

No. 671,193.

Patented Apr. 2, 1901.

C. W. MITCHELL.

BOX STRAP.

(Application filed Nov. 3, 1900.)

(No Model.)

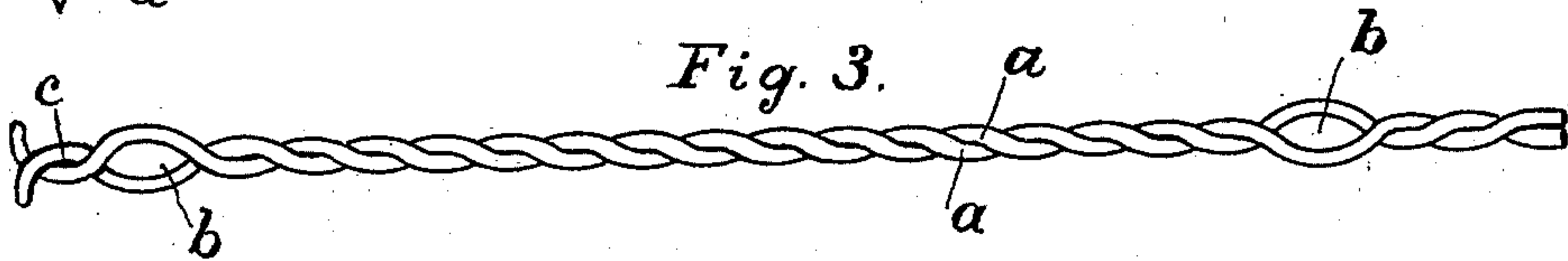
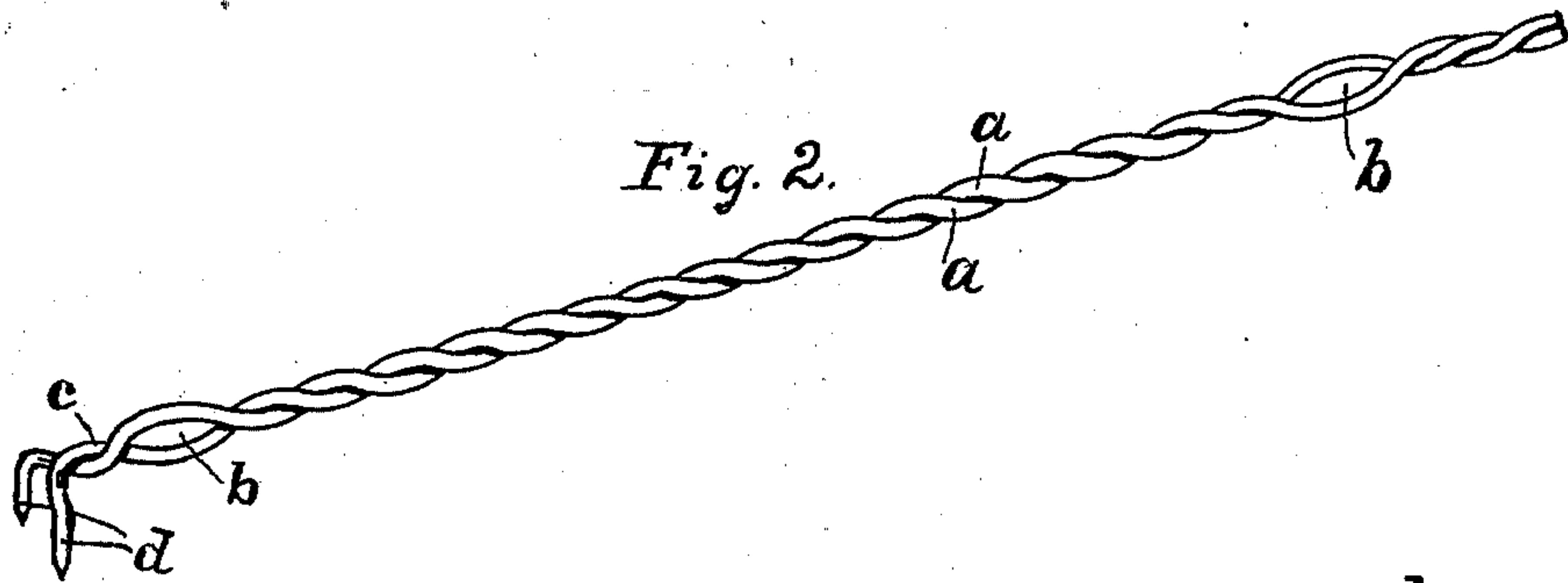
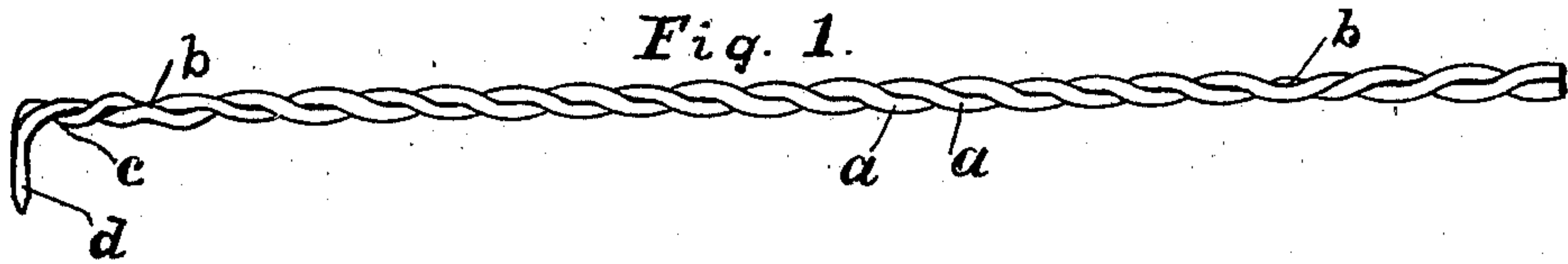
