

(No Model.)

J. M. LEAVER.
BOX PARTITION.

No. 517,007.

Patented Mar. 20, 1894.

Fig. 1.

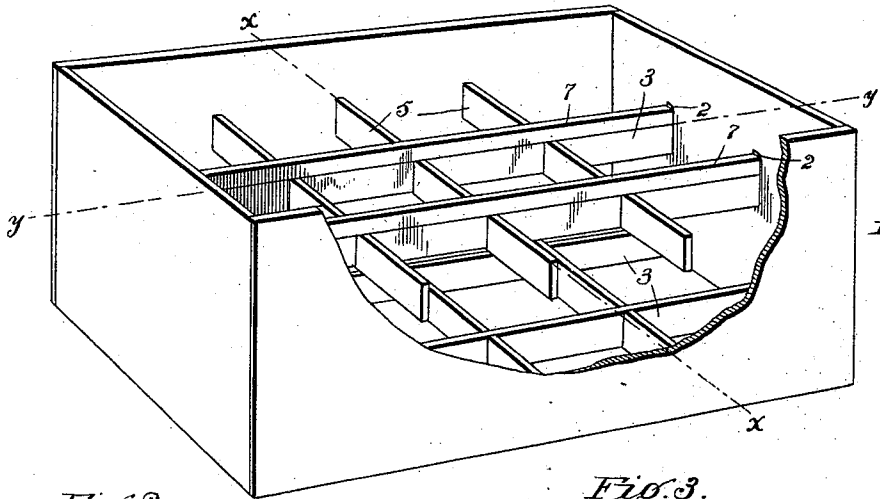


Fig. 2.

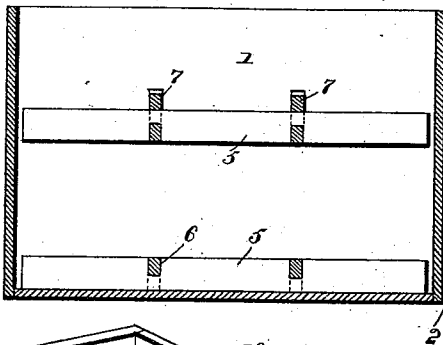


Fig. 3.

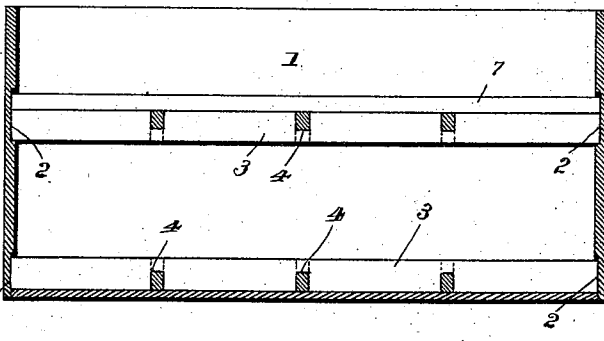


Fig. 4.

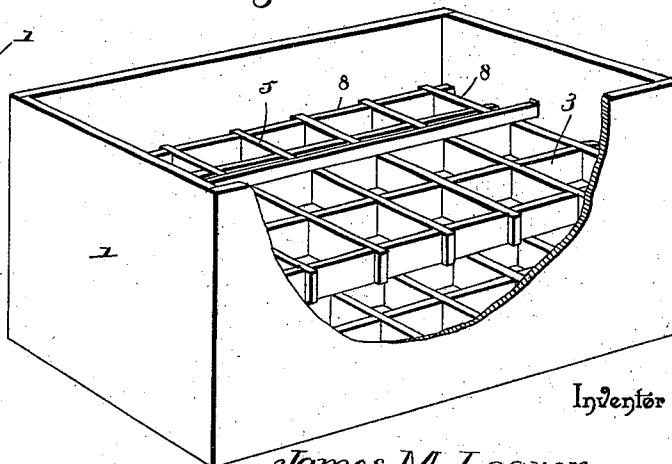
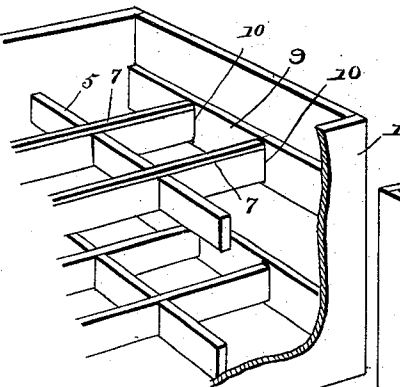


