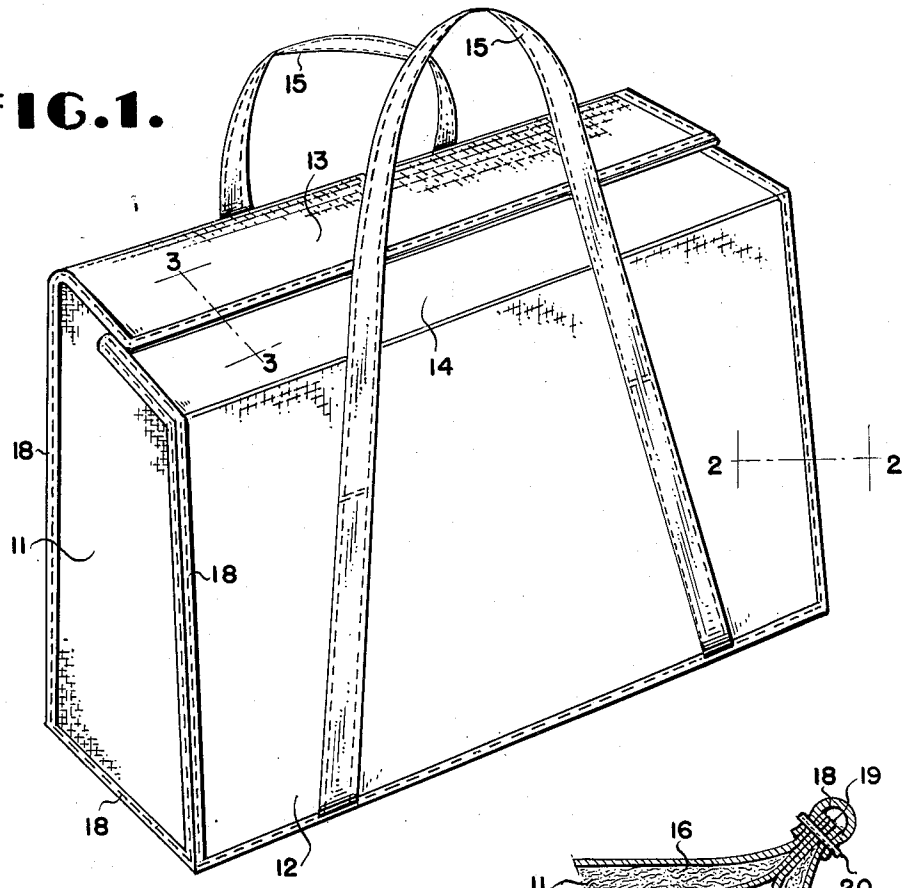
June 11, 1957 M. J. BERRY ET AL 2,795,258

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FIG. 1.



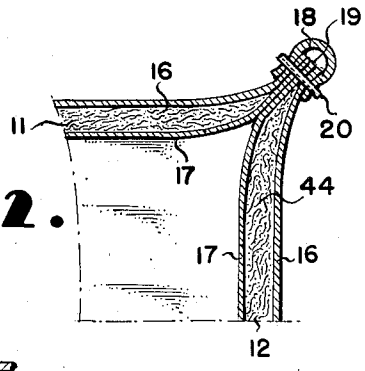


FIG. 2.

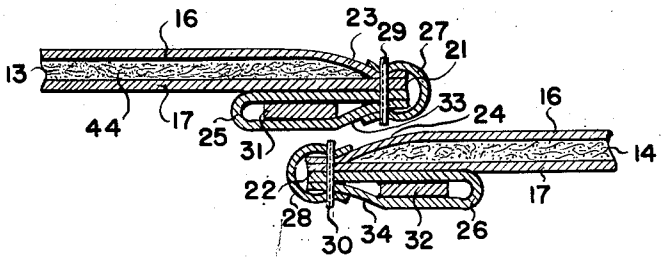


FIG. 3.

