Sept. 27, 1966 H. ROLFES 3,274,619

EMERGENCY SHOWER

Filed April 2, 1964

FIG. 1.

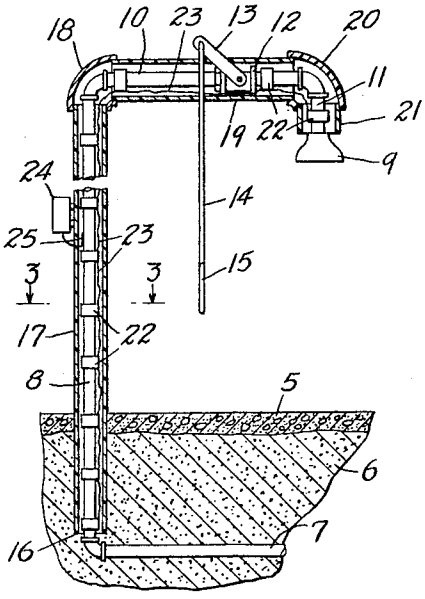


FIG. 3.

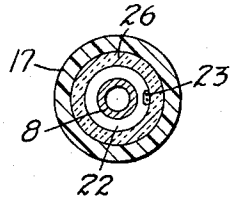
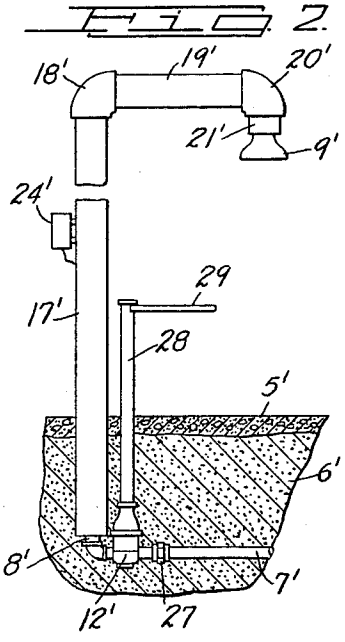


FIG. 2.



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United States Patent Office 3,274,619 Patented Sept. 27, 1966

3,274,619

EMERGENCY SHOWER

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Filed Apr. 2, 1964, Ser. No. 356,831
4 Claims. (Cl. 4—145)

This invention relates to the provision of what is termed an emergency shower usually located externally of a plant or factory for the purpose of administering a shower to an operator, particularly after the operator has been exposed to any type and kind of contamination or atmospheric condition which requires immediate shower treatment. More particularly, the invention deals with a device of the character described employing means for heating and insulating the piping leading to the shower nozzle and/or including operating valves controlling actuation of the shower, so as to maintain the same in operative condition at all times, notwithstanding the outdoor temperature which may prevail.

The novel features of the invention will be best understood from the following description, when taken together with the accompanying drawing, in which certain embodiments of the invention are disclosed and, in which, the separate parts are designated by suitable reference characters in each of the views and, in which:

FIG. 1 is a diagrammatic side and sectional view illustrating one type of installation made according to my invention, with part of the construction broken away and omitting illustration of insulating material for sake of clarity, such material being illustrated, in section in FIG. 3.

FIG. 2 is a diagrammatic side view of a modified form of installation which can be employed, the several parts of the installation being shown in elevation; and

FIG. 3 is an enlarged sectional view on the line 3—3 of FIG. 1.

In illustrating one adaptation and use of my invention, I have shown in FIG. 1 of the drawing a concrete slab **5** upon the top of the ground **6**, which would be externally of the plant or factory building, in conjunction with which the emergency shower is employed. At **7** is shown a water supply line extending through the ground **6** to a riser **8**, which extends upwardly a sufficient height to dispose a shower head **9** seven or more feet above the surface of **5**. Coupled with the riser is a horizontal pipe **10**, at the end of which is a depending pipe **11**, with which the shower head **9** is coupled. Arranged in the pipe **10** is a control valve **12** actuated through a lever **13**, to the free end of which is coupled a depending manually operated rod **14**, which can include, at its lower end, a suitable handgrip portion **15**.

Enveloping the riser **8** from a predetermined depth position **16**, preferably below the frost line, is a tubular protective casing **17**, including an elbow portion **18** at its upper end, a horizontal portion **19** around the pipe **10**, another elbow **20** at the end of pipe **10** and a depending tubular portion **21** encircling the depending pipe **11**. This tubular casing can be composed of any suitable material having insulating properties such, for example, as polyvinyl chloride.

