

UNITED STATES PATENT OFFICE.

GEORGE FOX, OF NEW YORK, N. Y.

ANGLE-PLATE FOR BOILER-FRONTS.

SPECIFICATION forming part of Letters Patent No. 520,674, dated May 29, 1894.

Application filed March 9, 1894. Serial No. 502,999. (No model.)

To all whom it may concern:

Be it known that I, GEORGE FOX, of New York city, in the county and State of New York, have invented a new and Improved
5 Water Front and Arch for Steam-Boilers, of which the following is a full, clear, and exact description.

My invention is an improvement in the class of hollow arches or fronts for steam boiler and
10 boiler fire-boxes. I construct the hollow water-front in right-angular form, and arrange it to cover a portion of the top of the fire-box, and all the end of the same above the grate, save the door space, as hereinafter described.

15 Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in both the views.

Figure 1 is a vertical section on the line 1—1
20 of Fig. 2, showing my improvement and the way it is applied to a boiler and boiler front, the latter being also in section; and Fig. 2 is a front elevation, partly in section, of the same, the boiler front being removed.

25 The boiler 10 is an ordinary horizontal boiler and may be of any usual type, it having the customary fire box 11 and front 12 between which and the end of the boiler is placed masonry in the usual way, and this brick-work
30 is supported on the right-angular front 13 which also protects the lower edge of the front 12, this angle plate being hollow throughout as shown at 15, so as to contain water, and it is recessed in front and on the lower edge, as
35 shown at 14, to provide for the door to the

fire box 11. The upper portion of the right-angular front extends horizontally rearward so that its ends form a support for the brick-work above, and it prevents any bricks from falling down into the fire box. It also, being
40 filled with water, prevents excessive radiation, so that the boiler front is not overheated and burned out. The front 13, is arranged, as shown in the drawings, to form the front and top of the fire box, and it is connected with
45 the boiler 10 by pipes 16 and 17 so that the water may circulate freely through it. It is also provided with downwardly extending blow-off pipes 18, which are controlled by valves 19, and whose lower ends are directed
50 into the ash-pit, and to further facilitate cleaning it out, it is provided with a hand hole 20 of the customary kind.

When my improved angle front 13 is used it is not necessary to place any mason work
55 between the front 13 and the grate bars or furnace.

Having thus described my invention, I claim as new and desire to secure by Letters
60 Patent—

The combination with boiler and fire-box, of the right-angular, hollow, water front, covering the top and that portion of the end of the fire-box, save the door space, which is above the grate, whereby it performs the
65 functions stated.

GEORGE FOX.

Witnesses:

F. W. HANAFORD,
C. SEDGWICK.