

(No Model.)

E. W. BALL.
PAPER FASTENER.

No. 305,040.

Patented Sept. 16, 1884.

Fig. 1.

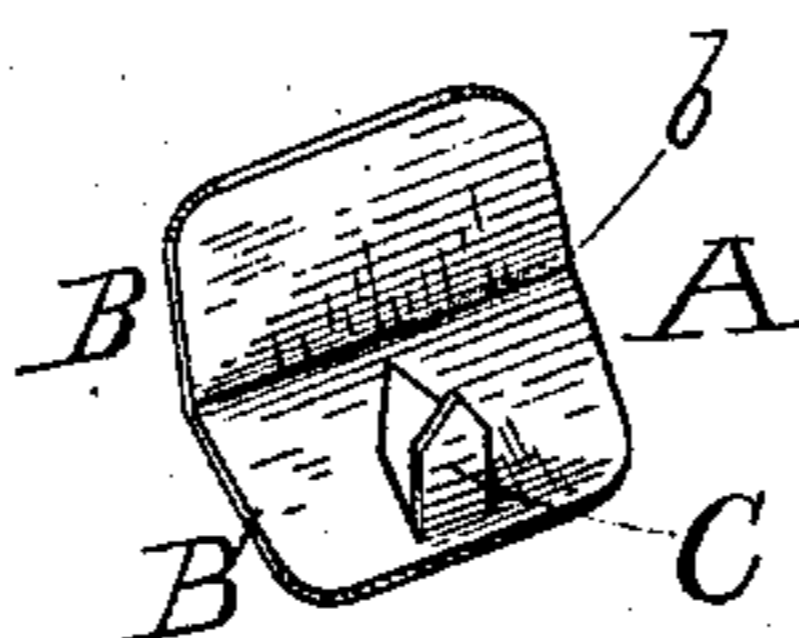


Fig. 2.

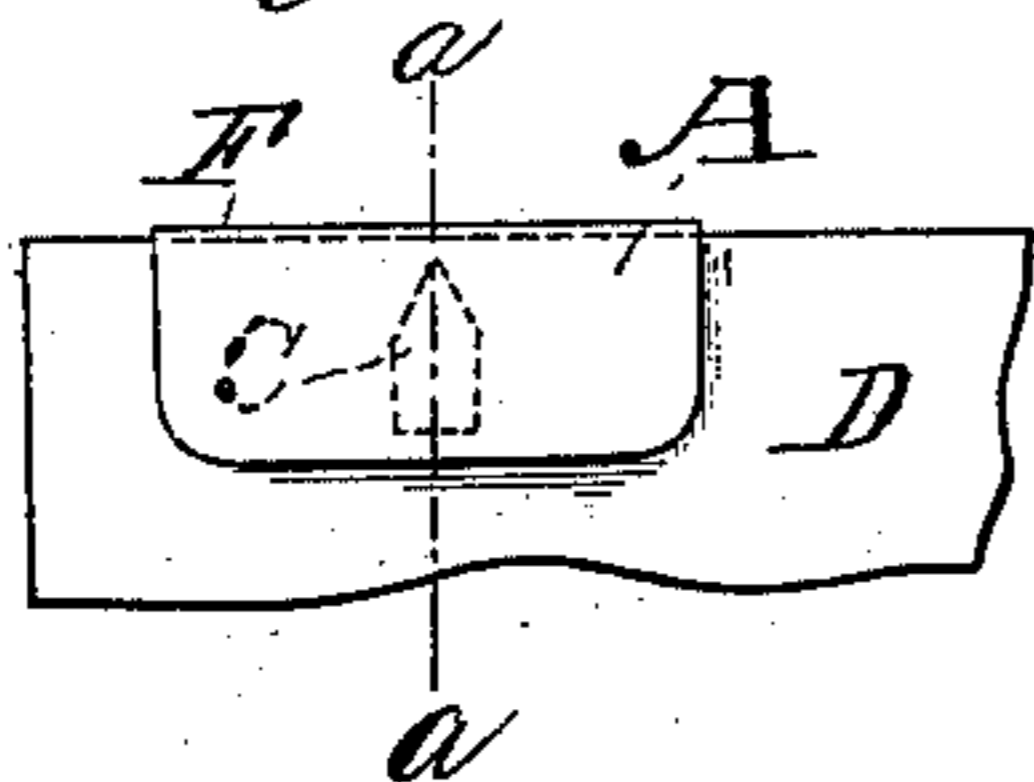


Fig. 3.

