

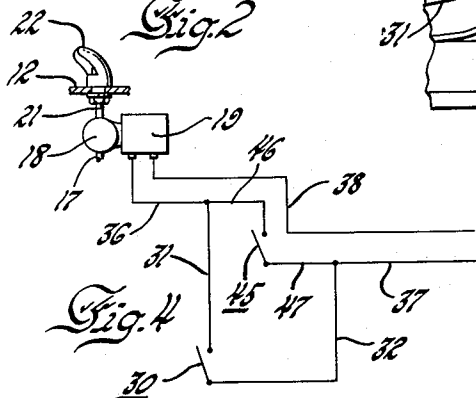
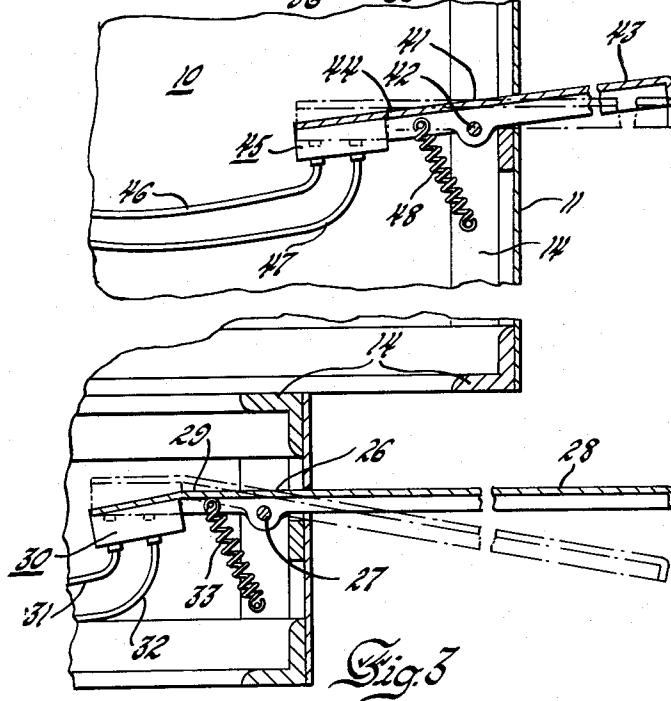
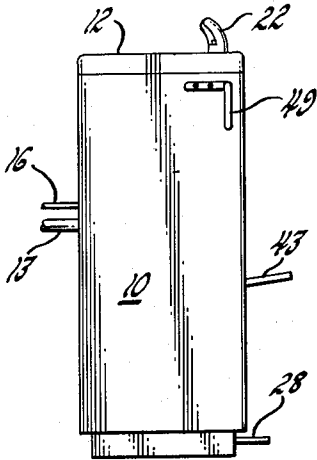
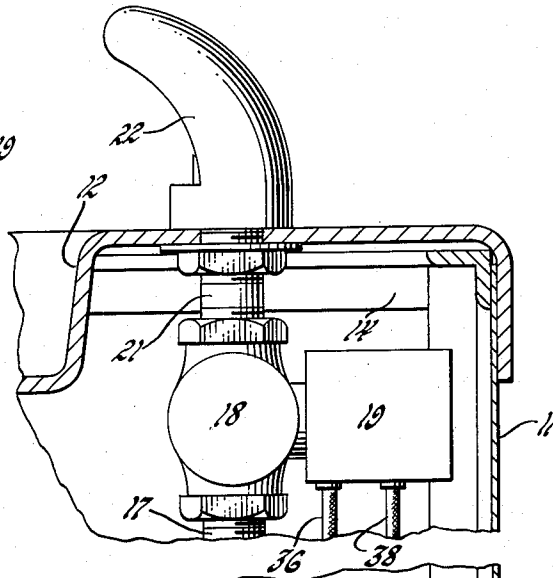
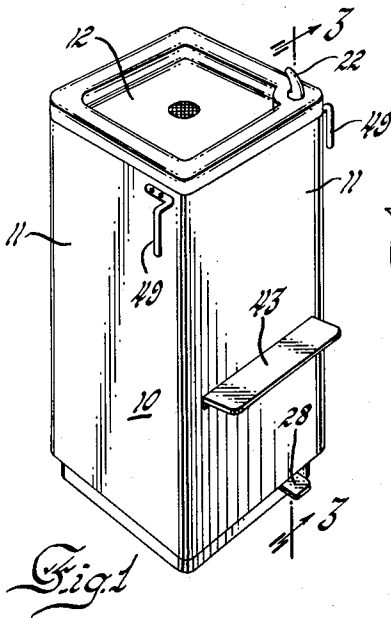
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2,739,461

