

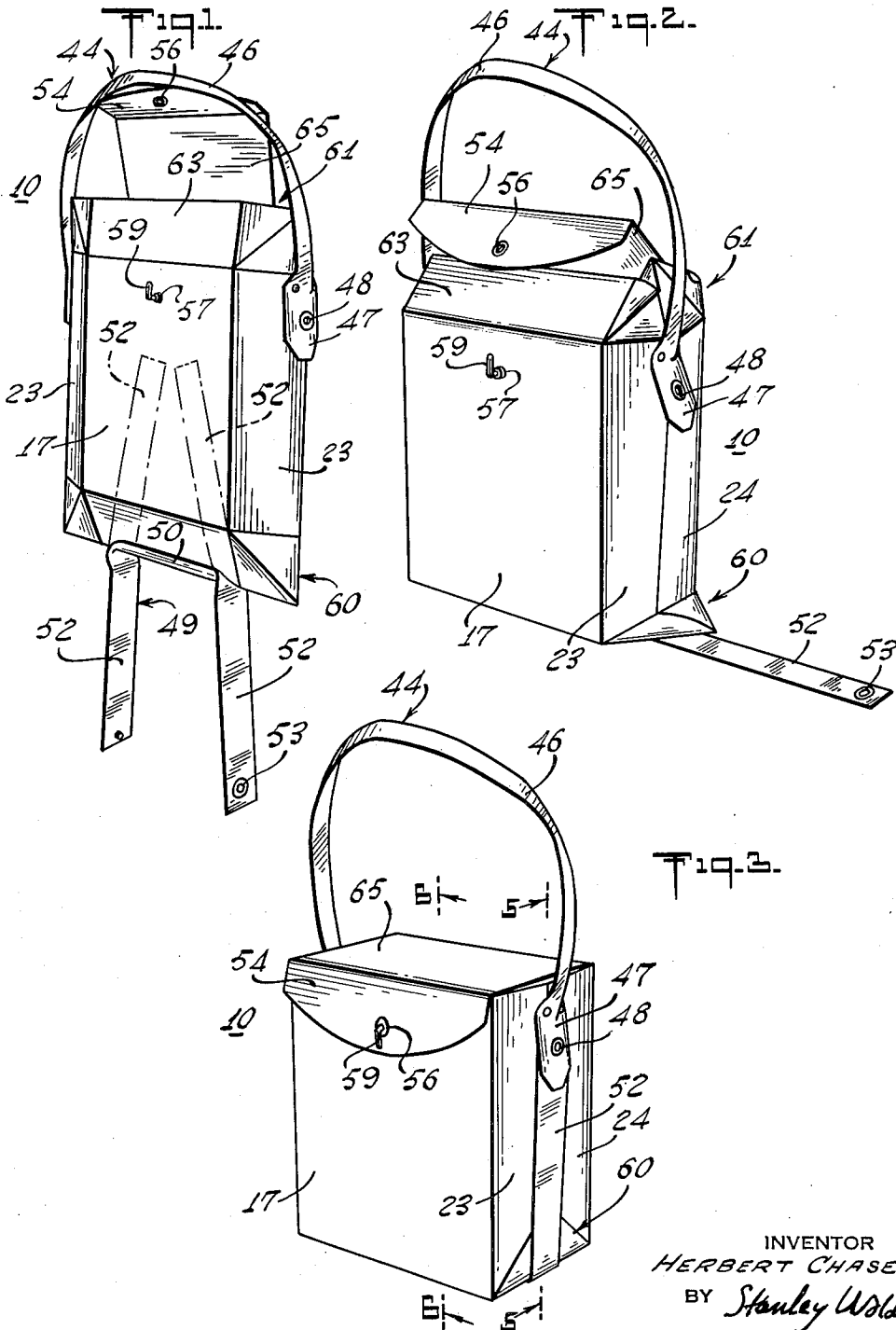
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H. CHASE
INSULATED CARRIER