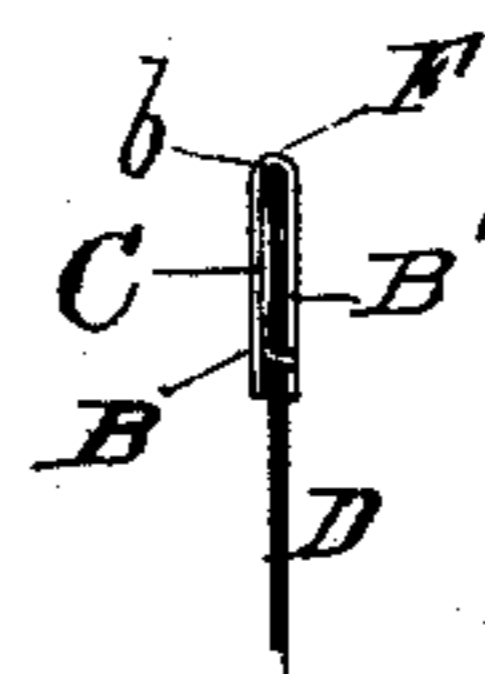


Fig. 4.

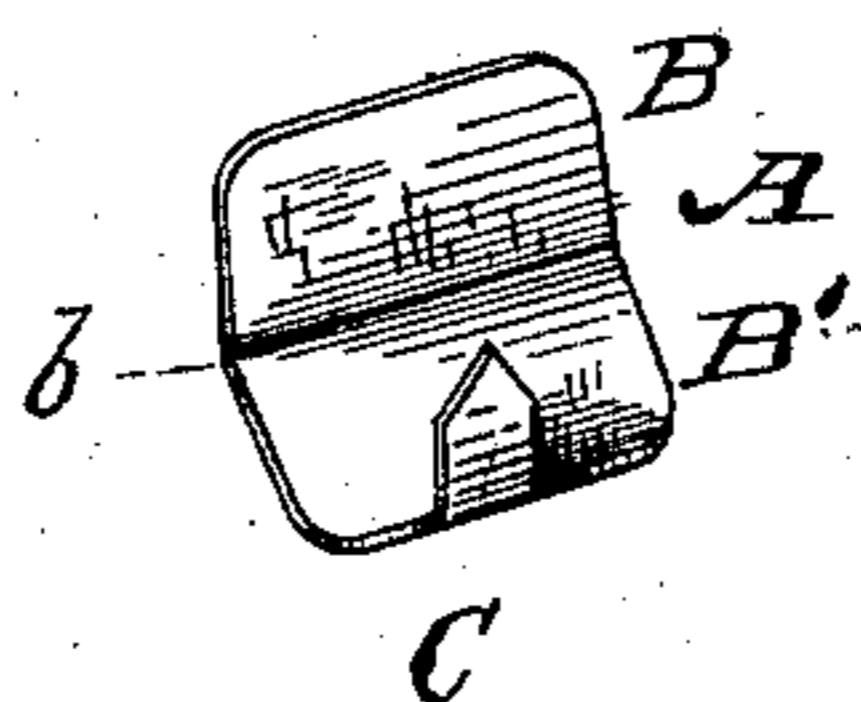
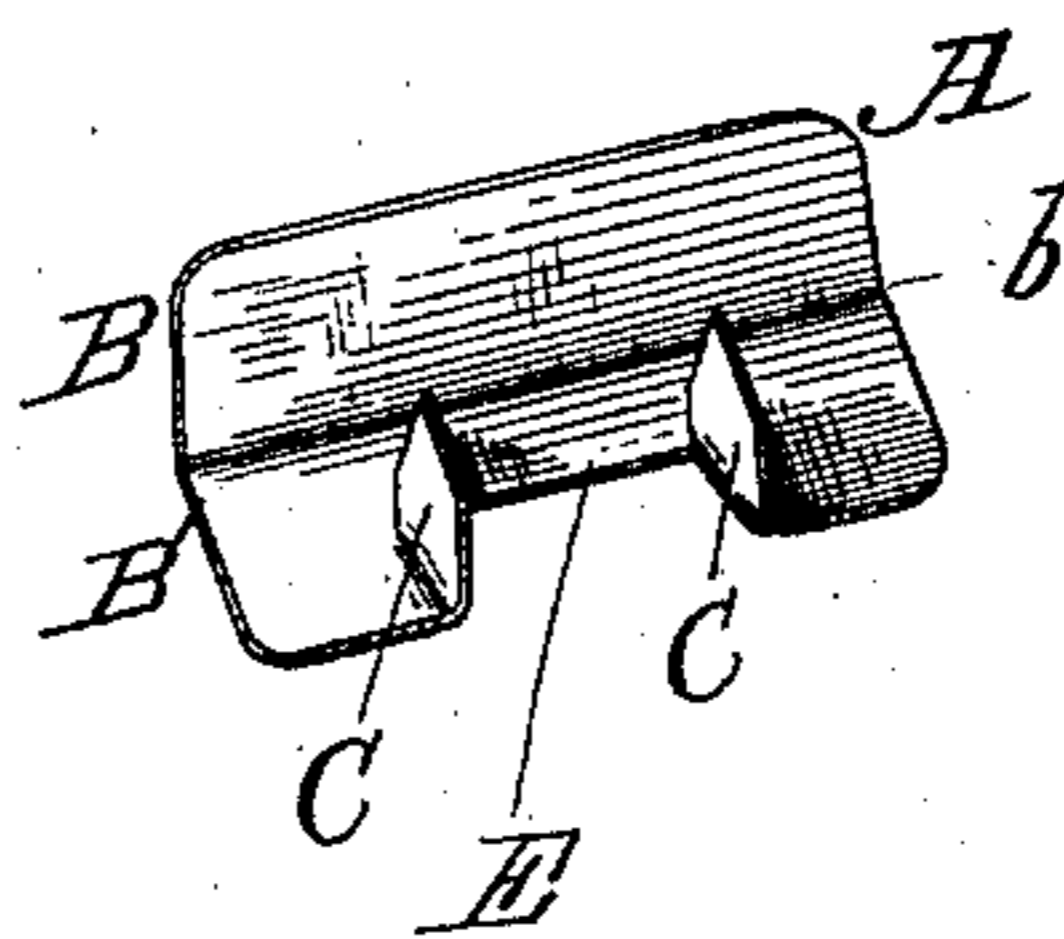


