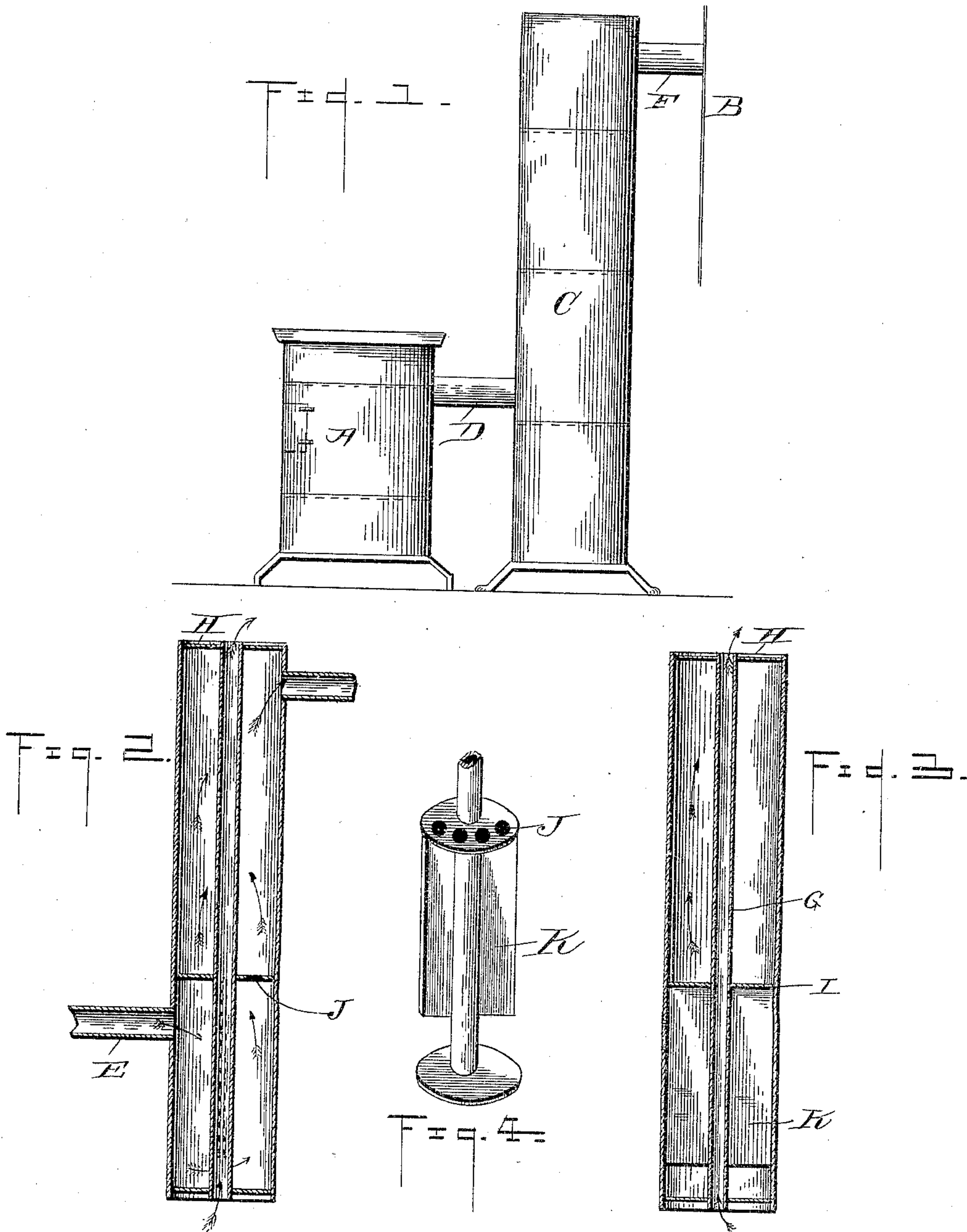


(No Model.)

