

C. E. LINGENFELTER.
BOILER HANGER.
APPLICATION FILED JUNE 8, 1908.

933,909.

Patented Sept. 14, 1909.

Fig. 1.

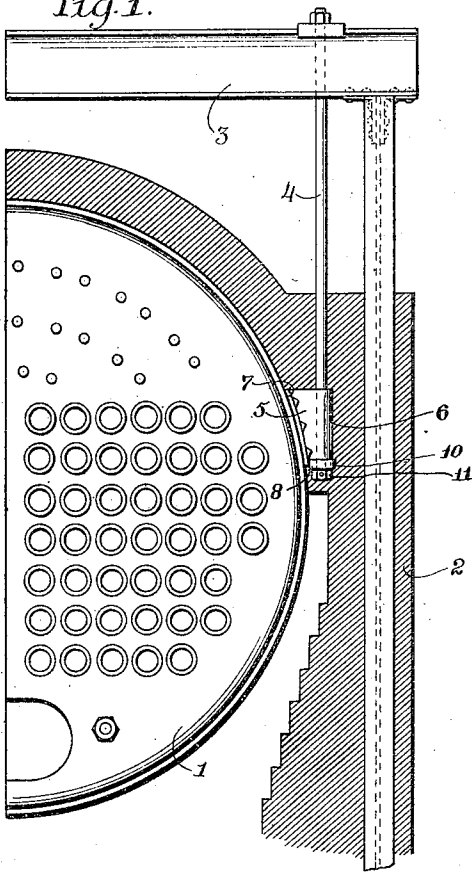


Fig. 2.

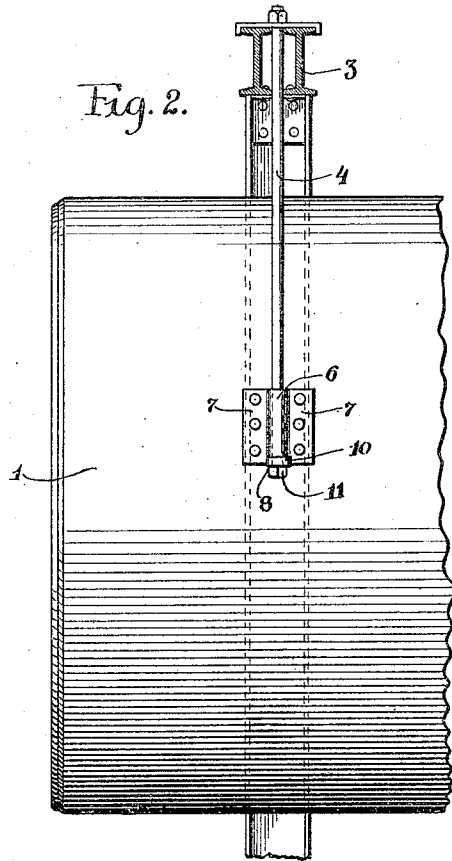


Fig. 3.

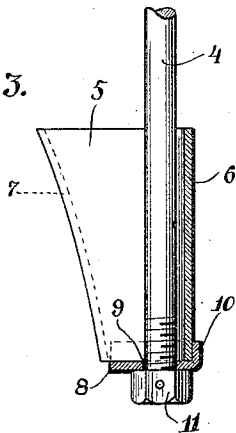


Fig. 5.

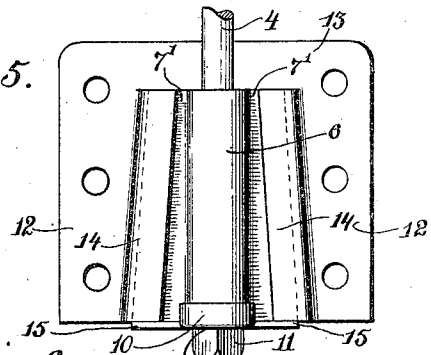


Fig. 6.

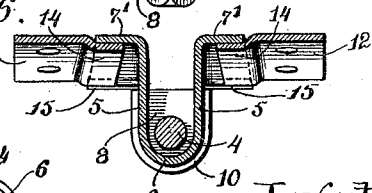
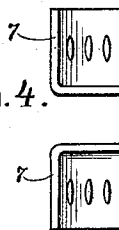


Fig. 4.



Witnesses:-
Frank Bemm.
Lone S. Russell.

Inventor:-
Carl E. Lingenfelter
by Peirce & Fisher
Attys.

UNITED STATES PATENT OFFICE.

CARL E. LINGENFELTER, OF CHICAGO, ILLINOIS.

BOILER-HANGER.

933,909.

Specification of Letters Patent. Patented Sept. 14, 1909.

Application filed June 8, 1908. Serial No. 437,292.

To all whom it may concern:

Be it known that I, CARL E. LINGENFELTER, a citizen of the United States, and a resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Boiler-Hangers, of which the following is a specification.

The invention relates to boiler-hangers and seeks to provide an improved hanger which will have the maximum strength in serving as means for attaching a supporting rod to the boiler, and which may be inexpensively constructed of sheet metal.

The invention consists in the features of improvement hereinafter set forth, illustrated in the accompanying drawings and more particularly pointed out in the appended claims.

In the drawings, Figure 1 is a front elevation of a boiler with the improved hanger applied thereto. Fig. 2 is a side elevation of the same. Fig. 3 is a vertical cross section of the improved hanger. Fig. 4 is a plan view thereof. Fig. 5 is a view in elevation of a modified form of the improved hanger. Fig. 6 is a plan view of the form shown in Fig. 5.

