

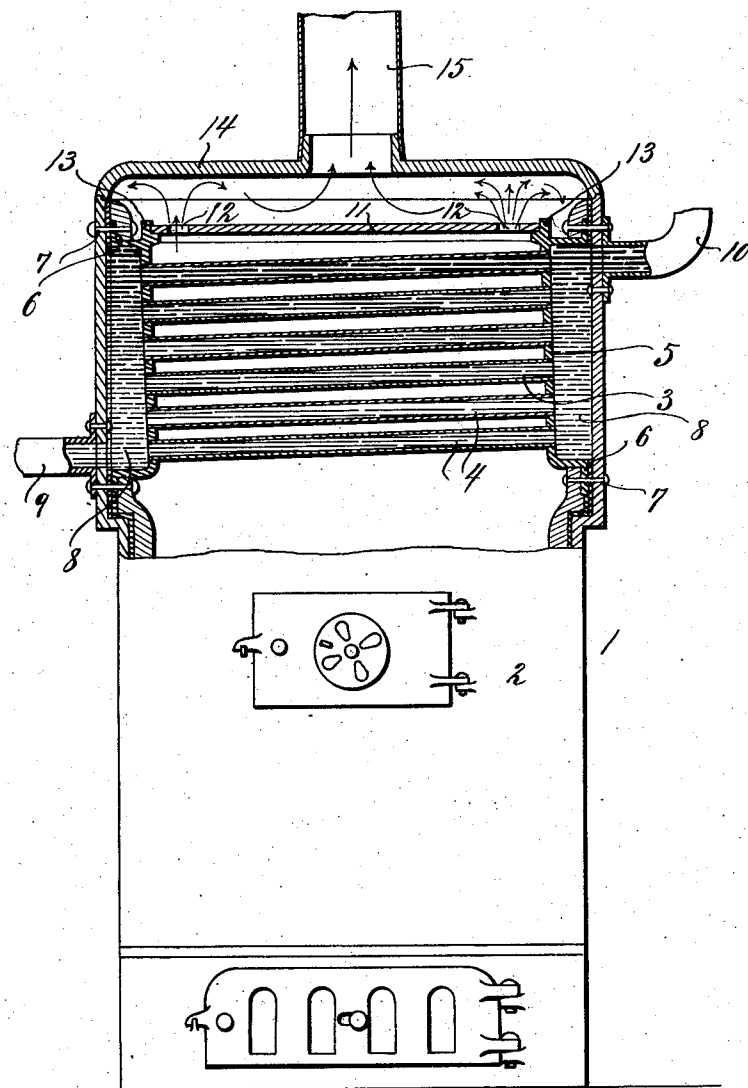
H. C. ENGLISH.
 WATER HEATING FURNACE.
 APPLICATION FILED OCT. 9, 1911.

1,027,327.

Patented May 21, 1912.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses

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2 SHEETS-SHEET 2.

Fig. 3.

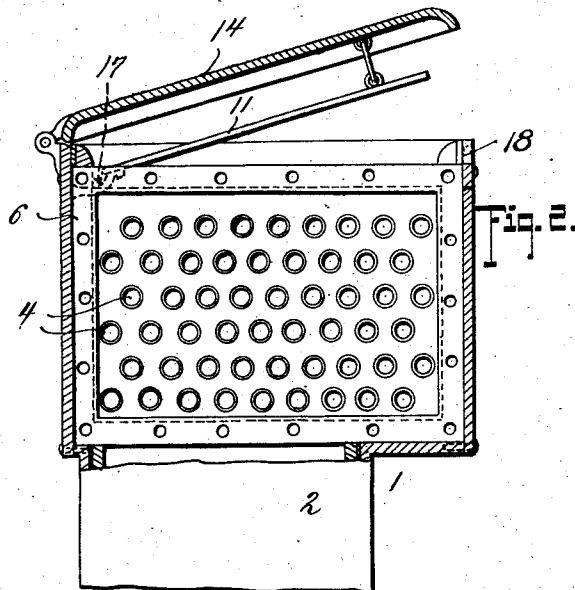
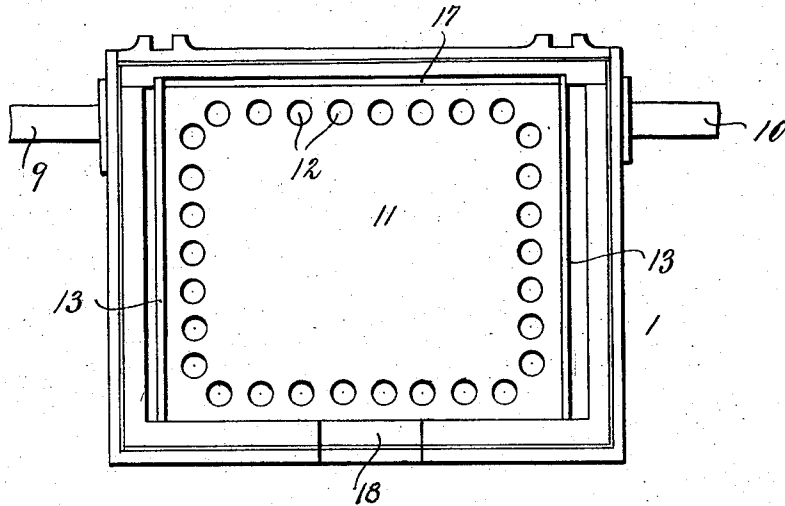


Fig. 2.

