(No Model.)

H. H. BALLARD.

BINDING CLIP FOR PAPERS, &c.

No. 430,331. Patented June 17, 1890.

Fig 1.

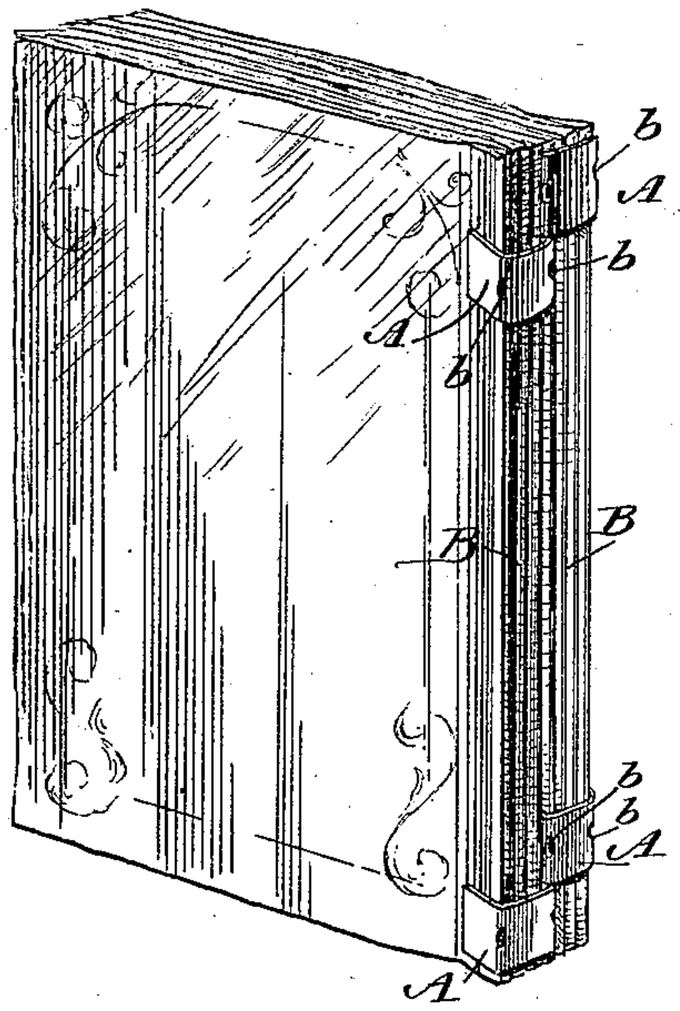


Fig 2.

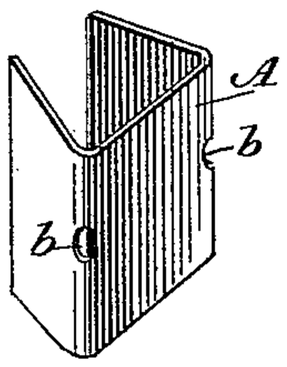


Fig 3.

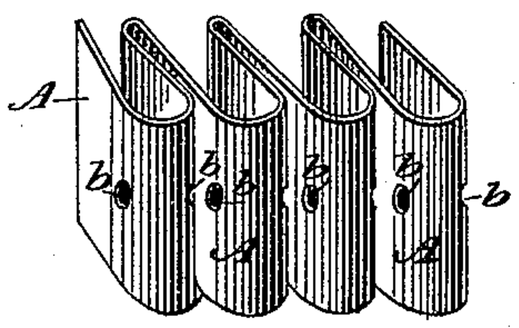


Fig 4.

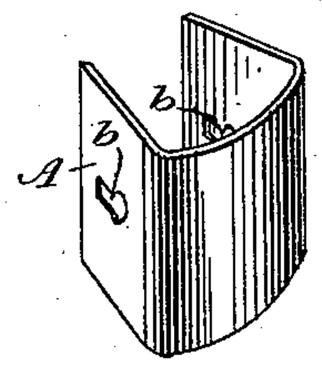


Fig 5.

