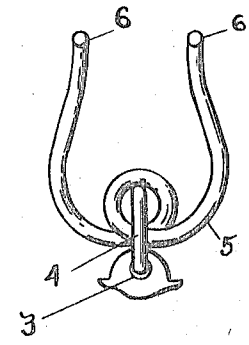
H. GARNETT.

RESPIRATOR.

APPLICATION FILED MAR. 22, 1916.

1,270,404. Patented June 25, 1918.

FIG. 5



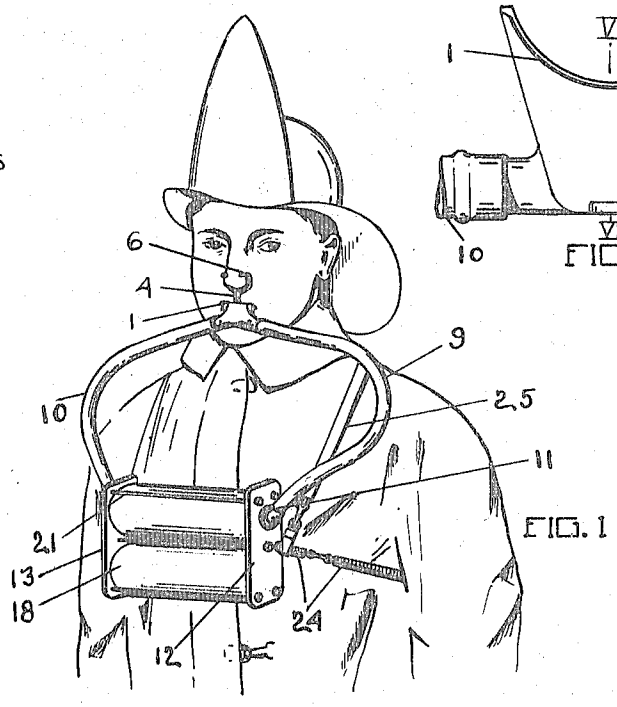


FIG. 1

FIG. 4

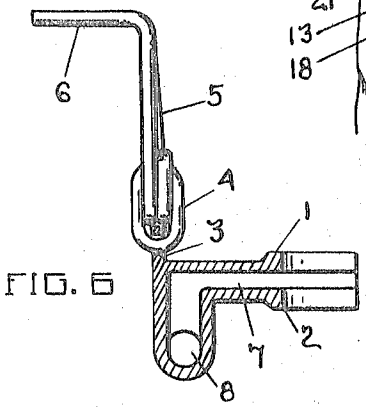


FIG. 6

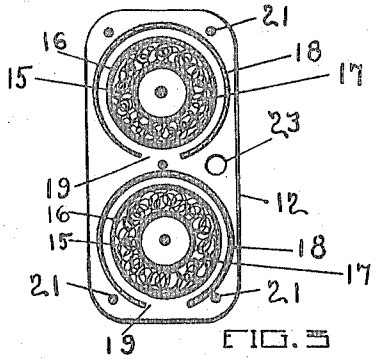


FIG. 3

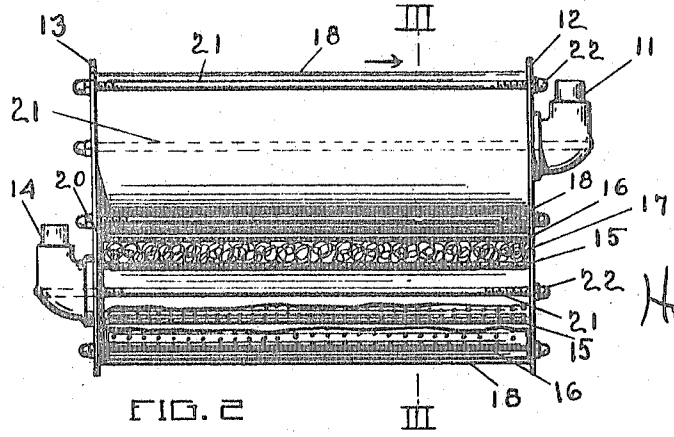


FIG. 2

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Inventor

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UNITED STATES PATENT OFFICE.

