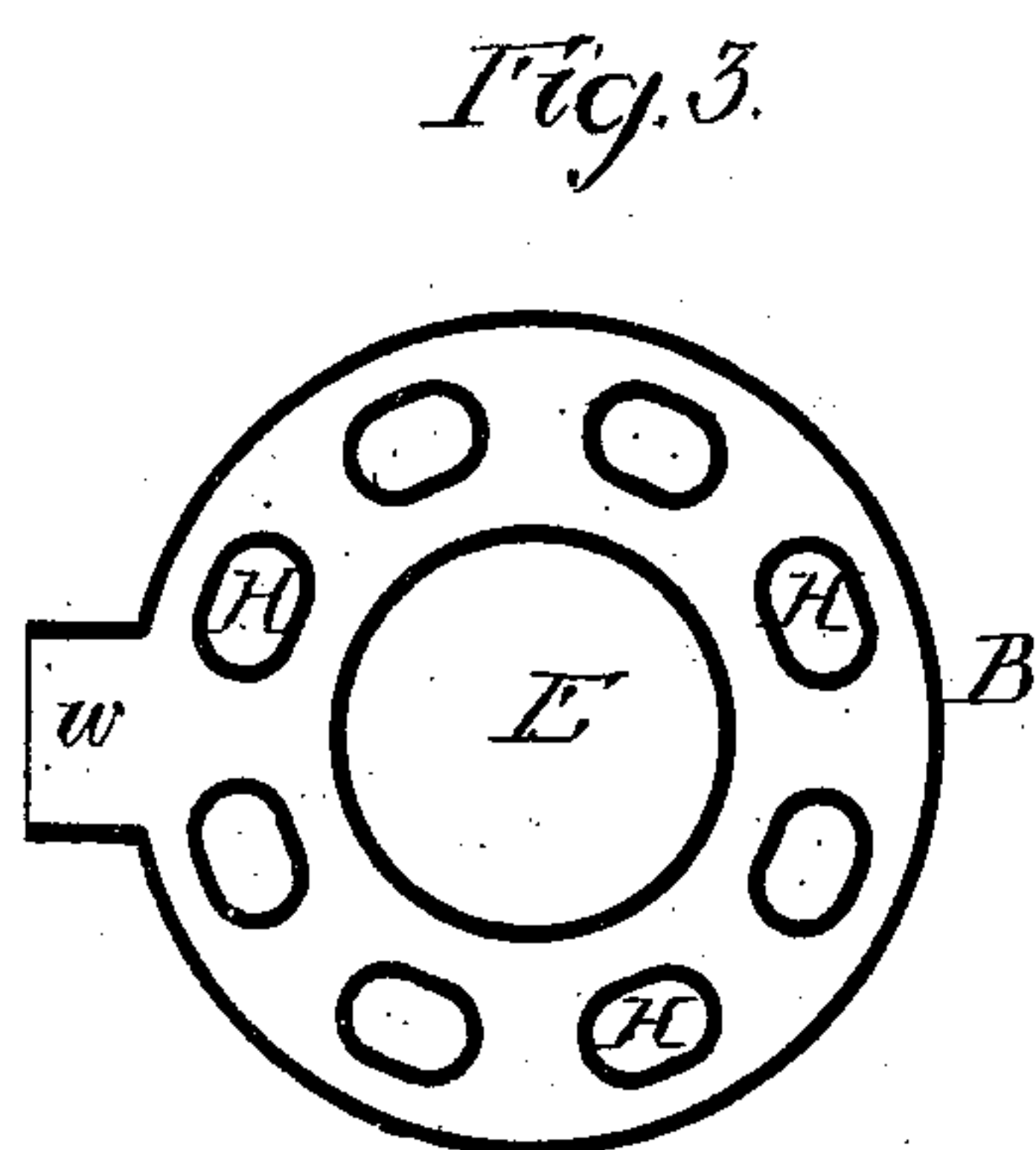
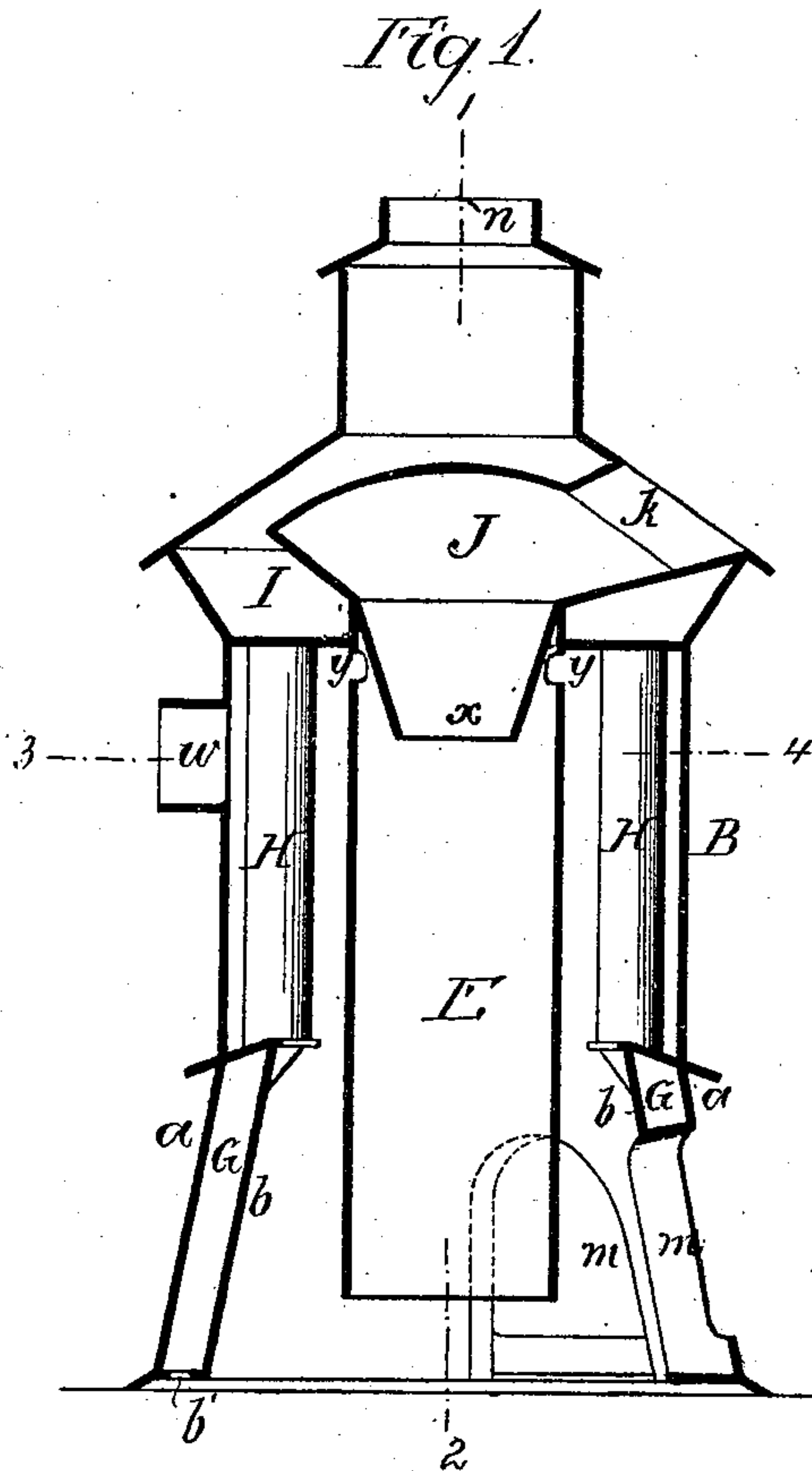
