No. 621,167. Patented Mar. 14, 1899.

W. SPIEGEL.

HANGER DEVICE FOR STEAM BOILERS.

(Application filed Oct. 3, 1898.)

(No Model.)

Fig. 1

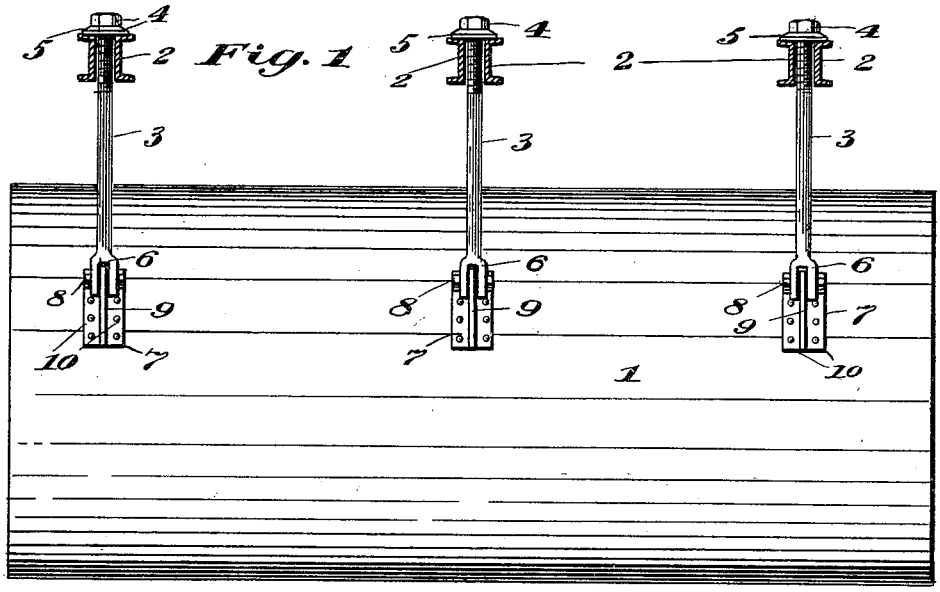


Fig. 2

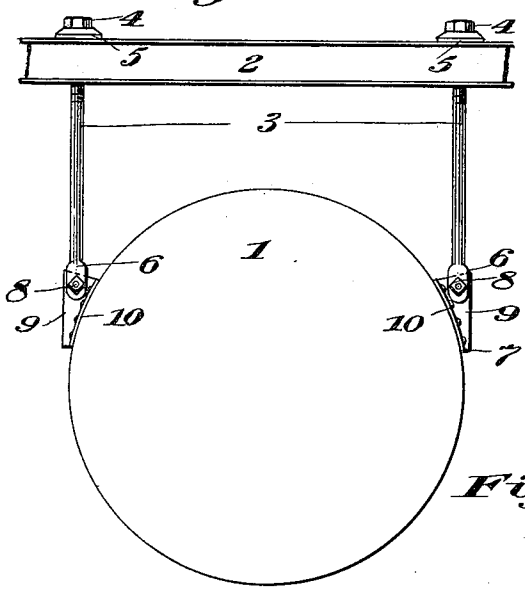


Fig. 3

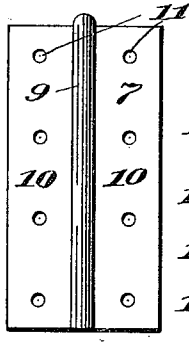


Fig. 5

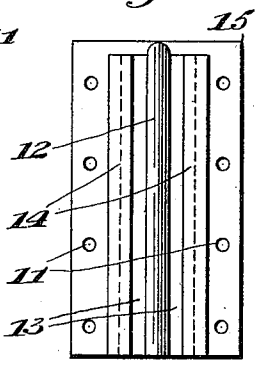


Fig. 4

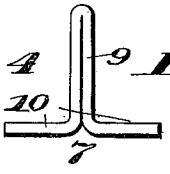
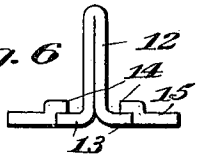


Fig. 6



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UNITED STATES PATENT OFFICE.

WILLIAM SPIEGEL, OF NEWPORT, KENTUCKY.

HANGER DEVICE FOR STEAM-BOILERS.

SPECIFICATION forming part of Letters Patent No. 621,167, dated March 14, 1899.

Application filed October 3, 1898. Serial No. 692,541. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SPIEGEL, a citizen of the United States, residing at Newport, in the county of Campbell and State of Kentucky, have invented certain new and useful Improvements in Hanger Devices for Steam-Boilers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to certain improvements in steam-boilers, and particularly in that class of boilers which are suspended or hung from beams above; and the object of the invention is to provide a boiler of this character having improved suspending or hanging means, such as to render it capable of being readily removed from and replaced in position.

The invention consists in certain novel features of the construction, combination, and arrangement of the improved suspending means whereby certain important advantages are attained and the boiler is made simpler, cheaper, and otherwise better adapted and more convenient for use than various other forms of boiler heretofore employed, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

In the accompanying drawings, which serve to illustrate my invention, Figure 1 is a side view showing a steam-boiler having suspending or hanging means according to my invention, and Fig. 2 is an end view of the same. Fig. 3 is a view drawn to a larger scale and showing, detached, one of the brackets to be secured to the boiler and forming part of the improved suspending means. Fig. 4 is an end view of the bracket shown in Fig. 3. Figs. 5 and 6 are views similar, respectively, to Figs. 3 and 4, but showing a modified form of the bracket shown in said figures.

