

G. O. LEONARD.
CONTAINER FOR BOILER SCALE REMOVERS.
APPLICATION FILED NOV. 22, 1907.

942,836.

Patented Dec. 7, 1909.

Fig. 1.

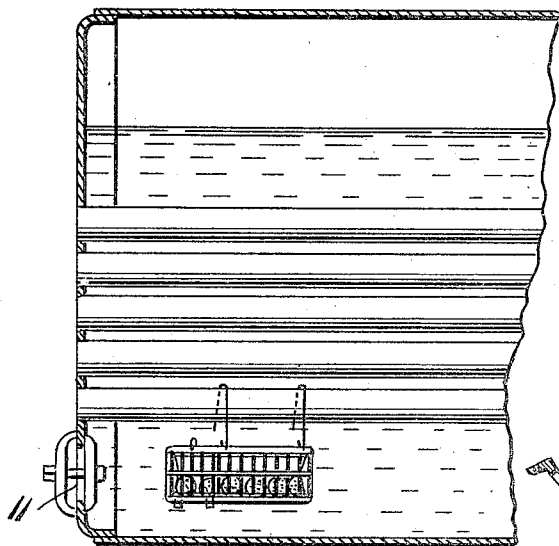


Fig. 5.

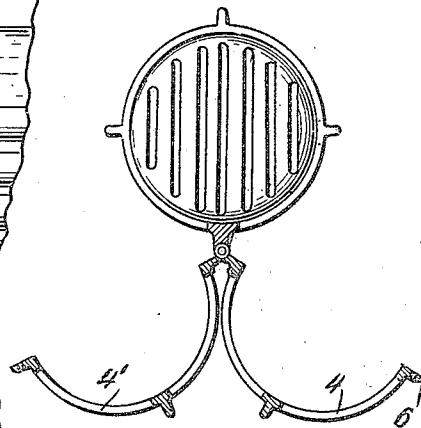


Fig. 2.

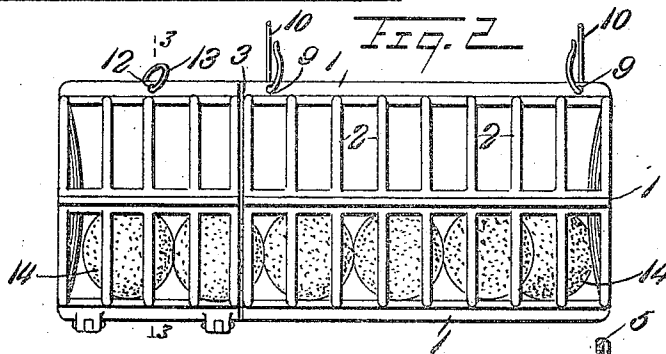


Fig. 3.

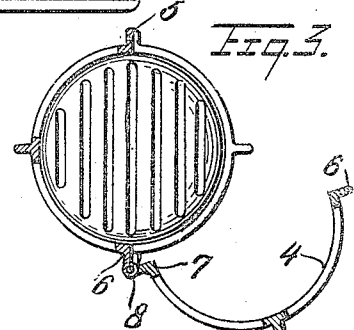
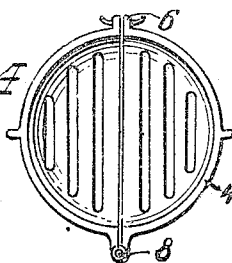


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE O. LEONARD, OF STAMFORD, NEW YORK.

CONTAINER FOR BOILER-SCALE REMOVERS.

942,836.

Specification of Letters Patent.

Patented Dec. 7, 1909.

Application filed November 22, 1907. Serial No. 403,389.

To all whom it may concern:

Be it known that I, GEORGE O. LEONARD, a citizen of the United States, residing at Stamford, in the county of Delaware and State of New York, have invented certain new and useful Improvements in Containers for Holding Boiler-Scale Removers, of which the following is a specification.

My invention relates to containers for holding boiler scale removers.

The object of the invention is to provide a device for holding metals, metallic compounds, amalgams or chemicals, used in boilers to prevent incrustation, or for removing scales or incrustation therefrom.