Arranged within the casings **17**, **18**, **19**, **20** and **21** at suitably spaced intervals are induction heating coils **22**, the wiring between adjacent coils being diagrammatically illustrated by the lines **23**. Mounted in connection with the casing **17** is a thermostat **24** in a suitable enclosure meeting specification requirements of any area in which the installation is made, the thermostat having an electrical coupling to the riser **8**, as diagrammatically seen at **25**, so that the water in the riser and extending to the valve **12** can be maintained at any desired temperature

ready for use at all times. In many instances, a temperature of approximately 70° F. is desirable.

In order to simplify the illustration in FIG. 1 of the drawing, the insulating material employed in the casings **17**, **18**, **19** and **20** are not shown but, to clearly illustrate this, an enlarged section through the riser **8** and the casing **17** is shown in FIG. 3 and, at **26**, I have diagrammatically illustrated in FIG. 3 the insulation which completely envelops the induction heating coils **22**, as well as the piping employed. Any suitable type of insulating material can be employed and I have found that polyurethane will be suitable for this purpose.

It will be understood that location of the manually actuated valve controlling operation of the shower can have different locations in the pipe line and, to diagrammatically illustrate one such other location, I have shown, in FIG. 2 of the drawing, the arrangement of a valve **12'** in the pipe **7'**, a suitable coupling being provided in the pipe **7'** adjacent the valve **12'**, as shown at **27**. In FIG. 2, **5'** represents the concrete or similar slab and **6'** represents the earth beneath the slab. **17'**, **18'**, **19'**, **20'** and **21'** will be similar to the casing shown in FIG. 1 and **9'** represents the shower head. At **24'** is shown the thermostat, similar to the thermostat **24**.

Extending upwardly from the valve **12'** is an operating rod **28**, having an angularly disposed handle member **29** facilitating manual operation by the individual taking the shower. With the structure shown in FIG. 2, it will be apparent that, in continued operations, water will be maintained in the riser shown, in part, at **8'** in FIG. 2 and, by virtue of this fact, the maintenance of the desired temperature of this water will be maintained by the induction heating coils which are employed, similar to the coils shown in FIG. 1 of the drawing.

With an emergency shower of the type and kind under consideration, successful operation of the shower can be maintained at all times to be assured of accomplishing end result as, in most of these instances, the shower operation is an emergency which must be performed instantly for protection of the individual being treated.

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

1. An emergency shower comprising a shower head in predetermined position above an outdoor ground slab, means for supplying water to said shower head, said means comprising a supply line submerged a frost safe distance below said ground slab, a riser extending upwardly from said supply line and coupled with a horizontal pipe extending to said shower head through a depending pipe, said first named means including a manually actuated valve controlling discharge of water from said shower head, a casing completely enveloping the riser, the horizontal pipe and the depending pipe extending to the shower head, interconnected induction heating coils mounted on and spaced longitudinally of the riser horizontal pipe and depending pipe, a thermostat controlling said coils, and insulating material in said casing around said coils, riser, horizontal pipe and depending pipe.

2. An emergency shower as defined in claim **1**, wherein said valve is disposed in the horizontal portion of said piping, a lever for actuating said valve, and a depending handgrip member in operative engagement with said lever.

3. An emergency shower as defined in claim **1**, wherein said valve is located in the supply line of said first named means, an upstanding elongated valve operating rod projecting above the surface of said slab, and a handle member fixed to the upper end of said rod for rotating the same.

4. An emergency shower comprising a source of water supply to a shower head in predetermined spaced relation above a supporting surface, said water supply com-

prising a submerged pipe, a riser extending upwardly from said pipe, a horizontal pipe at the upper end of said riser and a depending pipe at the end of said horizontal pipe supporting said shower head, means fully encasing the water supply from said submerged pipe to said shower head for insulating said water supply, interconnected induction heating coils within said encasing means and mounted on and spaced longitudinally of the riser, longitudinal pipe and said depending pipe for induction heating of said water supply to a point adjacent said shower head, a thermostat in circuit with said coils for controlling the temperature of water in said supply, and a manually actuated valve in said water supply controlling discharge of water from said shower head.

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