

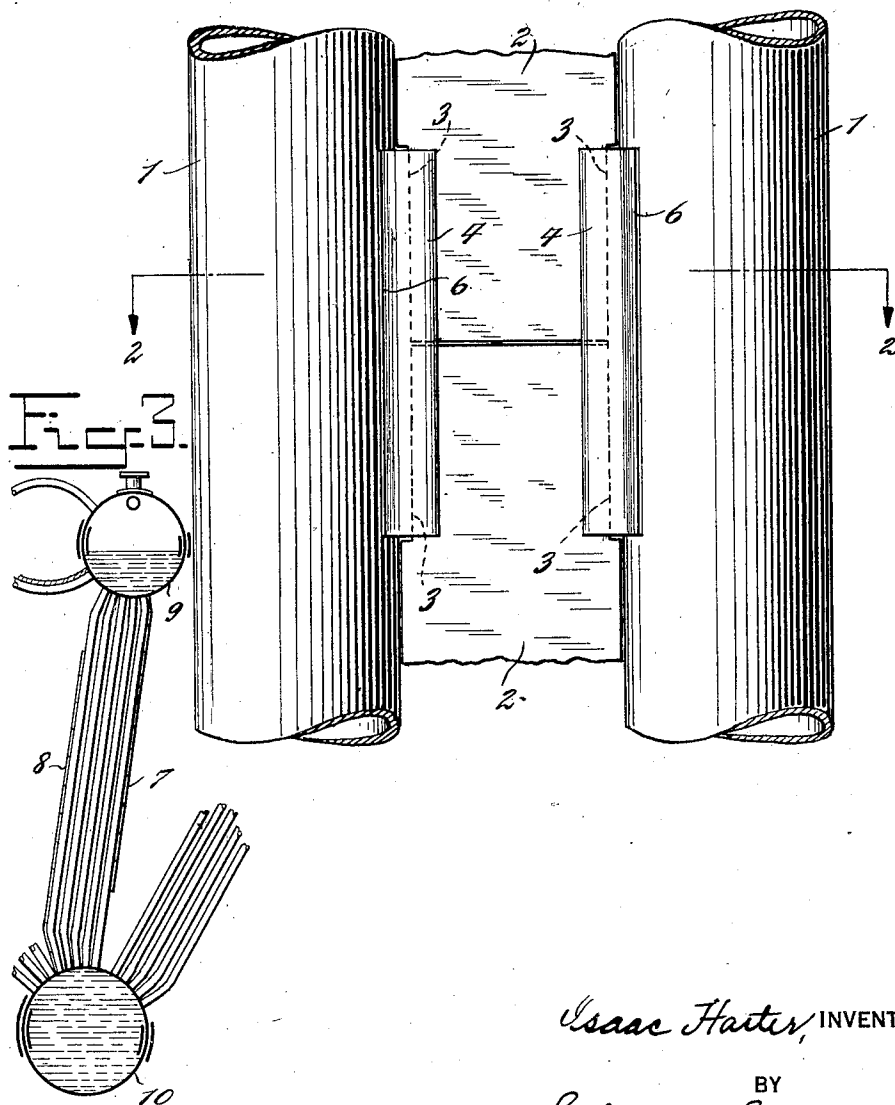
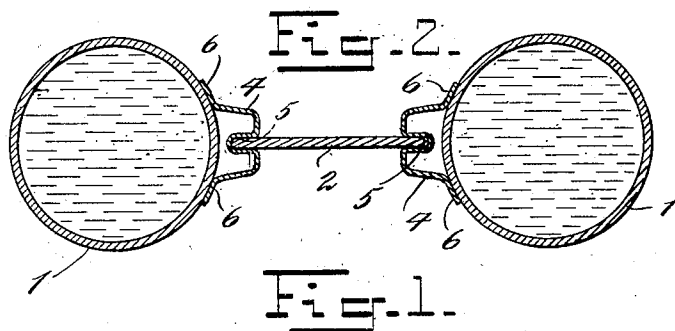
Dec. 3, 1929.

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1,737,759

METALLIC BAFFLE

Filed June 19, 1925



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UNITED STATES PATENT OFFICE

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METALLIC BAFFLE

Application filed June 19, 1925. Serial No. 38,200.

