Jan. 17, 1967 E. J. LARSON, JR 3,298,382

TEMPORARY SHELTER FOR INJURED PERSONS

Filed April 28, 1965

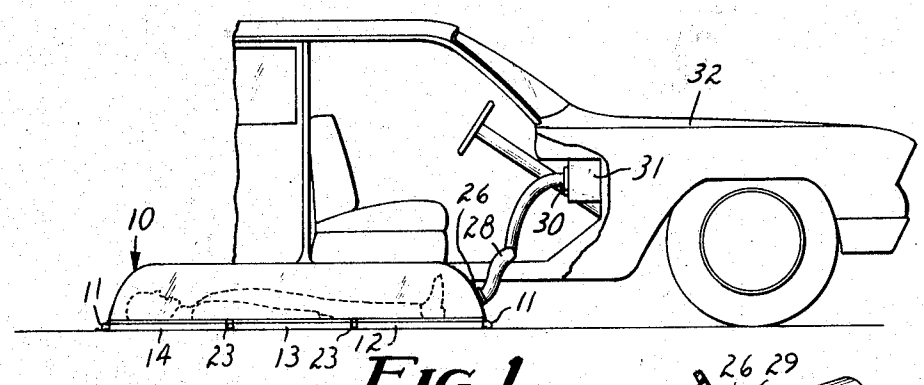


FIG. 1

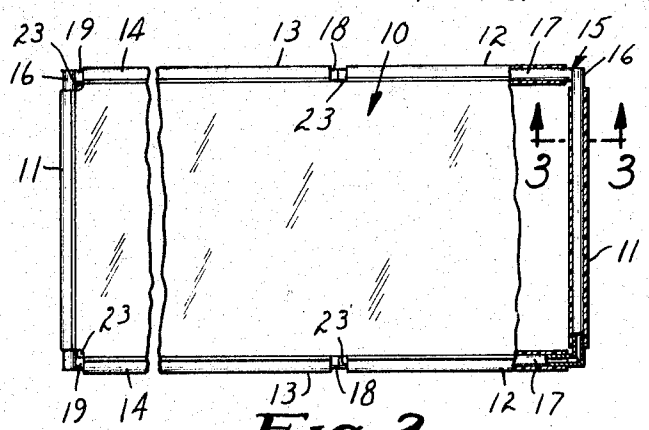


FIG. 2

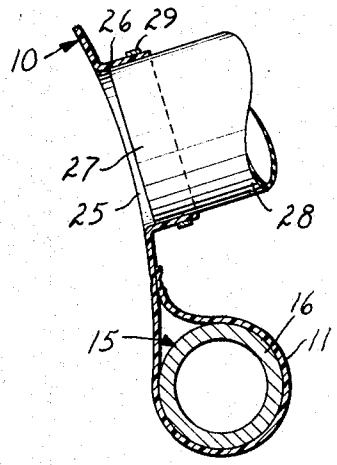


FIG. 3

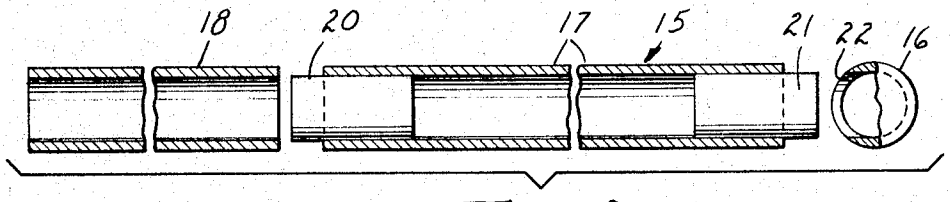


FIG. 4

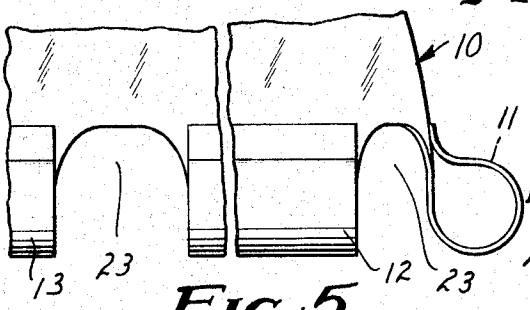


FIG. 5

INVENTOR.
ERNEST J. LARSON JR.
BY
Merchant, Merchant & Gould
ATTORNEYS

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TEMPORARY SHELTER FOR INJURED PERSONS

