Nov. 2, 1948. G. H. KNOBLOCH 2,452,936

ADJUSTABLE BAFFLE HOLDING DEVICE

Filed May 22, 1945

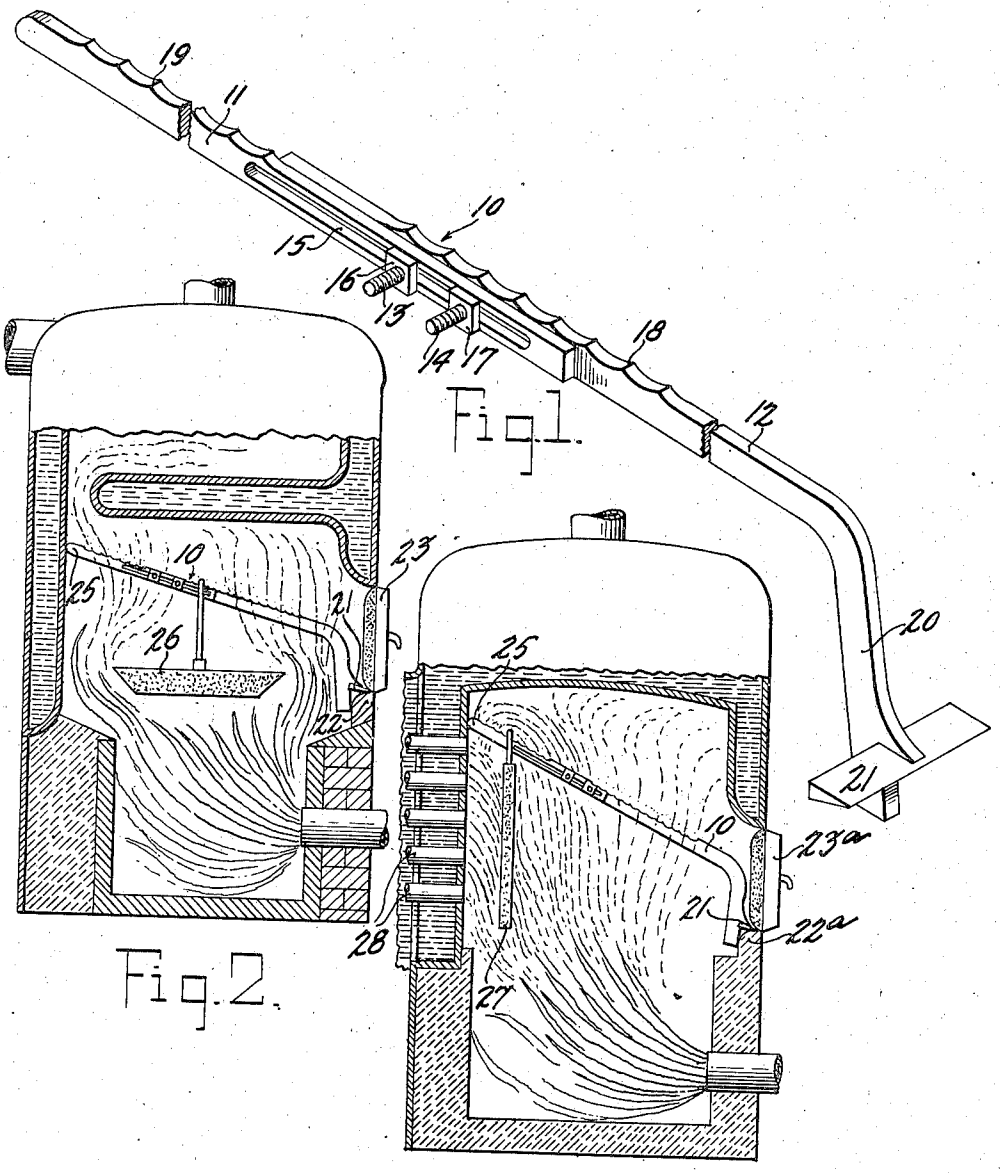


Fig. 1.

Fig. 2.

Fig. 3.

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Patented Nov. 2, 1948

2,452,936

UNITED STATES PATENT OFFICE

2,452,936

ADJUSTABLE BAFFLE HOLDING DEVICE

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Application May 22, 1945, Serial No. 595,203

3 Claims. (Cl. 248—200)

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This invention relates in general to heating apparatus but more particularly to means adapted for the support of a suspended baffle such as are commonly employed in connection with heating apparatus to more effectively distribute the ascending heat columns in the direction of the water retaining portions of the boiler.

There are several types of baffles which are employed to good advantage, one of them being a disk fabricated of refractory material and suspended horizontally just over the combustion chamber, and the other, what is technically known as a curtain baffle which is vertically suspended in front of and adjacent to the horizontal boiler tubes.

