

(No Model.)

J. A. BOWLER.
METAL BOX STRAP.

No. 568,510.

Patented Sept. 29, 1896.

Fig. 1,



Fig. 2,



Fig. 3,

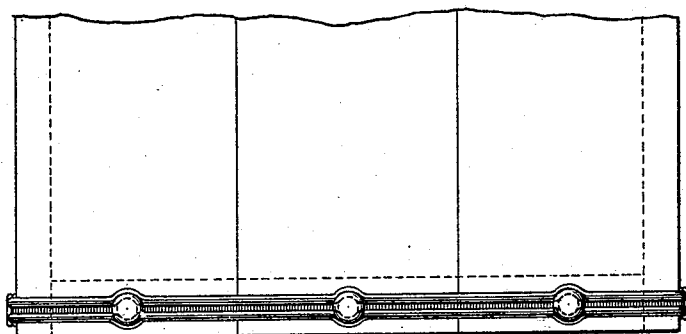
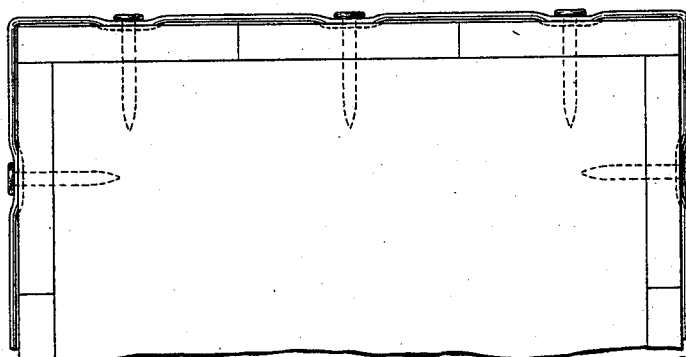


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN A. BOWLER, OF NEW YORK, N. Y., ASSIGNOR TO THE AMERICAN
BOX STRAP COMPANY.

METAL BOX-STRAP.

SPECIFICATION forming part of Letters Patent No. 568,510, dated September 29, 1896.

Application filed May 4, 1893. Serial No. 472,957. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. BOWLER, a citizen of the United States, residing in the city, county, and State of New York, have invented a certain new and useful Improvement in Metal Box-Straps, of which the following is a specification.

The object of my invention is to construct a metal handbox-strap which shall have no sharp or rough edges to injure the hands of persons applying the strap or handling packages secured therewith, that shall permit the driving of nails at any point and as closely together as may be desired, that shall be reversible, so that either side may be applied to the box with equal facility, that shall be so constructed as to be sufficiently thin to be readily punctured by any nail and still have ample tensile strength and shall at the same time be so flexible as to be handled and applied to boxes with ease, and that shall be so formed that when laid upon a box and secured at intervals the driving of the nails shall take up any slack, so that the strap shall tightly embrace the box, the strap at the same time being incapable of stretching lengthwise in practice.

To accomplish these ends, I construct the strap as follows: In cross-section it presents rounded or smooth thickened edges connected by a thin imperforate central web located centrally with reference to the thickened edges, so that the latter project on opposite sides thereof. The thickened edges furnish the desirable tensile strength and yet may readily be bent around the corners of boxes, while the central web is made so thin that any suitable nail may be driven through it with ease. I further propose to make the distance between the thickened edges so small that in the driving of any ordinary nail thereinto the point may enter or be forced between the thickened edges, and when driven through the thin central web the increasing thickness of the shank of the nail will spread the thickened edges apart. This results in a shortening of the strap and the taking up of slack, and as the beads formed by the thickened edges will then clamp firmly the shanks of the nails the nails are held more securely and prevented from becoming loose or being too

readily withdrawn. The strap will be further shortened to embrace the box tightly by reason of the fact that the nail-head will overlap and bear upon the thickened edges and when driven home by a sharp blow of the hammer will cause that part of the strap to bend below the plane of adjacent parts and embed the thickened edges in the wood of the box. This not only shortens the strap and takes up slack, but also causes the formation of a depression in the strap, which protects the nail-head. The thickened edges, which, as above stated, should be rounded or smooth, at least sufficiently to prevent injury to the hands, may be of any suitable cross-section, though I prefer to make them circular. Such a strap may be formed by drawing, rolling, or swaging, or by a combination of these methods of manufacture.

