

(Model.)

E. E. GOLD.
HEATER.

No. 255,849.

Patented Apr. 4, 1882.

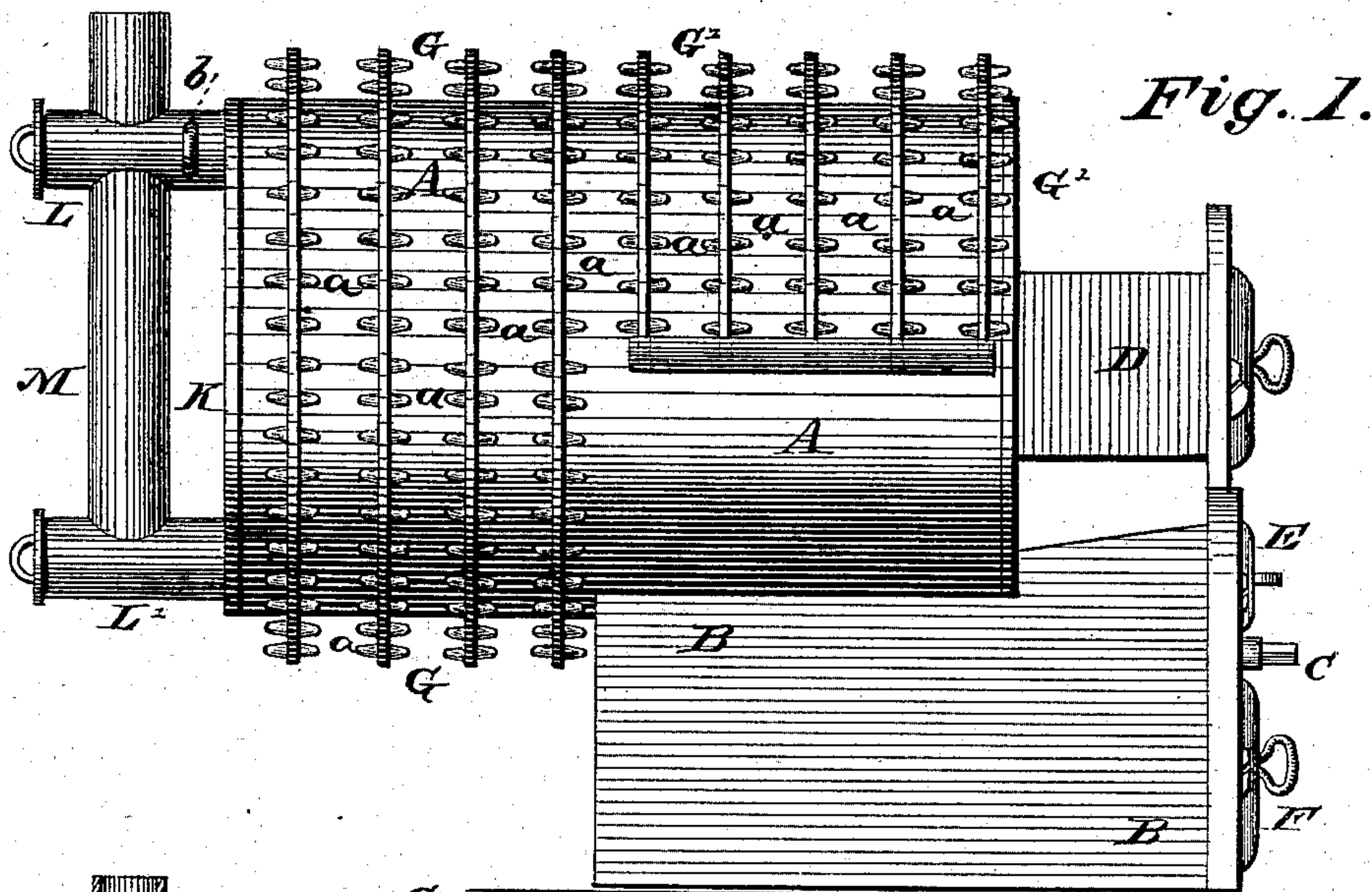


Fig. 1.

