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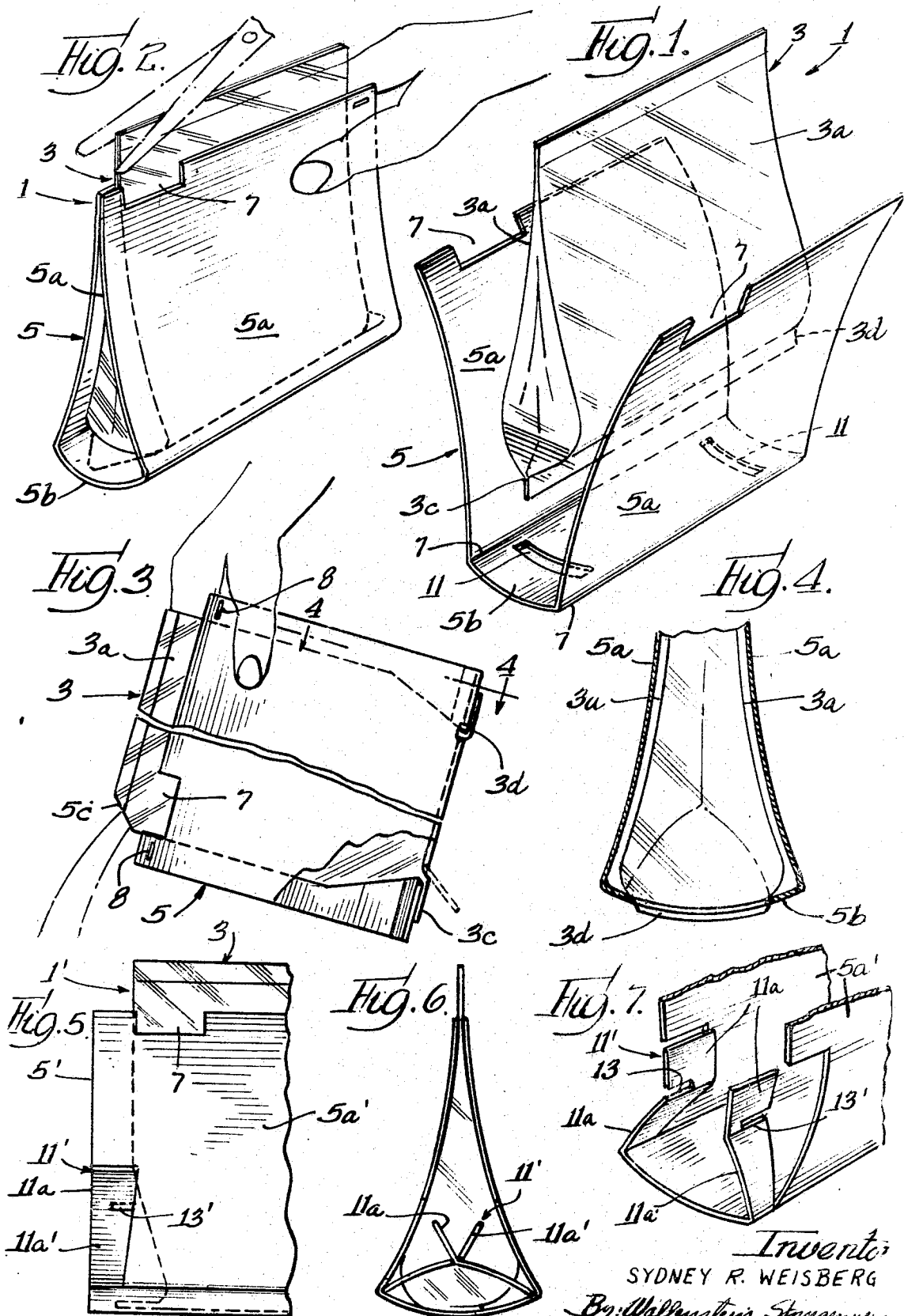
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COMBINATION BAG AND STAND ASSEMBLY