3,031,121

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2 Sheets-Sheet 1



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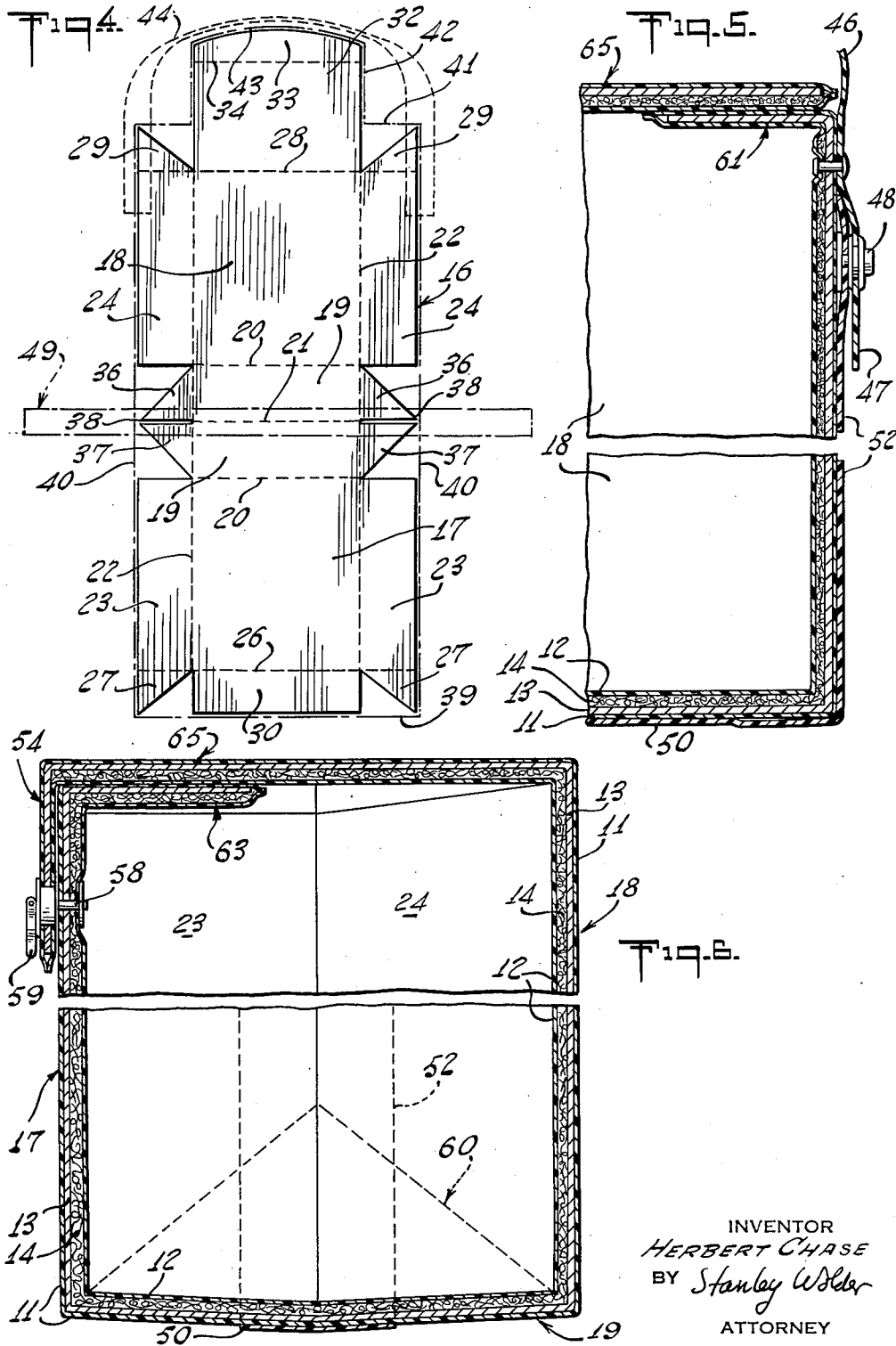
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2 Sheets-Sheet 2



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INSULATED CARRIER

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The present invention relates generally to improvements in receptacles and it relates particularly to an improved collapsible heat insulated container or handbag.

With the advent and availability of inexpensive lightweight and efficient heat insulating materials in sheet form such as the foamed organic thermoplastic materials, for example foamed or expanded polystyrene, fiber glass matting and the like, the use of portable heat insulated receptacles for domestic uses has greatly increased. These receptacles are conventionally of the rigid or box type or of the soft wall collapsible type. While the above receptacles which are presently available are useful for many purposes they possess numerous drawbacks and disadvantages. The rigid insulated containers, although they are relatively efficient in their capacities and heat insulating properties, are generally awkward, and bulky, difficult to store and otherwise leave much to be desired. On the other hand the bag type insulated containers, while relatively compact are of small capacity and highly inconvenient to use.

It is therefore a principal object of the present invention to provide an improved receptacle.

Another object of the present invention is to provide an improved heat insulated receptacle.

