

No. 627,545.

Patented June 27, 1899.

M. M. SUPPES.
BLAST FURNACE.

(Application filed Sept. 29, 1898.)

(No Model.)

Fig. 1.

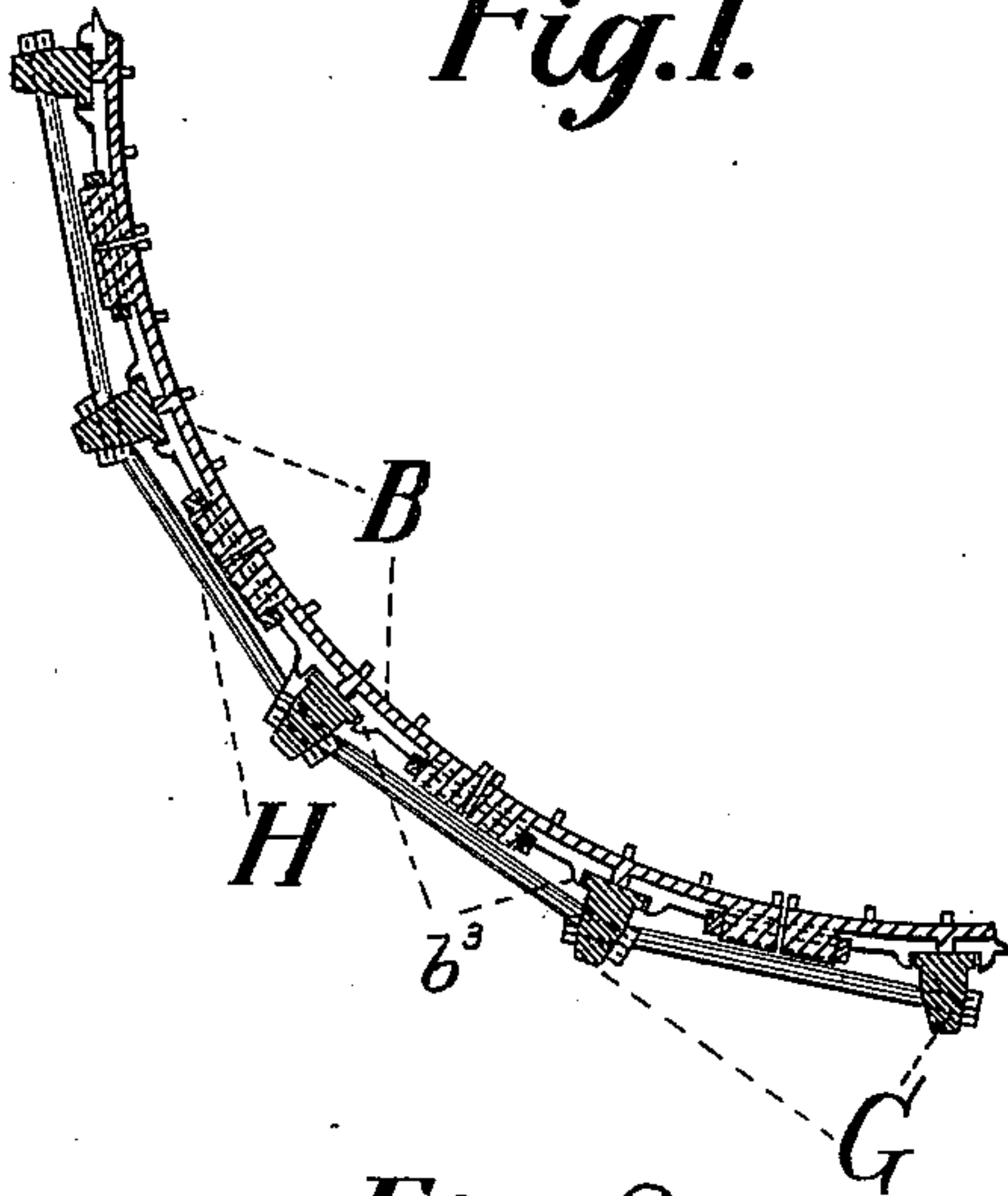


Fig. 2.