Ernest J. Larson, Jr., 4808 Dunberry Lane, Minneapolis, Minn. 55424

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This invention pertains to a temporary shelter for injured persons and more specifically to a cover for injured persons which may be attached to an automobile heater or the like to maintain said injured person comfortable while waiting for an ambulance.

In many instances such as when pedestrians are struck by automobiles, etc. injured persons must lie on the ground until an ambulance arrives to move them. In these instances an injured person is highly susceptible to pneumonia and other complications due to the great difficulty in maintaining him warm and comfortable.

In the present invention a temporary shelter is provided for injured persons to maintain them warm and comfortable until the arrival of an ambulance or the like. This temporary shelter includes a cover, which may be rigid and semi-cylindrical with the ends closed or which may be flexible and somewhat inflatable. The cover defines a body receiving opening thereunder and, in conjunction with the ground, completely encloses the injured person.

The cover has an opening at one end thereof with a passageway such as a hose or the like attached thereto. The other end of the hose is adapted to be connected to the heater in a police car or the like. Thus, the injured person is stretched out on the ground and the cover is placed over him. The hose communicating with the opening under the cover is attached to the heater in the police car or the like and the blower on the heater is turned on to force air into the opening under the cover to maintain the injured person warm and comfortable until the arrival of an ambulance.

It is an object of the present invention to provide a temporary shelter for injured persons.

It is a further object of the present invention to provide a temporary shelter for injured persons into which warm air under pressure may be introduced.

It is a futher object of the present invention to provide a temporary shelter for injured persons which may be quickly and easily attached to the heater of an automobile.

These and other objects of the present invention will become apparent to those skilled in the art upon consideration of the accompanying specification, claim, and drawings.

Referring to the drawings, wherein like characters indicate like parts throughout the figures:

FIG. 1 is a view of the present invention attached to an automobile heater;

FIG. 2 is a view in top plan of the present invention, parts thereof broken away and shown in section;

FIG. 3 is a sectional view as seen from the line 3—3 in FIG. 2;

FIG. 4 is a sectional view of the side of the frame; and

FIG. 5 is a detailed view of the frame holding edge of the cover.

In the figures the numeral **10** designates a cover which is generally semi-cylindrical in shape with the ends thereof closed. The cover **10** may be composed of a rigid material or, as in the present embodiment, a flexible material which is easily foldable for storage. As can be seen in FIGS. 3 and 5 the edges of the cover material are folded back to form a plurality of loops therearound. The material of the cover **10** is cut at the corners and centrally on either side to form a plurality of small openings **23** along the bottom which are utilized for circulation of air, as will be explained in more detail later, and aid in assembling the shelter. The turned-back edges on either end of the cover material form a single loop **11** along substantially the entire end. Three loops **12**, **13** and **14** are formed along the lower edge of the cover **10** on either side thereof. The described loops may be constructed by folding the material back on itself and fastening the edge to the main body of the material by some means such as sewing, heat sealing, etc.

An interlocking frame **15** fits into the loops **11–14** and maintains the edges of the cover **10** parallel to the ground and fixedly in contact therewith. The frame **15** is composed of two similar end pieces **16** and three side pieces **17**, **18** and **19** on either side thereof. The frame **15** is in general constructed of tubular pieces which are hollow and may be made of a material such as aluminum for lightness.