HERBERT GARNETT, OF TOLEDO, OHIO.

RESPIRATOR.

1,270,404. Specification of Letters Patent. Patented June 25, 1918.

Application filed March 22, 1916. Serial No. 85,784.

To all whom it may concern:

Be it known that I, HERBERT GARNETT, a subject of the King of Great Britain and Ireland, residing at Toledo, Lucas county, Ohio, have invented new and useful Respirators, of which the following is a specification.

This invention relates to respiration devices.

This invention has utility when embodied in breathing apparatus for use in fumes, smoke or noxious gases.

Referring to the drawings:

Figure 1 is a perspective view of an embodiment of the invention as mounted for use;

Fig. 2 is a front elevation of the air purifier or filter with parts broken away;

Fig. 3 is a section on the line III—III, Fig. 2;

Fig. 4 is a plan view of the nozzle or mouthpiece;

Fig. 5 is a detail view of the nose check; and

Fig. 6 is a section on the line VI—VI, Fig. 4 showing the nose check connected to the mouthpiece of the nozzle.

In the use of the device, it may be readily brought into operative position by placing the rib portions 1, 2 in the mouth while the eye 3 having the link 4 therein flexibly mounts the spring nose check 5 having the relatively yieldable arms 6 so that these arms 6 may be pressed in nostril closing position without inconvenience to the wearer.

Exhalation and inhalation may occur through passage 7 of the mouthpiece and thence by the openings 8 through tubes 9 and 10. The tube 9 is connected to the pure air outlet opening 11 in the air purifier housing which has the end diaphragm 12, opposed to which is the opposite end diaphragm 13 carrying the other pure air way 14 connected to the flexible duct 10. These ways 11, 14 communicate with the central perforate cylinders 15 concentrically disposed about which are the outer cylinders 16 having the intermediate annular filter or air purifying chamber 17 charged with a comminuted fibrous organic material, self adjusting for air filtering and purification in the removal of deleterious substances therefrom.

The outer perforate cylinders 16 are inclosed by the housing members 18 having on the under side thereof the foul air intake openings 19. The perforate cylinders 15, 16 are conveniently soldered or otherwise anchored to the diaphragm of the housing as the diaphragm 12. The annular filter chambers may be charged, then the open end of the chamber may be closed by the annular fabric gasket 20, the bolts 21 may then serve through cap nuts 22 for assembling the purifier so that all foul air must enter the passage, pass through the openings in the outer cylinders 16 and thence through the comminuted fibrous material on its way through the openings in the inner cylinder 15 for delivery by the ways 11, 14 through the flexible ducts 9, 10 to the mouthpiece.

As inhalation and exhalation occur through these same sets of passages, there is a discontinuous draw of the foul air which contributes to the efficiency of the purifier and in practice it has been found the exhalations commingle in a way not detracting from the practicability of the device.

In the mounting of the device there is extended through openings 23 of the diaphragms 12, 13, the coil spring 24 which may be readily hooked or detachably connected in its embracing position around the body of the wearer thereby holding the purifier against swinging while the purifier is maintained in vertical position by the strap 25 about the neck of the wearer. The device accordingly may be readily thrown into position for use with the operator's hands, arms and face free. When entering into the region for use the mouthpiece may be slipped into position and the nose check pressed to close the nostrils with all ready for automatic operation in supplying a purified air independently of any supply reservoir or trailing connection with a remote point thereby leaving the wearer unhampered to carry out his duties.

What is claimed and it is desired to secure by Letters Patent is:

1. A respirator air purifier embodying perforate members providing a central

chamber, and thereabout an enveloping chamber of fibrous material, there being nozzle connection to the central chamber supplied by air flow radially of said chamber.

2. A respirator air purifier embodying perforate cylinders providing a central chamber, and thereabout a chamber having therein air purifying means, said latter chamber having perforate cylindrical walls, and a housing for the cylinders providing foul air intake, said purifier restricting exhalation to the purifying means and intake.

In witness whereof I affix my signature.

HERBERT GARNETT.