Fig. 5.



Witnesses

F. Johnson
Chas. S. Hoyer.

Inventor

James M. Leaver
By *his* Attorneys,

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UNITED STATES PATENT OFFICE.

JAMES M. LEAVER, OF BAY CITY, MICHIGAN, ASSIGNOR OF ONE-HALF TO
EMERY J. VANCE, OF SAME PLACE.

BOX-PARTITION.

SPECIFICATION forming part of Letters Patent No. 517,007, dated March 20, 1894.

Application filed April 11, 1893. Serial No. 469,982. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. LEAVER, a subject of the Queen of England, residing at Bay City, in the county of Bay and State of Michigan, have invented a new and useful Box-Partition, of which the following is a specification.

This invention relates to box partitions, and the object of the same is to dispense with the use of all posts and similar devices for carrying the upper tier of strips any required distance above the lower tier, and reducing the amount of material and cost of the same required for such partitions as now ordinarily employed to a minimum.

With these and other objects in view, the invention consists of the construction and arrangement of the parts thereof as will be hereinafter more fully described and claimed.

In the drawings: Figure 1 is a perspective view of a box broken away at one side and showing the improved partition in position therein. Fig. 2 is a transverse vertical section on the line $x-x$, Fig. 1. Fig. 3 is a longitudinal vertical section on the line $y-y$, Fig. 1. Fig. 4 is a detail perspective view of the box shown broken away at one side, and illustrating a slight modification in the construction. Fig. 5 is a perspective view of a box shown broken away and illustrating a further modification in the construction.

Similar numerals of reference indicate corresponding parts in the several figures of the drawings.

Referring to the drawings, the numeral 1 designates the body of the box which, as shown in all the figures except Fig. 5, has a pair of slots or grooves 2 formed in the ends thereof at the upper and lower parts of the same, and it will be understood that the said slots or grooves may be equally well formed in the sides and be multiplied in number as may be found desirable. Before nailing on the bottom of the box the lower longitudinal strips 3 are inserted in the lower pair of slots or grooves 2, which in this instance open outward through the bottom edges of the said ends. The notches 4, in the said longitudinal strips 3, are arranged to face the bottom of the box, and the crosswise or transverse strips

5 are then placed upon the said longitudinal strips with the notches 6 thereof engaging the notches 4, and in such manner that the said notches 6 will face upwardly or toward the top of the box. The bottom of the box is then applied and the lower open partition of the form shown is held in place in the box together with all the parts thereof. The upper longitudinal strips 3 are then sprung into place to have their opposite ends engage and fit into the grooves or slots 2, formed in the upper parts of the ends of the box and are engaged by other cross or transverse strips 5, the notches 4 and 6 in this latter arrangement being reversely situated to those heretofore set forth.

It is obvious that the upper transverse or cross strip 5 would be liable to fall out of position when the box was reversed in handling or transit, and to prevent such disconnection a key strip or strips 7 rest on each of the longitudinal strips 4 and have their opposite ends fitted in the grooves or slots 2, the latter being made of such length as to accommodate this construction. The said key strip or strips extend across the open notches of the upper longitudinal strips 4, and hold the transverse or crosswise strips 5 against accidental disengagement, and by this means a second or upper tier of partitions is formed. In applying this key-strip or key-strips the ends of the same are sprung into the slots or grooves 2, and are thereby prevented from becoming accidentally disengaged.