Filed Oct. 4, 1968

2 Sheets-Sheet 1



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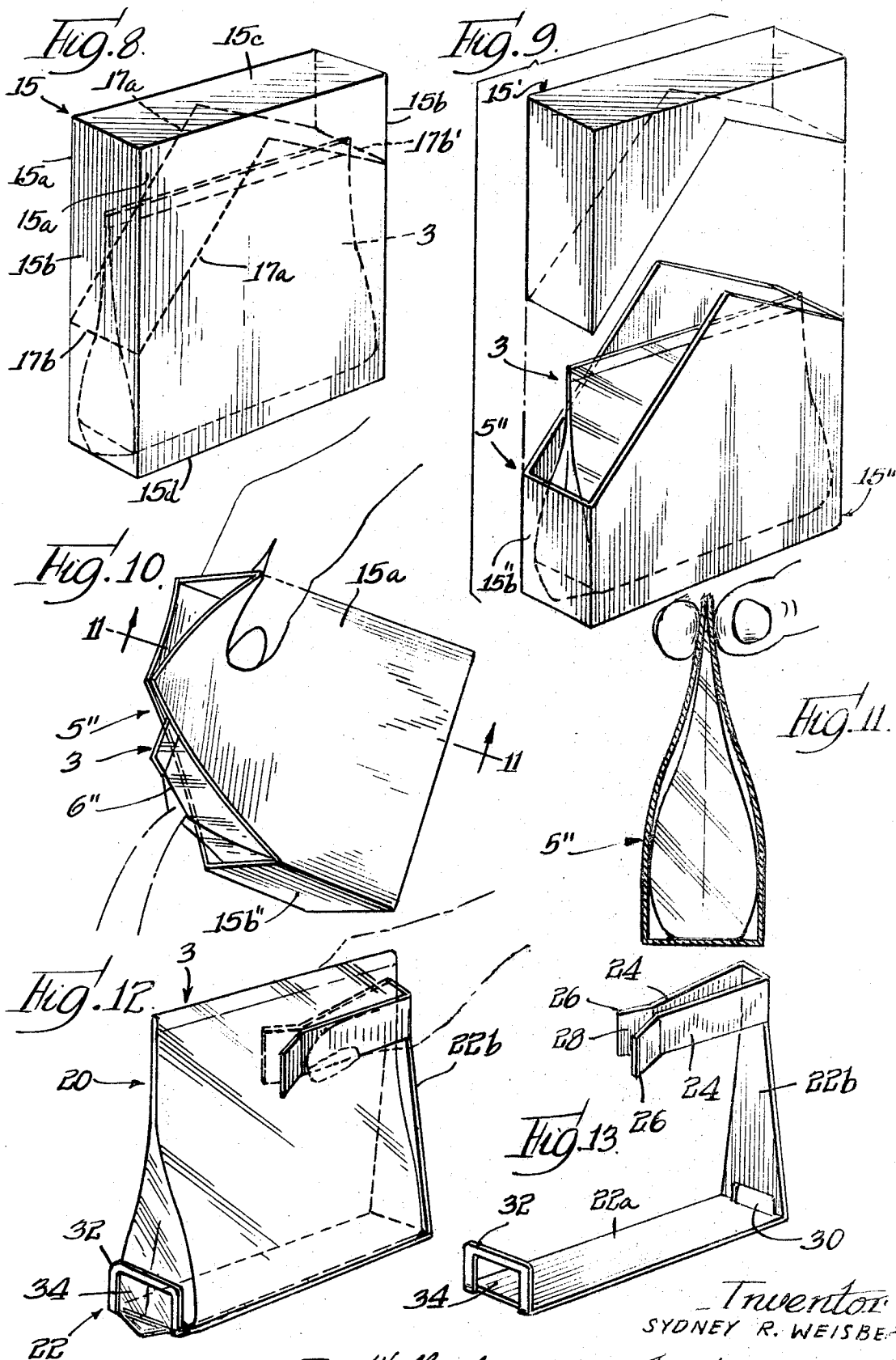
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COMBINATION BAG AND STAND ASSEMBLY

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ABSTRACT OF THE DISCLOSURE

A non-self-supporting flexible bag is supported on a stand having a bottom wall on which the bag rests, a pair of relatively close spaced inwardly flexible side walls which together with the bottom wall form a confined space in which the bag will remain upright and which, when gripped by the user, snugly engage the upper portion of the side walls of the bag to hold the same in place when the stand is grasped and tilted forwardly to pour the contents of the bag. Means are provided at the front of the stand which are engaged by the front bottom portion of the bag to keep the bottom portion of the bag from swinging away from the stand when the same is tilted forwardly.

This invention relates to a package assembly including a flexible bag which normally is non-self-supporting.

The practice of packaging liquid and solid substances in moisture and air impervious plastic containers has expanded markedly in recent years. In some instances the plastic containers are flat flexible bags which are substantially non-self-supporting. Generally speaking, the flat flexible bags are enclosed in a rigid or semi-rigid auxiliary container to provide support for the bags after they have been opened and a portion only of the contents thereof used. However, these containers or supports have been bulky and inconvenient to use. In many instances, no such associated supporting container is provided for the flexible bags, and the user, after opening the bags and removing therefrom less than all of the contents contained therein, is faced with the annoying and frustrating experience of having to devise means for keeping the remainder of the contents of the bag from leaking out, or spilling.

