

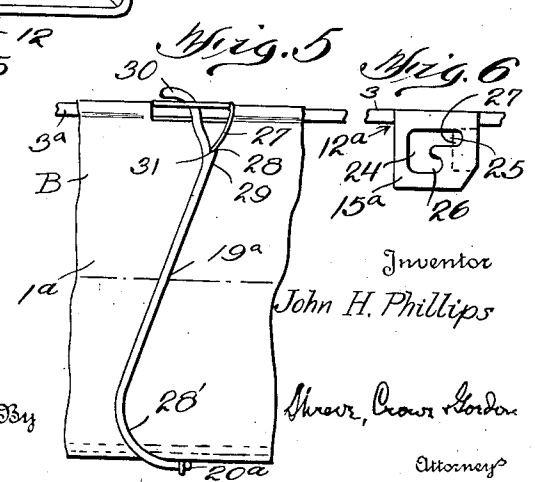
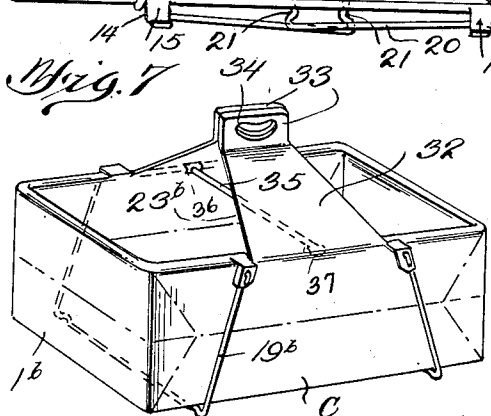
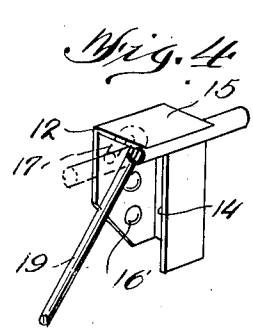
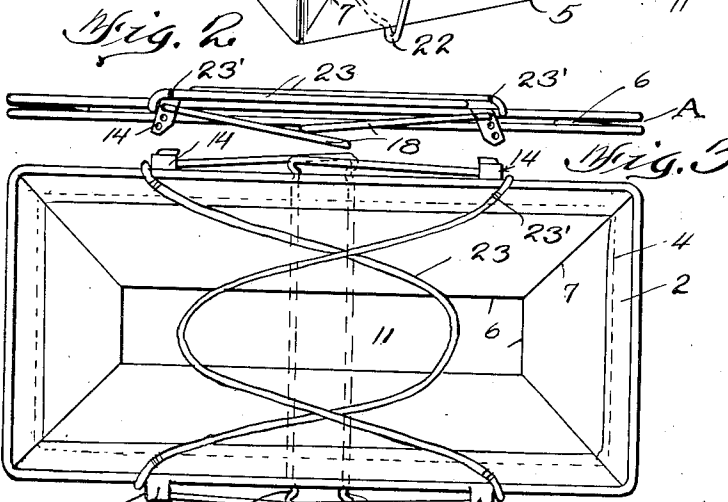
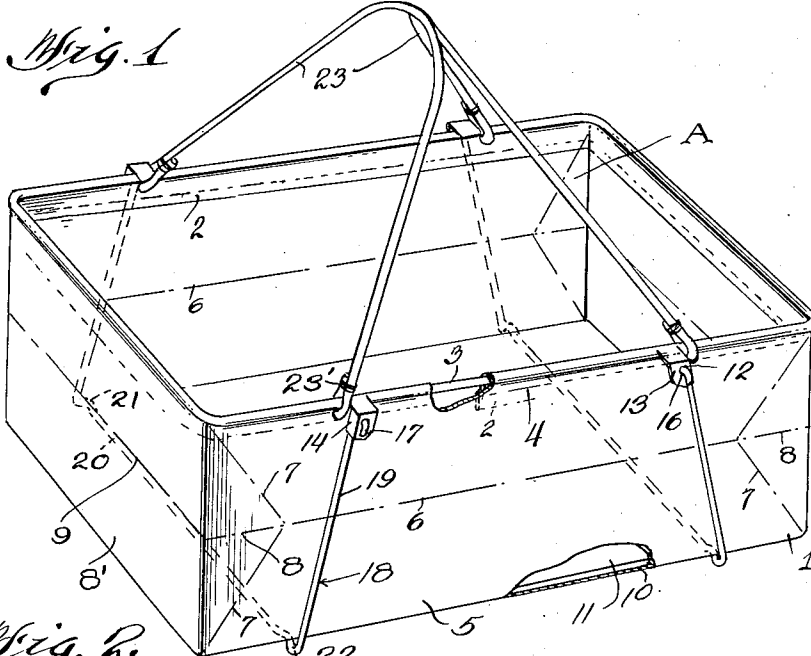
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J. H. PHILLIPS

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COLLAPSIBLE CONTAINER

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*Fig. 6*

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# UNITED STATES PATENT OFFICE

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## COLLAPSIBLE CONTAINER

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6 Claims. (Cl. 229—41)

Generically this invention relates to collapsible containers, but it more especially is directed to the basket type adapted to the carrying of groceries, and the like.

