

No. 644,887.

Patented Mar. 6, 1900.

E. H. BARNES.
WOODEN SHIPPING BOX.

(Application filed Aug. 14, 1899.)

(No Model.)

Fig. 2.

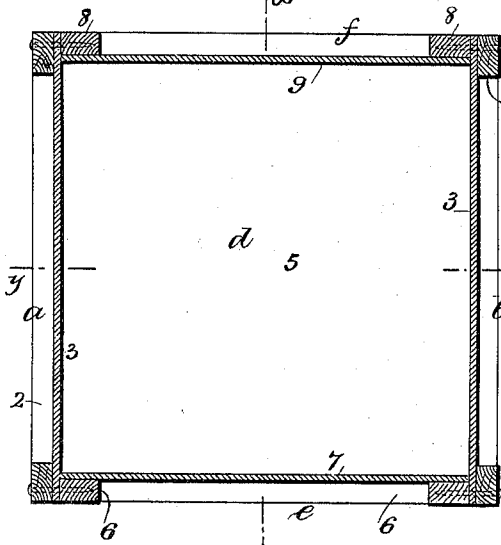


Fig. 3.

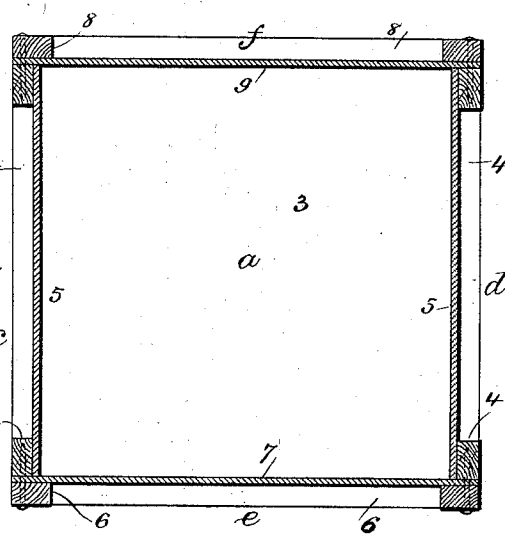


Fig. 4.

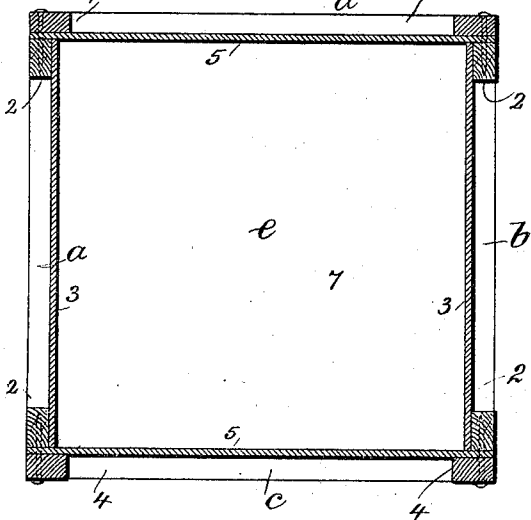
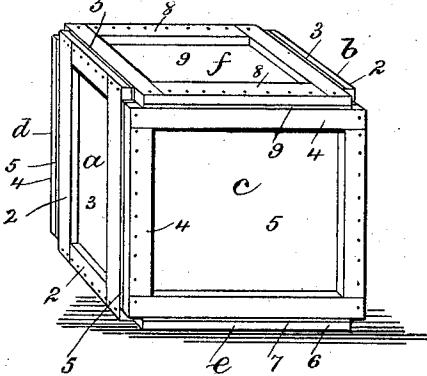


Fig. 1.



Witnesses

Chas. H. Smith
J. Staib

Inventor

Erastus H. Barnes.

per L. W. Terrell & Son
attys.

UNITED STATES PATENT OFFICE.

ERASTUS H. BARNES, OF NEW YORK, N. Y.

WOODEN SHIPPING-BOX.

SPECIFICATION forming part of Letters Patent No. 644,887, dated March 6, 1900.

Application filed August 14, 1899. Serial No. 727,092. (No model.)

To all whom it may concern:

Be it known that I, ERASTUS H. BARNES, a citizen of the United States, residing at New York, (Brooklyn,) in the county of Kings and State of New York, have invented an Improvement in Wooden Shipping-Boxes, of which the following is a specification.

The present and gradually-increasing scarcity of lumber makes economy in the use of lumber a necessity, and in the manufacture of shipping-boxes and wooden packages of one form and another this economy makes it necessary to devise peculiar forms of structure for strength, so that the packages may be light and yet strong and rigid in every direction, and at the same time the forms of packages or boxes must be adapted to the character of goods to be received and shipped therein.

