

F. PROUDFOOT.  
Heating-Drum.

No. 159,966

Patented Feb. 16, 1875.

Fig. 1.

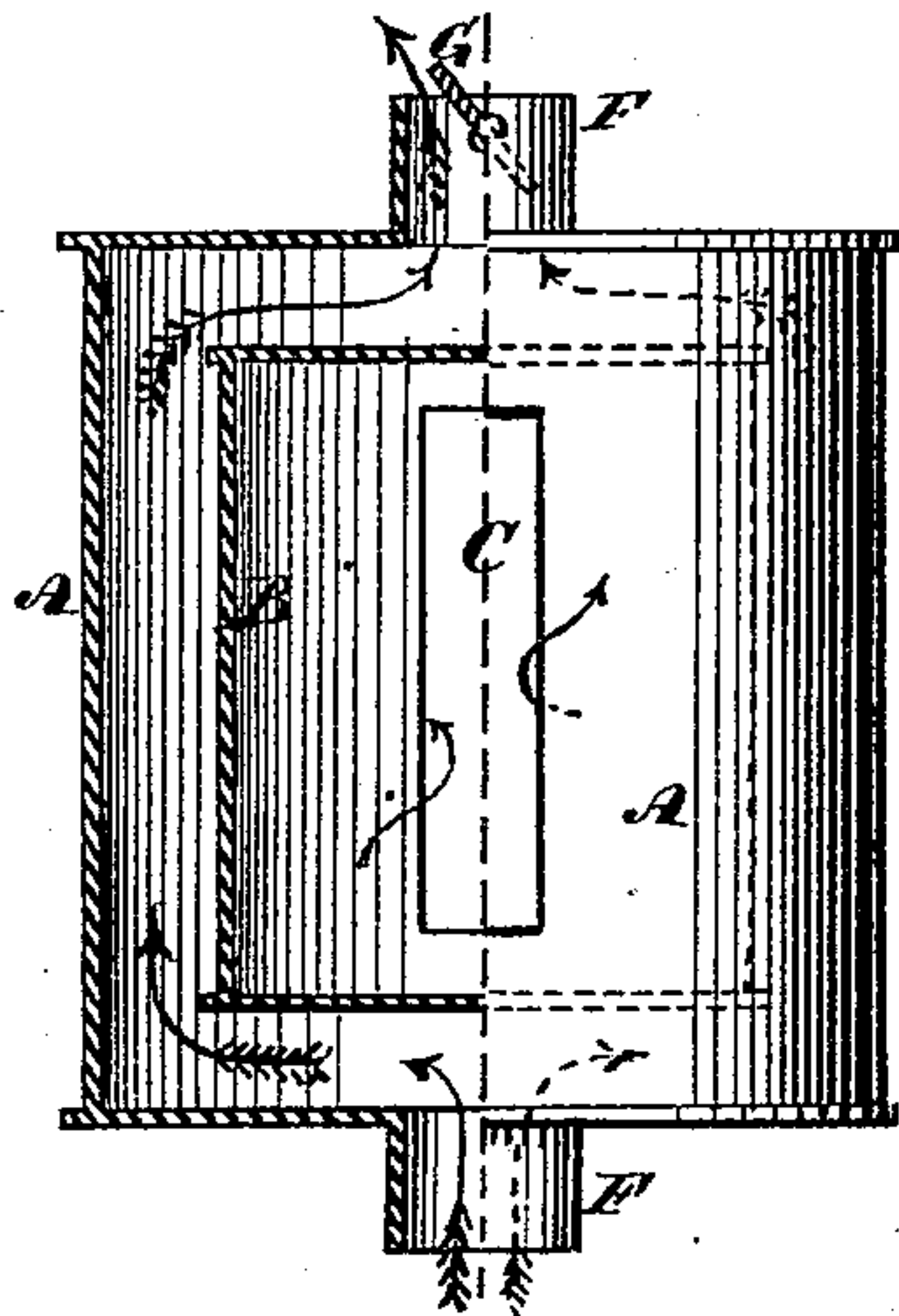


Fig. 2.

