

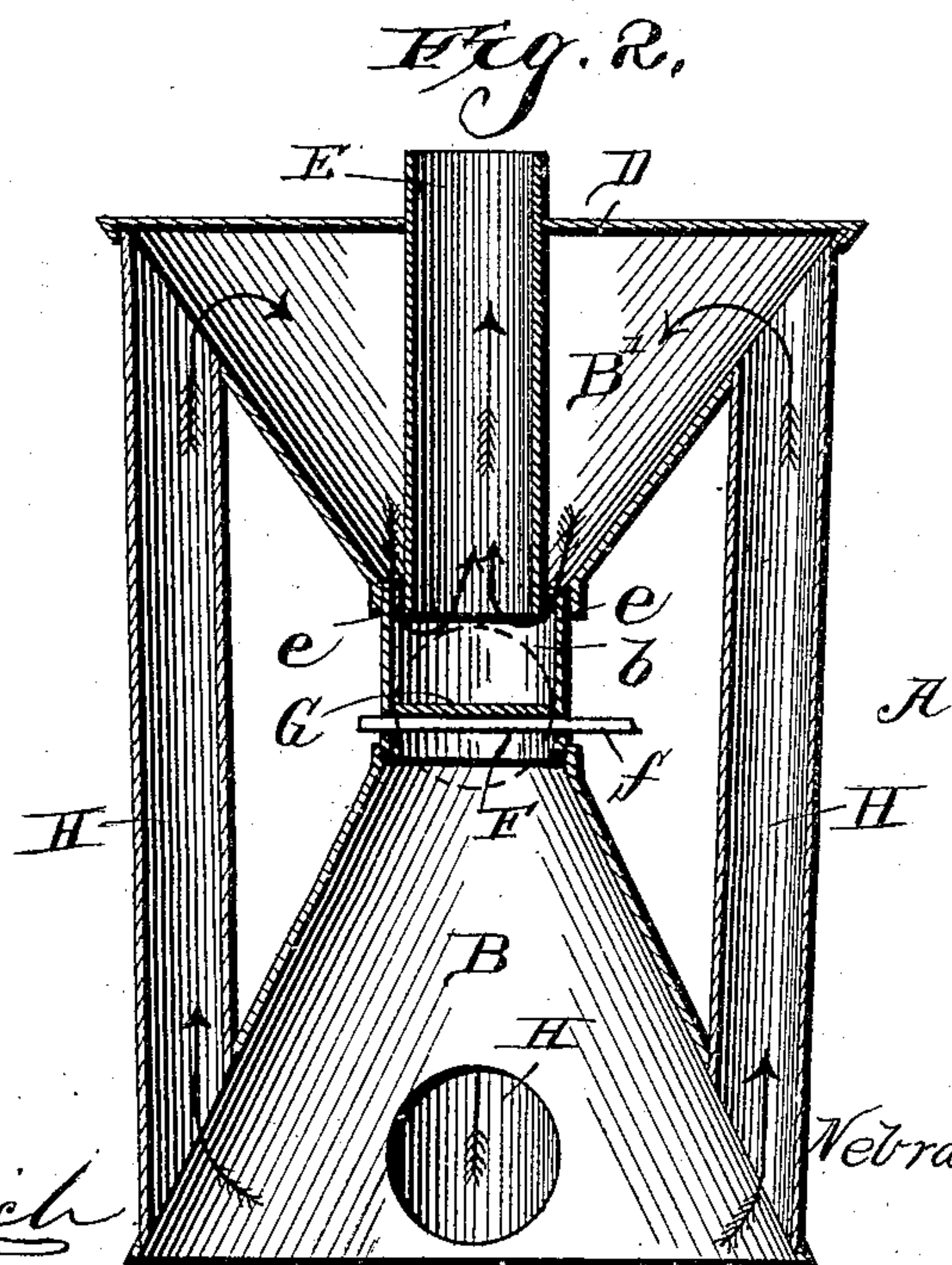