The above mentioned problems were, to a great extent, alleviated by the development of a container and stand assembly disclosed in my U.S. Pat. No. 3,144,129, granted Aug. 11, 1964. In the container and stand assembly disclosed in this patent, the upper portion of the bag is anchored by staples or the like to the upper portion of the stand, usually by the manufacturer.

One of the objects of the present invention is to provide a stand of a different type from that disclosed in said U.S. Pat. No. 3,144,129 in that the bag is not or need not be anchored by staples or the like to the stand, and wherein the bag and the stand are so related that the contents of the bag readily can be poured from a spout at the upper corner of the bag while the bag remains on the stand.

A further object of the invention is to provide a stand for a non-self-supporting bag where the ultimate user can readily position the bag on the stand which forms both a means for holding the flexible bag upright, so the contents of the bag open at the top will not spill therefrom, and a holder for the bag which is grasped and tilted forwardly to pour its inner contents from a spout at the front upper corner of the bag.

A related object of the invention is to provide a stand as described which is of simple and inexpensive construction.

A still further object of the invention is to provide an assembly of a box which completely encloses a flat non-self-supporting bag and from which one of the aforementioned stand can be readily fabricated by severing

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the upper portion of the box from the bottom portion thereof.

In accordance with one of the aspects of the present invention, a stand is provided having a bottom wall on which the bottom of the flat bag rests, and relatively closely spaced inwardly flexible side walls which, together with the bottom wall of the stand, form a confined space in which the bag will remain upright and which, when gripped by the user, snugly engage the upper portion of the side walls of the bag to hold the upper portion of the bag in place when the stand is grasped and tilted forwardly to pour the contents of the bag from a spout formed at the front upper corner of the bag. Means are provided at the bottom of the stand which are engaged by the front bottom portion of the bag to keep the bottom portion of the bag from swinging away from the stand when the stand is tilted forwardly during a pouring operation.

Other aspects of the invention deal with various preferred forms of the stand broadly described above. The above and other objects and features of the invention will become apparent on making reference to the specification to follow, the claims and drawings wherein:

FIG. 1 is a perspective view showing a flat bag in the process of being placed within a folded sheet of flexible material which is to form a stand for the bag;

FIG. 2 illustrates the completed assembly of the bag and the stand shown in FIG. 1 and a person in the process of cutting a pouring spout from the front upper corner of the bag;

FIG. 3 shows the bag and stand assembly of FIG. 2 being held by the user in a bag pouring position;

FIG. 4 is a fragmentary vertical sectional view through the bottom portion of the bag and stand assembly shown in FIGS. 2 and 3, taken along section line 4—4 in FIG. 3;

FIG. 5 is a fragmentary side elevational view of one end of a modified form of bag and stand assembly;

FIG. 6 is an end elevational view of the opposite end of the bag and stand assembly from that shown in FIG. 5;

FIG. 7 is a fragmentary perspective view of one of the ends of the stand shown in FIGS. 5 and 6 as the stand is in the process of being assembled from a folded sheet of flexible material;

FIG. 8 is a perspective view of a still further form of the invention where the stand forms a part of a complete rectangular box in which the bag is housed during shipment and storage;

FIG. 9 is a perspective view showing the separation of the upper portion of the box shown in FIG. 8 from the bottom portion thereof, which bottom portion forms a stand for the bag for holding the same upright and for pouring the contents of the bag;

FIG. 10 is a perspective view of the bag and stand assembly shown in FIG. 9 as the contents of the bag are being poured therefrom;

FIG. 11 is a vertical sectional view through the bag and stand assembly of FIG. 10, taken along section line 11—11 thereof;

FIG. 12 is a perspective view of a still further modified bag and stand assembly; and

FIG. 13 is a perspective view of the stand portion of the assembly shown in FIG. 12.

Referring now to the embodiment of the invention shown in FIGS. 1 through 4, an assembly 1 is a flat bag 3 and a stand 5 is shown where the stand forms a means for supporting the flat bag 3 in a stable upright position and a holder for the bag 3 to enable the contents of the bag 3 readily to be poured from a spout or opening 6 formed at the front upper corner of the bag.

