T. MOWINS.

STEEL PLATE BOILER BRACKET.

APPLICATION FILED JULY 11, 1911.

1,049,900. Patented Jan. 7, 1913.

Fig. 1.

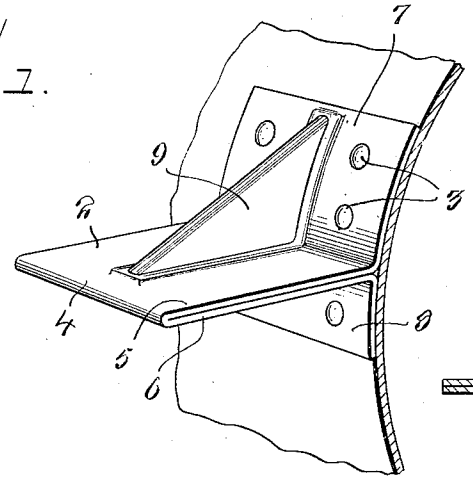


Fig. 6.

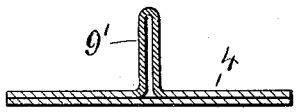


Fig. 2.

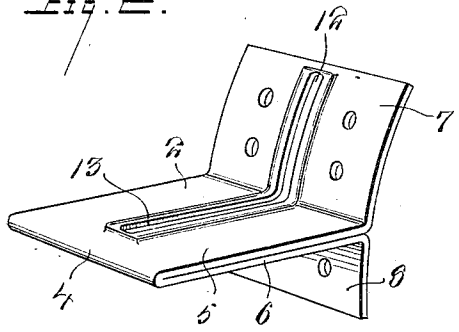


Fig. 3.

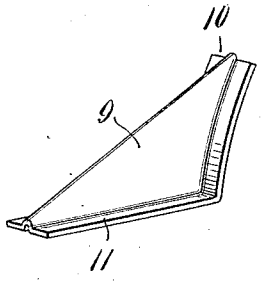


Fig. 4.

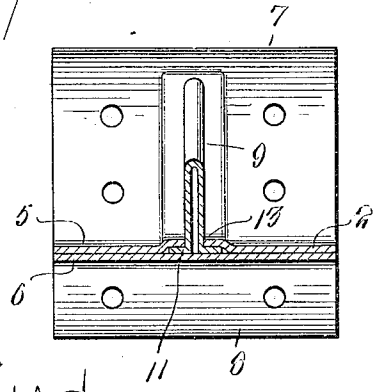
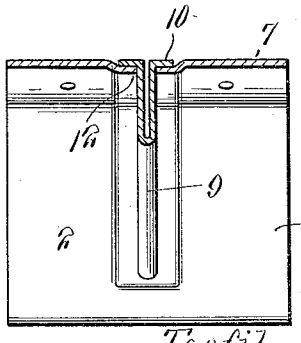


Fig. 5.



Witnesses

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STEEL-PLATE BOILER-BRACKET.

1,049,900. Specification of Letters Patent. Patented Jan. 7, 1913.

Application filed July 11, 1911. Serial No. 637,918.

To all whom it may concern:

Be it known that I, TEOFIL MOWINS, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented new and useful Improvements in Steel-Plate Boiler-Brackets, of which the following is a specification.

This invention relates to certain novel improvements in boiler lugs or brackets.

In carrying out my invention, it is my purpose to provide a lug proper constructed of some ductile metal which will readily conform itself to the shell of the boiler and be riveted thereon without danger of breakage, the said lug being provided with a separable bridge or strut formed of a casting, and which effectively reinforces the lug.

Heretofore in the construction of lugs for supporting boilers a majority of the said lugs are formed or made of castings, particularly case iron, and in order to sustain the weight of the boiler and withstand the strain incident thereto they have to be made very heavy. The objection to these lugs, in addition to their excessive weight, is that during the riveting of the lugs to the boilers they are liable to break owing to the brittleness of the cast iron which is also liable to rupture the structure during the heating and cooling or from the expansion or contraction of the material from which they are formed.

It is my object to remedy these objections as well as to provide a bracket of the minimum weight to support the boiler and that will last an indefinite length of time.

With the above recited objects and others of a similar nature in view, the invention consists in the construction, combination and arrangement of parts set forth in and falling within the scope of the appended claims.