Still another object of the present invention is to provide an improved collapsible type heat insulated receptacle.

A further object of the present invention is to provide an improved rigid wall heat insulated handbag which is readily collapsible into compact form for easy storage and shipping.

Still a further object of the present invention is to provide an improved rigid wall collapsible heat insulated handbag which is roomy, simple to use, efficient, convention, rugged and of highly attractive appearance.

The above and other objects of the present invention will become apparent from a reading of the following description taken in conjunction with the accompanying drawings wherein:

FIGURE 1 is a front perspective view of a receptacle embodying the present invention, illustrated in a substantially collapsed condition;

FIGURE 2 is a front perspective view thereof in partially expanded and unlocked position;

FIGURE 3 is a front perspective view thereof in a fully expanded, locked and closed position;

FIGURE 4 is a plan view of the reinforcing stay member of the subject receptacle, the liner and facing members and the locking strap being shown in dot and dash lines and the handle member being shown in dotted line;

FIGURE 5 is a sectional view taken along line 5-5 in FIGURE 3; and

FIGURE 6 is a sectional view taken along line 6-6 in FIGURE 3.

In a sense the present invention contemplates the provision of an improved collapsible receptacle comprising front and rear walls, collapsible side walls connecting corresponding side edges of said front and rear walls, a bottom wall including a pair of hinged panels having opposite laterally extending edges hinge connected to lower corresponding edges of said front and rear walls, wing members projecting from opposite side edges of said bottom wall and means releasably locking said wing members in an upwardly directed position along said side

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walls to maintain said receptacle in an expanded condition.

According to a preferred form of the present invention which may be employed to great advantage, the receptacle includes a relatively stiff stay member formed of a unitary blank and comprising panels defining the receptacle front, rear and bottom walls, the hinge sections being defined by score lines formed in the blank. Projecting laterally from the side edges of the front and rear wall panels and delineated therefrom by score lines are side wall rectangular panels. The wing members are of triangular configuration, the bases thereof being coextensive with the side edges of the bottom wall panels, each being bisected by cuts colinear with the bottom wall hinge line. A sheet of heat insulating material is superimposed upon the stay member and the two are sandwiched between thermoplastic liner and facing sheets the corresponding edges of which are heat sealed to enclose the stay member and heat insulating sheet. The edges of the plastic envelope along the side edges of the side wall panels are heat sealed together to complete the receptacle. A strap having laterally extending wings is disposed along the bottom of the receptacle and an upper handle has side legs secured to the receptacle side walls, the strap and handle legs having mating separable fasteners to permit the interconnection thereof to retain the bottom wall wings upright along the receptacle side walls and the receptacle in expanded position.

Referring now to the drawings which illustrate a preferred embodiment of the present invention the reference numeral 10 generally designates the improved insulated receptacle in the form of a handbag of rectilinear shape. The walls of the receptacle 10 are multilayered including an outer flexible or facing sheet 11, an inner flexible or liner sheet 12, a relatively stiff stay member 13 having a superimposed layer 14 of insulating material. The facing and liner sheets 11 and 12 are advantageously formed of a synthetic organic thermoplastic material such as Saran, polyethylene and the like, which may be readily heat sealed; the stay member 13 is preferably formed of cardboard or any suitable composition board and the heat insulating layer 14 is formed of any well known light weight sheet heat insulating material such as expanded or foamed polystyrene or polyurethane, fiberglass mat or the like.

The stay member 13 is formed of a unitary integral blank 16 wherein the various stay sections are delineated by hinge defining score lines, cut lines and free edges. The blank 16 includes transversely spaced similarly shaped rectangular front and rear stay panels 17 and 18 respectively, which are separated by an intermediate rectangular bottom panel 19, the panel 19 being delineated by laterally extending parallel score lines 20 and being divided into two equal sections by a laterally extending medial score line 21. Delineating the side edges of the panels 17, 18, and 19 are parallel transverse score lines 22.