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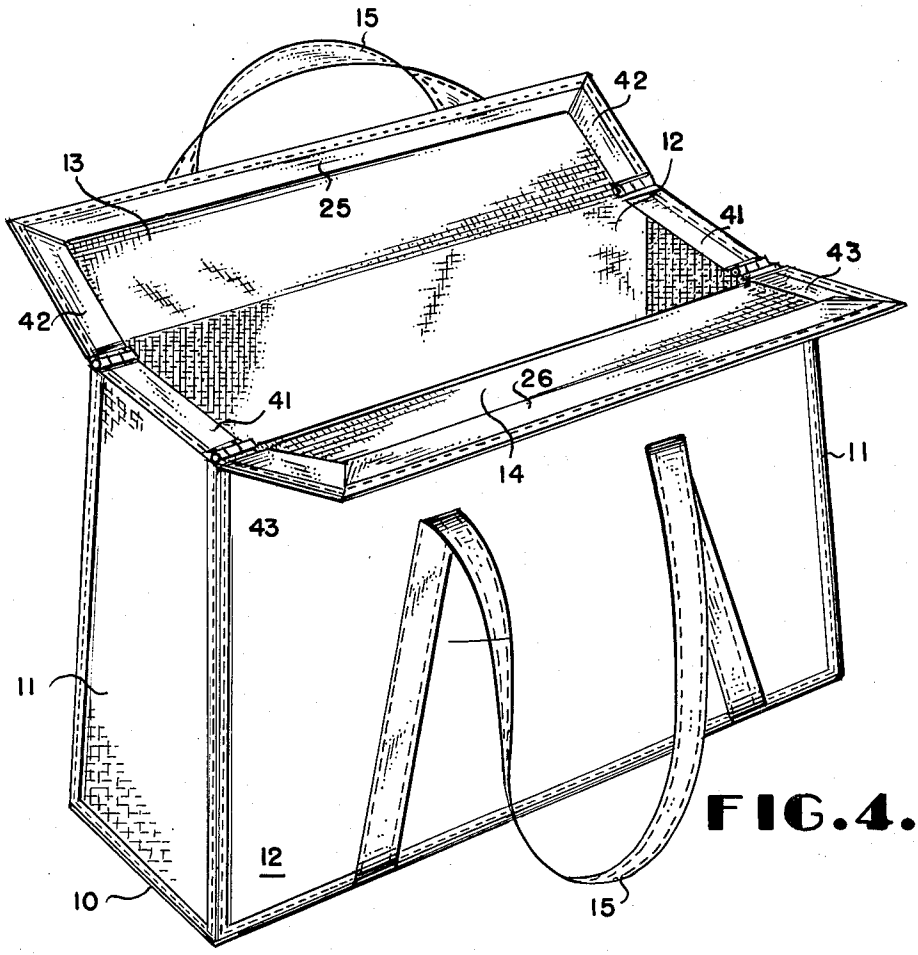


FIG. 4.

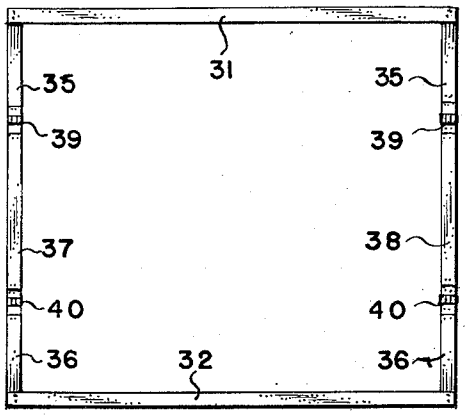
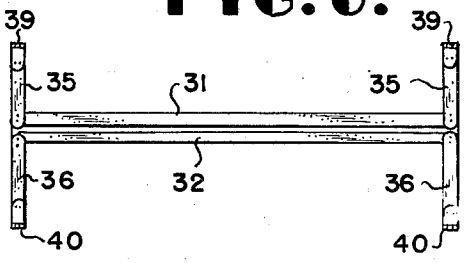


FIG. 5.

FIG. 6.



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Application June 16, 1955, Serial No. 515,924

6 Claims. (Cl. 150—28)

This invention relates to improvements in picnic bags.

