

J. GROSSIUS.
Heating Stove.

No. 104,581.

Patented June 21, 1870.

Fig. 1

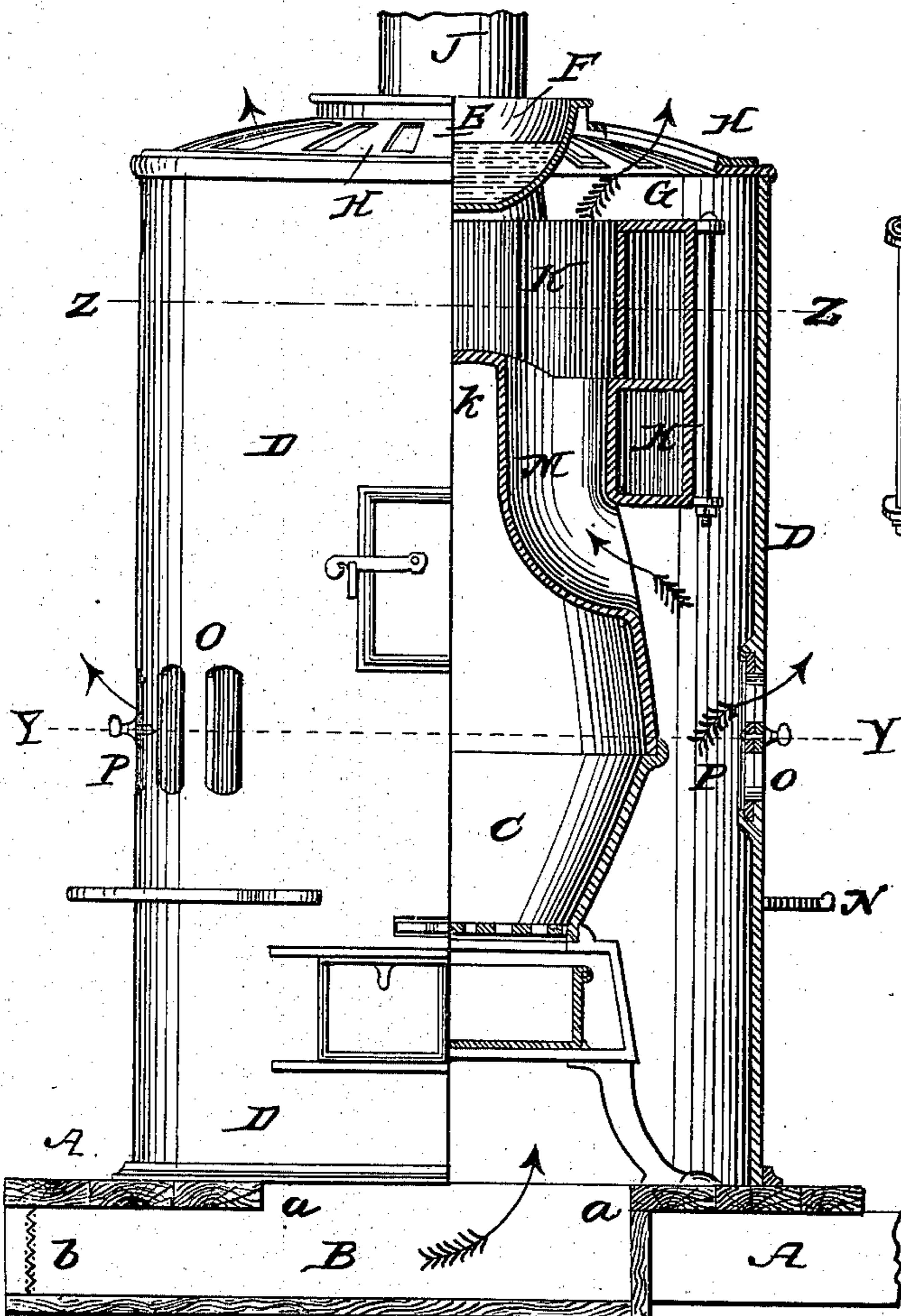
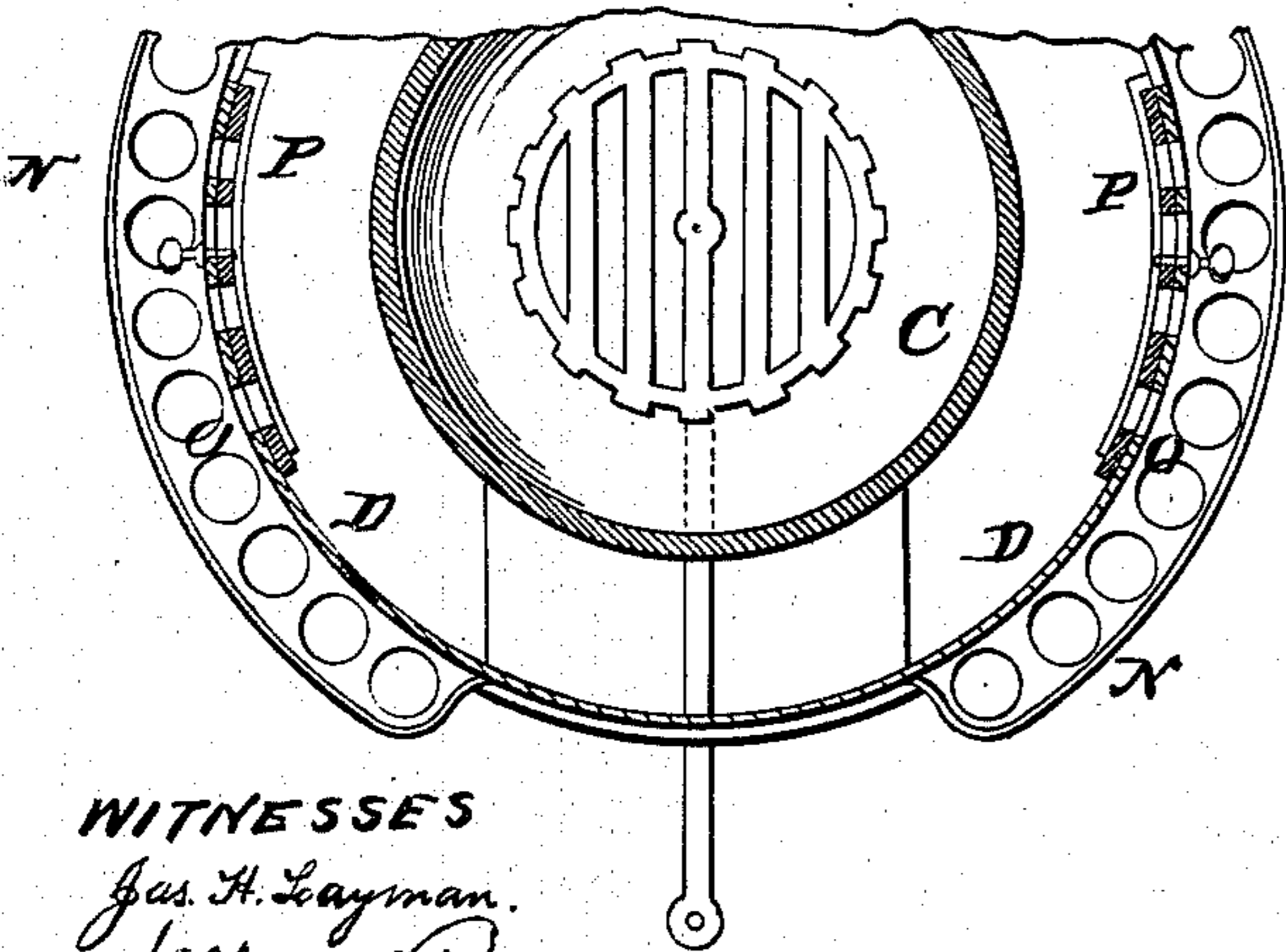