REFRIGERATED WATER COOLER

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REFRIGERATED WATER COOLER

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2 Claims. (Cl. 62—141)

This invention relates to refrigerated liquid coolers and particularly to drinking water cooler cabinets.

In conventional liquid water cooler cabinets of the type wherein a nozzle, bubbler, fountain or other such element at the top of the cabinet discharges a stream of cool water for drinking purposes it has, due to the height of the top of the cabinet and the stream of cool water discharged thereover, been impossible for small children to obtain a drink therefrom. Heretofore, when a child has desired a drink of water from such a water cooler cabinet it has been necessary for an adult to lift and hold the child at a proper elevated position at a side of the cabinet. This is not a very delightful experience for the child and the parent or adult in addition to holding the child must also operate the cool water dispensing lever, button or pedal on the cabinet and therefore such act is not satisfactory and becomes an awkward and troublesome task. I contemplate the provision on a drinking water cooler cabinet of the type described of means whereby a child may readily and easily obtain a drink of cool water therefrom without the presence and/or assistance of an adult.

An object of my invention is to provide an improved and more useful drinking water cooler apparatus.

Another object of my invention is to provide a water cooler and dispensing cabinet of the top discharge fountain, nozzle or bubbler type from which a child may obtain a drink in the absence of an adult and without necessity of the child searching for an actuating means for starting the flow of a stream of cool water from the fountain.

A further object of my invention is to provide a drinking water cooler cabinet of the type having a single fountain at the top thereof and a valve controlling the discharge of cool water therefrom with a plurality of devices located at different elevations along the height of the cabinet and each of which devices is movable independently of the other for operating the valve actuator to cause flow of drinking water from the fountain so as to accommodate use of the water cooler by adults without requiring them to bend or stoop to an uncomfortable position, permitting the adults to have free use of their arms and hands while at the same time affording means whereby children unaccompanied and unassisted by an adult may obtain a drink.

A still further and more specific object of my invention is to provide a drinking water cooler cabinet of the top discharge or fountain type, having a foot pedal adapted to be operated by an adult, with a movable step or ledge device located midway between the top and the bottom of the cabinet and connected with the actuating means of the fountain valve for causing flow of cool water at the fountain in response to the weight of a child stepping upon or supported on the step or ledge portion of the device.

Further objects and advantages of the present invention will be apparent from the following description, reference being had to the accompanying drawings, wherein a preferred form of the present invention is clearly shown.

In the drawings:

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Figure 1 is a perspective view of a water cooler cabinet having my invention embodied therein;

Figure 2 is a side view of the water cooler cabinet disclosed in Figure 1;

Figure 3 is an enlarged broken fragmentary vertical sectional view through the water cooler cabinet taken on the line 3—3 of Figure 1; and

Figure 4 is a wiring diagram showing connections between movable elements incorporated in the present invention and the water valve actuating means of the drinking fountain.

