

F. A. PRAHL.
 END FOR WIRE BOUND BOXES.
 APPLICATION FILED OCT. 9, 1909.

968,192.

Patented Aug. 23, 1910.

Fig. 1.

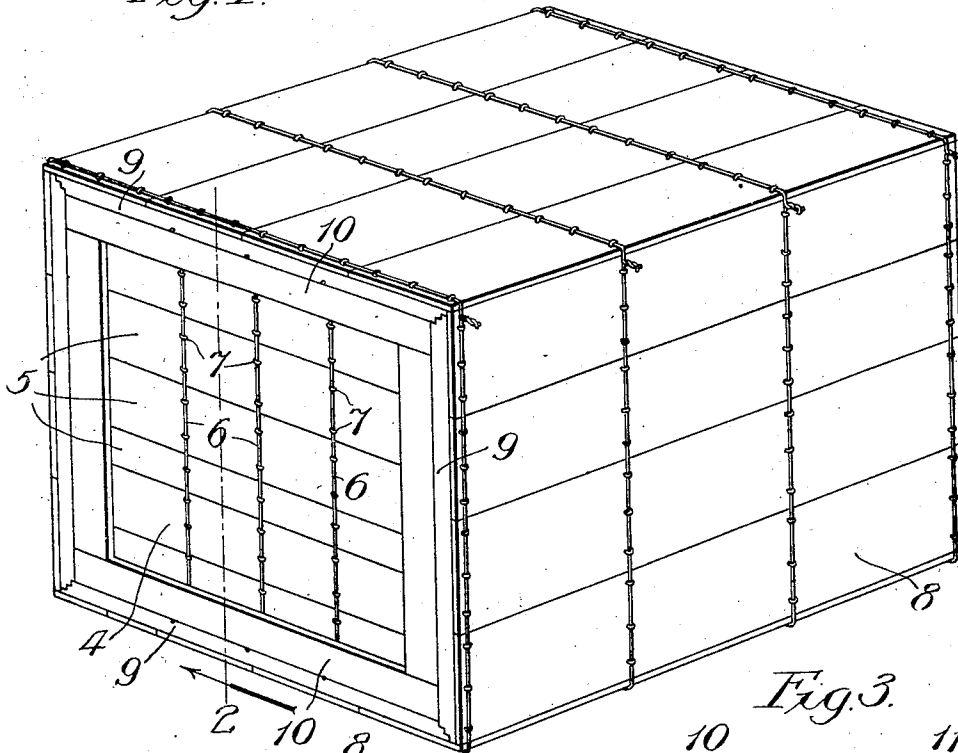


Fig. 3.

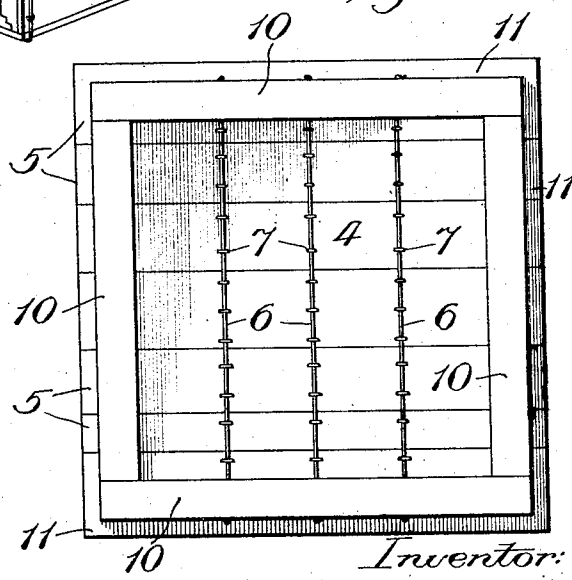
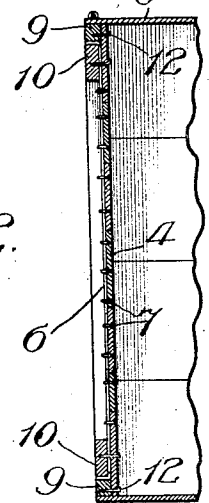


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

FREDERICK A. PRAHL, OF NEW YORK, N. Y., ASSIGNOR TO NATIONAL WIRE BOUND BOX COMPANY, OF SOUTH BEND, INDIANA, A CORPORATION OF INDIANA.

END FOR WIRE-BOUND BOXES.

968,192.

Specification of Letters Patent. Patented Aug. 23, 1910.

Application filed October 9, 1909. Serial No. 521,851.

To all whom it may concern:

Be it known that I, FREDERICK A. PRAHL, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a new and useful Improvement in Ends for Wire-Bound Boxes, of which the following is a specification.

