

S. R. WILMOT.
Steam-Radiators.

No. 153,140.

Patented July 14, 1874.

Fig. 1

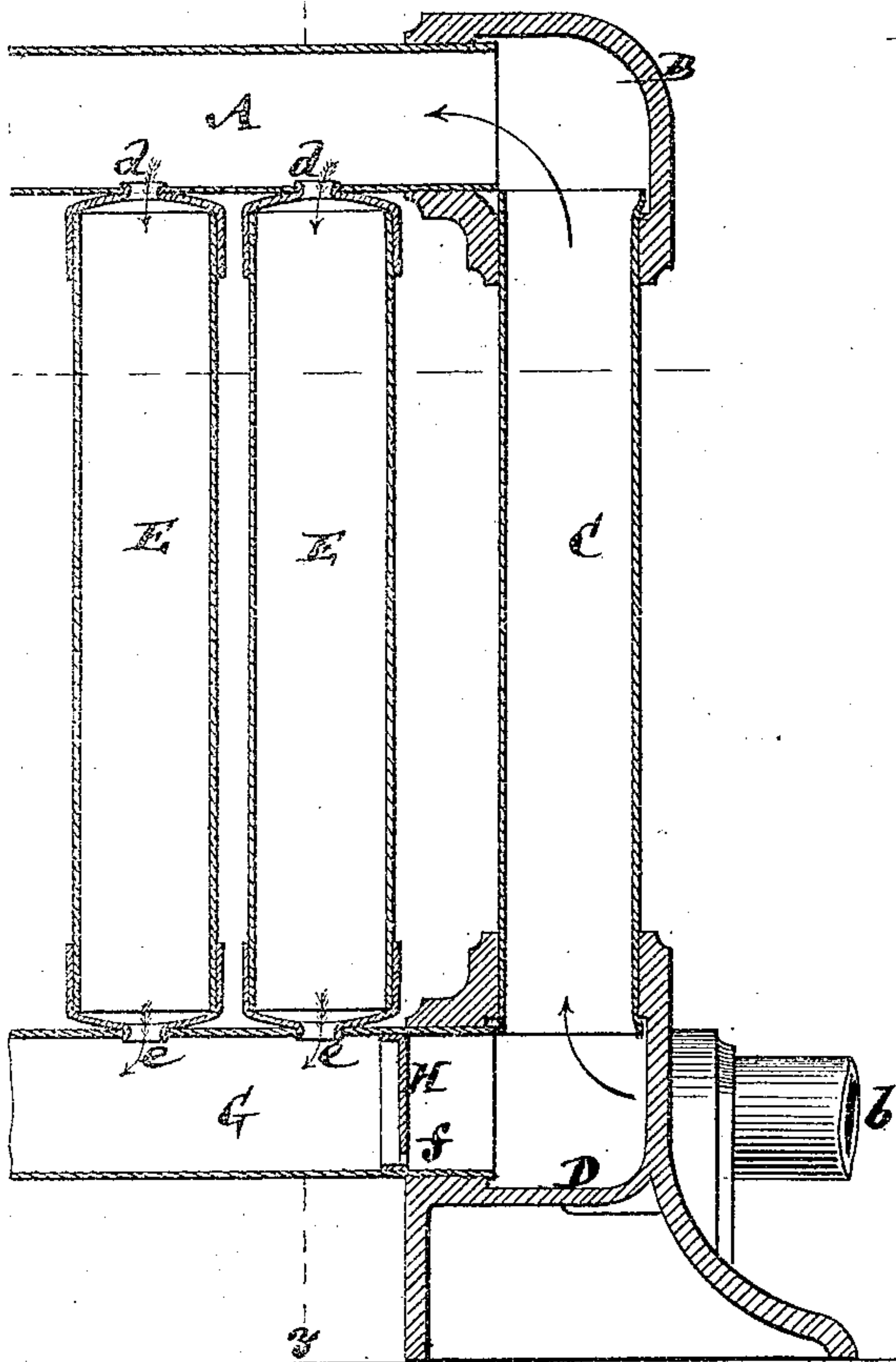


