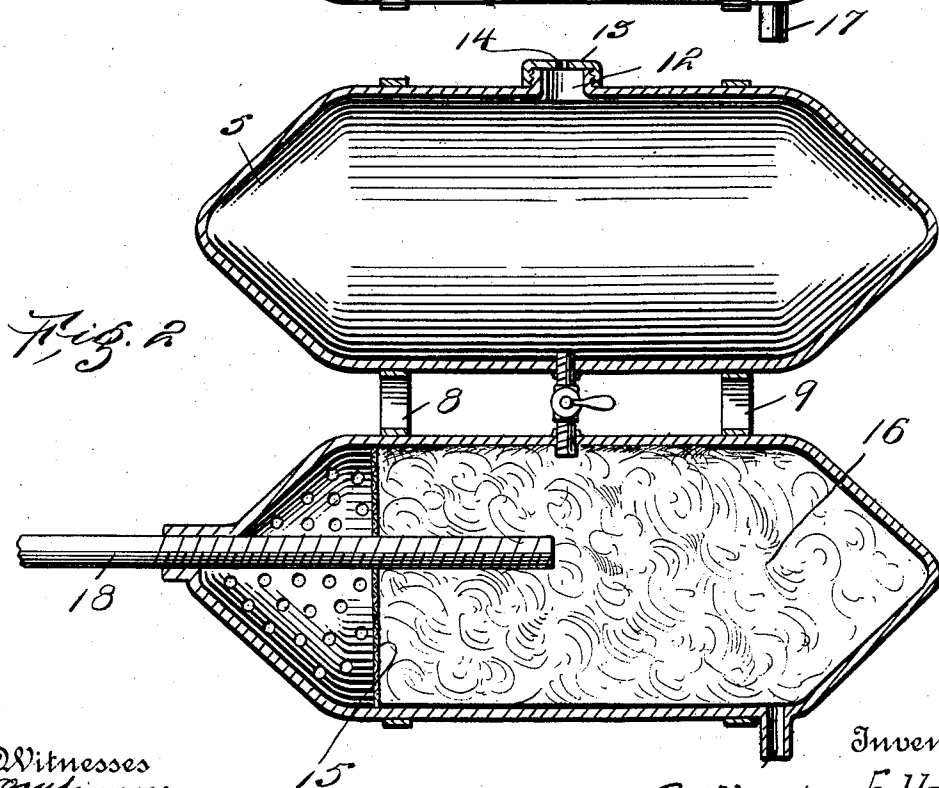
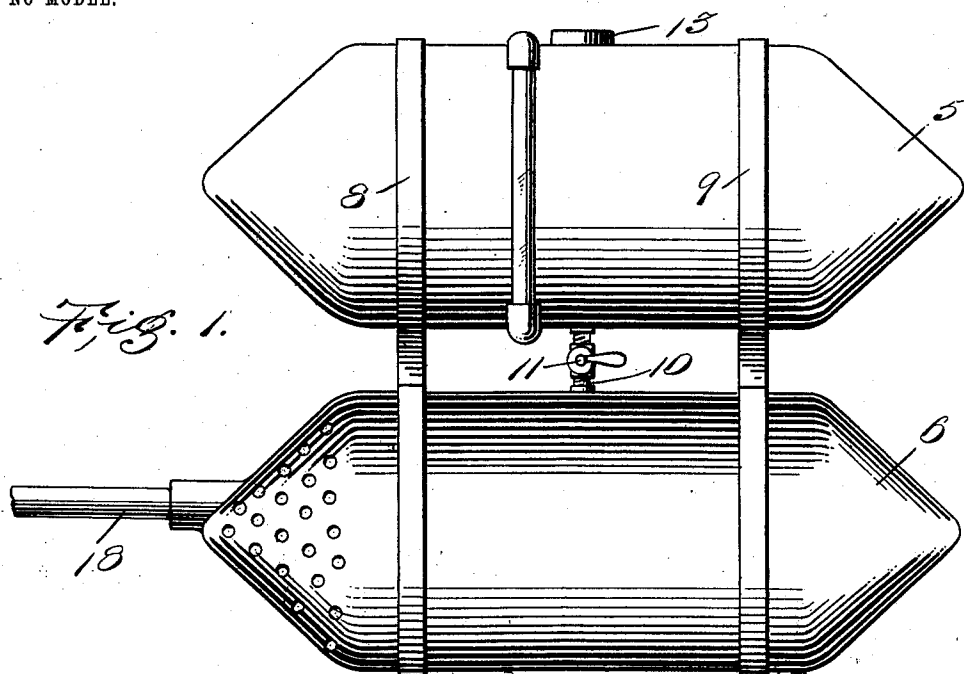