5 One of the principal objects of this invention is the provision of a basket-like collapsible container constructed from paper, fabric, or other light and foldable material, adapted to be discarded after being used, but of such construction as to be susceptible of repeated use if desired.

10 An important object of this invention is the provision of a collapsible container having a foldable body portion of paper or the like and hinged leg and body supporting members, said body and leg members being foldable into a flat compact form, and when so folded and lifted by the handles adapted to assume their normal extended positions, said leg members additionally constituting body reinforcing elements.

15 Another important object of this invention is the provision of a collapsible container constructed from paper or the like, having a rigid reinforcing frame carried by its upper edge, and container embracing means hingedly carried by the frame, said container and means being collapsible into substantially superimposed relation, and when so collapsed adapted to be handled or shipped in stacked form.

20 A further object of this invention is the provision of a collapsible container having a body portion constructed from paper, or the like, a reinforcing frame member surrounding the upper edge thereof, and means carried by the frame constituting body reinforcing and supporting leg elements, said means and body portion being foldable into substantially flat positions with respect to said frame, and without changing the horizontal area of the container.

25 With these and other objects in view, which will become apparent as the description proceeds, the invention resides in the construction, combination and arrangement of parts, hereinafter more fully described and claimed, and illustrated in the accompanying drawing, in which like characters of reference indicate like parts throughout the several figures, of which:

30 Fig. 1 is a perspective view of my improved collapsible container;

35 Fig. 2 is a side view of the container illustrated in Fig. 1 in collapsed position;

Fig. 3 is a top plan view of Fig. 2;

40 Fig. 4 is a fragmentary detailed view of one of the leg anchor members;

45 Fig. 5 is a fragmentary side elevation of a

portion of the container showing a modified form of leg and anchor structure;

Fig. 6 is a top plan view of the anchor member shown in Fig. 5; and

Fig. 7 is a view similar to Fig. 1 showing a slightly modified form of handle structure, and spreader means.

The devices with which I am familiar have proven deficient in many respects, some of which are; being flimsy, bunglesome and unwieldy to carry when filled; of an entirely non-rigid construction; improperly reinforced and likely to tear while being transported, etc.; and it was to overcome such deficiencies and provide a collapsible container of semi-rigid construction, adapted to be folded into a compact form when not in use and without increasing the normal horizontal area thereof, and having a substantially rigid frame member secured to and coextensive with the upper edge of the foldable body portion, substantially U-shaped members hingedly connected to the frame, constituting when the container is being carried reinforcing elements for the body portion, and when placed on a suitable supporting surface, supporting legs coacting with said frame to prevent sagging of the body portion, means for maintaining said leg members in bracing position, and handle means for expeditiously carrying the container when filled, that I designed the device forming the subject matter of this invention.

In the illustrated embodiment characterizing this invention there is shown a basket-like collapsible container A comprising a foldable body portion 1, in the present instance rectangular in configuration, preferably constructed from paper, though it may be formed from fabric, open mesh, or any composition material of a flexible and foldable nature according to the exigencies of the particular requirements.

Said body 1 is formed at its upper edge with a hem 2 within which is adapted to be substantially concealed a frame 3 preferably formed from steel wire, copper wire, or the like, and the size of which may be varied in accordance with the particular requirements. The hem 2 is secured about the frame 3 by stitching 4 or in any suitable manner. This frame constitutes a reinforcing and supporting member and maintains the body 1 in proper open position.

50 The sides 5 of body 1 are adapted to fold inwardly on fold line 6 upon themselves in overlapping relation, and outwardly on diagonal lines 7, and lines 8 which are continuations of lines 6, coincident with the similar folding of ends 8' 110

along fold lines 9, the overlapping sections of ends 8' extending or dovetailing between the overlapping sections of said sides along lines 7 bringing bottom 10 and frame 3 into superimposed relation to present a compact flat structure, and without changing the horizontal surface area of the container.

In order to structurally strengthen the device and effect a more ready folding and unfolding of the body portion as above described, an auxiliary bottom member 11 of a size corresponding to the inner dimensions of the body 1 and frame 3 is superimposed on the bottom 10 formed from any desired material such as corrugated board, cardboard, and the like.

