No. 744,495. PATENTED NOV. 17, 1903.

W. H. CORSE.

MUFFLER.

APPLICATION FILED MAY 12, 1903.

NO MODEL.

Fig. 1.

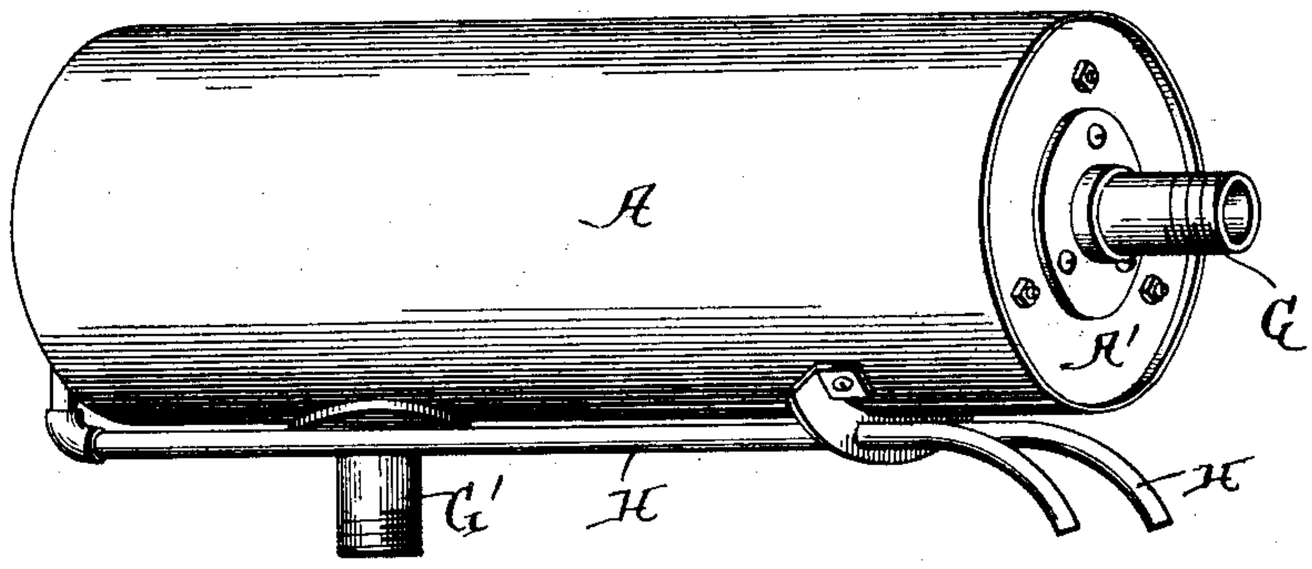


Fig. 2.

