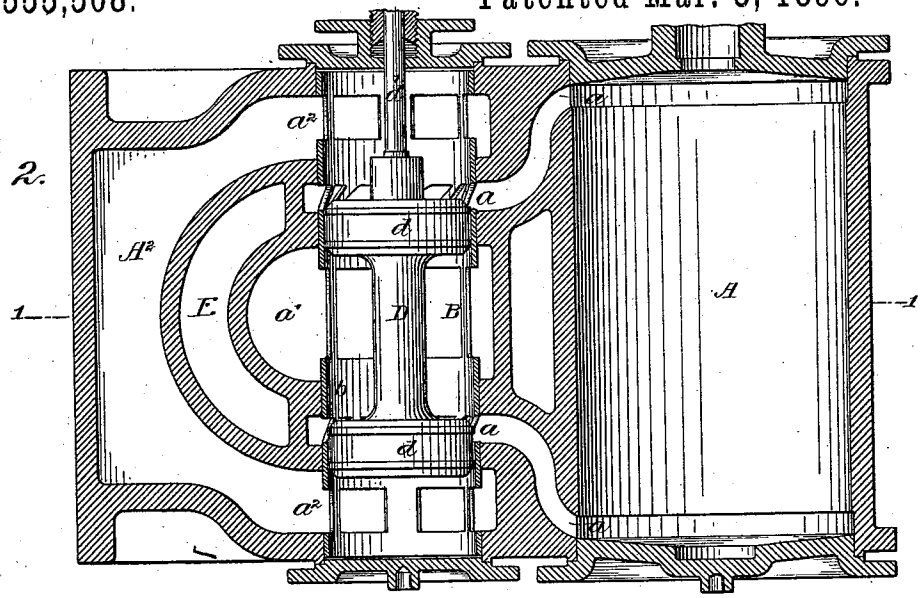
(No Model.)

W. P. HENSZEY.

STEAM LOCOMOTIVE.

No. 555,508. Patented Mar. 3, 1896.

FIG. 2.



