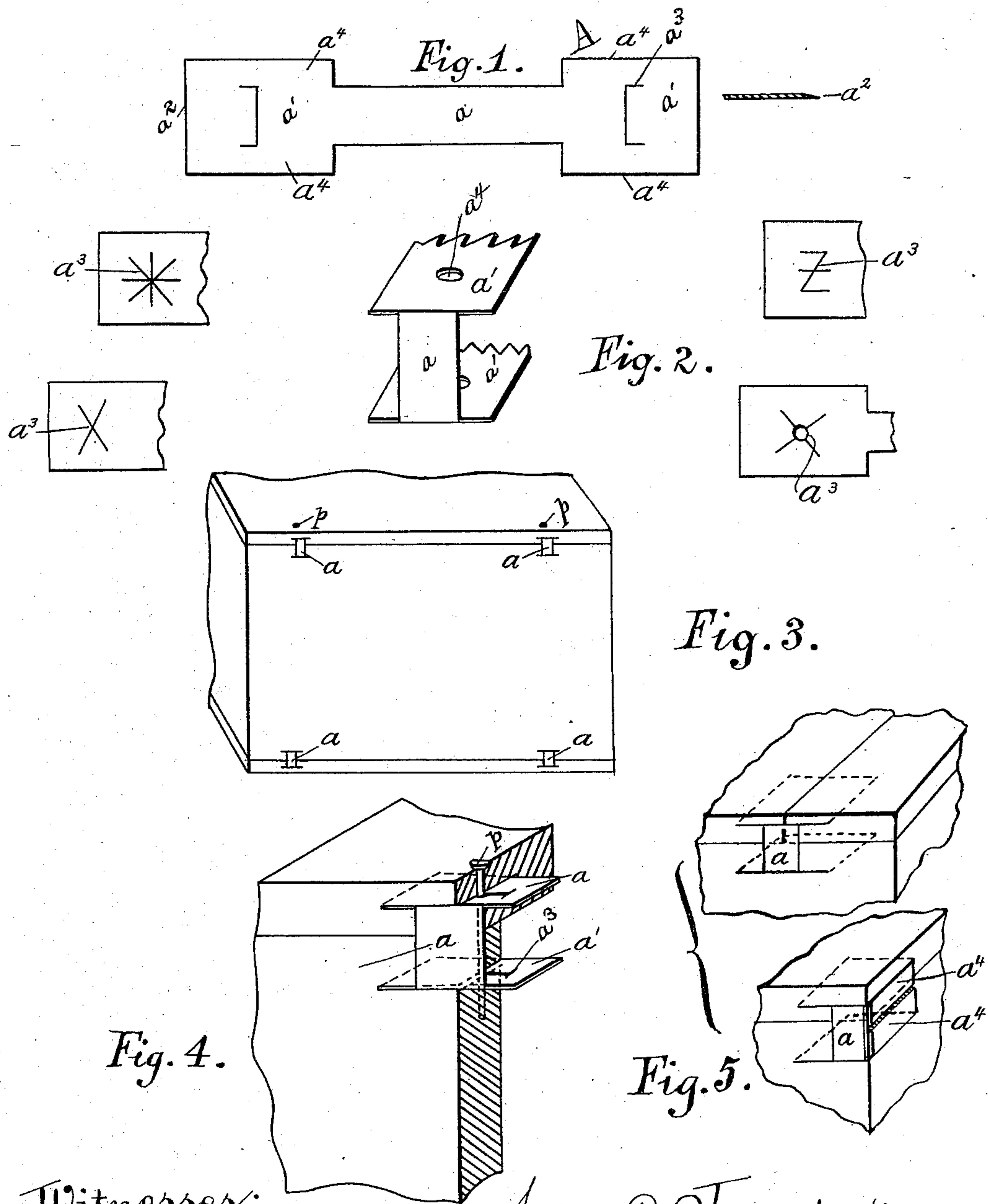


(No Model.)

J. L. LILIENTHAL.
BOX FASTENER.

No. 401,893.

Patented Apr. 23, 1889.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN LEO LILIENTHAL, OF SAN FRANCISCO, CALIFORNIA.

BOX-FASTENER.

SPECIFICATION forming part of Letters Patent No. 401,893, dated April 23, 1889.

Application filed December 5, 1888. Serial No. 292,727. (No model.)

To all whom it may concern:

Be it known that I, JOHN LEO LILIENTHAL, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented a new and useful Improvement in Box-Fasteners, of which the following is a specification.