The basic requisite of a receptacle used to transport picnic perishables is the preservation of the perishable in the original fresh condition when packed. Since perishables are adversely affected by exposure to the temperature and humidity of the atmosphere, the picnic receptacle must efficiently insulate the contents from the ambient atmosphere. However for practical purposes, the receptacle must be extremely portable, inexpensively fabricated and provide maximum access to the contents without introducing significant losses in insulation. The chief insulation losses in picnic receptacles are introduced through the closure structure which provides access to the contents therein. In various conventional picnic receptacles clamping and locking devices are provided for the purposes of tightly pressing a movable cover against the perimeter of an opening in the body of the receptacle to ensure an insulating seal. The proper manipulation of these clamping devices to open and close the receptacle consumes time, energy and results in significant losses in insulation. Since in the normal course of a picnic, frequent access to the contents in the receptacle is required, the opening and locking of the clamping devices becomes a tedious detail. Moreover should the user forget to lock the cover, the perishables within the receptacle will be almost completely exposed to the effect of the ambient atmosphere.

In the instant invention a picnic bag is provided which efficiently solves the problems cited above. In brief the novel picnic bag comprises a lightweight insulated plastic bag having an access opening at the top which is sealed by overlapping lids pivoted to opposite sides of the opening. The lids are biased to the sealed position by the pivoting means when the edges of the lids overlie the opening. When the outer edges of the lids have been pivotally opened to a position beyond the access opening the pivoting means biases the lids to a fully open position. The lid edges are provided with special sealing lips which effect a tight seal when in the closed position. Due to this novel closure structure, the bag can be conveniently opened with a minimum of time and energy. Moreover to close the bag one merely has to move the lids beyond a dead-center position whereupon the lids are automatically snapped shut, reducing appreciably the chances of leaving the bag accidentally open. In addition to the cited functional advantages over the conventional clamping devices, the novel closure structure introduces substantial economies in fabrication.

Consequently the primary object of this invention is the provision of a portable, lightweight picnic bag, adequately insulated, having an access opening controlled by a closure structure which is reciprocable from a sealed position to an open position with a minimum expenditure of time and effort without involving complicated locking devices.

Another object of this invention is the provision of a lightweight, adequately insulated, portable picnic bag having carrying straps and a self-sealing means for closing an access opening.

A further inventive object is the provision of a plastic picnic bag lined with insulating material.

A still further inventive object is the provision of a picnic bag of plastic material and provided with an access opening controlled by pivotal self-sealing closure lids.

A still further inventive object is the provision of a picnic bag having a pair of oppositely disposed closure lids superimposed over an access opening wherein the lids are biased resiliently to a closed overlapping position.

A still further inventive object is the provision of a portable picnic bag having a pair of closure lids pivotally superimposed over an access opening wherein the lids are pivoted to the bag by means of a hinge structure which for certain degrees of opening biases the lids to a closed sealed position and for other degrees of opening biases the lids to an open position.

A still further inventive object is the provision of a pair of closure lids for a picnic bag having a metallic structure embedded within the periphery of the lids biasing the lids to a closed sealed position.

A still further inventive object is the provision of a pair of overlapping closure lids for a picnic bag wherein the lids include sealing lips adapted to engage each other reversibly to tightly seal the bag access opening.

Further objects and advantageous features of the invention will become more apparent from the following detailed description when read in conjunction with the annexed drawings in which:

Figure 1 is a perspective view of the novel picnic bag when closed;

Figure 2 is a horizontal section taken through plane 2—2 of Figure 1 showing the construction of the bag lining and seams;

Figure 3 is a vertical section through the closure lids along plane 3—3 of Figure 1 showing the lid sealing structure;

Figure 4 is a perspective view of the bag in the open position;

Figure 5 is a plan view of the metallic frame which is embedded in the lid peripheries and in the edges of the bag surrounding the access opening; and

Figure 6 is a plan view of the metallic frame in the position assumed when the lids are closed.

Referring to Figure 4, the novel picnic bag is seen to comprise generally a bottom wall 10, parallelly spaced end walls 11 perpendicular to the bottom wall, spaced side walls 12 slightly inclined to the bottom wall and perpendicular to the end walls, and top closure lids 13 and 14 projecting pivotally from the upper edges of the side walls 12, enclosing therein a compartment for the storage of picnic items. A pair of straps 15 are each secured to the opposing side walls 12, by stitching or other conventional means, providing loops for carrying purposes.