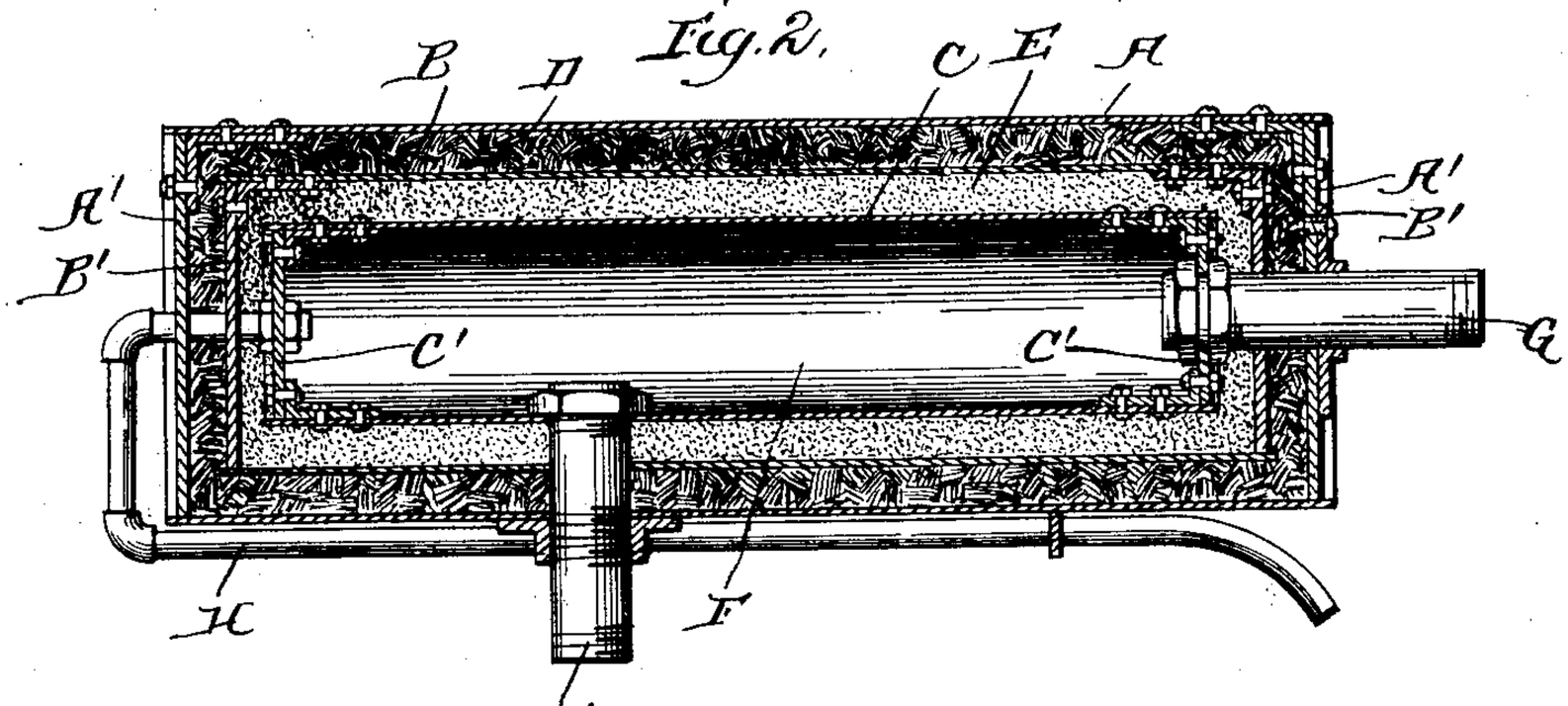


Fig. 3.

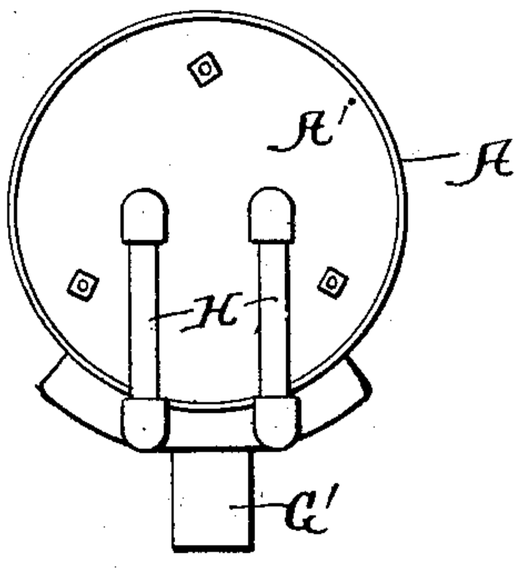
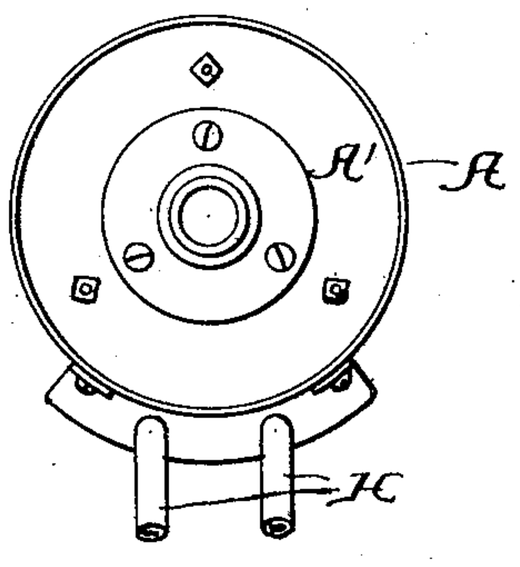


Fig. 4.



Witnesses:
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No. 744,495. Patented November 17, 1903.

UNITED STATES PATENT OFFICE.

WILLIAUM H. CORSE, OF NORWICH, NEW YORK.

MUFFLER.

SPECIFICATION forming part of Letters Patent No. 744,495, dated November 17, 1903.

Application filed May 12, 1903. Serial No. 156,728. (No model.)

To all whom it may concern:

Be it known that I, WILLIAUM H. CORSE, a citizen of the United States, residing at Norwich, county of Chenango, and State of New York, have invented a certain new and useful Improvement in Mufflers, of which the following is a specification.

My invention relates to a new and useful improvement in mufflers for gasolene-motors, and has for its object to provide a compact, simple, and durable muffler adapted to receive the exhaust-gases from the motor and effectively muffle and prevent the noise made by the motor when attached to either automobiles or other appliances.

