No. 666,106. Patented Jan. 15, 1901.

J. MATTHIAS.

DEMIJOHN CRATE.

(Application filed Oct. 4, 1900.)

(No Model.)

Fig. 1.

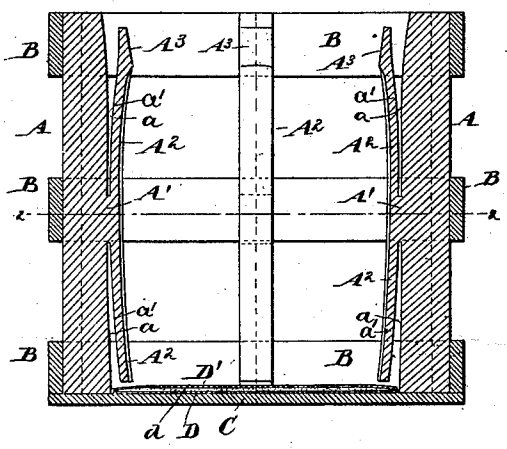


Fig. 4.

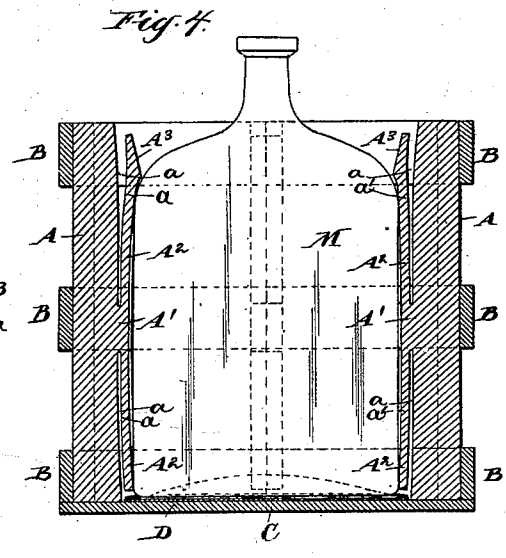


Fig. 2.

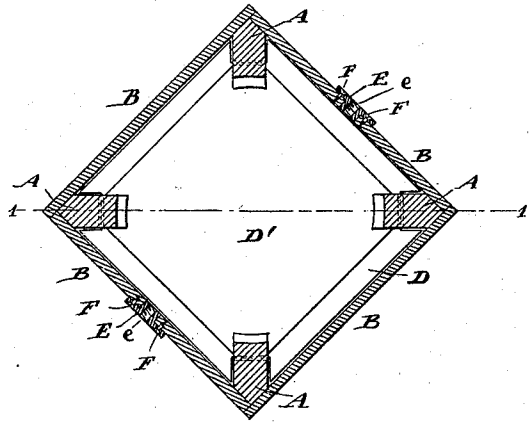
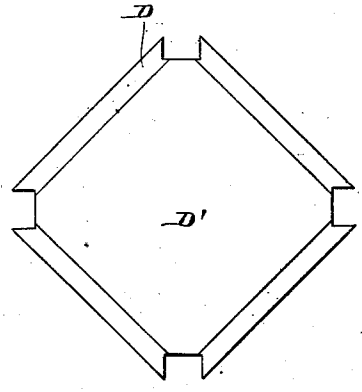


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOSEPH MATTHIAS, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND FRANK BLISH CARPENTER, OF SAME PLACE.

DEMIJOHN-CRATE.

SPECIFICATION forming part of Letters Patent No. 666,106, dated January 15, 1901.

Application filed October 4, 1900. Serial No. 31,943. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH MATTHIAS, a citizen of the United States, residing in the borough of Manhattan, in the city and State of New York, have invented a certain new and useful Improvement in Demijohn-Crates, of which the following is a specification.

The improved crate is of the class which may be made entirely of wood and in which the vessel to be protected is held by springs pressing against the several sides. I have devised a construction which attains a high degree of perfection with moderate cost.

The crate is square. In each corner is a peculiar upright of wood, having such dimensions radially as to extend inward within the circular space to be occupied by the demijohn, can, or bottle. I saw or otherwise shape the wood of each post, so that the same piece will serve both as a post and a spring, the latter pressing elastically on the inclosed vessel at points near the top and bottom. I fill the pores of these uprights with oil. The springs are so conditioned that they lock in a pad which lies in the bottom of the crate. The crate is of such length relatively to the demijohn that the mouth of the latter projects above the crate to allow of pouring out without removing. The springs are beveled near their upper ends to facilitate the insertion of the demijohn. The slight angle projecting inward near the upper end of each spring where the bevel at the top meets the curve below applies above the shoulder of the demijohn and contributes to keep the bottle locked in.

The following is a description of what I consider the best means of carrying out the invention.

The accompanying drawings form a part of this specification.

Figure 1 is a vertical section on the line 1 1 in Fig. 2. Fig. 2 is a horizontal section on the line 2 2 in Fig. 1. These figures show the crate empty. Fig. 3 is a plan view of the mat detached. Fig. 4 is a section corresponding to Fig. 1, but with a bottle or demijohn properly inclosed.

Similar letters of reference indicate like parts in all the figures.