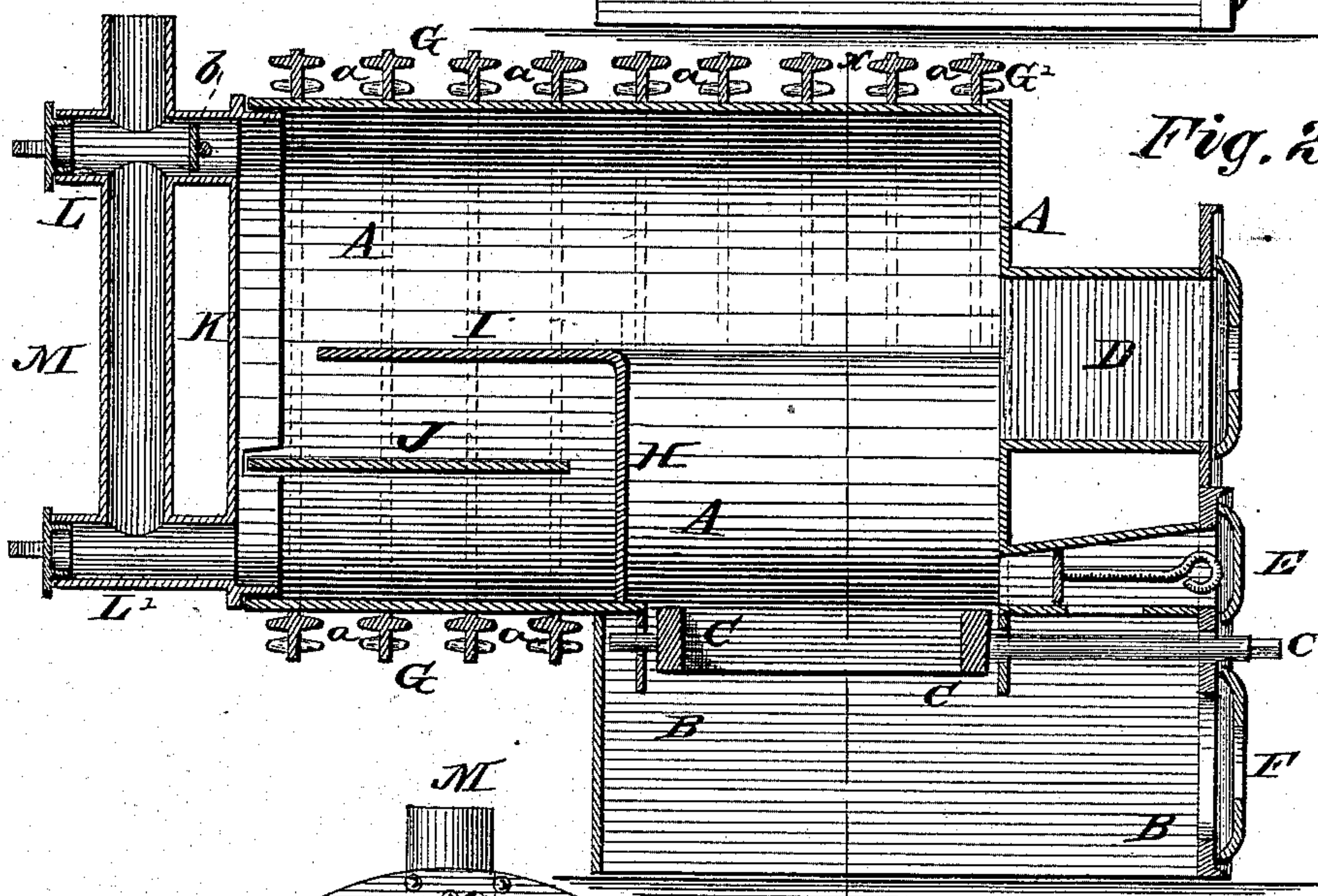


Fig. 2.

