

(No Model.)

J. M. LEAVER & E. J. VANCE.
SHIPPING CASE.

No. 513,646.

Patented Jan. 30, 1894.

Fig. 1.

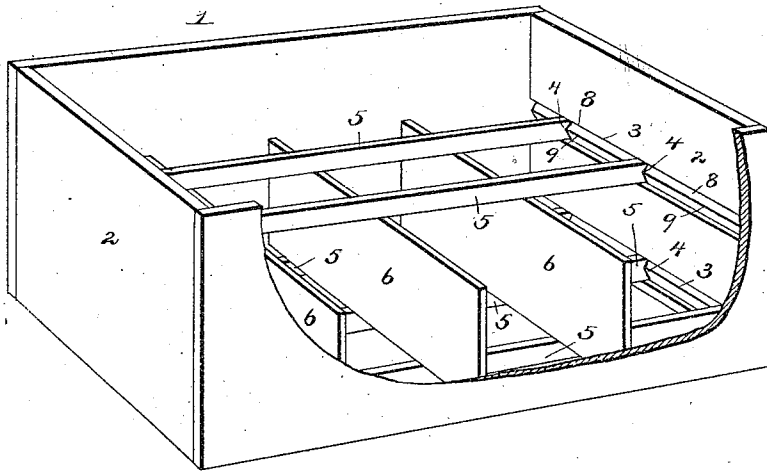


Fig. 2.

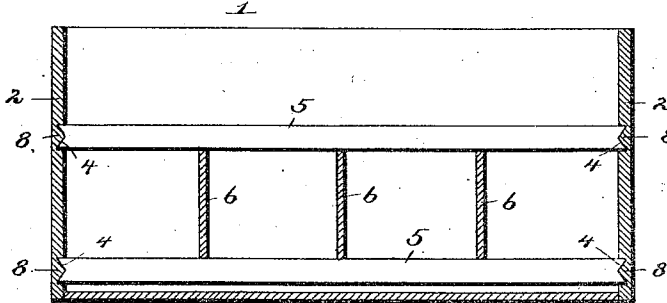


Fig. 3.

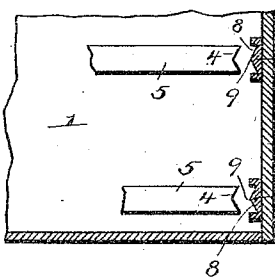


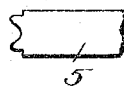
Fig. 4.



Fig. 5.



Fig. 6.



Inventors

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Witnesses

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UNITED STATES PATENT OFFICE.

JAMES M. LEAVER AND EMERY J. VANCE, OF BAY CITY, MICHIGAN.

SHIPPING-CASE.

SPECIFICATION forming part of Letters Patent No. 513,646, dated January 30, 1894.

Application filed June 6, 1893. Serial No. 476,768. (No model.)

To all whom it may concern:

Be it known that we, JAMES M. LEAVER, a subject of the Queen of England, and EMERY J. VANCE, a citizen of the United States, residing at Bay City, in the county of Bay and State of Michigan, have invented a new and useful Shipping-Case, of which the following is a specification.

The invention relates to improvements in shipping cases.

The object of the present invention is to improve the construction of shipping cases, and to enable tiers of partition strips to be readily arranged therein to form cells for the reception of bottles and analogous vessels, and to prevent the strips, during the handling of a shipping case or box from becoming displaced to keep the vessels shipped out of contact with one another to avoid breakage.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings and pointed out in the claims hereto appended.

In the drawings—Figure 1 is a perspective view of a box constructed in accordance with this invention, its top being removed and one side being broken away to show the interior construction. Fig. 2 is a longitudinal sectional view. Fig. 3 is a detail sectional view illustrating a modification of the invention. Figs. 4, 5 and 6 are detail sectional views illustrating modifications of the invention.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a box, provided on the inner faces of its ends 2 with horizontal ways 3, adapted to be engaged by recessed ends 4 of longitudinal strips 5, which are adapted to retain in the box transverse strips 6. The transverse strips 6 cross the longitudinal strips and are arranged between tiers of the same and form therewith cells for the reception of bottles, jars and analogous vessels, to enable the latter to be shipped without coming in contact with one another and breaking. The strips 6, which are disposed transversely of the box, are arranged between upper and lower tiers of longitudinal strips 5, and are prevented from rising; and the bottles or

other contents of the box, when the latter is in use, prevent the strips moving laterally.

The horizontal ways 3, which may be formed in the ends of the box or be constructed separately in cleats 7 and secured to the box, as illustrated in Fig. 3 of the accompanying drawings, consists of grooves which may be angular or curved as shown; and the interlocking ends of the strips 5 are recessed to correspond with the configuration of the ways. Rectangular, V-shaped, W-shaped, sigmoidally curved, and equivalent shapes of grooves may be readily employed for forming the horizontal ways, which effectually prevent the strip 5 from moving vertically on the ends of the box. The longitudinal strips 5 may be readily sprung into engagement with the horizontal ways, or may be inserted by turning them slightly diagonally of the box; and after insertion they may be readily shifted to form the cells as desired.

In the first three figures of the drawings the ways are constructed by angular grooves 8 substantially V-shaped, which form in each way a horizontal triangular rib 9; and the ends 4 of the strip 5 have V-shaped recesses to fit the ribs 9. The grooves 8 form straight shoulders at the top and bottom of each way.

Any number of tiers may be employed to form the cells as desired; and by constructing the horizontal ways in cleats, for securing or applying them separately to boxes, it will be apparent that the partition strips and cleats may be readily shipped independent of boxes or cases, and afterward applied thereto, thereby obviating the necessity of shipping boxes and greatly lessening the expense.

It will be apparent that the partition strips may be readily and quickly arranged in the box to form the cells for the reception of bottles and other vessels, and that they are securely held against accidental displacement without the necessity of employing separate keys or locking strips.

Changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

What we claim is—

1. The combination of a shipping case pro-

vided with oppositely disposed horizontal ways, strips arranged horizontally and having their ends engaging the ways, and strips disposed transversely of the said strips to form
5 cells and secured by them in position, substantially as described.

2. The combination of a shipping case provided in its ends with horizontal grooves forming ways, longitudinal strips arranged in horizontal tiers and having their ends interlocking with and conforming to the configuration of the ways, and transverse strips arranged between the tiers of longitudinal strips and forming cells therewith, substantially as described.
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3. The combination of a shipping case provided on its ends with horizontal angular grooves forming ways, longitudinal strips provided at their ends with angular recesses conforming to the configuration of the ways, and
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transverse strips secured between the horizontal ones and forming cells, substantially as described.

4. The combination of a shipping case provided at its ends with ways, each composed of a horizontally disposed, triangular rib and substantially V-shaped grooves forming upper and lower shoulders, longitudinal strips provided at their ends with V-shaped recesses and fitting in said ways, and transverse strips arranged between the longitudinal strips,
25
30 substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

JAMES M. LEAVER.
EMERY J. VANCE.

Witnesses:

H. A. BENCE,
I. TABOR.