May 1, 1951 J. J. MURPHY 2,551,037

FIRE ALARM OF THE WHISTLE TYPE

Filed April 13, 1949

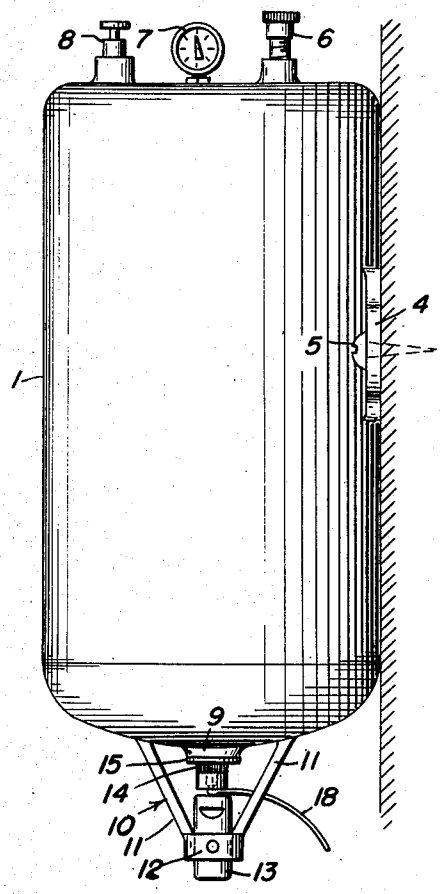


Fig. 1.

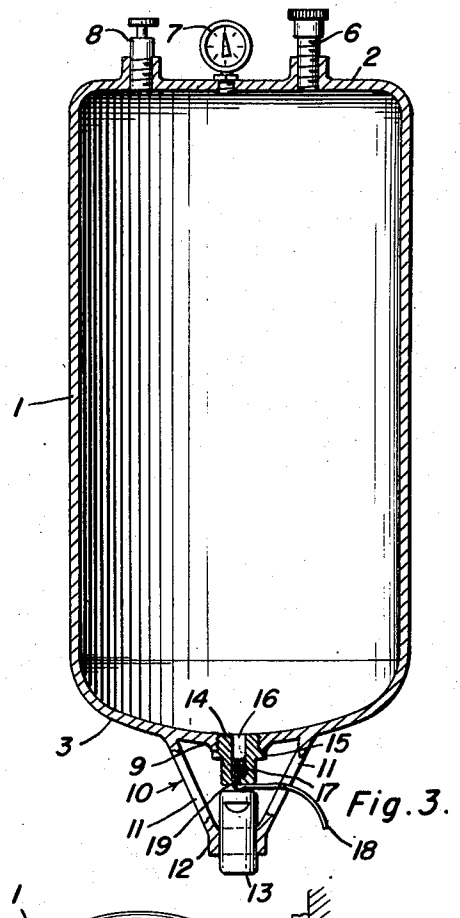


Fig. 3.

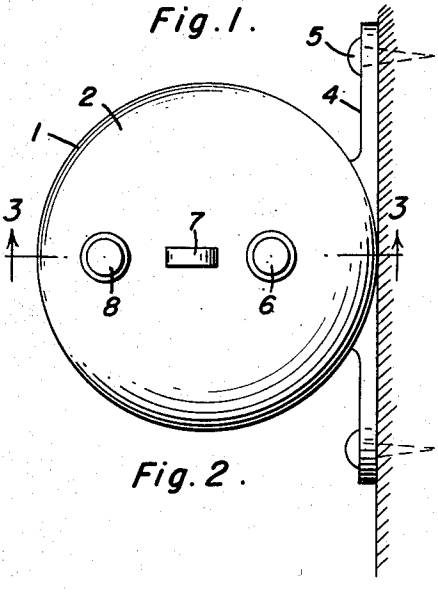


Fig. 2.

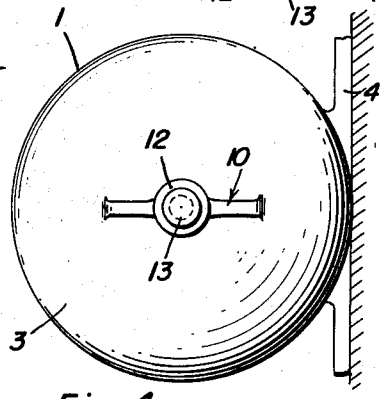


Fig. 4.

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FIRE ALARM OF THE WHISTLE TYPE

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3 Claims. (Cl. 116—104)

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My invention relates to improvements in fire alarms of the type adapted for sounding a whistle, the primary object in view being to provide a simply constructed, inexpensive device of this character especially adapted for household use and to be rendered effective quickly by a fire at a considerable distance therefrom in a room in which the device is installed.

Other and subordinate objects, within the purview of my invention, together with the precise nature of my improvements will be readily understood when the succeeding description and claims are read with reference to the drawing accompanying and forming part of this specification.

