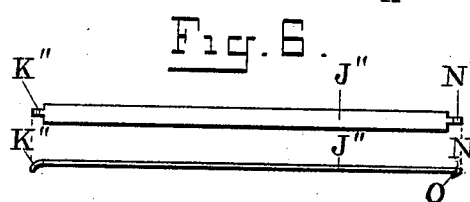
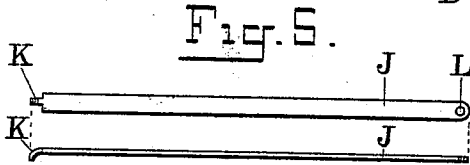
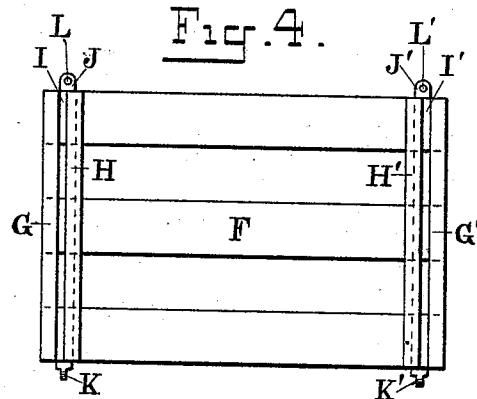
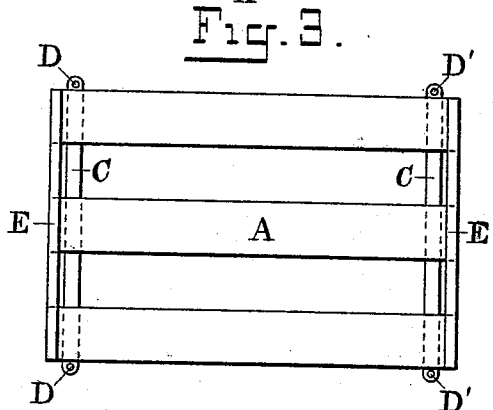
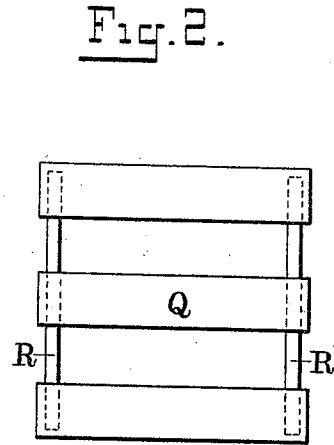
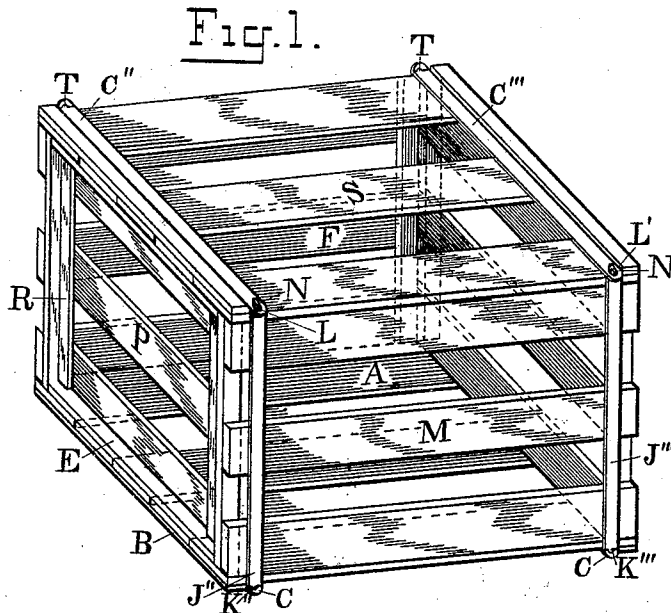


(No Model.)

F. T. HOWELL.  
SHIPPING CRATE.

No. 515,226.

Patented Feb. 20, 1894.



Witnesses

*W. H. Alber.*  
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# UNITED STATES PATENT OFFICE.

FELIX TARANT HOWELL, OF BIRMINGHAM, ALABAMA, ASSIGNOR TO JAMES C. WILLIAMS AND WILLIAM J. VANN, OF SAME PLACE.