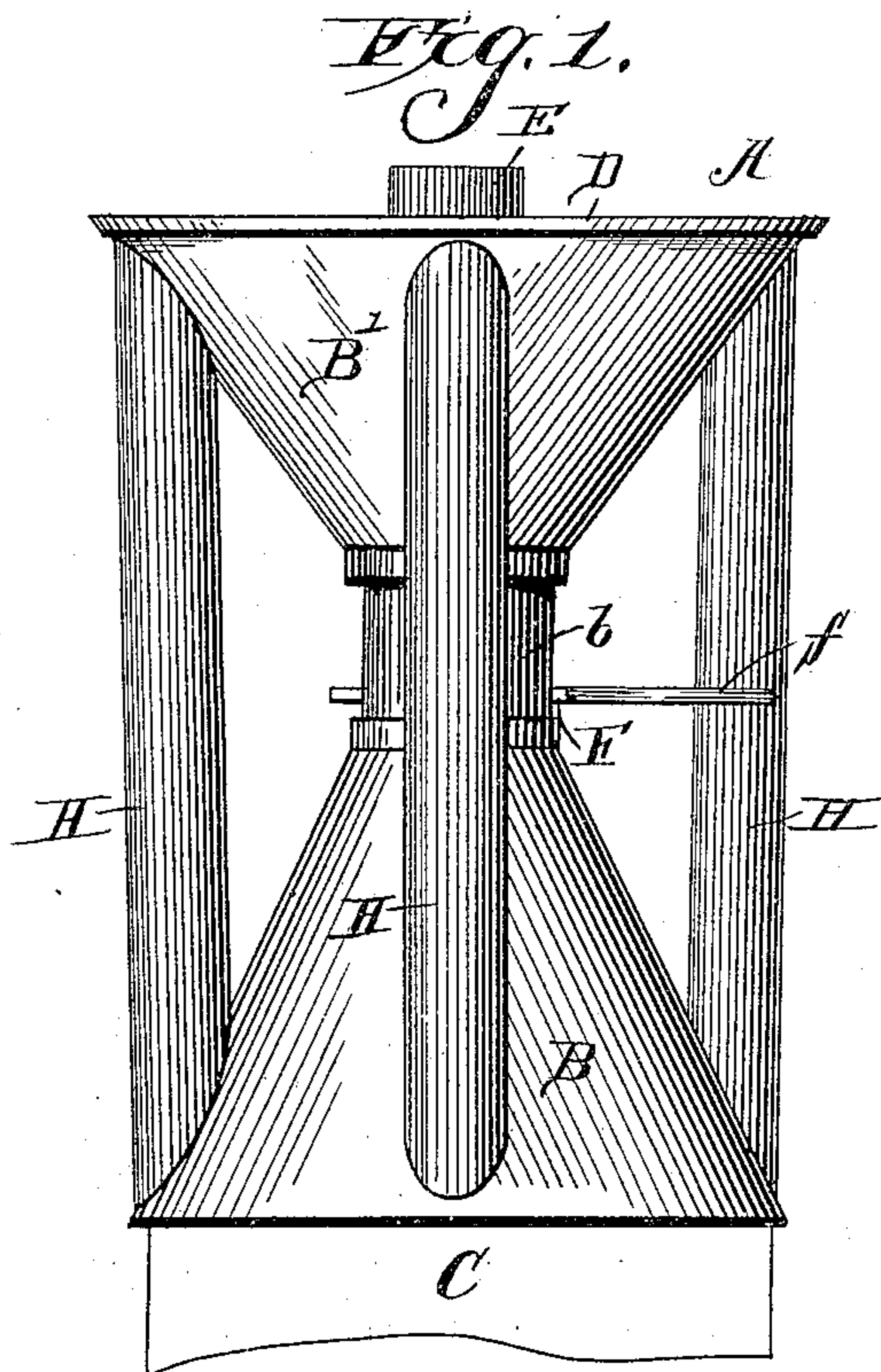
(No Model.)