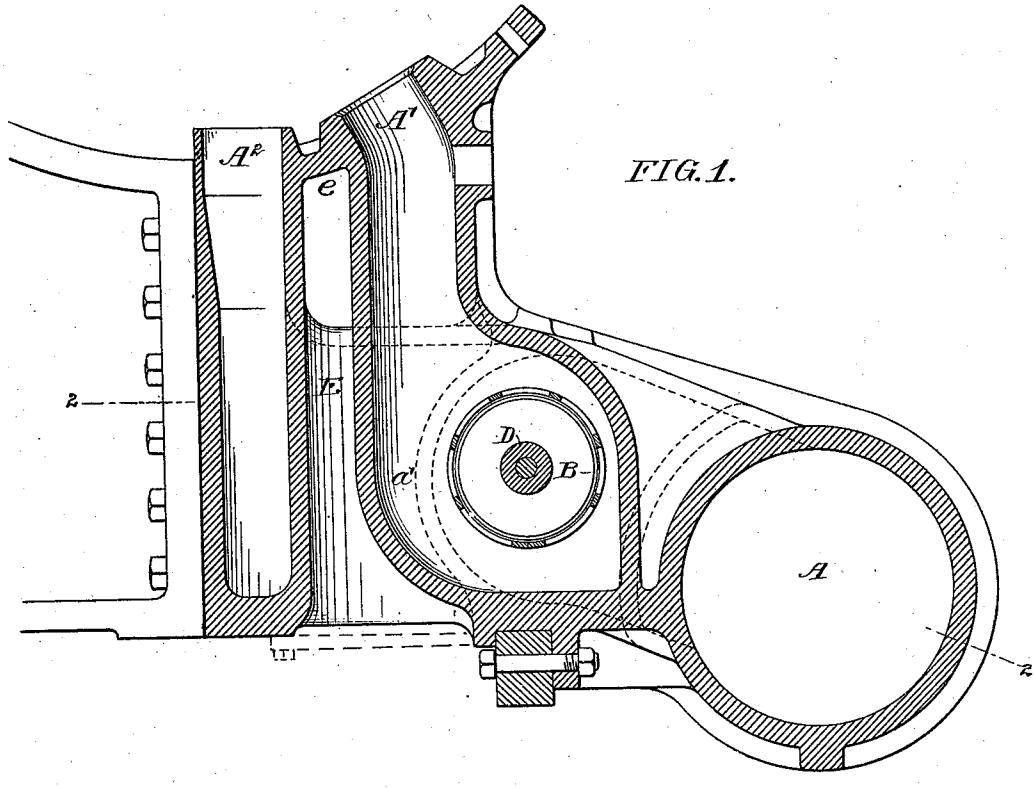


FIG. 1.

Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM P. HENSZEY, OF PHILADELPHIA, PENNSYLVANIA.

STEAM-LOCOMOTIVE.

SPECIFICATION forming part of Letters Patent No. 555,508, dated March 3, 1896.

Application filed November 15, 1895. Serial No. 569,086. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. HENSZEY, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Steam-Locomotives, of which the following is a specification.

The object of my invention is to so construct the saddle or cylinder casting of a locomotive that the inlet-passage will be separated from the exhaust-passage, so that the exhaust-steam will not affect the live steam. This object I attain in the following manner, reference being had to the accompanying drawings, in which—

Figure 1 is a sectional view through the cylinder-casting of a locomotive on the line 1 1, Fig. 2; and Fig. 2 is a sectional plan view on the line 2 2, Fig. 1.

In the ordinary construction of high-pressure locomotive-cylinders it has been customary to have the inlet-ports on the outside and the exhaust-port on the inside of the casting. By my invention I reverse this order and admit the steam to the valve through a passage inclosed by the exhaust-passage, which is separated from the live-steam passage by the dead-space.

A is the cylinder of the ordinary construction.

B is the valve-chest, which in the present instance is cylindrical in form and has a bushing *b*.

a are the ports leading from the valve-chamber to the cylinder.

a' is the inlet-port surrounding the valve-chamber and communicating with the inlet-passage A'.

A^2 is the exhaust-passage communicating with ports a^2 at each end of the valve-chamber. The bushing *b* of the valve-chamber is cut away opposite the several ports, so as to allow for the free passage of the live and exhaust steam.

D is a piston-valve formed in two sections *d d* and attached to the valve-rod *d'*. The sections are so arranged in relation to the ports of the valve-casing that when the valve is in the position shown in Fig. 2 the forward end of the cylinder will exhaust through the ports *a* and a^2 to the passage A^2, while steam is admitted to the opposite end of the chamber through the passage A', ports *a'* and *a* at the opposite end of the cylinder.

Separating the inlet-passage A' from the exhaust-passage A^2 is a dead-space E, which extends up to the portion *e* of the saddle, so that the exhaust-steam escaping through the passage A^2 will not affect in any manner the live steam passing to the cylinder through the passage A'. The dead-space may be open, as shown in Fig. 1, or may be closed by a cover, as shown by dotted lines in said figure. The outer surface of the cylinder-casting is covered, so as to protect the high-pressure passage and the valve-chamber from the atmosphere.

I claim as my invention—

The combination in a locomotive-cylinder, of the casting having a cylindrical valve-chest, a central inlet-port for live steam, exhaust-ports at each end of the valve-chest and ports leading to the cylinder midway between the inlet-port and exhaust-ports, a central inlet-passage formed in said casting and extending from the said inlet-port, a dead-space at the back of the inlet-passage formed in said casting and an exhaust-passage communicating with the exhaust-ports and situated back of the dead-space so that the steam-inlet passage is separated from the exhaust-passage, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WM. P. HENSZEY.

Witnesses:

JAMES G. KEYS,

JAS. H. M. HAYES.