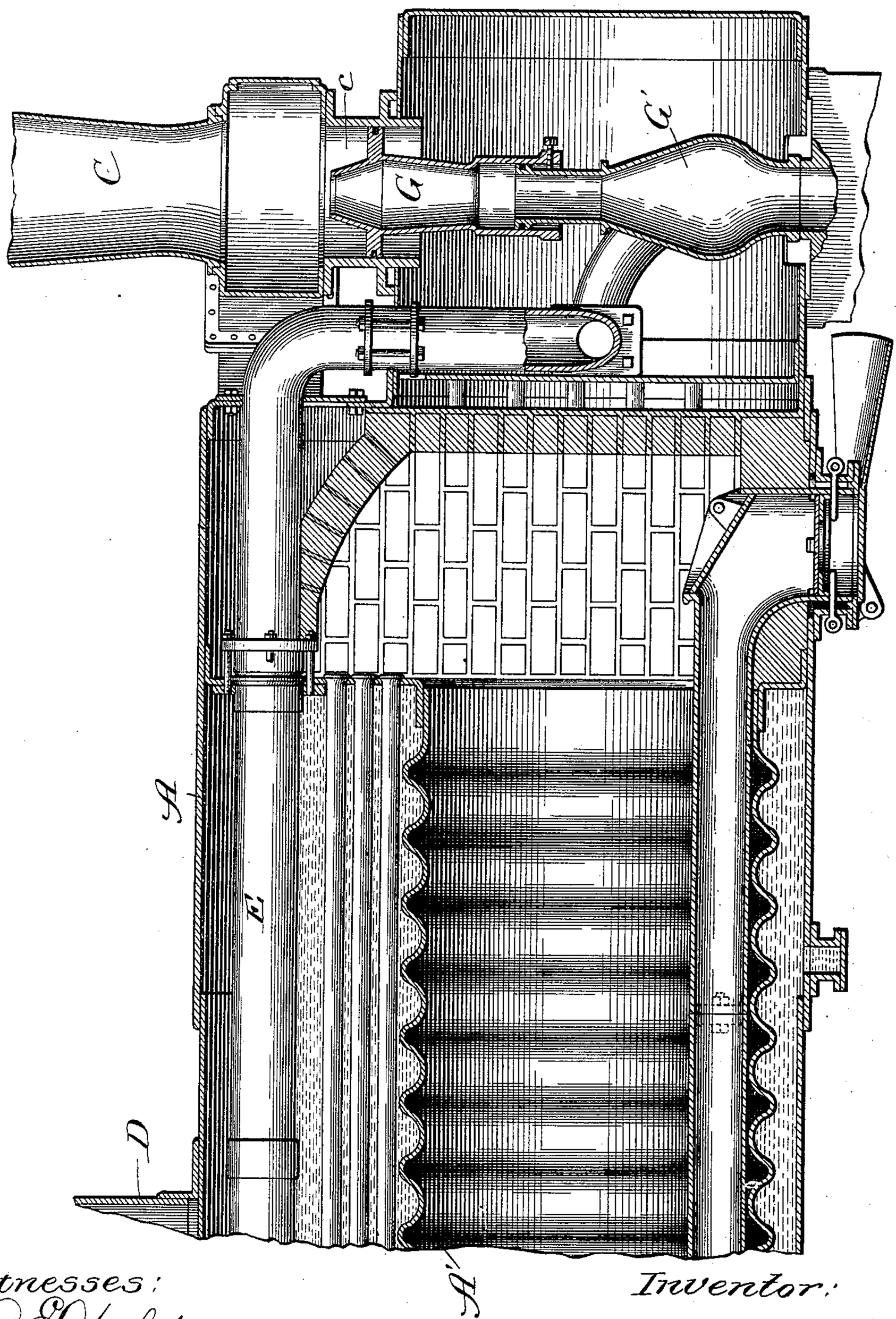
No. 666,395. Patented Jan. 22, 1901.

J. PLAYER.

EXHAUST MECHANISM FOR LOCOMOTIVES.

(Application filed June 30, 1900.)

(No Model.)



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UNITED STATES PATENT OFFICE.

JOHN PLAYER, OF TOPEKA, KANSAS.

EXHAUST MECHANISM FOR LOCOMOTIVES.

SPECIFICATION forming part of Letters Patent No. 666,395, dated January 22, 1901.

Original application filed April 25, 1900, Serial No. 14,212. Divided and this application filed June 30, 1900. Serial No. 22,123. (No model.)

To all whom it may concern:

Be it known that I, JOHN PLAYER, a citizen of the United States, residing at Topeka, in the county of Shawnee and State of Kansas, have invented certain new and useful Improvements in Exhaust Mechanism for Locomotives, of which the following is a specification.

This application is a division of an application filed by me April 25, 1900, Serial No. 14,212, and such mechanisms as are described but not claimed herein are described and claimed in such application.

The principal object of the invention is to provide a locomotive-boiler with a simple, economical, and efficient nozzle by which steam is exhausted into the smoke-stack to increase the draft thereof; and the invention consists in the features, combinations, and details of construction hereinafter described and claimed.

The accompanying drawing represents a longitudinal sectional elevation of the front end of one kind of a locomotive constructed in accordance with my improvements.

In illustrating and describing my improvements I have only shown and described those parts which I consider to be new, taken in connection with so much that is old as will properly disclose the invention to others and enable those skilled in the art to practice the same, leaving out of consideration other and well-known mechanisms which if shown and described herein would only tend to confusion, prolixity, and ambiguity.

In constructing a locomotive in accordance with my improvements I use a boiler A, the front end of which is shown in longitudinal section in the accompanying drawing and which is practically and preferably a cylindrical continuous shell from one end to the other. Inside of this exterior boiler-shell is a second cylindrical shell A′, which is inserted axially through the boiler from end to end, but with its axis arranged eccentric to that of the main shell. The water and steam space of the boiler is formed in the space between these two shells.

The locomotive is provided with the usual smoke-stack C at the front end thereof, out through which the heated gases and products of combustion pass. The arrangement of parts to accomplish this result being fully described and claimed in the application above noted and the novel elements thereof forming no particular novelty in this application, further description thereof will be unnecessary.

The boiler is provided with the usual steam-dome D, a portion of which is shown in the drawing, in which a throttle-valve is located. (Not shown.) From this steam-dome the steam-supply pipe or pipes E lead to the engine-cylinder. (Not shown.) The throttle-valve, it will be understood, is of the usual construction and is operated, as is usual in such instances, from the cab of the locomotive by means of ordinary rods and a throttle-lever. (Also not shown.)

An exhaust-nozzle is provided, which leads from the engine-cylinder (not shown) and is made in two parts G and G′, arranged in axial line with the smoke-stack. The upper part G is adjustably mounted on the lower part and is snugly as well as adjustably fitted in the smooth cylindrical bore *c* at the lower part of the stack, so that when necessary it can be raised and lowered to suit different circumstances and conditions, all of which will be fully appreciated by those skilled in the art.

I claim—

In a locomotive, the combination of a stack portion provided with a smooth cylindrical bore at its lower end, an exhaust-pipe made in two parts—a lower part and an upper part—adjustably secured thereto and snugly as well as adjustably fitting the smooth cylindrical bore of the stack, substantially as described.

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