

[54] **CARRIER FOR PORTABLE HEATER**

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[58] Field of Search **126/204, 206, 208; 2/66**

[56] **References Cited**
UNITED STATES PATENTS

2,727,241	12/1955	Smith	2/66
282,391	7/1883	Smith	2/66
2,014,256	9/1935	Kramer	2/66

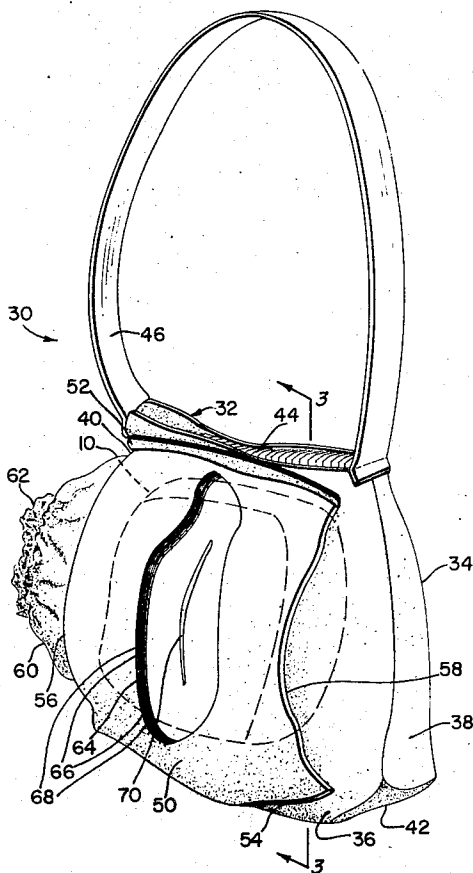
2,835,896	5/1958	Giese	2/66
3,491,373	1/1970	Thomas, Jr.	2/66

