

(No Model.)

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

No. 513,645.

Patented Jan. 30, 1894.

Fig. 1.

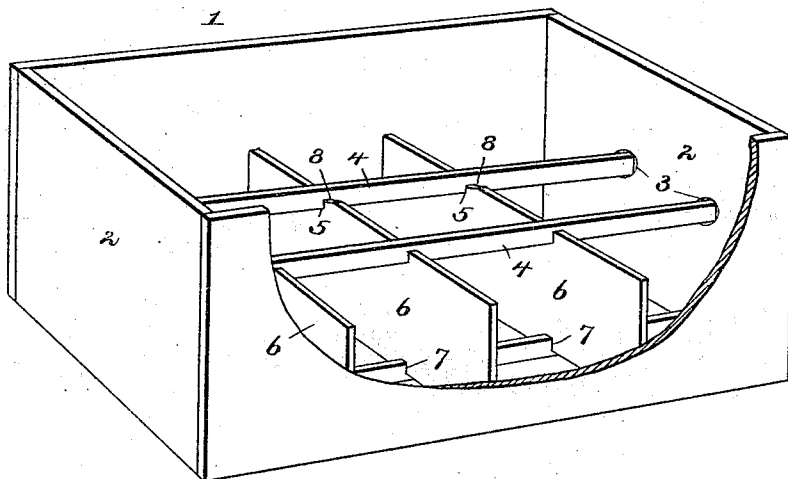


Fig. 2.

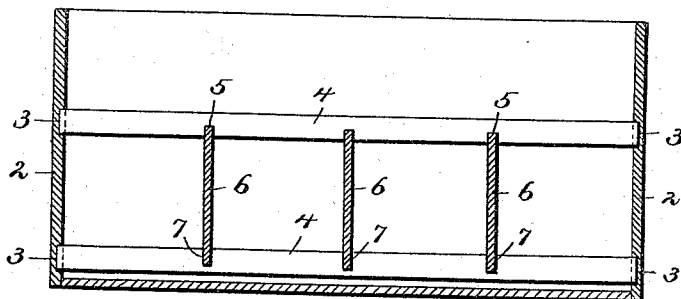


Fig. 3.

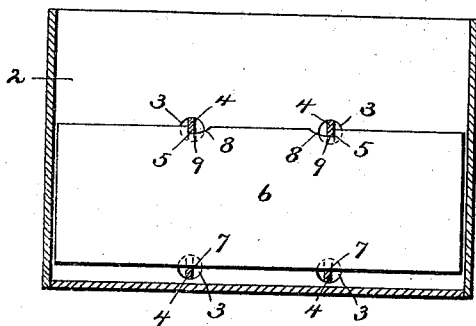
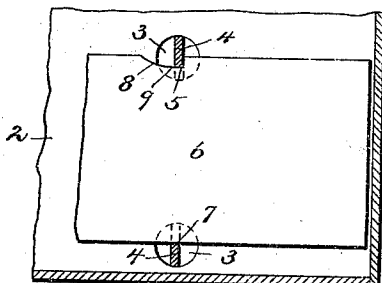


Fig. 4.



Inventors

Emery J. Vance and  
James M. Leaver.

Witnesses

Harry L. Ames.  
N. M. Riley

By their Attorneys,

C. A. Snow & Co.

# UNITED STATES PATENT OFFICE.

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

## SHIPPING-CASE.

SPECIFICATION forming part of Letters Patent No. 513,645, dated January 30, 1894.

Application filed May 31, 1893. Serial No. 476,120. (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 that class of shipping cases, which employ crossed partition strips to form cells for bottles or other vessels to prevent breakage, and to enable the partition strips to be quickly assembled and to be securely retained in proper position against accidental displacement without necessitating the employment of independent locking keys or strips.

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 embodying the invention, the top being removed and one side being broken away to show the construction of the partition strips. Fig. 2 is a vertical longitudinal sectional view. Fig. 3 is a transverse sectional view. Fig. 4 is an enlarged detail sectional view showing the interlocking recesses of the partition strips.

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 rows of circular sockets 3, which receive the ends of horizontal strips 4 disposed longitudinally of the box in upper and lower rows or tiers. The longitudinal strips 4 are provided at intervals at their engaging edges with rectangular recesses 5, and engage the upper and lower edges of transversely disposed strips 6, which form with the longitudinal strips 4 cells for the reception of bottles, jars and similar vessels or receptacles.

The ends of the longitudinal strips 4 may be readily sprung into the circular sockets 3 of the ends of the box, and are adapted to be

turned into engagement with the transverse strips. The transverse strips 6 are provided at their lower edges with rectangular recesses 7 to interlock with the recesses 5 of the bottom longitudinal strips 4. The upper edges of the transverse strips 6 are provided with quadrant-shaped recesses 8 having flattened bottoms 9 and forming vertical shoulders at their outer ends. The upper longitudinal strips 4 are inserted into the sockets in a horizontal position, that is to say with their main faces in a horizontal position, and are turned into a vertical position as illustrated in the accompanying drawings. The shoulders formed by the quadrant-shaped recesses support the upper longitudinal strips, and the bottles or other contents to be placed in the shipping case prevent the strips 4 from turning. In practice the lower longitudinal strips 4 are first placed in position, and then the transverse strips 6 may be readily interlocked at their lower recesses with the lower longitudinal strips; and the upper longitudinal strips have to be inserted in the recesses or sockets 3 as above set forth.

The transverse strips 6 may be employed without the recesses 7 and 8, and in this case their upper and lower edges will fit in the rectangular recesses 5 of the longitudinal strips 4; and the contents of the shipping case will prevent the longitudinal strips from turning away from a vertical edgewise position. Both the longitudinal and transverse partition strips can be employed without interlocking recesses, and the bottles or jars to be shipped will preserve the transverse strips and the longitudinal strips in proper position.

It will be readily seen that the partition strips may be conveniently and rapidly assembled for forming cells and that they are securely held against accidental displacement without the necessity of employing keys or locking strips. It will also be readily apparent that the circular sockets may be readily bored out with ordinary boring tools.

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.

The flattened bottoms of the quadrant-

shaped recesses of the transverse partition strips form a flat base for the upper longitudinally disposed strips which resting upon the flattened bottoms of the recesses and fitting against the vertical shoulders thereof do not tend to become displaced.

What we claim is—

1. The combination of a shipping case provided with oppositely disposed circular sockets, transverse strips arranged within the shipping case, and longitudinal strips fitting in the circular sockets and adapted to be turned down upon the transverse strips to secure the latter in place, substantially as described.

2. The combination of a shipping case provided at its ends with rows of circular sockets, transverse strips, and longitudinal strips arranged in the sockets and provided with recesses and receiving therein the upper and lower edges of the transverse strips, substantially as described.

3. The combination of a shipping case provided at its ends with circular sockets, transverse strips provided at their upper edges with quadrant-shaped recesses forming ver-

tical shoulders, and longitudinal strips having their ends arranged in the sockets of the shipping case and provided intermediate of its ends with recesses interlocking with those of the transverse strips, substantially as and for the purpose described.

4. The combination of a shipping case provided at its ends with rows of circular sockets, transverse strips provided at their lower edges with transverse recesses and having at their upper edges quadrant-shaped recesses having flattened bottoms and forming vertical shoulders, and longitudinal strips fitting in the sockets and provided with rectangular recesses and adapted to be turned into engagement with the recesses of the transverse strips, 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.