

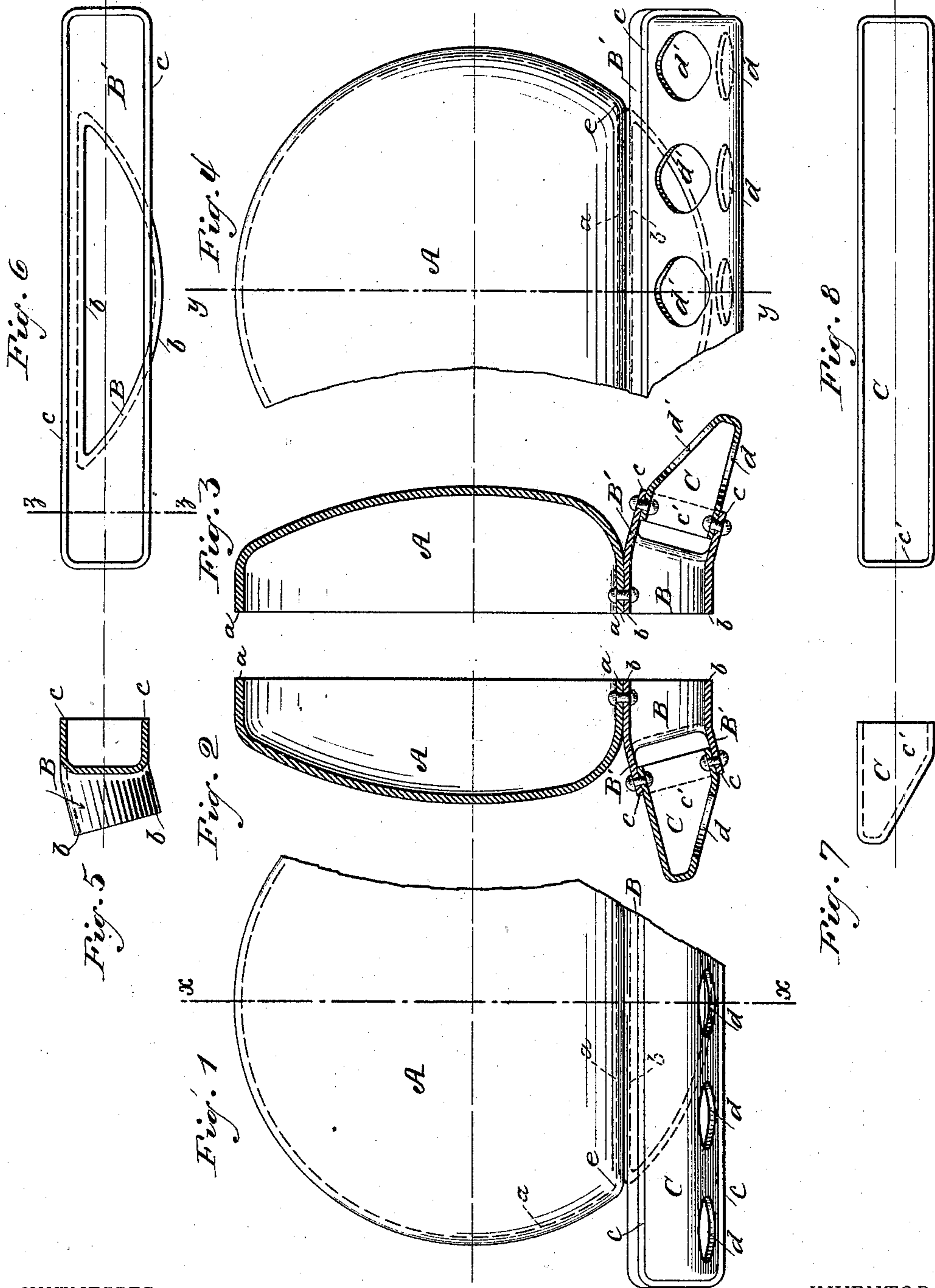
(No Model.)

M. J. MARTINEZ & O. MULLER.

COMBINED DRUM HEAD AND MANIFOLD FOR SECTIONAL STEAM BOILERS.

No. 368,600.

Patented Aug. 23, 1887.



WITNESSES.

Aug. 23, 1887
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INVENTORS

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UNITED STATES PATENT OFFICE.