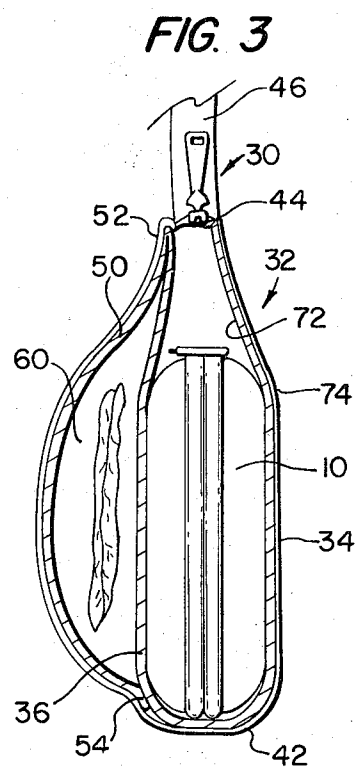
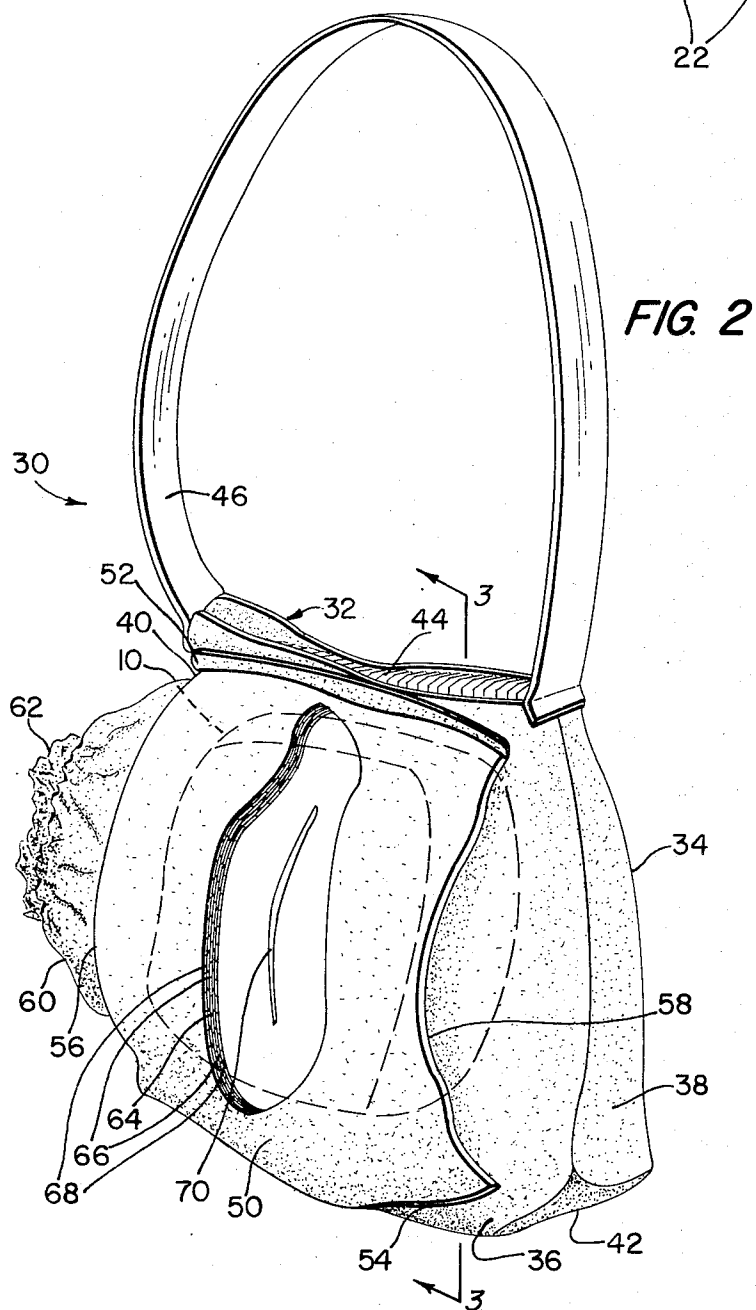
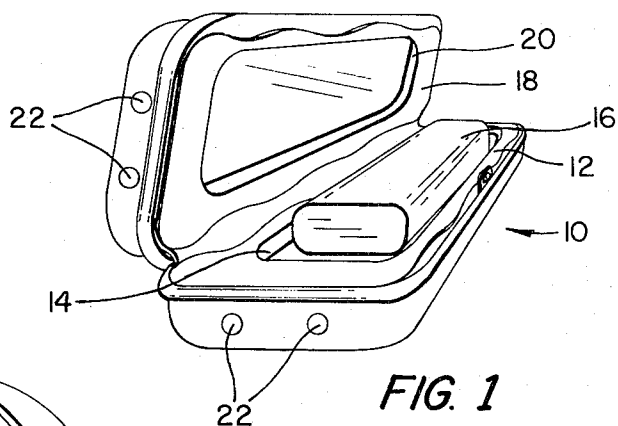
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[57] **ABSTRACT**

A carrier is provided for a portable heater, the heater comprising a solid combustible fuel element and an air permeable incombustible casing, said carrier being in the form of a bag of air pervious material having a zippered opening, and a flap secured to an outer wall of the bag at the upper and lower margins, leaving hand openings at either end. The openings may be provided with sleeves, and the flap-covered outer wall may have a slit to provide access to the bag interior.

8 Claims, 3 Drawing Figures





CARRIER FOR PORTABLE HEATER

BACKGROUND OF THE INVENTION

The present invention relates to a carrier for a portable heater, for use as a hand warmer out of doors by spectators, sportsmen and the like.

It has long been known to be desirable to provide protective clothing for people engaged in such outdoor pursuits as hunting, fishing, skiing, etc., as well as outdoor spectator sports. For the hands, in particular, mitts and gloves have been provided, but in situations where there was long exposure to cold, where the temperature was unusually low, and/or a strong wind was blowing, these protective clothing devices were not found to be satisfactory, since they had no source of heat incorporated in them. Consequently, there were later developed various articles of clothing which had an energy source.

One typical type of clothing including an energy source was the glove, sock or the like which was heated by the incorporation therein of small conductive wires or similar elements, with energy supplied from a small battery. While these gloves and socks generally proved to be satisfactory as long as the battery was operative, it frequently happened that the battery became inoperative at inopportune times, and spare batteries were not available. Also, it is known that some batteries are prone to having their lives shortened, or their energy level lowered, by exposure to cold. Hence, the battery operated clothing has not provided a completely satisfactory solution.

