R. L. HUBBARD.

MUFFLER CUT-OUT.

APPLICATION FILED MAY 22, 1912.

1,081,744. Patented Dec. 16, 1913.

Fig. 1.

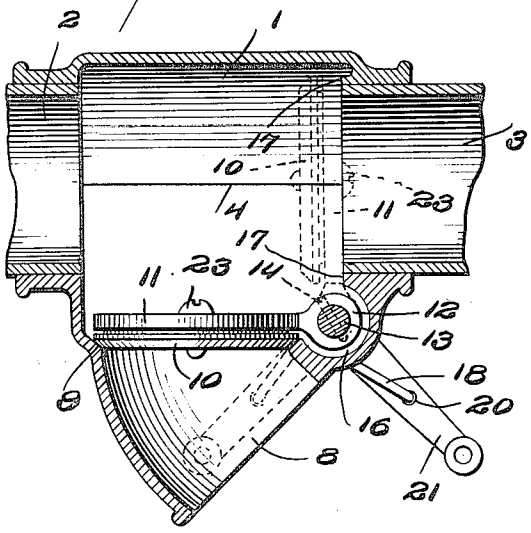


Fig. 2.

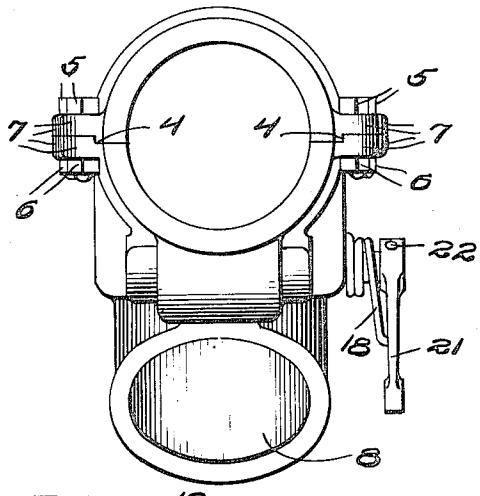


Fig. 3.

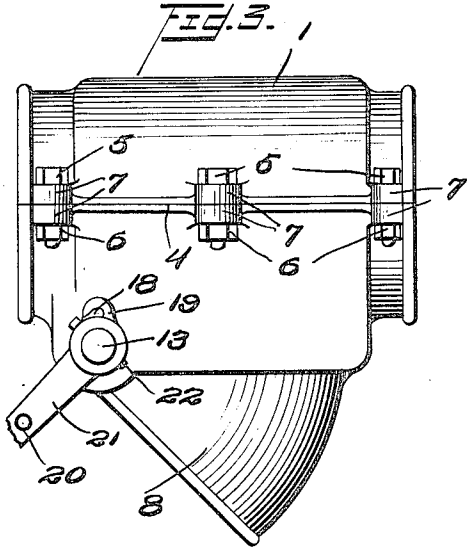
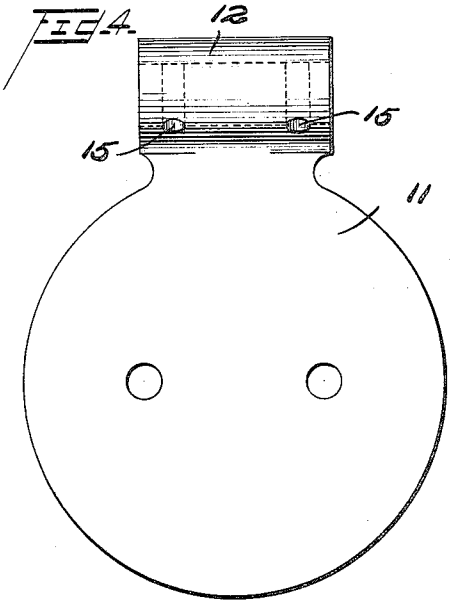


Fig. 4.



Inventor

Richard L. Hubbard

Witnesses

A. Strauss

R. A. Krenkel

By Joshua R. H. Potts

Attorney

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UNITED STATES PATENT OFFICE.

RICHARD L. HUBBARD, OF PHILADELPHIA, PENNSYLVANIA.