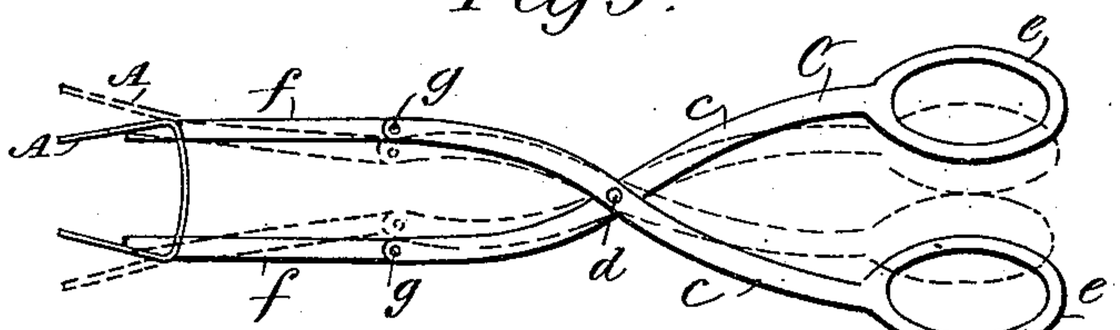
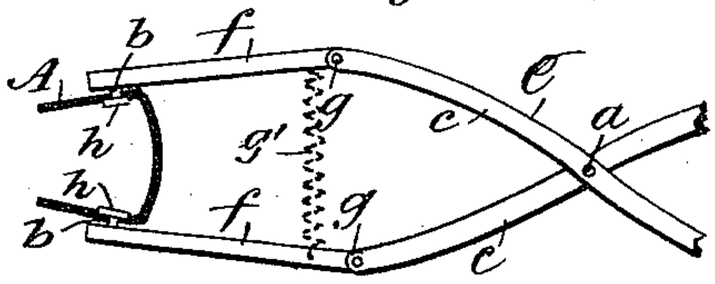


Fig 6.



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HARLAN H. BALLARD, OF PITTSFIELD, MASSACHUSETTS.

BINDING-CLIP FOR PAPERS, &c.

SPECIFICATION forming part of Letters Patent No. 430,331, dated June 17, 1890.

Application filed December 23, 1889. Serial No. 334,601. (No model.)

To all whom it may concern:

Be it known that I, HARLAN H. BALLARD, of Pittsfield, in the county of Berkshire and State of Massachusetts, have invented a new and useful Improvement in Binding-Clips for Papers, Pamphlets, and other like Articles, of which the following is a full, clear, and exact description.

This invention relates to binding-clips for holding loose papers, pamphlets, magazines, and other like articles, including temporary covers on the same. It essentially differs from ordinary spring-clips for the purpose, which are provided with fixed handles for opening them arranged to project backwardly from the clip, which handles are greatly in the way when the clips are in their place on the papers or magazines, &c., that they serve to bind; and the invention consists in a spring binding-clip having no attached handles for opening it, but which is provided with apertures adapted to receive independent handles or levers for opening it, preferably of a nippers-like construction, substantially as hereinafter described, and pointed out in the claims. By means of these clips the papers or documents held by them can be placed on a bookshelf like an ordinary book with no objectionable protrusion from their backs.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a view in perspective of a series of pamphlets or magazines with my improved clips applied thereto. Fig. 2 is a perspective view of one of the clips detached; Fig. 3, a perspective view of a series of such clips made out of a single piece of metal adapted to hold an accumulated number of pamphlets or documents; and Fig. 4, a perspective view of one of the clips, having special openings in its sides instead of in opposite margins of its back, as in the previous figures, for engagement with the clip of the separate device or devices used to open it. Fig. 5 is an end view of the clip with a nippers-like opening device applied thereto, and Fig. 6 a view showing a modified construction of said opening device as applied to a clip constructed as shown in Fig. 4.