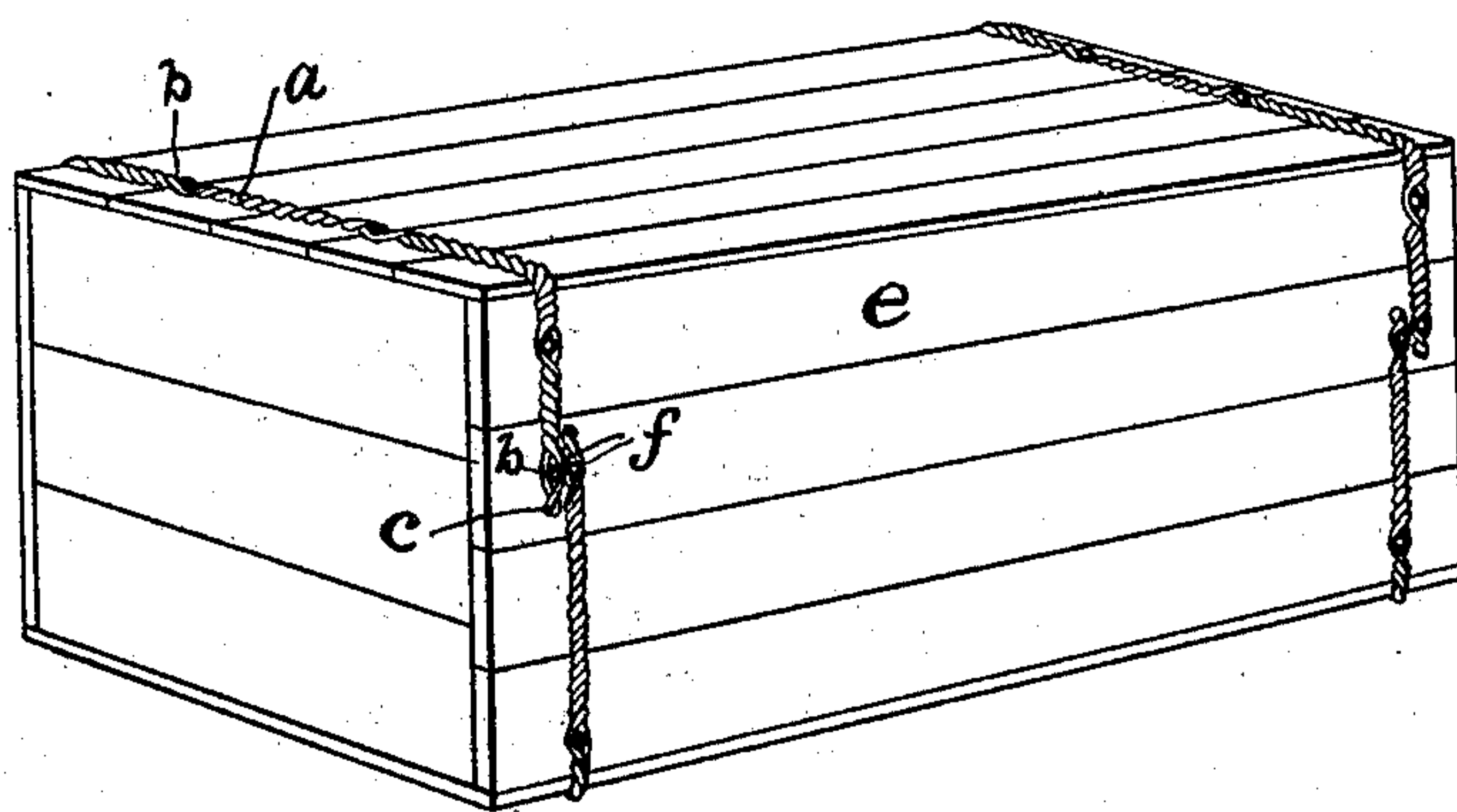


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES W. MITCHELL, OF BROOKLYN, NEW YORK, ASSIGNOR TO THE
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BOX-STRAP.

