

April 29, 1941.

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2,239,848

AIR CONDITIONING APPARATUS

Filed Aug. 13, 1940

2 Sheets-Sheet 1

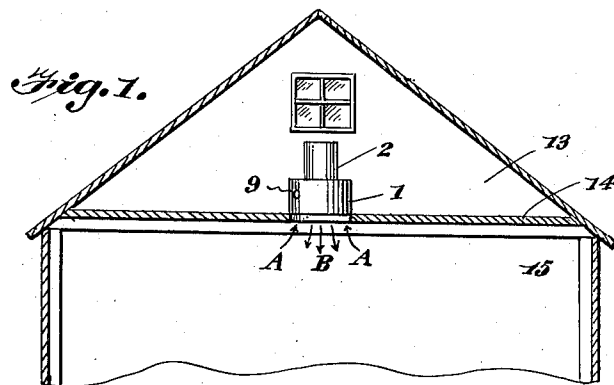
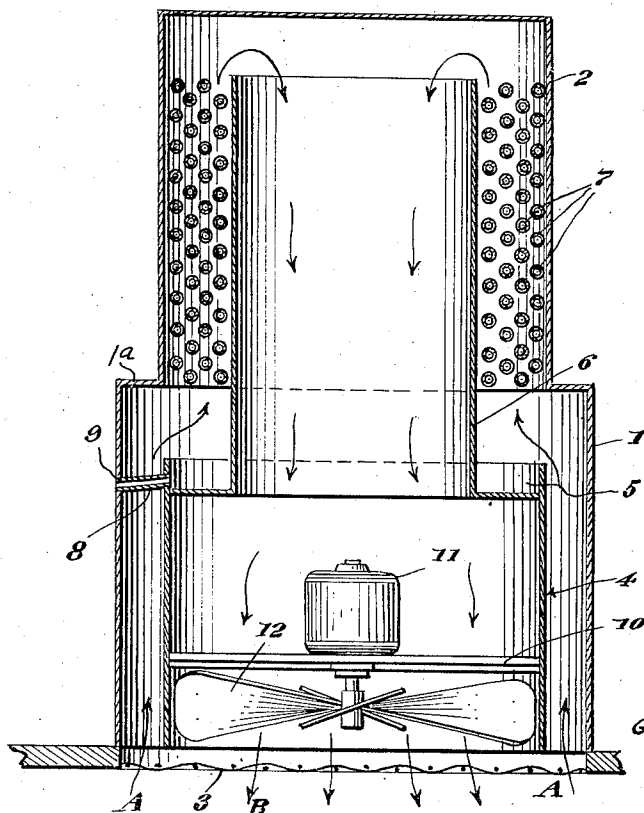


Fig. 2.



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Fig. 3.

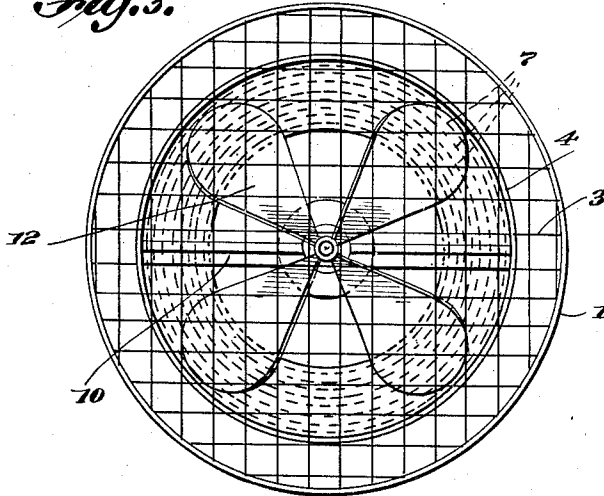


Fig. 4.

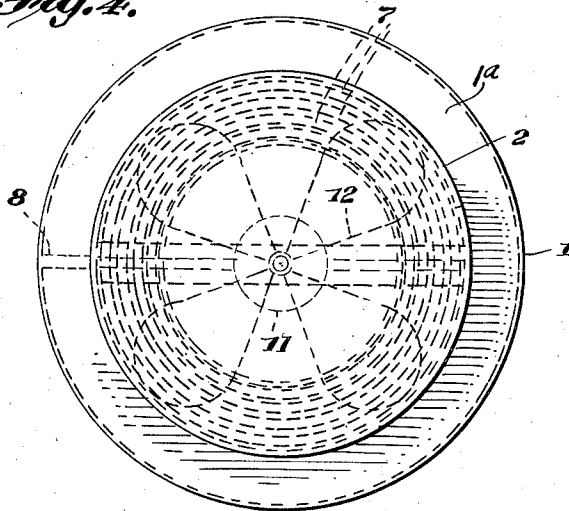
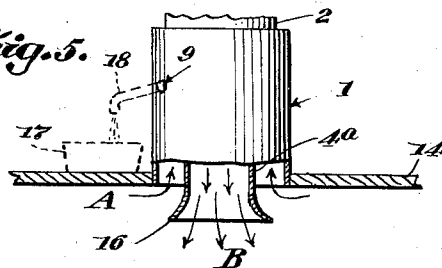


Fig. 5.



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AIR CONDITIONING APPARATUS

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3 Claims. (Cl. 62-140)

This invention relates to an air conditioning apparatus.