N. H. BARNES.

HEATING DRUM OR RADIATOR.

No. 398,115.

Patented Feb. 19, 1889.



Witnesses,

Henry G. Diterich

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UNITED STATES PATENT OFFICE.

NEBRASKUS HOMES BARNES, OF WAHOO, NEBRASKA.

HEATING DRUM OR RADIATOR.

SPECIFICATION forming part of Letters Patent No. 398,115, dated February 19, 1889.

Application filed October 30, 1888, Serial No. 289,551. (No model.)

To all whom it may concern:

Be it known that I, NEBRASKUS HOMES BARNES, a citizen of the United States, residing at Wahoo, in the county of Saunders and State of Nebraska, have invented new and useful Improvements in Heating Drums or Radiators, of which the following is a specification.

My invention relates to improvements in heating drums or radiators; and it consists in a certain novel construction and combination of devices, fully described hereinafter in connection with the drawings, and specifically pointed out in the appended claims.

In the drawings, Figure 1 is a side view of the improved drum or radiator affixed in operative position to the upper end of a stove, a small portion of which is shown. Fig 2 is a central vertical sectional view of the same.

Referring by letter to the drawings, A designates the casing of the drum, which consists of the conical lower section, B, which is fitted at its base on the upper end of the stove, (shown at C in Fig. 1,) and the inverted conical upper section, B', which is connected at its apex to the apex of the lower section by the neck *b*. The upper end of the casing is closed by the top plate, D, through a central perforation in which projects the upper end of the outlet-pipe E. This pipe extends vertically downward through the center of the upper section and passes through the neck *b*, the diameter of the pipe being somewhat less than that of the neck, to form an annular passage, *e*, around the pipe.

F represents a transverse spindle mounted in bearings in the opposite sides of the lower end of the neck, and extended beyond the same at one end to form a handle, *f*, and G represents a valve arranged on the said spindle and fitting tightly in the lower section to close the same.

H H represent flues, which extend from the lower end or base of the lower section to the upper end or base of the upper section, and thereby connect the space below the valve G with the upper end of the casing.

The operation of the improved drum or radiator is as follows: When the valve is open, as shown in dotted lines in Fig. 2, the heated air, smoke, and other products of combustion pass directly up the outlet-pipe E and escape, and when the valve is closed the products of

combustion pass into the lower section, and, being deflected by the valve G, pass up through the flues H to the upper end of the upper section. They then pass downward through the neck at the lower end of the said section and escape through the outlet-pipe, as shown by the arrows in Fig. 2.

The advantages of the improved device are as follows: The peculiar shape of the casing enables the flues which connect the two sections thereof to be straight and approximately vertical, thereby preventing dust and soot from lodging therein, and the inverted conical form of the upper section prevents the accumulation of dust and soot therein, as it will necessarily slip downward over the inclined sides thereof and pass through the annular opening or passage *e* into the lower section. Thus the improved drum is kept entirely free from accumulations and it never becomes necessary to clean the same.

Having thus described my invention, I claim—

1. In a heating drum or radiator, the combination of the casing comprising the lower conical section and the inverted conical upper section, the apexes of the said sections being connected by neck *b*, the outlet-pipe passing through the closed upper end of the upper section and extending into the said neck, whereby an annular passage, *e*, is formed, the valve G, arranged in the neck below the lower end of the outlet-pipe, and the approximately vertical flues H H, connecting the bases of the said sections, substantially as and for the purpose specified.

2. In a heating drum or radiator, the combination of the upper and lower conical sections, having their adjacent apexes connected by a neck in which is arranged a valve, the vertical central pipe extending downward into the said neck and terminating above the valve, and the outside vertical flues connecting the remote ends of the sections, substantially as specified.

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

NEBRASKUS HOMES BARNES.

Witnesses:

L. E. HOLMES,
JOSEPH MUNNEY.