

S. DILLON & J. NOEY.
MAN HEAD CRANE FOR STEAM BOILERS.
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Fig. 2.

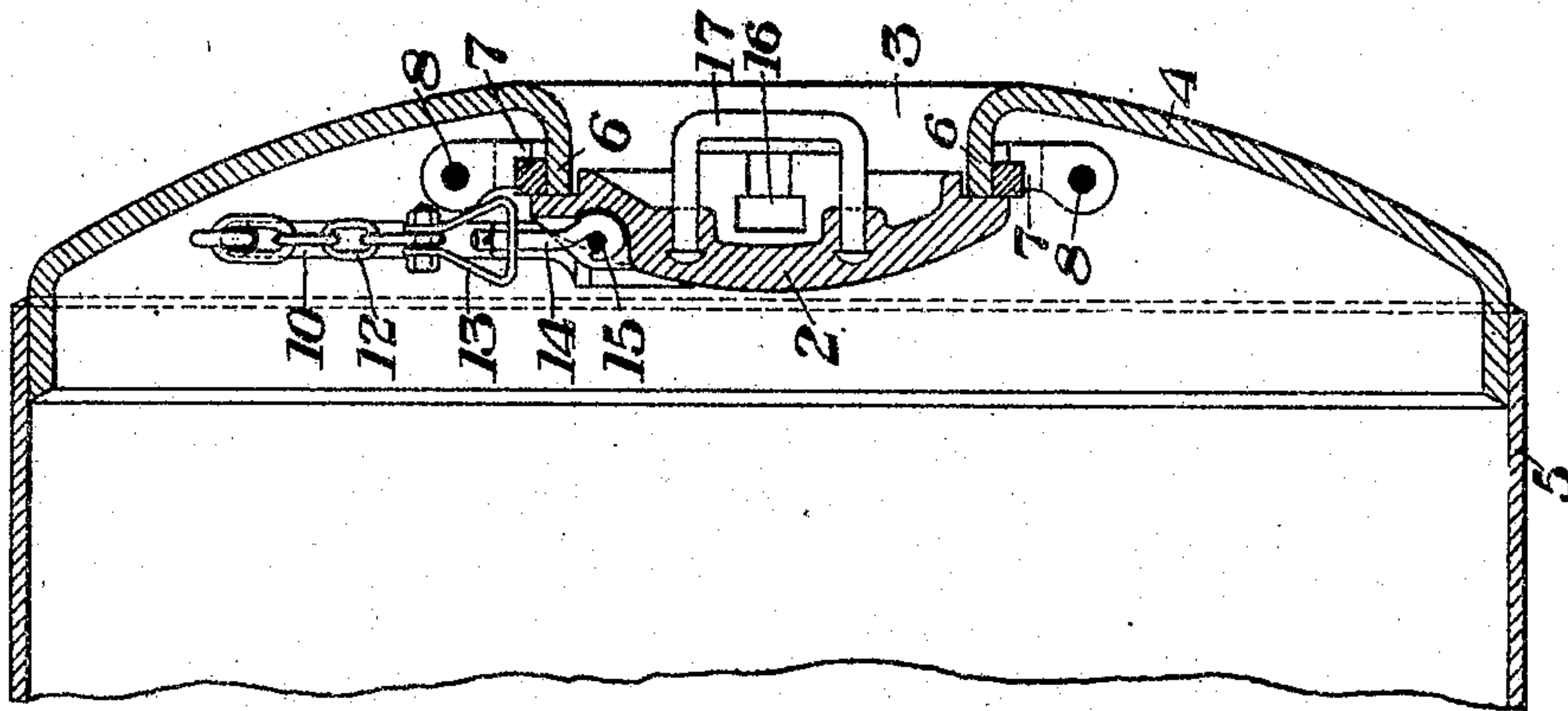
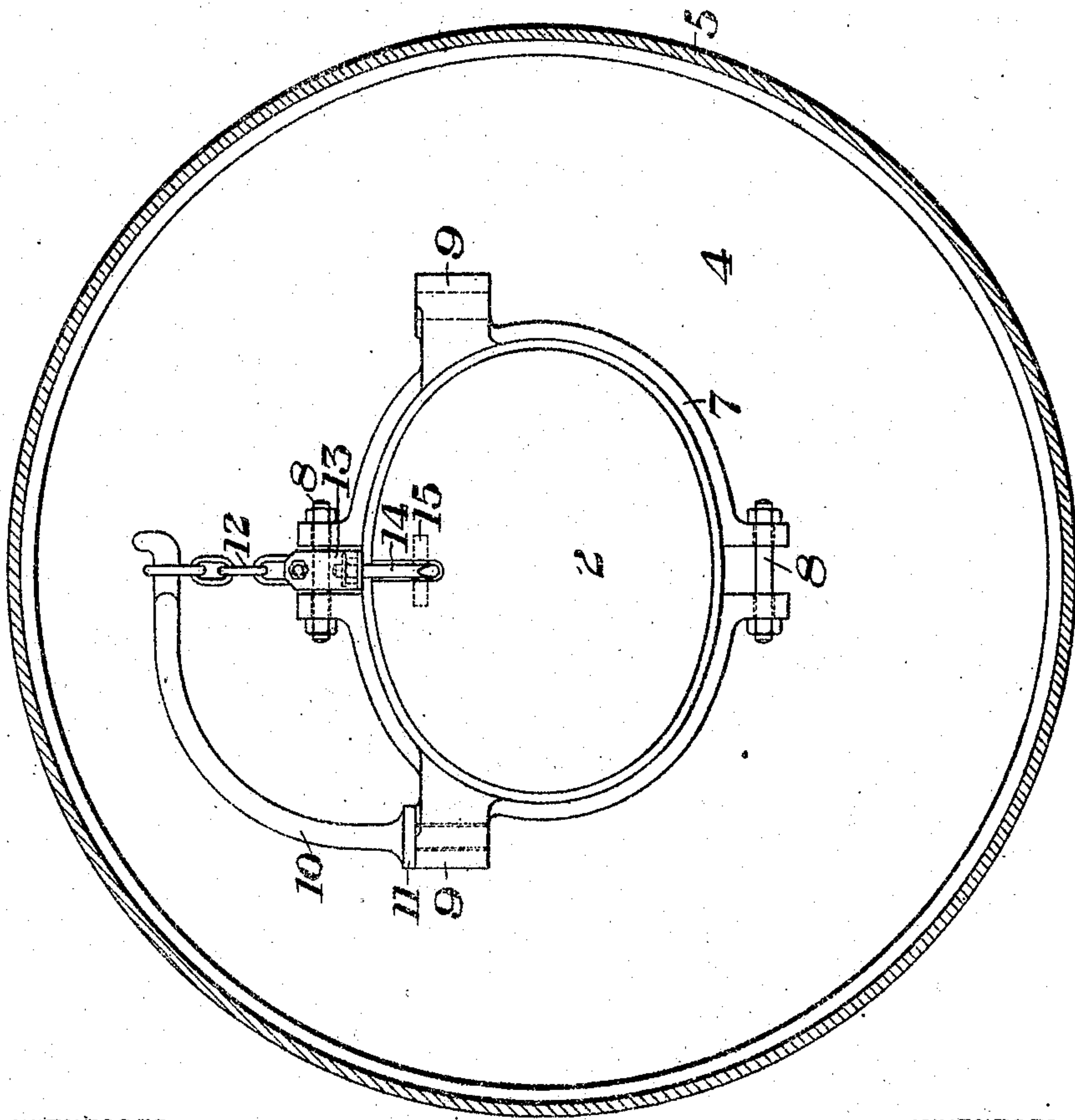