In the accompanying drawings,—Figure 1 is a perspective view of my improved lug attached to a boiler. Fig. 2 is a similar view of the lug, with the bridge or strut removed. Fig. 3 is a perspective view of the strut or disk. Fig. 4 is a transverse sectional view taken through the strut with the bridge attached. Fig. 5 is a horizontal sectional view of the same. Fig. 6 is a sectional view illustrating the bridge or strut welded upon the lug.

Referring now to the accompanying drawings in detail, the numeral 1 designates a portion of a boiler shell, and 2 the supporting lug which is secured to the shell through the medium of suitable rivets 3.

In making my improved boiler strut, I take a piece of flat metal, preferably wrought iron or steel, which is very ductile under the hammer, and bend the same to provide the horizontal member 4 of the said strut. The horinzontal member thus comprises an upper section 5 and a lower section 6, and the two sections may if desired be secured together in any preferred manner. The inner terminals of the horizontal member 4 providing the sections 5 and 6 are bent in opposite directions to provide the upper flange 7 and the lower flange or apron 8. These flanges are formed with openings through which the bolts 3 are inserted, and whereby the lug is secured upon the boiler shell.

The numeral 9 designates the reinforcing bridge or strut for the lug. This bridge or strut, as illustrated in the several figures of the drawings, is constructed of a single piece of cast metal, the same being of a triangular formation, and the right angular edges of the said bridge or strut are off-set to form the flanges 10 and 11. These flanges are secured to the flange 7 as well as to the top member 5 of the horizontal portion 4 of the strut in any desired or preferred manner.

In the drawings, the flange 7 as well as the top plate 5 of the horizontal member 4 are illustrated formed with registering cut away portions 12 and 13, and the bridge 9 while formed of a single piece of metal, is substantially U-shaped in cross section. The triangular bridge or strut may pass through the openings 12 and 13 so that the lower flanges 11 of the said strut will rest upon the lower plate 6 of the horizontal member 4, while the opposite flange 10 will contact with the boiler shell, and by this construction no securing means for retaining the bridge or strut upon the lug is necessitated. The sides of the angular member 9 are adapted to contact with the walls or edges formed by the openings 12 and 13, while the flanges 10 and 11 are fully received within the upset portions arranged adjacent the walls of the said openings, and which provide the pockets for the flanges. The strut may be inserted within the pockets from the rear of the lug after the members 5 and 6 have been bent upon each other, or the said strut may be inserted through the openings, and have its flanges received with-

in the pockets of the lug before the member 6 is bent against the member 5.

I am aware of the fact that boiler lugs and brackets have heretofore been constructed of a ductile material and that the said lugs or brackets have been provided with integrally formed bridge or struts, and I do not claim broadly such a construction.

In Fig. 6 I have illustrated a lug constructed as heretofore described, but in this instance I have shown the reinforcing bridge 9′ welded to the lug, it being understood of course that the reinforcing member or bridge is formed of some hardened material such as steel or the like, while the strut is constructed of material which is ductile under the hammer, so that the said strut may be readily adjusted by opening the same to form with the shell of the boiler.

I claim—

1. A boiler lug formed of one integral piece of wrought iron or steel, the said piece being bent upon itself to provide the horizontal portion of the lug, the members comprising the said horizontal portion having their extremities bent in opposite directions to provide flanges, said flanges being curved to correspond with the cross sectional contour of the boiler, means for securing the said flanges to the boiler, the upper flange as well as the upper member of the horizontal portion being provided with elongated registering openings, a strut comprising a casting, said strut being of a substantially angular formation and being U-shaped in cross section, the right angular edges of the said strut being flanged in opposite directions, and the said strut adapted to be passed through the openings provided in the lug and to have their flanges contact with the said lug adjacent the openings provided in the lug.

2. A boiler lug comprising a horizontal portion having one of its ends provided with flanges which extend in opposite directions from the said body, an angular strut member having two of its edges provided with oppositely arranged flanges, and means for connecting the flanges of the strut to the horizontal member of the lug and to one of the flanges of the lug.

3. A boiler lug formed from a strip of material and bent upon itself to provide a flattened horizontal portion, the terminals of which being bent in opposite directions to provide flanges, one of the flanges and one of the bent members of the horizontal portion being provided with registering slots, the material adjacent the edges provided by the slots being extended beyond the plane of the flange and the said horizontal member to provide pockets, an angular strut having two of its edges provided with flanges which project beyond the opposite faces of the strut, the said strut adapted to be passed through the slots of the lug and to have their flanges received within the pockets provided by the lug.

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

TEOFIL MOWINS.

Witnesses:
C. D. HIGBY,
M. ZUROM.