No. 858,488. PATENTED JULY 2, 1907.

M. E. TYNES.

COLLAPSIBLE SHIPPING CASE.

APPLICATION FILED JUNE 29, 1905.

Fig. 1.

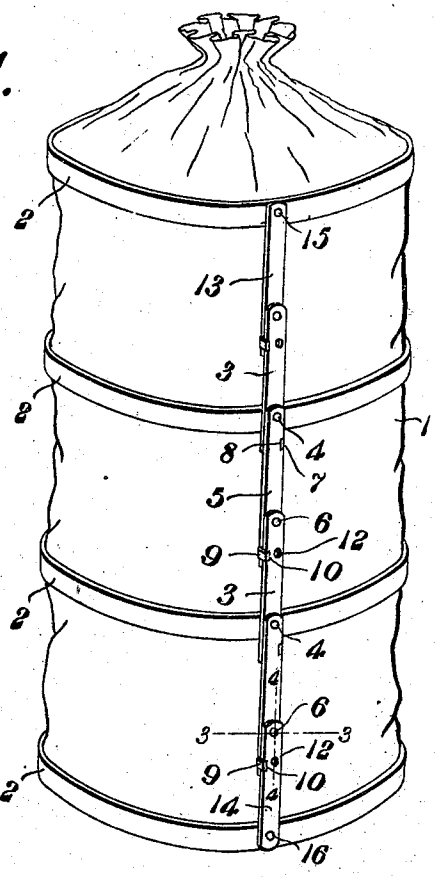


Fig. 3.

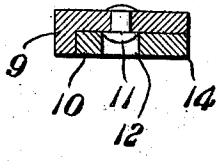


Fig. 4.

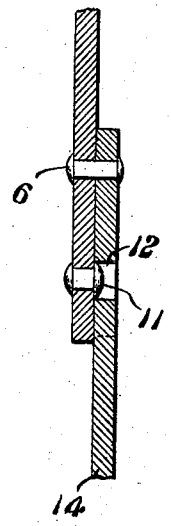
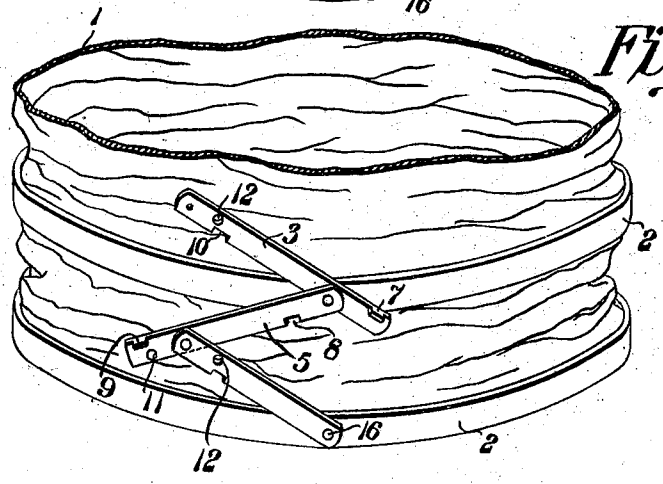


Fig. 2.



WITNESSES:

E. F. Stewart

C. Bradway.

Minor E. Tynes, INVENTOR

By C. A. Snow & Co.

ATTORNEYS

UNITED STATES PATENT OFFICE.

MINOR EUGENE TYNES, OF GLOSTER, MISSISSIPPI, ASSIGNOR OF ONE-HALF TO JOHN H. HINES, OF GLOSTER, MISSISSIPPI.

COLLAPSIBLE SHIPPING-CASE.

No. 858,488. Specification of Letters Patent. Patented July 2, 1907.

Application filed June 29, 1905. Serial No. 267,610.

To all whom it may concern:

Be it known that I, MINOR EUGENE TYNES, a citizen of the United States, residing at Gloster, in the county of Amite and State of Mississippi, have invented a new and useful Collapsible Shipping-Case, of which the following is a specification.

This invention relates to shipping crates or cases and has for its object to provide an improved collapsible case of this character which has been particularly designed for the shipment of bunches of bananas, hats and the like.

The body of the present device is preferably in the nature of a bag and it is proposed to provide a supporting frame therefor to retain the bag in an upright position when in use and capable of being collapsed to fold the bag in compact form for convenience in returning the case as an "empty".

It is also an important object of the invention to effect automatic locking of the bag supporting frame when extended to its limit so as to facilitate the setting up of the case and at the same time to permit convenient breaking of this interlocking of the frame when it is desired to fold or collapse the device.