No. 758,402.

PATENTED APR. 26, 1904.

C. E. YACKEL.
EXHAUST MUFFLER.
APPLICATION FILED NOV. 7, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

CATHERINE E. YACKEL, OF JUNIUS, NEW YORK.

EXHAUST-MUFFLER.

SPECIFICATION forming part of Letters Patent No. 758,402, dated April 26, 1904.

Application filed November 7, 1903. Serial No. 180,225. (No model.)

To all whom it may concern:

Be it known that I, CATHERINE E. YACKEL, a citizen of the United States, residing at Junius, in the county of Seneca, State of New York, have invented certain new and useful Improvements in Exhaust-Mufflers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to mufflers, such as are employed in connection with the exhaust-pipe of high-pressure engines, and particularly gas-engines, the object of the invention being to provide a muffler which will reduce the noise of the exhaust to a minimum, which will be simple in construction and most efficient in its operation.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in both views, Figure 1 is a side elevation showing a muffler embodying the present invention. Fig. 2 is a longitudinal section taken vertically through the muffler.

Referring now to the drawings, the present muffler comprises an upper chamber 5 and a lower chamber 6, both of which are substantially cylindrical-shaped in their main body portions and have conical end portions, as illustrated.

The two chambers or members 5 and 6 are rigidly connected by means of the straps or braces 8 and 9, and midway of the ends of these two members there is a connecting-pipe 10, the passage of which is controlled by means of an ordinary valve 11.

The upper member 5 is designed as a reservoir to hold water and is provided with a filling-opening 12, having a cap 13, provided with a vent 14, which permits of ingress of a small quantity of air as the water passes from the reservoir through the connecting-pipe to the lower chamber or member.

In the lower member at the base of one conical end is a transverse foraminous partition 15, between which and the opposite end of the member is a filling 16, of absorbent material—such as mineral wool, sponge, or similar sub-

stance—and which is wetted by the water that drops thereonto from the pipe 10. The valve in the pipe 10 is set to feed the water to the absorbent material substantially at the same rate that it is evaporated in the operation of the muffler, the excess moisture which passes through the absorbent material and collects in the bottom of the lower member passing out through the drip-pipe 17.

The exhaust-pipe 18 from the engine is passed through the apex of that end of the lower member having the screen or partition at its base, said exhaust-pipe extending axially of the lower member and terminating slightly short of the middle point thereof, the extremity of this exhaust-pipe being buried in the absorbent material, as illustrated. The conical end of the lower member through which the exhaust-pipe extends is perforated, as illustrated, so that the exhaust after being discharged in the direction of the opposite end of the lower member will pass radially in the direction of the wall of said member and then rearwardly and out through the perforations.

In practice modifications of the specific construction shown may be made and any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

What is claimed is—

A muffler comprising upper and lower chambers having a valved connecting-pipe communicating with the lower chamber through its upper portion, said upper chamber being adapted to hold a liquid, the lower chamber having perforations through one end and having a transverse foraminous partition adjacent to said perforated end, an exhaust-pipe passed through the perforated end of the lower chamber and through the partition and a filling of absorbent material between the partition and the opposite end of the chamber and surrounding the exhaust-pipe.

In testimony whereof I affix my signature in presence of two witnesses.

CATHERINE E. YACKEL.

Witnesses:

RALPH YACKEL,
LYNN L. DEVEREAUX.