As better seen in Figure 2 the walls of the bag are composed of spaced sheets of plastic 16 and 17 enclosing therebetween an insulating material 44 such as glass wool or the like. The intersecting edges of the bag walls are sealingly joined by means of longitudinal curved beads of plastic 18 which envelope the abutting ends 19 of the plastic sheets. The beads 18 are then secured to the ends 19 with stitching 20 forming longitudinal seams along the peripheral edges of the bag.

By spacing the beads 18 from the ends 19 an air pocket is formed providing an additional insulating layer about the edges of the bag. The seam structure described in connection with Figure 2 is representative of the seam structure provided at all the edges of the bag excepting the edges of the lids 13 and 14. In Figure 3 the edge construction of the lids 13 and 14 are each better seen

to comprise the plastic sheets 16 and 17, forming homogeneous extensions of the sheets comprising the side walls 12, and enclosing a glass wool insulating layer 44. The thickness of the glass wool layer adjacent the opposing ends 21 and 22 of the sheets 16 and 17 tapers towards the ends and the outer plastic sheets 16 are curved towards the inner sheets 17 to provide outer beveled surfaces 23 and 24.

Longitudinal sealing flaps 25 and 26 of plastic are disposed along the inner plastic sheets 17 adjacent the lid edges. The ends 21 and 22 and the open ends of the flaps 25 and 26 are enclosed by plastic beads 27 and 28 secured to the lid edge structure by stitching 29 and 30. Both of the flaps 25 and 26 include metallic bands 31 and 32 which are embedded therein respectively. The metallic bands form a portion of a hinge-frame assembly whose structure and function will be disclosed below in greater detail. Due to the envelopment of the bands 31 and 32 within the flaps 25 and 26, the inner ends 33 and 34 of the flaps 25 and 26 provide beveled surfaces complementary to the surfaces 23 and 24. Thus the surfaces 33 of lid 13 and 24 of lid 14 constitute complementary opposing surfaces adapted to engage sealingly for insulatory purposes when lid 13 overlies lid 14. Conversely when lid 14 overlies lid 13 the surfaces 34 and 23 are adapted to engage sealingly. In addition to other functions to be disclosed the bands 31 and 32 reinforce the edges of the lids to maintain the desired shape.

The lids 13 and 14 are pivotally secured to the end walls 11 by means of a hinge-frame assembly shown in Figures 5 and 6. The hinge-frame assembly comprises the spaced bands 31 and 32 which are embedded in edges of the lids 13 and 14, the pairs of legs 35 and 36 integrally secured at right angles to the bands 31 and 32 and the middle strips 37 and 38 which are pivotally connected in alignment with the pairs of legs 35 and 36 by pairs of spring hinges 39 and 40. The pairs of hinges include spring biasing means which urge the bands 31 and 32 either to the open position of Figure 5 or the closed position of Figure 6 depending upon the angle existing between the pairs of legs 35 and 36 and the middle strips 37 and 38. When the bands 31 and 32 overlie the strips 37 and 38 the spring hinges bias the bands to the closed position; when the bands 31 and 32 do not overlie the strips, they will be biased to the open position as seen in Figure 5.

The middle strips 37 and 38 are embedded in a pair of edges 41 which project at right angles towards each other from the end walls 11. Similarly the lids 13 and 14 are provided with short projections 42 and 43 which align with the edges 41 and enclose the leg pairs 35 and 36 respectively.

Consequently when the bag is in the closed condition (Figure 1) the spring hinges force the lids 13 and 14 tightly against each other causing the surfaces 33 and 24 to engage in a sealing relationship. The lower lid 14 also is forced to bear sealingly against the edges 41 due to the embedded portions of the hinge-frame assembly. Since the lid edges are each provided with corresponding sealing surfaces on both surfaces, the relative positions can be reversed and still maintains the desired sealed relationship.

To open the bag, the user merely pivots each lid manually away from the other until the angle formed between the lids and the strips 41 exceeds 90° whereupon the spring hinges will automatically force the lids to the fully open position of Figure 4. This position will be maintained until the user moves the lids inwardly to a position wherein the angle formed between the lids and the strips 41 is less than 90°. The spring clips will then complete and maintain the closed position.