Fig. 5.



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PAPER-FASTENER.

SPECIFICATION forming part of Letters Patent No. 305,040, dated September 16, 1884.

Application filed July 18, 1884. (No model.)

To all whom it may concern:

Be it known that I, EDWARD W. BALL, of the city and county of Worcester, and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Fasteners for Paper or other Material; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a perspective view of a paper-fastener embracing my improvements. Fig. 2 represents the device shown in Fig. 1 applied to use, as will be hereinafter more fully described. Fig. 3 represents a cross-section on line *a a*, Fig. 2. Fig. 4 represents the same invention shown in Fig. 1, as will be hereinafter more fully described; and Fig. 5 represents upon an enlarged scale the same invention in a slightly-modified form.

To enable those skilled in the art to which my invention belongs to make and use the same, I will proceed to describe the invention more in detail.

As paper-fasteners have heretofore been made they have been found in practical use to be objectionable, in that in some the papers were liable to be easily torn apart. In others the papers were liable to twist out of place when only one fastening device was used. In others the fastening points or fingers were not covered, and, being exposed, were liable to tear or scratch the fingers and hands of the user, and besides could not readily be slipped into and out of files and wrappers, the unprotected points catching, scratching, and tearing the papers in the files into which the papers having such fastenings were inserted or withdrawn; and, besides, none of the fastenings referred to are of such character as to gage the edges of the papers, while at the same time being of such construction as to enable the operator to apply the same by hand without the use of tools.

To avoid these and other objections is the object of my present invention, the nature of which consists of an improved article of manufacture, consisting of a metal paper-fastener having two limbs standing at right

angles to each other, and a fastening-point formed from the metal of one of the limbs and standing at right angles thereto and parallel, or nearly so, with the other or plain limb of the fastener, as will be hereinafter more fully described.