R. BABCOCK.
HEATING DRUM.

No. 436,452.

Patented Sept. 16, 1890.



WITNESSES:

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RANSOM BABCOCK, OF WATAGA, ILLINOIS.

HEATING-DRUM.

SPECIFICATION forming part of Letters Patent No. 436,452, dated September 16, 1890.

Application filed June 23, 1890. Serial No. 356,324. (No model.)

To all whom it may concern:

Be it known that I, RANSOM BABCOCK, a citizen of the United States, residing at Wataga, in the county of Knox and State of Illinois, have invented certain new and useful Improvements in Heating-Drums; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in heating-drums; and it consists in certain novel features, hereinafter first fully described, and then pointed out in the claim.

In the annexed drawings, Figure 1 is a side view of my improved heating-drum in its operative position. Figs. 2 and 3 are vertical longitudinal sections of the drum, taken at right angles to each other. Fig. 4 is a detail perspective view.

Referring to the drawings by letter, A designates a stove of the usual or any preferred construction, and B designates the wall of the room in which the stove is placed. My improved drum C is preferably arranged between the stove and the wall, as clearly shown in Fig. 1, and is connected to the smoke-pipe D of the stove by an inlet-pipe E, as shown, and as will be readily understood. This inlet-pipe, it will be noticed, is near the lower end of the drum, or, to speak more precisely, is below the center thereof, and at the upper end of the drum I provide the outlet-pipe F, which leads into the chimney.

A cold-air tube G is arranged centrally within the drum, and the ends of this tube are open to permit the free circulation of the air there-through, while the ends of the drum are closed by the disks H, as shown in Figs. 2 and 3. Just above the end of the inlet-pipe I arrange within the casing of the drum the horizontal partition I, which is provided in its rear portion with the openings J, to permit the smoke and hot air to pass upward through the drum. Deflectors K are formed on the opposite sides

of the cold-air tube and depend from the under side of the horizontal partition to near the bottom of the casing, and said deflectors are arranged transversely to the inlet-pipe, so that the smoke and hot air escaping from the said pipe will be positively turned toward the bottom of the drum and then allowed to pass under the bottom edges of the deflectors and escape upward through the casing, circulating around the cold-air tube.

From the foregoing description, taken in connection with the accompanying drawings, the operation of my device and the advantages of the same will be readily understood. The smoke and products of combustion pass from the stove into the drum through the inlet-pipe and will be deflected to the bottom of the same and then pass upward through the openings in the horizontal partition. Above this partition the heated currents will be unobstructed in their passage and will circulate around the cold-air pipe, entirely filling the upper portion of the drum, and escape through the outlet-pipe into the chimney. The heated currents, by circulating around the cold-air tube, will raise the temperature of the said tube and consequently create a draft through the same so that the cold air will be caused to ascend therethrough and pass out from the top thereof, thus maintaining a constant circulation of the air in the room. The cold air will be heated while passing through the drum and the room thus maintained at a uniform temperature.

It will be noticed that my improved drum is very simple in its construction and that it can consequently be manufactured at a small cost.

By the use of my drum the quantity of fuel consumed will be reduced to a minimum, as the casing provides a large external surface to radiate heat in addition to the raising of the temperature of the air in the cold-air tube.

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

The improved heating-drum herein described and shown, consisting of a casing, a cen-

tral cold-air tube arranged therein and having both ends open, an inlet-pipe entering the drum below the center of the same, an outlet-pipe at the upper end of the drum, a horizontal partition within the drum just above
5 the end of the inlet-pipe and having a number of openings in its rear portion, and vertical deflectors on the sides of the cold-air tube

extending from the horizontal partition to near the bottom of the casing, as set forth. 10

In testimony whereof I affix my signature in presence of two witnesses.

RANSOM BABCOCK.

Witnesses:

EBER GOODDARD,

W. A. LEE, Sr.