## SHIPPING-CRATE.

SPECIFICATION forming part of Letters Patent No. 515,226, dated February 20, 1894.

Application filed February 10, 1893. Serial No. 461,772. (No model.)

*To all whom it may concern:*

Be it known that I, FELIX TARANT HOWELL, a citizen of the United States, residing at Birmingham, in the county of Jefferson and State of Alabama, have invented certain new and useful Improvements in Shipping-Crates; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in that class of shipping crates, usually designated knock down crates; and the objects of my improvements are, first, to make a shipping crate, or shipping case of that kind, that will be simple of construction, strong and durable, that can be set up without nails, screws, or other means of fastening, other than the devices attached to the crate, and that will be perfectly secure to ship the goods inclosed, in the said crate, or shipping case, without danger of coming apart; second, to make a shipping crate, or case that can be transported, from the factory to the place of using, occupying a small amount of space, and when used, can be taken apart, packed up and shipped back, to be used again, and so used continuously until the crate, or case is worn out. I attain these objects by the device illustrated in the accompanying drawings, in which—

Figure 1, is a perspective view of the crate, when set up ready for shipping. Fig. 2, is an inside view, of one of the ends, before it is set up. Fig. 3, is a top view, of the part that forms the bottom. Fig. 4, is an inside view, of one of the sides. Fig. 5, is an enlarged detail front and side view, of one of the back side clamps. Fig. 6, is an enlarged detail front and side view, of one of the front side clamps.

Similar letters refer to similar parts throughout the several views.

The bottom A, is made of two or more slats, on both ends of the bottom, are secured cleats B, even with the ends, to hold the bottom together, and secured on the inside of the cleats are wrought iron clamps C, C, made of heavy hoop iron, having formed on their ends eyes D, D', the said eyes being used to secure the bottom of the sides, as hereinafter described; the bottom is also provided with cleats E, E',

secured to the bottom on the inside of the ends, the said cleats hold the ends of the crate to place, and keep them from slipping out when the crate is put up.

The back side F, is made of two or more slats, but can be made solid if so desired, and has secured on its inside even with the ends, two cleats G, G', and on the inside two additional cleats H, H', leaving recesses I, I' between them, for the crate ends to rest in; on the outer side, are also secured wrought iron clamps J, J', having curved ends K, K' on the bottom, and eyes L, L' on the top ends as shown.

The front side M, is made in the same manner, as above described, with the exception, the clamps J'', J''' having curved ends K'' K''' on the bottom, are provided with hooks N, N on the top ends, having a hole O formed in the head of the hooks, to secure the said hooks to place, by a lock, or seal if so desired.

The ends P, and Q, are made of slats, and are provided on the outer side near the ends, with two cleats R, R', secured firmly to the material forming the ends.

The top S, is made in the same manner, as before described for the bottom, is cleated on the ends in the same way, and is provided on the outside with wrought iron clamps C'' C''', having formed on one end the curved ends T, T, and on the opposite ends eyes, of the form shown at L Fig. 5.

To set the crate up, the bottom is placed as shown in Fig. 3, the ends placed on the bottom inside the cleats E, E', the curved ends of the clamps on the sides are placed in the eyes of the bottom clamp, and the sides drawn to place resting against the ends, the curved ends of the top clamps, are then placed in the clamp eyes on the back side of the crate, and the top shut down until it locks on the hooks, formed on the upper end of the front clamps, as shown.

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

A shipping crate, consisting of a bottom with cleats E, E' on its ends, metallic clamps secured on the outside having eyes D, D', formed on both ends, a front and back with cleats H H' and G, G' at the ends having a re-

cess I between the cleats, the back having metallic clamps on the outside with curved tails K formed on the bottom ends and eyes L on the top, the front having metallic clamps on the outside with curved tails K formed on the bottom ends and hook heads N on the top, a top having metallic clamps on the outside with curved tails formed on the back ends and eyes to close and lock over the hook-heads on the front, two crate ends to fit in the recesses I, I between the cleats on the front and

back, the metallic clamps binding the parts of the crate together, all combined as set forth and described.

In testimony whereof I affix my signature in presence of two witnesses.

FELIX TARANT HOWELL.

Witnesses:

ED. WARREN,  
J. J. SMITH,  
WM. CROSBY.