Fig. 1.



WITNESSES

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UNITED STATES PATENT OFFICE.

SYDNEY DILLON, OF EDGEWOOD PARK, AND JOHN NOEY, OF BRADDOCK, PENNSYLVANIA.

MAN-HEAD CRANE FOR STEAM-BOILERS.

No. 900,689.

Specification of Letters Patent.

Patented Oct. 6, 1908.

Application filed June 17, 1908. Serial No. 438,944.

To all whom it may concern:

Be it known that we, SYDNEY DILLON, of Edgewood Park, Allegheny county, Pennsylvania, and JOHN NOEY, of Braddock, Allegheny county, Pennsylvania, have invented a new and useful Improvement in Man-Head Cranes for Steam-Boilers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a transverse section of a boiler drum showing the man-head and man-head crane as constructed and applied to a boiler or boiler drum in accordance with our invention; and Fig. 2 is a longitudinal section of the same.

Our invention relates to the handling of man-heads for closing man-holes in boilers and similar vessels and the object of the invention is to provide improved means for handling such man-heads and for reducing the amount of labor involved in removing and replacing such heads in and out of position in the man-holes which are located in such vessels.

A further object of our invention is to provide a man-head crane which can be easily and quickly put into use on existing boilers and which is adapted to be secured in place on boilers without the necessity of drilling holes in the shell or head of the boilers.

The invention consists in providing means for suspending the man-head within the boiler so it can easily and quickly be swung into and out of its closing position in the man-hole and in improved means for securing the apparatus forming the man-head crane to the boiler without the necessity of drilling or punching holes in the shell or head of the boiler.