The boiler 1, in connection with which the improved hanger is illustrated, is provided with a suitable setting 2 and is adapted to be supported from a suitable overhead structure 3 by suspension or supporting rods 4.

One of the improved hangers is employed in connection with each of the suspension rods 4. Each of these hangers comprises a sheet metal plate that is bent to form a central projecting portion of U-shape in horizontal section and having parallel side walls 5 and a semi-cylindrical end wall 6 with side flanges 7 extending laterally from the inner edges of the side walls 5. The central projecting, U-shaped portion of the hanger is widest at its upper end, and the side flanges 7 are curved and inclined and are adapted to be secured to the boiler shell at a point slightly above the central portion thereof. The parts of the hanger are so constructed that, when it is secured in position, the walls 5 and 6 of the U-shaped, projecting portion will be vertically disposed or parallel with the supporting or suspension rods 4.

The side walls 5 of the U-shaped, projecting portion of the hanger are spaced apart to receive the suspension rod 4 which extends therethrough. The lower end of the

the U-shaped, projecting portion of the hanger, preferably by means of a cap piece 8 which is provided with a central perforation 9 through which the lower end of the rod 4 extends, and with an upturned, U-shaped flange 10 which fits over the lower end of the projecting portion of the hanger. The nut or head 11 on the lower end of the rod, engages the under side of this cap piece. The cap piece, like the main body of the hanger, is preferably constructed of sheet metal shaped to proper form.

By constructing the hanger so that the walls of the central, projecting portion thereof will be vertically disposed when in operative position, and by forming the projecting portion of open U-shape in horizontal section to receive the supporting or suspension rod which extends therethrough and is connected to the lower end of the projecting portion, the strain upon the hanger will be uniformly distributed throughout all portions thereof so that a strong construction is provided. The cap piece 8 which is preferably employed in connection with the hanger to connect the lower end of the suspension rod thereto, serves to properly position the rod with reference to the hanger and therefore assists in securing a uniform distribution of the strain throughout the hanger. It should also be noted that the improved hanger may be used in connection with straight suspension rods which may be inexpensively formed. Moreover, the parts may be readily applied and assembled.

The improved hanger may be permanently secured to the boiler by riveting the side flanges to the boiler shell, as shown in Figs. 1 and 2, or, by providing suitable means as shown in Figs. 5 and 6, the hanger may be detachably secured to the boiler. In this form the side flanges 7' of the hanger are adapted to detachably engage the side pieces 12 of a U-shaped metal plate 13 which is permanently riveted to the boiler shell. The side pieces 12 are provided with lips or guides 14 which overlap the edges of the side flanges 7' and secure the hanger in position. The lips or guide flanges 14 preferably converge toward their upper ends and the edges of the side flanges 7' of the hanger are correspondingly shaped to fit between the lips 14. The upper edges of the flanges 7' abut against the upper portion of the U-shaped plate 13 and the lower edges of the flanges are provided with out-turned lips

15 which abut against the lower ends of the lips or guides 14. To facilitate transportation of the boiler, the hangers of this form shown may be detached and the boiler can
5 then be rolled over.

It is obvious that the details set forth may be varied without departure from the essentials of the invention. For example, the improved hanger is shown in connection
10 with a boiler suspended from above. It will be apparent, however, that the invention is applicable to a reverse arrangement and for holding down marine or locomotive boilers.

Having described my invention, what I
15 claim as new and desire to secure by Letters Patent, is:—

1. A boiler-hanger comprising a sheet metal plate bent to form a central projecting portion, U-shaped in horizontal section,
20 widest at its upper end and having vertical walls with inclined side flanges at their inner edges adapted to be secured to the boiler shell, the side walls of said central projecting portion being spaced apart to receive
25 a boiler supporting rod extending there-through.

2. A boiler-hanger comprising a sheet metal plate bent to form a central projecting portion, U-shaped in horizontal section
30 and widest at its upper end, with side flanges adapted to be secured to the boiler shell, the side walls of said central projecting portion being spaced apart to receive a supporting rod extending therethrough and a cap piece
35 engaging one end of said central projecting portion and adapted to engage one end of the supporting rod.

3. A boiler-hanger comprising a sheet metal plate bent to form a central project-

ing portion, U-shaped in horizontal section, 40 widest at its upper end, and having vertical walls with curved, inclined side flanges adapted at their inner edges to be secured to the boiler shell, the side walls of said central projection being spaced apart to re- 45 ceive a suspension rod extending there-through, and a perforated cap piece having a U-shaped flange fitting over the lower end of said central projecting portion and adapted to engage the lower end of the suspension 50 rod.

4. A boiler-hanger comprising a part adapted to be permanently secured to the boiler and a sheet metal plate bent to form a central projecting portion, U-shaped in 55 horizontal section and widest at its upper end, with side flanges adapted to detachably engage said part, the side walls of said central projecting portion being spaced apart to receive a supporting rod extending there- 60 through.

5. A boiler-hanger comprising a part adapted to be permanently secured to the boiler and a sheet metal plate bent to form a central projecting portion, U-shaped in 65 horizontal section and widest at its upper end, with side flanges adapted to detachably engage said part, the side walls of said central projecting portion being spaced apart to receive a suspension rod extending there- 70 through, and a cap piece fitting over the lower end of said central projecting portion and adapted to engage the lower end of the suspension rod.

CARL E. LINGENFELTER.

Witnesses:

HARRY L. CLAPP,

KATHARINE GERLACH.