Projecting laterally from the side edges of the front panel 17 are a pair of opposite rectangular wing panels 23 and projecting laterally from the side edges of the rear panel 18 are a pair of opposite rectangular wing panels 24 each set of panels 23 and 24 defining a collapsible side wall stay of the finished receptacle. The wing panels 22 and 23 are divided from the panels 17 and 18 by the score lines 22. Depending from the lower edges of the wing panels 23 and delineated therefrom by score line 26 are a pair of triangular gusset stays 27 having bottom apices and side edges colinear with those of wing panels 23. Similarly, extending upwardly from the top edges of wing panels 24 and delineated therefrom by a score line 28 are a pair of gusset stays 29 having upwardly directed apices and side edges colinear with those of wing panels 24. A rectangular flap stay panel 30 depends from

the panel 17 being divided therefrom by score line 26 and reaching the level of the apices of gusset stays 27. Projecting upwardly from the upper panel 18 and delineated therefrom by score line 28 is a rectangular cover stay 32 terminating in a flap stay 33 divided from the cover stay 32 by a score line 34, the upper edge of the flap stay 33 being curved.

Directed outwardly from the side edges of the upper and lower bottom wall stay panels 19 are upper and lower triangular gusset stays 36 and 37 respectively, the bases thereof being defined by score lines 22. The gusset stays 36 and 37 are right angle triangles having confronting edges separated by slots 38 colinear with the score line 21, outwardly directed apices laying along the line of the side edges of the wing panels 23 and 24 and hypotenuses which extend to the corners of panels 17 and 18.

The heat insulating layer 14 is superimposed upon the stay blank 16 and may be of the same shape thereof or may have a shape corresponding only to the panels 17, 18, 19, 23, 24 and 32 or to that of the liner and facing sheets which will be hereinafter described. The layer 14 may, if desired, be secured to the stay blank 16 in any suitable manner.

The facing and liner sheets 11 and 12 are of the same outline, sandwiching between them the stay assembly 16 and insulating layer 14, the stays preferably being outermost and the insulating layer innermost. Each of the sheets 11 and 12 are provided with a lower edge 39 disposed below and extending slightly beyond the apices of gussets 27, parallel side edges 40 extending slightly above the upper apices of gusset stays 29, colinear edges 41 directed inwardly from the upper terminal of edges 40, side edges 42 projecting upwardly from the inner ends of edges 41 outside the sides of panel 32 and 33 and a curved upper edge 43 connecting the upper ends of edges 42. The coinciding corresponding edges of the sheets 11 and 12 are heat sealed to each other to form a tight fitting envelope fully enclosing the sandwiched stay assembly 16 and heat insulating layer 14. In addition, the colinear edges 40, above and below the medial score line 21 are likewise heat sealed to each other by folding the assembly about the medial line 21 to bring the upper and lower sections of edges 40 into coincidence. The heat sealing procedure may be effected in any well known manner. Moreover, if desired, in order to facilitate the folding of the various gussets, the sheets 11 and 12 may in addition, be heat sealed to each other along the hypotenuses of the gussets 27, 29, 36 and 37, along the edges of the panels opposite the gusset hypotenuses, and along the slots 38, following the above sealing, the receptacle, per se, is completed and is of the configuration shown in FIGURES 1 to 3 of the drawing.

A handle member 44 is provided which includes a band or strap section 46 terminating at the free ends thereof in enlarged tabs 47. The upper portions of the tabs 47 are secured to the receptacle upper side walls by rivets or the like and the lower portions thereof are free and provided with inwardly directed separable fastener male elements 48. A flexible strap 49 includes an intermediate section 50 secured in any suitable manner to the underface 51 of the receptacle bottom wall along the lateral medial line thereof and a pair of laterally outwardly extending wing sections 52 which are provided at their ends with separable fastener female elements 53 mating the fastener male elements 48.

The cover flap 54 has a central opening formed therein which is engaged by a decorative grommet 56. Mounted on the front upper face of the receptacle front wall is a suitable latch member 57 including a forwardly directed post 58 which has snap hinged at its free end a latch element 59. The latch element 59 is adapted to pass through the grommet 56 to bring the post 58 into registry therewith and to be swung to a depending position to releasably lock the receptacle cover in a closed position.

Considering now the operation and employment of the

improved receptacle described above, in its collapsed condition the receptacle 10 is substantially in the condition shown in FIGURE 1 of the drawing, the front and rear walls being in substantially face abutting relationship, and the side and bottom walls being folded along their longitudinal medial axis to collapsed positions. The lower and upper gusset sections 60 and 61 are likewise in collapsed outwardly directed flattened positions. The upper front wall flap 63 lies in the plane of the receptacle front wall and the cover 65 is folded as desired so that the collapsed receptacle assumes a flat rectangular shape. The straps 46 and 49 being flexible can be folded to overlay the receptacle. Thus in the collapsed condition the receptacle is highly compact assuming a minimum of space and facilitating the easy storage thereof for packaging, shipping, dispensing and storing purposes.