MUFFLER CUT-OUT.

1,081,744. Specification of Letters Patent. Patented Dec. 16, 1913.

Application filed May 22, 1912. Serial No. 698,915.

To all whom it may concern:

Be it known that I, RICHARD L. HUBBARD, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Muffler Cut-Outs, of which the following is a specification.

My invention relates to improvements in muffler cut outs, the object of the invention being to provide a device of this character which may be secured in position between the engine and the muffler without the employment of screw-threads, and which may be quickly operated not only to open the exhaust to the outside air, but completely cut off the muffler.

A further object is to provide an improved device of this character which may be secured in position by simply cutting out a section of the pipe between the engine and the muffler and securing the device to the ends of the cut pipe, and provide a valve which is normally held in position to close the exhaust outlet by a spring, the gas pressure also being sufficient to hold the valve in such closed position, the valve adapted to be opened and moved against the second seat to entirely shut off communication with the muffler.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described and pointed out in the claim.

In the accompanying drawings: Figure 1, is a view in longitudinal section illustrating my improvements. Fig. 2, is an end elevation of the device. Fig. 3, is a view in side elevation, and Fig. 4, is an enlarged plan view of the valve.

My improved muffler cut out comprises a two part casing 1, which may be assembled upon the ends of pipes 2, and 3, without screw-threads. In other words, while of course the casing may be otherwise formed, I find a preferable arrangement such as illustrated in which the casing is divided into an upper and a lower section, and said sections having a stepped juncture as shown at 4, and secured by bolts 5 and nuts 6 projecting through registering ears 7 on the sections. My improved casing may therefore be positioned on any exhaust pipe by simply cutting out a section of said pipe, and then clamping the casing on the ends of the pipe sections as seen in Fig. 1.

The casing is provided with an outlet 8, and this outlet which is illustrated as curving slightly at its inner end, is provided with a beveled valve seat 9 to receive the beveled face 10 of a valve 11, and normally close said outlet. This valve 11 is circular in form as shown in Fig. 4, and at one end is provided with an integral bearing sleeve 12 which is secured upon a journal 13 by means of pins 14, said pins projecting through registering openings 15 in the sleeve 12 and journal 13. This sleeve 12 is located in a recessed portion 16 of the casing, and said valve is so located that when swung to a position shown in dotted lines in Fig. 1, the valve will close against a seat 17 formed in the casing at its end communicating with the muffler. In other words, when the valve 11 is opened so as to open the outlet 8, it is swung to a position to entirely close communication with the muffler, thus the muffler is completely cut out, and oil and dirt cannot enter the muffler while the exhaust is escaping through the outlet 8.

While the valve is held in position to close the outlet 8 by the pressure behind the same, it is returned to such position by means of a spring 18. This spring is coiled about the journal 13, and at one end projects into a recessed enlargement 19, and at its other end projects through an opening 20 in a lever 21. This lever 21 is secured to the journal 13 by means of a pin 22, and is adapted to be connected to any suitable operating means for controlling the valve. The beveled valve 10 is secured to valve 11 by means of screws 23, and hence this valve may be readily replaced when worn. In operation, therefore, the exhaust enters from the left hand side of Fig. 1, and passes through the right hand side of Fig. 1, so that when the valve 11 is in either of its closed positions, the pressure of gas tends to hold the valve in this position, and when the valve is closed against seat 17, the exhaust outlet is completely opened and the muffler is entirely cut out.

Various slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claim.

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

In a device of the character described, the combination with an exhaust pipe having a section cut out for a portion of its length, of a split casing located in the cut out portion of the pipe and clamped upon the spaced alined ends thereof, said casing having a passage therethrough larger than the internal diameter of the pipe, an outlet larger in diameter than the diameter of the pipe communicating with said passage, and a valve mounted in said casing and constructed to normally close the outlet and close the passage when moved to an open position, the adjacent pipe end forming a seat for the valve and the casing having an annular portion reinforcing the said pipe end, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

RICHARD L. HUBBARD.

Witnesses:
R. H. KRENKEL,
CHARLES E. POTTS.