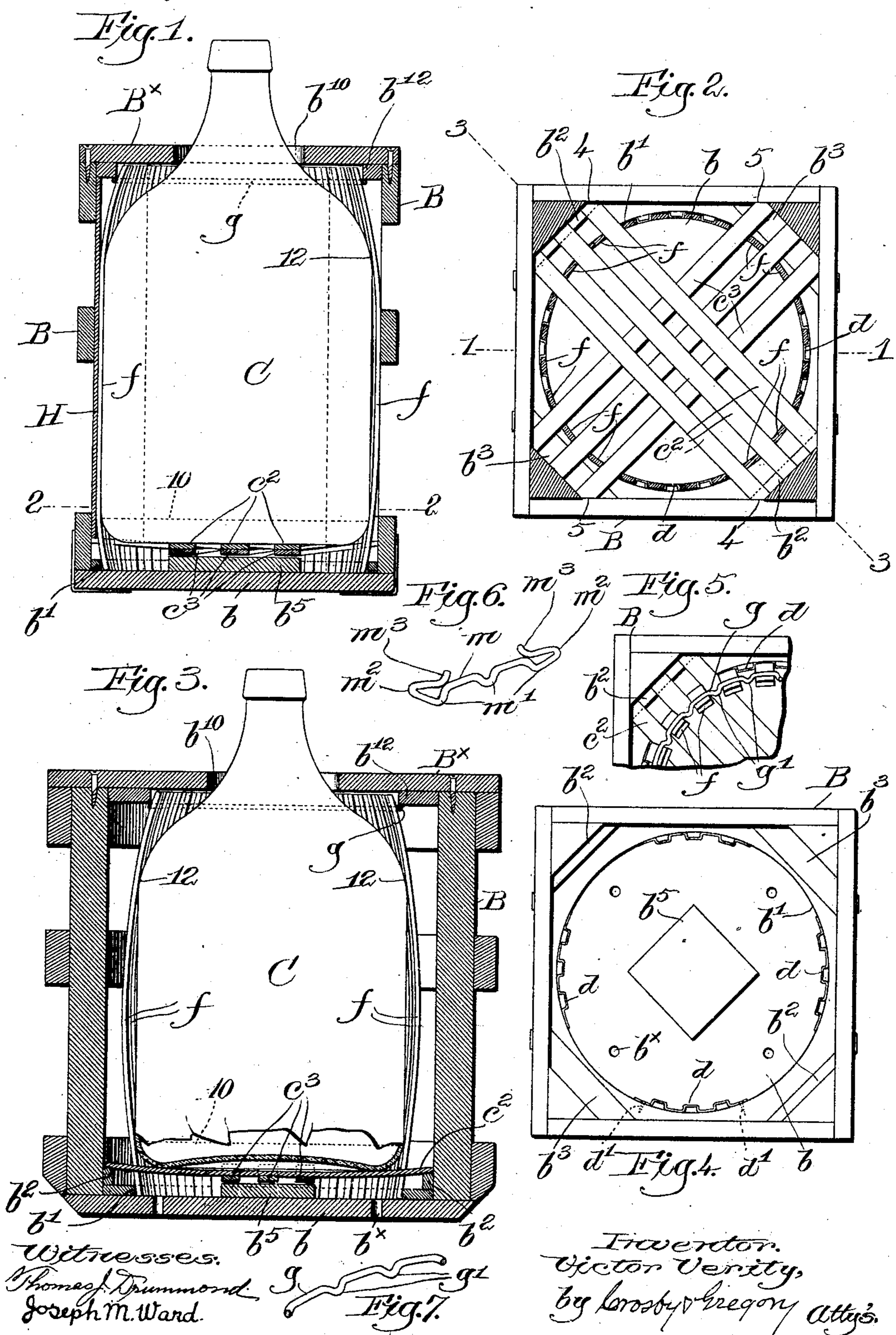


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V. VERITY.
PACKING RECEPTACLE FOR CARBOYS.
APPLICATION FILED AUG. 8, 1906,



UNITED STATES PATENT OFFICE.

