A portable and collapsible shower for campers which includes a base structure forming a step portion and reservoir for water to be used in showering. The base structure includes a submersible pump connected through a flexible or rubber hose to a shower head which would be suspended above the reservoir to direct water therefrom back to the reservoir and onto the user. In the portable version, the shower includes a demountable frame for mounting an enclosing curtain for privacy, with the frame being modified in the case of a camper to be suspended directly from the ceiling thereof.
My invention relates to shower equipment as a part of camping apparatus and more particularly to an improved recirculating portable shower for campers, trailers or automobiles and particularly adapted for use in sites where running water is not available.

Portable and collapsible shower equipment are known and in use. Such apparatus is particularly adapted for use in areas or in camp sites where bathing facilities are not readily available. They have previously been built into campers or trailers and as such have been collapsible. However, all prior designs have required a pressurized water source and additional equipment for heating or tempering water. Further, where they have been applied to campers, they required complex built-in structures not readily available for modification of existing equipment. Separate collapsible and portable units have been complex in structure and required additional equipment making such structures not readily storable or portable.

My improved portable and collapsible shower apparatus provides a structure which is truly portable and compact and readily available for usage in areas where running water or pressurized water sources are not available and which may be readily built-in or attached to existing camping equipment with a minimum of modification.

My improved portable and collapsible shower in its portable or carrying form includes a boxlike base structure defining a reservoir for water in which is positioned a submersible pump operated by an electric motor and adapted to be energized from a battery source of a vehicle through an electric cable fitting into a cigarette lighter attachment or directly attaching to the battery cable. The boxlike structure houses a tubular frame which attaches thereto to form an enclosure upon which a curtain is mounted. The pump is connected to a flexible hose with a shower head thereon which is adapted to be connected to the upper part of the frame for a conventional shower attachment. The reservoir includes a step portion upon which a person would stand. Tempered water is placed in the reservoir prior to usage and the pump moves the water therefrom through the shower head with the water being returned to the reservoir. Energization of the pump is effected through connection of the same to the battery source, as indicated above. This same principle or apparatus may be readily installed in an existing camper by positioning the same in a table location wherein the base structure forms a floor section and support for the table. The table is readily removable and the seating arrangement defines the enclosure opening with the enclosure mounting being as in the portable structure or suspended from the roof of a camper with the same submersible pump moving water from the reservoir through the shower head and returning the same to the reservoir. The principle of operation of this shower unit is similar to a tub in that the same water is utilized rather than discharged water as it is used. This enables the user to merely fill the reservoir with water of a desired temperature for showering.

Therefore it is the principle object of this invention to provide an improved portable and collapsible shower for camping.

Another object of this invention is to provide a portable showering apparatus particularly applicable at sites where pressurized water sources are not available.

Another object of this invention is to provide a collapsible shower apparatus requiring a limited amount of storage space and which is readily erected for usage.

A further object of this invention is to provide a portable showering apparatus of this type which is energized from a battery source.

A still further object of this invention is to provide a portable and collapsible shower apparatus which may be readily installed in existing camping equipment or campers.

A further object of this invention is to provide a portable showering apparatus requiring a low voltage power supply to present no danger of electrical shock to the user.

These and other objects of this invention will become apparent from a reading of the attached description together with the drawings wherein:

FIG. 1 is a perspective view of my improved portable and collapsible shower apparatus in an erected position,

FIG. 2 is a perspective view of the showering apparatus of FIG. 1 in a collapsed and stored position,

FIG. 3 is a perspective view of a portion of a camper showing the improved portable showering apparatus in a stored condition, and

FIG. 4 is a perspective view similar to FIG. 3 showing the showering apparatus in an erected position.