My invention relates to box-fasteners; and it consists in a device whereby the cover, sides, or bottom, where conjoined, shall be firmly held together and cannot be separated by accident or design without breakage of the material composing the structure.

The object of my invention is twofold: First, I provide means for firmly connecting the edges and the corners of boxes and analogous structures; secondly, my invention comprises means for so closing a box or analogous inclosure that if any attempt is made to open the same there will be positive evidence of such tampering with the package.

My device may be appropriately styled a "safety-fastener," that will not only secure the bottom, top, and side walls of a package, but also act as a detective implement, and in this latter respect be of great service for employment on packages during transit in bond, which require supervision by revenue officers.

The invention is hereinafter fully described, illustrated in the drawings, and specifically pointed out in the claims.

Referring to the accompanying drawings, wherein like letters of reference point out similar parts on each figure, Figure 1 represents the blank from which the fastener is constructed. Fig. 2 represents the same turned over to form the finished articles, the edges being serrated. Fig. 3 represents one end of a quadrangular box, the bottom and top being connected to the end according to my invention. Fig. 4 is an enlarged view in detail of part of a box (portions being broken away) supplied with one of my fasteners. Fig. 5 shows in two views the application of the device for overlapping joints and the manner of returning upward and downward portions of the opposite plates at corners of packages.

In the drawings, A represents the fastener,

constructed of sheet metal, consisting of a vertical strip, a , having plates a' a' turned over at right angles to said strip. The terminal edges a'' of the plates may be beveled to a knife-edge, as shown in Fig. 1, or said edges may be serrated, as shown in Fig. 2. The plates a' have each an orifice, a''' , or a slit, a''' , which orifices or slits on the respective plates are in alignment, one over the other. The openings a''' a''' are for the reception of a nail or pin, p , which in practice, when driven into the package, first passes within the opening of one plate a' , then through the package side or wall, as the case may be, and then during its progress enters within and through the opening of the opposite plate, as plainly illustrated in the drawings.

I do not confine myself to any form of openings a''' a''' . They may be circular, oblong, or polygonal, or may consist of a series of crossed slits. I show in the drawings, in detail to Fig. 2, several forms of openings, any of which will be within the scope of my invention; but I prefer that they be made of that form and size relative to the configuration of a cross-section of the holding pin or nail p , so that when it is driven home it will bend and force portions of the plate bodily into the material of which the package is constructed.

From the foregoing description, in connection with the drawings, the nature, object, and operation of my invention will be readily understood by all familiar with analogous devices. In practice the free edges a'' of the plates a' are driven into two conjoined members of the package, and then a pin, p , is inserted through the material composing the structure, and said pin is driven through the openings in the plates, whereby the respective parts of the package are securely clamped vertically and transversely and cannot be separated without forcible rupture.

In the drawings I represent my device as connecting the bottom and cover of a quadrangular case to its sides, but do not confine myself to the employment thereof in any special location. It may be used to connect the sides to the ends, and will be found very useful as a fastener for trunks. It is preferable that the plates a' shall be wider than the ver-

tical strip a , from which they are overturned, as plainly shown in the drawings.

The object of forming the plates of larger width than the strip which connects them is that they may overlie any strip, bead, dovetail, rabbet, or other joint near the edges or corners of the structure to which the device is applied. Another object for having the plates a' of larger area than the strip a is that it is contemplated in some instances to insert the plates at corners of cases and boxes, and in so doing to leave a portion of the width of said plates outside of said structure, in which case such outwardly-extending part or parts, as a^4 , can be bent over at right angles from the plane of the plate, (see Fig. 5,) as a return, and additional strength thereby secured in a direction opposite both to the connecting-strip and the plates.

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

1. A fastener for boxes, consisting of a strip, a , having integral therewith plates a' , overturned in parallel planes at right angles

to said strip, each plate provided with an opening adapted to receive a fastening-pin, p , as and for the purposes indicated, substantially as described.

2. The combination, with the conjoining edges of the walls of a package, of plates a' , inserted therein, said plates being overturned at right angles to a strip, a , integral therewith, and secured in place by a pin, p , passing bodily into the material of the package and through openings of said plates, substantially as described.

3. A fastener for boxes, consisting of plates a' , overturned at right angles to an integral connecting-strip, a , said plates being wider than the connecting-strip, each provided with slitted openings, the edges of which are adapted to be forced downwardly by a pin, p , when driven against said slits, as and for the purposes indicated, substantially as described.

JOHN LEO LILIENTHAL.

Witnesses:

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