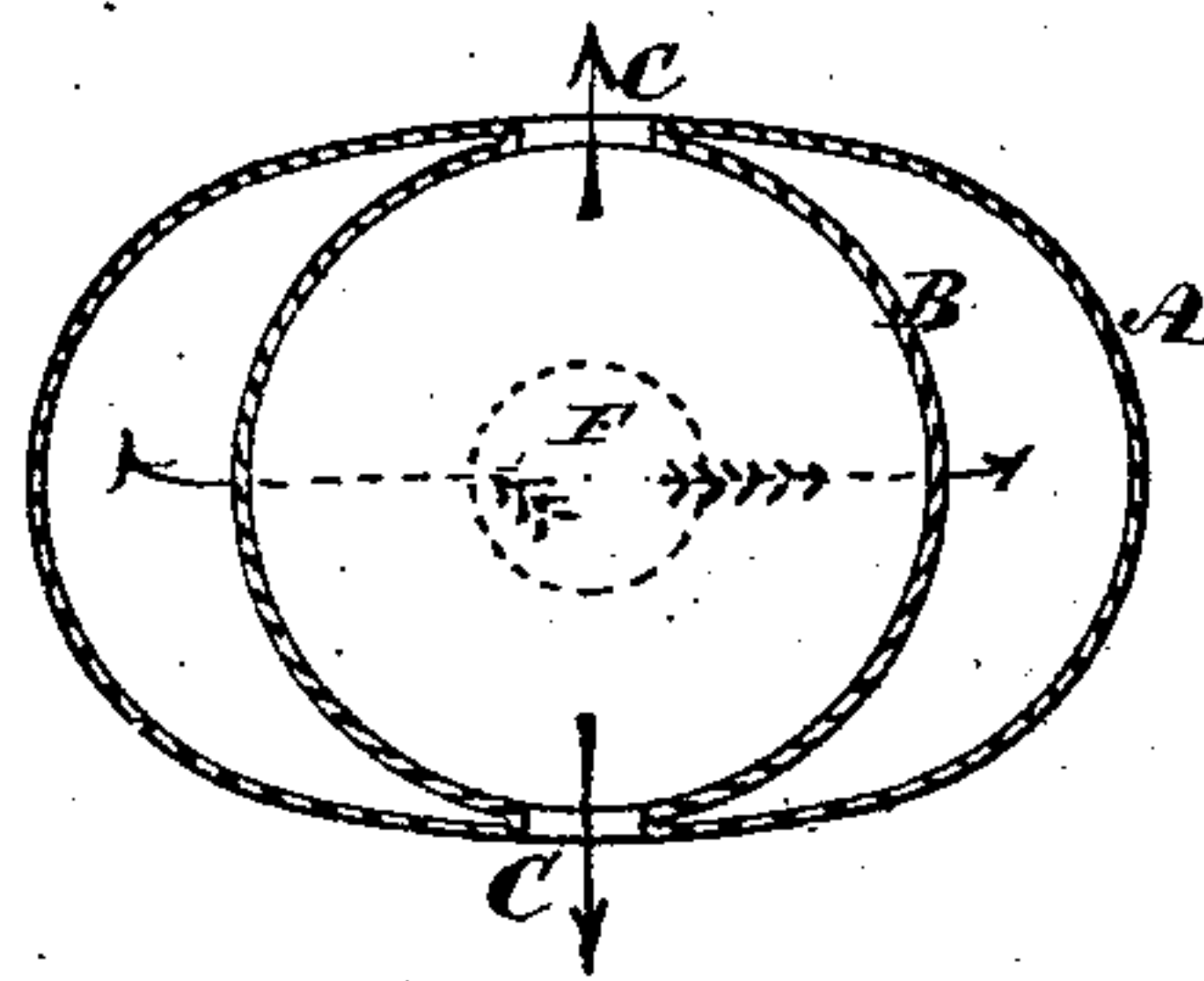


Fig. 3.

