

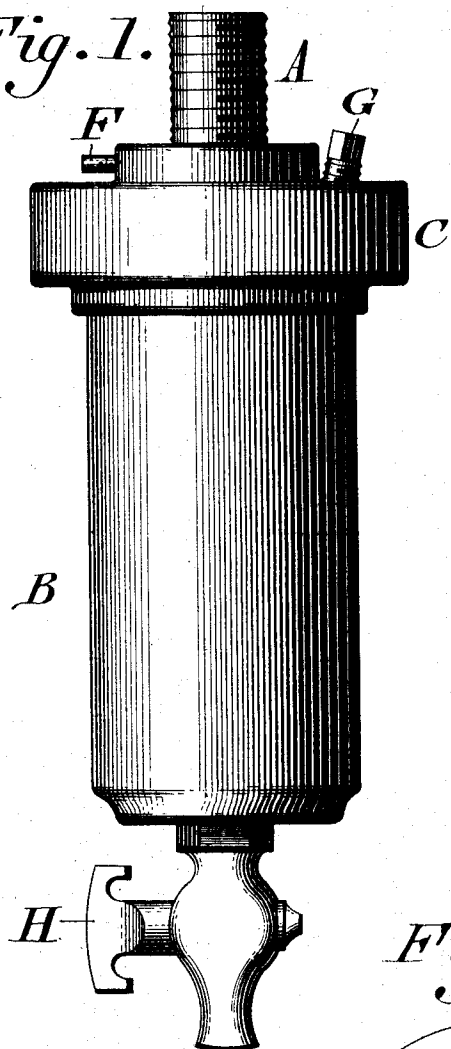
(No Model.)

D. GOFF.  
STEAM MUFFLER.

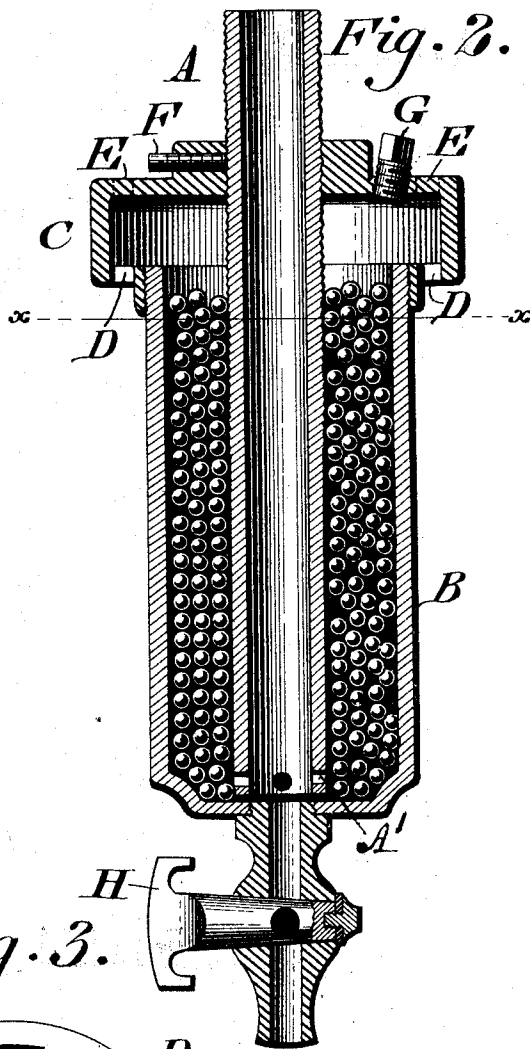
No. 503,534.

Patented Aug. 15, 1893.

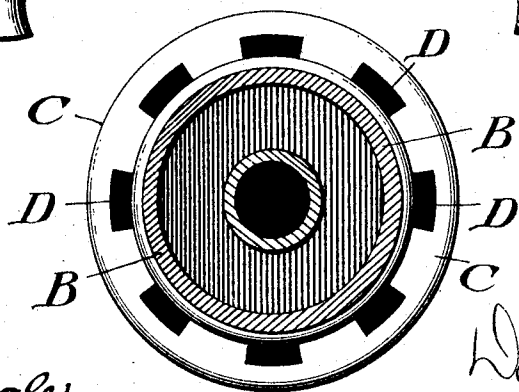
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## STEAM-MUFFLER.

SPECIFICATION forming part of Letters Patent No. 503,534, dated August 15, 1893.

Application filed September 10, 1892. Serial No. 445,525. (No model.)

*To all whom it may concern:*

Be it known that I, DANIEL GOFF, a citizen of the United States, residing at Atlantic City, in the county of Atlantic, State of New Jersey, have invented a new and useful Improvement in Steam Mufflers and Traps, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a steam muffler, whereby the noise of steam is prevented, and the supply pipe of the device is sealed to form a trap, the construction being hereinafter fully set forth.

Figure 1 represents a side elevation of a steam muffler and trap embodying my invention. Fig. 2 represents a central vertical section thereof. Fig. 3 represents a horizontal section on line *x, x*, Fig. 2.

Similar letters of reference indicate corresponding parts in the several views.

Referring to the drawings: A designates a pipe and B designates a cylinder, chamber or casing into which the lower end of said pipe projects, and with which said end is in communication, by the opening A' in its side near its lower end said casing being closed at bottom and open at top.

C designates the cap of said casing, the same being hollow and secured to the casing in any suitable manner. The pipe A is screw-threaded and fitted in a screw-threaded opening in the cap C, whereby the casing may be adjusted on said pipe, or vice-versa. In the under wall of the cap are openings D, the same forming communications for the interior of the casing B with the atmosphere, and they are employed when the device renders service, for cylinder cocks of steam engines, more particularly locomotives, so that the steam as it leaves the cap is prevented from obscuring the vision. For safety valves, the openings are in the upper wall of the cap, as shown at E, E, in dotted lines, Fig. 2.

In order to retain the casing B or pipe in adjusted position, I employ a screw F, which passes through the upper portion of said cap, and tightens against said pipe, the effect of

which is evident. The casing B is filled partly, or entirely so, with shot, pieces of stone or other material as a loose filling, and the same may be replenished or removed when desired through an opening in the cap, the same being closed by a plug G.

The operation is as follows: Steam is admitted into the pipe A, and the same escapes at the bottom thereof into the casing B, and rising in the latter is broken by the filling therein. As the cap is of greater diameter than the casing B, it forms a large chamber to receive the broken up steam that results and permits the same to expand, such steam finally escaping noiselessly or comparatively noiselessly through the openings in the cap. The water of condensation is contained in the chamber B and seals the bottom of the pipe A, thus preventing forcible escape of the steam into the casing B, said water being removable through the cock H at the bottom of the casing when so required.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A steam muffler and trap having the cap C with a discharge opening, the casing B connected therewith, the supply pipe A adjustably fitting in said cap and passing through the same into the casing, and the filling material in the casing around said pipe, said cap having its periphery extending beyond that of the casing B forming a chamber above the casing, substantially as described.

2. A muffler formed of a cap with a discharge opening, a casing connected with said cap, a supply pipe passing through the cap into said casing, filling in the casing around said pipe, a discharge cock, and an opening for said filling with a closing plug therein, said cap being of greater diameter than said casing, and said parts being combined substantially as described.

DANIEL GOFF.

Witnesses:

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