Fig. 2



WITNESSES
Geo. H. Layman.
William Bauer

Fig. 3

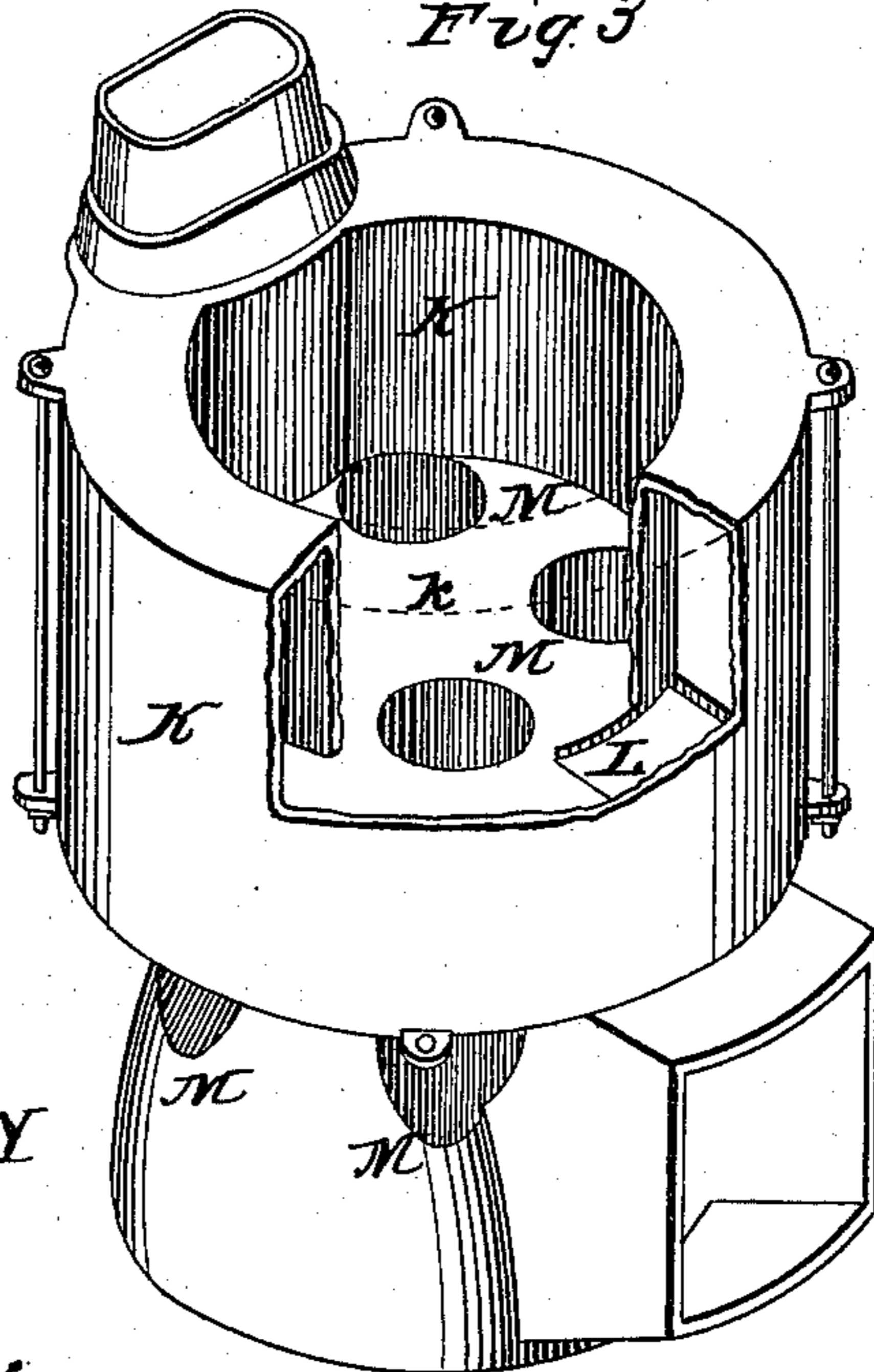


Fig. 4

