

E. C. SHAW.
 SUPPLEMENTAL BOILER FOR LOCOMOTIVES.
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1,057,361.

Patented Mar. 25, 1913.

Fig. 1.

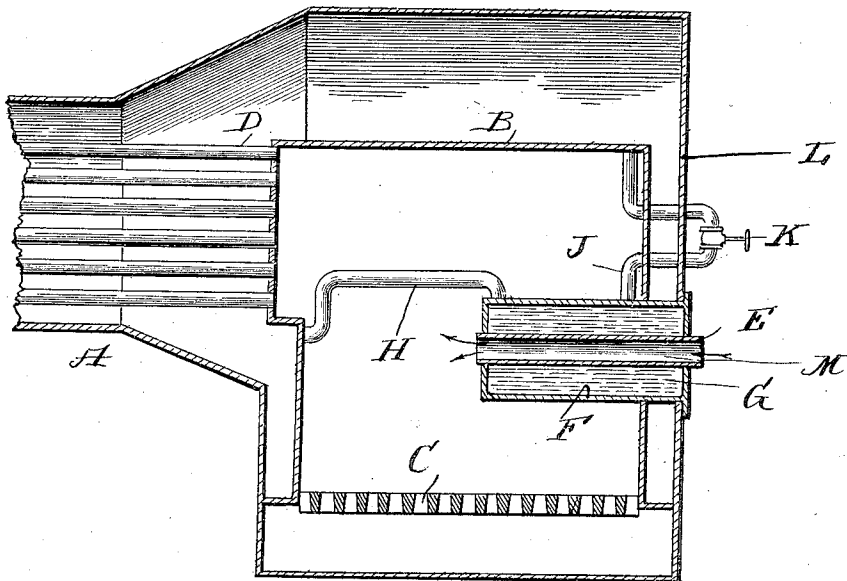
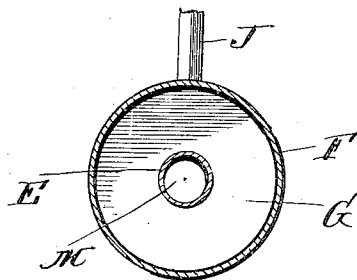


Fig. 2.



WITNESSES

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SUPPLEMENTAL BOILER FOR LOCOMOTIVES.

1,057,361.

Specification of Letters Patent.

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Application filed June 29, 1912. Serial No. 706,574.

To all whom it may concern:

Be it known that I, EDWIN C. SHAW, 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 Supplemental Boilers for Locomotives and other Engines, of which the following is a specification.

My invention has relation to improvements in supplemental boilers for locomotive and other engines, and the object of the invention is to provide a locomotive or other engine with a supplemental or pre-heating boiler which will be located in the fire-box a little above the fuel grate, said supplemental boiler having a longitudinal centrally formed opening through which air is admitted from the outside into the fire-box above the grate bars to promote combustion.

With these and other objects in view the invention consists in the novel construction and combination of parts as will be hereinafter more in detail described and the asserted novelty specifically pointed out in the claim.

I have fully and clearly illustrated my invention in the accompanying drawings in which;

Figure 1 is a longitudinal side elevation of a locomotive boiler partly broken away. Fig. 2 is a cross sectional view of my supplemental boiler as applied in this example to a locomotive boiler.

Similar letters of reference indicate similar parts throughout both views.

Referring to the drawings: A designates a locomotive boiler provided with the usual fire-box B, grate-bars C and fire-tubes D connected with the fire box, all of which are of the well known construction and which form no part of my invention, and hence

further description of the same is not deemed herein necessary.

The improvement consists of a cylinder E open at both ends and surrounded by a jacket F forming a water space G connected by an inlet pipe H with the water space I of a locomotive or other boiler. The jacketed cylinder is also connected by a pipe J with the water space I, said pipe having a valve K.

The device is fitted within an opening in the boiler front L and is supported above the grate-bars of the fire-box.

The utility of the improvement is that water entering the space G through the pipe H is heated and with the steam is discharged into the pipe J and thence into the boiler, thus the water after it is circulated in the locomotive boiler supplies water to the supplemental boiler through the medium of the pipe H, above stated.

The open ends of the cylinder E provide an air space M through which air passes to the coal in the fire-box to promote combustion thereof.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

The combination with a locomotive boiler, fire-box, grate-bars and fire-tubes located within the boiler; of a jacketed supplemental boiler having an air space formed centrally therethrough, and inlet and outlet pipes, the outlet pipe having a valve connected thereto, all constructed and operated substantially as described and for the purposes set forth.

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

EDWIN C. SHAW.

Witnesses:

CHARLES GREEN,
EDWARD ABRAHAMS.