My present invention relates to baffles for water tube boilers, and more particularly to baffles which extend parallel to the water tubes, and will be understood from the following description and the annexed drawings, in which Fig. 1 is a front view, partly broken away, showing two water tubes and the filling pieces therebetween constituting part of a baffle; Fig. 2 is a section along the line 2—2 of Fig. 1 and Fig. 3 is a somewhat diagrammatic illustration, on a small scale, showing the disposition of the baffle in relation to a set of tubes of a Stirling boiler.

Like reference characters indicate like parts throughout the drawings.

As is well understood, in certain types of water tube boilers, such for instance, as Stirling boilers, baffles are arranged parallel to the water tubes to direct the flow of the hot gases. Such baffles are illustrated at 7 and 8 of Fig. 3, the former extending down from the drum 9 along the front of the bank of water tubes and the latter extending up from the drum 10, along the rear of the bank.

In the baffle of my present invention, I utilize a row of water tube 1 as part of the baffle and insert metallic baffle elements 2 between these tubes. The elements 2 are preferably made of sheet metal and are arranged in position between the tubes with holders along the edges thereof contacting with the tubes, and with the space beyond the holders filled by the edges of the elements 2 coming into contact with or close proximity with the tubes 1.

As shown in Figs. 1 and 2, baffle elements 2 are placed in the spaces between adjacent water tubes 1 to form with the tubes a complete wall or baffle. The baffle elements 2 are formed of plain flat sheets or plates of metal and have notches 3 along the edges at the ends thereof for the holders, these notches terminating in abrupt shoulders.

The baffle elements 2 are maintained in place between the tubes 1 by means of holders 4. These holders are preferably formed of sheet metal with longitudinal grooves 5 in which the edges of the elements 2 fit, and with outwardly extending flanges 6 which may be slightly curved on their contacting surfaces

to fit smoothly on the outside round surfaces of the tubes 1.

The baffle sections or elements 2 can be installed by placing two holders in contact with tubes 1 in proper position, and simply slipping the reduced ends of the sections or elements 2 longitudinally into the slots 5 of the holders 4. The flanges 6 will be so bent or shaped that there will be considerable frictional contact between these flanges and the tubes 1, so that the holders will retain the elements 2 in position to form a baffle, as at 7, which does not have to be supported from below.

When it is desired to install the baffle elements along bent portions of the tubes, transverse slits may be made in the elements so as to facilitate bending the elements to conform to the bends in the boiler tubes.

I claim:—

1. In combination, a pair of boiler tubes having their axes substantially in the same plane, a baffle element disposed between said tubes and comprising a plate having its sides substantially parallel to said plane and with edges extending substantially parallel to said tubes and longitudinally thereof, and a holder disposed between each longitudinal edge of the plate and the adjacent tube, and adapted to hold said plate in position between said tubes.

2. In combination, a pair of boiler tubes, a baffle element disposed between said tubes and comprising a plate having edges extending substantially parallel to said tubes and longitudinally thereof, and a holder disposed between each longitudinal edge of the plate and the adjacent tube, and frictionally engaging said plate and tube to hold said plate in position between said tubes.

3. In combination, a pair of boiler tubes having their axes substantially in the same plane, a baffle element disposed between said tubes and comprising a plate having its sides substantially parallel to said plane and with edges extending substantially parallel to said tubes and longitudinally thereof, and a holder disposed between each longitudinal edge of the plate and the adjacent tube, and

having a groove adapted to receive the plate therein.

4. In combination, a pair of boiler tubes having their axes substantially in the same plane, a baffle element disposed between said tubes and comprising a plate having its sides substantially parallel to said plane and with edges extending substantially parallel to said tubes and longitudinally thereof, and a holder disposed between each longitudinal edge of the plate and the adjacent tube, said holder having flanges contacting with the tube and a groove within which the plate is received.

5. In combination, a pair of boiler tubes having their axes substantially in the same plane, a baffle element disposed between said tubes and comprising a plate having its sides substantially parallel to said plane and with edges extending substantially parallel to said tubes and longitudinally thereof, and a holder disposed between each longitudinal edge of the plate and the adjacent tube, and adapted to hold said plate in position between said tubes, said plate having shoulders adapted to engage said holder to prevent relative movement therebetween.

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