

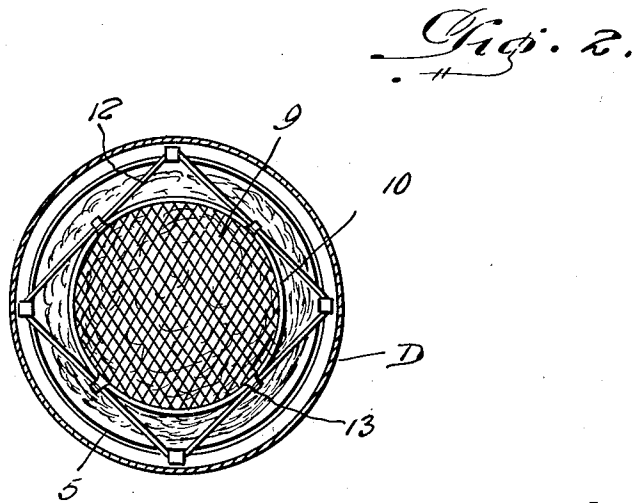
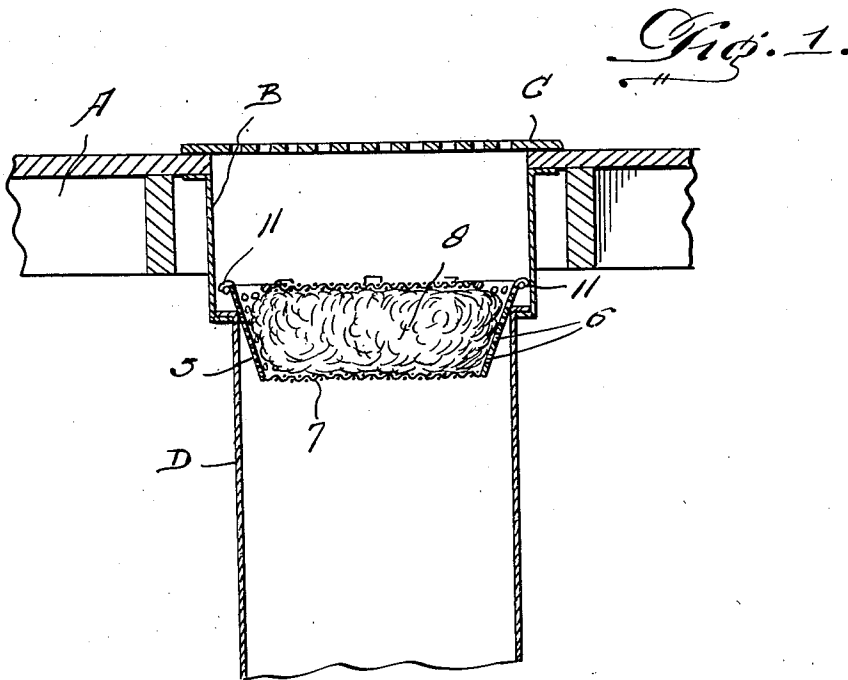
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P. PIRCHIO

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AIR FILTER

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AIR FILTER

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This invention relates generally to hot air registers used in the heating systems of dwellings or other building and has more particular reference to an air purifying device therefor, the primary object of the invention residing in the provision of means constructed for ready disposition within the register so as to filter the air passing therethrough so as to prevent the passage of smoke, soot and the like into the particular room.

One of the most important objects of the invention is to provide a purifier of this character that is of relatively simple construction, inexpensive of manufacture and one that may be easily disposed within conventional hot air registers to cause the filtering of the air passing into and through the register.

With the foregoing and other objects in view as the nature of the invention will be better understood, the same comprises the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawing and claimed.

In the drawing wherein like reference characters indicate corresponding parts in both of the views:

Figure 1 is a section of a conventional hot air register having communication with a furnace hot air pipe and arranged within which is my improved air purifying device, and

Figure 2 is a horizontal section through the register disclosing the present invention in top plan.

Now having particular reference to the drawing, A designates the floor of a building equipped with a generally conventional hot air register B having a perforated metal lid C and being flanged at its lower open side for receiving the flanged end of the usual hot air conveying pipe D that extends to the furnace or other air heating plant, not disclosed.

My invention per se consists of a conical shaped metallic container 5 formed throughout its entire area with air inlet openings 6 and having a bottom wall 7 of foraminous material, or if desired said bottom wall may be of the same material as forming said container. The diameter of this container 5 is such that the same will partially enter the hot air pipe D and rest upon the upper end of

the pipe as disclosed in Figure 1 for entirely closing the same to the register B other than through said container.

This container 5 is provided for the purpose of holding a non-corrosive fire resisting filter medium 8 such as metal, wool, or the like. For maintaining this wool in a compact mass within the container there is provided a circular lid 9 preferably of wire screening having a wire rim 10. For the purpose of securing this lid within the container said container is formed at its upper edge at a plurality of spaced points with bent over lugs 11 beneath which is extended a length of wire 12 which wire will be in position within the container 5 at points intermediate said fingers 11. The wire rim 10 of the screen lid 9 is also formed at a plurality of spaced points with spring fingers 13, which when bent over the length of wire 12 carried by the container 5 intermediate the fingers 11 of said container will rigidly secure the wire mesh lid in position centrally within said container for preventing the loosening of the mass of filter material 8 therein.

Obviously the hot air passing upwardly through the pipe D must pass through the filter medium 8 before entering the register B. Smoke, soot and other foreign matter will be collected within this material so that the air finally passing through the register will be highly purified.

Even though I have herein shown and described this particular purifying device as being of circular configuration for disposition within a circular hot air register and a circular hot air conveying pipe it is nevertheless to be understood that other changes may be made in the size and design of the same in accordance with the design and size of conventional hot air registers and their hot air communicating pipes.

Having thus described the invention, what I claim is:—

A hot air filter comprising a frustoconical perforated body, a sheet of screen material across the smaller end of the body, a wire forming a square figure having its corners secured to the edge of the larger end of the body so that the sides extend in chords there-

across, a foraminous closure of circular formation mounted in the confines of the wire and secured thereto and a mass of filtering material in the body between the sheet and the closure.

5 In testimony whereof I affix my signature.

PASQUALE PIRCHIO.

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