Mounted on each of the respective sides spaced from the respective ends of the frame 3 is an anchor member 12. The respective anchor members may be stamped from sheet metal and bent to form the depending section 13 and further bent to form the stop section 14, the free end of the horizontal portion 15 being bent or crimped about frame 3 and firmly secured thereto by soldering or in any suitable manner. The section 13 is formed with one or more inwardly projecting protuberances or friction lock elements 16', and with a perforation 16 adapted to pivotally receive one of the free ends 17 of the supporting leg and body reinforcing elements 18, now to be described.

The respective substantially U-shaped or loop elements 18 are preferably formed from steel or copper wire, variable in size and rigidity as desired. Each of said elements 18 comprises a pair of leg portions 19 having their free ends extending through perforations 16 of opposed anchor members 12 spaced from one end of frame 3, and bent over or crimped to prevent their disengagement therefrom. The horizontal section 20 integrally connecting the leg sections 19 and extending under the bottom 10 of the container is of a greater length than the width of frame 3, so as to obtain a wider base and form with said legs an angular bracing means for said frame and body portion carried thereby. Said section is also bent adjacent the legs 19 to form curved recesses 21 and feet 22, the latter adapted to support said section spaced above the supporting surface on which the feet rest.

The stops 14 limit the hinged or swinging movement of the U-shaped elements 18 and supports them at angles with respect to each other so as to enlarge the supporting base area and effect a braced leg structure when in container supporting position. Such arrangement also permits the recesses 21 to engage over the sides of the frame 3 of a similar container when a number of containers are nested or placed one above the other, as will be clear without further description.

In order that the filled containers may be expeditiously carried even when the contents are unevenly balanced, a pair of preferably cord handles 23 are employed with their free ends looped around the frame 3 adjacent the outer edges of anchor members 12 and fastening the ends by binding with cord, wire, or in any suitable manner as at 23'.

When it is desired to fold or collapse the container A it is but necessary to compress the bottom 10 and top frame 3 into superimposed relation and move the leg assemblies in meeting and overlapping relation against said bottom, or initially disengage the leg structure from the friction elements 16' and turn the container over,

whereupon by virtue of their own weight the foldable parts will assume their proper folded positions.

It has been found desirable under certain conditions to slightly change the leg and anchor structures of the form of container hereinbefore described, without departing from the scope or spirit of my invention, and which modified structure is shown in Figs. 5 and 6 of the drawing, and which will now be described.

This form is similar to Fig. 1, except the horizontal portion 15a is formed with a bayonet slot 24 having an elongated slot portion 25 at one end adjacent frame 3a and extending in parallelism therewith, and a similar but shorter slot 26 at the other end adjacent the outer edge of member 15a. Said member 15a is formed at its inner edge with a tongue or clip member 27 projecting diagonally beneath said member 15a with its free end 28 terminating at a point substantially in a vertical plane with respect to the end of slot 26, and which may be cut out to conform to the rounded surface of leg member 19a if desired.

The sections 20a of the U-shaped elements 18a are rotatably secured to the bottom 10a by staples, straps, or other suitable means, and the leg members 19a adjacent their respective lower ends are curved outwardly towards the respective ends of the containers as at 28'. Spaced from each of their ends, legs 19a are bent as at 29 oppositely to bends 28' and outwardly and upwardly projecting through slots 24 and terminating in right angularly extending portions 30, which structure prevents complete disengagement of the legs from their anchor members 12a. Also formed on the outer surface of each of the bends 29 is a notch 31 adapted to engage the end 28 when leg 19a is engaged in slot 26 and whereby the same is rigidly locked with respect to anchor 12a and frame 3a. When the respective legs are so positioned, said elements 18a constitute braced rigid supporting means for the frame 3a and body portion 1a.

This form of container B may be collapsed by simply manually disengaging the upper ends of legs 19a from clip member 27 and placing them in slots 25, and as the bottom 10a is brought into superimposed relation with respect to frame 3a, the sections 20a being rotatably secured thereto causes the leg portions 19a to be projected through slots 25 and, by means of curved portions 28', assume parallel positions with respect to the edges of the frame and bottom sections when said container has reached complete folded position.

The container may be restored to open or extended position by merely lifting the folded container by its handles, whereupon it will assume open position, and by moving the upper ends of legs 19a into slots 26 bringing notches 31 into engagement with ends 28 a rigid supporting frame structure is effected as above described.

In adapting my improved device to certain uses it is found expedient to modify the handle structure 23, as shown in Fig. 7, and without departing from the spirit or scope of my invention as hereinbefore described. In this form of my invention designated as C, the handle means 23b is formed from the material from which the folded body portion 1b is constructed, such as paper, fabric, and the like, and comprises a strip or strap section 32 constituting a continuation of the respective side portions of the body 1b and of a width equal to the space between the

anchor members 12b, tapering towards its free end. Said members 32 being of lengths sufficient to meet at points spaced from their extremities and extending upward in overlapping relation, to form the complementary gripping members 33, each being formed with an opening 34.

