

(No Model.)

J. J. O'BRIEN.
BOILER.

No. 600,443.

Patented Mar. 8, 1898.

Fig. I.

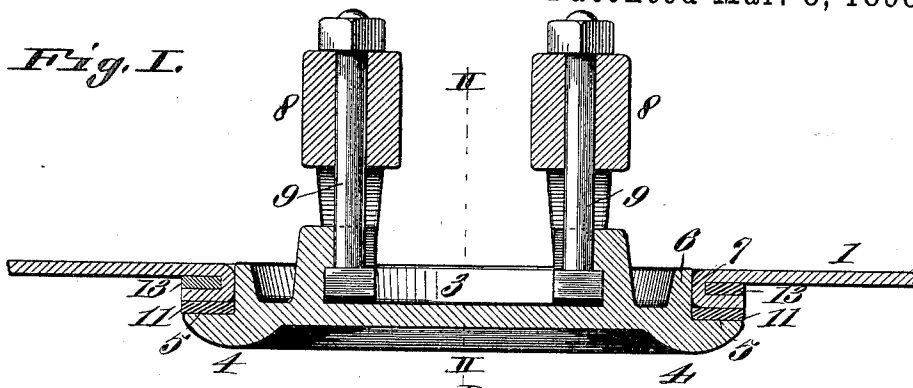


Fig. II.

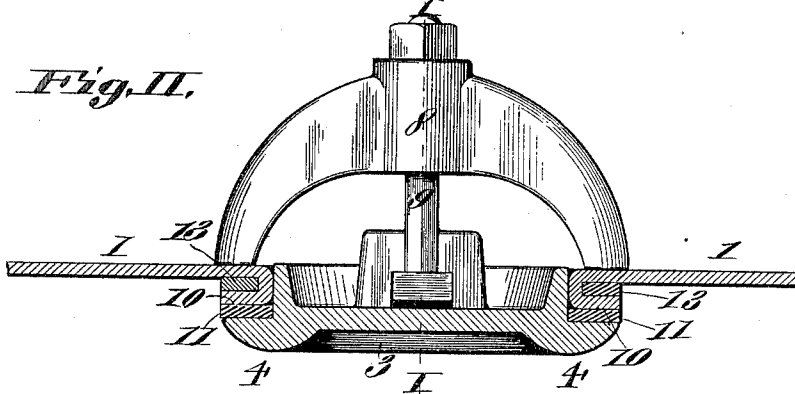


Fig. III.

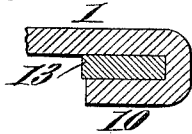


Fig. IV.

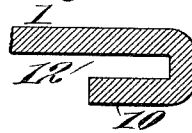
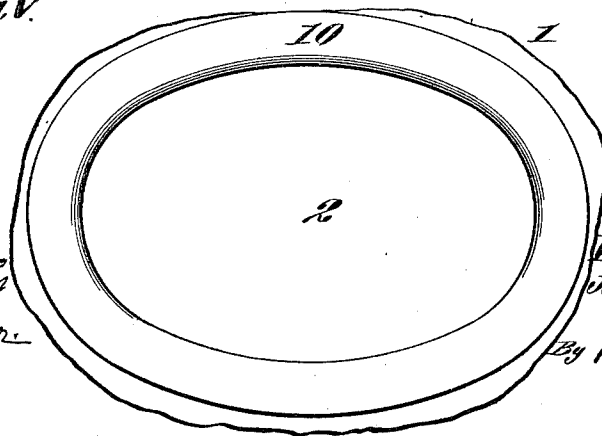


Fig. V.



Attest:
E. D. Knight
Stanley Stoner

Inventor:
John J. O'Brien
By *Knight, Bros*
attys

UNITED STATES PATENT OFFICE.

JOHN J. O'BRIEN, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE JOHN O'BRIEN
BOILER WORKS COMPANY, OF SAME PLACE.

BOILER.

SPECIFICATION forming part of Letters Patent No. 600,443, dated March 8, 1898.

Application filed October 18, 1897. Serial No. 655,589. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. O'BRIEN, a citizen of the United States, residing at the city of St. Louis, in the State of Missouri, have
5 invented certain new and useful Improvements in Boilers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

10 My invention relates to an improved manner of forming up the manholes, hand-holes, &c., of boilers, whereby there is provided a strong, secure, and perfect seat for the covers of these holes, and whereby there is provided a broad bearing for the body-face of
15 the cover.

My invention consists in features of novelty hereinafter fully described, and pointed out in the claim.

20 Figure I is a section showing part of a boiler and a plate or cover with its supporting bridges and bolts and illustrating my invention, the section being taken on line I I, Fig. II. Fig. II is a section taken on line II
25 II, Fig. I. Fig. III is an enlarged detail section with the plate or cover removed. Fig. IV is a detail sectional view with the ring removed. Fig. V is a detail inside view of part of the boiler at the manhole.

30 1 represents part of the boiler having a manhole or hand-hole 2.

3 represents the plate or cover of the manhole, which has an inner flange 4, having a flat seat-face 5. The plate or cover has, further, a flange 6 with a flat body shoulder or
35 face 7. The cover or plate is held in position

by means of a bridge or bridges 8 and bolt or bolts 9, as usual.

The edge of the boiler-plate surrounding the hole 2 is bent inwardly and folded back, 40 forming a flat surface 10, against which lies the gasket or packing-ring 11, that is located between the face 10 and the flange 4 of the cover or plate 3. This inturned edge of the boiler-plate is folded so as to leave a space 12 45 between it and the body of the plate, as shown in Fig. IV. In the space 12 is located a forming-ring 13, or, in other words, the inturned edge is folded over a forming-ring 13, thereby providing a wide bearing for the body face 50 or shoulder 7 to fit against, so that the cover is supported in position while the bolts 9 are being tightened.

I claim as my invention—

A boiler comprising a plate 1 formed with 55 a hand-hole 2 and with an inturned edge surrounding the hand-hole and providing a ring-space 12 and a flat face 10, the forming-ring 13 located in the space and over which the inturned edge is bent, the packing-ring 11 fitting against the flat face of the inturned edge, 60 and the cover formed with an inner flange 4, having a flat face 5 seating against the packing-ring, and an outer flange 6 having a wide shoulder 7 fitting against the inner edge of 65 the packing-ring and against the bent portion of the inturned edge; substantially as described.

JOHN J. O'BRIEN.

In presence of—

E. S. KNIGHT,
STANLEY STONER.