In some forms of boilers the interior construction is such that baffles of the kind mentioned may readily be "hung up" by the expedient of a wire or chain attached to a conveniently located water tube extending diametrically across the heat chamber. However in other forms of boilers this method of installation cannot be employed and consequently various methods have been resorted to in an endeavor to suspend the baffles properly. Some of these methods have proved unsatisfactory in that the baffles could not be maintained in just the most effective position, or were of a makeshift type of suspension to begin with. Accordingly it is an object of the present invention to provide an improved and highly effective means for support of any one of several types of baffles adapted for suspension within a boiler.

A further object of the invention is to provide a baffle suspension device for the purpose specified that is adjustable as to its length so that it can be longitudinally extended to diametrically span the entire inside width of the heating chamber of a boiler for contact on both sides thereof thus making it secure against displacement and insuring stability.

A still further object of the invention is to provide a baffle supporting device that is applicable to most any type of conventional boiler and can readily be adjusted to meet all normal boiler dimensions.

Other objects and advantages of the invention will be obvious from the following description of an illustrative embodiment thereof.

In the drawings:

Figure 1 is a detail perspective view of the present invention. Figure 2 is a vertical section of one type of boiler showing the invention as it would support a disk type of baffle therein. Figure 3 is a vertical section of another type of

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boiler showing the invention as it would support a curtain type of baffle therein.

With reference to the drawing, 10 designates the baffle supporting device as a whole which is comprised of two separate elongated portions 11 and 12 slidably joined together in an extensible manner by the screw bolts 13 and 14 secured in the portion 12 and extending through a longitudinal slot 15 formed in the portion 11 the two portions being thus adapted for adjustment to any reasonable predetermined length and secured in that position by means of the nuts 16 and 17 screw-threaded on said bolts.

The upper edge of each of the two portions 11 and 12 should be serrated as at 18 and 19 in any convenient form that will prevent slipping of the means employed, such as a wire or chain, to suspend the baffle from the invention when the same is disposed in an inclined position as shown. The portion 12 has an offset section disposed at approximately 120 degrees forming an almost vertically disposed leg 20 as shown in the drawing. This leg extends downwardly a substantial distance when the device is in its operative position. Spaced approximately 3 inches from the lower end of the leg 20 there is attached to or forming an integral part thereof, a transversely disposed element 21 of wedge shaped formation adapted to provide a foot or base support for the device to engage the lower portion 22 of the boiler just below the fire door.

With reference to Figure 2, there is shown how the present invention sustains a disk type of baffle 26. The baffle supporting means 10 which constitutes the present invention is inserted through the fire door 23 so that the foot 21 bears against the lower portion of the door opening 22. Since the length of the device has previously been adjusted so that the extreme end 25 will bear against the water jacket on the opposite side at a point substantially above the level of the foot portion, it will accordingly be held rigidly in place due to the gravity of the baffle 26 which is suspended therefrom.

With reference to Figure 3 there is shown a representation of the curtain type of baffle 27 suspended in much the same manner as the disk baffle in Fig. 2 only in this particular instance the invention has been lengthened out a bit in order that the end 25 will reach well above the boiler tubes 28 thus permitting the baffle to be hung in the most effective position. The lower portion 21 of the device in this instance also rests upon the lower portion of the door 23a designated at 22a.

Variations may be resorted to within the scope of the invention and portions of the improvements may be used without the others, whilst not departing from the spirit of the invention.

Having thus described my invention, I claim:

1. In apparatus of the class described, in combination, a plurality of longitudinal elements adapted to support a suspended means, means to secure at least two of said elements in a relatively predetermined overlapping locked position as to length, serrated engaging means on each of said elements to prevent slipping of the suspended means, a lower offset portion forming a leg on one of said elements, and a transversely disposed foot forming a base support.

2. In a baffle supporting device for a boiler or the like having vertical side walls, of a device adapted for the support of a baffle within said boiler comprising a pair of relatively extensible elements in contact having upper and lower edges and disposed in overlapping parallel relation one having an elongated slot, a pair of screw bolts secured in the other of said elements and extending through said slot to provide an adjustable locking engagement of said elements at such a combined length as to permit its being supported

in an angular position between said side walls, a series of serrations formed upon the upper edges of said elements, and an angularly offset portion on one of said elements forming a leg having an extended foot for the support of said elements within said chamber.

3. In a baffle supporting device for a boiler or the like having vertical side walls, of an elongated supporting member adapted for limited extension to permit of engagement with said side walls in an inclined position, a foot portion forming a lower base support for said member and engaging means on said elongated member adapted to avert slipping of a baffle thereon due to its inclined position.

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