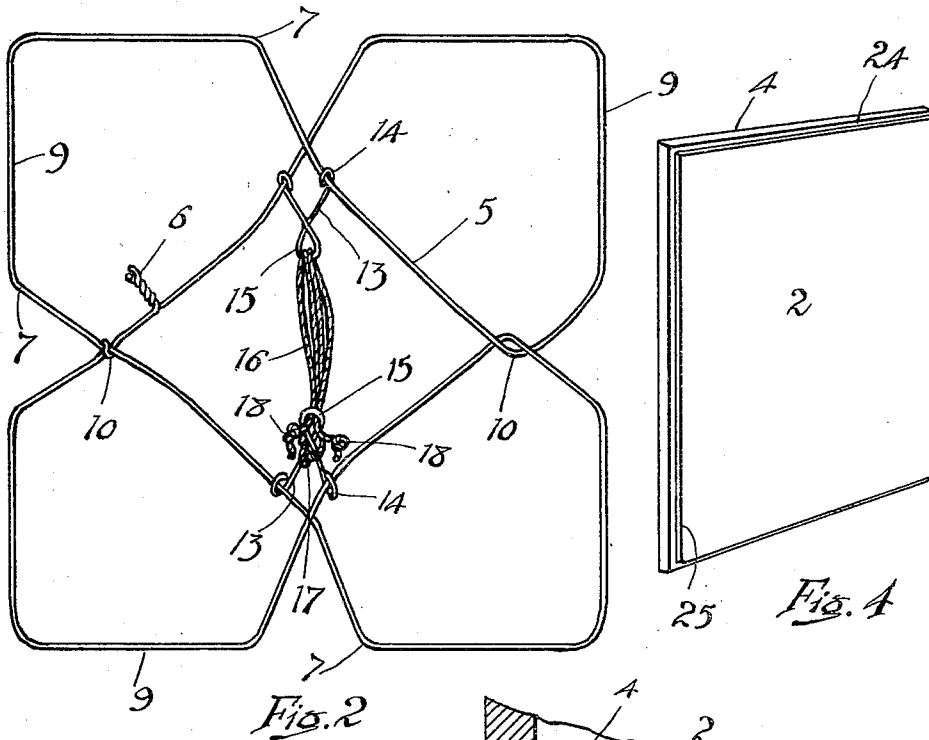
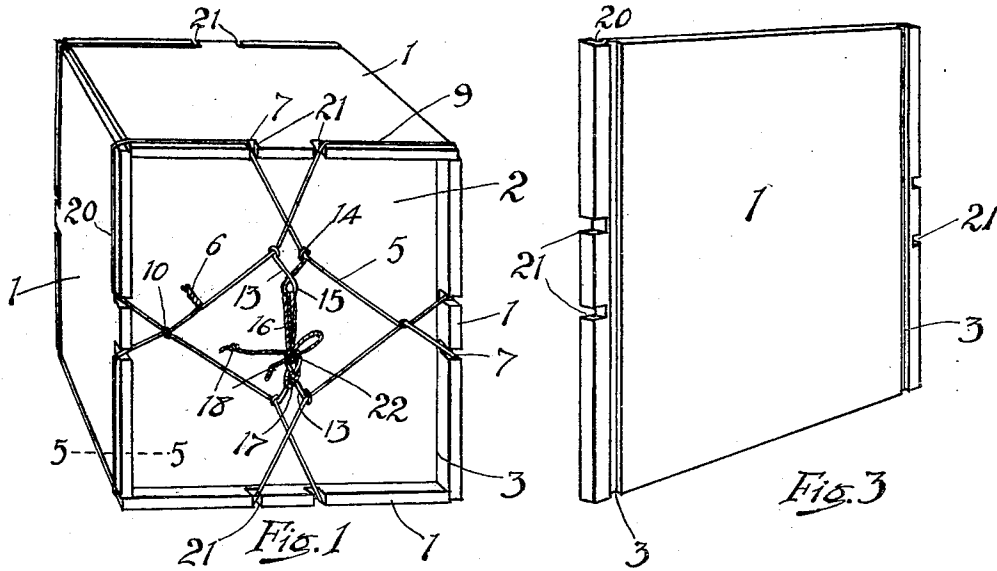


R. A. SIMPSON.
 KNOCKDOWN BOX.
 APPLICATION FILED JULY 2, 1907.

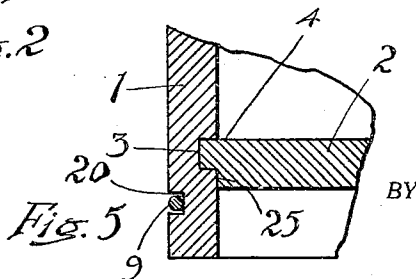
936,484.

Patented Oct. 12, 1909.



WITNESSES:

Geoffrey Holt.
C. L. Howe



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 BY *J. M. Wright,*
 ATTORNEY.

UNITED STATES PATENT OFFICE.

RUFUS A. SIMPSON, OF FERNDALE, CALIFORNIA.

KNOCKDOWN BOX.

936,484.

Specification of Letters Patent.

Patented Oct. 12, 1909.

Application filed July 2, 1907. Serial No. 381,954.