Also in order to prevent any possible distortion of the frame 3b when the contents are of a heavy nature, I have provided a spacer bar 35 suitably hinged to one side of the frame as at 36 and suitably detachably engageable with the opposite side as at 37.

From the above it will be apparent that I have designed a foldable or collapsible basket container comprising a foldable body portion adapted to be formed from a single piece of material and if desired including the handle members, and a single frame member attached only to the upper edge of said body, and a pair of foldable members hingedly or otherwise attached to the frame constituting bracing supporting legs and body reinforcing means; or to express it more concisely, a supporting frame and leg structure, within which is suspended a container body portion attached to the frame only at its upper edge, the whole being foldable into a flat compact form, yet presenting a device simple in construction, manufacturable at an extremely low cost, and efficient for the purposes intended.

Although in practice I have found that the form of my invention illustrated in the accompanying drawing and referred to in the above description as the preferred embodiment is the most efficient and practical; yet realizing the conditions concurrent with the adoption of my invention will necessarily vary, I desire to emphasize that various minor changes in details of construction, proportion and arrangement of parts, may be resorted to within the scope of the appended claims without departing from or sacrificing any of the principles of this invention.

Having thus described my invention, what I desire protected by Letters Patent is as set forth in the following claims:

1. A collapsible container comprising a body portion predeterminedly foldable, a supporting frame connected to the upper edge of the body portion, anchor means carried by said frame, supporting leg and body reinforcing elements carried by said body and slidable in said anchor means, means carried by the anchor means detachably engageable with said leg elements to rigidly connect the same with said anchor means to maintain the legs in container-supporting position, said body portion and leg elements adapted to be folded with respect to said frame to effect a substantially flat compact structure.
2. A collapsible container comprising a foldable body portion, a supporting frame connected to the upper edge of the body portion, anchor means carried by said frame, supporting leg and body reinforcing elements movably carried by said body and slidable in said anchor means, said leg elements formed adjacent their free ends with notches, clip means carried by the anchor means detachably engageable with said notches to rigidly connect said elements with the anchor means to maintain the same in container-supporting position, whereby folding of said body portion effects folding of said legs with respect to said frame into a substantially flat compact structure.
3. A collapsible container comprising a foldable body portion, a supporting frame connected to the upper edge of the body portion, anchor

means carried by said frame, supporting leg and body reinforcing elements carried by said body and slidable in said anchor means, clip means carried by the anchor means detachably engageable with the free ends of said leg elements to rigidly connect the same with said anchor means to maintain the legs in frame-supporting position when resting on a supporting medium and constituting container reinforcing and supporting elements when the container is being carried in extended position, whereby folding of said body portion with respect to the frame likewise effects folding of the leg elements with respect to said frame to effect a substantially flat compact structure.

4. A collapsible container comprising a body and handle means therefor formed from a single piece of foldable material, a supporting frame comprising side and end portions connected to the body at its upper edge, anchor means connected to the respective side portions at points spaced from their ends, frame-supporting leg and body reinforcing and supporting elements adapted to embrace the body and movably connected to said anchor means, brace and retaining means carried by the anchor means adapted to maintain the legs in frame-supporting position, whereby said body is adapted to be folded into substantially flat superimposed relation with respect to the frame and said legs into overlapping and overlying relation with respect to said body.

5. A collapsible container comprising a body portion formed from foldable material, a supporting frame comprising end and side sections connected to the upper edge of the body portion, anchor means carried by said side sections at points spaced from their ends, frame-supporting and body-embracing leg elements, movably connected to said anchor means, means carried by said anchor means coacting with said leg elements to maintain the latter in frame-supporting position and normally prevent folding of said legs, said legs additionally constituting body reinforcing and supporting means when the body is in extended position, whereby said legs are adapted to effect folding of said body with respect to the frame when brought to folded positions without changing the horizontal area of the device.

6. A collapsible container comprising a body portion predeterminedly foldable, a rectangular supporting frame connected to the upper edge of the body portion, anchor means carried by the respective sides of the frame spaced from the ends thereof, supporting leg and body embracing reinforcing elements having their free ends hingedly connected to said anchor means, stop means carried by the anchor means adapted to limit movement of said legs in one direction and constituting a brace means when the container is resting on a supporting medium, and friction elements carried by the anchors for normally maintaining the legs in expanded or supporting position, whereby said legs constitute frame supporting elements when resting on a support and container reinforcing and supporting elements when the container is being carried, said legs adapted to be folded into overlapping relation with respect to said body and causing said body to be folded into superimposed relation with respect to said frame to form a substantially flat compact structure when the device is not in use.