It will be seen that the partitions are arranged to hold bottles or analogous devices separated from themselves both at the upper parts thereof and at their bottom portions. When the partitions are arranged in the manner set forth they become, as it were, a part of the box and are rendered very secure, while at the same time they not only keep the bottles apart in an advantageous manner but require the use of less material in their formation and less labor in applying the same. The longitudinal strips are, of course, equal to the length of the box and the depth of the slots or grooves 2, so that they are caused to stay firmly in their places. The width of said slots or grooves 2 is slightly greater than the

thickness of the strips engaging the same, to permit the latter to readily enter without binding into the said slots or grooves.

In certain cases it might be desirable to add more tiers of partitions like the upper tier, where bottles of unusual length are to be packed and transmitted from one place to another; and it might also be desirable, at times, to have the bottom tier of strips raised from the bottom of the box to allow placing of hay, shavings, or other suitable material on the bottom of the box to cushion the bottoms of the bottles, and in this event the lower tier of strips would have the same arrangement as the upper tier and would not depend on the bottom of the box to hold them in position. In this latter instance the key-strips would also be used.

In Fig. 4 a partition is shown that is of similar form to that heretofore described, except that there are additional strips 8 at the ends and sides with a space between the same and the ends and sides of the box to thereby form a cushion for the bottles and prevent them from touching the said sides or ends of the box directly. As previously stated, the grooves or slots 2 need not necessarily be formed in the ends of the box, but may be formed in the sides, but it is preferable that they be formed in the ends for the reason that the ends of a box are usually thicker than the sides and more material is provided to work upon.

In Fig. 5 a further modification in the construction is shown, and consists in providing strips 9, having vertical slots or grooves therein, and that are arranged to be nailed to the sides or ends of the box as shown, to supplement or dispense with the formation of grooves or slots in the sides or ends of the box in the manner as heretofore set forth. By this means the partitions may be supplied to the trade without necessitating the purchase of the entire box, and which would include the tiers together with the strips 9.

The forms of the box shown, especially that form shown by Fig. 1, have the transverse or crosswise strips terminating short of the inner opposing surfaces by the sides to thereby cushion the bottles in a measure by permitting a yielding movement of the said cross-strips. This construction may or may not be employed, and it will of course be understood that it is not employed when the cross or transverse strips have their ends seated in slots or grooves in a manner similar to the longitudinal strips, and in which instance the

said longitudinal strips will not have their ends engaging grooves or slots.

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.

Having described the invention, what is claimed as new is—

1. In a device of the class described, the combination of a case having slots or grooves at the ends thereof, a partition composed of transverse strips and longitudinal strips having their ends arranged in the slots or grooves, and the key-strips arranged on the upper edges of the longitudinal strips and extending along the same and having their ends engaging said slots or grooves, substantially as described.

2. In a device of the class described, the combination of partitions composed of a series of longitudinal and transversely-arranged interlocking strips having ends thereof fitted in grooves or slots, additional outside longitudinal and transverse strips, and a support provided with the said slots or grooves, the said additional strips being located close to said support to prevent the device or article supported by the partition from contacting with the said support, substantially as described.

3. In a device of the class described, the combination of a box having short slots or grooves in the upper and lower parts of the ends thereof, the lower slots or grooves opening out through the bottom edges of the said ends, a lower partition having longitudinal and transverse strips with the said longitudinal strips thereof mounted in the said slots or grooves, an upper partition similar in construction to the aforesaid partition and having the ends of the longitudinal strips thereof removably mounted in the upper slots or grooves, and key-strips bearing on the longitudinal strips of the upper partition to hold the parts of the latter together and having their opposite ends removably fitted in the said short slots or grooves, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JAMES M. LEAVER.

Witnesses:

ORON J. COFFIN,
CHAS. M. NICHOLAS.