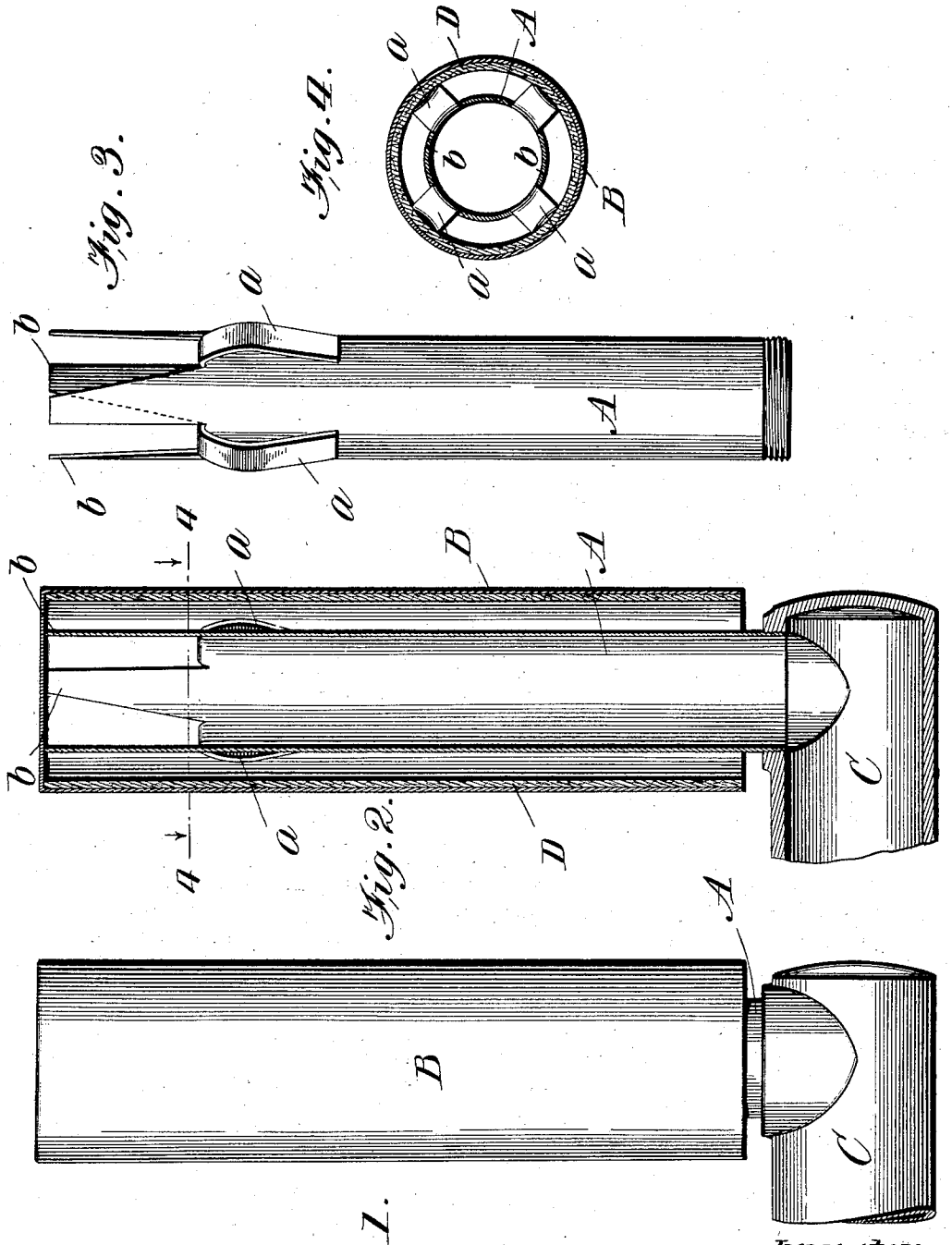
No. 728,200. PATENTED MAY 19, 1903.

I. E. BUTLER.

MUFFLER OR SILENCER FOR CARBURETERS.

APPLICATION FILED JAN. 21, 1903.

NO MODEL.



Witnesses:
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No. 728,200. Patented May 19, 1903.

UNITED STATES PATENT OFFICE.

IRA E. BUTLER, OF CHICAGO, ILLINOIS.

MUFFLER OR SILENCER FOR CARBURETERS.

SPECIFICATION forming part of Letters Patent No. 728,200, dated May 19, 1903.

Application filed January 21, 1903. Serial No. 139,946. (No model.)

To all whom it may concern:

Be it known that I, IRA E. BUTLER, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Mufflers or Silencers for Carbureters, of which the following is a full, clear, and exact specification.

My invention relates to carbureters; and its object is to provide devices which will prevent the buzzing or humming caused by the inrushing outer atmosphere into the air and vapor mixing devices of the carbureter. This I accomplish by the means hereinafter fully described and as particularly pointed out in the claims.

In the drawings, Figure 1 is a side elevation of my invention. Fig. 2 is a vertical central section therethrough. Fig. 3 is a side view of the intake-pipe with the muffler removed. Fig. 4 is a horizontal section taken on dotted line 4 4, Fig. 2.

