March 17, 1925. 1,530,324

A. R. PRIBIL

MUFFLING TUBE

Filed June 28, 1923

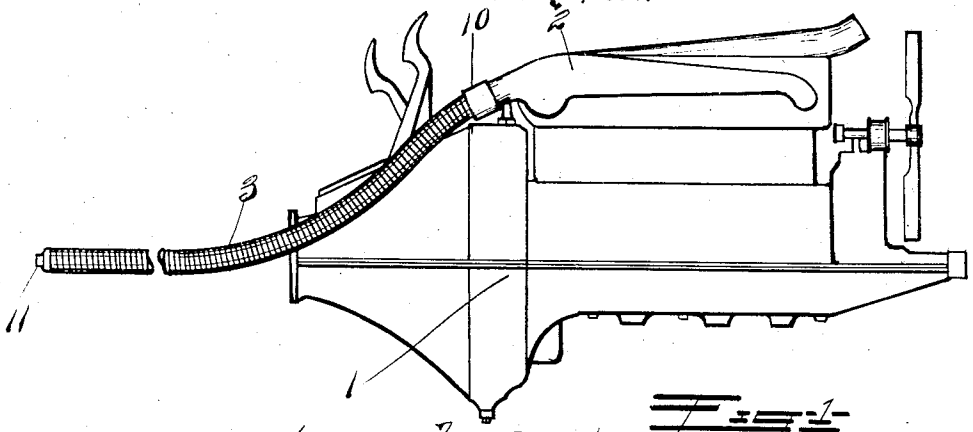

Fig. 1.

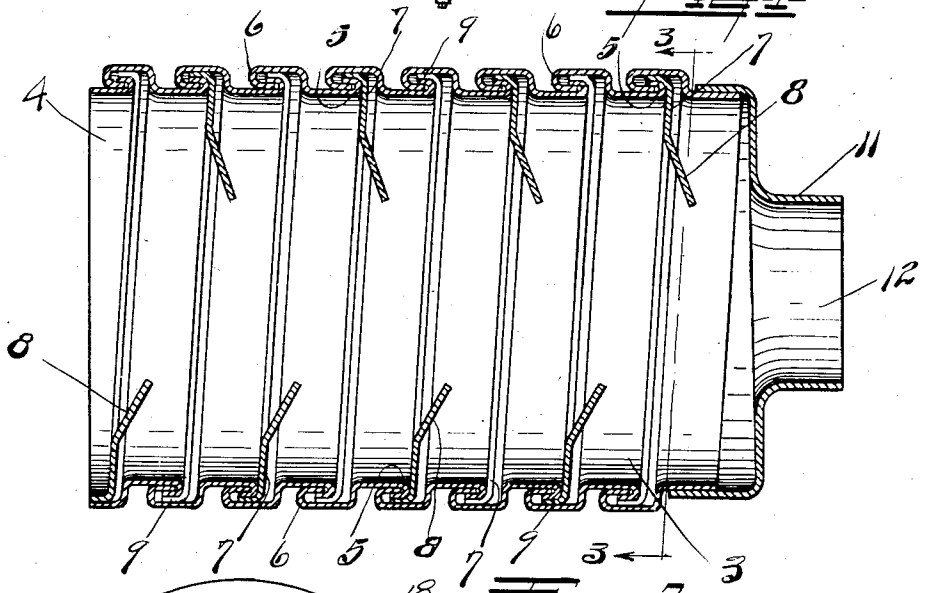

Fig. 2.

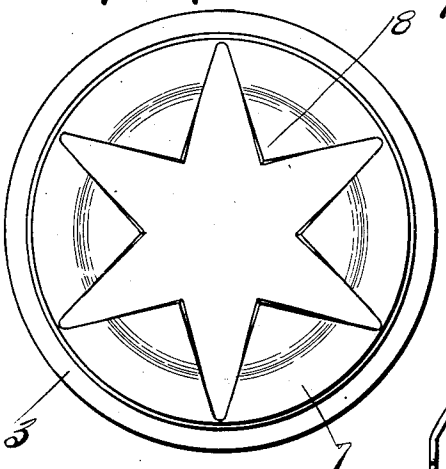

Fig. 3.

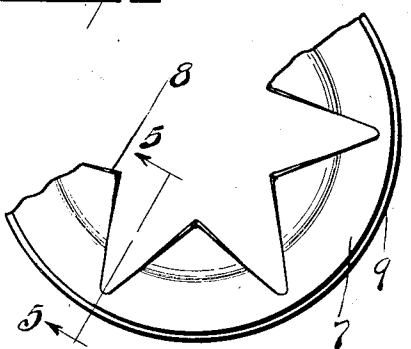

Fig. 4.

Fig. 5.

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UNITED STATES PATENT OFFICE.

ALEXIS R. PRIBIL, OF SAGINAW, MICHIGAN.