My invention relates to a built-up reinforced box-end of novel and improved construction for use in the manufacture of wire-bound boxes.

Wire-bound box-blanks of the general type shown in Reissue Letters Patent No. 12,725, dated November 26, 1907, particularly when supplied to customers at a distance, are usually shipped in knock-down condition, that is to say the cleated and wire-reinforced, or stitched, blanks, each intended to form the top, bottom and sides of a box are shipped in a flat, or unfolded condition separate from the box ends. The latter, particularly in the case of a box of large dimensions, are usually formed of a plurality of strips of thin lumber, or stock, of varying widths which, for shipment in the knock-down, are generally placed loosely together in proper relation; and in forming a box of this wire-bound type it has been usual to simply fasten the assembled end-stock, as thus provided, in place, by stapling it at the edge-portions to the cleats of the box-blank. While in most cases this manner of providing the box-ends answers all the requirements in practice, it is desirable that boxes, particularly of large size and for the shipment of certain kinds of merchandise, shall be provided with ends of a reinforced construction which will materially increase the strength of the box and afford an additional safeguard against unauthorized access to its contents in transit.

My object is to provide a simple and inexpensive built-up end, more especially for wire-bound boxes of the larger sizes, and so constructed, initially, that it may be readily secured to the cleats of a folded box-blank to produce a particularly strong, durable and slightly box.

In the accompanying drawing—Figure 1 illustrates a well-known wire-bound box provided with my improved ends; Fig. 2, a broken section taken on line 2 in Fig. 1;

and Fig. 3, an elevation of the end as it appears before being fastened in place.

Each end-wall 4 may be formed, as shown, of a plurality of strips 5 of different widths, or all of the same width. In practice, the strips 5 placed together, are sawed to the proper dimensions to form an end-wall and then passed through a stitching machine which applies binding-wires 6 to its outer side which are fastened in place by short staples 7. These staples straddle the wires 6, pass through the strips 5, and are clenched on the inner side of the wall whereby the said side presents a smooth surface. The box-blank 8, which when folded forms the top, bottom and sides of the box has end-cleats 9 applied in the usual way. The wire-reinforced end-wall is provided on its outer face with battens 10 fastened against the strips 5 by means of nails or staples driven from the reverse side of the wall. The battens 10 extend short of the edges of the wall and fit within the cleats 9, leaving the margin portion 11, which in practice abuts against the inner faces of the cleats 9, with the edges of the wall fitting against the inner surfaces of the folded blank 8, behind the cleats 9. The end-portions of the wires 6 are drawn taut over the edges of the upper and lower battens and cut off flush with the outer surfaces thereof. The box-ends are fastened in place by staples, or the like 12 driven from the inner sides of the margin portions 11 into the cleats 9. The battens 10 add comparatively little to the weight of the box, but tend greatly to reinforce the ends and in fact to brace the entire box. The binding-wires 6 also very materially strengthen the ends by tending to hold the strips 5 together and prevent their being bent inward or outward and to give to each end, in effect, the same security that it would possess if of a single piece of the lumber.

What I claim as new, and desire to secure by Letters Patent, is:—

1. The combination with a foldable box-blank formed of a plurality of sheets secured together by binding wires, and provided with cleats, of a built-up box end therefor, comprising a wall formed of a plurality of strips, strengthening wires extending across and stapled to the strips to se-

cure them in edgewise relation to each other, and battens secured to the outer face of said wall to extend short of its edges and form a blank-cleat engaging margin about it, for the purpose set forth.

2. The combination with a foldable box-blank formed of a plurality of sheets secured together by binding wires, and provided with cleats, of a built-up box-end therefor, comprising a plurality of strips forming an end-wall for the box, strengthening wires extending crosswise of the said strips and stapled thereto, and end-strengthening battens fastened to said strips to leave a surrounding margin, all so constructed and arranged that in the formation of a box the said strips at the margin fit against, and their battens are surrounded by, the cleats of the box-blank.

3. The combination with a box-blank formed of a plurality of sheets secured together by binding wires, and provided with cleats, of a built-up box-end, adapted for application to such box and comprising a plurality of strips forming an end-wall for the box, strengthening wires extending crosswise of said strips at the outer side only thereof and stapled thereto, and end-strengthening battens fastened to the outer side of said strips to leave a surrounding margin, all so constructed and arranged that in the formation of a box the said strips at the margin fit against, and their battens are surrounded by, the cleats of the box-blank.

FREDERICK A. PRAHL.

In presence of—

F. OLOF CUDLIPP,
C. L. MILLARD.