My improved portable and collapsible shower for camping is shown in FIGS. 1 and 2 as a collapsible and portable unit. It includes a base structure, indicated generally at 10, which as will be seen in FIG. 2 forms the carrying case for the shower in the collapsed position. The base structure includes a bottom wall 12, side walls 11, end walls 15, and a foldable top wall 16 with flaps portions 17 hinged thereto. In the open position the base structure forms a watertight structure which is the reservoir for the shower into which water is positioned, as will be hereinafter noted. Attached to the sidewalls or base walls is a raised step portion 20 upon which the person using the shower will stand to be raised above the normal depth of water in the reservoir. This structure is preferably made of wood although other materials may be utilized therein. Positioned in the reservoir is a submersible pump 30 having an inlet 32 and an outlet 34, the pump being powered by an electric motor of the low-voltage type (not shown) which has connected thereto a electric lead lines 35 having suitable length and with a bayonet type connector 36 at the extremity of the same adapted to fit into a cigarette lighter receptacle of a standard automobile. As an alternative, a pair of clips (not shown) may be utilized at this extremity to connect the motor or lead lines directly to the battery of an automobile. The electric motor is of the low-voltage type for operating from the standard car voltage or battery voltage. The motor with the drives connected to the battery source and remain running until the lead lines are removed therefrom. Outlet 34 of the pump which is positioned within the base structure and attached to a sideway or bottom wall thereof, is connected to a rubber hose 40 with a sufficient length to reach the top of a shower enclosure, indicated generally at 50, to be hereinafter identified. At this extremity of the hose, a shower head 52 is connected, the shower head having a curved neck and a discharge opening 53 therein with a suitable hook 54 thereon. Above the same enclosure or curtain support 50 is formed of a plurality of tubular members 55 which fit telescopically into one another and mount the end walls of the base structure suitable brackets 60. The upper portion of the enclosure is formed by a generally rectangular frame structure 65 having suitable cross braces 66 therein and downward extending tubular members 67 which fit into the upper tubular members 55 of the enclosure. The width and length dimensions of this rectangular frame are less than the interior dimensions of the rectangular base structure such that the same may be positioned therein in the collapsed position of the shower. Similarly the length of the tubular members 55 are such as to fit within the enclosed case in the dismantled position of the shower. The brackets and lower tubular members of the enclosure are slightly inclined so that when the tubular members are erected or connected, they will fit into the depending tubular portions 67 of the head frame to rigidly mount the same. Positioned on the head frame thereon are a plurality of rings 80 having suitable snaps thereon which fit through eyelet holes 82 in the shower curtain 84 for the purpose of mounting the same on the head frame.

The portable shower is readily erected at a camp site or place of usage by merely opening the top flap 16 of the base structure 10 and extending the flap portions 17 so that they ride on the sideway or end walls 11 and 15 of the base structure. The tubular sections 55 are removed and installed placing the same through the supporting brackets on the end walls of the
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base structure with the head frame being mounted at the top of the same. Thereafter the curtain is attached by positioning the rings 80 through the eyelets 82 in the curtain 84 suspending the same and attaching the shower head 53 to the head frame by means of the ring 54. The rubber hose will normally be connected to the shower head and motor and will fold in the collapsed position such that it may be stretched and suspended from the head frame for installation. Thereafter and for usage, water which has previously been heated is poured into the reservoir and the electric lead lines 35 are connected to the battery source either through the plug 36 in the cigarette lighter of a vehicle or directly to the battery, if battery clips are positioned on the extremities of the lead lines. Water will be pumped from the reservoir through the rubber hose or flexible conduit to the shower head wherein it will be sprayed down the enclosure and returned to the reservoir. The water, similar to bath water, will be recirculated to enable a person to shower at a location where running water is not available. The entire structure may be readily collapsed and stored by reversing the procedure and the complete portable shower is housed in a case defined by the base structure with a suitable carrying handle 90 for positioning the same. Thus it may be readily stored and handled for camping.