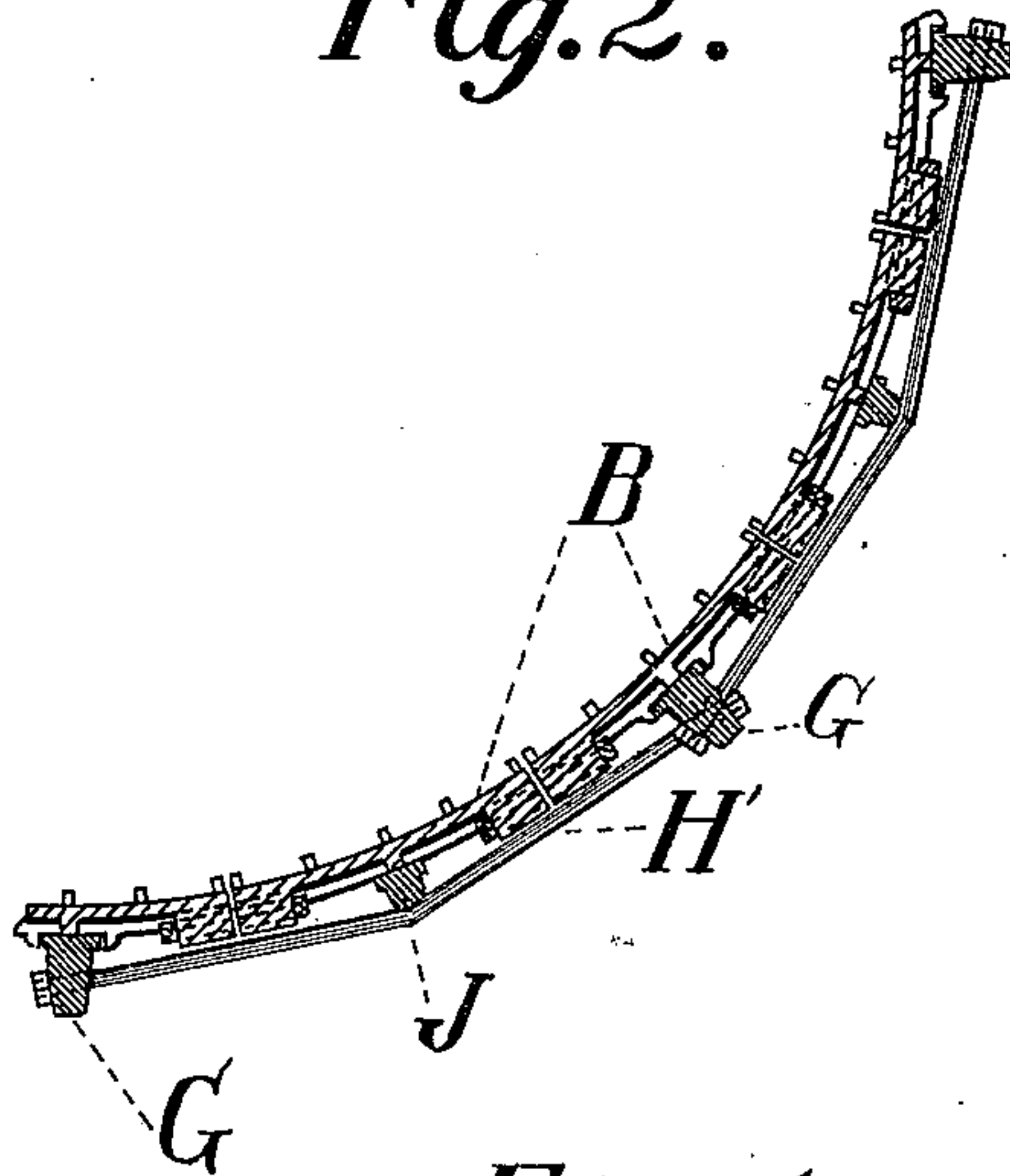


Fig. 3.