Referring to the drawings and particularly Figures 1 and 2, I show a water cooler cabinet 10 which includes outer metal panels 11 forming the back, front, and side walls thereof and a drain catch basin 12 on top of the cabinet. The drain opening in basin 12 is connected to a drain pipe 13 which extends out of the back of cabinet 10 (see Figure 2). Such cabinets ordinarily comprise a metal box-like frame 14 (see Figure 2) for supporting the top basin 12 and the panels 11. The interior of cabinet 10 includes a machine compartment (not shown) which houses the refrigerant translating portion or refrigerant compressor-condenser-unit of a closed refrigerating system associated with cabinet 10. The evaporator of this closed refrigerating system is normally insulated and is disposed in heat exchange relationship with a water cooling tank or coil (not shown) located in cabinet 10 for cooling water therein for drinking purposes. This construction and arrangement is conventional and well-known to those skilled in the art. The cold water storage tank or coil within cabinet 10 has an inlet pipe 16 leading from a source of water supply under pressure and extending through the back wall of cabinet 10 (see Figure 2). The storage tank or coil also has an outlet pipe 17 (see Figure 3) leading therefrom and connected to a valve 18 adapted to be actuated by an electrically energized solenoid 19. Solenoid valve 18 is connected, by a pipe 21 (see Figure 3), to a discharge bubbler, a nozzle, or fountain 22 secured to the wall of top basin 12 on cabinet 10. Most water coolers of this type are provided with a pressure regulating or reducing valve (not shown) disposed either in the inlet pipe 16 or in the outlet pipe 17 for limiting the pressure of the water at the discharge fountain 22 to provide a stream of water emitted therefrom of proper height. This stream of water, cooled by the water cooling means or evaporator of the refrigerating system, flows upwardly and angularly from nozzle 22 over and into the basin 12 when valve 18 is opened.

The top or basin of water cooler cabinets of the type herein shown and described are located at a predetermined height above the floor upon which a cabinet is supported to render it convenient for an adult to drink from a stream of cool water discharged from the nozzle or fountain thereon. Such water cooler cabinets are usually provided with a hand operated means located at the top thereof or a foot operated pedal located adjacent the bottom of the cabinet for actuating a valve to control the flow of cool water from the discharge nozzle. Either is satisfactory as far as use of the water cooler cabinet by adults is concerned. However, if a child desires a drink of cool water from the fountain on the cabinet he or she may be able to reach a top hand operated means to turn the water on, but the child is not tall enough to locate his or her mouth in a position to drink from the water stream at the fountain. Also if a child steps on a foot pedal at the bottom of a water cooler cabinet, to turn the water on, he or she is too short to then drink from the water stream at the top of the cabinet. When a child desires a drink from a water cooler cabinet of the type described, the presence of an adult is necessary so that the adult may lift the child into a position suitable to permit his or her drinking from the fountain on the cabi-

net. In order to render a water cooler cabinet of the type herein shown universally usable, for children as well as adults, I provide means on such a cabinet whereby the child may step or climb upwardly on the cabinet into a standing position which will enable him or her to drink from the fountain thereon. I also provide means whereby, when the child elevates himself or herself to a proper drinking position on the water cooler cabinet, a stream of cool water is caused to flow automatically from the fountain thereon, thus obviating the necessity of the child searching for a handle, button or lever to turn the water on.