In the drawings, 2 represents a removable man-head shown in its closing position in the man-hole 3 which is located in the head 4 of a boiler or boiler drum 5. The man-hole 3 is provided around its edge with an inwardly projecting integral flange 6 and on this flange 6 is a clamp 7 formed in two parts which are secured together by means of bolts 8. Each of the parts 7 forming the clamp is provided with a boss 9, this boss having a vertically extending opening forming a socket there-through. Placed in the opening or socket in one or the other of the bosses 9 is a swinging arm 10 which arm is bent upwardly and inwardly and is provided on its lower end with

a shoulder or flange 11 to limit the distance this arm projects into the socket in the lug 9. The man-head 2 is suspended from the upper end of the swinging arm 10 by means of the flexible chain links 12 and shackle 13, so as to be adjustable vertically, the shackle 13 being provided with a rotatable hook 14. The hook 14 engages with the pin 15 which is cast in place in the man-head 2 and permits of the head being rotated in a vertical plane about the axis of the pin 15.

The man-head 2 is provided with the customary T-slot 16 in which the usual T-headed bolts (not shown), are used for securing the man-head in place in the man-hole of the boiler. The man-head 2 is also provided with a handle or link 17 to assist in moving the man-head into and out of position in the man-hole.

In the operation of our improved apparatus, when it is desired to open the man-hole, the securing bolts are removed and the man-head is pushed inwardly into the boiler. The swinging arm 10 carries the man-head and swings it inwardly into the boiler and out of the man-hole. When it is desired to close the man-hole, the man-head is pulled back into position by means of the handle 17 and is then secured in its closing position in the man-hole by the securing bolts in the usual manner.

The advantages of our invention will be appreciated by those skilled in the art. On account of the weight of such man-heads they are difficult to handle without suspending them so as to permit of their being swung easily and quickly into place.

By the use of our improved apparatus, the man-head can be moved into and out of its closing position and the man-head is always suspended in position to be brought back in to the man-hole. By providing the lugs or bosses on each of the clamps, the swinging arm can be placed on either side of the man-hole so as to permit the man-head being swung to whichever position that is desired.

The apparatus is simple and is easily applied. No holes extending through the shell or head of the boiler for the securing bolts are necessary.

Modifications in the arrangement and the construction of the apparatus can be made without departing from our invention. The clamp can be made in one piece instead of in two as is shown and one lug for the swinging arm may be used if desired.

The lower end of the arm 10 may be tapered so as to fit into a correspondingly tapered hole in the lug 9 instead of providing a flange 11 to limit the distance the arm will project into the opening in the boss or lug.

The manner of suspending the man-head from the swinging arm may be varied and other changes may be made without departing from our invention.

10 We claim:—

1. A boiler or similar closed vessel having a man-hole therein provided with a flanged edge defining its sides, a man-head, a swinging man-head support and means clamped on the flanged edge of the man-hole for securing said support in place; substantially as described.

2. A boiler or similar closed vessel having a man-hole provided with a flanged edge defining its sides, a man-head, a bent arm from which said man-head is suspended, and means clamped on the flanged edge of said man-hole for securing said arm in place on the flange of said man-hole; substantially as described.

3. A man-head support comprising a boiler or similar closed vessel having a man-hole therein, said man-hole having an inwardly turned flange defining the edge of the man-hole, a man-head for closing said man-hole, a swinging arm having connections from which said man-head is suspended so as to be vertically adjustable, and a clamp having a socket in which said swinging arm is pivotally mounted, said clamp embracing the inwardly turned flange and having means for tightening the clamp in place on said flange; substantially as described.

4. In a man-head crane for boilers or similar closed vessels, the combination with a boiler or vessel having a man-hole therein, said man-hole having an inwardly projecting flange, of a clamp secured on said flange and having a socket therein, a swinging arm mounted in said socket and a man-head suspended from said arm so as to be vertically adjustable thereon; substantially as described.

5. In a man-head crane for boilers or similar closed vessels, the combination with a boiler or vessel having a man-hole therein, said man-hole having an integral, inwardly projecting flange, of a clamp secured on said flange, and having a socket therein, a swinging arm removably mounted in said socket, and a man-head suspended from said arm; substantially as described.

6. A boiler or similar closed vessel, having a man-hole provided with a flanged edge, supports secured to said edge at opposite sides of the hole and a swinging man-head supporting arm or crane adapted to be secured in either one of said supports; substantially as described.

7. A boiler or similar closed vessel having a man-hole provided with a flanged edge, a support secured to the flanged edge of said man-hole, a swinging man-head supporting arm or crane movably secured to said support, a man-head suspended from said arm, and a flexible connection between said arm and man-head; substantially as described.

8. A boiler or similar closed vessel having a man-hole provided with a flanged edge, a support secured to the flanged edge of said man-hole, a swinging man-head supporting arm or crane movably secured to said support, a man-head suspended from said arm, and connections between said swinging arm and the man-head arranged to permit movement of said man-head in a horizontal plane; substantially as described.

9. A boiler or similar closed vessel having a man-hole provided with a flanged edge, a man-head for closing said man-hole, a swinging arm from which said man-head is suspended, and a support secured to the flanged edge of said man-hole to which said arm is attached; substantially as described.

In testimony whereof, we have hereunto set our hands.

SYDNEY DILLON.
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Witnesses:

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