(No Model.)

G. C. SHARPE.

DRAFT TUBE FOR LOCOMOTIVE BOILER FURNACES.

No. 561,621. Patented June 9, 1896.

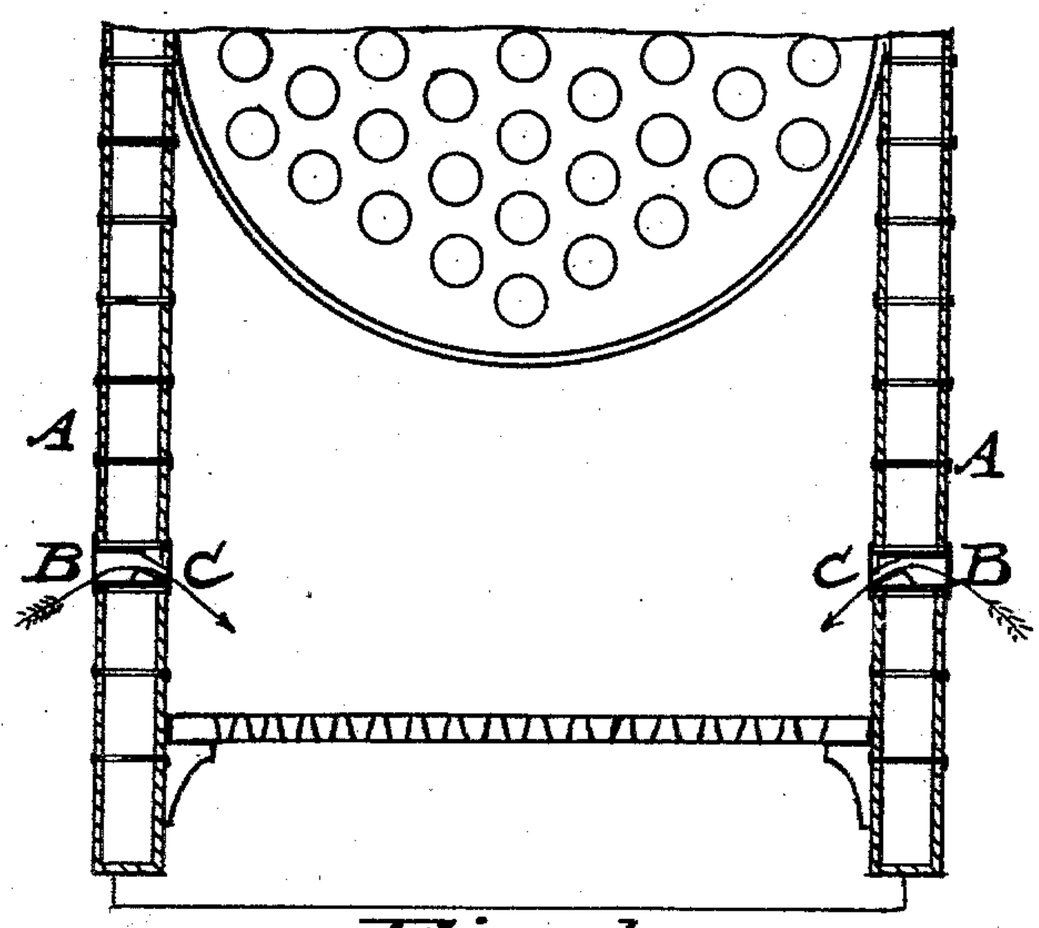

Fig. 1.

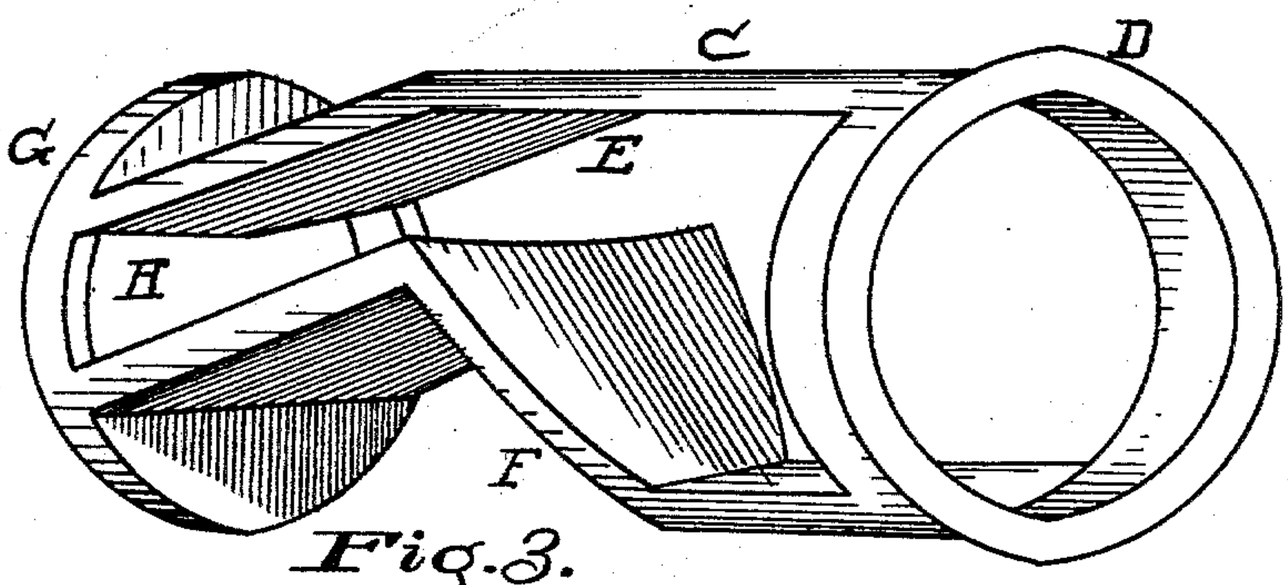

Fig. 3.

