

No. 663,725.

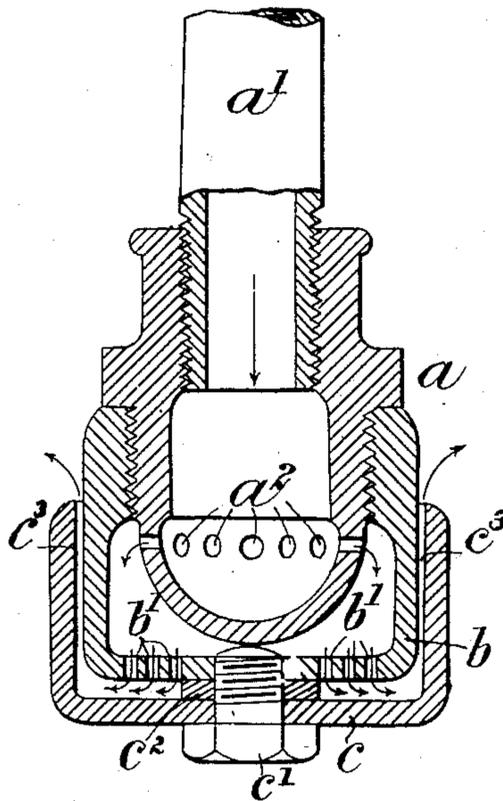
Patented Dec. 11, 1900.

G. BUCK.

EXHAUST SILENCER FOR EXPLOSIVE ENGINES.

(Application filed Apr. 21, 1900.)

(No Model.)



Witnesses,

John E. Dousfield.
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Inventor,

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UNITED STATES PATENT OFFICE.

GEORGE BUCK, OF LONDON, ENGLAND, ASSIGNOR OF ONE-HALF TO
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EXHAUST-SILENCER FOR EXPLOSIVE-ENGINES.

SPECIFICATION forming part of Letters Patent No. 663,725, dated December 11, 1900.

Application filed April 21, 1900. Serial No. 13,760. (No model.)

To all whom it may concern:

Be it known that I, GEORGE BUCK, a subject of the Queen of Great Britain, residing at 18 Hogarth Place, Earl's Court, London, England, have invented a new and useful Exhaust-Silencer for Explosion-Engines, of which the following is a specification.

My invention relates to an improved device applicable to the exhaust-pipe of an explosion-engine for the purpose of obviating or minimizing the noise produced by the exhaustion of the products of combustion from the engine-cylinder.

According to my invention I provide for breaking up the exhaust-gases into thin streams, so that they will come into contact with the atmosphere in such a condition as to produce the least possible shock, and to this end I construct the silencer of two boxes fitted one over the other and of a cap fitting over the outer box, perforations being formed in the inner box to establish communication with the outer box, and through the outer box to establish communication with the interior of the cap, a space being left between the cap and the outer box, from which the exhaust-gases ultimately reach the atmosphere.

The accompanying drawing shows a section through an exhaust-silencer constructed according to the invention.

a is the box, screwed to the end of the exhaust-pipe a' and having in it a series of openings or perforations a^2 a^2 , through which the products of combustion can pass in a series of streams and preferably in a direction radial to the axis of the said box.

b is a cap into which the products of combustion escaping through the holes a^2 pass, the said cap b being screwed onto the box a

and having in its end a series of holes b' , arranged parallel to the axis of the box.

c is an auxiliary cap placed over the cap b , to which it is secured by the screw c' , a washer or distance-piece c^2 being placed between the cap b and auxiliary cap c , so that an escape-vent c^3 is left between the outer surface of the cap b and the inner surface of the auxiliary cap c . With this construction the products of combustion which issue through the holes b' strike against the inner end of the auxiliary cap c and then escape into the atmosphere through the annular space c^3 .

The arrows in the figure indicate the course of the gases in passing through my improved silencer to the atmosphere.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

An exhaust-silencer consisting of a receiving-chamber having a hemispherical head, lateral apertures midway between the inlet end and the top of said head, an enveloping cylindrical cap surrounding said chamber and forming therewith an auxiliary chamber which communicates with the aforesaid receiving-chamber by means of said lateral apertures, ports in the head of said enveloping-cap near the edge thereof and an auxiliary cylindrical cap mounted on the head of said enveloping-cap and forming around it an escape-vent adapted to deflect the spray, substantially as described.

GEORGE BUCK.

Witnesses:

JOHN E. BOUSFIELD,
C. G. REDFERN.