Nov. 15, 1960 H. ZIFF 2,960,136

INSULATED BAG

Filed Feb. 16, 1959

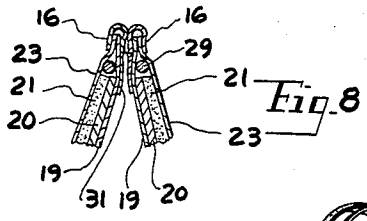


Fig. 8

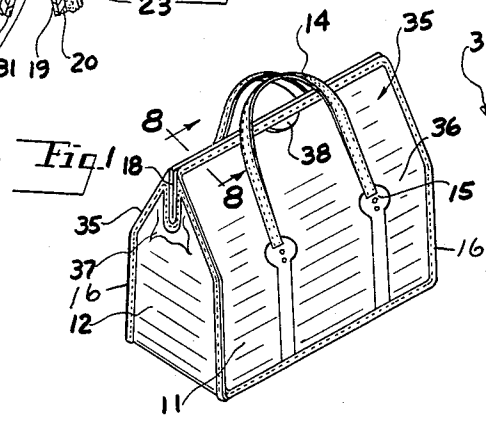


Fig. 1

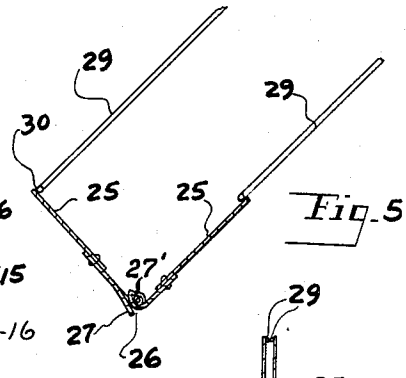


Fig. 5

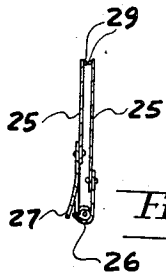


Fig. 6

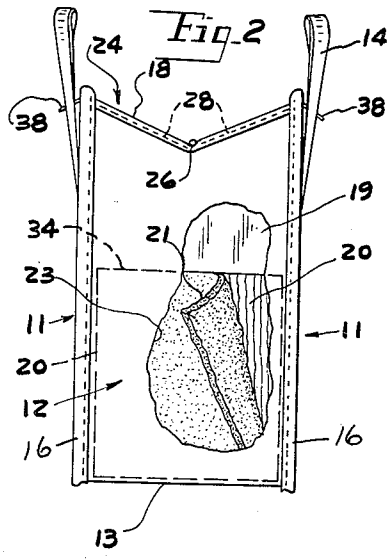
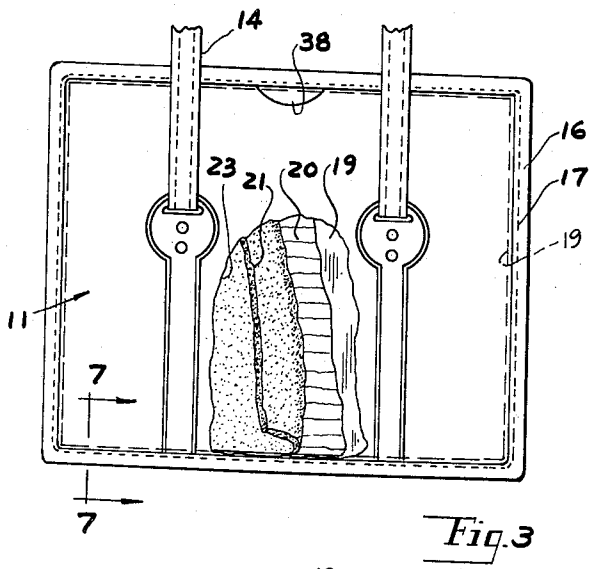