An object of the invention is the construction of a small and compact apparatus which is especially adapted to be mounted in an attic, communicating with the room below through an opening in the ceiling, whereby warm air from the top of the room to be cooled is taken through the apparatus, and cooled, and subsequently discharged into the room.

Another object of the invention is the construction of a novel and efficient apparatus, which is comparatively inexpensive to manufacture, and which can be easily installed, as the operator desires.

A still further object of the invention is the construction of an air conditioning apparatus, or unit, which can be used upon motor vehicles, just as well as in dwellings or buildings.

With the foregoing and other objects in view, the invention comprises certain novel constructions, combinations, and arrangements of parts as will be hereinafter fully described, illustrated in the accompanying drawings, and more particularly pointed out in the appended claims.

In the drawings:

Figure 1 is a view in elevation of an apparatus constructed in accordance with the present invention, showing the same mounted in the attic of a dwelling or building.

Figure 2 is an enlarged vertical, central sectional view of an apparatus constructed in accordance with the present invention.

Figure 3 is a bottom plan view.

Figure 4 is a top plan view, showing the fan and coils in dotted lines.

Figure 5 is another embodiment of the invention; it is partly a side elevation and a vertical section.

Referring to the drawings, 1 is a primary cylindrical casing which is provided with an inwardly extending horizontal portion 1a; said portion 1a being provided at its inner edge with an integral dome 2. The primary casing 1 is open at its bottom and is covered by a grille 3, Fig. 2. Within the primary casing 1 is an auxiliary cylindrical casing 4. Casing 4 is open at its lower end, which end registers with the open lower end of the primary casing 1. The auxiliary casing 4 is provided with a drip pan 5. This drip pan 5 has as its inner portion an intake shell 6. This shell 6 extends a considerable distance up into dome 2. Within dome 2 and coiled around the shell 6 are spaced tubings or cooling coils 7. These coils 7 are supplied with suitable

means for cooling same. A drain pipe 8 is connected at its inner end to the drip pan 5 and its outer end extends through aperture 9. The drip pan 5 catches the condensation occurring on the cooling coils 7.

A bracket or motor hanger 10 is fastened in the auxiliary casing 4, and a motor 11 and fan 12 is supported by said bracket 10. The fan 12 should operate at a slow speed, so that it will not handle more than 60 cubic feet per minute for an average five-room house.

The apparatus may be placed in the attic 13 of a dwelling, directly upon the ceiling 14, so that hot air can be drawn from the room 15 (Fig. 1) and passed through the apparatus for cooling and then discharged from the apparatus into the room 15. The course of the air is indicated by the arrows A, as it is drawn up into the apparatus, passing up through the coils 7 and thence down through the shell 6, around motor 11 and thence discharged in a cooled condition, into the room 15, as indicated by the arrows B.

In the embodiment shown in Figure 5, the structure is the same as hereinbefore described, except that the auxiliary casing 4a extends a slight distance below the ceiling 14 and is flared out at 16. By this construction the hot air A, Fig. 5, is positively directed into the apparatus, while the cooled air B is discharged into the room, without any liability of the cooled air being sucked back into the apparatus with the hot air from the room.

If it is desired, a receptacle 17 (dotted lines Fig. 5) can be placed under spout 18 (dotted line), which spout 18, is suitably fastened in the aperture 9, in communication with the drain pipe 8.

It is to be understood that this apparatus can be mounted in motor vehicles, as well as in houses and buildings. Further, the apparatus can be made of any size to accommodate the condition of placement, or the capacity desired.

The means for supplying the cooling agent to coils 7 may be of any ordinary construction, as well as means for supplying an electric current to motor 11.

While I have described the preferred embodiment of my invention and illustrated the same in the accompanying drawings, certain changes or alterations may appear to one skilled in the art to which this invention relates during the extensive manufacture of the same and I, therefore, reserve the right to make such changes or alterations as shall fairly fall within the scope of the appended claims.

What I claim is:

1. In an apparatus of the class described, the combination of a primary casing provided with a dome, an auxiliary casing within said primary casing, said auxiliary casing provided with a drip pan in its upper portion, a shell within said dome and constituting a portion of said drip pan, coils within said dome around said shell, and a motor-driven fan within said auxiliary casing.

2. In an apparatus of the class described the combination of a primary casing open at its bottom and provided with an integral dome at its top, an auxiliary casing within said primary casing, said auxiliary casing open at its bottom and provided with an integral drip pan and shell at its top, said shell constituting the inner wall of said drip pan, said shell extending up into said dome and open at its top, coils within said dome around said shell and positioned to the top of the shell, a drain pipe communicating at its inner end with said drip pan and at its outer end with the outer atmosphere through a wall of said primary casing, a bracket within

said auxiliary casing, and a motor-driven fan supported by said bracket.

3. In an apparatus of the class described, the combination with a ceiling provided with an aperture, of a primary cylindrical casing, having the lower end registering with said aperture, said primary casing provided with an inwardly-extending horizontal portion at its upper end, said horizontal portion provided at its inner edge with an integral upstanding dome, an auxiliary casing within said primary casing, said auxiliary casing provided at its lower or outer end with an outwardly-flared extension projection beyond said aperture and beyond said ceiling, said auxiliary casing having a pan down in its upper end, said pan having its inner wall constituted by an upwardly-extending shell, said shell projecting up into said dome, coils around said shell within said dome, a bracket secured up in said auxiliary casing, and a motor driven fan supported entirely upon said bracket above the opening in said ceiling.

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