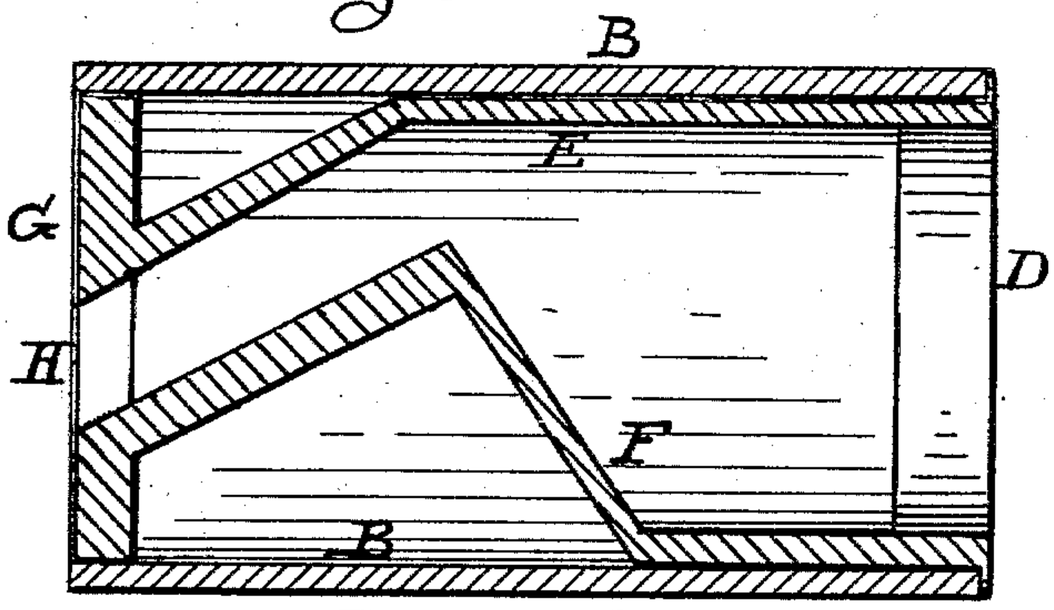

Fig. 2.

Witnesses,
C. A. Amy.
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by his Attorney Geo. W. Tibbitts

UNITED STATES PATENT OFFICE.

GEORGE C. SHARPE, OF COLUMBUS, OHIO.

DRAFT-TUBE FOR LOCOMOTIVE-BOILER FURNACES.

SPECIFICATION forming part of Letters Patent No. 561,621, dated June 9, 1896.

Application filed January 18, 1896. Serial No. 576,048. (No model.)

To all whom it may concern:

Be it known that I, GEORGE C. SHARPE, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Draft-Tubes for Locomotive-Boiler Furnaces, of which the following is a specification.

This invention relates to draft-tubes in locomotive-boiler furnaces, and has for its object to improve the draft-inlets in such a manner that the air shall be diverted throughout the fire, and thereby enhance the combustion, resulting in a saving of fuel and increased heating qualities.

The invention consists in the combination, with the draft-tubes, of diverting-tubes within said draft-tubes, substantially as hereinafter described, and pointed out in the claim.

In the accompanying drawings, Figure 1 is a sectional view of a locomotive-boiler having my improvement attached. Fig. 2 is a longitudinal section of a draft-tube, showing my improved diverting-tube included. Fig. 3 is perspective view of my new diverting-tube.

Heretofore with the use of plain open tubes the air was drawn in a direct line toward the boiler-flues, the effect of which was that the smoke and gases were carried off quickly. is obviated by my improvement, and the smoke and gases are consumed, as shown and described, by the means as follows:

A represents the sides of the boiler-furnace, and B B the air-inlet tubes through the side walls.

C is the diverting-tube, consisting of a ring having an annular flange D.

E and F are parts of a tube extending inward from said ring, the upper part extending about two-thirds and thence bent downward at an angle of about thirty-six degrees and joined to a disk G. The lower part F extends in about one-third and is bent upward at an angle of about forty-five degrees to about or a little above the axial line of the tube, thence bent downward on a line parallel with the downward bend of the upper part, and is also joined to the disk G. A slot H is made through the disk between the junction of the two parts E and F for a passage into the fireplace. These diverters are placed in the tubes B B with the flange D against their outer ends, and they may be turned so as to direct the currents of air downward or rearward, as desired, so that the ingoing air will in striking the inclines be deflected and caused to be mingled with the smoke and gases, thereby greatly enhancing the combustion of the same and reducing the amount of smoke thrown off to a minimum.

Having described my invention, what I claim is—

In a locomotive-furnace the combination with the draft-tubes B, of the diverting-tubes C, consisting of the rings D, part E extending straight inward two-thirds thence downward thirty-six degrees, the part F extending inward one-third distance, thence upward at an angle of forty-five degrees, thence downward on a line parallel with part E, and the disk G joining both parts E and F, and having slot H, leading into the furnace, substantially as described.

GEORGE C. SHARPE.

Witnesses:
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