

No. 693,638.

Patented Feb. 18, 1902.

C. BREUER.

DEVICE FOR REMOVING NOXIOUS IMPURITIES FROM THE AIR OF ROOMS.

(Application filed Nov. 20, 1900.)

(No Model.)

Fig:1.

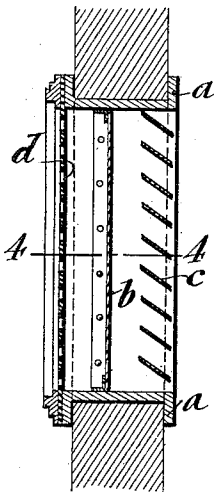


Fig:2.

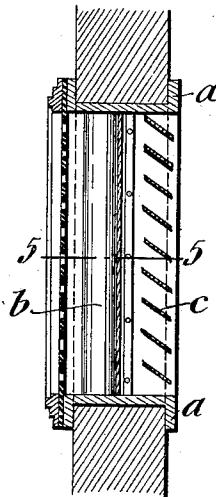


Fig:3.

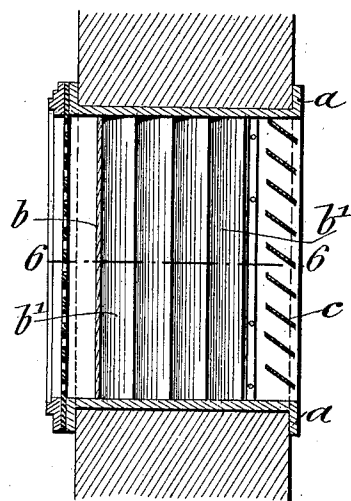


Fig:4.

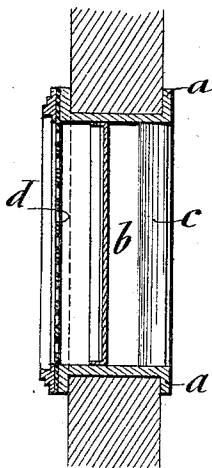


Fig:5.

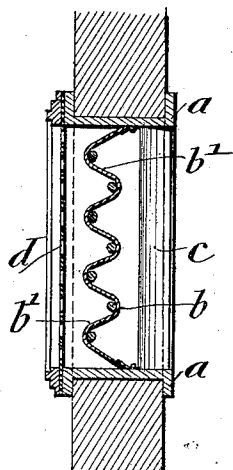
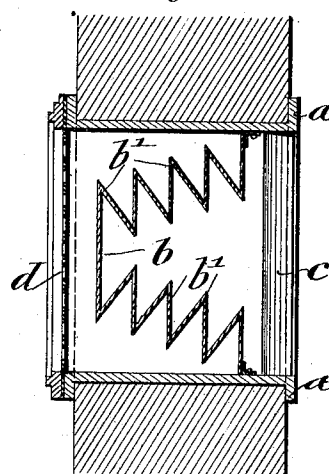


Fig:6.



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CARL BREUER, OF FRIEDENAU, GERMANY.

DEVICE FOR REMOVING NOXIOUS IMPURITIES FROM THE AIR OF ROOMS.

SPECIFICATION forming part of Letters Patent No. 693,638, dated February 18, 1902.

Application filed November 20, 1900. Serial No. 37,175. (No model.)

To all whom it may concern:

Be it known that I, CARL BREUER, a citizen of the Empire of Germany, and a resident of Friedenau, near Berlin, Germany, have invented certain new and useful Improvements in Devices for Removing Noxious Impurities from the Air of Rooms, of which the following is a specification.

This invention relates to a device for purifying the air of rooms of noxious gases—such as carbonic acid, sulfureted hydrogen, ammonia, organic scents, and exhalations of the human body—by the process of atmolysis.

The object of the invention is to provide a device of simple construction to be placed in an outer wall of a room for the purpose of ventilation.

To this end the invention consists of a device for removing the impurities from the air of rooms, comprising a casing set in the outer wall of a room, a diaphragm of a colloidal substance, such as caoutchouc, provided in said casing, and suitable protecting-guards for the diaphragm.

The use of caoutchouc as a diaphragm for eliminating the noxious gases from the air of rooms is based upon the atmolyzing property it possesses, discovered by scientific experiment to have certain properties the manifestations of which are comprehended in "Graham's law" relative to the diffusion of gases through colloidal bodies.

These several details of construction and combination of parts will be hereinafter more fully described, and finally set forth in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical transverse sectional view of the device in position in the wall of a room. Figs. 2 and 3 are similar views showing the diaphragm in modified form. Figs. 4, 5, and 6 are horizontal transverse sections, respectively, on lines 4 4, Fig. 1, 5 5, Fig. 2, and 6 6, Fig. 3.

Similar letters of reference designate corresponding parts.

Referring to the drawings, *a* represents the casing of the device, placed in the outer wall of a room, preferably near the ceiling. The diaphragm *b*, made of pervious material, such as caoutchouc or other colloidal substance, is

secured in the casing and may be formed in undulatory or zigzag cross-sectional surfaces, designated as *b'* in Figs. 5 and 6, for the purpose of increasing the capacity of the diaphragm for atmolyzing the air by enlarging the area of its surface. In order to protect as far as possible the caoutchouc diaphragm from rain, the louver-boards *c* are provided on the exterior side of the casing, and to shield the diaphragm from injury by accident from within the room the metal guard *d* is provided on the interior side of the casing, said guard being preferably a screen of wiregauze.

In a room provided with a device as herein described the various gases given off by the human body are diffused through the diaphragm, due to the difference of density of the air inside the room charged with gases from the density of the atmosphere outside. Thus the diaphragm serves to equalize the condition of the air inside a room with the outside atmosphere, keeping the inside air in normal condition without supplying fresh air to the room with the tendency of creating a draft at the same time.

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

1. A device for removing noxious gases from the air of a room, consisting of a casing set in the outer wall of the room, a diaphragm of colloidal substance, such as caoutchouc provided in said casing, and guards for protecting said diaphragm, substantially as set forth.

2. A device for removing noxious gases from the air of a room, consisting of a casing set in the outer wall of the room, a diaphragm of caoutchouc provided therein and formed with undulatory cross-sectional surfaces, louver-boards secured to the exterior side of the casing, and a screen-guard provided on the interior side of the casing, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

CARL BREUER.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.