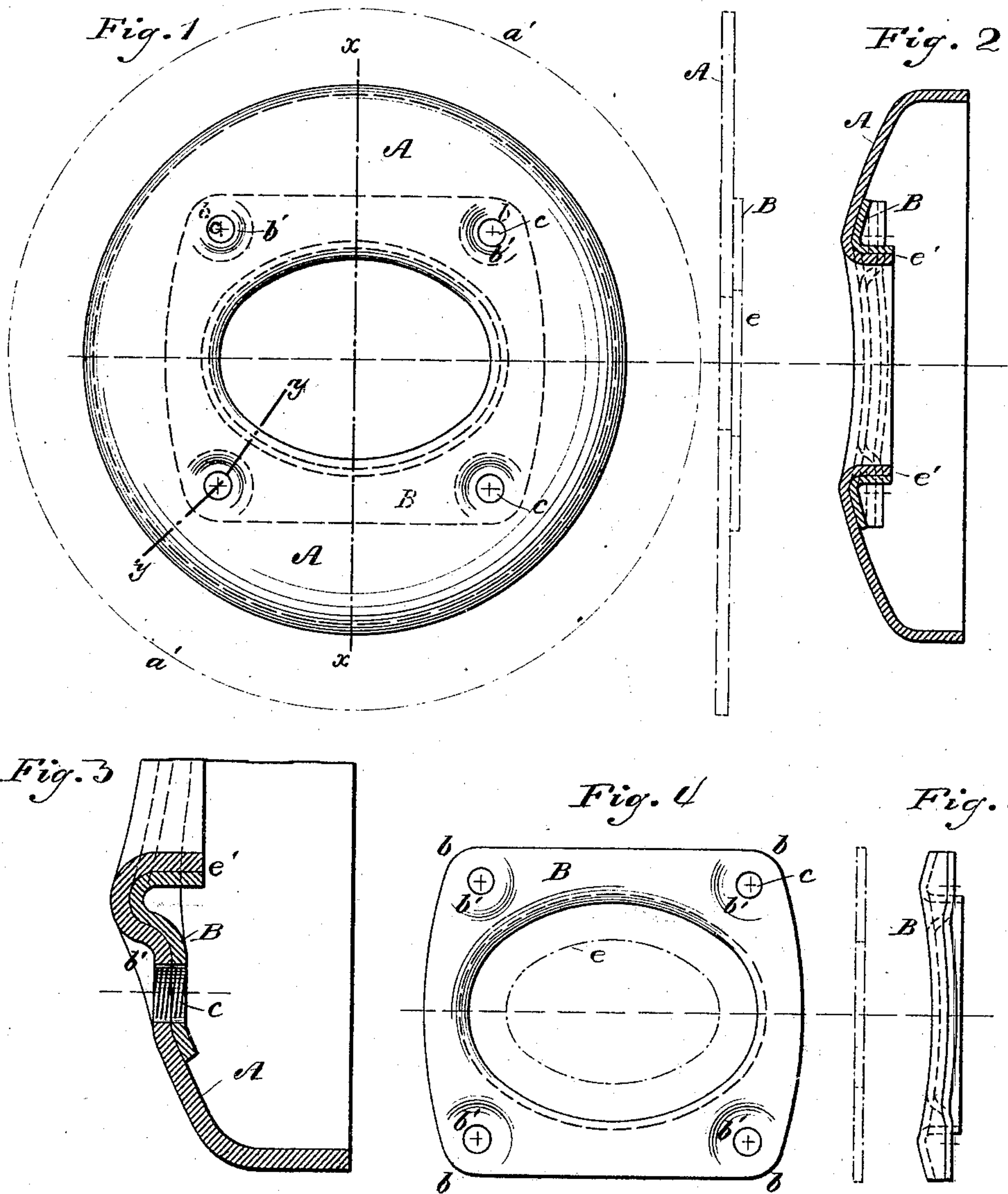


(No Model.)

