

(No Model.)

J. W. MANSFIELD.

BINDING STRAP.

No. 389,933.

Patented Sept. 25, 1888.

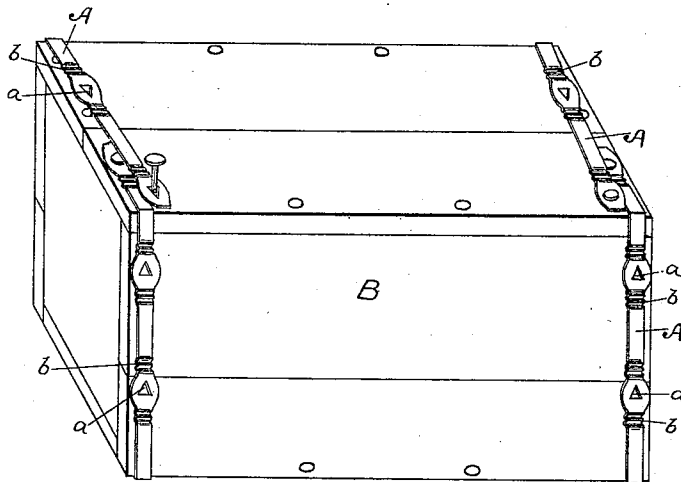


FIG. 1.

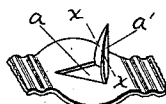


FIG. 3.

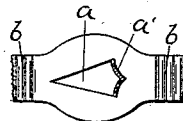


FIG. 4.

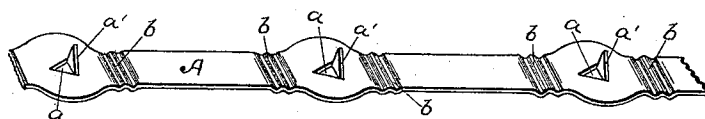


FIG. 2.

WITNESSES.

Albert E. Leach -
M. H. Thompson.

INVENTOR

James W. Mansfield
By his Attorney
H. B. H. Brown

UNITED STATES PATENT OFFICE.

JAMES W. MANSFIELD, OF BOSTON, MASSACHUSETTS.

BINDING-STRAP.

SPECIFICATION forming part of Letters Patent No. 389,933, dated September 25, 1888.

Application filed March 12, 1888. Serial No. 266,940. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. MANSFIELD, a citizen of the United States, residing at Boston, in the county of Suffolk and Commonwealth of Massachusetts, have invented a certain new and useful Binding-Strap, of which the following is a specification.

My invention consists of an improved binding-strap for strengthening packing-boxes, casks, and like articles, as hereinafter set forth.

Figure 1 of the drawings represents a box bound by my improved device, and Fig. 2 is a view of the under side of a portion of the strap. Fig. 3 is a similar view, but showing the prong *a'* with V-shaped section. Fig. 4 is a section on *x x*, Fig. 3.

In the common binding of packing cases with hoop-iron great inconvenience is experienced by reason of being obliged to employ a punch for perforating the strip with nail-holes. My improved strap is adapted to be furnished in strips of considerable length in rolls or on spools, from which the required length of strap, ready for immediate use, may be readily taken at any time and easily bound about the packing-case or other article without the use of any punch or other tool, save a hammer.

The strap *A* is made from a continuous strip of sheet metal of the shape shown in Fig. 2. It is provided at intervals with the holes *a* punched therein. These holes may be circular, but are preferably angular, as shown in the drawings, the metal cut from the holes being struck up, as shown, to form one or more sharp-pointed prongs, *a'*, at each hole. These prongs *a'* may be plain, as shown in Fig. 2, or, as in Figs. 3 and 4, may be struck up with a V-shaped transverse section. The strap is also enlarged around the holes *a*, so that there is at these perforated portions at least as much metal as at intervening points, thus making a strap uniformly strong throughout. This is especially desirable, as ordinary hoop-iron bands, being of uniform width, have a tendency to break at the holes, these being of course the weakest points. The strap being held in place on the packing-box or other article, the prongs *a'* are driven into the wood by means of a hammer. The prongs *a'* may serve merely

to hold the strap in place until nails are driven; or, especially if struck up in the shape shown in Fig. 3, they may serve to secure the strap firmly without the use of nails at all, the V shape serving greatly to strengthen the prong. Commonly, however, it is best to use a nail at each end of the strap, the ends being preferably lapped in some such manner as that shown in Fig. 1.

On each side of the holes *a* and adjacent thereto I preferably make one or more transverse corrugations, *b*, which, while not materially affecting the tensile strength of the strap, serve to render it easily broken at any of the corrugated portions by simply bending the metal back and forth.

It is desirable that the strap when broken off from the roll should be so broken in front of and near one of the holes in order that no loose end may be left unsecured when in place on the box, as would frequently be the case should the strap be broken off at random. For this reason the strap is not corrugated throughout, but simply one or two corrugations are made on each side of the holes and near them, in order that by bending the metal back and forth the break occurs at the corrugated portion only. By this means the strap is easily made to terminate at each end near one of the said holes *a*, and there are no loose ends to catch.

I claim—

1. A binding-strap having holes and transverse corrugated portions adjacent to said holes, whereby the strap may be conveniently broken off at said corrugated portions only, substantially as and for the purposes described.

2. A binding-strap having at intervals holes and integral prongs adjacent to said holes, being sections of the strap bent aside from the main portion, and transverse corrugated portions *b* at each side of and near said holes, substantially as and for the purposes described.

In witness whereof I have hereunto set my hand.

JAMES W. MANSFIELD.

Witnesses:

WM. B. H. DOWSE,
ALBERT E. LEACH.