Aug. 10, 1926. 1,595,711

J. A. CORNELIER

GAS PURIFIER

Filed Jan. 21, 1926

Fig. 1.

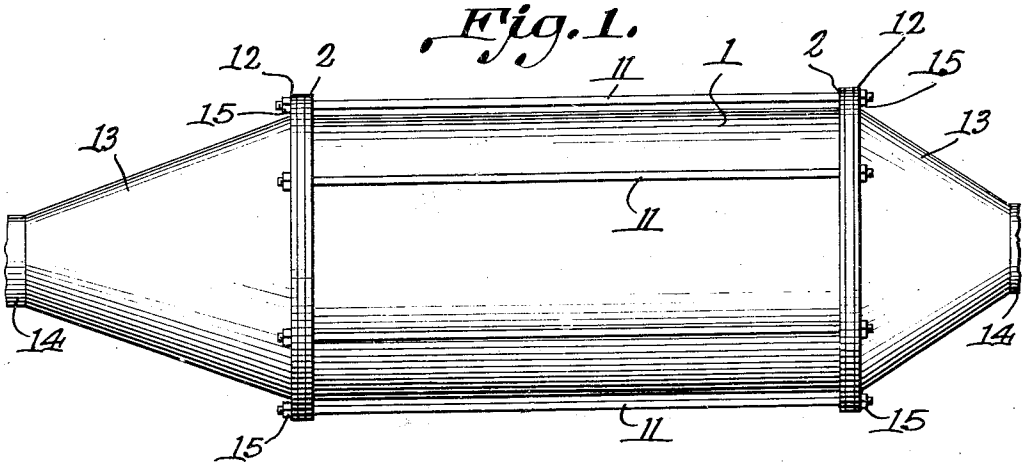


Fig. 2.

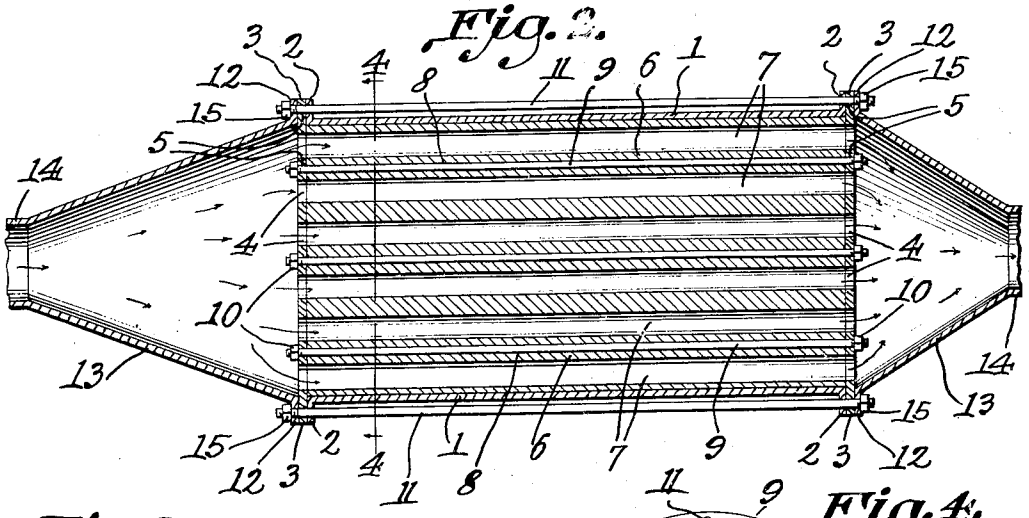


Fig. 3.

