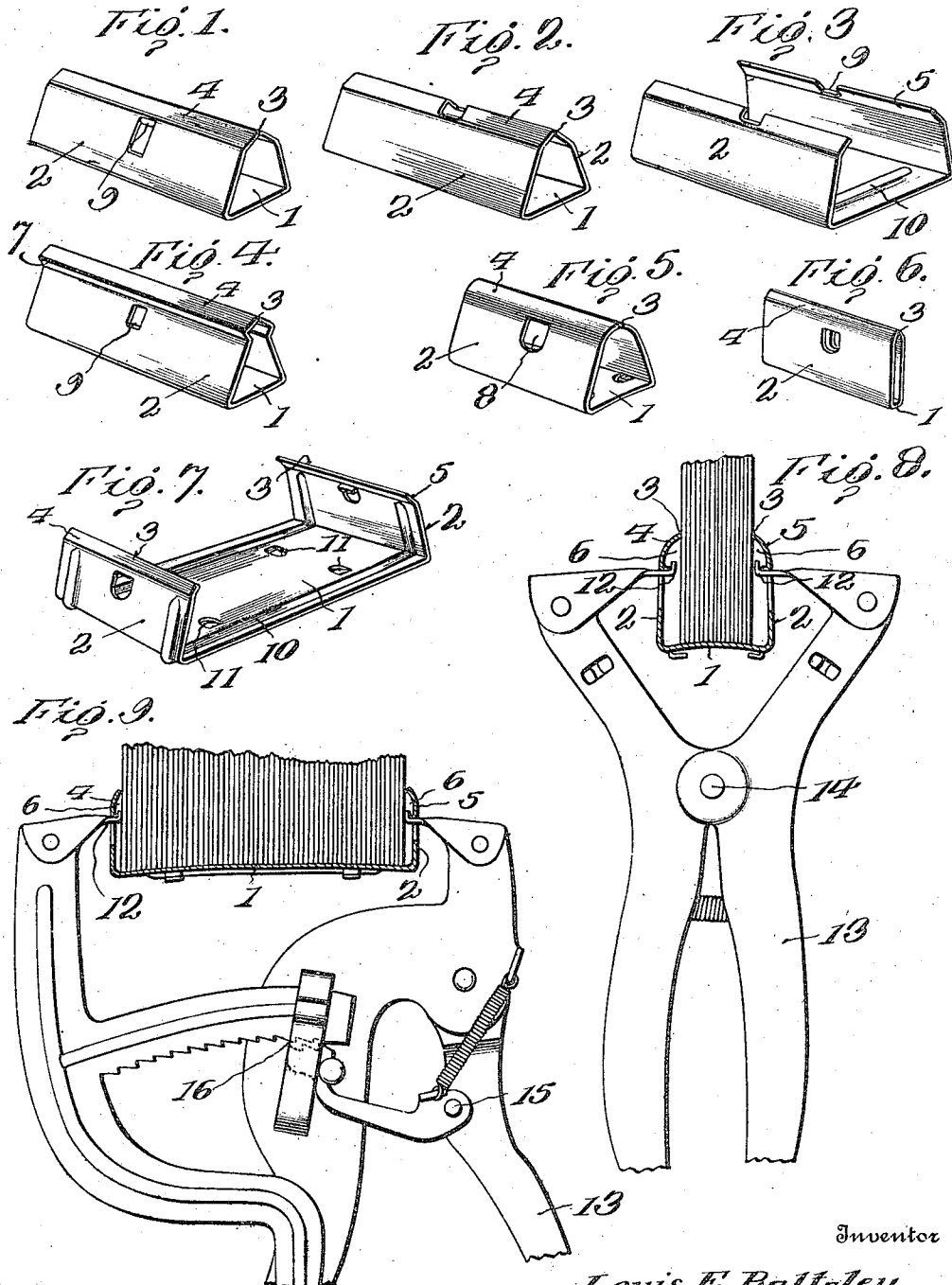


L. E. BALTZLEY.
 FILING BINDER CLIP.
 APPLICATION FILED MAY 23, 1914.

1,256,426.

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FILING BINDER-CLIP.

1,256,426.

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To all whom it may concern:

Be it known that I, LOUIS E. BALTZLEY, a citizen of the United States, residing at Weehawken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Filing Binder-Clips, of which the following is a specification.

This invention relates to filing binder clips; and it comprises a clip made of a single piece of spring metal bent substantially in the form of a triangle and having a secondary bend near its clamping ends whereby there is provided a free space contiguous to the clamping jaws into which the operating ends of spreading pliers may be inserted for the purpose of opening the clip to place it on the papers to be clipped or to remove papers therefrom. The invention also comprises a clip of a single piece of spring metal bent in the form above described and having means preferably on opposing faces with which operating portions of spreading plies or levers may contact to spread opposing sides or jaws of the clip; all as more fully hereinafter set forth and as claimed.

