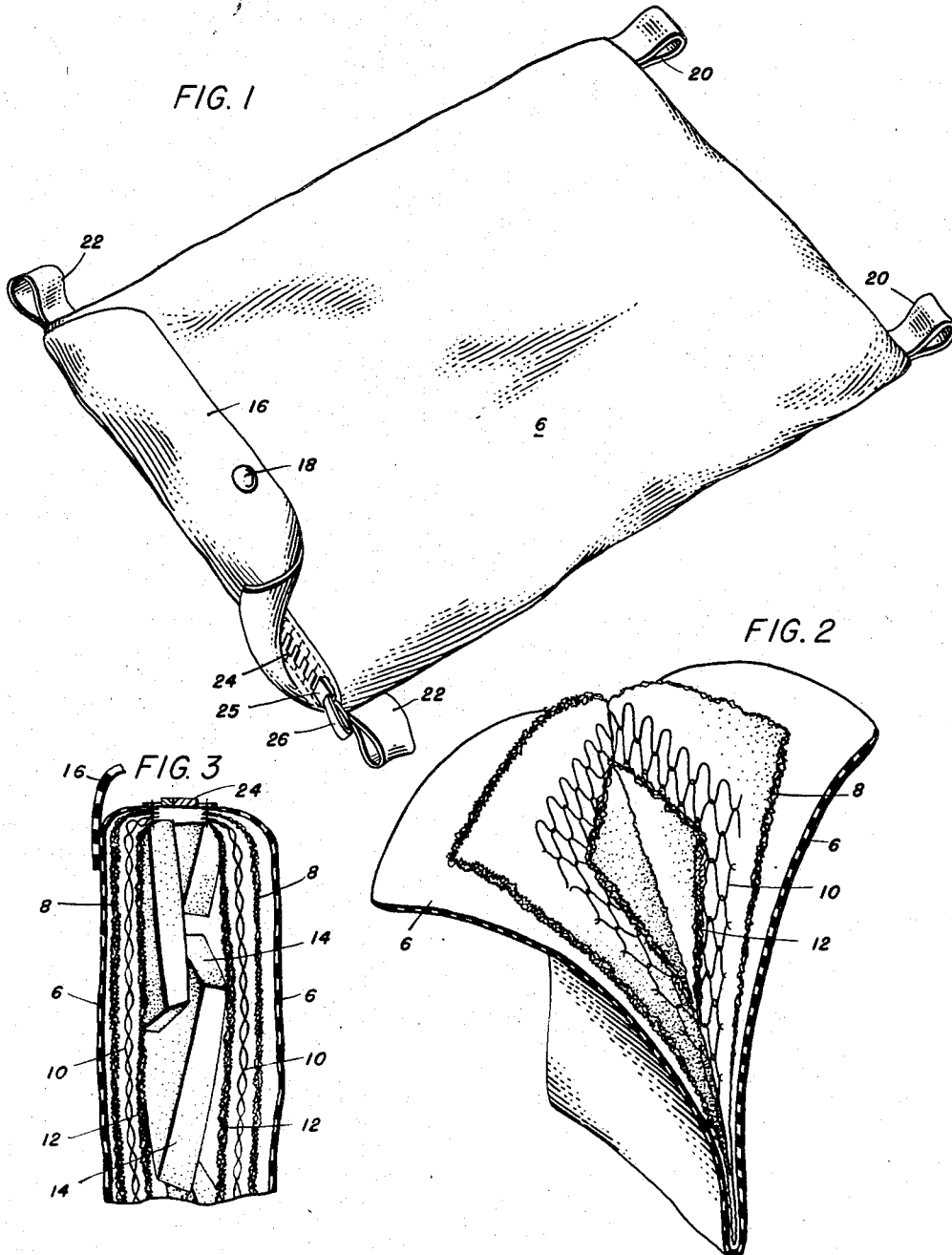


Aug. 14, 1951

H. E. HIPPS ET AL
DRY ICE PACK
Filed Sept. 1, 1948

2,563,933



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2,563,933

DRY ICE PACK

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Application September 1, 1948, Serial No. 47,308

9 Claims. (Cl. 62—91.5)

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This invention relates to an ice bag or pack and is more particularly described as a flexible container for Dry Ice or any similar ice substitute. The container may also be used for cracked ice, ice cubes, and the like, if desired, by making the closure water proof.

In using and applying Dry Ice, which is solidified carbon dioxide, one objection is that it can not be applied directly to the exposed skin of a person and even if applied in an ordinary bag or pack, the lumps or projections engage and contact a person, localizing the application, causing discomfort and even causing irritation and burns if the Dry Ice is not sufficiently insulated. In the present invention this objection is overcome by providing the ice bag with a metallic cloth or mesh for spreading the cold to all parts of the bag, eliminating sharp projections caused by lumps or blocks, and making the application of cold in therapy more efficient and to cover a larger area for the amount of Dry Ice contained.

An important object of the invention is to provide a container for lumps or blocks of ice or Dry Ice in which a liner of metallic cloth or mesh acts to level projections of the material and to spread the cold to all parts of the container.

A further object of the invention is to provide a liner of flexible metallic mesh or cloth in a Dry Ice bag covered with a porous insulation to prevent too direct an application of cold at the outside of the bag.

Still a further object of the invention is to provide a container for Dry Ice which preserves and disperses the cold and also allows the free escape of vapor therefrom.

Other objects of the invention will appear in the specification and will be apparent from the accompanying drawings, in which,

Fig. 1 is a perspective view of the exterior of a container in accordance with this invention;

Fig. 2 is a perspective view of a portion of the interior of the container shown in Fig. 1, spread apart for showing the various inside layers; and

Fig. 3 is a sectional detail showing the layers of the container in relation to material within the container.