In the drawings, A, Figs. 1, 4, and 5, represents the completed device ready for use, while in Figs. 2 and 3 the device is shown applied to fasten several sheets together.

In the manufacture of the article thin sheets of any desired metal are taken and the article stamped or cut therefrom of the desired shape and size, the fastening finger or point C being formed from the metal of the wing B' of the clamping-plate.

In Fig. 1 the fastening finger or point C is stamped out from the wing B', and stands up at a right angle thereto, and parallel, or nearly so, to the wing B. In Fig. 4 the finger or point C is formed by cutting from the blank which forms the wing B', the point C projecting up at right angles to the wing B' and parallel, or nearly so, to plain wing B. In Fig. 5 the fingers or points C are stamped or formed from the center of the wing B', leaving, however, a part, E, to be bent down with the other parts of wing B', to hold and protect the edges and one side of the papers fastened together, the points C projecting up at right angles to the wing B' and parallel, or nearly so, to the plain wing B, the same as in the two previous examples referred to. It will be observed that the wings B and B' stand at a right angle to each other before the papers are inserted, but are bent parallel when the fastening is completed.

In the use of the article in either of the forms shown in Figs. 1, 4, and 5, the operator takes the sheets to be fastened together, and after the hole or holes for the finger or fingers C has or have been made (so that when the finger or fingers have been inserted in the same, the edges of the papers will abut against the inner side, *b*, of the bend or back, A', of wings B and B') passes the finger or fingers C through the holes, and then bends such finger or fingers C down upon the papers, after which the wing B is bent down over the bent finger or fingers, thereby securely fastening the pa-

pers together and protecting the fastening-fingers from contact with the hands and fingers of the operator, and also from other papers, as before explained.

5 In the forms shown in Figs. 1 and 4, the fingers are bent inward, while in the form shown in Fig. 5 they are bent laterally. The result is, however, the same. The edges of the papers are held securely against the inner face, *b*, of the bend *F* of the device, while the ends of the finger *C* are covered and protected by the wings *B* and *B'*.

15 It will be observed that my improved fastener can be conveniently and quickly applied by hand, and that, too, without the use of tools for the purpose of completing the operation; and, further, that the fastener is of such construction that the edges of the paper are evened by the act of fastening them together. For instance, the fastener is placed upon a stand or table, with the wing *B'* resting thereon, in which position it stands quite firmly, the plain wing *B* and the fastening-finger *C* standing in vertical positions, and parallel, or nearly so, to each other. The sheets of paper to be fastened together are then taken into the hands of the operator, and their edges placed against the plain wing *B*, which evens them, and with the fingers they are then pressed down upon the point of fastening-finger *C*, which pierces and passes through the same, after which it is bent down upon the papers and the plain wing *B* bent forward and down, as fully indicated in Fig. 3 of the drawings. The plain wing *B*, when it is bent down, adjusts itself to the number of sheets fastened together, the bend being only just sufficient to receive the papers, and the device requires no hammering or pounding in order to permanently secure the

papers together. A large number of sheets 40 may thus be quickly fastened together by a single fastener, the operation being performed by a person having but little strength in the fingers. In fact, the operation can be performed by a child, two or three sheets being 45 first taken and pressed over the fastening-finger *C* until they rest upon the base-wing *B'*, after which additional sheets may be placed in position upon the fastening-finger *C* in the same manner, and the operation continued until a 50 sufficient number of sheets have been arranged together to fill the finger up to its beveled portion, after which that part is bent forward and the plain wing *B* bent forward over it, thus holding the papers together, while the sharp 55 finger-point is protected and shielded, as before explained.

The device is so effectual that even when made of thin tin it will hold a large number of sheets securely together, thus furnishing a 60 very light, tasty fastener, and one, too, suitable for fastening letter-sheets together.

Having described my improved paper-fastener, what I claim therein as new and of my invention, and desire to secure by Letters Pat- 65 ent, is—

As an improved article of manufacture, a metal paper-fastener consisting of two wings, *B* *B'*, and fastening-finger *C*, wings *B* and *B'* standing at right angles to each other, and 70 fastening-finger *C* standing at right angles to wing *B'* and parallel to plain wing *B*, substantially as and for the purposes set forth.

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