A further object is to provide a device which may be readily inserted in a steam boiler and secured therein and which will properly hold the material for removing incrustation without interfering with the circulation of water through the container.

With these and other objects in view the invention consists in a receptacle which may be cylindrical in form and which is provided with well braced sides and ends, both of which have numerous openings therein.

The invention also consists in providing suitable doors through which the compound may be inserted, such doors being formed by hinging one side or a portion of the side, or one or both ends of the device.

In the accompanying drawings, Figure 1 is a fragmentary sectional view through a boiler with a container embodying the invention positioned therein. Fig. 2 is a side elevation of an embodiment of the invention. Fig. 3 is a sectional view through Fig. 2, approximately on line 3—3 thereof, the door of the cage being swung to an open position. Fig. 4 is an end view of the container shown in Fig. 2. Fig. 5 is a transverse sectional view through a slightly modified form of container in which two doors are provided, the doors being shown open for the purpose of illustration.

Referring to Fig. 2 of the drawings, I provide a container consisting of a body portion, preferably cylindrical in form having longitudinal braces 1 disposed at equal distances about the sides, said braces being connected by transverse ribs 2. Three of the longitudinal braces extend from end to end of the container, the fourth being cut at the point 3, (Fig. 2) in order to provide for a door 4. This door is similar in construction to the walls of the body portion of the con-

tainer, but the brace on the upper side of the body portion is offset at 5, said offset portion being engaged by the member 6 formed on the edge of the door. The lower longitudinal brace is provided with a similar offset portion which is engaged by the member 7, formed on the opposite edge of the door. Hinges 8 connect the door with the body portion at this point.

The end of the container adjacent to the door is divided into halves vertically, each half consisting of a concave portion provided with slots, as shown, and formed, if desired, integrally with the body portion and the door. The opposite end of the container is also concave, and may be formed integrally with the body portion, but is not divided into sections.

The upper longitudinal brace 1 is provided with apertures 9, through which wires 10, or other supporting means may be passed, for securing the device to one of the tubes of the boiler, after it has been inserted through the manhole 11. The edge of the door is also provided with an aperture 12 which registers with the aperture in the offset portion of the brace, and permits of the insertion of a fastening device 13.

It will be observed also that the longitudinal braces are T-shaped in cross section, and are thus able to resist a great amount of strain compared with the amount of metal which they contain.

In Figs. 1 and 2 I have shown material, indicated by the numeral 14, which when dissolved in the water, will prevent or remove incrustation.

In the modification shown in Fig. 5, two doors 4 and 4' are provided, both doors being hinged to the lower brace.

What I claim as new and desire to secure by Letters Patent, is:

1. In a container of the character described, the combination of a plurality of longitudinal T shaped braces, a plurality of arc shaped transverse ribs connected thereto, said ribs and said braces forming a latticework body, closure means hinged to one of said braces consisting of a part forming a semi-circular end portion and a part forming a semi-cylindrical side portion, means co-acting with said closure means to form a closed latticework container, and means for suspending said container in a boiler.

2. In a container of the character described, the combination of a plurality of

longitudinal braces, and a plurality of transverse ribs connected thereto, said ribs and braces forming a tubular latticework body, said braces projecting beyond said tubular
 5 body, closure means hinged to one of said projecting braces consisting of a part forming a side for said body and a part forming an end portion, means co-acting with the parts aforesaid to form a closed latticework
 10 container, means for maintaining said closure means in a closed position, and means for suspending said container in a boiler.

3. In a container of the class described, the combination of a plurality of longitudinal
 15 braces and a plurality of transverse ribs connected thereto, said ribs and braces forming a latticework receptacle, and two of said

braces projecting beyond said receptacle, a closure means hinged to one of said projecting braces consisting of a pair of semi-cylindrical doors each of which is formed with a
 20 side for said body and an end portion, means co-acting with said closure means and engaging the other of said braces projecting beyond the body portion for holding the closure
 25 means in a closed position, and means for suspending said container in a boiler.

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

GEORGE O. LEONARD.

Witnesses:

J. K. McARTHUR,
 A. S. CHAMBERS.