The illustrated bag 3 is a non-self-supporting bag made of a suitable highly flexible synthetic plastic material. The bag has relatively closely spaced side walls 3a—3a

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sealed at their periphery to form a flat bag construction of the type which cannot normally support itself in a stable upright position. As illustrated, the bag 3 has liquid or other contents which bulge the bottom portion of the bag. The stand 5 is formed from a single sheet of flexible material, such as cardboard or other suitable material, folded along fold lines 7-7 into relatively wide outer panels 5a-5a separated by a relatively narrow panel 5b. When the outer panels 5a-5a are folded upwardly as shown in FIG. 1, they form a confined space for holding the bag 3 upright. As illustrated, the stand side walls 5a-5a preferably have a width substantially greater than that of the bag 3, but a height substantially less than that of the bag 3. Accordingly, when the bag 3 is positioned between the side walls 5a-5a of the stand, the upper portion of the bag 3 projects above the stand side walls and the end margins of the stand side walls project beyond the end margins of the bag 3. Staples 8-8 may be passed through the upper corner portions of the stand side walls 5a-5a located beyond the sides of the bag 3 to hold the stand permanently about the bag. As shown in FIG. 2, a spout 6 may be formed in the front upper corner of the bag 3 by cutting across the corner of the bag with a scissors. To prevent the panel side walls from compressing and sealing the bag side walls 3a-3a along the entire length of the upper margins of the stand panels 5a-5a, rectangular slots 7-7 are formed in the portions of the upper margins of the stand panels 5a-5a positioned opposite the front end of the bag, so the bag contents can flow readily between the bag walls at this point to the spout 6 when the bag is tilted forwardly.

The stand side walls 5a-5a are inwardly flexible so that the side walls 3a-3a of the bag 3 can be gripped through the side walls 5a-5a of the stand, whereby the upper portion of the side walls of the bag 3 remain in a fixed position with respect to the stand when the stand is grasped in the manner shown in FIG. 3 and tilted forwardly for pouring the contents of the bag 3 through the spout 6.

The stand 5 is provided with means at the front and bottom of the stand engaged by the front bottom portion of the bag to keep the bottom portion of the bag from swinging away from the stand when the stand is tilted forwardly as shown in FIG. 3. In the form of the invention shown in FIGS. 1 through 4, this means comprises transversely extending openings 11-11 formed at the front and rear ends of the bottom wall 5b of the stand and spaced apart a distance somewhat less than the width of the bag. The front and rear bottom corners 3c-3d of the bag 3 are flattened and pushed downwardly through the openings 11-11 and then pulled outwardly so that the bottom of the bag is anchored to the bottom of the stand.

Referring now to FIGS. 5 through 7 which illustrate a modified bag and stand assembly 1' which is similar to the bag and stand assembly 1 in FIGS. 1 through 4 except that the means for holding the bottom portion of the bag 3 in place on the stand when the stand is tilted are abutment means 11'-11' at the front and rear ends of the bottom wall 5b of the stand. The abutment means 11'-11' are each preferably formed from a pair of tabs 11a-11a' struck from the side walls 5a'-5a' of the modified stand 5'. The tabs 11a-11a have horizontal slots 13-13' therein, the slot 13 being formed in the forward edge of the tab 11a and the slot 13' being formed in a corresponding point in the rear edge of the tab 11a'. The slotted portions of the tabs are interleaved to lock the two tabs in place to form an abutment means 11'.

Reference should now be made to FIGS. 8 through 11 which show a still further modified form of the invention. In the forms of the invention shown in FIGS. 1 through 7, the bag and stand assembly is assembled by the ultimate user from a flat sheet of flexible material having dark lines marked thereon locating the fold lines 7-7. In the embodiment of the invention shown in FIGS. 8 through 11, the modified stand identified by reference 5'' forms part of a rectangular box or container 15 shown

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in FIG. 8 in which the bag 3 is shipped and stored. The rectangular box 15 has the usual side walls 15a-15a, end walls 15b-15b, a top wall 15c and a bottom wall 15d. The side and end walls 15a-15a and 15b-15b of the box 15 have lines of serrations 17a-17a and 17b-17b' which respectively form the outlines of the upper margins of the stand 5''. By severing the box walls along the serrations, the box 15 separates into upper and lower sections, 15' and 15'' as shown in FIG. 9, the bottom sections 15'' forming the aforementioned stand 5''. The side wall serrations 17a-17a preferably extend along angular lines as shown, one of which inclines downwardly to a point below the top of the front of the bag 3, so the separation of the box 15 into the two sections referred to exposes the front upper corner of the bag 3 which is to be severed to form a pouring spout 6''. The portion 15b'' of the box end wall 15b remaining with the bottom section 15'' of the box 15 constitutes a means at the front of the stand for keeping the bottom portion of the bag 3 from swinging away from the stand when the stand is tilted forwardly.