The water cooler cabinet 10 herein disclosed is provided with a movable foot operated pedal electric switch device located adjacent the bottom of the cabinet for use by adults to cause a stream of cool water to flow from the drinking nozzle or fountain 22. This device includes a pedal 26 (see Figure 3) pivotally mounted upon cabinet 10, as at 27, and has its one end 28 projecting outwardly through the front wall 11 thereof. The inner end 29 of pedal 26 carries an electric switch such, for example, as a conventional mercury switch, indicated by the numeral 30, having wires 31 and 32 extending from contacts thereon or therein. Any suitable means such as a spring or the like 33 may be employed for normally biasing the outer end 28 of pedal 26 into its upper position whereby the switch 30 on the inner end 29 of pedal 26 is maintained in an "off" position. The wires 31 and 32 of mercury switch 30 are connected to wires 36 and 37 respectively of an electric current supply circuit which also includes a wire 38 (see Figure 4). Wires 36 and 38 are connected to the electrically energizable solenoid 19 which forms the means for actuating valve 18 in a manner as is common and now well-known to those skilled in the art. When an adult desires a drink of cool water from the fountain 22 on cabinet 10, he or she places a foot on the exposed end 28 of pedal 26 and depresses this end of the pedal to cause movement of the pedal about its pivotal mounting 27 for raising the inner end 29 thereof as shown by the dot-dash lines in Figure 3 of the drawings. As the end 29 of pedal device 26 rises, the mercury in switch 30 bridges the contacts to which the wires 31 and 32 are attached and thereby makes or completes the electric circuit to solenoid 19 through wires 37, 32, 31, 36, and 38 to energize same and cause it to actuate valve 18 into open position. This opening of valve 18 directs water, cooled by the evaporator of the refrigerating system within cabinet 10, to and out of the fountain or nozzle 22 which water flows in a stream upwardly and laterally therefrom over the basin 12 for drinking purposes. When the pressure of the adult's foot is released from the foot operated electric switch device, spring 33 returns the pedal 26 to its normal position, as shown in full lines of Figure 3 of the drawings. The mercury in switch 30 then flows out of bridging engagement with the contacts thereof for breaking or opening the electric circuit to the valve actuating means or solenoid 19 whereby this solenoid is deenergized and the valve 18 closes to stop the flow of cool water from the fountain.

The water cooler cabinet 10 herein disclosed is also provided with a movable step-like electric switch device having a ledge projecting through the front wall 11 thereof and located at a height thereon intermediate the lower movable foot operated electric switch device and the top of cabinet 10 or the nozzle 22 thereon (see Figures 1 and 2). This device includes a member 41 pivotally mounted upon cabinet 10, as at 42, and has a step or ledge-like end 43 projecting outwardly of the front side wall 11 of cabinet 10. The member 41 has an inner end portion 44 which carries an electric switch such as a conventional mercury switch indicated at 45. Wires 46 and 47 extend from contacts of switch 45 and are connected to the wires 36 and 37 respectively in the electric circuit disclosed in Figure 4 of the drawings. A spring or the

like biasing means 48, having its one end secured to member 41 and its other end secured to a part of cabinet 10, holds the step-like end 43 of member 41 in a desired location to normally maintain switch 45 in an "off" position. The step-ledge 43 of member 41 is disposed at a predetermined height on the front of cabinet 10 suitable to permit a child to elevate himself or herself into a standing position thereon whereby he or she may drink from the fountain 22. In order that a child may have some means to assist it in climbing or stepping upon the step-ledge 43, I provide and rigidly secure an exposed handle or handles 49 to the cabinet 10, in spaced relation to walls 11 thereof, intermediate the step-ledge device and the top of the cabinet. Each of these handles 49 forms an elevated handhold at the sides of cabinet 10 (see Figures 1 and 2) for assisting a child in a manner to be presently described. This step-like electric switch device is movable and operable in response to the weight of a child standing on or supported upon the step-ledge 43 thereof. When a child, unaccompanied by an adult, desires a drink of cool water from the fountain of water cooler cabinet 10, he or she grasps the handhold or holds 49 and steps upon the step-ledge 43. The present arrangement is such that the weight of the child upon stepping on and being supported by the step-ledge 43 moves the member 41 about its pivotal mounting 42 to raise its inner end 44 into the position shown by the dot-dash lines in Figure 3 of the drawings. The end 44 of member 41 upon being elevated causes the mercury in switch 45 to bridge the contacts thereof to which wires 46 and 47 are attached and make or complete the electric circuit to solenoid 19 through wires 37, 47, 46, 36, and 38 to energize same and cause it to actuate valve 18 into open position. Valve 18 is thus automatically opened, in response to the child's weight on step or ledge 43 of the movable step-like electric switch device, and cool water flows in a stream from fountain or nozzle 22 for affording the child a drink. When the child steps down off the step-ledge 43, after drinking, spring 48 returns the pivotally mounted member 41 to its normal position, shown in full lines in Figure 3 of the drawings, and the lowering of end 44 of member 41 causes the mercury in switch 45 to break or open the electric circuit to solenoid 19 whereupon valve 18 closes and stops the flow of cool water out of nozzle or fountain 22.