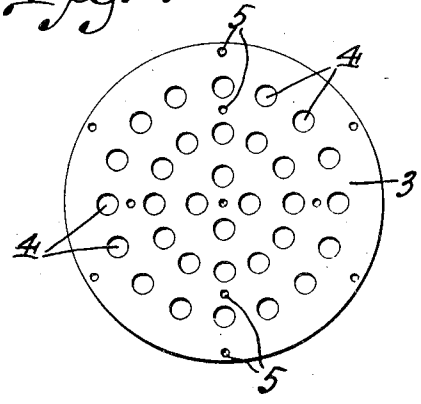
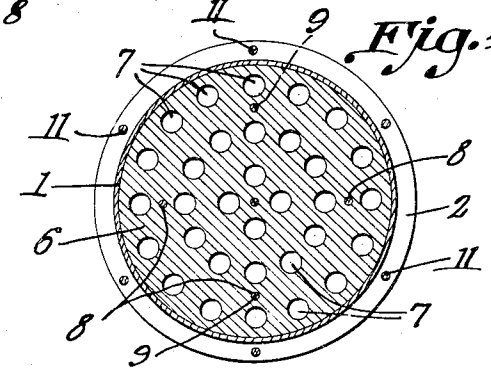


Fig. 4.



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UNITED STATES PATENT OFFICE.

JEAN A. CORNELIER, OF GRANTS PASS, OREGON.

GAS PURIFIER.

Application filed January 21, 1926. Serial No. 82,869.

This invention relates to a device for purifying poisonous gases such as carbon monoxide so that the same will be rendered non-injurious.

A further object is to provide a device in the form of an attachment which can be placed in communication with the exhaust of an internal combustion engine whereby the spent gases will be compelled to flow therethrough, the construction of the attachment being such that chemical reaction will take place therein so that the toxic gases will be changed before the gases issue from the attachment.

With the foregoing and other objects in view which will appear as the description proceeds the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed may be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings,

Figure 1 is a side elevation of the attachment, the same being shown positioned between the flared ends of opposed pipes.

Figure 2 is a longitudinal section through the structure shown in Figure 1.

Figure 3 is an elevation of one of the heads of the attachment.

Figure 4 is a section on line 4—4 Figure 2.

Referring to the figures by characters of reference 1 designates a casing preferably cylindrical provided with an outwardly extending annular flange 2 at each end thereof. Heads 3 preferably formed of sheet metal, are seated upon the flanged ends of the casing and each head is provided with a plurality of large openings 4 and other smaller openings 5. A core 6 is fitted snugly within the casing 1 and is preferably formed of a mixture of asbestos and magnesite molded under pressure. In this core are formed longitudinal passages 7 adapted to register with the large openings 4 in the two heads and additional small passages 8 are provided in the core and are adapted to register with certain of the openings 5. These passages 8 are designed to receive tie rods 9 the ends of which extend through the head, these rods being provided with nuts 10 or the like whereby the heads can be pressed tightly against the ends of the core and held properly assembled therewith. Additional tie rods 11 are extended through the flanges 2 and the openings 5 in the marginal portions of the head, these rods also serving to attach the heads to the flanges 12 provided at the large ends of flares 13 extending from pipes 14. By providing nuts 15 or the like on the ends of the rods 11 the same can be tightened so as to hold all of the parts together securely.

Before the core 6 is placed in the casing 1 it is impregnated with a mixture of barium dioxide, calcium chloride, potassium permanganate, pyrogallic acid, bone ash and ashes of nut shells and fruit pits. This mixture, with the magnesite, is commingled with the asbestos.

The ingredients mentioned can be combined in any desired proportions for producing the best results and the said ingredients will have the quality of combining with various toxic gases so that when the gaseous products of combustion given off by an internal combustion engine are directed into this device, there will be no danger of poisoning by any of the gases as would be the case should they be discharged unchanged directly into the atmosphere.

It will be understood of course that the various parts can be of any preferred sizes and configurations and that the device can be placed in any suitable position where it will receive the gases from an internal combustion engine before they can escape into the atmosphere.

What is claimed is:

1. The combination with a casing, apertured heads at the ends thereof, and means for directing gases to one of the heads, of a core housed within the casing and abutting against the heads, said core having passages communicating with the apertures in the heads, and including means for effecting a chemical change in toxic gases entering the core.

2. The combination with a casing, apertured heads thereon, and means for directing gases to one of the heads from the exhaust of an internal combustion engine, of a core fitted within the casing and against the head and having longitudinal passages communicating with the apertures, said core including a mixture of asbestos, magnesite, and means for combining chemically with toxic gases flowing into the passages.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

JEAN A. CORNELIER.