Filing binder clips of the type to which the present invention relates have not been practically successful in use because they are subject to many disadvantages. For instance, in one form which has not proved successful openings are provided in the large end or in the faces on the sides some distance from the extremities, with the result that when such clips are used to secure the maximum number of loose leaves it is practically impossible to insert the pliers in the holes and to secure sufficient leverage in the side of the clips. It is an object of the present invention to overcome this disadvantage and to produce a clip which always provides space for the operating portion of the plier, regardless of the number of papers upon which it is used.

Cylindrical clips with turned over edges have been proposed, but these present smooth round edges to the papers and therefore do not as securely bind the papers together as a clip which is so shaped that it presents sharp edges to the papers. Cylindrical clips are subject to the disadvantage that they cannot be made with the resiliency with which triangular or similar clips can be made and furthermore they are neces-

sarily larger than a triangular clip for a given number of loose papers.

The prime necessity of a filing binder clip is that it shall be as close as possible to the papers, taking up very little room, presenting no openings through which the papers may slip, binding the papers firmly together and affording means by which it may be conveniently opened for insertion and removal of papers.

It is a desideratum in the art in which this invention relates to obviate the disadvantages set forth in heretofore known clips and to produce a triangular or substantially triangular clip having sufficient resiliency to clamp a very few or the maximum number of papers to which the clip is adapted while at the same time to so form the clip as to be of minimum size.

This invention has also for its object the provision of a spring clip of thin spring metal suitably reinforced whereby the clip is light in weight and is very little larger as a whole than the thickness of a batch of papers to which it is attached.

In the accompanying drawings showing several forms of specific embodiments of my invention, Figures 1, 2, 3, 4, 5, 6 and 7 are perspective views of different specific forms. Figs. 8 and 9 are transverse sections of two different forms of my clip together with operating pliers therefor.

Referring to the drawing, 1 indicates the base of the triangular clip, and 2 the converging sides, the extremities of which are formed into clamping jaws 3. Near the jaws the sides are bent as shown at 4 and 5 at obtuse angles so that when papers are inserted to be bound by the clip a free plier space designated by 6 is provided between the clip sides and the papers. In one form of the invention the sides of the clip may be provided with an offset section 7 (Fig. 4) and the extremities of the sides may be bent at an obtuse angle to such offset portion.

The main sides of the clips or the bent extremities may be provided with holes 8 into which the hooked portion of pliers may be inserted for spreading the jaws of the clip to attach them to papers. These holes are preferably made contiguous to the jaws and preferably near the angle formed by bending the extremities of the clips, but they may be formed in the bent over portions and may be in the form of

slots extending inwardly from the jaws themselves as is shown in Fig. 3.

The metal of the sides or the bent over portions of the clips surrounding the holes is stamped to prevent a hooked portion or holding means 9 in the form of tangs. These tangs may be struck from the edges of the holes either near the jaws as is shown in Figs. 1, 7, 8 and 9 or they may be struck from the edges of the holes toward the back of the clip as is shown in Figs. 2, 3, 4 and 5. In the first instance, pliers such as are shown in Figs. 8 and 9 are used. In the latter instance similar pliers having reversed hook portions are necessary. The backs and if necessary the sides of the clips are reinforced in any suitable manner but preferably this is done by means of a plurality of reinforced ribs 10 struck from the metal itself during the forming operation.

The pliers shown in Figs. 8 and 9 are not claimed in this invention as they form the subject of an application to be subsequently filed.

The pliers comprise hook portions 12, operating handles 13 and pivots 14 (Fig. 8) and 15—16 (Fig. 9).

The backs of the clips may be provided with tongues 11 for the insertion of index cards or the like.

The operation of the clips is obvious from the above description. Pliers such as are

shown in Figs. 8 and 9 having the hook portions 12 are inserted in the holes of the sides of the clips with the hooked portions engaging the tangs 9 and such pliers are operated to spread the jaws of the clips while the batch of papers to be clipped is inserted in place. The pliers are then released and are withdrawn from the clips and the papers. The pliers may be easily withdrawn because they are not subject to any friction between the clip sides and the papers, and for the same reason the hooked portion of the pliers may be easily inserted when it is desired to remove a clip from a batch of papers.

What I claim is:—

A filing binder clip made of spring metal having a base and two converging sides, the extremities of the sides being bent to form gripping jaws and to provide free plier spaces inside the clip, each of said sides having an opening near said jaws and an inwardly projecting hook formed at the jaw side of said opening.

In testimony whereof, I affix my signature in the presence of two subscribing witnesses.

LOUIS E. BALTZLEY.

Witnesses:

F. B. GRINDELL,
S. SCHUMAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."