

H. G. ASHTON.

SAFETY-VALVE ATTACHMENT TO UTILIZE THE ESCAPE STEAM.

No. 186,783.

Patented Jan. 30, 1877.

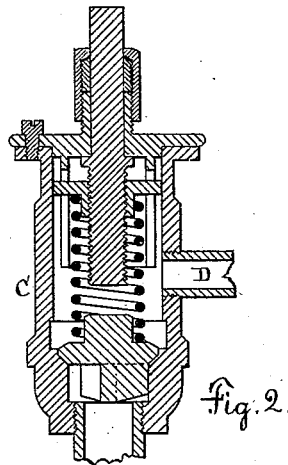


Fig. 2.

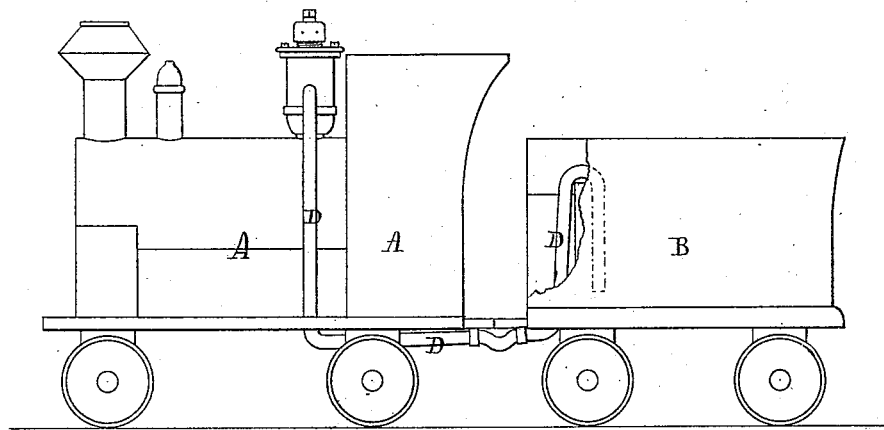


Fig. 1.

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# UNITED STATES PATENT OFFICE.

HENRY G. ASHTON, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN SAFETY-VALVE ATTACHMENTS TO UTILIZE THE ESCAPE-STEAM.

Specification forming part of Letters Patent No. **186,783**, dated January 30, 1877; application filed November 29, 1875.

*To all whom it may concern:*

Be it known that I, HENRY G. ASHTON, of Boston, Massachusetts, have invented an Improvement in Locomotives and other Steam-Engines, which is fully described in this specification, reference being had to the accompanying drawings, making a part hereof.

The steam which escapes from the safety-valves of locomotives, and all other steam-engines known to me, has heretofore escaped into the open air. This is highly objectionable in locomotives because of the noise, which, as well as the sight of it, has frequently caused damage by frightening teams and otherwise. Moreover, the steam thus escaping is entirely wasted.

The main object of my invention is to do away with all these objections, and my invention consists in conducting the steam which escapes from the safety valve or valves to the tank which contains the feed-water, thereby preventing all visible escape of the steam, all noise attending such escape, and utilizing a very large percentage of such steam by causing it to heat the feed-water.

The apparatus is exceedingly simple, as is obvious from the above description. It consists merely of a proper chamber about the valve and proper pipes connecting this chamber with the feed-water.

In the drawings, A indicates a locomotive, B its tender, C one of its safety-valves, and D

a pipe connecting the valve-casing with the feed-water tank in the tender. The best form of valve known to me for practising my invention is shown in section in Fig. 2. It is too well known to need description, other than that its casing is closed sufficiently to compel the steam which escapes through the valve proper to pass through the pipe D into the feed-water. To this end the valve-stem should be properly packed, as shown in the drawings.

I have described the best form of my apparatus; but it is obvious that my invention is not confined to any one form; its distinguishing characteristic being conducting the steam which escapes through the safety-valve into the feed-water instead of allowing it to escape into the open air.

I am aware of the English patent of Thomas Yarroll, No. 758, of 1857, and desire to disclaim the apparatus therein shown.

What I claim as my invention is—

The combination of the safety-valve and feed-water tank, as described, in order that the steam which escapes through the valve shall be conducted into the feed-water, as and for the purposes specified.

HENRY G. ASHTON.

Witnesses:

CHAS. F. SLEEPER,  
J. E. MAYNADIER.