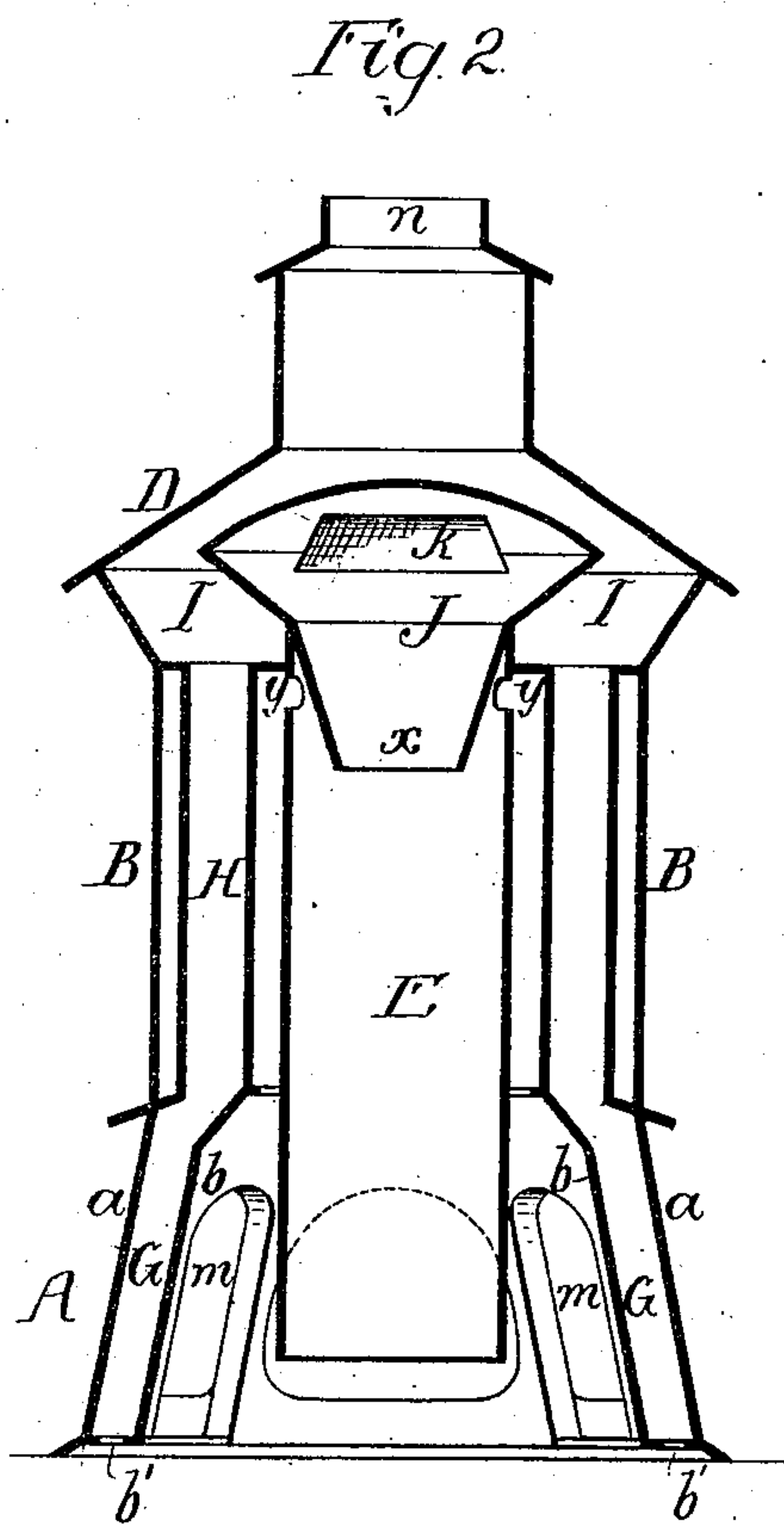