The object of the present invention is to produce a shipping-box or package-case for dry goods and similar articles that is light, stiff, and strong in every direction, where all the joints lap and the nails are driven in lines that are at right angles to one another, and in which box or package there is a smooth and even interior for the reception of such articles and in which the articles may be shipped without liability of being injured or torn.

In carrying out my present invention the box or package is composed of similar sections, each of which comprises a frame of battens surfaced on one side with a thin slab of wood, in which battens the grain of the wood runs lengthwise of the batten-strips. In connecting these similar sections the end sections lap upon the edges of the side sections and are transversely narrower than the side sections an amount on either side equal to the thickness of the frame of battens and wood surface of each section, and the top and bottom sections fit between the exposed ends of the side sections and their opposite edges overlap the end sections. The end sections are nailed upon and to the side sections, the top and bottom sections are nailed to and upon the end sections, and the side sections are nailed to the top and bottom sections, the nails in all cases being driven through the battens of the frames across the grain of the wood and through the wood surface directly

into the edges of the battens of the other frames and across the grain of the wood thereof, so that the lines of nails connecting the various sections are at right angles to one another for strength and stiffness.

In the drawings, Figure 1 is a perspective view representing my improvement. Fig. 2 is a vertical section through the same. Fig. 3 is a vertical section at right angles to Fig. 2 and at $x x$ of Fig. 2, and Fig. 4 is a sectional plan at $y y$ of Fig. 2.

$a b$ are the side sections; $c d$, the end sections; e , the bottom section, and f the top section. These sections are all similar to one another and are each composed of a frame of battens in which the grain of the wood runs lengthwise, with a thin slab of wood on one surface nailed to the battens.

2 represents the batten-frame of the side sections, and 3 the wood-slab surface; 4, the batten-frame of the end sections, and 5 the wood-slab surface; 6, the batten-frame of the bottom, and 7 the wood-slab surface; 8, the batten-frame of the top, and 9 the wood-slab surface.

In putting the sections together all of the batten-frames are on the exterior and all of the wood-slab surfaces on the interior, so that a smooth interior is formed for the reception of the goods to be transported, so that there is little or no liability of injury to the same. The end sections $c d$ overlap the edges of the side sections, and they are nailed thereto by the rows of nails passing through the batten-frames and the wood surface into the edges of the batten-frames of the side sections. These end sections are shorter vertically than the height of the side sections and as much shorter at either side as the thickness of the top and bottom sections. The top and bottom sections fit between the top and bottom edges of the side sections and overlap the top and bottom edges of the end sections, and they are secured to the side and end sections by rows of nails that pass through the side sections into the edges of the batten-frames composing the top and bottom, and they are secured to the end sections by nails passing down through their batten-frames into the edges of the batten-frames of the end sections. In this way the various rows of nails are at right angles to one another and the overlapping of the

sections makes it possible to drive all these rows of nails through the batten-frames of one section across the grain of the wood into the batten-frames of the other section, also across the grain of the wood, and in this way ample strength is provided and a firm liberal hold for the nails, the construction being such that the package or box in all directions is stronger and more rigid than the ordinary package, and the package if dropped upon a corner is so strong that it is almost impossible to injure the same by the weight of the contents, the strain being so evenly divided and the parts so rigidly connected that the strains encountered in transportation and handling are fully compensated for in the structure of the package.

With the sections set together in the manner described notches of semicubical construction are formed at the respective corners of the box, where the corners of the sections meet. The corners are thus stiffened and there are three points to receive the blows and hard usage to which such boxes are subjected.

I claim as my invention—

1. A wooden shipping box or package, comprising similar sections each composed of a frame of battens surfaced on one side to the edges with a thin slab of wood, the said sections being set together so that the thin slabs of wood all come on the inside of the box and

the batten-frames of one section overlap those of the adjacent section, the grain of the wood of the adjacent battens running lengthwise at the joints and the nails connecting the sections are driven across the grain of the wood in different directions through the battens of one section into those of the other sections, substantially as set forth.

2. A wooden shipping box or package comprising similar sections, each composed of a frame of battens having the grain of the wood running lengthwise and surfaced on one side to the edges with a thin slab of wood, the end sections lapping upon and being connected to the side sections and shorter vertically than the side sections an amount equal to the thickness of the top and bottom sections, and the top and bottom sections fitting between the side sections and overlapping the end sections, the said sections being connected by rows of nails driven across the grain of the wood through the batten-frames of one section into those of the other sections in lines that are at right angles to one another or approximately so, the corners having notches of semicubical form, substantially as set forth.

Signed by me this 7th day of August, 1899.

ERASTUS H. BARNES.

Witnesses:

GEO. T. PINCKNEY,
S. T. HAVILAND.