SPECIFICATION forming part of Letters Patent No. 671,193, dated April 2, 1901.

Application filed November 3, 1900. Serial No. 35,326. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. MITCHELL, a citizen of the United States, residing in the borough of Brooklyn, in the city of New York, county of Kings, and State of New York, have invented certain new and useful Improvements in Box-Straps, of which the following is a specification, reference being had to the drawings forming a part hereof.

10 My invention relates to box-straps provided at intervals with eyes, openings, or loops to receive nails or other securing means for the purpose of attachment to boxes or crates.

15 The object of my improvements is to provide a box-strap which shall be neater in appearance, more conveniently attached, and more secure in the attachment than those hitherto employed.

20 In the drawings, Figure 1 is a side view of a box-strap with my improvement applied thereto. Fig. 2 is a perspective view thereof. Fig. 3 is a top view thereof. Fig. 4 is a perspective view of a box with the box-strap applied thereto.

25 Similar reference-letters indicate similar parts throughout the several views.

While my invention is applicable to box-straps of various kinds, it is particularly advantageous in connection with box-straps of twisted wire, and I have illustrated it as applied to one of this form. The box-strap, as shown, may be made of two strands of wire *a a*, twisted together and at intervals separated into eyes, openings, or loops *b*, the direction of twist being reversed after passing each loop. Near the end of the box-strap beyond the last eye *b* it has been necessary, in order to prevent the untwisting of the strap due to pulling against the nail in the eye, to provide an inch or more of twisted end of strands *a*. When the nail is driven through the eye, there is found to be a tendency of this loose twisted end to rise and project from the box at a greater or less angle, depending upon the depth to which the nail has been driven. Besides its unsightly appearance this loose end is inconvenient to handle from the danger it presents of injuring the hands or clothing of those who have occasion to shift or to pass near the boxes thus strapped.

My invention absolutely eliminates this objectionable feature of the old box-strap by providing for the loose end of the strap beyond the last eye a secure manner of attachment to the box of such a character that, in addition to the function of holding the loose end from any tendency to rise and project, it performs the additional function heretofore performed by the inch or more of twisted end of strands of preventing the strap when pulling against the nail in the eye from untwisting at this point, thus permitting me to dispense with the greater part of the hitherto necessary loose twisted ends. This I do by providing beyond and close to the outermost eye *b* one turn *c* and bending the loose ends beyond and close to this turn sharply at a right angle and cutting them off and sharpening the points, so as to make two parallel points *d*, projecting substantially perpendicular to the plane of the eye *b*.

In applying this box-strap a nail *f* having been started through the last eye *b* a blow of the hammer will drive this nail home, at the same time driving the round points firmly into the wood, thus securely fastening the end of the box-strap from any tendency to rise and project and absolutely removing any chance for the box-strap to untwist at this point and slip past the nail. Fig. 4 shows the strap thus applied to a box *e*. As is evident, the loose ends of each strap are firmly embedded in the wood and held from any tendency to project.

I do not limit myself to a box-strap made of two strands, as a greater or less number may be used, nor to one in which the direction of twist is alternated between the eyes, nor to one made of strands of circular section, as I consider a strap made of twisted strands or strips of various cross-sections to be within my invention.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. As an article of manufacture, a box-strap of twisted wire, provided with eyes or openings to receive nails or other securing means, and having its ends sharpened and bent at right angles, close to the outermost eyes, whereby the ends may be secured to a box ad-

adjacent to the point of attachment of the outermost eyes and prevented from untwisting, substantially as described.

2. As an article of manufacture, a box-strap
5 of twisted wire, provided at intervals throughout its length with eyes or openings to receive nails or other securing means, the direction of twist of the wire between the eyes being alternately from right to left and from left
10 to right, and having its ends pointed and bent close to the outermost eyes, whereby the

loose ends may be driven into a box and thereby prevented from untwisting, substantially as described.

In testimony whereof I have hereunto¹⁵ signed my name, in the presence of two subscribing witnesses, this 1st day of November, 1900.

CHARLES W. MITCHELL.

Witnesses:

THEODORE T. DORMAN,
G. A. TAYLOR.