S. RAYMOND.
Heating-Stove.

No. 197,664.

Patented Nov. 27, 1877.



Witnesses
Harry A. Crawford
Harry Smith

Inventor
Seymour Raymond
by his Attorneys
Hawson and Son

UNITED STATES PATENT OFFICE.

SEYMOUR RAYMOND, OF MIDDLETOWN, PENNSYLVANIA, ASSIGNOR TO
HIMSELF AND JOSEPH CAMPBELL, OF SAME PLACE.

IMPROVEMENT IN HEATING-STOVES.

Specification forming part of Letters Patent No. **197,664**, dated November 27, 1877; application filed
October 1, 1877.

To all whom it may concern:

Be it known that I, SEYMOUR RAYMOND, of Middletown, Pennsylvania, have invented a new and useful Improvement in Heating-Stoves, of which the following is a specification:

My invention relates to certain improvements, fully described hereinafter, in the base-burning stove for which Letters Patent No. 167,566 were granted to myself and Joseph Campbell, September 7, 1875; the object of my present improvements being to obtain more radial heat and more highly-heated air than can be obtained from the patented stove.

In the accompanying drawing, Figure 1 is a vertical section of my improved stove; Fig. 2, a vertical section on the line 1 2; and Fig. 3, a sectional plan on the line 3 4.

A represents the illuminated section of the stove immediately above the fire-pot; B, the body; and D, the cap or top section, E being the magazine.

The section A consists of the inner casing *b* and outer casing or jacket *a*, and between these casings intervenes the air-heating chamber G, which is closed below, with the exception of openings *b'*, for the admission of air, and above, excepting at the points where the chamber communicates with the vertical tubes H. In this section A, which is similar to that described in the aforesaid patent, there are suitable openings *m* for mica doors or frames.

The tubes H, which are surrounded by the cylindrical body A, communicate with the hot-air chamber I within the upper section D, the latter having at the top an outlet, *n*, which may be made to communicate, by suitable pipes, with rooms above or adjoining that in which the stove is situated.

In the aforesaid patent there is an annular passage between two casings for the air to

pass from the chamber of the lower section to the chamber I, and this not only detracted from the radial heat, but restricted the heating-surface. In my present improvements the casing is independent of, and at a distance from, the tubes H, round which the products of combustion circulate before reaching the outlet *w*. The tubes, consequently, present such an extended heating-surface that a high degree of heat must be imparted to the air which passes through them to the chamber I; at the same time the body casing B is exposed to the products of combustion, and consequently great radial heat is derived from it in the room containing the stove.

Above the magazine, and within the chamber I, is the receiver J, to which the fuel is admitted through a chute or duct, *k*, the latter being provided with a suitable door, the receiver terminating in a hollow inverted frustum of a cone, *x*, which is contained within the upper portion of a magazine, E, where there are openings *y*, the cone serving to deflect the gases generated in the magazine through the said openings and preventing them from gaining access to the chamber I.

I claim as my invention—

The combination, in a base-burning stove, of the illuminating-section A, body B, magazine E, and hot-air chamber I with the air-heating pipes H, arranged between the magazine E and body B, above the illuminating-section A, all substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SEYMOUR RAYMOND.

Witnesses:

HENRY STEHMAN,
GEO. W. ETTILE.