This invention relates to certain new and useful improvements in hiking and survival back packs. More especially my invention relates to a portable hiking pack embodying a camp stove and provided with straps whereby it may be hung over the hiker's shoulders, and also provided with a body engaging canvas bands so that the pack may be carried upon the back of the hiker in comfort.

There are several advantages to the use of a pack embodying a stove for burning liquefied petroleum gases, sometimes referred to as L.P. gases. The resulting flame is clean and odorless. Ordinarily, the fuel is easily portable in relatively small containers which withstand the high pressures to which the gas is subjected in storage. These gases, particularly propane, will volatilize at the normal ambient temperatures one encounters in most parts of the country and, therefore, make a suitable fuel for use in practically all localities. Especially is a stove desirable in arid areas where grass and forest fires are an ever present danger, where open fires cannot be tolerated even with a slight wind. Wood burning stoves requires one to locate firewood and this is not always easy and convenient when one is hiking and especially above the timber line; this increases the normal cooking time and requires extra clean-up time. The present structure provides a new and improved pack with a stove arranged therewith which overcomes the difficulties enumerated above.

It is, therefore, the primary object of this invention to provide a new and improved portable pack with a gas stove arranged therewith.

Another object of the invention is to provide a pack embodying a stove for burning L.P. gas and at the same time provide a maximum heating in the shortest interval of time from starting.

Another object of the invention is to provide a pack embodying a stove easily and quickly convertible from a storage condition to one of use, maintaining at all times an even and uniform flame of consistent characteristics preventing the blackening of pots and pans while in use.

Another object of the invention is to provide a portable pack having supporting means and a rectangular shaped aluminum cabinet combined therewith and having an insulated shelf arranged between the upper and lower cabinet walls thereof providing a cooking compartment and a storage compartment for the foods to be cooked.

Another object of the invention is to provide ventilation across the back of the pack and thereby contribute to his comfort and well being.

Another object of the invention is to provide a pack cabinet and lower supporting means which will support suitable side pockets, will support a storage bag on top of the cabinet, will support a sleeping bag below the cabinet and will support canteens below the side pockets for carrying water for drinking, cooking and cleaning purposes.

Another object of the invention is to provide the cabinet with a hinged vertical front wall enclosing the cooking and food storage compartments so that this wall hinged at its base portion will serve as a table top when the cabinet is open, will retain the contents within their compartments and providing a protection of the contents from damage when the cabinet is closed.

Another object of the invention is to provide means for the removal of the gas stove and fuel container, and support units of either impregnated wood or canned fuel should an emergency arise.

Another object of the invention is to provide a pack with a cabinet and supporting means assembled therewith, pack supporting wheels mounted on the lower portions of the supporting means, and a handle secured to the upper portions of the cabinet for lifting and carrying of the entire pack over uneven surfaces, up and down steps, and which can be used efficiently on surfaces other than concrete pavements, walks, or the like, when not carried upon the back of the user.

These objects and the several novel features of the invention are hereinafter more fully described and claimed, and the preferred form of construction by which these objects are attained is shown in the accompanying drawings in which:

FIGURE 1 is a side elevational view of the pack embodying the present invention and showing the insulated hinged front wall in a lowered position for use as a table;

FIGURE 2 is a front elevational view of the pack shown in FIG. 1;

FIGURE 3 is a top plan view of the pack shown in FIGURES 1 and 2;

FIGURE 4 is a side view of the pack of the present invention in use;

FIGURE 5 is a perspective front view of the pack of the present invention in use;

FIGURE 6 is a fragmentary sectional view taken on line 6—6 of FIG. 7 through the metal cabinet of the present invention showing the arrangement of the fuel container and fuel burner therein;

FIGURE 7 is a fragmentary sectional view taken on line 7—7 of FIG. 6;

FIGURE 8 is a fragmentary sectional view taken on line 8—8 of FIG. 7;

FIGURE 9 is a perspective view showing two substitute heating means to replace the preferred gas heating means;

FIGURE 10 is a top plan view of the grid used in the invention; and

FIGURE 11 is an enlarged perspective view of the hiking pack embodying this invention and showing the hinged front wall in a lowered position for use as a table;

A rolled sleep bag is shown by dotted lines and forming a part of the pack.

Referring more particularly to the disclosure in the drawings, the numeral 15 designates generally the main cabinet of my individual carrying pack. The cabinet 15 comprises a bottom wall 16, two side walls 17 and 18, a top wall 19, a concave rear wall 20 and a front closure panel 21, all of formed sheet metal. The closure panel 21 is hinged securely to the front portion of the cabinet by a pair of hinges 22 rigidly secured to a lateral panel 23 adjacent the bottom wall 16 and extending between the side walls thereof. The lower half of the hinge being mounted upon said panel 23 and the co-operating upper half of the hinge being mounted with said closure panel 21.