In this embodiment a tubular piece **18** is centrally located on either side of the frame **15** and the tubular pieces **17** and **19** have a plug **20** fixedly secured therein which projects axially from the end thereof and is adapted to insert into one end of the tubular piece **18**. Thus, when the plug **20** of the tubular piece **17** is coaxially inserted in one end of the tubular piece **18** and the plug **20** in the end of the tubular piece **19** is coaxially inserted in the other end of the tubular piece **18** the three pieces **17**, **18** and **19** form a single elongated piece approximately the length of the cover **10**.

Likewise the free ends of the piece **17** and the piece **19** have a plug **21** therein which projects axially therefrom. The end pieces **16** have a hole **22** therein at either end perpendicular to the longitudinal axis thereof and of a diameter substantially equal to the diameter of the plug **21**. Thus, after the side pieces **17**, **18** and **19** are assembled in the loops **12**, **13** and **14** of the cover **10** the end pieces **16** are inserted in the loops **11** and the plugs **21** in the tubular pieces **17** and **19** are inserted into the holes **22** on either end of the end pieces **16** to complete the frame **15**.

A circular aperture **25** at one end of the cover **10** is constructed by providing a small opening and pulling the material of the cover **10** out perpendicular to the surface thereof to form a flange **26** around the finished circular aperture **25**. One end **27** of a tube **28**, which may be a rubber hose or the like, is then inserted into the opening **25** so that the flange **26** and the end **27** of the tube **28** are concentric. The tube **28** is then held fixedly in place by means of a clamp **29** placed around the flange **26** with the end **27** of the tube **28** therein. The free end **30** of the tube **28** is adapted to be connected to a heater **31** in an automobile **32**, as shown in FIG. 1. While the end **30** of the tube **28** is connected to an opening at the front of the heater **31** for simplicity in the FIG. 1, it should be understood that many automobile heaters do not have such openings and accordingly the end **30** would either be adapted to fit the outlet of the heater being used or such an opening could be provided in vehicles such as police cars, etc. Also, the end **30** may be adapted to fit over the opening of any standard car heater or it may be adapted to fit a specific car heater **31** such as the heater in a police car or the like.

In the operation of the present invention the cover **10** and the frame **15** along with the hose **28** are in general wrapped into a neat compact package for storage in a police car or the like. When an injured person is encountered the cover **10**, frame **15** and hose **28** are removed from storage and assembled with the frame **15** in the loops **11–14** of the cover **10**. The cover **10** is then placed over the injured person so that he is somewhat centrally located thereunder and the frame **15** maintains the edges of the cover **10** contiguous with the ground.

The end **30** of the hose **28** is connected to the heater **31** of the automobile **32** and the heater fan is turned on. Warm air is then forced under pressure by the heater fan through the hose **28** under the cover **10** to maintain the injured person in a warm comfortable atmosphere. As warm air is forced under the cover **10** cool air and air already used by the injured person is forced out through the openings **23**. Thus, a steady stream of warm, fresh air flows over the injured person maintaining him relatively comfortable until an ambulance arrives.

While I have shown and described a specific embodiment of this invention, further modifications and improvements will occur to those skilled in the art. I desire it to be understood, therefore, that this invention is not limited to the particular form shown and I intend in the appended claim to cover all modifications which do not depart from the spirit and scope of this invention.

I claim:

A temporary shelter for injured persons comprising:

(a) a flexible cover having a plurality of loops positioned around the lower edges thereof,

(b) a rigid collapsible frame composed of separate elongated parts separably interconnected adjacent the ends thereof and engaged in said loops of said cover for defining in combination with said cover a single, prostrate human body receiving opening thereunder,

(c) means for introducing warm air under pressure into said opening to at least partially inflate said flexible cover and to maintain an injured person thereunder at a comfortable temperature including

(1) a flexible conduit having one end thereof in communication with said opening, and

(2) means for attaching the other end of said conduit to an internal automobile heater providing warm air under pressure; and

(d) at least one opening through said cover adjacent said frame for the exhaust of air from said shelter.

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HARRISON R. MOSELEY, *Primary Examiner.*

CHARLES E. O'CONNELL, *Examiner.*

A. I. BREIER, *Assistant Examiner.*