My invention can be applied to the air-intake pipe of any carbureter; but it is particularly applicable to the mixing devices of the carbureter for which I have made application for patent, filed January 21, 1903, Serial No. 139,945. Its essential features are, first, an intake-pipe A, and, second, the muffler B, within which said pipe is inclosed. In the drawings this intake-pipe is shown as connected to and arising from a horizontally-disposed cylindrical air-chamber C, and its upper end is slit so as to provide a series of two or more tongues *a a a*, which are bent back in such a curved course as to form springs that stand out from the circumference of said pipe. I prefer to use at least three of the tongues, to make them correspond in shape and dimensions, and to arrange them equal distances apart.

The muffler B comprises a cylinder which is closed only at its upper end and is provided with a non-vibratory or asbestos lining D. Its internal diameter is greater than that of pipe A and is slightly less than the diameter of the imaginary circle bounding the tongues *a*, and it is slipped longitudinally down over pipe A and is centered and held in any position to which it may be adjusted by the outward pressure of the tongues *a* against its inner surface.

The downward adjustment of the muffler over pipe A is limited by its closed upper end coming in contact with the upper extremities of the fingers *b b*, extending from its upper end and formed by making the tongues *a a*. In this position the air enters the annular space between the lower edges of the muffler and pipe A and passes upward between the two in between the fingers *b* into pipe A and down through the latter into the chamber C of the carbureter. One side edge of fingers *b* is preferably inclined, so as to taper the same, and thus facilitate the free flow and entrance of the air into pipe A. The vertical adjustment of the muffler by increasing or decreasing the friction of the air in transit to pipe A regulates the speed of the current entering pipe A, and the non-vibratory lining of the same prevents the vibrations of the shell of the muffler and deadens any sound caused by such inrushing air-currents no matter what position the muffler may be in.

What I claim as new, and desire to secure by Letters Patent, is—

1. A silencer for carbureters comprising an air-intake pipe, and a muffler consisting of a hollow shell closed at one end and open at the other having its interior circumference lined with a non-vibratory material and of a greater diameter than that of said pipe, and means for centering and supporting said muffler upon said pipe.

2. A silencer for carbureters comprising an air-intake pipe, and a longitudinally-adjustable muffler consisting of a hollow shell closed at one end and open at the other having its interior circumference lined with a non-vibratory material and of a greater diameter than that of said pipe, and means integral with said pipe for centering and supporting said muffler upon said pipe.

3. A silencer for carbureters comprising an air-intake pipe, a muffler consisting of a hollow shell having its interior circumference lined with a non-vibratory material, and of a greater diameter than that of said pipe, diverging tongues carried on the upper end of said pipe, for centering and supporting said muffler.

4. A silencer for carbureters comprising an air-intake pipe, a muffler consisting of a hollow shell having its interior circumference

lined with a non-vibratory material and of a greater diameter than that of said pipe, the entrance of said pipe having longitudinal slits, and diverging tongues, formed by bending the material between said slits back, which center and support said muffler.

5. A silencer for carbureters comprising an air-intake pipe, a muffler consisting of a hollow shell having its interior circumference lined with a non-vibratory material and of a greater diameter than that of said pipe, the entrance of said pipe having longitudinal slits, and diverging tongues, formed by bending the material between said slits back, which center and support said muffler, and fingers extending longitudinally from the entrance of said pipe between said tongues.

6. A silencer for carbureters comprising an air-intake pipe, a longitudinally-adjustable muffler consisting of a hollow shell having its interior circumference lined with a non-vibratory material, and of a greater diameter than that of said pipe, diverging tongues carried on the upper end of said pipe, for centering and supporting said muffler.

7. A silencer for carbureters comprising an air-intake pipe, a longitudinally-adjustable muffler consisting of a hollow shell having its interior circumference lined with a non-vibratory material and of a greater diameter than that of said pipe, the entrance of said pipe having longitudinal slits, and diverging tongues, formed by bending the material between said slits back, which center and support said muffler.

8. A silencer for carbureters comprising an air-intake pipe, a longitudinally-adjustable muffler consisting of a hollow shell having its interior circumference lined with a non-vibratory material and of a greater diameter than that of said pipe, the entrance of said pipe having longitudinal slits, and diverging tongues, formed by bending the material between said slits back, which center and support said muffler, and fingers extending longitudinally from the entrance of said pipe between said tongues.

9. In a silencer for carbureters, the combination with a suitable muffler, of an air-intake pipe the entrance edge of which has a series of diverging tongues, and a series of longitudinally-extending fingers alternating therewith, and made in one piece with said pipe.

10. A silencer for carbureters comprising an air-intake pipe, and a muffler consisting of a hollow shell closed at one end and open at the other into the open end of which said intake-pipe extends longitudinally, said muffler having its interior circumference provided with a non-vibratory material and of a greater diameter than said pipe, and means for centering and supporting said muffler upon said pipe.

11. A silencer for carbureters comprising an air-intake pipe, and a muffler consisting of a hollow shell closed at one end and open at the other into the open end of which said intake-pipe extends longitudinally, said muffler having its interior circumference provided with a non-vibratory material and of a greater diameter than said pipe, and means integral with said pipe for centering and supporting said muffler upon said pipe.

In testimony whereof I have hereunto set my hand this 10th day of November, 1902.

IRA E. BUTLER.

Witnesses:
E. W. HART,
E. K. LUNDY.