Fig. 2

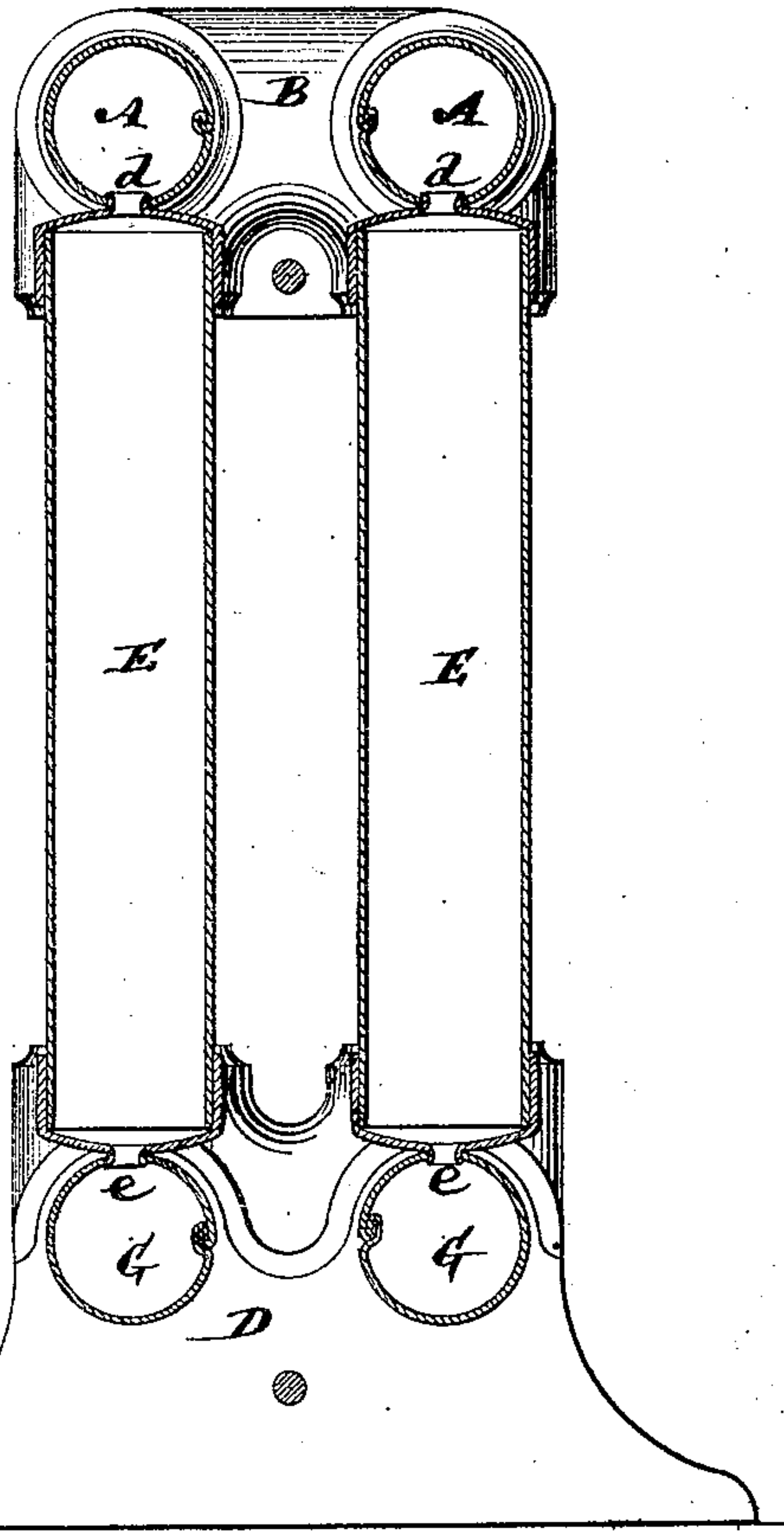
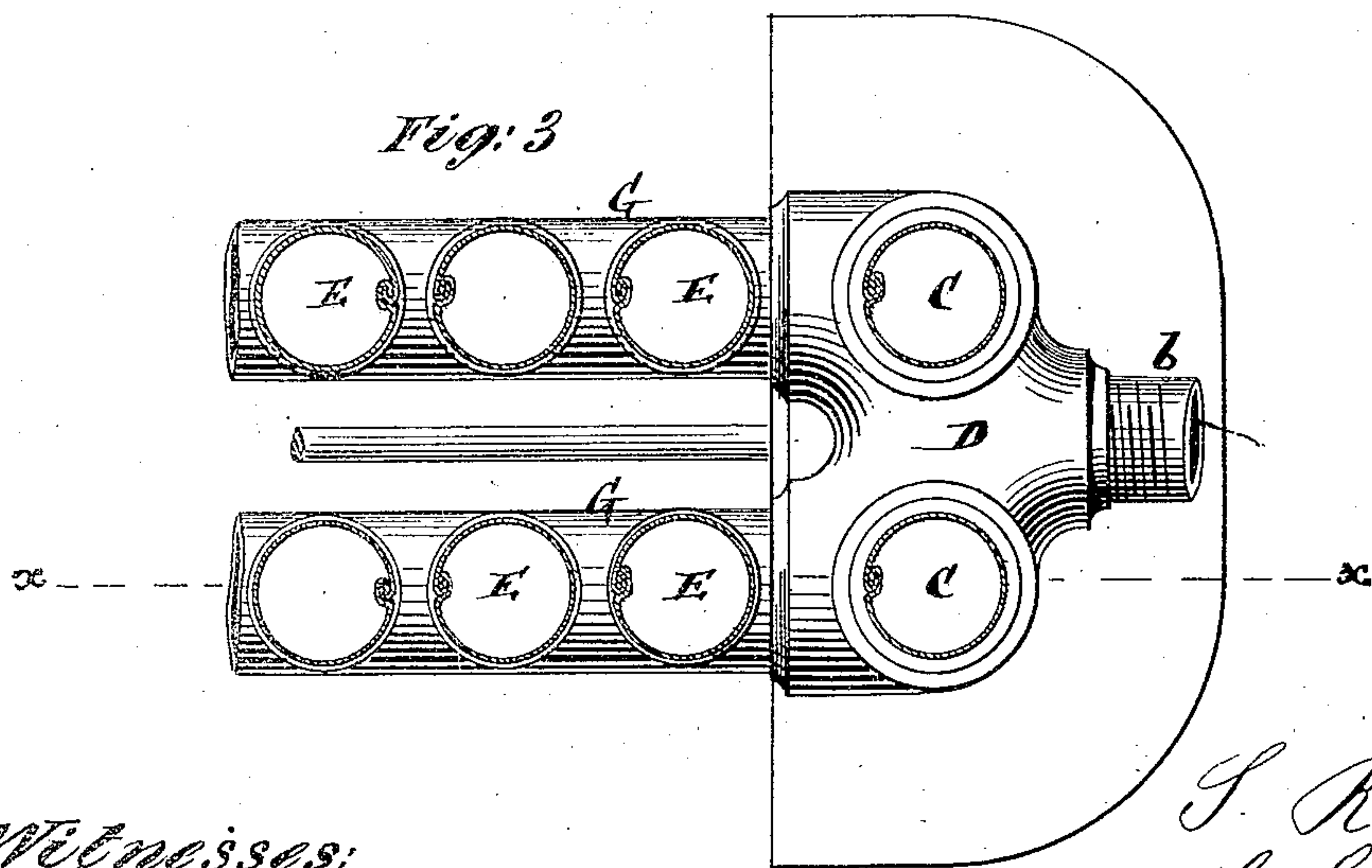