A A indicate the binding-clips, which are made of spring steel or brass and of an approximately U shape, with their sides inclining toward each other at their mouths to firmly and compactly hold within them the pamphlets B or other papers or documents they are slipped onto or over, as shown, for instance, in Fig. 1.

These clips, which may either be made singly, as in Figs. 1, 2, and 4, for instance, or in a cluster, side by side, of a single spring-metal strip to hold an accumulation of magazines &c., as shown in Fig. 3, each require to be opened or have their sides sprung apart before they can be placed on the papers, documents, or covers they are designed to hold, and preferably also before they can be removed therefrom.

Instead of constructing said clips with fixed handles or levers projecting backward, as other binding-clips have been made, for the purpose of opening them, which handles are objectionable, as hereinbefore mentioned, I specially construct such spring-clips with holes or openings in them to provide for the engagement with them when they are required to be opened of separate levers or handles that may be removed after the clips have been opened. I thus produce a spring binding-clip readily adapted by its construction to be opened by independent mechanical means and that shall present a smooth exterior—that is, without fixed levers or handles projecting from its back.

As in every case some levers or handles are necessary to open the clips, said opening devices are in one sense a necessary accessory, and such will be found more convenient when constructed in the form of a pair of detachable and engaging nippers, substantially as shown in Figs. 5 and 6.

In Figs. 1, 2, and 3 each clip has its engaging holes *b b* made in the opposite marginal sides of its back, which is the construction also shown in Fig. 5. To open such a clip, when it is required to put it on to the papers or article it is to hold, the lever-engaging device C, as shown in Fig. 5, is of a nippers-like construction, and consists of a pair of crossing arms or members *c c*, pivoted together, as at *d*, with, if desired, finger-loops *e e* at their back ends, and having additional rods or levers *f f* pivoted to them at their for-

ward ends, as at *g g*. These additional rods or levers are projected through the holes *b b* of either of such clips, with their forward ends resting against the inner walls of the sides of the clip. In such case, on closing the back ends of the arms *c c* the jointed extensions or rods *f f* will be forced toward each other at their back or pivoted ends, and their opposite or forward end portions, which have their fulcrums on the side walls of the holes *b b*, will be forced outward against the inner walls of the sides of the clip, thereby opening the clip or springing its sides apart to receive the article to be bound within it, as shown by dotted lines in said Fig. 5.

Instead of the openings *b b*, however, being made in the marginal sides of the back of the clip, they may, as shown in Figs. 4 and 6, be made in the actual sides of the clip and preferably of a key-hole shape, as shown in Fig. 4, where the metal of the clip may be slightly reduced in thickness on the inner walls of its sides to receive a button *h* on the forward end portions of the jointed rods *f f* through the enlarged portions of said openings, and by slightly sliding the nippers-like device B in a given direction, so as to cause said buttons to lock with the sides of the clip, as shown in Fig. 6, when said nippers-like device may be operated, as before described, to open or spring the sides of the clip apart, both when putting the clip onto the pamphlet or article to be bound as well as in taking it off the same, instead of pulling it off directly with the fingers.

If found desirable, the arms *f* of the nippers may be held normally open by the interposition of a spring *g'*, as shown in dotted lines in Fig. 6 of the drawings.

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

1. A spring binding-clip for papers and the like approximately U shape, with its members inclined toward each other at its mouth to adapt it to embrace and hold papers inserted between its members, and provided with openings adapted to receive independent levers for springing its members apart or opening it, substantially as described.

2. The combination, with the spring binding-clip A U shape, with its members inclined toward each other and provided with openings, of a pinchers-like opening device adapted to enter the openings of the clip for springing its members apart, substantially as herein shown and described.

3. The within-described spring-clip-opening device C, consisting of the cross-arms *c c*, pivoted together, as at *d*, and extension rods or levers *f f*, pivoted or jointed in their rear to the forward ends of the cross-arms *c c*, essentially as set forth.

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Witnesses:
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