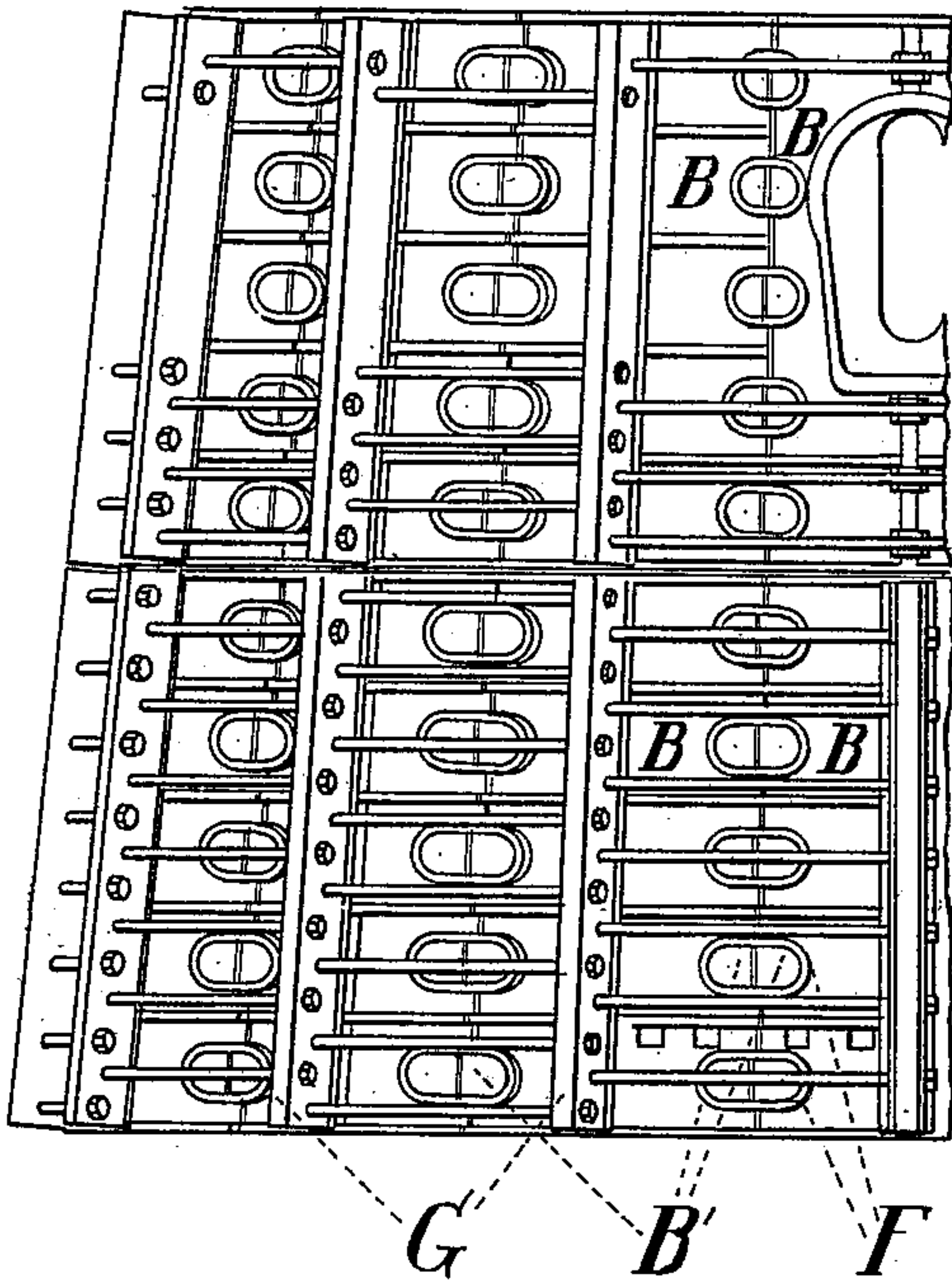