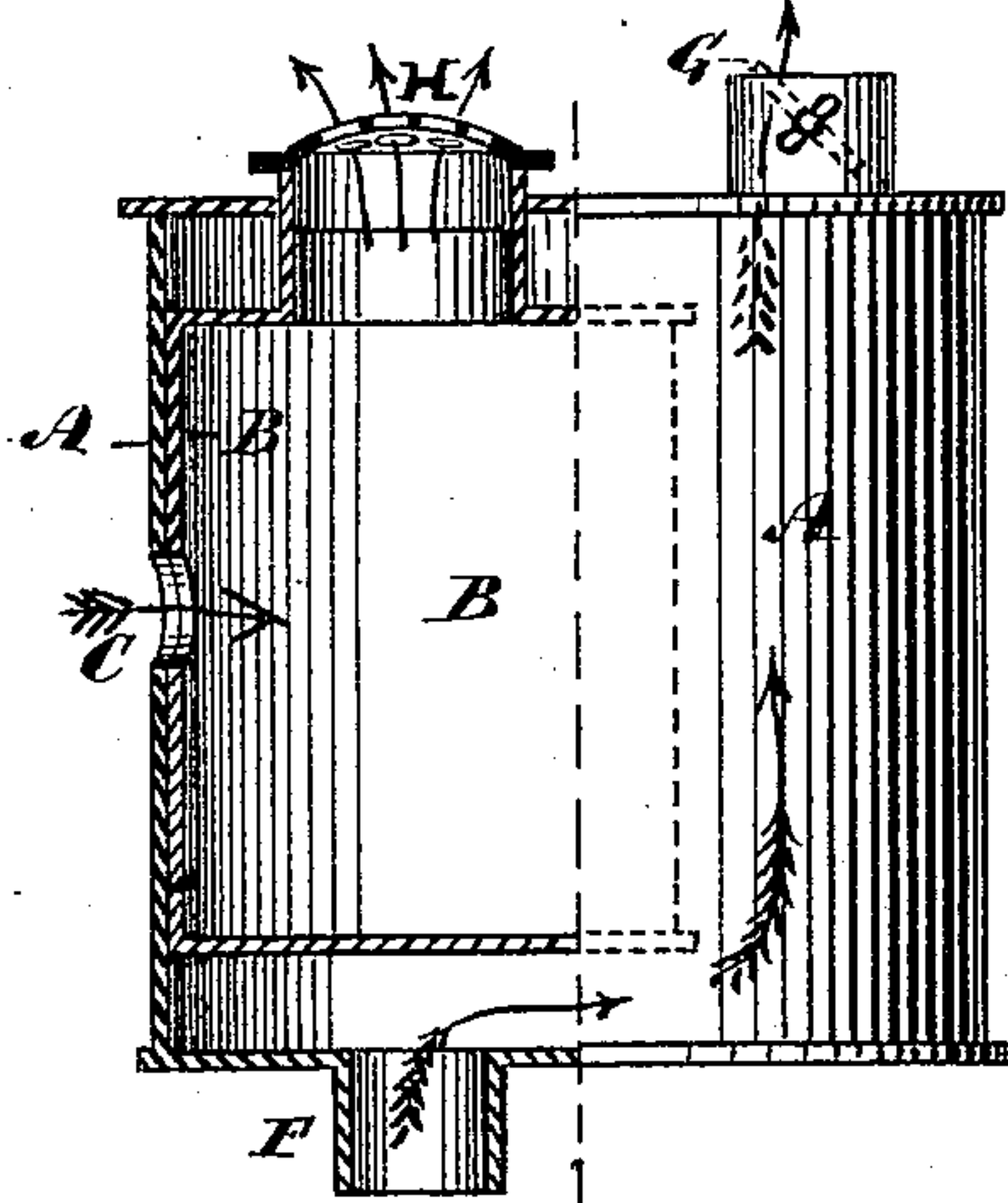
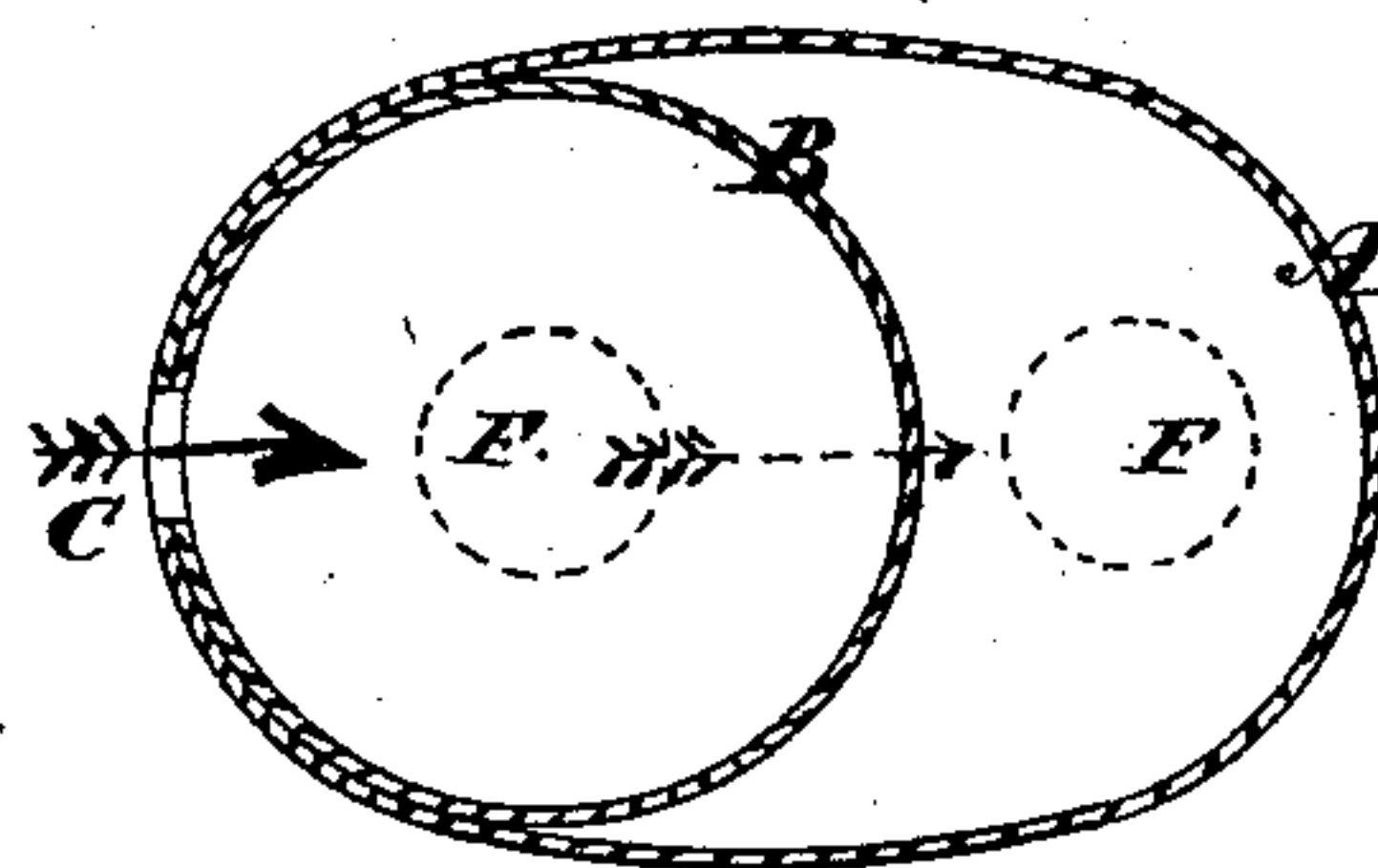