Other types of heating devices for these areas of use include hand warmers in the nature of small portable and hand-size heaters having as their source of energy some combustible fuel. The most prominent fuels have been liquid fuels, and in some instances, solid fuel has been used. In a known portable heater, a solid fuel element in the shape of a briquette or an elongate stick was provided, for ignition by a match or lighter, and the briquette or stick was carried in a suitable casing which was of some incombustible material, but which was supplied with openings or apertures to permit the circulation of air therethrough, so as to supply the necessary oxygen to the solid fuel element therein.

SUMMARY OF THE INVENTION

The present invention provides a carrier for a portable heater of the type comprising a solid combustible fuel element supported in an incombustible casing, which is substantially hand-size. This carrier is in the form of a bag having an opening at the top thereof, which is closed by a suitable closure, such as a zipper. The portable heater is placed in the bag and the zipper closed. In addition, a flap is secured to an outer wall of the bag, the flap having a generally rectangular shape and secured along its top and bottom edges to the outer wall, as by stitching. At the sides of the flap, a pair of wrist protectors are secured, the wrist protectors being in the form of sleeves having elastic bands at their outer ends to provide cuff-like arrangements. Thus the hands of a sportsman may be inserted through the sleeves, and occupy the warming space provided between the outer wall of the bag and the flap. In addition, a slot may be provided in the outer wall, underlying the flap, so that the hands of the wearer may be inserted through the slot, into direct contact with the portable heater. A

shoulder strap is preferably provided so that the bag of the carrier may be slung over the shoulder of the wearer, or around his neck. The material of the bag and flap is air permeable, so that air may pass through and support the combustion of the solid fuel in the heater: preferably an inner layer of wool-felt and an outer nylon fabric cover are used as the material for the bag and flap.

Among the objects of the present invention are to provide a carrier for holding a heater of the solid fuel and casing type, and to provide such a carrier which will both retain the heat of the portable heater, and permit air to pass to the solid fuel thereof. Another object of the present invention is the provision of a carrier having provision for hand access to the heater. A still further object of the present invention is to provide a carrier which will avoid loss of the heater, and at the same time provide a place sheltered from the wind and the elements where the hands of a person may be warmed without undue loss of heat therefrom. Other objects and many of the attendant advantages of the present invention will be more readily understood from the following specification and drawings.

BRIEF DESCRIPTION OF DRAWINGS

FIG. 1 is a perspective view of a portable heater of a known type.

FIG. 2 is a perspective view, with parts broken away, of a carrier in accordance with the present invention.

FIG. 3 is a cross sectional view taken on the line 3-3 of FIG. 2.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings, wherein like or corresponding reference numerals are used to designate like or corresponding parts throughout the several views, there is shown in FIG. 1 a portable heater generally designated 10 which includes a casing bottom 12 having a recess 14 therein for supporting a solid fuel element 16. Hingedly connected to one edge of the bottom 12 is a casing top 18, which may also be provided with a suitable recess 20. The casing parts 12 and 18 are of a suitable incombustible material, and may include openings 22 or the like for permitting combustion-supporting air to reach the solid fuel element 16. A suitable closure element is provided so as to hold the casing parts 12 and 18 in closed position. As will be understood, the solid fuel element 16 may be ignited by a match, lighter, or the like, and then the heater may be closed and held in the closed position, combustion or burning of the fuel element 16 continuing for as long as 12 hours, depending upon the size of the fuel element 16.

In order to provide a suitable carrier for the heater 10, to avoid loss, and the like, there is provided a carrier 30, as shown in FIGS. 2 and 3, carrier 30 comprising a bag 32 having walls 34 and 36 forming its sides, end walls 38 and 40, and the bottom 42. An opening is provided at the top of the bag 32, closed by a suitable closure such as the zipper 44. A suitable strap 46 has its ends attached to the bag 32 adjacent the top thereof. Within the walls and bottom of the bag 32 there is provided a compartment for the heater 10, which is shown within the compartment, in dashed lines.