A pair of chains 25 are employed to support said closure panel 21 in its horizontal position to provide a shelf or table. The upper ends of the chains are secured to the forward edge portions of the cabinet at substantially midway between the top and bottom walls, the lower ends of the chains being secured to the edge portions of said panel 21 substantially mid-way between the upper and lower edge portions thereof. A solid shelf 27 is arranged in said cabinet parallel with and between said top and bottom walls, said shelf dividing the cabinet into two compartments one above the other, the upper compartment being completely sealed off from the lower compartment forming a food storage compartment;
the shelf 27 being of heat insulating material prevents any heat in the lower compartment from entering the upper compartment when the front panel 21 is in its closed, vertical position and arranged in tight engagement with the cabinet by spring latch 30, secured to the top shelf of the cabinet and extending forwardly therefrom to engage the top edge portion of the panel 21.

In the lower compartment 29 I desirably provide a fireproof cooking compartment since the walls and shelf 27 are formed of fireproof material. As seen best in FIGURES 6, 7 and 8, I prefer to locate a heating element, such as a gas burner 31, or a canned fuel burner 32, or an impregnated wood type element 33. I prefer to use the gas burner type heating element 31 which includes the usual mechanism as far as the operator is concerned. These parts include a bow type burner structure 35; a removable container 36 for liquefied petroleum gases, often referred to as L.P. Gases, as a fuel in portable stoves, or other types of liquefied gases; and means such as a bolt and nut type means 37 for securing the gas burner ends 33 to the bottom wall 16; a gas supply line 38, and a needle valve 39 equipped with a thumb screw for control and regulation of the flow of gas from the container 36. The position occupied by the stove 35 is important, as well as the evacuation of the combustion gases. The stove 35 is secured substantially centrally upon the lower wall 16, or at least midway between the front and rear elements of the cabinet. The container 36, as shown by FIGURES 6 and 7, is arranged along one side wall of the cabinet and clamped upon the floor thereof, so that it is accessible for replacement through the front opening of the lower compartment 29. The needle valve 39 is assembled upon the container 36 and is connected to the gas supply line 38. The supply line 38 is bent angularly and upwardly and then horizontally and arranged to pass over the top of the burner, then passes downwardly and connects with the side of the burner 35. The passage of the supply line 38 over the burner allows the supply line to become heated by the flame from the burner and effecting proper operation of gas from the liquefied fuel carried by container 36. Should the occasion arise that all the gas is consumed, and the user is on a hiking trip, he can remove the stove 35 by removal of the locking nut on the bolt 37 and substitute either the canned fuel element 32 or impregnated wood element 33 which are carried elsewhere upon the exterior of the cabinet by suitable means.

The burner itself, secured to the bottom of the cabinet, is of simple structure and need not be described in detail, has a corrugated top plate member 40 whereby a suitable flame is produced by mixture of air with the generated fuel. The stove is caused to produce a uniform and even heat by insuring that only fuel in the gasous state is conducted to the burner once the burner is ignited.

A grill, or grid 45, substantially rectangular in shape, as shown by FIG. 10, is formed of a plurality of parallel wires or rods 46 joined at their ends by transverse members 47 and 48 joined at their center. The grid is removably mounted above the burner 31 and parallel with the bottom wall 16 of the cabinet.

The side walls 17 and 18 of the cabinet are provided with integral depending extensions, or side members 50, each provided with end extensions, or base members 51. The side members being substantially identical constitute the lower supporting means for the cabinet. The base members 51 have forward end portions 52 which are formed angularly and downwardly forming ground engaging means, and they have rear end portions 53 with rollers, or wheels 54 rotatably mounted thereon forming mobile supports; the forged ends 52 being substantially in the horizontal plane as passes beneath the rollers 54 and in that position, thereby keeping the cabinet in vertical position when supported upon the ground. The rear edge portions of the side panels 17 and 18 are provided with a plurality of openings, or vertically longitudinal slots 56 and 57, two slots in each side being shown therein. Cross-wise extending flexible support webbing members 58 and 59 are arranged in the slots 56 at the top and slots 57 in the depending portions 50. The support webbing member 58 will extend between the shoulder blades of the user and the concave exterior surface of the back wall 20 forming a comfortable supporting means. The supporting webbing member 59 will extend between the cabinet and the small of the back adjacent the hips of the user.

A reinforcing plate 60 for attachment of shoulder straps is rigidly secured to the top wall 19 of the cabinet, or do not wish to confine myself to the exact details of construction shown, as various forms, modifications and arrangement.
of parts as shown may be had without departing from the spirit and scope of the invention as claimed.