In order to expand the receptacle for use, the front and rear walls are merely spread apart to fully extend the side walls and bottom wall. The bottom gussets 60 will expand into the outwardly directed double layer position illustrated in FIGURE 2 of the drawing and the gussets 61 will also expand permitting the swinging of the flap 63 between an opened and closed position and affording free access into the interior of the expanded receptacle. The receptacle is releasably locked in its expanded position by bringing the strap wings 52 along the underfaces of the gussets 60 and bringing them to an upright position along the faces of the receptacle side walls. The fastener elements 48 and 53 are brought into mating engagement, effecting a connection between the handle 44 and the strap 49 and maintaining the receptacle in expanded position by reason of the gussets 60 being retained in their upwardly directed position. It is important to note that by reason of the connection between the handle 44 and strap 49 as aforesaid, the receptacle is supported along the bottom thereof when carried by the handle 44 thereby increasing the structural strength and carrying capacity of the receptacle when in the locked expanded position.

Articles may readily be inserted into the receptacle by unlatching the flap 54, fully opening the cover 65, and urging the flap 63 forward to a position coplanar with the receptacle front wall to provide free access into the receptacle. To close the receptacle the cover 65 is closed and the flap 63 is swung rearwardly to a horizontal position, and the gussets 61 collapsed to a position underlying the cover 65 and flap 63 as may be seen in FIGURE 2 of the drawing. The cover 65 may then be locked by latching the flap 54. When it is desired to collapse the receptacle the fastener elements 48 and 53 are disengaged and the above expanding procedure reversed.

It can be seen from the above that there has been provided by the present invention a simple rigid wall collapsible heat insulated receptacle which is easy to expand and collapse, is of relatively high capacity, and is rugged, convenient and inexpensive, and of attractive appearance.

While there has been described and illustrated a preferred embodiment of the present invention it is apparent that numerous alterations, omissions and additions may be made without departing from the spirit thereof.

What is claimed is:

1. An improved collapsible receptacle comprising similarly shaped rectangular front and rear walls, side walls hinge connected to corresponding side edges of said front and rear walls and each including a pair of vertically hinged similarly shaped rectangular panels, a bottom wall including a pair of hinged similarly shaped rectangular panels having opposite laterally extending edges hinge connected to lower corresponding edges of said front and rear walls, a top wall hinged to the top of said front wall, said walls being formed of similarly shaped unitary flexible facing and lining members and a unitary stiff stay sheet and a heat insulating layer, said facing sheet and insulating layer being superimposed and sandwiched between said facing and lining members,

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tapered wing members projecting from opposite sides of said bottom walls in extension of said stiff stay sheet member for substantially the full width of said sides of said bottom walls, and gusset members extending between and joined through the lower edges of the facing and lining members of said side walls and enveloping said wing members, said gusset members being of greater area than said wing members, and means releasably locking said wing and gusset members in an upwardly directed position along said side walls to maintain said receptacle in an expanded condition.

2. A receptacle as described in claim 1, triangular second wing members hinged along their bases to the upper edges of said side wall and second gusset members enveloping said second wing members and being of larger area than said second wing members, said second gusset members being connected to the upper edges of said side wall and the lateral edges of said top wall.

3. A receptacle as described in claim 1 including a cover member hinged to the upper edge of said rear wall, a flap hinged to the free end of said cover member, and mating latching means located on said flat and said front wall.

4. A receptacle as described in claim 1, said means releasably locking said wing members including a first strap member affixed to said bottom wall and adapted to overlap said wing members, a handle member affixed to and extending between said side walls across and spaced from the top of said receptacle, and means releasably connecting the free ends of said first strap member to opposite side of said handle to connect said handle and strap members about said receptacle and to support said wing

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member along said side walls and maintain said receptacle in an expanded condition.

5. A receptacle as described in claim 1, said wing members being triangular and hinged along their bases to the side edges of said bottom wall, each of said wing members being slotted from their apices to their bases along the line colinear with the common hinged line of said bottom wall.

6. A receptacle as described in claim 5 wherein said hinge connections are defined by score lines formed in said stay sheet and said facing and lining members comprise synthetic organic thermoplastic webs heat-sealed to each other along their free contiguous edges.

7. A receptacle as described in claim 4 wherein said first strap member includes laterally extending wing members terminating in first separable fastener elements and said handle member is defined by a second strap member fastened to said side walls and provided with depending tabs carrying second separable fastener elements mating said first fastener elements.

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