N. W. PRATT.
BOILER HEAD AND MAN HOLE.

No. 368,611.

Patented Aug. 23, 1887.



WITNESSES.

Aug. 23, 1887
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BOILER-HEAD AND MAN-HOLE.

SPECIFICATION forming part of Letters Patent No. 368,611, dated August 23, 1887.

Application filed March 3, 1887. Serial No. 229,574. (No model.)

To all whom it may concern:

Be it known that I, NAT. W. PRATT, a citizen of the United States, residing at Brooklyn, county of Kings, and State of New York, have
5 invented certain new and useful Improvements in Boiler-Heads and Man-Holes, of which the following is a specification.

This invention consists in the application of a re-enforcing plate to a boiler-head and the
10 flanged margins of a man-hole in said boiler-head, whereby the parts are given an increased rigidity, and whereby an increased thickness of metal is obtained for the securing of feed-pipes and other connections, and a greater
15 breadth of surface is obtained for seating the man-hole plate.

In order to enable others skilled in the art to which my invention appertains to understand and use the same, I will proceed to describe in detail the manner of its construction,
20 as shown by the accompanying drawings, in which—

Figure 1 is a front elevation of a boiler drum-head and man-hole made according to
25 my invention; Fig. 2, a vertical central section of the same on the line xx ; Fig. 3, an enlarged cross-section on the line yy , Fig. 1; Fig. 4, a front elevation of the re-enforcing plate, and Fig. 5 a side view of the same.

30 In Fig. 1 the outlying circle a'' in broken lines indicates the original diameter of the boiler-head plate A, and the vertical broken-lined figures beside the same indicate an edge view of the said boiler-head plate and a superimposed re-enforcing plate, B, placed in position thereon preparatory to the pressing operation, both being perforated at e with the
35 man-hole perforation, the latter being the larger in the plate B, to allow for the differing flow of metal. The two plates thus superimposed are now placed in a suitable appliance (as a hydraulic press having the required form of dies) and forced at one operation into the
40 form of Figs. 1 and 2, comprising a domed flanged boiler-head and an inwardly-flanged man-hole with a re-enforcing ring. The inner edges of the previously-perforated plates now coincide, presenting a broadened packing-surface, e'' , which may be finished to receive
45 the man-hole plate.

At the points corresponding with the cornered extensions b of the re-enforcing plate or ring B the two plates are impressed during

the operation aforesaid with indentations b' , having surfaces which lie in a plane at right
55 angles to the axis of the flanged head, as more clearly shown in Fig. 3. The said indentations add stiffness to the structure, and are designed, furthermore, for the purpose of receiving holes e , into which feed or other pipe
60 connections may be threaded.

The re-enforcing plate is held in position by friction, being in the process of formation forced into intimate contact with the head. If
65 the head and plate are heated to a welding heat before placing in dies, they will be welded together and form one piece having the same form.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The process of forming a boiler-head and
70 man-hole, consisting of superimposing two plates of different sizes and forming therefrom at one operation a flanged boiler-head with a flanged man-hole and re-enforcing ring,
75 substantially as described.

2. The process of forming a man-hole, consisting in superimposing two plates and flanging them both at one operation, whereby one
80 forms a re-enforce and the combined edges of the two make the packing-surface, substantially as described.

3. A boiler-head having a man-hole and one or more openings for the reception of pipes, in which the man-hole face is thickened and
85 its periphery re-enforced and the openings for pipes increased in thickness by one and the same piece of metal, substantially as specified.

4. A boiler-head having a man-hole and one or more openings for the reception of feed or
90 other pipes, in which the man-hole is re-enforced and the openings thickened by one and the same piece of metal, substantially as described.

5. A flanged man-hole, in combination with
95 a re-enforcing ring fixed thereon by the same operation which produces the flange, substantially as specified.

6. A flanged re-enforcing ring for a man-hole and a thickening-plate for a boiler-head
100 in one piece, substantially as described.

NAT. W. PRATT.

Witnesses:

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AUG. CREVELING.