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PACKING-RECEPTACLE FOR CARBOYS.

No. 862,424.

Specification of Letters Patent.

Patented Aug. 6, 1907.

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To all whom it may concern:

Be it known that I, VICTOR VERITY, a citizen of the United States, and a resident of Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement in Packing-Receptacles for Carboys or Bottles, of which the following description, in connection with the accompanying drawing, is a specification, like letters on the drawing representing like parts.

This invention has for its object the production of a novel and efficient packing receptacle for large glass bottles or carboys, whereby the same may be transported and stored with a minimum risk of breakage.

In the present embodiment of my invention the carboy or bottle is supported in a yielding manner within an outer crate or box, by simple and inexpensive means, so that shocks and jars due to transportation or manipulation of the receptacle will not damage the contents.

The receptacle is of light weight, strong and durable in its construction, and so arranged that the packing of a carboy or bottle is readily effected.

The various novel features of my invention will be fully described in the subjoined specification and particularly pointed out in the following claims, one practical embodiment of my invention being illustrated in the accompanying drawings and explained in the specification.

Figure 1 is a vertical sectional view of a packing receptacle embodying my invention, taken on the line 1—1, Fig. 2, and with a bottle or carboy shown in elevation. Fig. 2 is a horizontal section on the line 2—2, Fig. 1, looking down, the carboy being omitted. Fig. 3 is an enlarged vertical sectional detail on the line 3—3, Fig. 2, the carboy being partly broken out to show more clearly the bottom support therefor. Fig. 4 is a top plan view, with the cover removed, of the outer crate or box, the yielding members which form the bottom support for the carboy being omitted. Fig. 5 is a top plan detail showing the upper ends of the resilient upright members which laterally support the bottle or carboy. Fig. 6 is a perspective detail of a modified form of separating or spacing device for the lower ends of the upright members, to be referred to. Fig. 7 is an enlarged perspective detail of the contracting and separating device for the upper ends of said upright members.

Referring to the drawings, a stout outer crate or box B, having a solid bottom b as herein shown, and provided with drainage perforations b^x , and a circular wall or shoulder b' is formed on the inner face of the bottom. I have provided the box or crate with oppositely located pairs of seats, in the corners of the crate at its bottom, the seats of one pair being shown at $b^2 b^2$, and the seats of the other pair at $b^3 b^3$, Figs. 2 and 4.

Referring to said figures it will be seen that the seats b^3

b^3 are broader, and their inner edges nearer together, than the other pair of seats b^2 , for a purpose to be described.

Flat, resilient slats or strips c^2 , of wood or other suitable material having the requisite strength and elasticity combined with reasonable cost, are supported on the seats b^2 , and in Fig. 2 three of such slats are shown, arranged in parallelism and laterally separated, the outer corners of the two outside slats being beveled at 4, to fit the side of the crate. A similar set of slats c^3 are supported on the seats b^3 , and the outer corners of the outside slats are similarly beveled, at 5, the slats c^3 passing beneath the set or series c^2 . A bearing block b^4 is fixed on the crate bottom at the center thereof, to support the crossed slats when they have become permanently bent by age or long standing in flexed or bent condition. The two crossed series of slats form a yielding or resilient vertical support for the bottle or carboy C, Figs. 1 and 3, the bottom thereof resting on the slats at four symmetrically-located planes, equidistant from each other.

The bottoms of large bottles and carboys are usually made concave, as shown in Fig. 3, so that the bearing portion is circular and near the outer circumference.