Fig. 4.



Witnesses.

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# UNITED STATES PATENT OFFICE.

FREDERICK PROUDFOOT, OF TORONTO, CANADA.

## IMPROVEMENT IN HEATING-DRUMS.

Specification forming part of Letters Patent No. **159,966**, dated February 16, 1875; application filed December 18, 1874.

*To all whom it may concern:*

Be it known that I, FREDERICK PROUDFOOT, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Drum-Heaters; and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention relates to improvements in that class of drum-heaters having an inner and an outer drum, the intervening space forming the smoke-passage; and it consists in suspending the inner drum within the outer drum by direct contact of the walls at one or more places, both drums being correspondingly perforated at the part or parts of contact, to afford air circulation through the inner drum, the objects being to cause greater radiation of heat, to give durability to the construction, simplify and cheapen the cost of manufacture, and to admit of the inner drum to contain water for evaporation.

Figure 1 is an elevation of my drum, one-half shown in vertical section. Fig. 2 is a horizontal section of the drum. Fig. 3 is a half-section, half-elevation, of a drum of modified arrangement. Fig. 4 is a horizontal section of the same.

A is the outer, and B the inner, drum, the latter held suspendedly within the former by one or more portions of the side walls being in contact and fixedly held by rivets or other means. At the junction of the side walls suitable perforations C are made in both drums, to cause a through circulation of air in the drum B. The cold air entering by one aperture becomes heated and passes out through another aperture into the apartment to be warmed. The inner drum has a tight bottom to hold water for evaporating purposes, the vapor passing into the room with the

heated air. The outer drum is connected to a stove or stove-pipe in the ordinary way, by telescoping with the collars F at top and bottom of the drum, and in such collars may be placed a damper, G, if desired. The smoke passes between the drums A and B, in the direction indicated by the feathered arrows, the plain arrows indicating the course of the air. Fig. 3 shows a portion of the top of the outer drum perforated, and connected with the inner drum by a short tube, through which the heated air passes, the contact of the walls of the drums A B being at one end only. Fig. 1 shows the points of contact to be at two opposite sides.

I claim as my invention—

1. As an improvement in drum-heaters, and in combination with a smoke-pipe, F, the outer drum A and inner drum B, having perforations C at the rear and front sides of said drums for the passage of air wholly through the inner drum B, said drum B having a water-tight bottom for the reception of water, and attached contiguously to opposite sides of the outer drum A, the smoke-space of the outer drum extending over the ends of the inner drum, as and for the purpose set forth.

2. In combination with smoke-pipe F, and outer drum A, and inner drum B, having water-tight bottom and perforations C, the perforated capped passage H, extending upwardly from the inner drum through the outer drum, for the passage of air solely within the inner drum, as and for the purpose set forth.

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