Fig. 2



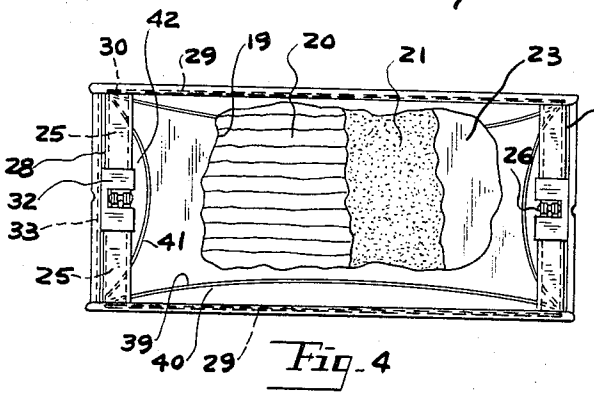


Fig. 4

Fig. 3

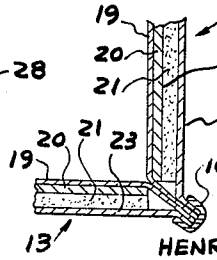


Fig. 7

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INSULATED BAG

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4 Claims. (Cl. 150—29)

This invention relates to an insulated carrying case or bag and more particularly to a novel insulated case with means for sealing the same when closed.

It is an object of this invention to provide in a carrying case a pair of side walls which normally assume an upright position when the bag is open, but whose upper ends may be inclined inwardly defining closures for said bag.

It is another object to provide a hinged frame with spring means associated therewith whereby when the frame elements are arranged at an angle to each other greater than 45 degrees, said cover elements will snap to open position and when the frame elements are arranged less than 45 degrees with respect to each other will snap into closed position with said frame elements in opposing substantial engaging relation.

These and other objects will be seen from the following specification and claims in conjunction with the appended drawing in which:

Fig. 1 is a perspective view of the present insulated bag.

Fig. 2 is a partially broken away end elevational view thereof on an enlarged scale with the bag open.

Fig. 3 is a partially broken away fragmentary side elevational view thereof.

Fig. 4 is a fragmentary partially broken away plan view thereof.

Fig. 5 is a fragmentary perspective view of a portion of the hinged frame.

Fig. 6 is an end section of the hinged frame illustrating its position when the bag is closed.

Fig. 7 is a fragmentary section on an enlarged scale taken on line 7—7 of Fig. 3.

Fig. 8 is a fragmentary section on an enlarged scale taken on line 8—8 of Fig. 1.

It will be understood that the above drawing illustrates merely a preferred embodiment of the invention and that other embodiments are contemplated within the scope of the claims hereafter set forth.

Referring to the drawing, the present insulated carrying case includes the upright front and rear walls 11, spaced end walls 12 and bottom wall 13. These walls cooperate to provide the present bag construction in the open position shown in Fig. 2 with the front and rear walls including cover elements 35 for closing the upper open end of said bag.

A pair of inverted U-shaped carrying straps 14 are centrally positioned on opposite sides of said bag with their free ends suitably secured to central portions of the front and rear walls at points 15 as by welding.

Continuous U-shaped beading 16 extends along and interconnects peripheral edges of the front and rear walls with corresponding edge portions of the end walls with suitable stitching 17; at the same time said beading interconnects bottom portions of the front and rear walls with corresponding edge portions of bottom wall 13. Additional beading 18 of U-shape in cross section extends

over and is suitably stitched to the top edge of end walls 12, best illustrated in Fig. 2.

Fig. 1 shows the cooperative sealing relation of beading 18 when the bag is closed. Additional sealing of the cover elements 35 of said bag is further shown on an enlarged scale in Fig. 8, being a vertical section through the upper closed portion of the bag in Fig. 1.