MANUEL J. MARTINEZ, OF BAYONNE, NEW JERSEY, AND OTTO MULLER,
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COMBINED DRUM-HEAD AND MANIFOLD FOR SECTIONAL STEAM-BOILERS.

SPECIFICATION forming part of Letters Patent No. 368,600, dated August 23, 1887.

Application filed March 3, 1887. Serial No. 229,586. (No model.)

To all whom it may concern:

Be it known that we, MANUEL J. MARTINEZ, residing at Bayonne, county of Hudson, State of New Jersey, and OTTO MULLER, residing at the city, county, and State of New York, citizens of the United States, have invented certain new and useful Improvements in a Combined Drum-Head and Manifold for Sectional Steam-Boilers, of which the following is a specification.

This invention relates to the construction of manifolds and drum-heads for use in making connection between a drum and a series of water-tubes of a sectional water-tube steam-boiler; and the said invention consists of an improved combined construction of the drum-head and the manifold, whereby they are produced from wrought-metal plates and whereby great rigidity of the several parts is attained.

In order that others skilled in the art to which our invention appertains may be enabled to understand and use the same, we will proceed to describe its construction in detail, having reference to the accompanying drawings, and point out in the appended claims its novel characteristics.

Figure 1 is an elevation, partly broken away, of a front drum-head with a manifold combined therewith; Fig. 2, a vertical central section of Fig. 1, taken on the line $x x$; Fig. 3, a similar section on the line $y y$ of Fig. 4; Fig. 4, an elevation, partly broken away, of the rear drum-head; Fig. 5, a cross-section of the manifold on the line $z z$; Fig. 6; Fig. 6, an elevation of the back piece of the manifold, having a flanged drum-head segment; and Figs. 7 and 8, an end view and an elevation, respectively, of the front piece of the manifold.

The combined manifold and drum-head embodied in the present invention is composed of three distinct parts: First, the drum-head segment A, having the flange a ; second, the complementary drum-head segment B, having the flange b , and the extension or open box B'; and, third, a trough-shaped piece, C, having perforations for the reception of water-tubes or hand-hole plates.

The flange a of the segment A extends about the curved periphery of the latter to the points

e , whence it is carried horizontally across, corresponding to the chord of a circle, and presents a flat surface for the reception of the corresponding surface of the complementary segment flange b which is riveted or welded thereto. The horizontal bridge thus formed by the united edges of the flanges a and b acts both as a stiffening-beam for the structure and as a deflecting-plate for directing the steam and water current lengthwise of the drum.

The complementary segment B is extended outwardly and transversely upon its exterior side, so as to form the open rectangular or oblong box B', the perimeter or flange c of which is turned downward at an angle to the axis of the drum and segments, as viewed in cross-section in Figs. 2 and 3. The trough-shaped piece C, having closed ends c' , is fitted to the oblong flange c of the open box B', and having a V-shaped cross-section forms therewith a prismatic manifold when riveted or welded to said flange, as shown. The trough C, in the present instance, has one of its sides parallel with the angle of inclination of the extension-flange c , while the opposite side is converged at an angle greater than that of said extension. It will therefore be observed by an inspection of Figs. 2 and 3 that by the reversal of the trough C its lower surface will be inclined in one or the other direction to the axis of the drum, for the purpose of entering the water-tubes at the desired angle thereto. The side of the trough C which is lowermost is provided with a series of circular perforations, d , into which the ends of the water-tubes are expanded or otherwise secured. In case the inclination of the said tubes is such as to render them accessible by means of a tube-cleaning implement, as in Fig. 3, the uppermost side of the trough C is provided with a series of perforations, d' , corresponding to the perforations d , and of suitable shape for the reception of hand-hole plates.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. A combined drum-head and manifold for water-tube boilers, consisting of, first, a flanged segment; second, a complementary flanged segment with a rectangular or oblong extension

thereto, and, third, a trough-shaped piece adapted to fit the said rectangular or oblong extension and form therewith a manifold, substantially as described.

- 5 2. A combined drum-head and manifold for a water-tube boiler, consisting of, first, a flanged segment; second, a complementary flanged segment with a rectangular or oblong extension at an angle to the axis of the segment,
10 and, third, a reversible trough-shaped piece with its sides forming an angle greater than

the angle of the extension, adapted to fit the said extension and form therewith a prismatic manifold, having its sides at reversible angles to the axis of the drum-head, substantially as 15 described.

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Witnesses:

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