A A A A are flat uprights of wood, held with their breadths radial. B B are horizontal strips rigidly connecting these posts, and C is a thin bottom. All may be of spruce or other convenient wood having a fair degree of strength and elasticity. The interior of the bottom contains a mat D, composed of excelsior held between two sheets of coarse corrugated paper. This makes a soft bottom, on which the base of the vessel M rests. I will term this vessel a "demijohn."

The inner faces of the posts are partly separated from the main body by saw-cuts $a\,a'$, inclined relatively to each other, as shown. The wedge-pieces thus set free are removed and rejected. Enough of the wood of the post is allowed to remain at A′ between these wedge-shaped incisions to hold the spring firmly. Before making the saw-cuts $a\,a'$ and while all the parts of the post are firm and unyielding the inner face of each post is hollowed in two directions—in the horizontal direction to the extent required to match the circular form of the demijohn and in the vertical direction to a sufficient extent to bear against it firmly at points near the upper and lower ends. The demijohn may even spring the wood to a considerable extent without causing the demijohn to touch at the mid-height. The spring portion A^2 as thus partially set free is shortened a little at each end and a bevel is made at and near the upper end, as indicated by A^3. The latter facilitates the insertion of the demijohn. The salient internal angle A^5, where the bevel A^4 meets the general curvature of the inner face, applies above the shoulder of the demijohn and locks the demijohn into the crate not so strongly as to require any appliance to release it when it is desired to remove it and a strong direct pull is made on the demijohn, but the locking is sufficient to greatly aid in retaining the demijohn when the crate is laid on its side and jolted as in being transported in wagons. The springs A^2 thus formed integral with each post hold the demijohn with more than usual firmness. The holding is effected at and near each end. The hollowing of the bearing-faces horizontally is useful in two ways—first, by affording a broad bearing matching perfectly to the demijohn, and, second, by serving to hold the demijohn with some success even if from any cause one of the posts should prove defective.

Before putting the parts together I saturate

the posts and especially the spring portion on the inner face of each with linseed-oil, which makes the pores impervious to moisture and goes far to insure against shrinking and swelling or warping.

The two pieces of paper D forming the mat differ in size and form. The lowermost is shaped to match to and be held in place by the corner-posts. The upper part D′ is smaller, and its edges are cemented to the lower piece D with the previously-prepared thin stratum of excelsior *d* between.

In applying the parts together the posts are properly connected by the side pieces B. Now the structure being inverted the mat is placed in positions resting on the ends of the springs A^2, and thus conditioned the bottom C is applied and strongly secured; but the lower ends of the springs A^2 are sufficiently short to move outward and inward freely over the mat. The mat is retained by the springs, so that in all subsequent uses of the crate the mat remains in place.

E E are castings of malleable iron or other suitable material inserted in holes produced in opposite sides of the crate at about the mid-height. Each is secured by two screws F and F and is tapped centrally. The tapped holes *e* are adapted to receive screw-threaded pins, (not shown,) which may be short ordinary bolts, as stove-bolts, which may then serve as trunnions by which the crate and the inclosed demijohn may be supported and tilted in a suitable cradle when required.

The demijohn may remain in the crate and the whole be tilted as required to pour out the whole or any portion of the contents either when thus mounted or not.

Modifications may be made without departing from the principle or sacrificing the advantages of the invention. The side strips B may vary considerably in width. They may be widened so as to nearly or quite cover the whole sides. I prefer the open condition shown, for the reason, among others, that it shows to the eye the quantity of liquid remaining. The crate is particularly neat in appearance and may be varnished and variously decorated, if desired. It is well adapted to constitute a portion of the furnishing of apartments. The bottom mat D may be made without the excelsior, several thicknesses of corrugated paper taking its place, or with the excelsior or analogous filling the paper may be plane. For ordinary crates the wood parts A B C may be secured by nailing. The paper D D′ of the mat may be varnished with shellac or otherwise prepared to endure moisture, if preferred.

I claim as my invention—

1. A demijohn-crate having uprights firmly connected each carrying a spring A^2 made integral with the upright and extending obliquely upward and downward from a point near its mid-length and having its lower extension free to move inward and outward above the mat, in combination with a bottom C and a mat D, the latter matched tightly in the bottom and extended loosely under the springs, all adapted to serve substantially as herein specified.

2. A demijohn-crate having posts firmly connected by strips B which on two opposite sides carry metal bushings E adapted to receive pivots on which the whole may be tilted, each post carrying a nearly parallel spring A^2 held thereto at a point near its mid-length and having its lower end free to move above the mat, in combination with a bottom C and a mat D, all substantially as herein specified.

3. A demijohn-crate having uprights firmly connected carrying each a nearly parallel double spring A^2 held to the post at a point near its mid-length and having its lower end free to move above the mat, in combination with a bottom C and a mat D, the inner faces of the posts being hollowed both longitudinally and circumferentially and the upper end beveled inward and adapted to hold the demijohn against endwise displacement, all substantially as herein specified.

4. The combination with a demijohn of uprights of wood, saturated to repel moisture, and having each a main part A adapted to serve as a post, a portion A′ at the mid-length serving as a connection and the elastic part A^2 adapted to serve as a spring to soften concussions and also as holding means to retain the demijohn, all formed in one piece, substantially as herein specified.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

JOSEPH MATTHIAS.

Witnesses:
J. B. CLAUTICE,
M. F. BOYLE.