MUFFLING TUBE.

Application filed June 28, 1923. Serial No. 648,280.

To all whom it may concern:

Be it known that I, ALEXIS R. PRIBIL, a citizen of the United States of America, and a resident of Saginaw, in the county of Saginaw and State of Michigan, have invented certain new and useful Improvements in Muffling Tubes, of which the following is a specification.

This invention relates to muffling tubes and the like such as used on internal combustion engines, connections to exhaust heaters, and for all other purposes where it is desired to dampen and muffle sounds.

The prime object of the invention is to design a muffling tube which can be attached to the exhaust port of an engine, and which will effectively muffle and deaden the exhaust explosions with a mimimum of back pressure.

Another object is to design a very simple and economical flexible structure, which will conform to the curves required in installing it on automotive vehicles, either as a muffling device or heater connection, and which will effectively muffle the explosion.

A further object is to design a muffling tube which can be formed in one continuous coil and of any desired length.

With the above and other objects in view, the present invention consists in the combination and arrangements of parts, hereinafter more fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes may be made in the form, size, proportion, and minor details of construction, without departing from the spirit, or sacrificing any of the advantages of the invention.

In the drawing,

Fig. 1 is a side view of an internal combustion engine showing my improved muffling tube attached thereto.

Fig. 2 is an enlarged fragmentary sectional side view of the muffling tube proper.

Fig. 3 is a sectional end view.

Fig. 4 is a fragmentary end view of a portion of the baffle strip, and

Fig. 5 is a cross sectional edge view thereof taken on the line 5—5 of Fig. 4.

Referring now particularly to the drawing in which I have shown the preferred embodiment of my invention, the numeral 1 indicates an internal combustion engine which is provided with the usual exhaust pipe 2 to which my flexible muffling tube is attached, and through which the exhaust gases pass to the atmosphere.

Heretofore it has been customary to provide a rigid muffler structure proper, having baffle plates or the like rigidly secured therein to form a tortuous passage for the gases. This rigid structure causes undue back pressure, as each baffle abruptly obstructs and retards the flow of gases in the muffler. These mufflers are usually constructed of a predetermined length, and are connected to a length of exhaust pipe and suspended beneath the body of the motor vehicle.

In my improved construction I provide a resilient flexible tube 3 which is formed by the spirally wound strip 4 formed as clearly shown in Figure 2, having the turned edge 5 and 6 which forms an interlocking flexible connection with the adjacent coil, a resilient baffle strip 7 is interlocked in this flexible tube 3 and comprises a thin metal strip stamped to form a toothed or serrated edge 8 preferably shaped as shown, and which projects into the interior of the tube, for gradually muffling and retarding the exhaust gases passing therethrough, the opposite edge being turned as shown at 9 and is interlocked in the edges 6, the spiral winding gives the gases a spiral motion and prevents undue back pressure, as the force of the exhaust explosion is not sharply arrested and taken by one rigid baffle plate as in rigid mufflers, but is distributed the entire length of the baffle strip, while the projecting serrated edges obstruct the passage and insures the breaking up of the gases, also, the resiliency and flexibility of the tube and strip aid in muffling the sound. I find it advantageous to form the edge of this baffle strip toothed shaped and bent as shown, as it prevents buckling and allows the strip to be readily shaped and wound, this is not however necessary, as this edge can be of any desired shape, and I do not wish to be limited to any specific configuration.

The end of the exhaust pipe proper is enlarged as shown at 10, and the end of the muffling tube is inserted therein and secured in any suitable manner. A coupling 11 is secured to the opposite end of the flexible tube by means of rivets or in any other approved manner, and terminates in a restricted orifice 12 through which the spent gases pass to the atmosphere.

From the foregoing description it will be obvious that I have perfected a very simple, substantial, and effective muffling tube, which is very economical to manufacture, and easy to attach and assemble.

What I claim is:—

1. A spirally wound muffling tube comprising a resilient flexible tube, formed with interlocking edges and having a resilient flexible baffle strip interlocked therein.

2. A spirally wound muffling tube comprising a flexible tube having interlocking edges, and having a continuous baffle strip interlocked therein.

3. A muffling tube comprising a continuous spirally wound flexible tube formed with interlocking edges, and having a spirally wound continuous baffle strip interlocked therein.

4. A muffling tube comprising a continuous strip formed with interlocking edges and forming a continuous spirally wound flexible tube, and having a spirally wound flexible baffle strip interlocked therein.

5. A muffling tube comprising a spirally wound flexible tube, and a baffle strip interlocked therein and formed with a serrated edge projecting into the interior of the tube.

6. A muffling tube comprising a single spirally wound flexible tube having interlocking edges, and adapted to be attached to the exhaust port of an engine, and a single spirally wound baffle strip interlocked therein and extending to the end of the said flexible tube.

In testimony whereof I affix my signature.

ALEXIS R. PRIBIL.