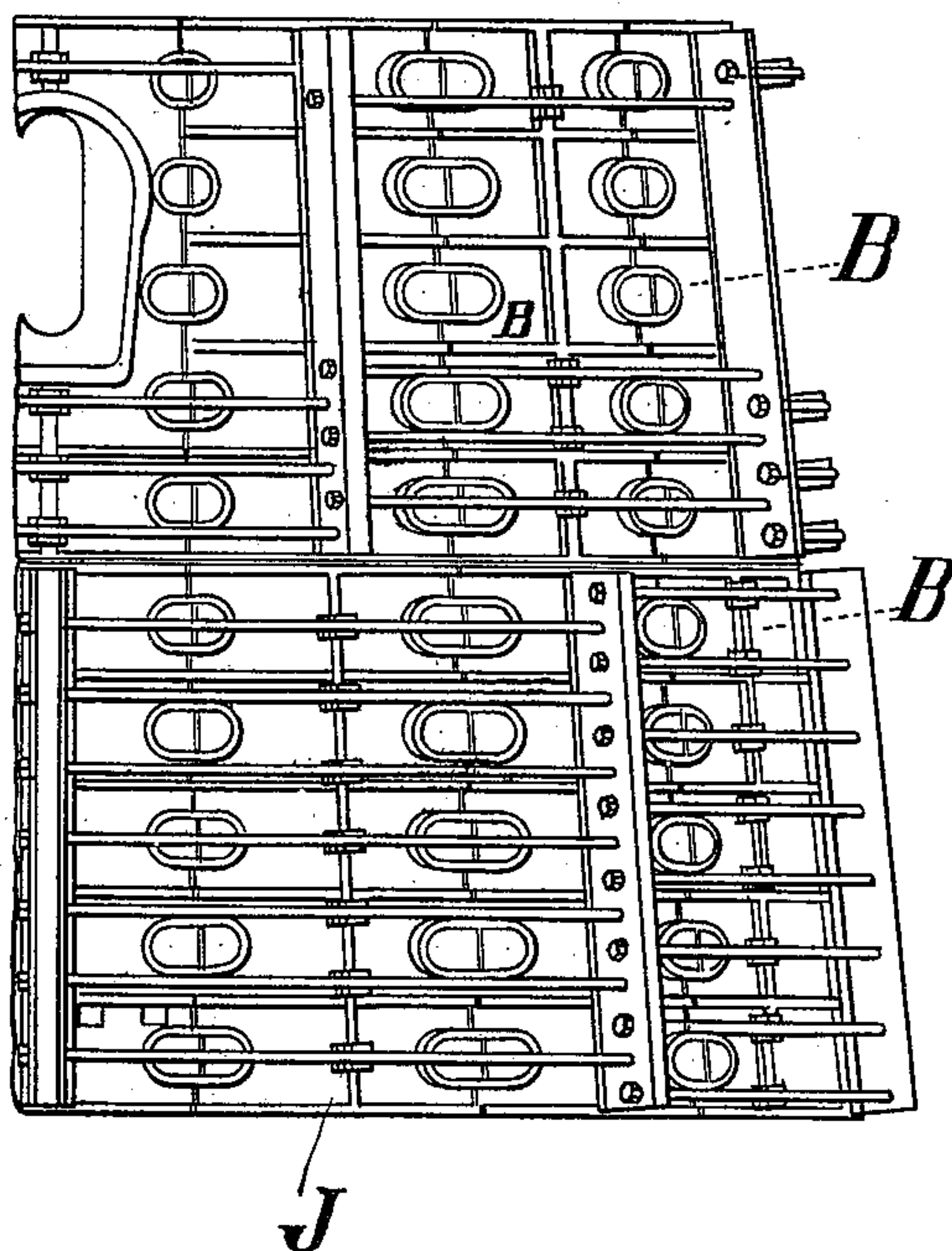


