

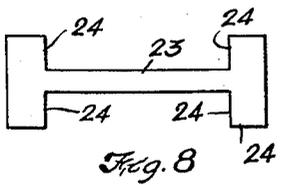
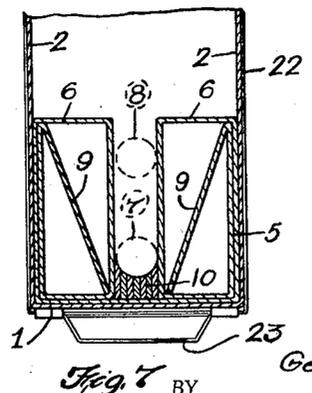
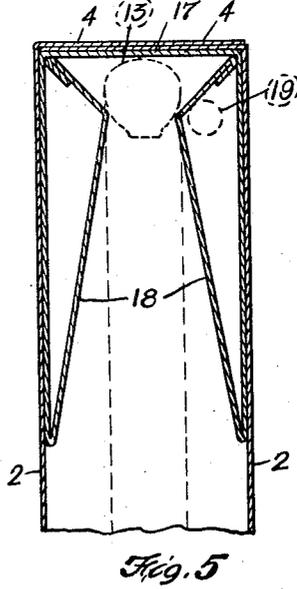
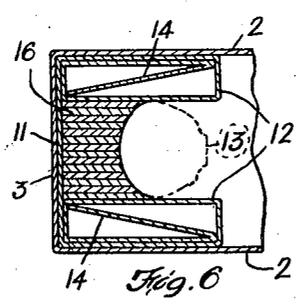
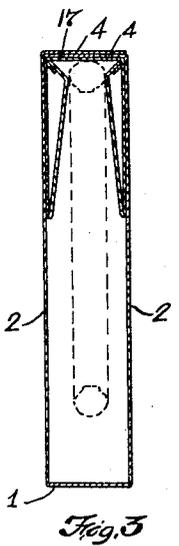
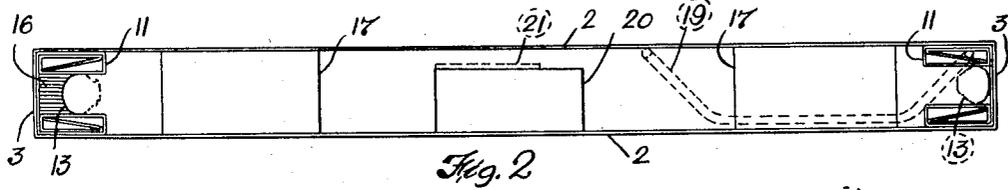
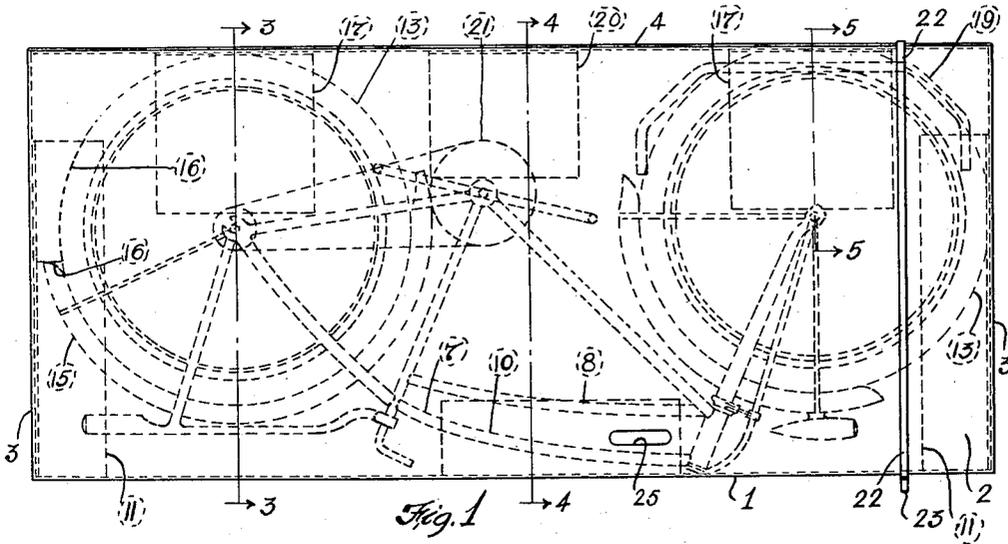
Oct. 20, 1942.