I claim:

1. A hiking pack provided with a walled cabinet, comprising a flat bottom wall, a flat horizontal top wall, two vertical side walls, a concave rear wall, a rigid lateral vertical front panel extending a short distance upwardly between the side walls and adjacent the front edge portion of the bottom wall thereby enclosing the lowermost portion of said cabinet, a flat solid shelf arranged horizontally between the said flat top and bottom wall dividing the cabinet into a pair of vertically arranged forwardly-facing open-front compartments, a flat horizontal drop door type front wall carried thereby, the cabinet dimensioned and hingedly secured at its bottom edge portion to the upper edge portion of said rigid lateral front panel for closing and sealing both of said open-front compartments when arranged in a vertical position and in contact with the forward edges of said side walls, a pair of flexible chain means attached at the side walls and to said front closure panel for supporting said closure panel in a horizontal position extending forwardly and outwardly from said lateral front panel leaving said compartments in open condition, the lower wall member being formed of material with suitable insulation preventing any heat within said lower compartment from being conducted into said upper compartment, said side walls forming integral integral support members adapted to contact the ground to support the cabinet in an upright position when so positioned relative to the ground, a single strap fastener secured to said top wall midway between said side walls and adjacent said concave rear wall, a pair of shoulder straps, the upper ends of said straps being attached to said top wall, and the lower ends of said straps attached by suitable means to the lowermost end portions of said integral depending supporting members of said side walls.

2. The hiking pack structure according to claim 1 characterized in that the side wall depending supporting members are in the same vertical plane embodying its associated side wall, and the forward end portions of said base portions are formed angularly and downwardly whereby the forward ends thereof are in horizontal alignment with the ground contacting surface of said supporting wheels at the rear ends thereof.

3. The hiking pack structure according to claim 1 wherein the side wall depending supporting members are of inverted T-shape configuration providing a horizontal base portion therefrom, and each base portion including supporting wheels mounted on the rear ends thereof.

4. The hiking pack as defined in claim 3, in which the supporting members are in the same vertical plane embodying its associated side wall, and the forward end portions of said base portions are formed angularly and downwardly whereby the forward ends thereof are in horizontal alignment with the ground contacting surface of said supporting wheels at the rear ends thereof.

5. The hiking pack as defined in claim 4, in which a plurality of rods interconnect said base portions and space them apart, said cabinet further embodying an upright handle support member secured to and projecting upwardly and rearwardly from each of the two side walls thereof, and a rod type handle connecting said handle supporting members together at their upper free ends.

6. A hiking pack, comprising a cabinet, said cabinet having a hinged drop door type front wall carried thereby, a concave vertical rear wall, two vertical side walls, a flat horizontal top wall, a flat horizontal bottom wall, a lateral vertical front wall panel extending between said side walls adjacent the forward edge portion of said bottom wall and extending a short distance upwardly therefrom, a horizontal shelf of non-heat conducting material arranged between said top and bottom walls forming a pair of vertically arranged, forward-facing compartments, said drop door type front wall being dimensioned and hinged at its bottom portion for closing the open-front compartments when arranged vertically and in contact with the forward edges of the side walls, said front wall hinged to the upper edge of said lateral front wall panel, a pair of chains attached at their upper ends to the upper portions of said side walls, the lower ends of said chains attached to said drop door type front wall thereby supporting it in horizontal plane leaving said compartments in open condition, said front wall when in lowered position extending forwardly and outwardly and in a plane parallel to the plane enclosing said cabinet bottom wall and spaced a short distance above the same, said lower compartment having a gas type burner means secured therein with a gas container, a grill arranged above said gas burner means parallel to the bottom wall of said cabinet, a tubular pipe means connecting said burner means with said gas container, a single strap fastener secured to the upper wall of said cabinet adjacent its rear wall, a pair of shoulder straps attached at their upper ends to said single strap fastener, and each of said straps arranged at their lower ends to a common metal rod extending between integral side wall extensions depending from the rear edge portions of said side walls, said extensions being of inverted T-shape and forming ground contacting means for supporting said cabinet when arranged relative to the ground.

7. The hiking structure according to claim 6 wherein the side wall depending extensions form a pair of integral leg members of inverted T-shape and forming ground contacting means, each ground contacting means extending forwardly and rearwardly relative to said cabinet, and rear end portions of said ground contacting means each including supporting rollers mounted thereon providing a mobile structure.

8. The hiking pack structure according to claim 7 wherein the forward end portions of said ground contacting means are formed angularly and downwardly, whereby the ends thereof are in horizontal alignment with the ground contacting surface of said supporting wheels.

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