Fig. 4.



WITNESSES:

Myrtle E. Sharpe.
Robert M. Evans

INVENTOR

Max. M. Suppes
BY
Richard L. Lys
ATTORNEY.

UNITED STATES PATENT OFFICE.

MAXIMILIAN M. SUPPES, OF ELYRIA, OHIO.

BLAST-FURNACE.

SPECIFICATION forming part of Letters Patent No. 627,545, dated June 27, 1899.

Application filed September 29, 1898. Serial No. 692,238. (No model.)

To all whom it may concern:

Be it known that I, MAXIMILIAN M. SUPPES, of Elyria, in the county of Lorain and State of Ohio, have invented a new and useful Improvement in Blast-Furnaces, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to blast-furnaces, and has for its object the provision of an improved hearth-jacket and hearth-jacket fastening for the same.

With these objects in view the invention consists in the novel features of construction and arrangement hereinafter described, and pointed out in the appended claims.

In the accompanying drawings, to which reference is had, Figures 1 and 2 show horizontal sections of modified forms of quarter-arcs of a hearth-jacket and my improved means for binding the jacket-sections together; and Figs. 3 and 4 are side elevations, respectively, of the modifications shown in Figs. 1 and 2.

Referring to the drawings, the letter B designates the metallic sections of which the hearth-jacket is composed, and which are arranged in tiers or layers, one above the other, as shown in Figs. 3 and 4. The concave faces of the sections are formed with vertical ribs or projections *b*, which rest against and hold the jacket away from the hearth-wall, the resulting intervening space being utilized by me to receive the flowing water of a water-circulation system for cooling the hearth-wall, as fully described and claimed in another pending application, filed April 8, 1899, Serial No. 712,247.

Referring first to Figs. 1 and 3, the sections B of the jacket are formed with semi-oval projections B' at their ends which abut in adjacent sections to form substantially continuous oval projections. Oval rings F surround each abutted pair of these semi-oval projections, and thereby connect the different hearth-sections together. At the center of each section is a vertical column G, which rests between parallel ribs *b*³, formed integrally with the said sections. Connecting the columns are bolts H, as shown.

In the modification shown in Figs. 2 and 4 the construction is similar in principle to that just described, except that the columns

G only engage alternate sections B of the hearth-jacket, bearing-blocks J being provided between the intermediate sections and the bolts H'.

The constructions described form a hearth-jacket which can be readily set up and removed, and in which the sections are so connected as to render each one capable of being quickly connected or disconnected and removed, while at the same time the fastenings therefor are of simple and secure character.

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

1. A hearth-jacket for blast-furnaces comprising the combination of a plurality of sections contacting to form a circular jacket, couplings between the ends of each pair of contacting sections, a plurality of vertical columns bearing against central portions of different sections of the hearth-jackets and stay-bolts connecting neighboring columns.

2. A hearth-jacket for blast-furnaces comprising the combination of a plurality of sections contacting to form a circular jacket, couplings between the ends of each pair of contacting sections, vertical columns bearing against central portions of alternately-located jackets, bearing-blocks at the central portions of the intermediate jackets, and stay-bolts connecting the said columns and bearing at their centers against the bearing-blocks.

3. A hearth-jacket for blast-furnaces composed of sections, a plurality of outward projections at each end of each section, rings surrounding the adjacent portions of neighboring sections, fastening members bearing against central portions of the said sections, and a series of stay-bolts connecting the said fastening members.

4. A hearth-jacket for blast-furnaces composed of sections, a plurality of outward projections at each end of each section, rings surrounding the adjacent projections of neighboring sections, fastening members bearing against central portions of alternate sections, and a series of horizontal stay-bolts connecting the fastening members.

In testimony whereof I have affixed my signature in presence of two witnesses.

MAXIMILIAN M. SUPPES.

Witnesses:

JOS. H. CRAIG,
FRED W. WATERMAN.