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UNITED STATES PATENT OFFICE.

HENRY C. ENGLISH, OF WILMINGTON, DELAWARE, ASSIGNOR TO JOHN W. CARTER, JR., OF WILMINGTON, DELAWARE.

WATER-HEATING FURNACE.

1,027,327.

Specification of Letters Patent.

Patented May 21, 1912.

Application filed October 9, 1911. Serial No. 653,656.

To all whom it may concern:

Be it known that I, HENRY C. ENGLISH, a citizen of the United States, residing at Wilmington, in the county of Newcastle and State of Delaware, have invented certain new and useful Improvements in Water-Heating Furnaces, of which the following is a specification.

This invention relates to water heating furnaces, and primarily the object is to provide a boiler which is economical in construction and use, having provided therein improvements whereby the products of combustion are utilized to thereby evenly and rapidly distribute the heat in the water heating chamber.

A further object is to provide a water heater which has a plurality of tubes in which the water is being heated and to so construct the furnace that the water tubes are easily accessible for cleaning purposes and the like.

With the above and other objects in view, this invention consists in the construction, combination, and arrangement of parts, all as hereinafter more fully described, claimed and illustrated in the accompanying drawings wherein—

Figure 1 is a front elevation partly in section; Fig. 2 is a transverse section; and Fig. 3 is a top plan view with the cover or top removed.

Throughout the following detail description and on the several figures of the drawings, similar parts are referred to by like reference characters.

Referring to the drawings, 1 denotes the furnace in general provided with the usual fire pot 2 and water heating chamber 3. In the water heating chamber a plurality of upwardly inclined water pipes 4 are located, said pipes being carried by suitable heads 5. The heads are preferably spaced from the walls of the chamber 3 and formed with flanges 6 which are fastened to the wall members of the furnace by bolts 7. The flanges 6 form closures for the spaces between the heads, chambers 8 being thus provided which will normally be filled with water. The feed pipe 9 is carried on one side of the furnace and leads the water into one of the chambers 8 at the bottom thereof. The water when heated will rise into the pipe 10 located on the opposite side of the furnace and leading from the upper portion

of the chamber 8 adjacent to the right side thereof.

An important feature of this invention is the arrangement of the baffle-plate 11 which covers the water heating chamber and has along the margin thereof a series of openings 12 through which the products of combustion will pass when having first entered between the water pipes 4. As noted in the drawing, said baffle-plate is supported by upwardly extending flanges 13 of the heads 5 and the space above the baffle-plate up to the furnace top or cover 14 is comparatively narrow and approximately of even dimensions. When the products of combustion pass up through the openings 12, the contact thereof with the top 14 spreads them in different directions as indicated by arrows in the drawings, thereby evenly distributing the heat around the chamber 3 before the products of combustion pass out through the flue 15.

In order that the water heating chamber will be easily accessible for repair the top of the furnace is removable and also the baffle-plate 11, which latter is detachably connected by hooks 16 adjacent to one edge of said top, while the other edge rests on the edge of the trough 17. When the front edge of the furnace top is lifted, the baffle-plate will also be lifted to an inclined position, as shown in Fig. 2, and the soot or other substances which may have gathered on top of the baffle-plate will roll down into the trough 17. This is advantageous inasmuch as the wind will not cause the soot or ashes to fly around in the room in which the furnace is located. The front side of the furnace is also provided with an opening 18, through which the top of the baffle-plate may be cleaned without lifting the cover of the furnace.

For more convenient access to the heating chamber, the front and back walls of the furnace are removable, as illustrated in Fig. 2 of the drawings.

Having thus fully described my invention, what is claimed as new is:—

1. A water heater comprising a heating chamber, a removable top for said chamber pivotally secured to the heater at one side thereof, said top having an opening therethrough, a baffle plate spaced from and connected to the top at its outer side, and means comprising a trough carried by the heater

below the connection of the top and upon which the opposite side of the plate is seated, whereby soot and other foreign matter rolling from the baffle plate may be collected as the top is raised.

2. A water heater comprising a heating chamber, a removable top for said chamber having an opening centrally therethrough, a baffle plate below and spaced from said top, said plate having a plurality of marginal openings therethrough, means detachably securing the plate at one side to the top aforesaid, and means secured at the opposite side of the chamber on which said plate is mounted for pivotal movement, said means being adapted to collect accumulations rolling from the baffle plate as the top is raised.

3. A water heater comprising a heating chamber, said chamber having upstanding flanges provided therein and also a trough carried adjacent to one side of said chamber, a baffle-plate normally resting on said trough and on said upstanding flanges, a removable top spaced from said baffle-plate, and hooks connecting one edge of said baffle-plate to aforesaid removable top, all for a purpose set forth.

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

HENRY C. ENGLISH.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."