Dec. 30, 1924. 1,521,074

S. L. CARR

MUFFLER FOR INTERNAL COMBUSTION ENGINES

Filed Jan. 7, 1922

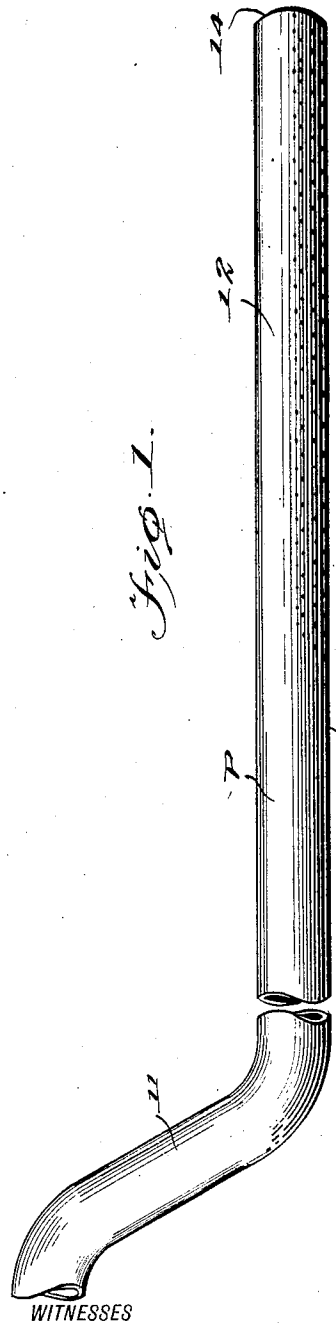


Fig. 1.

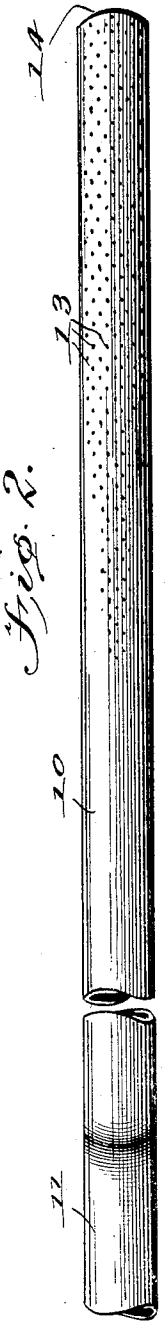


Fig. 2.

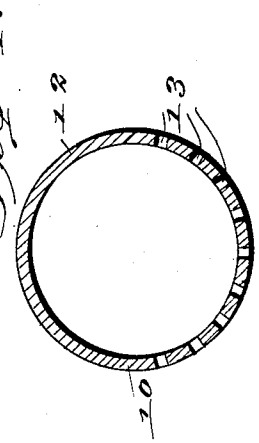


Fig. 4.

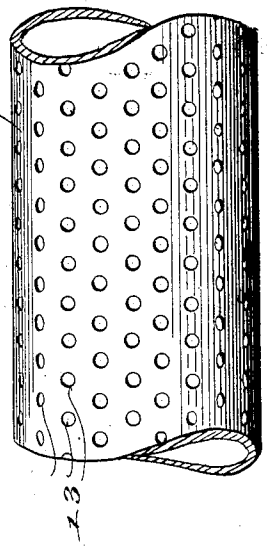


Fig. 3.

WITNESSES

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UNITED STATES PATENT OFFICE.

SIDNEY LEE CARR, OF BAY CITY, TEXAS.

MUFFLER FOR INTERNAL-COMBUSTION ENGINES.

Application filed January 7, 1922. Serial No. 527,652.

To all whom it may concern:

Be it known that I, SIDNEY LEE CARR, a citizen of the United States, and a resident of Bay City, in the county of Matagorda, in the State of Texas, have invented certain new and useful Improvements in Mufflers for Internal-Combustion Engines, of which the following is a specification.

This invention relates to a muffler for internal combustion engines.

Among the objects of the invention is to provide a muffler which freely permits the escape of gases to the atmosphere from the exhaust of an internal combustion engine; which will silence the report of the exhaust of an internal combustion engine to a high degree; and which will not cause back pressure of the gases escaping therethrough.

It is also an important object of the invention that the muffler be extremely simple in construction and inexpensive to manufacture.

The invention is illustrated by way of example in the accompanying drawings, in which,

Figure 1 is a side elevation of a muffler constructed in accordance with the present invention,

Figure 2 is a bottom plan view of the same,

Figure 3 is a detailed perspective view of a section of the perforated portion of the muffler, and

Figure 4 is a transverse sectional view of the same.

Referring to the drawings more particularly, the muffler consists in a pipe P which is of relative large diameter and comprising the straight portion 10 and the upwardly bent portion 11. The rear end portion 12 of the straight portion 10 is perforated upon its under side, said perforations being indicated by the reference character 13 and, as best shown in Figure 2, gradually increase in number toward the rear end of the pipe portion 12. Also the rear end of the straight portion 10 is formed with a closure as indicated at 14.

It may be here mentioned that the forward end portion 11 of the muffler may be connected in any suitable manner to the exhaust manifold of an engine and the muffler serve for all the different cylinders of the engine. Also any suitable means may be used for supporting the rear end of the muffler.

In the operation of the present device the gases pass through the forward portion 11 of the pipe P and then into the straight section 10. The gases begin to escape through the small holes or perforations 13 soon after entering the straight portion 10 and are permitted to escape to the atmosphere before reaching the rear end of the pipe P. The gases escape freely and do not cause any back pressure upon the engine exhaust. Also by experience it has been found by this particular arrangement and construction of muffler that the report of exhaust from the engine is entirely silenced.

It should be here pointed out that it is quite important that the rear end of the pipe 10 be provided with a large number of perforations 13 for the reason that these perforations break up the discharge gases into small parts before emitting the same to the atmosphere and thus reduce the noise of the explosions in the associated internal combustion engine.

What I claim is:

A muffler for internal combustion engine consisting in a pipe, one end being adapted to be connected to the exhaust manifold of an internal combustion engine and its other end closed, and said pipe having a perforated portion extending longitudinally thereof from its rear end to a point considerably forward thereto, and said perforations being distributed over the lower half of the pipe and graudally increasing in number, the perforated area of the pipe being progressively increased in width from the forward end toward the rear end of the pipe.

SIDNEY LEE CARR.