In providing a container for Dry Ice, a material must be used which is not affected by this refrigerant, and the latter should not be in direct contact with the metal mesh fabric. The container should not be left open exposing the Dry Ice, but a sufficient vent must be left open to permit the escape of the Dry Ice vapor. The Dry Ice material passes directly from a solid state to a vapor, and does not tend to moisten

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the interior of the container, but an escape must be afforded for the vapor.

Referring now more particularly to the drawings, a finished bag, container, or Dry Ice pack is shown in one form in Fig. 1. It may be made in various sizes and shapes, for special purposes and applications, and comprises essentially an outer cover 6, an inner insulating liner 8, a metallic mesh fabric 10 and an inner insulating container 12 for receiving Dry Ice 14.

The outer cover 6 may be in the form of an open bag with an overlapping flap 16 secured in closed position by a snap fastener 18. At the bottom corners are fastening ears 20 and projecting from the upper corners at the sides are fastening ears 22. The material of the cover is preferably a flexible rubber-like fabric, or a plastic like Koroseal; it should not be hardened, made brittle, or otherwise adversely affected by the refrigerant. The open end of the bag is closed by an open mesh fastener, like a zipper 24 having a movable slider 25 actuated manually by a loop 26.

Within the bag and preferably co-extensive with the inside of the cover is the insulating liner 8 which is made preferably of open mesh, fibrous, somewhat fluffy material, such as terry cloth or toweling, through which cold will pass freely and readily from the inside to the cover. In direct inner contact with the liner 8 is the metallic fabric 10 also in the form of an open mouth bag and composed of aluminum, silver, copper, or any well known heat conducting metal. At the inside of the metallic fabric 10 is the other insulating container 12 into which the Dry Ice 14 is deposited. This insulating layer is also preferably composed of terry cloth, toweling, or similar material. The insulating container 12 prevents direct contact of the Dry Ice with the metallic fabric which tends to become imbedded in the Dry Ice, just like ordinary ice, which produces a localizing effect directly to be avoided.

The upper or open edges of the several parts which make up this container are secured together at the sides of the zipper 24 leaving the intermeshing parts of the zipper free and unobstructed for the passage of vapor therethrough from the Dry Ice. The flap 16 fits loosely and is not intended to confine the vapor in the container.

With this construction it is necessary only to open the container by opening the zipper 24, to insert the Dry Ice 14, spreading it as evenly therein as possible. The zipper is closed, and the flap is left open or closed as desired. The

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container is then applied or placed for cold therapy treatments, and since the Dry Ice is contained in a closed space it will last for a considerable time and will apply the cold evenly and efficiently due to the metallic fabric. Any residue of Dry Ice may be discharged from the container or may be completely vaporized in and from the container, and since it leaves no moisture the inside of the container remains clean and uncontaminated for the next use.

Although but a single form of the invention has been described, it should be regarded as an illustration or example and not as a limitation or restriction, as many changes may be made in the construction, combination, and arrangement of the parts without departing from the spirit and scope of the invention.

We claim:

1. A Dry Ice container having a flexible cover bag, and a metallic flexible mesh fabric as a liner within the cover bag for receiving Dry Ice therein and diffusing cold therefrom.

2. A Dry Ice container comprising a bag with an inner lining of metallic flexible mesh fabric to diffuse cold from Dry Ice inserted therein, and a common closure for the bag and the lining.

3. A Dry Ice container comprising a composite bag with different layers including a closable cover, an insulation closable within the cover, and a flexible metallic mesh bag within the insulation and into which the Dry Ice is inserted and by which the cold therefrom is diffused.

4. A Dry Ice container comprising a flexible cover in the form of a closable bag, an inner closable liner of insulating fabric, a closable flexible metallic mesh bag within the inner liner, and a second liner of insulating fabric within the metallic mesh bag for receiving Dry Ice therein.

5. A Dry Ice container in the form of a bag having an open mesh zipper closure, an insulating liner for the bag, and a cold dispersing inner lining within the insulating lining for holding Dry Ice therein, the insulating liner and the cold dispersing liner being also connected to the zipper closure for opening and closing therewith.

6. A Dry Ice container comprising a flexible cover bag having an open mesh closure, a flexible metallic mesh fabric within the bag, an insulating fabric lining between the cover and the

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metal mesh fabrics, an insulating fabric lining at the inside of the metal mesh fabric, and the edges of the linings and metal mesh fabric being secured to the edges of the open mesh closure to open the innermost insulating lining for the insertion of Dry Ice therein.

7. A Dry Ice container comprising an outer flexible cold conducting cover, a metallic flexible mesh fabric bag within the cover, and flexible fabric insulating linings of toweling material at the inside and the outside of the metallic mesh bag, the metallic mesh dispersing the cold throughout the container and the insulating linings conserving the cold.

8. A Dry Ice container comprising an outer flexible cold conducting cover with an open end and a closable flap, an open-end bag of metallic flexible mesh fabric within the cover, a pair of towel fabric insulating linings one for the outside and the other for the inside of the metallic mesh bag, and an open mesh closure secured to corresponding edges of the cover, the linings and the metallic mesh fabric to close and open them simultaneously, the metallic mesh dispersing cold from Dry Ice in the container and vapor escaping through the open mesh closure when the Dry Ice is in the container.

9. A Dry Ice container comprising a flexible cover bag, a metallic flexible mesh fabric container within the bag into which the Dry Ice is inserted, and a common open mesh closure for the bag and the metallic mesh fabric container through which fumes from the Dry Ice may exude.

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