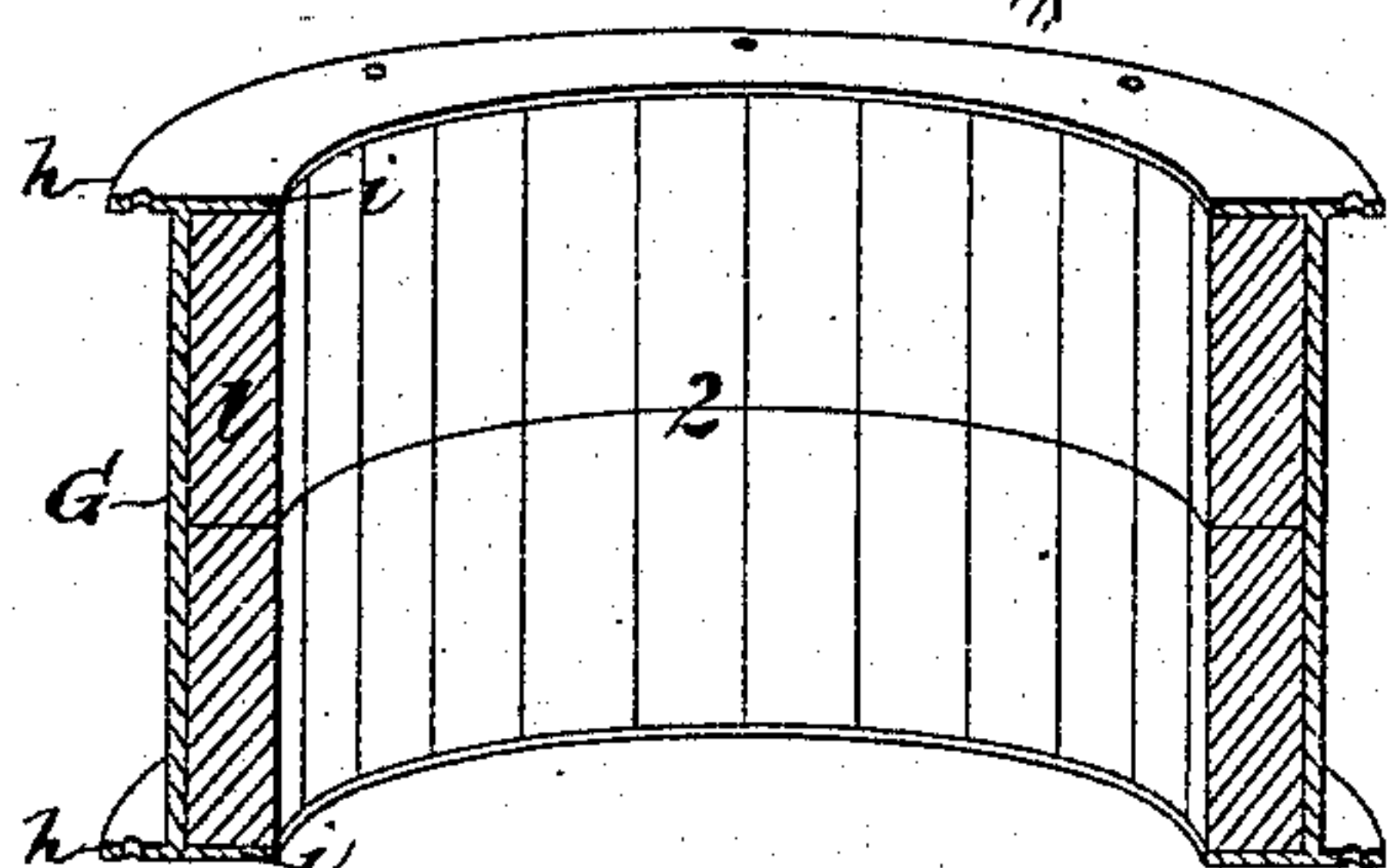
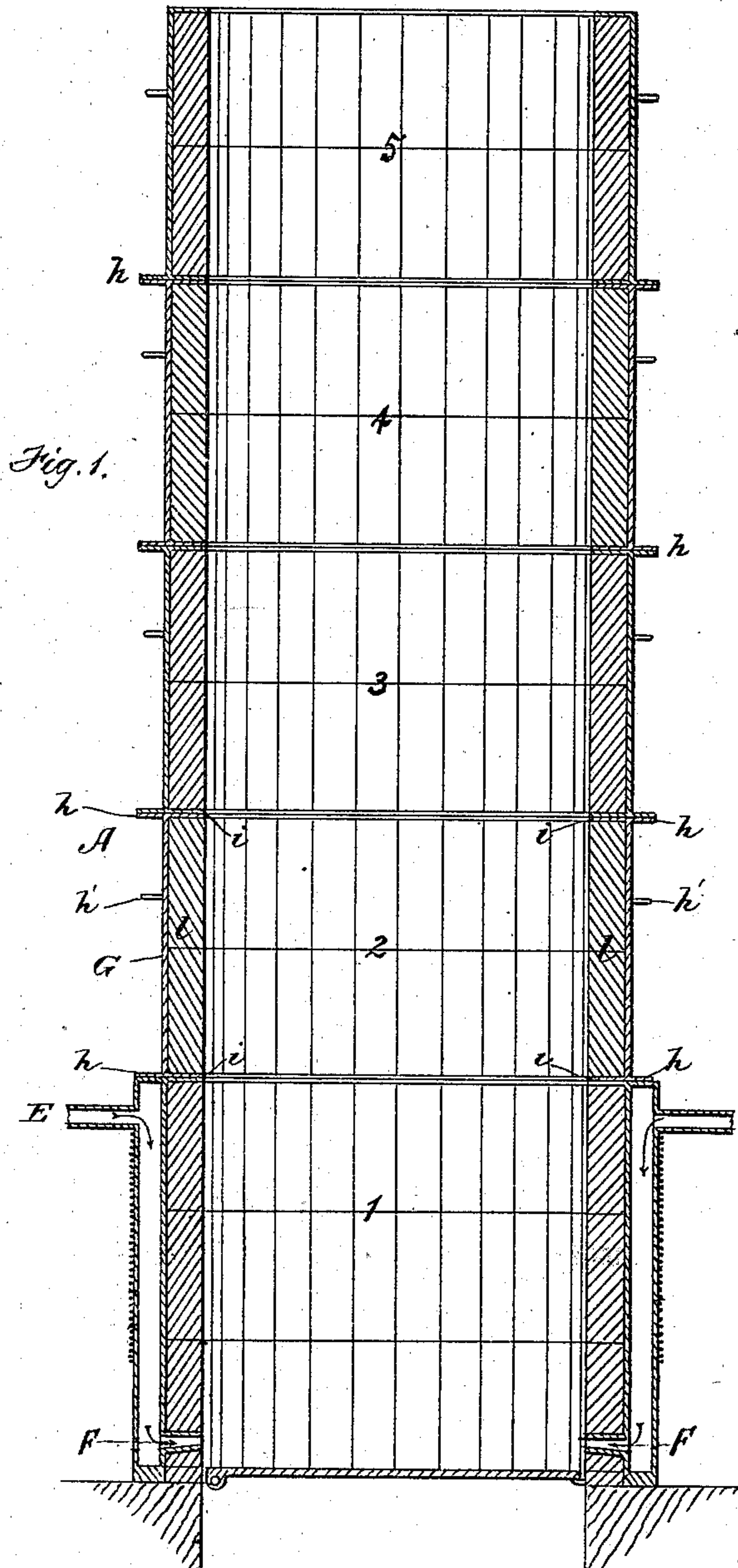


