

E. A. Castellaw. Locomotive Smoke

113980

Stack. PATENTED APR 25 1871

Fig. 1.

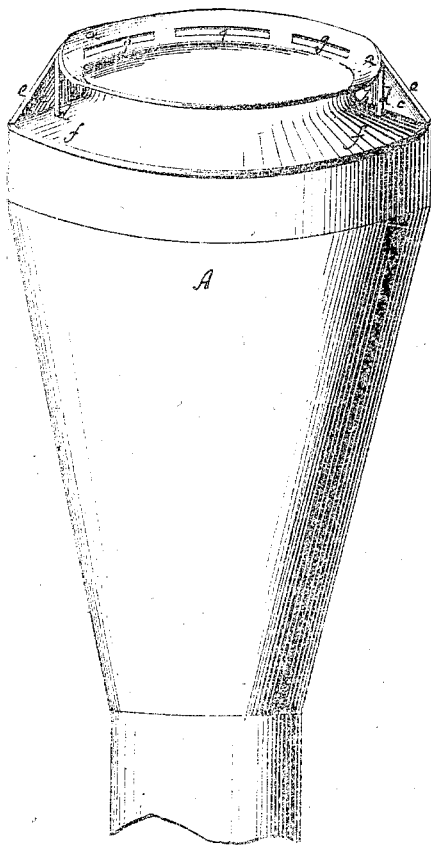


Fig. 2.

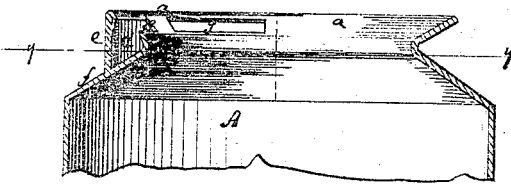
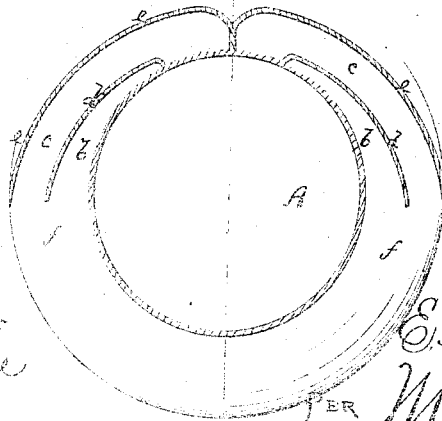


Fig. 3.



Witnesses:

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EDWIN A. CASTELLAW, OF SAVANNAH, GEORGIA.

Letters Patent No. 113,980, dated April 25, 1871.

IMPROVEMENT IN LOCOMOTIVE SMOKE-STACKS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, EDWIN A. CASTELLAW, of Savannah, in the county of Chatham and State of Georgia, have invented a new and improved Locomotive Smoke-Stack; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 represents a perspective view of my improved smoke-stack.

Figure 2 is a detail section of the same, *x x*, fig. 3, being the section line.

Figure 3 is a horizontal section of the same, *y y*, fig. 2, being the section line.

Similar letters of reference indicate corresponding parts.

The invention consists in applying air-channels to the upper part of the stack, which will discharge a current of air upward close behind the smoke-stack, the said current keeping the smoke in a vertical column until the same is high enough to be clear of the train.

A in the drawing represents a smoke-stack of suitable form and internal construction. Around its upper part, close below the upper outward-projecting flange *a*, are arranged air-channels *b b* and *c c*. The same are formed by vertical curved plates *d d* and *e e*, that are interposed between the flange *a* and the conical top *f* of the stack.

The outer plates *e e* extend from the back of the smoke-stack forward to the transverse diameter of the same, while the plates *d* extend back from the same diameter to about thirty degrees from the longitudinal diameter *x x*, as is clearly indicated in fig. 3.

The said plates *d e* form thus the several air-chambers *b b* and *c c*, which are open in front to be filled with air as the locomotive passes through the same, and to discharge it through apertures *g g* of the flange *a* back of the smoke-stack. The air thus discharged through the openings *a* ascends in a powerful upward current and constitutes a semi-cylindrical vertical guard which the ascending smoke cannot penetrate, and in which the same is held confined until it is high enough to clear the train.

The number of air-chambers and apertures thus arranged on locomotive smoke-stacks may be varied at will.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

A locomotive smoke-stack provided with air-channels *b b c* around the rear half of its crown, and with apertures in the crown-flange *a* to constitute a guard of ascending air for the purpose of keeping the smoke forward, substantially as herein shown and described.

EDWIN A. CASTELLAW.

Witnesses:

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