

(No Model.)

A. M. WHITE & T. W. HODGSON.

CROWN BAR FOR FURNACES.

No. 308,450.

Patented Nov. 25. 1884.

Fig. 2.

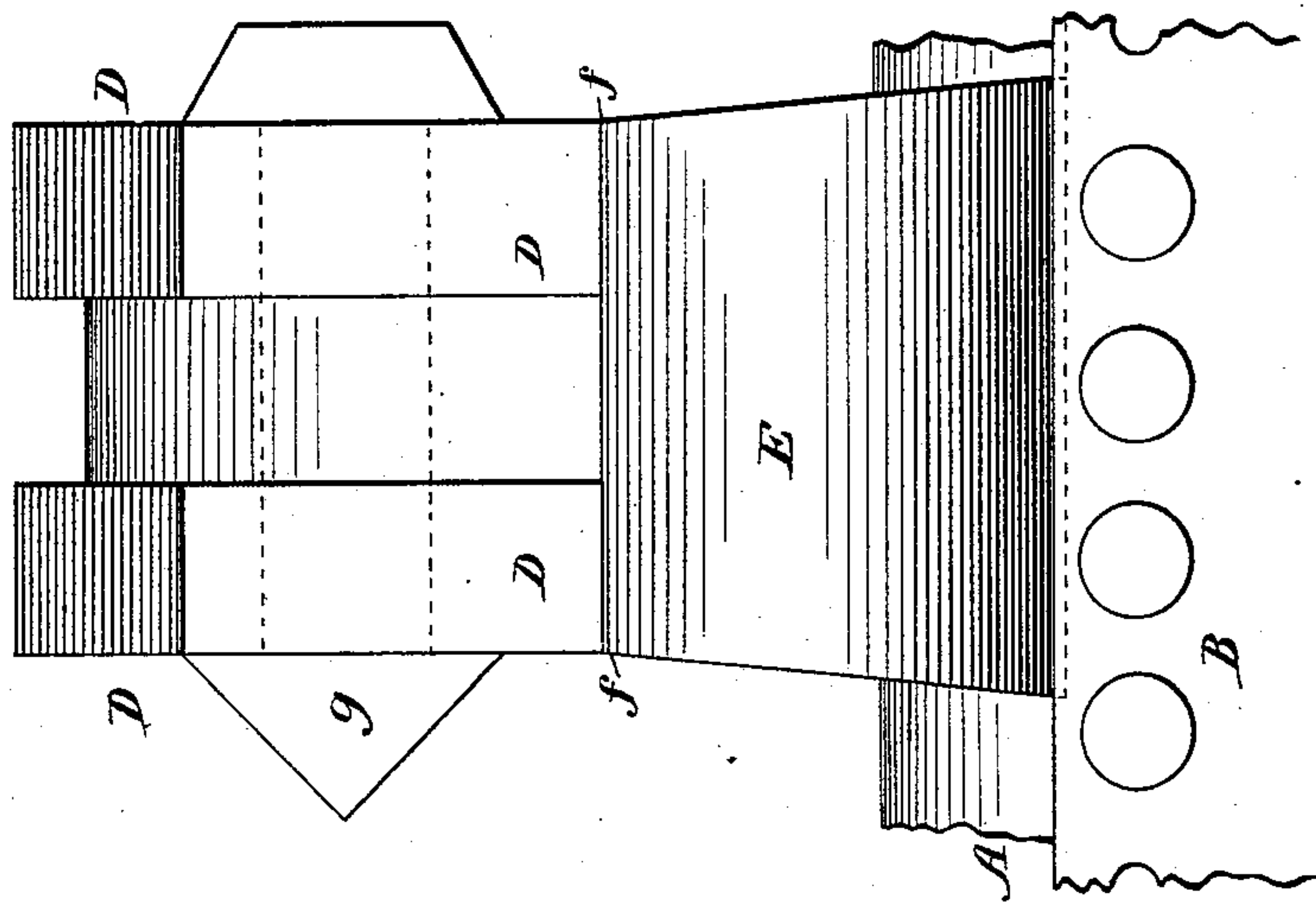
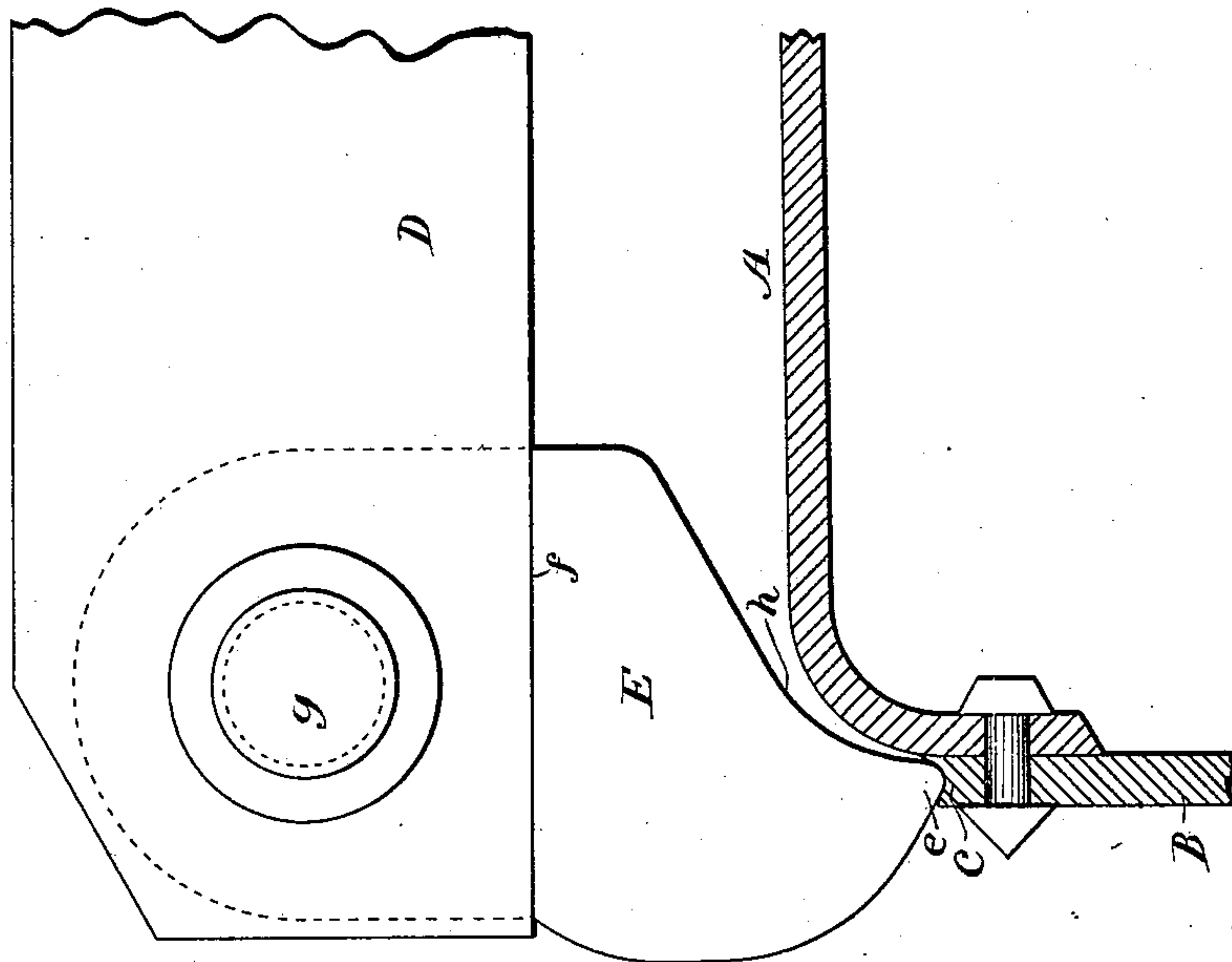