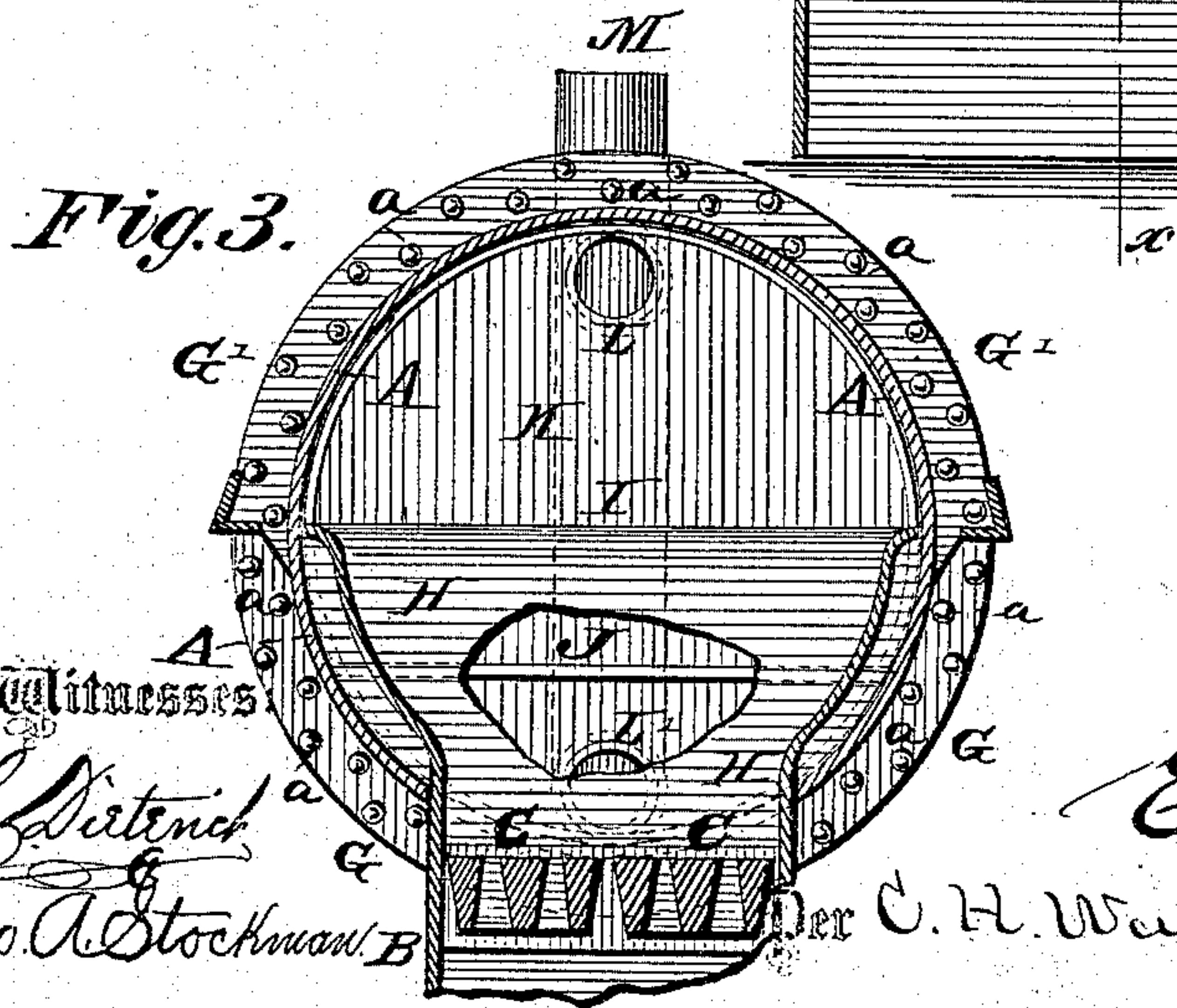


Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

EDWARD E. GOLD, OF NEW YORK, N. Y.

HEATER.

SPECIFICATION forming part of Letters Patent No. 255,849, dated April 4, 1882.

Application filed July 22, 1879. Renewed September 5, 1881. (Model.)

To all whom it may concern:

Be it known that I, EDWARD E. GOLD, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Heaters; and I do hereby declare that the following is a full, clear, and exact description of the invention, which 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 that class of heaters in which the fire-box is wholly or partially surrounded by radiating flanges; and it consists in the interior arrangement of the rear end of the drum or fire-box, whereby the heat is thrown down to the bottom thereof and the escape of the products of combustion retarded, as will be hereinafter more fully set forth.

In the annexed drawings, Figure 1 is a side elevation. Fig. 2 is a central vertical section; and Fig. 3 is a transverse vertical section on line *x x*, Fig. 2.

A represents the horizontal drum, the forward portion of which forms the fire-box. B is the ash-pit, and C C the grates. D is the mouth to the fire-box; E, draft-door, and F door to ash-pit.

The drum A is provided on its rear portion, which overhangs the ash-pit, with a series of continuous flanges, G, extending entirely around the same at suitable distances apart. The forward portion of the drum has similar flanges, G', over the top, and all the flanges have on both sides numerous protuberances, *a a*, as shown, for increasing the radiating-surface. These parts may all be constructed in any of the known and usual ways for this class of heaters.

The interior of the drum A is provided with a vertical diaphragm, H, in rear of the grates, which diaphragm extends from the bottom upward for a suitable distance—say one-half the height of the drum, more or less; and from the upper edge of said diaphragm a horizontal plate, I, running entirely across the drum, extends rearward to within a short distance of the rear head.

Below the plate I is arranged another plate, J, which extends from the rear head forward to within a short distance of the diaphragm H.

In the rear head, K, of the drum is an outlet, L, at the top and another, L', at the bottom, the two being connected by a pipe, M, which communicates with the chimney. In the upper outlet, L, is a damper, *b*, as shown. When this damper is open the products of combustion will pass directly over the top of the plate I and out at L into the chimney; but when the said damper is closed the products of combustion will pass over the plate I, down at the rear end, then forward between the plates I and J to the diaphragm, and then down and back under the plate J to the outlet L'. By this means the escape of the products of combustion is retarded and the heat, &c., thrown to the sides and bottom of the overhanging portion of the drum, so as to heat the same thoroughly and increase the radiating capacity of the heater.

It is evident that more than one plate J may be used, when they should be arranged so as to leave a passage alternately at front and rear ends.

This invention is intended as an improvement upon the heater for which Letters Patent No. 172,014 were granted to me January 11, 1876. In this former patent I had simply a flue in the bottom of the drum and one outlet in the end and another in the bottom of the drum.

The main object of my present invention is to thoroughly heat the lower portion of the overhanging part of the drum, which would otherwise be comparatively cool and radiate but little heat.

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

The combination of the drum A, diaphragm H, plates I J, head K, with outlets L L', connecting-pipe M, and damper *b*, substantially as and for the purposes herein set forth.

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

EDWARD E. GOLD.

Witnesses:

M. PARPART,
E. HORN,
THEODORE HORN.