Each of the respective front, rear, end and bottom walls consists of a series of laminations which cooperate to provide good insulating character to the bag. There is provided as illustrated in Figs. 2, 3, 4 and 7, an inner sheet 19 of plastic material, such as polyethylene, which finishes off and provides a lining for the bag. Outwardly thereof there is provided a layer or cardboard 20 or equivalent stiffening material. Adhesively secured to its exterior surface as at 22 there is provided a relatively thick layer of insulating material of jute, glass wool or equivalent insulator. There is also provided a plastic outer layer 23 of polyethylene or other suitable plastic material. These layers are secured together along the intersecting corners as by beading 16, Figs. 7 and 8, thereby completing the laminated wall construction.

Referring to Fig. 2, upon opening of the bag, there is provided at its upper end, a substantially rectangular opening 24. Within said upper open end and spaced below beading 18, there are provided at opposite ends of said bag a pair of downwardly and inwardly inclined flat ledges whose upper ends are spaced below the top edges of beading 16.

Said ledges are preferably arranged at an angle in excess of 90 degrees to each other when the bag is open as in Fig. 2, and are in substantially parallel engaging relation in cooperation with beading 18 when the bag is closed, as shown in Figs. 1 and 6. Each ledge includes a pair of downwardly and inwardly inclined plates 25 of appreciable width which are connected at their inner ends by hinge means 26.

The outer ends of plates 25 are respectively interconnected by the reinforcing rods 29 secured at their ends to the plates 25 as by welding at 30, thus defining the reinforcing framework for the upper end of the bag, best illustrated in Fig. 4.

The hinge means 26 includes suitable resilient spring means 27 and detent means whereby when the ledge plates 25 are at an angle with respect to each other greater than 90 degrees approximately, said ledge plates are biased as to move or snap outwardly with respect to each other maintaining the bag in the open position shown in Fig. 2.

Similarly hinge 26—27, Fig. 6 is so constructed that when the ledge plates 25 are related to each other less than 90 degrees approximately, said ledge plates and cover portions of the bag connected thereto will snap into and assume a closing sealing position, illustrated in Figs. 1, 6 and 8.

When cover elements 35 are closed, the upper longitudinal edge portions of beading 16 register in longitudinal engaging sealing relationship as shown in Fig. 8. Likewise ledges 25 and adjacent beading 18 are in cooperative engaging and sealing relation as shown in Fig. 1.

In the preferred embodiment, plates 25 are covered by plastic sleeves 28, made of polyethylene or the like, with inner end portions of the sleeves 28 supportably engaged by the inwardly directed notched plastic strips 32 as shown in Fig. 4. Outer portions of said strips are fixedly secured to the interior of the end walls adjacent beading 18, as by stitching.

The reinforcing frame rods 29 are arranged adjacent the inner surfaces of front and rear walls 11 and are spaced slightly below their upper ends. Said rods are enclosed by lining 19 as well as the opposed longitudinal-

ly extending strips 31, Fig. 8, which are suitably secured to upper and interior portions of said front and rear walls.

The cardboard stiffeners 20 for the end walls are of less height as indicated at 34, Fig. 2 as are the cardboard laminations of the front and rear walls which extend from top to the bottom thereof.

The reason for this is that when the bag shown in Fig. 2 is closed, hinges 26 drop downwardly as shown in Fig. 1 and are not impeded during closing by the stiffener or cardboard layer forming a part of said end walls. While conventional bags of this nature are provided with separate covers as in applicant's insulated bag, Patent 2,857,949, dated October 28, 1958 and reissued February 17, 1959, the present insulated bag does not provide for separate cover elements per se.

On the other hand, the upper portions 35 of the front and rear walls 11, when bent angularly inward and upward, as shown in Fig. 1, define a pair of covers bent substantially along the dotted line 36 of Fig. 1. Accordingly, when the bag is fully open as in Fig. 2, the said covers 35 form a part of the upright front and rear walls 11. The upper ends of the respective front and rear walls are secured by the frame rods 29 to the centrally hinged hollow rectangular frame which includes ledge plates 25 and the respective longitudinally spaced hinges 26. This framework facilitates the opening and closing of the bag as shown in Figs. 2 and 1 respectively and provides a means for establishing a cooperative engaging and sealing relation between the beading 16 along the upper edges of cover elements 35, and a further cooperative sealing relation between the inclined ledges 25—28 and adjacent end wall beading 18, as particularly shown in Fig. 1.