By making the seats b^2 of the upper series of slats c^2 farther apart the weight is brought upon the slats at a greater distance from the seats, than will be the case with the slats c^3 , so that when the carboy is placed in the crate the bending of the two sets of slats $c^2 c^3$ will be different. That is, the upper set or series will bend the more easily, so that an equal portion of the weight of the load will be sustained by the slats c^3 , a very springy, resilient support being provided, which will take up and absorb shock and jar due to vertical movements of the crate and contents in transit or when being moved around.

As shown in Fig. 2 the bottom slats are separated by equal spaces, and the cage-like lateral support or inclosure for the carboy coöperates with the bottom slats in a mutual positioning function.

Before describing the lateral support, attention is called to separators d , preferably made of metal straps, bent into substantially the shape shown in Figs. 2 and 4, and secured to the annular shoulder b' by suitable fastenings d' . I have shown four of the separators, arranged between the corner seats for the bottom slats, the spacing provided for by each separator being equal to that between the bottom slats.

The carboy is laterally sustained or supported yieldingly by a cage made up of a series of thin, preferably flat upright members f , which in practice are staves or slats of wood or other resilient and suitable flexible material. Four of the staves are spaced near their lower

ends by the bottom slats c^2 , and four more by the slats c^3 , as will be clear from an inspection of Fig. 2, each upright member f being of the proper width to pass between two bottom slats, the ends of the members f resting on the crate bottom b within and against the shoulder b' .

The carboy or bottle is placed in the outer crate or box upon the yielding support described, and the upright members or slats f at the corners may be positioned before or after the carboy is in position. Now additional upright members f are inserted, filling the segmental portions around the carboy, each separator d spacing several of the members f while one of such members is positioned between each end of a separator and the nearest of the cross-slats, as will be manifest from an inspection of Fig. 2.

The diameter of the shoulder b' is somewhat less than the external diameter of the carboy along a line near its bottom, see Figs. 1 and 3, so that the slats or members f , by engaging the carboy substantially along such line, will be forced outward as far as the limits of the crate will permit. The upper ends of the upright members f are now brought inward toward each other and embraced by a contracting and spacing device, which in practice is conveniently a ring g of heavy wire, bent to present a series of intumed projections g' equidistant from each other. The slats f are laterally separated at their upper ends by the projections or bends g' , as shown in Fig. 5, and are drawn together by the ring g as it is forced downward causing the members or slats f to be bent or flexed longitudinally and to engage the carboy at or near its shoulder, as at 12.

Carboys and large glass bottles are made thick at the bottom and near it up along the sides, and also at the shoulder portion, but in between the glass is much thinner, and this is also true of the neck above the shoulder.

When the slats f are bent or flexed longitudinally each one will be in holding engagement with the carboy at two points, clearly shown in Fig. 3, and those points of engagement are where the glass is strongest and best adapted to stand any strain.

The packing receptacle has a removable top or cover B^x , Figs. 1 and 3, provided with an opening b^{10} for the neck of the carboy, and of such diameter that even if the receptacle be tipped or upturned the neck will not suddenly hit the cover.

As shown in Figs. 1 and 3 the upper ends of the members f approach the inner surface of the cover, but not engaging it, and an annular ledge b^{12} is made on the inside of the cover to rest upon the contracting and separating device g and prevent movement thereof toward the adjacent ends of the slats f .

From the foregoing description, in connection with the drawings, it will be manifest that the bottle or carboy is inclosed and laterally supported by a yielding cage, composed of a series of upright resilient slats or staves, held at or near their upper and lower ends in such manner that they are bent or flexed longitudinally and engage the carboy near the bottom and shoulder thereof.

The mode of packing and sustaining the carboy is light, strong and durable, and very elastic, taking up shock and jar while maintaining a firm hold on the carboy, so firm in fact that upon complete overturning of

the receptacle, to empty the contents of the carboy, the latter will still be held by the cage and cannot drop onto the cover B^x .

In practice the slats are made reversible, so that if any one or more become "set" by long usage or strain, they can be reversed and bent or flexed in the opposite direction, thereby renewing their elasticity and resiliency.