The strap thus formed is smooth and flat. Either side may be applied to the box with the same facility. It is narrow and therefore requires but a minimum of metal, and in its application to a box the driving of the nails serves to shorten the strap and cause it to embrace the box tightly, and the beads or thickened edges clamp the nails and hold them securely. In handling and applying such a strap there is no danger of injuring the hands of the workmen, and as either side may be applied with equal facility to the box, and as where the strap is laid along the box and preliminarily secured at extended intervals, as is the desirable custom, the driving of the intermediate nails takes up the slack and causes the strap to embrace the box tightly.

In many existing styles of straps eyes, apertures, or recesses have been formed at intervals for the reception of nails, and nails can only be driven at such points. Consequently it frequently occurs that the eye comes over a crack or seam in the box, and a nail cannot be properly driven in at that point. For the same reason the strap cannot always be secured at or sufficiently close to the corners of the box, and is liable to be so loose as to be forced off of the corner when the box is dragged in handling it.

In my strap nails can be driven at any point to properly secure it at corners of boxes or elsewhere.

As is obvious, the strength of my strap resides in the beaded edges, and the narrow, thin, imperforate central web is employed to give the functions and produce the results above recited.

Such a strap possesses advantages which are obvious and which, so far as I know, have never before been attained.

In the accompanying drawings, Figure 1 is a plan view of a short section of strap on a slightly-enlarged scale; Fig. 2, a cross-section thereof; Fig. 3, a plan view of an end of a box having a strap applied thereto, and Fig. 4 a side elevation of the same.

In Figs. 3 and 4 the strap shown is full size for all ordinary purposes, that is to say, I should make the thickened or beaded edges of about the size indicated, and the thin central web integral therewith about three sixty-fourths of an inch, more or less, in width. In the drawings I have shown cylindrical edges *a a* and a thin central web *b* connecting them and formed integral therewith. The function of this web is primarily to merely connect the thickened edges, but incidentally it adds to the strength of the strap. It must, however, in all cases be so thin that nails may be driven through it with facility. The points of the nails may be entered or forced between the thickened edges and are driven home, as indicated in Figs. 3 and 4. In the former figure is shown how the shank of the nail will spread the thickened edges apart, thus shortening the strap. The nail-heads naturally straddle and lie upon the thickened edges, and when the nail is driven home the edges are bent and driven into the wood of the box, thus forming a depression that constitutes a seat or protection for the nail-head and at the same time also effects a further shortening of the strap.

The thick edges or beads *a* forced apart by the nail-shank clamp the sides of the nail and tend to prevent its withdrawal from the wood of the box. If the thick edges or beads

were somewhat more widely separated than herein described, they would be spread by the heads of the nails which might be driven down between them, and such a strap would be included within my invention.

I claim as my invention—

1. A flat metal box-strap, having solid smooth cylindrical or beaded edges connected diametrically by an integral thin narrow central web, the web being so thin as to be readily punctured by ordinary holding-nails, and so narrow that the beaded edges are adapted to be spread apart by the nails.

2. A flat reversible metal box-strap consisting of a thin narrow central web and solid beaded nail-clamping and nail-head-supporting edges integral therewith and projecting on both sides thereof, the central web being of such thinness as to be readily punctured at all points of its length by ordinary holding-nails, and so narrow that the beaded edges are adapted to be forced apart by the shanks of the nails, and have the heads of the nails bear thereupon, substantially as and for the purposes specified.

3. A flat metal box-strap having smooth beaded or thickened nail-clamping and nail-head-supporting edges connected by and projecting on both sides of a thin narrow web, the space between the beaded edges being so narrow as to afford merely an entrance for the ordinary holding-nails and so thin as to be readily punctured by the nails at all points of its length, whereby a strap is obtained whose thickened edges are forced apart by the shanks of the nails and are bent down by the impact of the heads of the nails below the general plane of the strap, substantially as and for the purposes specified.

In testimony whereof I have hereunto subscribed my name.

JOHN A. BOWLER.

Witnesses:

FRANK THOMPSON,
OTTO ZIMMERMAN.