A further object of my improvement is that the muffler is so constructed that it may be attached to the motor in any manner and may be located in any position relative to said motor.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a perspective view of the muffler; Fig. 2, a longitudinal section of the same; Fig. 3, an elevation of one end of the muffler; Fig. 4, an elevation of the opposite end.

The muffler consists, essentially, of three cylinders, one located inside of the other, with a space in between. A represents the outer cylinder, which is closed at each end by the heads A′. B represents the second cylinder, closed at each end by the heads B′, and C reprepresents the third or inner cylinder, closed at each end by the heads C′. The space in between the cylinders A and B is filled with charcoal, as represented at D, and the space in between the cylinders B and C is filled with a composition, as represented at F. This composition forms one of the principal features of my invention and consists of brass, steel, copper, and aluminium filings, plaster-of-paris, asbestos, blue-clay cement, and although I do not wish to be limited to the exact proportions of the different materials used I have found by experiment the best proportion, by weight, to be as follows: brass-filings, five per cent.; steel-filings, five per cent.; copper-filings, five per cent.; aluminium-filings, ten per cent.; plaster-of-paris, twenty per cent.; asbestos, thirty per cent.; blue-clay cement, twenty-five per cent. This composition is for the purpose of absorbing and muffling the noise and also forms a good non-conductor for heat and prevents the muffler from heating, which is a great disadvantage in other forms of mufflers.

The inner chamber F, inside of the inner cylinder C, is what I call the "explosion-chamber," into which the gas passes from the motor.

G and G′ represent the inlet-pipes, which are connected with the motor and extend through the heads A′, B′, and C′ to the chamber F. The inlet-pipe G extends through one end of the muffler, and the inlet-pipe G′ extends through the lower side of the muffler, through the cylinders A, B, and C, into the inner chamber. I provide these two inlet-pipes, so that the muffler can be connected in any position, and, if desired, both of these pipes could be connected to the motor, which would probably be preferable when a four-cylinder motor is used, or either one of the pipes could be connected with the motor, the pipe not connected being capped.

H represents two exhaust-pipes leading from the interior chamber F through the heads A′, B′, and C′, and extending downward underneath the muffler and opening to the atmosphere.

The advantages of this improved muffler are that the noise and pounding of the machine in which a gasolene-motor is used is diminished, and on account of the construction of the muffler the same does not become overheated and will not blister or damage portions of the vehicle in which the muffler is used.

Another advantage of this muffler is that it is so constructed that the same may be placed in any portion of the vehicle which is found convenient and connected to the motor in any manner.

Of course I do not wish to be limited to the

construction here shown, as slight modifications could be made without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful is—

1. A muffler consisting of three shells, one located inside of the other with a space in between each shell, the space between the outer and intermediate shell being filled with charcoal, a composition filling the same between the intermediate shell and the inner shell, said composition consisting of brass, steel, copper, and aluminium filings, plaster-of-paris, asbestos and blue-clay cement, an inlet-pipe extending through one end of the motor, through the three shells into the inner chamber, a second inlet-pipe extending through the lower side of the muffler through the three shells into the inner chamber, and two exhaust-pipes extending from the other end of the muffler through the three shells and opening to the atmosphere, as specified.

2. A muffler consisting of three cylinders fitting one inside of the other with a space in between each cylinder, heads secured at each end of each cylinder, charcoal interposed between the outer and intermediate cylinder, a composition interposed between the intermediate and the inner cylinder, said composition consisting of substantially five per cent. of brass-filings, five per cent. of steel-filings, five per cent. of copper-filings, ten per cent. of aluminium-filings, twenty per cent. of plaster-of-paris, thirty per cent. of asbestos, twenty-five per cent. of blue-clay cement, an inlet-pipe extending through the three heads in one end of the muffler to the inner chamber, an inlet-pipe extending through the lower side of the muffler through the three cylinders to the inner chamber, two exhaust-pipes extending from the inner chamber through the three heads in the other end of the muffler and extending downward and then underneath the muffler, the other end of the exhaust-pipes being curved downward and open to the atmosphere, as specified.

3. In a muffler of the character described, an explosion-chamber into which the gas is allowed to escape from the motor, a composition surrounding said explosion-chamber, said composition consisting of brass-filings five per cent., steel-filings five per cent., copper-filings five per cent., aluminium-filings ten per cent., plaster-of-paris twenty per cent., asbestos thirty per cent., and blue-clay cement twenty-five per cent., as and for the purpose specified.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

WILLIAUM H. CORSE.

Witnesses:

H. B. HALLOCK,

L. W. MORRISON.