With these and other objects in view, the present invention consists in the combination and arrangement of parts as will be hereinafter more fully described, shown in the accompanying drawing and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made, within the scope of the claims, without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawing:—Figure 1 is a perspective view of one embodiment of the present invention set up in condition for use. Fig. 2 is a fragmentary perspective view showing the device partially collapsed. Fig. 3 is an enlarged detail cross sectional view taken on the line 3—3 of Fig. 1. Fig. 4 is an enlarged detail sectional view on the line 4—4 of Fig. 1.

Like characters of reference designate corresponding parts in each and every figure of the drawing.

Referring at first more particularly to Figs. 1 to 4 inclusive of the drawing, it will be seen that the body of the present case is in the nature of a flexible bag 1 having a closed bottom. This bag is embraced by a series of hoops or bands 2, the lowermost hoop being at the bottom of the bag and the uppermost band at a suitable distance below the top of the bag, that portion of the mouth of the bag which is above the uppermost band being designed to be drawn together and tied to close the bag preparatory to shipment thereof.

For the support of the bands 2 in the set-up condition of the case there are three or more collapsible props which are duplicates in construction and mounting and therefore a description of one of these props is deemed sufficient. Upon each of the intermediate bands there is a flat link 3 which stands in an upright position when the case is in use and projects above and below the band with its greater portion extending above the band, there being a pivotal connection 4 between the link and the band. The lower portion of the link 3 is overlapped by another link 5 which is pivoted thereto by the common pivotal connection 4 with the lower end of the link 5 lapping the next below link 3 and pivotally connected thereto as at 6 at the upper extremity of the link 3. The lower end of each link 3 is provided with a lateral outwardly directed stop projection 7 designed to be received within an edge notch or seat 8 in the adjacent link 5 when the two links are brought into parallelism. The link 5 is also provided with an outwardly directed edge projection upon that edge of the link which is opposite the notch 8, and the adjacent upper edge portion of the link 3 is provided with an edge notch or seat 10 to receive the projection 9 whereby the links are automatically stopped when brought into parallelism. The lower end portion of the link 5 is provided with a boss or projection 11 cast or pressed thereon and the overlapping portion of the link 3 is provided with a perforation or socket 12 into which the boss is designed to snap when the links are brought into parallelism, thereby interlocking the links against accidental pivotal movements and thus retaining the entire prop in rigid condition. There are also upper and lower terminal links 13 and 14 which are pivoted to the respective upper and lower bands as at 15 and 16 with their free end portions connected to the adjacent respective links 3 and 4 in the same manner as hereinbefore described for the connection of the links 3 and 5.

When the case is set up as shown in Fig. 1, the several links are overlapped in parallelism with the corresponding stop projections and seats engaged to prevent swinging of the links past the vertical, and the several seats and projections 11 and 12 are engaged to render the prop rigid and thereby maintain all of the bands spaced with the bag rigidly supported so as to stand in an upright position upon its bottom. The bag is filled through its upper end which is afterwards drawn together and tied so as to close the same.

To collapse the case, the joints between adjacent links are broken alternately in opposite directions, as indicated in Fig. 2, and the several bands are forced downwardly one upon the other while the links fold back and forth across one another until the entire device is in a collapsed condition for convenience in return shipment as an "empty". When the links are folded together they are disposed on one side of the line passing through their pivots 4.

When the case is used for shipping certain small articles that have to be handled and packed carefully, it

will be more convenient to distend the case in a step by step manner. As, for instance, starting with a fully collapsed case, the lower pair of links of the props will be straightened out and locked without distending the case further. The articles are then packed into the bag until the distended part is filled, then the case is extended another step by opening the intermediate pairs of links. This process is continued until the case is filled. The case may likewise be unfolded in a step by step manner, which feature will be found advantageous when articles are sold in more or less limited quantities directly from the bag. As the top of the articles in the bag gets lower and lower, the case can be collapsed one section after another, so that the contents will always be conveniently accessible without having to reach down into the case, as would be necessary if the device were not foldable in the manner described.

Having fully described the invention, what is claimed is:—

A collapsible shipping case comprising a flexible bag; and a plurality of bands encircling the bag and attached thereto; a plurality of props disposed around and connected with the bands to hold the bag distended or collapsed; each prop consisting of a pair of links between juxtaposed bands and arranged with their ends overlapping and pivotally connected, a notch and projection locking device between the overlapping ends of each pair of links, the adjacent links of adjacent pairs having their terminal portions arranged to overlap each other and to overlap the adjacent band, a single rivet pivotally connecting the said overlapping portions to each other and to the band thereat, and additional notch and protection locking devices between the overlapping portions of the links at the bands for coöperating with the first mentioned locking devices for preventing the props from collapsing, the corresponding pairs of links of the several props being foldable independently so that the bag may be collapsed step by step and the links of each prop being foldable on one side of the line passing through the pivotal points between the bands and links.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

MINOR EUGENE TYNES.

Witnesses:
L. M. TYNES,
B. C. SCOTT.