The construction is such that the upper rectangularly shaped portions of end walls 12 are partly collapsed into substantially triangular shape as at 37 when the bag is fully closed.

Arranged adjacent one of the walls 11 upon its interior and extending approximately ½ of the height thereof from the bottom is the longitudinally extending plastic strip 39, which is joined along its bottom and end edges to interior portions of the bag defining the elongated storage pocket 40. A similar transverse strip 41 is joined at its bottom and end edges to the interior of one of the end walls 12 defining a second storage pocket 42.

The bag construction is completed by a pair of tabs 38 secured upon the outer surfaces of cover elements 35 centrally thereof adjacent beading 16 to facilitate opening of the bag to the position shown in Fig. 2.

Having described my invention, reference should now be had to the following claims.

I claim:

1. In an insulated carrying bag having front, rear, end and bottom walls, the upper edges of said front, rear and end walls adapted to define an open end, a longitudinally disposed hollow rectangular hinged frame interposed between and adjacent the interior upper ends of said front, rear and end walls and secured thereto, said frame including at each end a pair of downwardly and inwardly inclined ledges, hinge means pivotally interconnecting their inner ends, said ledges adapted for cooperative engaging sealing registry when said bag is closed, upper opposing ends of said front and rear walls adapted to fold inwardly defining a pair of cover elements respectively with their top edges in engaging and sealing registry when the bag is closed, opposing portions of said frame positioned adjacent said top edges being in substantially parallel engaging registry, and cooperating spring and detent means engaging said hinge means adapted to resiliently bias said cover elements to closed position when said ledges are inclined to each other less than 90 degrees approximately and bias said cover elements to an upright open position when greater than 90 degrees approximately, the ledge defining ends of said frame being flat and relatively wide, the sides of said frame being rods secured at their respective ends to the outer ends of said ledges respectively, said frame folding to a pair of parallel upright inverted U-shaped registering elements when the bag is closed.

2. The carrying bag of claim 1, continuous U-shaped flexible beading extending around the edges of said front and rear walls respectively, interconnecting the same with the adjacent edges of said end and bottom walls respectively, and additional U-shaped beading overlying the top edges of said end walls, folding of said cover elements inwardly bringing top portions of said front and rear wall beading and opposed portions on said end wall beading into cooperative engaging sealing registry respectively.

3. The carrying bag of claim 1, flexible sleeves covering said ledges, and a notched strip secured to each end wall and supportably extending around the hinged inner ends of said covered ledges respectively.

4. In an insulated carrying bag having front, rear, end and bottom walls, the upper edges of said front, rear and end walls adapted to define an open end, a longitudinally disposed hollow rectangular hinged frame interposed between and adjacent the interior upper ends of said front, rear and end walls and secured thereto, said frame including at each end a pair of downwardly and inwardly inclined ledges, hinge means pivotally interconnecting their inner ends, said ledges adapted for cooperative engaging sealing registry when said bag is closed, upper opposing ends of said front and rear walls adapted to fold inwardly defining a pair of cover elements respectively with their top edges in engaging and sealing registry when the bag is closed, opposing portions of said frame positioned adjacent said top edges being in substantially parallel engaging registry, and spring means forming a part of said hinge means adapted to resiliently bias said cover elements to closed position when said ledges are inclined to each other less than 90 degrees approximately and bias said cover elements to an upright open position when greater than 90 degrees approximately, each of said walls including four layers, namely inner and outer sheeting of plastic material, an intermediate flexible cardboard strip, and a layer of insulating material adhesively secured to the exterior surface of said cardboard strip.

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