G. E. STOLPMAN

2,299,355

SHIPPING-CONTAINER

Filed May 6, 1938



INVENTOR.
George E. Stolpman
BY
Fay, Oberlin & Fay
ATTORNEYS.

UNITED STATES PATENT OFFICE

2,299,355

SHIPPING CONTAINER

George E. Stolpman, Lakewood, Ohio, assignor to
The Cleveland Welding Company, Cleveland,
Ohio, a corporation of Ohio

Application May 6, 1938, Serial No. 206,405

2 Claims. (Cl. 206—46)

This invention relates, as indicated, to shipping containers, but has reference more particularly to a shipping container for a bicycle or the like and to a method of packing the bicycle within the container.

The invention has, as its primary object, the provision of a lightweight container of rugged construction, wherein a bicycle may be expeditiously packed, and in which it may be shipped without danger of injury to the bicycle or damage to any parts thereof.

Another object of the invention is to provide a bicycle-containing package which is entirely devoid of any nails or metallic fastening devices.

A further object of the invention is to provide an insert which is particularly valuable for inclusion in a container wherein bicycles are packed.

To the accomplishment of the foregoing and related ends, said invention, then, consists of the means hereinafter fully described and particularly pointed out in the claims; the annexed drawing and the following description setting forth in detail one method and one product constituting, however, but one of various applications of the principle of my invention.

In said annexed drawing:

Fig. 1 is a side elevation of a carton embodying the novel features of the invention;

Fig. 2 is a top plan view of the carton, with the lid thereof open;

Fig. 3 is a cross-sectional view, taken on the line 3—3 of Fig. 1;

Fig. 4 is a cross-sectional view, taken on the line 4—4 of Fig. 1;

Fig. 5 is a fragmentary cross-sectional view, taken on the line 5—5 of Fig. 1;

Fig. 6 is a view, on an enlarged scale, of the extreme left portion of Fig. 2;

Fig. 7 is a view, on an enlarged scale, of the extreme lower portion of Fig. 4; and

Fig. 8 is a development of the handle for the carton.

The carton, which may be made of corrugated or solid fibre board, may be made in any conventional manner to provide a bottom 1, sides 2, ends 3, and a top consisting of overlapping flaps 4.

The bicycle, as shown in Fig. 1, is placed within the carton in inverted position, the handle bars, seat, pedals, stem, stand and stand spring having been previously removed. In order to cushion the bicycle within the carton during transit thereof, and to prevent movement of the bicycle or parts thereof within the carton, a number of inserts

are provided, which are placed at points within the carton where the bicycle is likely to come into direct contact with the inner wall of the carton.

Centrally of the carton, adjacent the bottom 1, is an insert 5, which, as shown in Figs. 4 and 7, comprises a single strip of corrugated or solid fibre board folded to provide a pair of spaced box-like portions 6, each of which fills the space between the frame members 7 and 8 and the inner walls of the sides 2 of the box, so as to prevent lateral movement of the bicycle frame within the box at this point. In folding the strip, members 9 are formed which extend diagonally across each box-like portion 6, and which act as braces to prevent collapse of said portions by the pressure of the bicycle frame in transit or handling of the carton. In order to cushion the frame in a vertical direction, a multiplicity of fibre board strips 10, the upper edges of which are curved to conform with the curvature of the frame member 7, are set on edge between the box-like portions 6 of the insert, said frame member resting directly on such strips. These strips 10 are of substantially the same length as the insert 5.

Inserts 11 are placed within the carton adjacent the ends 3, and, as shown in Figs. 2 and 6, these inserts are similar in every respect to the inserts 5, except that they extend vertically instead of horizontally. Each insert comprises a single strip of corrugated or solid fibre board folded to provide a pair of spaced vertically-extending portions 12 of rectangular cross section, each of which fills the space between the tires 13 and the inner surfaces of the sides 2 of the box, so as to prevent lateral movement of the bicycle within the box at these points. In folding each strip, members 14 are formed which extend diagonally across each box-like portion 12, and which serve to reinforce said portion against collapse. The front tire of the bicycle is in direct engagement with that portion of the insert 11 which connects the box-like portions 12 thereof, but a space is left between the rear tire of the bicycle and the corresponding portion of the adjacent insert, so that the rear fender or mud-guard 15 of the bicycle may be accommodated within the insert, as shown in Fig. 2. This space is filled with a multiplicity of strips 16 of fibre board, which cushion the bicycle in a direction longitudinally thereof, the inner edges of these strips being curved to conform with the curvature of the tire, and the tire bearing directly on the strips, which are set on edge. These strips extend from the upper end of the insert downwardly to a point just above the fender 15.