An alternate embodiment of the structure is shown in FIGS. 3 and 4 applying the same structure to the interior of a camper. Although the camper frame is not shown, the seating structure 100 is indicated as a dinette section of a conventional camper having a table 102 supported therein. The problem of applying a shower to a nonmodern camper or camper is finding the physical space to erect the same. The improved collapsible and portable shower may be readily applied to the seating or dinette area of such campers which normally have a 2 by 3 foot opening around the seats to position the table 102 therein. These are the approximate dimensions of the base structure or case 10 shown in FIGS. 1 and 2 and the same may be readily inserted by removal of the table and providing a mounting for the same on the lid structure 16 or top wall of the base structure which mounting would provide for readily removing the table with the same. Thus the base structure 10 applied to the existing table in the dinette area would merely raise the table and floor structure within the seating area by the height of the case. This structure would be erected for usage in the same manner where tubular portions are used. In the embodiment shown in FIG. 4, the poles are omitted since the ceiling of the camper or trailer may provide hooks 105 to suspend the head frame 65 of the enclosure eliminating the need for the tubular portions to mount the same directly to the base. Thus in FIG. 4, the head frame 65 with the rings 80 thereon mounts the curtain 84 directly to the ceiling and the submersible pump 30 in the reservoir portion of the base structure will have attached thereto the flexible hose 40 leading to the shower head 53 which would be suspended from the frame by means of the hook 54. The structure would be used in the same manner by heating or tempering water and pouring the same into the reservoir. The motor would be connected to a power source such as the battery and through the leads 35 which we could connect to existing battery wiring in the trailer or to the vehicle associated therewith. The collapsible and portable shower functions in the same manner in that it pumps water from the reservoir through the shower head with the water being returned to the reservoir to be recirculated for showering purposes. The head frame 65 and curtain together with the shower head 53 and hose 40 all collapse and store the same within the base structure 10 when not in usage. Water may be removed from the reservoir when the shower is not in use by continuing pumping operation and directing the shower head to some point remote from the trailer.

In my improved portable and collapsible shower, I have provided a structure which forms a reservoir into which tempered water may be placed and pumped to a shower head. This water will be recirculated and the base structure provides means for mounting an enclosure for privacy of the user. The entire structure is readily erected and dismantled as well as being stored within the base structure in the closed position. In the case of the camper, removal of the table support and table may be readily facilitated by the mounting of the same thereon which would be detachable.

In considering this invention it should be remembered that the present disclosure is illustrative only and the scope of the invention should be determined by the appended claims.

What is claimed is:

1. A portable shower comprising, a base structure forming a reservoir, a submersible pump mounted in the base structure in the reservoir, said pump having an inlet common to the reservoir and an outlet conduit, flexible conduit means connected to the outlet conduit, a shower head connected to the opposite extremity of the flexible pipe and adapted to be elevated above the base structure, said reservoir in said base structure being adapted to be filled with tempered water, and means for operating the pump to pump the tempered water from the reservoir through the flexible conduit to the shower head with the water being returned to the reservoir.

2. The portable shower of claim 1 and including enclosure means supported in common with the base structure and having means thereon for supporting the shower head elevated above the reservoir.

3. The portable shower of claim 2 in which the means for operating the submersible pump includes an electric motor adapted to be connected to a battery source of power.

4. The portable shower of claim 3 in which the base structure is a boxlike member having side and bottom walls and foldable top wall with side and bottom walls defining the reservoir and in which a raised step portion is mounted on the bottom wall of the base structure and extending over a portion of the same.

5. The portable shower of claim 4 in which the enclosure means includes a demountable frame means supporting an enclosing curtain and extending from the base structure with the flexible conduit and the shower head mounted thereon.

6. The portable shower of claim 1 in which the enclosure means, flexible conduit and the shower head are collapsible to be positioned within the base structure and enclosed by the foldable top portion thereof.

7. The portable shower of claim 6 in which the foldable top portion forms a side enclosing the base structure to provide a carrying case for the shower.

8. The portable shower of claim 5 in which the demountable frame means includes a head frame upon which the curtain is suspended and sectioned supports which telescopically fit together and mount in holders on the base structure to support the head frame.

9. The portable shower of claim 5 in which the demountable frame means includes a head frame mounting the shower curtain and including means to support the same on the structure mounting the base structure.

10. The portable shower of claim 4 in which the foldable top portions are a plurality of hinged side members adapted to be opened in an upright position parallel with the sidewalls of the base structure to form water deflectors around said enclosure means.

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