Referring primarily to Figs. 1, 2, and 3, 1 indicates the boiler, herein shown as of the ordinary horizontal type, and 2 2 indicate channel-beams extending transversely across the boiler above the same and arranged in pairs, one at the center and one at each end of the boiler 1, the beams of the respective pairs being spaced apart, as clearly shown in Fig. 1, to receive between them suspending or hanging rods 3, one at each side of the boiler.

Each suspending-rod 3 is screw-threaded at its upper end to receive a nut 4, beneath which is held a washer 5, which bears on the upper face of each beam 2 of the pair. The suspending-rods 3 are also provided with forks 6 at their lower ends to receive between them brackets 7, secured to the opposite sides of the boiler 1, said forks being perforated for the passage of bolts 8, which extend also through perforations in the brackets 7, as will be readily understood.

The brackets 7 are formed, as shown in Figs. 2, 3, and 4, of a piece or plate of sheet metal having a central longitudinal rib or lug 9 bent or pressed in it so as to extend at right angles from the face of said sheet, the edge portions 10 of said sheet projecting on opposite sides of the said lug or rib and being curved or bent and perforated, as shown at 11, so as to permit of being conveniently riveted to the side of the boiler 1. The plate or piece of metal from which the bracket 7 is formed is so cut as to give to the lug or rib 9 when the plate is bent or pressed into shape a triangular form, being widest at top, at which point the perforation for the passage of the bolt 8 is formed. By this construction it will be seen that the boiler 1 is hung or suspended by the rods 3 from the beams 2 above, so that the expansion and contraction of the metal are compensated for and damage to the walls due to this cause when the boiler is supported on lugs resting on such walls is altogether obviated. Further, the construction is such that the boiler may be conveniently removed and replaced by simple detachment of the bolts 8, by means of which the forks 6 are connected to the brackets 7, and in case of settling of the beams 2 this may be compensated by adjustment of the nuts 4 upon the rods 3. The boiler may also be rolled about from place to place, since the ribs or lugs 9 are arranged to extend tangentially from the surface of the boiler and do not project sufficiently to materially interfere with such rolling. It will also be obvious that the improved suspending or hanging means constructed

according to my invention is susceptible of some modification without material departure from the principles and spirit of the invention, and for this reason I do not wish to be understood as limiting myself to the precise form and arrangement of the several parts herein set forth. For example, in some cases the construction shown in Figs. 5 and 6 may be employed. As shown in these views, the projecting rib or lug 12, to which the fork of the suspending or hanging rod 3 is connected, is made detachable from the boiler, being bent or pressed from a plate or sheet of metal, as above described with reference to Figs. 1, 2, 3, and 4, so as to form angular curved edge or side portions 13, which are adapted to be slid in place under overhanging guides 14, formed on a plate 15, adapted to be riveted or otherwise secured to the side of the boiler. By this construction when the boiler is dismounted the projecting portions or brackets may also be detached, so as not in any way to interfere with the rolling or dragging of the boiler about.

Having thus described my invention, I claim—

1. The combination of suspending-rods, a boiler and brackets each formed of a metal plate centrally bent to form a projecting triangular rib and curved side portions on opposite sides of said triangular rib, the said curved side portions of the plates being secured to the outer surface of the boiler and the triangular ribs projecting tangentially from the surface of the boiler and being provided with means of attachment to the lower ends of the suspending-rods, substantially as set forth.

2. The combination of suspending-rods, a boiler and brackets each formed of two parts one adapted for attachment to the outer surface of the boiler and the other adapted for detachable engagement with said attached part, the detachable parts of the brackets being provided with ribs constructed to extend tangentially with respect to the surface of the boiler when the parts are engaged, and having means of attachment to the lower ends of the suspending-rods, substantially as set forth.

3. The combination of suspending-rods, a boiler and brackets each formed in two parts, one adapted for attachment to the outer surface of the boiler and formed with a recess and the other adapted for detachable engagement with the recess of the first-named part, the detachable parts of the brackets being provided with ribs constructed to extend tangentially with respect to the surface of the boiler when the parts are engaged, and having means of attachment to the lower ends of the suspending-rods, substantially as set forth.

4. A bracket for boiler-hangers formed of two parts adapted for detachable engagement, one part being provided with a rib constructed to extend tangentially with respect to the surface of the boiler when the parts are engaged and having means of attachment to a suspending-rod and the other part being adapted for attachment to the outer surface of the boiler, substantially as set forth.

5. A bracket for boiler-hangers formed of two parts, one provided with a guideway and the other with means for detachable engagement with said guideway, one part being adapted for attachment to the outer surface of the boiler, and the other part being provided with a rib constructed to extend tangentially with respect to the surface of the boiler when the parts are engaged and having means of attachment to a suspending-rod, substantially as set forth.

6. A bracket for boiler-hangers formed of two parts, one formed with a central guideway and having its side portions adapted for attachment to the outer surface of the boiler and the other part being centrally bent to form edge portions adapted for detachable engagement with said guideway and a central projecting rib adapted for engagement with a suspending-rod, and arranged to extend tangentially with respect to the surface of the boiler when the parts are engaged substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM SPIEGEL.

Witnesses:
JNO. B. SCHEEBLY,
CHARLES NEBLETT.