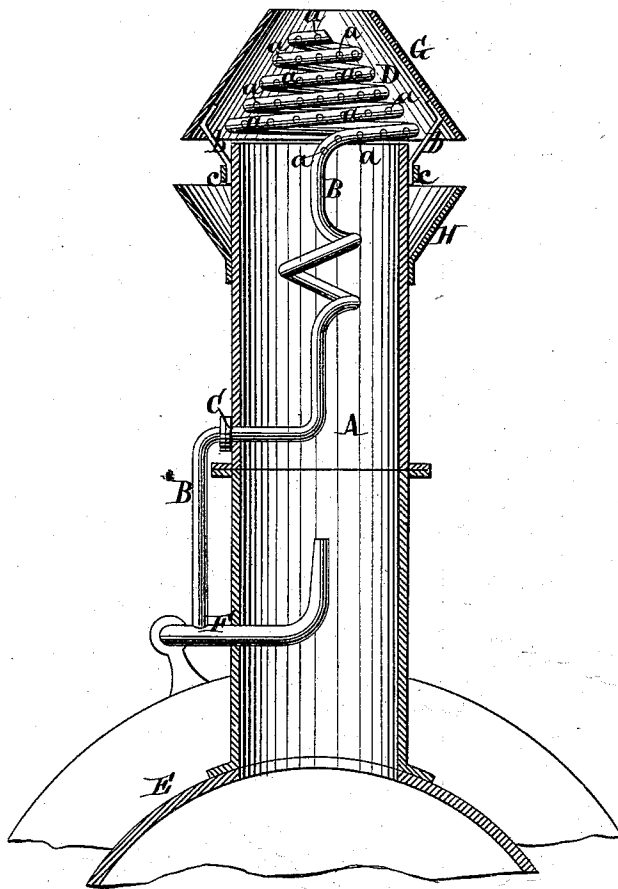


J. G. MAY.
SPARK-EXTINGUISHER.

No. 173,981.

Patented Feb. 22, 1876.



Witnesses.

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J. GOTTFRIED MAY, OF MAGDEBURG, ASSIGNOR TO BERNHARD SCHAEFFER
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IMPROVEMENT IN SPARK-EXTINGUISHERS.

Specification forming part of Letters Patent No. 173,981, dated February 22, 1876; application filed
January 21, 1876.

To all whom it may concern :

Be it known that I, J. GOTTFRIED MAY, of Magdeburg, Prussia, have invented a new and Improved Spark-Extinguisher, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, which represents a vertical central section of a locomotive smoke-stack containing my improvement.

My invention relates to a contrivance for extinguishing sparks, which is applicable to smoke-stacks of locomotives or portable engines, or to chimneys of any description. It consists in combining with a smoke-stack or chimney a perforated coil of pipe, which is further combined with a generator of steam in such a manner that if steam is let into the said perforated coil of pipe the steam is allowed to escape in or over the smoke-stack or chimney, and by this means any sparks passing through the latter are effectually extinguished. The perforated pipe is bent in such a way that the steam escaping therefrom assumes the form of sheets or layers, through which the sparks are compelled to pass, and thereby the extinguishing of the sparks is greatly facilitated.

In the drawing, the letter A designates the smoke-stack of a locomotive, to which I have, in this example, shown my invention applied, such smoke-stack containing a pipe, B. The smoke-stack is provided with an opening, C, through which the pipe B is made to pass, one part of the pipe being made to extend upward and the other downward. The upper part of the pipe B is provided with a number of perforations, *a*, while this perforated part is bent in the form of a coil, D. The lower end of the pipe B is connected to the locomotive-boiler E through the medium of the blow-off cock or pipe F. The coil D is, in the present example, made immediately over the top of the smoke-

stack A, but it may, if seen fit, be arranged in the interior and upper part of the latter. It will be readily understood that if steam is let into the pipe B it will escape through the perforations *a*, and hence any sparks of fire passing through the smoke-stack A are extinguished, while, moreover, by the bent part or coil D the escaping steam is made to form sheets or layers, through which the sparks are caused to pass, and, in consequence thereof, the extinguishing of the sparks is not only facilitated but insured.

Instead of connecting the perforated pipe B to the blow-off cock F, it may be connected to a small water-tank placed in the smoke-stack A, or connected directly to the boiler.

The smoke-stack A has a hood, G, which is connected thereto by means of arms *b*, the lower parts of which are inserted in straps or sockets *c*, so that the hood is detachable. This hood G may, if desired, be connected to the smoke stack A by such means as to adapt it to be raised and lowered. The smoke-stack A, moreover, is encircled by a flange, H, which is inclined and situated near the upper end of the stack, as shown. By this flange H and the side of the smoke-stack A an annular vessel is formed to receive any drippings of condensed steam from the hood G.

It is obvious that my invention is applicable to all classes of smoke-stacks or chimneys.

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

In combination with the smoke-stack of a steam-engine, the pyramidal coil of perforated pipe, located in the upper part of the smoke-stack, and connected with a steam-generator, substantially as described.

J. G. MAY.

Witnesses:

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