W. L. THOMPSON.
Sectional Furnace.

No. 237,339.

Patented Feb. 1, 1881.



Witnesses.

E. B. Fairchild
Geo. S. Brown

Inventor.
W. L. Thompson
by Wright & Brown
Atty.

UNITED STATES PATENT OFFICE.

WILLIAM L. THOMPSON, OF BOSTON, MASSACHUSETTS.

SECTIONAL FURNACE.

SPECIFICATION forming part of Letters Patent No. 237,339, dated February 1, 1881.

Application filed February 24, 1880.

To all whom it may concern :

Be it known that I, WILLIAM L. THOMPSON, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Sectional Furnaces, of which the following is a specification.

This invention relates to furnaces which are constructed in successive superposed cylindrical sections; and it consists in the peculiar construction and combination of parts hereinafter particularly set forth.

In the accompanying drawings, Figure 1 represents a vertical section through my improved blast-furnace, and Fig. 2 represents a view of an upper furnace-section.

A designates the said furnace, which consists of a permanent base or lowest section, 1, and detachable upper sections, 2, 3, 4, and 5. Lower section, 1, is a hollow shell, the inner wall of which is in a line with the upper sections. The flat top of this shell serves as a base for the flange *h* of whichever upper section may temporarily occupy the place which section 2 occupies in the drawings. This shell has air-inlets *E* in its outer wall, near the top of said shell, and air-outlets *F*, through which the air thus admitted is supplied to the furnace. In passing through the hollow shell the air tends to cool section 1. The upper sections, 2, 3, 4, and 5, are each provided at top and bottom with external horizontal annular flanges *h h*, whereby they may be secured together, and with similar inner flanges, *i i*, whereby they support the fire-brick lining *l*. The said sec-

tions may be transposed from time to time, so that no one of them shall remain in the position next to the base or section 1 too long, and thus be continually most exposed to the action of the fire—as, for instance, the sections 2 and 5 may each be shifted to the position of the other, &c.

The durability of the furnace is greatly increased by this construction and the transposition of parts, as shown.

I am aware that furnace-chimneys have been constructed with a permanent base having an air-chamber surrounding it for the purpose of cooling the same and furnishing hot air to the tuyeres; also, that furnace-chimneys have been made in successive superposed sections. I therefore do not broadly claim either of said constructions.

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

A furnace consisting of permanent base and detachable upper sections, each of said sections being provided with external flanges, *h h*, at top and bottom, and similarly-arranged internal flanges, *i i*, for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 12th day of February, A. D. 1880.

WILLIAM L. THOMPSON.

Witnesses:

C. F. BROWN,
RICHARD BROWN.