Secured to the outer wall 36 of the bag 32 is a flap 50, flap 50 being secured adjacent its top margin 52

and bottom margin 54 by means such as conventional stitching. The flap 50 is generally rectangular, and the vertical margins 56 and 58 thereof are not secured to the wall 36 of bag 32, but instead preferably have wrist protectors 60 secured thereto. Wrist protector 60 is generally in the form of a sleeve having its inner end stitched to the edge 56 of flap 50, and also stitched to the outer wall 36 of the bag 32. A constriction of the outer end of sleeve 60 is provided by an elastic band, not shown, which provides the shirring 62, in the form of a cuff. It will be understood that there is a wrist protector 60 at each end of the flap 50, and the wrist protector 60 at the right hand end of FIG. 2 will be understood to have been tucked between the flap 50 and the outer wall 36 of bag 32.

There is provided in the wall 36, near the middle thereof, a generally vertically extending slot 70, which will permit entry of the hands of the user, or at least the fingers of a user, into the compartment holding the heater 10, so as to enable the fingers or hand to come into direct contact with the heater 10.

The flap 50 is made of multiple layers including a middle layer 64 of polyester urethane, intermediate layers 66 of glass wool, and outer layers 68 of woven nylon. Thus the flap 50 has great insulative value, permits passage of a small quantity of air, while being substantially wind and water proof.

Referring now to FIG. 3, there may be seen the heater 10 within the compartment of the bag 32 of carrier 30, lying on the bottom wall 42, and between the outer walls 34 and 36. There may also be seen the flap 50 with the upper edge 52 and lower edge 54 secured to the outer wall 36. The wrist protector 60 is indicated between the flap 50 and wall 36.

As will be seen from FIG. 3 in particular, the bag 32 is made of a suitable material comprising an inner layer 72, which is of air pervious wool-felt, the felt layer 72 being covered by a nylon fabric cover material 74, which is woven so as to permit the passage of some air therethrough, sufficient to support combustion, and which is also substantially water-proof.

In use, the fuel element 16 is lighted as above noted, and the portable heater is then placed within the compartment of the bag 32 of carrier 30. The zipper is then closed, and the bag 32 may be supported by the strap 46 extending about the neck of the user. The user's hands may then be inserted through the wrist protectors 60, where the elastic band therein will prevent the entry of cold air, particularly when the wind is blowing. If it is necessary or desirable to have the fingers and/or entire hand of the user warmed more quickly, use may be made of the slot 70 in the wall 36 so as to establish direct contact between the hand and the heater 10. The material of the bag will be seen to be heat insulative, keeping the heat within the bag, and within the compartment defined by the flap 50, while at the same time permitting combustion to continue by permitting a small but sufficient amount of air to pass through the

material from which the bag 32 is made.

There has been provided a carrier for a portable heater of the type containing solid fuel, which will prevent the loss of the heater, while providing ready access for the hands of the user, the carrier herein being readily transported by a person by carrying it by a suitable strap over his shoulders. The present invention carrier will be seen to protect the hands against the elements by a relatively wind-proof compartment, and also provides direct access for the hands to the heater. The present invention heater carrier also provides suitable combustion air to the heater, while preventing water, such as rain, from reaching the fuel element of the heater.

It will be obvious to those skilled in the art that various changes may be made without departing from the spirit of the invention, and therefore the invention is not limited to what is shown in the drawings and described in the specification but only as indicated in the appended claims.

I claim:

1. A carrier for a portable heater which includes a solid combustible fuel element supported in an air-permeable incombustible casing, said carrier comprising:

a carrying bag including an opening for receiving a portable heater, closure means for said opening, a flap, means for securing said flap to an outer wall of said bag only along the upper and lower margins of said flap, said flap having end margins thereof in adjacent relationship to said outer wall of said carrying bag and free of attachment thereto, thereby defining openings at the ends of said flap between the flap and bag to provide an entry for hands between the flap inner surface and the adjacent bag outer surface,

and slot means in the said wall underlying said flap for providing access of hands therethrough to the interior of said bag for engaging a heater therein, said bag being of air pervious material.

2. The carrier of claim 1, and sleeve means attached to said flap margins and said outer wall at said openings.

3. The carrier of claim 1, and strap means attached to said bag for supporting said bag from the neck of a wearer.

4. The carrier of claim 1, said material comprising an inner layer and an outer covering.

5. The carrier of claim 4, said inner layer being felt.

6. The carrier of claim 5, said outer covering being woven nylon.

7. The carrier of claim 1, said flap comprising multiple insulative layers.

8. The carrier of claim 1, said flap comprising inner layers of polyester urethane and glass wool and outer layers of woven nylon.

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