While I have illustrated the foot operated device and the step-ledge device as being pivotally mounted upon cabinet 10, it is obvious that these devices may be mounted in any suitable or desirable manner for movement relative to the cabinet so as to carry out the function or result intended thereof. It is to be understood that either of the electric switch devices disclosed upon being moved in the manner described will cause energization and operation of the water valve actuating means or solenoid 19 to open valve 18 independently of one another. Due to the average height of water cooler cabinets of the type disclosed not being very tall and due to their containing considerable weight, that of the refrigerating system and water storage tank or coil, there is no likelihood of the water cooler cabinet 10 tipping forward when a child climbs or steps up on the step-ledge 43.

From the foregoing, it should be apparent that I have provided an improved refrigerated water cooler cabinet and have increased its use by enabling children, without the help of an adult, to obtain a drink of cool water therefrom. Children do not possess a natural instinct to search for or operate a valve actuating means on a water cooler. Thus, the feature of constructing the step-ledge of the one electric switch device so that it is moved in response to the weight of a child stepping and standing thereon, for automatically causing flow of cool water from the fountain, obviates the necessity of a child searching for and operating such a valve actuating means. By the arrangement disclosed, a child

can, himself or herself, obtain a drink of cool water from the water cooler cabinet unassisted by an adult, even though one is present and this prevents soiling of the adult's clothing.

While the form of embodiment of the invention as herein disclosed constitutes a preferred form, it is to be understood that other forms might be adopted, as may come within the scope of the claims which follow.

What is claimed is as follows:

1. A water cooling and dispensing apparatus comprising in combination, a cabinet having a water supply inlet thereto, means in said cabinet for cooling water entering same through said inlet, a drain catch basin on said cabinet, a nozzle for discharging a stream of water cooled by said cooling means upwardly over and into said basin, a valve for controlling the flow of water from said nozzle, means for actuating said valve, said valve actuating means including a manually movable device on said cabinet and a step-like device projecting outwardly from a side wall of said cabinet at a height thereon intermediate the bottom thereof and said nozzle, said step-like device being adapted to support a child thereon in a position permitting the child to drink from a stream of water flowing from said nozzle, said step-like device being movable in response to the weight of a child stepping thereon, means connecting each of said devices with said water valve actuating means whereby movement of either of said devices independently of the other causes operation of said valve actuating means to open said valve, and a hand hold on a side wall of said cabinet intermediate said step-like device and the top of said catch basin for assisting the child in stepping upwardly upon said elevated step-like device and for maintaining himself or herself balanced thereon while drinking from the stream of water.

2. A water cooling and dispensing apparatus comprising in combination, a cabinet having a water supply inlet thereto, means in said cabinet for cooling water entering same through said inlet, a drain catch basin on said cabinet, a nozzle for discharging a stream of water cooled by said cooling means upwardly over and into said basin, a valve for controlling the flow of water from said nozzle, means for actuating said valve, said valve actuating means including a movable foot-operated pedal device located on said cabinet adjacent the bottom thereof and a step-like device projecting outwardly from a side wall of said cabinet at a height thereon intermediate said foot pedal device and said nozzle, said step-like device being adapted to support a child in a standing position thereon to permit the child to drink from a stream of water flowing from said nozzle, said step-like device being movable in response to a child stepping thereon, means connecting said foot-operated pedal device and said step-like device with said water valve actuating means whereby movement of either of said devices causes operation of said valve actuating means to open said valve, and a hand hold on said cabinet intermediate said step-like device and the top of said catch basin for assisting the child in stepping upon said elevated step-like device and for maintaining himself or herself balanced in a standing position thereon while drinking from the stream of water.

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