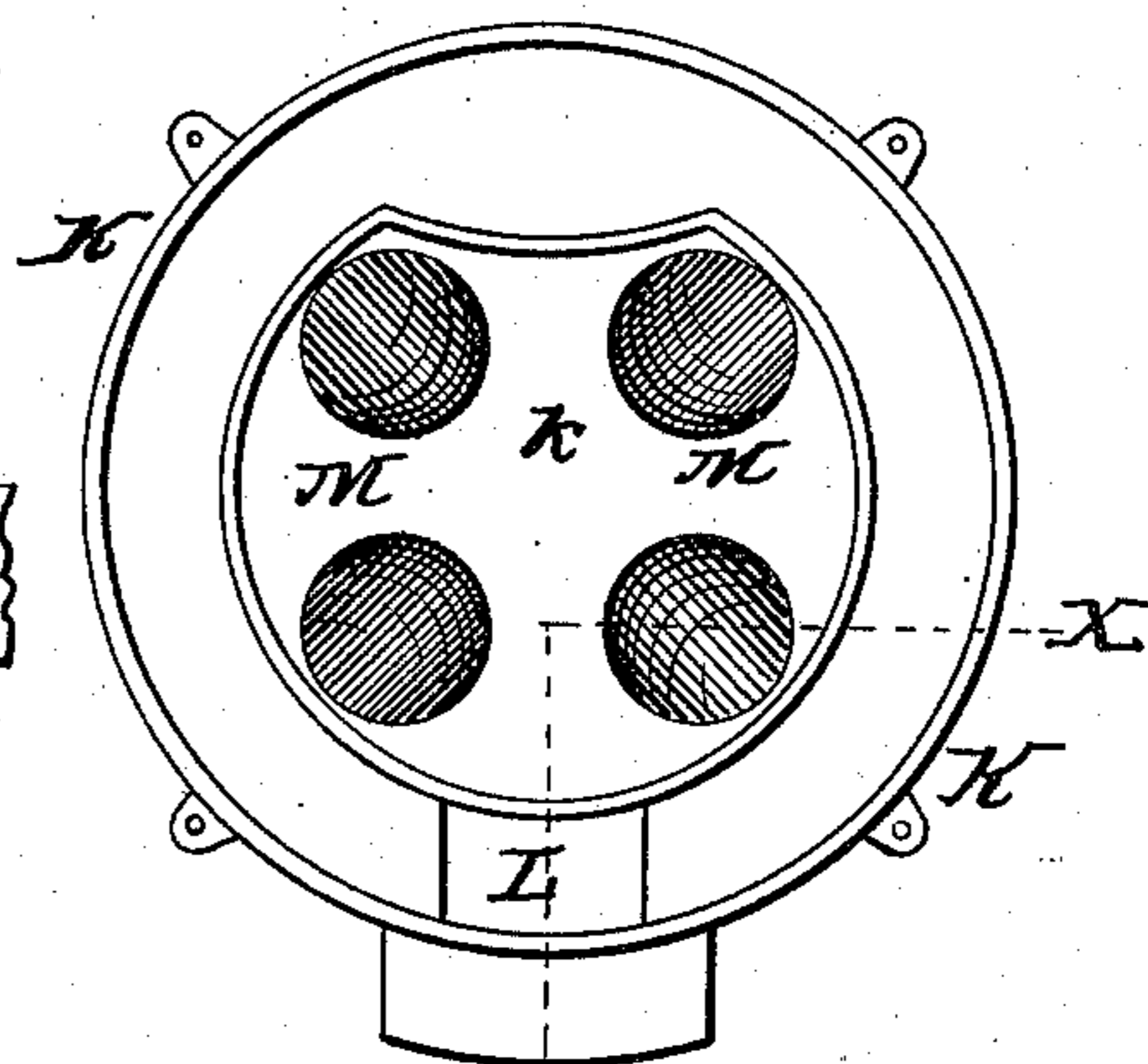
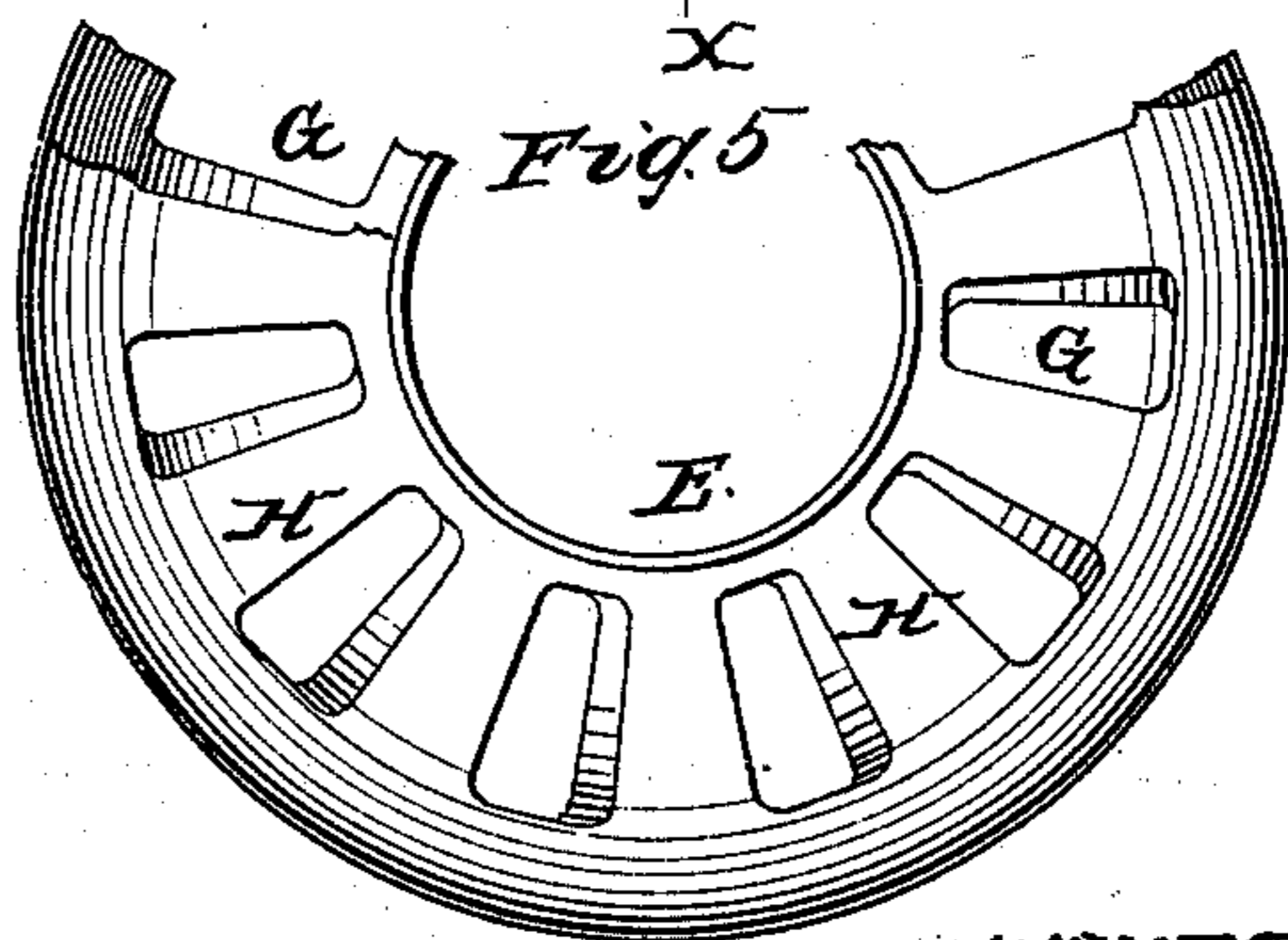