Inserts 17 are placed within the carton adjacent the top 4, each insert as shown in Figs. 3 and 5, being formed similarly to the inserts 5 and 11, from a single strip of corrugated or solid fibre board to provide a pair of spaced hollow portions 18 of triangular cross-section. The tires 13 of the bicycle extend into these inserts and fill the space between the triangular portions 18 thereof, so that the inserts are effective to prevent lateral movement of the bicycle at these points. Due to the triangular section of the portions 18, resistance to collapse of these portions is provided. Prior to insertion of one of the inserts 17, the handle bar 19 is placed therein in such manner that the central portion thereof extends through one of the portions 18 of the insert. One of the handle portions of the bar will then extend into one of the portions 12 of the adjacent insert 11, and the handle bar will thus be maintained against movement within the carton.

The seat, pedals, stem, stand, and stand spring are placed with a small carton 20, which is then placed within the bicycle carton adjacent the top thereof. The carton 20, it will be noted, is narrower than the bicycle carton and, as shown in Fig. 2, lies between the sprocket wheel 21 and one of the sides 2 of the bicycle carton, so that its lateral movement is obviated. To avoid longitudinal movement of the inserts 17 and the carton 20, an adhesive may be applied to the upper surfaces thereof, so that when the inner flap 4 of the top is turned down, it will adhere to said carton and inserts to hold them firmly in position.

If desired, an entirely separate top may be employed for the carton instead of the integral flaps 4, in which event, the inserts 17 and carton 20 may be adhesively secured to said top and the top then placed in position in the bicycle carton, being secured to the latter by means of adhesive tape.

To permit handling of the carton, a band of nailless steel strapping 22 may be provided, extending around the carton and having its ends in overlapping relation across the bottom of the carton. A handle 23, of sheet metal or the like may then be secured to this band, as by crimping flanges 24 thereof about the overlapping portions of the band, as clearly shown in Fig. 7. The handle thus forms a seal for the package.

Instead of a handle 23, as described, a cut-out 25 may be provided in one side of the carton, within which the fingers may be inserted for the purpose of handling the container, or a rope handle (not shown) may be affixed to the carton at this point.

It is thus seen that means have been provided for effectively packaging and shipping bicycles, that the bicycle is firmly held within the carton, and at the same time cushioned at all points within the carton, and that all this has been accomplished without the use of nails or other fastening devices, which would injure the bicycle.

Others forms may be employed embodying the features of my invention instead of the one here explained, change being made in the form or construction herein disclosed, provided the elements stated by any of the following claims or the equivalent of such stated elements be employed, whether produced by my preferred method or by others embodying steps equivalent to those stated in the following claims.

I therefore particularly point out and distinctly claim as my invention:

1. In a shipping carton for bicycles, the combination with a fibre board container comprising a top, bottom and opposed walls, of a fibre board insert at the bottom thereof having spaced hollow portions operative to engage the frame of a bicycle therebetween, fibre board inserts in the ends of said container having spaced hollow portions operative to engage the opposite side walls of the tires of a bicycle, fibre board inserts in the upper portion of said container having spaced hollow portions operative to engage the side walls of a bicycle, and a multiplicity of fibre board strips set on edge between said spaced hollow inserts at the bottom of said container operative to support the frame of a bicycle.

2. In a shipping carton for bicycles, the combination with a fibre board container comprising a top, bottom and opposed walls, of a fibre board insert at the bottom thereof having spaced hollow portions operative to engage the frame of a bicycle therebetween, fibre board inserts in the ends of said container having spaced hollow portions operative to engage the opposite side walls of the tires of a bicycle, fibre board inserts in the upper portion of said container having spaced hollow portions operative to engage the side walls of a bicycle, a multiplicity of fibre board strips set on edge between said spaced hollow inserts at the bottom of said container operative to support the frame of a bicycle, and like inserts of strips on edge placed between said spaced hollow inserts at the ends of the container operative to support the tires and inhibit longitudinal movement of a bicycle within said container.

GEORGE E. STOLPMAN.