An open outer crate B is herein illustrated, and for many purposes it will be found amply sufficient to properly protect the contents of the receptacle, but such an open crate can be made a closed box, to all intents, by inserting thin boards between the cage members f and the inner sides of the crate. Such a board is shown at H , Fig. 1, it being cut to the proper dimensions, preferably, to obviate nailing, and is pushed down into place before the cover B^x is applied, four of such boards being required. The board tends to flatten the adjacent member or members f , as shown in Fig. 1, but the hold of the members on the carboy or bottle is not thereby decreased or rendered less secure. By making the boards readily removable the repacking of a carboy is more conveniently accomplished. Such boards afford some protection in case of accident and breakage of glass, confining the broken pieces within the crate and also fending off blows from timbers or the corners of packing boxes, etc. which might pass through the open sides of the crate and jam against the nearer of the cage members f .

Instead of making the bottom separators d of strap metal they may be made of wire, similarly to the annulus or hoop g , such a modification being shown in Fig. 6. A piece of wire m is bent to present the requisite number of projections m' , to separate the slats, and the ends of the wire are bent back at m^2 , and then toward each other at m^3 . The main part, having the projections m' , is placed on the top and at the edge of the annular shoulder b' on the crate bottom, and the ends m^3 are secured by suitable fastenings, such as double pointed nails or staples, holding the main part of the separator in proper position on the shoulder.

My invention is not restricted to the precise construction and arrangement herein shown, as various modifications may be made by those skilled in the art without departing from the spirit and scope of my invention.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a packing receptacle, an outer rectangular crate or box, corner seats on the bottom thereof, a spring support carried by the seats, to yieldingly sustain the carboy vertically, and a series of upright resilient members circularly arranged close together and bent outward longitudinally in a continuous curve from end to end, means to engage and hold said members from lateral and outward movement at their upper and lower ends, the inner concave faces of the said members being adapted to engage the carboy adjacent the breast and bottom thereof and yieldingly sustain the same laterally and a removable cover for the crate, having an annular ledge on its inner side, surrounding the upper ends of the resilient members, and resting upon the means for preventing lateral and outward movement of the upper ends of said members.

2. In a packing receptacle, an outer crate or box, means within it to engage and yieldingly support the bottom of a carboy at a plurality of equidistant points, resilient, upright side-supporting members sustained at their lower ends within the crate, said members surrounding the carboy, a removable annular spacing and contracting device to engage and draw inward the upper ends of said

members, and a cover for the crate, apertured to receive the neck of the carboy and adapted when in place to hold the said spacing and contracting device in proper position.

- 5 3. In a packing receptacle, a rectangular outer crate or box, corner seats on the bottom thereof, two series of resilient slats supported on diagonally opposite pairs of seats and crossing each other, the seats for the uppermost series of slats being farther apart than the seats for the lowermost series of slats, upright resilient slats resting at their lower ends on the crate bottom, some of the slats being interposed between the bottom slats, to maintain lateral separation thereof, means to separate the upright slats between the seats, and an annular contracting and separating device to embrace and draw inward the upper ends of the upright slats.

15 4. In a packing receptacle, a rectangular outer crate or box, a circular shoulder on the bottom thereof, means mounted on the crate to vertically and yieldingly support

a carboy, a cage within the crate comprising a series of upright resilient members resting on the crate bottom against the circular shoulder, means to maintain the lower ends of said members from lateral movement, an annular contractor and separator to embrace and draw inward the upper ends of said members, and a movable crate cover adapted to engage and hold the separator and contractor in proper position, the upright members inclosing the carboy and engaging the same adjacent the bottom and shoulder of the carboy, laterally and yieldingly supporting it and preventing sudden engagement thereof with the crate cover when the crate is inverted.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

VICTOR VERITY.

Witnesses:

JOHN C. EDWARDS,

MARGARET A. FRENEY.