Fig. 5



INVENTOR
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UNITED STATES PATENT OFFICE.

JOHN GROSSIUS, OF CINCINNATI, OHIO.

HEATING-STOVE.

Specification forming part of Letters Patent No. **104,581**, dated June 21, 1870.

I, JOHN GROSSIUS, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Warm-Air Stove for School-Houses, &c., of which the following is a specification:

Nature and Objects of the Invention.

My invention relates to devices for imparting the heat of the furnace or stove proper in the most effectual manner to a current of fresh air which is introduced from the outside of the building, and for the proper and discretionary distribution of said air after being warmed.

General Description with Reference to the Drawing.

Figure 1 represents, by a half-elevation and by section at line X X, a stove embodying my improvements. Fig. 2 is a horizontal section at the line Y Y. Fig. 3 is a perspective view of the stove proper, a portion being broken away. Fig. 4 is a horizontal section of the stove proper at the line Z Z. Fig. 5 shows, by top view, a portion of the upper register.

A represents a portion of the floor of the school or other room. B is an air-inlet, which communicates with the external atmosphere, and may have one or more screens or strainers, *b*, to prevent the entrance of any gross impurities. C is the stove proper, set immediately over an aperture, *a*, in the floor, communicating with the inlet B. The said stove proper is entirely enveloped by a shell or case, D, which operates to confine the air that, entering it from B, becomes heated by the stove, and to distribute the same in the manner hereafter explained. The said shell has at the center of its top plate an open neck, E, to receive a pot, F, for holding and evaporating water, outside of which neck the said top is pierced with a series of apertures, G, having a similarly-pierced parti-annular register, H, and is also pierced with an aperture for the passage of the smoke-pipe J.

My stove proper, C, is surmounted by an annular drum or flue, K, which, receiving the emanations of combustion through orifice L, passes

them around its interior in both directions to the smoke-stack or chimney J. A number of pipes, M, extending obliquely athwart the smoke-space of the stove from the floor *k* of the drum to the side of the stove beneath the drum, serve to very effectually heat that portion of the air which enters them, and to cause a very active circulation thereof. Encircling the drum horizontally at a convenient height is a perforated ledge or shelf, N, which serves as a foot-rest for persons suffering from cold or wet feet. Surrounding the shell immediately above the shelf N is a series of apertures, O, capable of being closed or opened at will by one or more registers, P, which, being opened while those above are closed, operate to throw the heated air out just above the foot-rest, and thus to warm and dry the lower extremities of persons using said rest, while the perforations of said rest not only prevent the collection of mud upon it, but permit warm air to ascend directly from the stove side against the feet of those using it.

Claims.

I claim herein as new and of my invention—

1. The combination of the annular flue K, the orifice L, communicating with said annular flue at or near the front of the stove, the discharge-flue J at back, and the series of oblique pipes M M M, all as shown and described.

2. The combination and arrangement of the annular flue K, front orifice, L, rear flue, J, open neck E, removable central pan, F, and register H, all substantially as represented, for the purposes set forth.

3. The combination of the perforated foot-rest N, register O P, stove C, and upper register, H, when constructed and arranged as herein specified.

In testimony of which invention I hereunto set my hand.

JOHN GROSSIUS.

Witnesses:

GEO. H. KNIGHT,
JAMES H. LAYMAN.