In said drawings:

Figure 1 is a view in side elevation of my improved fire alarm in the preferred embodiment thereof;

Figure 2 is a view in plan;

Figure 3 is a view in vertical longitudinal section taken on the line 3—3 of Figure 2;

Figure 4 is a view in bottom plan.

Referring to the drawing by numerals, my improved fire alarm, as illustrated, comprises a cylindrical tank 1 having top and bottom ends 2, 3 and a suitable attaching bracket 4 formed thereon for securing by screws 5 to mount the tank 1 on a wall, or the like, of a room in upright position. The tank 1 is designed to contain air under pressure. A suitable air inlet valve 6 is secured in the top end of the tank 1 for charging said tank with compressed air to a suitable pressure registered by a pressure gauge 7 on said top end. A suitable type of pressure relief valve 8 is also provided on the top end 2 of the tank 1 for safety purposes. The bottom end of the tank 1 is provided with a short axial, internally threaded neck 9 and with a depending yoke 10 comprising a pair of arms 11 converging downwardly, relatively, from said bottom end 3 and from opposite sides of the neck 9 to a collar 12 vertically aligned with said neck 9 and subjacent thereto.

A whistle 13 is fixed in the collar 12, in any suitable manner, in vertical alignment with the neck 9 and which is of a suitable type for sounding by air entering under pressure the upper end thereof.

A combustible screw plug 14 of highly inflammable material, such as hard Celluloid, is turned into the neck 9 with a circumferential flange 15 thereon engaging the neck 9, said plug depending out of said neck 9 a suitable distance for exposure to the atmosphere for burning and to dispose its lower end close to the upper end of the whistle 13. The combustible plug 14 is hollow being formed

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with an axial socket 16 open at the upper end of said plug and with a closed lower end close to the lower end of the plug. A core 17 of candle wax is provided in the bottom of the socket 16. The purpose of the combustible plug 14, socket 16 and core 17 will presently appear.

A long, hollow, flexible fuse 18 of the twisted taper-type with gun powder and glue therein, preferably, is suitably attached at one end to the lower end of the screw plug 14 and which may be of any suitable length for extending around a room, on the floor, ceiling, or wall, and for leading out of a room in which it is so arranged for similar arrangement in another or other rooms. Preferably the fuse 18 is attached by fixing one end 19 in the lower end of the combustible plug 14 in the axis thereof with an extra charge of gun powder in said end 19.

In case of fire in the room in which the described fire alarm is installed, or in another room, depending upon the use of the fuse 18, said fuse is ignited and quickly ignites the combustible plug 14 which burns up quickly around the core 17 leaving a clean hole through the remainder of said plug 14 for the escape of air under pressure of the tank 1 for sounding the whistle 13. The core 17 is softened during the burning of the combustible plug 14 outside the neck 9 but since the Celluloid burns more quickly than the wax, said core is merely softened and blown out of the way without clogging the whistle 13.

As will be seen, my improved fire alarm provides an inexpensive installation which may be easily and quickly installed in any home, office building, barn, or factory to sound an alarm, in case of fire which may be heard from a considerable distance. The tank 1 may be recharged with air, and the combustible plug 14, core 17, fuse 18 and whistle 13 replaced at a minimum of cost. The advantage of this will be manifest.

The foregoing will, it is believed, suffice to impart a clear understanding of my invention, without further explanation.

Manifestly, the invention, as described, is susceptible of modification, without departing from the inventive concept, and right is herein reserved to such modifications, as fall within the scope of the appended claims.

Having thus described my invention, what is claimed as new is:

1. In a fire alarm, a tank for containing air under pressure and having an air outlet, a combustible hollow closure plug fixed in said outlet to extend out of the same for burning when ignited in the air outside said tank to open said

outlet, and a signal sounding device operative by air under pressure and mounted on said tank in line with said outlet for operation by air issuing under pressure out of said outlet.

2. In a fire alarm, a tank for containing air under pressure and having an air outlet, a combustible hollow closure plug fixed in said outlet to extend out of the same for burning when ignited in the air outside said tank to open said outlet, a signal sounding device operative by air under pressure and mounted in said tank in line with said outlet for operation by air issuing under pressure out of said outlet, and a fuse line attached at one end to said plug and adapted to be extended therefrom to ignite said plug by fire igniting the fuse.

3. In a fire alarm, a tank for containing air under pressure and having an air outlet, a combustible closure plug fixed in said outlet to extend out of the same for burning when ignited to open

said outlet, a signal sounding device operative by air under pressure and mounted in said tank in line with said outlet for operation by air issuing under pressure out of said outlet, said plug having a core of slower burning material than the plug adapted to be blown out of the burning plug when the latter is partly burned and by the pressure of air on said tank to leave a clean opening in the unburned portion of the plug for escape of air therethrough.

JAMES J. MURPHY.

REFERENCES CITED

The following references are of record in the file of this patent:

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Number	Name	Date
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