Refer now to FIGS. 12 and 13 which show a further modified form of the bag and stand assembly identified by reference 20. The bag and stand assembly 20 utilizes a modified stand 22 which is formed of a metal stamping or the like including, in addition to a bottom wall 22a, a vertical wall 22b extending upwardly from the rear end of the bottom wall 22a. The vertical wall 22b forms a rear abutment wall for the bag 3 and a support from which extend a pair of forwardly extending spring metal fingers 24-24. The ends of the spring metal fingers 24-24 bend outwardly at 26-26 to form a tapered mouth 28 into which the bag 3 may be readily passed.

FIG. 12 illustrates the manner in which the stand 22 is grasped for pouring the contents of the bag 3. Thus, the rear wall 22b of the stand is engaged by the palm of the user's hand whose fingers extend around the outside of the horizontally extending spring metal fingers 24-24 which are squeezed tightly inwardly to grasp the bag 3.

The means for preventing the bottom portion of the bag 3 from swinging forwardly from the stand 20 when the stand is tilted forwardly include upwardly extending portion 32 at the front of the bottom wall 22a which portion 32 has an opening 34 into which extends the front bottom portion of the bag 3. An opening 30 is also formed in the bottom of the wall 22b into which opening the bottom rear portion of the bag 3 passes.

It is understood that numerous modifications may be made in the most preferred forms of the invention disclosed without deviating from the broader aspects thereof.

I claim:

1. In combination with a non-self-supporting flexible bag having relatively closely spaced side walls sealed at their periphery to form a flat bag construction, a stand for supporting said bag upright when the bag is open and partly filled and for forming a holder for the bag when the contents of the bag are poured through an opening formed at or near the front upper corner of the bag, said stand including a bottom wall on which said bag rests, the upper portion of said bag being completely free of any anchoring connections to the stand, relatively closely spaced inwardly flexible side walls which, together with the bottom wall, form a confined space in which the bag will remain upright and which, when gripped by the user, snugly engage the upper portion of the side walls of the bag to hold the upper portion of the side walls of the bag in place when the stand is grasped and tilted forwardly to pour the contents of the bag, and means at the front of the stand engaged by the front bottom portion of the bag to keep the bottom portion of the bag from swinging away from the stand when the stand is tilted forwardly and said stand being open at the top thereof to expose at least the front upper corner portion of the bag to permit the contents thereof to be poured from an opening formed thereat.

2. The combination of claim 1 wherein said stand is

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an open-top, rectangular, box-like structure where said means at the front of the stand engaged by the front bottom portion of the bag is a vertical wall extending between said inwardly flexible side walls thereof.

3. The combination of claim 1 wherein said means at the front of the stand engaged by the front bottom portion of the bag is an apertured wall extending upwardly from said bottom wall and through which the front bottom portion of the bag extends.

4. The combination of claim 1 wherein said means at the front of the stand engaged by the front bottom portion of the bag are the defining walls of an opening formed in the front portion of said bottom wall of the stand, the front bottom portion of the bag extending first downwardly and then forwardly through said opening so the bag is interlocked with the stand.

5. The combination of claim 1 wherein said inwardly flexible side walls and said bottom wall are formed from a single folded sheet of flexible material folded into three panels respectively forming, in succession, one of said side walls, said bottom wall and the other side wall.

6. The combination of claim 5 wherein said means at the front of the stand engaged by the front bottom portion of the bag comprise tabs struck from said side walls of the stand and interlocking to form an abutment for the front bottom portion of the bag.

7. The combination of claim 1 wherein said bottom wall of the stand has apertures at the forward and rear

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portions thereof into which apertures the front and rear bottom portions of the bag extend downwardly and outwardly to interlock the bag with the stand.

8. The combination of claim 1 wherein the stand has upstanding walls at the front and rear of said bottom wall which upstanding walls have apertures therein through which the front and rear bottom portions of the bag extend to interlock the bag with the stand.

9. The combination of claim 1 wherein said side walls comprise horizontally extending resilient fingers, said resilient fingers forming an opening into which said bag is horizontally slid into position on the stand, said fingers projecting from a wall extending upwardly from one end of said bottom wall of the stand.

10. The combination of claim 9 wherein said upwardly extending wall is at the rear end of said bottom wall.

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206—65; 229—7, 55