Fig. 1.



WITNESSES

Ed. C. Newman,
E. C. Davidson.

INVENTOR

Arthur Melville White.
Thomas Walker Hodgson

By their Attorneys

Baldwin, Hopkins & Payson.

UNITED STATES PATENT OFFICE.

ARTHUR M. WHITE AND THOMAS W. HODGSON, OF ROME, NEW YORK.

CROWN-BAR FOR FURNACES.

SPECIFICATION forming part of Letters Patent No. 308,450, dated November 25, 1884.

Application filed August 19, 1884. (No model.)

To all whom it may concern:

Be it known that we, ARTHUR MELVILLE WHITE and THOMAS WALKER HODGSON, both of Rome, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Crown-Bars for Furnaces, of which the following is a specification.

The invention relates to the manner of supporting the crown-bars on the fire-box; and its object is to provide an economical and practical structure in which the free circulation of water over the crown-sheet is unobstructed.

In the accompanying drawings, Figures 1 and 2 are detail views illustrating our invention, and showing portions of a fire-box and crown-bars. The crown-sheet A and side sheets, B, of the fire-box are riveted together in the ordinary way, the upper edges of the side sheets being below the surface of the crown-plate, as usual. The joints or seams formed by the upper edges of the side sheets and the downwardly-projecting sides of the crown-sheet are calked by the well-known Connery process—that is, the upper edges of the side sheets are worked with a tool having a convex edge, so as to compress or upset the metal against the sides of the crown-sheet and form concave channels C in the edges of the side sheets. The crown-bars D are supported by castings E, which are preferably shaped as illustrated in the drawings, so as to leave as much space between them and the crown-sheet as possible, and are formed with rounded noses or convex edges *e*, which fit in the calking-channels C in the edges of the side sheets, so as to support the bars solely on the side sheets. Each casting E carries two crown-bars, as clearly illustrated in the drawings. The casting is formed with a straight shoulder, *f*, on each side, on which the crown-bars rest, the bars being bolted to the casting by a rivet, *g*. The square shoulders or seats *f* on the casting for the crown-bars and the rivet *g* bind the bars and the casting rigidly together. This

structure and the manner of seating the castings on the side sheets give the crown-bars a firm and stable support. As the castings are supported solely on the side sheets and are cut away, as shown at *h*, there is an unobstructed space for the free circulation of the water over the entire crown-sheet.

By the use of castings for supporting the bars, and by organizing the parts as illustrated in the drawings, considerable facility and economy in construction are obtained.

We are aware that it is old to support crown-bars conjointly on the side and crown sheets by means of interposed castings, and we therefore make no claim to such a structure.

We are also aware that it is old to support crown-bars solely on the side sheets of the fire-box, and we do not, therefore, claim such a construction.

We claim as our invention—

1. The combination, substantially as set forth, of the crown-sheet, the side sheets having calking-channels formed in their upper edges, the crown-bars, and castings which support the bars solely on the side sheet and are formed with rounded noses or convex edges to fit in the calking-channels.

2. The combination, substantially as set forth, of the crown-sheet, the side sheets having calking-channels formed in their upper edges, the castings which support the crown-bars solely on the edges of the side sheets and are formed with rounded noses or convex edges which fit in the calking-channels, the straight shoulders or seats formed on said castings for the crown-bars, and a single bolt or rivet which unites the crown-bars with each casting.

In testimony whereof we have hereunto subscribed our names.

A. M. WHITE.
T. W. HODGSON.

Witnesses:

GEO. P. NOCK,
GEO. D. LINN.