To all whom it may concern:

Be it known that I, RUFUS A. SIMPSON, a citizen of the United States, residing at Ferndale, in the county of Humboldt and State of California, have invented new and useful Improvements in Knockdown Boxes, of which the following is a specification.

The object of the present invention is to provide a knock-down box which shall be cheap and simple in construction, and which shall contain no hinges or other parts liable to get out of order by reason of the severe usage to which such boxes are generally subjected in transportation.

My improved box is especially adapted and intended for transporting butter, either in separate blocks or in a single mass, and the box when empty being knocked down and returned to the factory for reshipment.

In the accompanying drawing, Figure 1 is a perspective view of the box set up; Fig. 2 is an enlarged detail view of the binding wire loose; Fig. 3 is a perspective view of one of the sides of the box; Fig. 4 is a perspective view of an end of the box; Fig. 5 is an enlarged broken detail horizontal section on the line 5-5 of Fig. 1.

Referring to the drawing, 1 indicates the four long sides of the box, which are identical in form, and 2 indicates its ends which are likewise of the same construction at both ends. Each of the sides 1 is formed near each end with a groove 3, adapted to receive the edge 4 of an end of the box, and thereby to retain the end of the box in position. Said sides are arranged around said ends symmetrically, that is, proceeding in one direction around the box, the front edge of one side overlaps the rear edge of the next side in advance, and the front edge of the latter side, in like manner, overlaps the rear edge of the next, in advance, and so on in regular rotation. This permits the four sides to be placed indifferently in contact with any of the edges of the ends 2 of the box. When the four sides have been thus arranged around the ends with the edges of the latter engaging the grooves 3 in the inner surfaces of said sides, it is then necessary to secure in place said sides by means of the binding wire 5. The two ends of said wire are spliced together, as shown at 6, and the wire is bent into the general form of a square with rounded corners, the wire, however, extending from points 7 near the

middle of the sides of the square in a direction, as shown at 9, substantially parallel to the nearest diagonal of the square, these portions 9 of the wire being bent around each other as shown at 10. Engaging these portions of the wire are two yokes 13 having hook-shaped ends 14, and loops 15 in the middle. The middle of a cord 16 is hitched, as shown at 17, around the loop of one of said yokes, and the two ends of the cord are passed through the loop of the other yoke and are then passed through the loop of the first yoke, to which the cord is hitched, and knots 18 are then formed on said ends.

After the box has been set up in the manner already described, a wire 5 is passed over an end of the box and laid in grooves 20 formed in the outer surfaces of the long sides 1, between the ends and the grooves 3, the ends of said long sides being formed each with two notches 21 at the ends of grooves 20, permitting the portions 9 of the wire to extend from said grooves 20 over or against the end 2 of the box and toward the middle portion thereof. After the wire has been thus adjusted in place with all of the portions 9 passing through said notches 21, the knotted ends of the cord 16 are then grasped and pulled upward, drawing the two yokes together. The effect of drawing the two yokes together is to draw inward the binding wire 5, and thus firmly bind all of the sides of the box around the corresponding end. When the wire has been thus drawn inward, the two ends of the cord are tied together by a slip knot, as shown at 22, which is sufficiently large to be unable to pass through the loop of the adjacent yoke. The outer end of the box is then tied up in the same way. In order to knock down the box, it is only necessary to first pull open the slip knot by pulling open the short end of the cord, whereupon the wires are released and can be slipped off the ends of the sides 1 of the box, whereupon said sides can be removed, and the ends, in turn, can be removed, leaving the butter or other material resting upon the bottom side of the box.

Each end piece is formed with rabbeted edges 24, the narrow portions of which are adapted to enter the grooves 3 in the side pieces, while the shoulders 25 of said rabbeted edges rest against said side pieces. A construction is thereby provided by which the length of the interior of the box can be

increased or diminished to a small extent, sufficient to permit of packing therein either a single mass of butter or the same amount of butter cut up in smaller packages, each in
5 a separate wrapper. The thickness of these wrappings increases the length which it is necessary to provide for the interior of the box without unduly compressing the separate packages, and this may be provided for
10 by arranging the end pieces with the shoulders of the rabbets extending outward, thus giving an increase in the interior of an ordinary size box of about three-eighths of an inch. These shoulders also strengthen the
15 edges of the long sides 1 of the box.

It will readily be seen that the parts of the box can be quickly set up and strongly secured together. The identity in form of the four long sides of the box facilitates its
20 assemblage. Since the box contains only the wooden sides and the wire connections, the latter being so constructed as to retain their shape always ready for use, the box is found to be very convenient for shippers, while
25 effecting a great saving over the practice

heretofore employed of providing a new box for each shipment.

I claim:—

A knock down box comprising end plates, side plates projecting beyond the end plates 30 and having each two notches in its projecting portions near the middle of said end, a band having its ends secured together and bent into substantially square form, said band extending around each corner formed 35 by adjacent side plates and through a notch in the side plate into the space between said projecting portions adjacent to the end plate, two yokes each having hook-shaped ends adapted to engage the latter portions of the 40 band, and having a loop in the middle, and a cord passed through said loops to secure said yokes together.

In testimony whereof I have hereunto set my hand in the presence of two subscribing 45 witnesses.

RUFUS A. SIMPSON.

Witnesses:

C. L. HOWE,

D. B. RICHARDS.