It is now apparent that the bag provided herein can be opened and closed with a minimum of effort requiring no special locking devices. Furthermore since the bag can only assume a fully closed or a fully open position, it is virtually impossible for the bag to remain open undetected. Due to the simple construction, the bag can be economically fabricated and the weight kept to minimum increasing the portability thereof. It should be further noted that the user need not concern himself as to which lid is to be closed first due to the reversible sealing structure provided at the lid edges.

By decreasing the time required to open and close the bag and virtually eliminating the possibility of leaving the bag unintentionally open, the insulation provided by the bag is more efficiently utilized.

Although the depicted embodiments are preferred, it is further stressed that many modifications can be devised involving changes in size, shape, material, rearrangements of parts, etc., without departing from the spirit and scope of the invention as disclosed herein and claimed hereinafter.

Having thus described in detail the nature of the invention, a grant of Letters Patent is desired for the improvements as defined in the following appended claims.

We claim:

1. A bag comprising a plurality of walls enclosing a compartment including an access aperture and a closure therefore, said walls comprising spaced sheets of a plastic material with a layer of glass wool therebetween, said walls being joined at the intersections thereof with curved beads stitched about the intersections, said beads enveloping the abutting ends of the plastic sheets and being spaced from said ends to form an air pocket about the edges of said bag, said closure comprising spaced sheets of plastic enclosing a layer of thermal insulation therebetween, said closure being secured to the walls whereby the closure is recpirocable from a closed position to a fully open position.

2. A bag comprising a plurality of side walls, a bottom wall and an access opening, said walls being formed of spaced layers of plastic sheet material surrounding a layer of insulating material, in combination with a pair of closure lids pivotally mounted on opposite sides of the opening, said lids being of sufficient dimensions to completely close the opening when in one position and being reciprocable to another position whereby the access opening is completely unobstructed, each of said lids including edges provided with sealindg means adapted to engage the edge of the opposing lid to completely seal the opening when in the first said position, in further combination with resilient means biasing the lids to the first said position when the angles between the lids and the plane of the opening is less than 90°, and to the open position when the said angles are more than 90°.

3. A bag comprising a bottom, spaced side walls, end walls perpendicular to the side walls and the bottom, said walls being formed of spaced layers of plastic sheet material surrounding a layer of insulating material, an access opening and closure lids pivotally secured to the side walls adjacent the opening and extending integrally therefrom, further comprising a pair of edges, each edge integrally secured at right angles to the end walls adjacent the opening and extending into the opening for a short distance, said walls, lids, and edges being composed of a layer of glas wool enclosed in spaced sheets of plastic, the joints formed at the intersection of the walls comprising a plastic bead enclosing the intersecting ends of the plastic sheets, and forming an air pocket about said ends the bead being stitched to the sheets, said lids being secured to the edges with spring hinges biasing the lids in opposite rotary directions from a perpendicular position of the lids relative to the plane of the opening.

4. A bag comprising spaced side walls, a bottom wall, spaced end walls secured to each other along their abutting edges and including a top access opening, in combination with a pair of closure lids pivotally secured to the side walls and reciprocable from a closed overlapping position to a fully open position, the bag being comprised of a plastic material lined with insulation, in

further combination with a frame having fixed portions secured to the end walls adjacent the opening and movable portions secured to the lids, said movable portions and fixed portions being connected by spring hinges whereby the lids are urged resiliently to the closed overlapping position when the lids form an angle with the fixed portions less than 90° and to the open position when the angle is more than 90°.

5. A bag comprising walls enclosing a compartment, said walls being composed of plastic layers surrounding a layer of insulation and including an open end surrounding an access opening in combination with a pair of closure lids pivotally secured to the said open end and disposed above the opening on opposite sides thereof, said lids being pivotally reciprocable from a closed overlapping position to an open position, said lids further comprising inner flaps secured to the inner surfaces of the lids adjacent the lid edges and including beveled sealing surfaces, the lids also including outer beveled sealing surfaces adapted to engage the flap sealing surfaces whereby

the lids will engage each other sealingly in the overlapping position regardless of the relative lid positions.

6. A picnic bag as in claim 5 in combination with spring hinges connecting the lids with the open end biasing the lids to the open position when the lids form an angle greater than 90° with the plane of the open end and biasing the lids to a closed position when the angle is less than 90°

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