Fig. 3



Witnesses:
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UNITED STATES PATENT OFFICE.

SAMUEL R. WILMOT, OF BRIDGEPORT, CONNECTICUT.

IMPROVEMENT IN STEAM-RADIATORS.

Specification forming part of Letters Patent No. **153,140**, dated July 14, 1874; application filed February 7, 1874.

CASE B.

To all whom it may concern:

Be it known that I, SAMUEL R. WILMOT, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented an Improvement in Steam-Radiators, of which the following is a specification:

This invention generally consists in a steam-radiator composed of upper and lower horizontal pipes, connected by vertical pipes with each other and with end feet or supports, in such a manner that the upper horizontal pipe or pipes form a reservoir to supply the intermediate or main body of vertical pipes with steam in a downward direction, and independently of one another, while the lower horizontal pipe or pipes serve to carry off the water of condensation received from the vertical pipes. By this construction all difficulty as regards establishing circulation of the steam through the radiator is avoided, and the greatest heat obtained at the upper portion of the radiator for the air entering between the pipes at the lower portion of the radiator; also, a free circulation of the cold air is insured between the vertical pipes of the radiator.

In the accompanying drawing, Figure 1 represents a longitudinal vertical section, in part, of the one end of my improved radiator on the line *xx*; Fig. 2, a transverse vertical section of the same on the line *yy*, and Fig. 3 a horizontal section thereof.

Similar letters of reference indicate corresponding parts.

A A are upper horizontal steam pipes or reservoirs, of which there may be one, two, or more; but when two or more, the same are arranged parallel with each other, or thereabout. Each of these horizontal steam pipes or reservoirs is connected at its ends, by an elbow, B, with a vertical receiving and outlet pipe, C, the one being arranged at the one end and the other at the opposite end of the radiator, the steam entering from below through a branch, *b*, of a foot-piece, D, which, in connection with a corresponding foot-piece at the opposite end of the radiator and a suitable disposition of the parallel rows of vertical pipes from one

another, gives a free circulation or admission of cold air from below and above the floor on which the foot-piece D rests, up and between the intermediate vertical pipes E, that connect, preferably by contracted upper and lower apertures *d e*, with the upper steam-supply pipes or reservoirs A A and lower horizontal pipes G G, which connect at their ends with the feet D, and which serve to carry off the water of condensation from the vertical pipes E. The one or forward end of these lower horizontal pipes G contains a cap or diaphragm, H, which prevents the steam entering by the branch *b* from passing along said pipes, and compels it to flow up the receiving-pipe C to the horizontal pipes or reservoirs A A. Said cap or diaphragm H may, however, have a small aperture, *f*, in it, to carry off water of condensation from entering the receiving vertical pipe C of the reservoir.

The upper and lower horizontal pipes A G it is preferable to make of sheet metal, so that they will spring or slightly collapse to provide for unequal expansion of the vertical pipes E E.

By this construction of radiator the steam is independently supplied from the reservoirs A to the vertical pipes E, and all difficulty as regards circulation is avoided, the steam passing downward through said pipes, and the water of condensation being separately delivered from each; likewise the greatest heat being obtained near the upper portion of the radiator, and, by means of the feet D and the separated disposition of the parallel rows of vertical pipes E, a free circulation of the cold air entering from below, outside of, and between the vertical pipes is insured.

I claim—

The combination of the feet D and elbows B with the end pipes C, supply-pipes A, vertical pipes E, horizontal pipes G, and diaphragm H, substantially as described, for the purpose specified.

SAMUEL R. WILMOT.

Witnesses:

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