E. BALTZLEY.

COMBINED FILING BINDER AND BINDING CLIP.

APPLICATION FILED OCT. 21, 1914.

1,283,037. Patented Oct. 29, 1918.

Fig. 1.

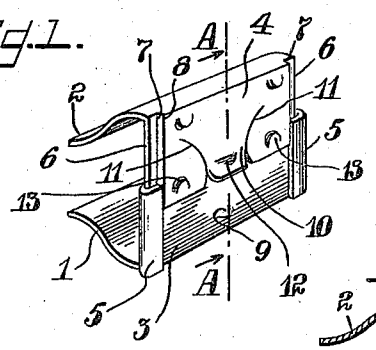


Fig. 2.

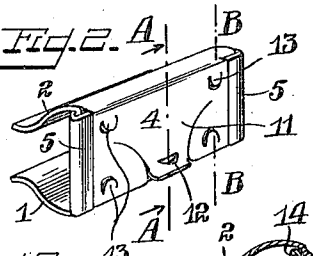


Fig. 3.

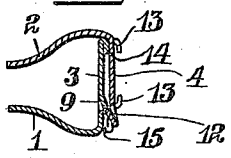


Fig. 4.

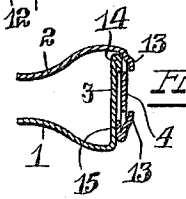


Fig. 5.

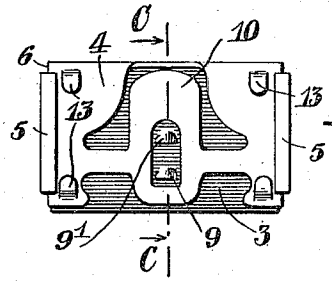


Fig. 6.

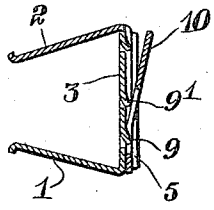


Fig. 7.

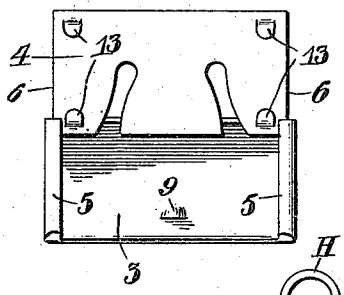


Fig. 8.

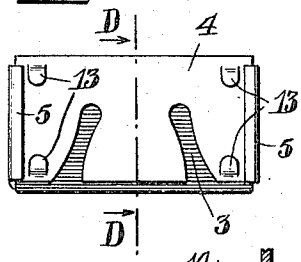


Fig. 9.

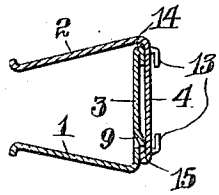


Fig. 10.

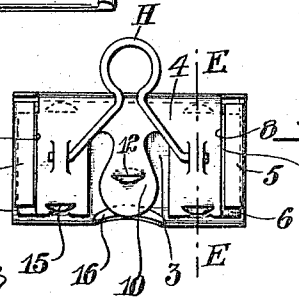


Fig. 11.

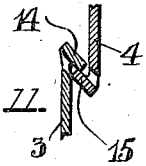
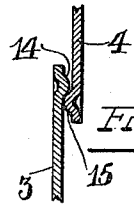


Fig. 12.



WITNESSES:

J. D. Mitchell

R. Richardson

INVENTOR

Edwin Baltzley

UNITED STATES PATENT OFFICE.

EDWIN BALTZLEY, OF WEEHAWKEN, NEW JERSEY, ASSIGNOR TO LOUIS E. BALTZLEY, TRUSTEE, OF WEEHAWKEN, NEW JERSEY.

COMBINED FILING-BINDER AND BINDING-CLIP.

1,283,037. Specification of Letters Patent. Patented Oct. 29, 1918.

Application filed October 21, 1914. Serial No. 867,922.

To all whom it may concern:

Be it known that I, EDWIN BALTZLEY, a citizen of the United States, and a resident of Weehawken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Combined Filing-Binders and Binding-Clips, of which the following is a specification.

This invention relates to combined filing binders and binding clips and comprises a clip advantageously made of resilient material having clamping members arranged to be adjusted apart while free from spring stress and secured in such position under spring stress to bind papers and the like together; and it further comprises opposed clamping members having means, preferably the back, arranged in slidable relation and suitable means on the backs for securing the members in such position that they may be preliminarily adjusted a certain distance apart, placed under spring stress and subsequently latched in such position whereby the resiliency of the material may be relied upon to hold loose papers and the like between the clamping members; all as more fully hereinafter set forth and as claimed.

Filing binders comprising two opposing resilient jaw members arranged for clamping over the edge of loose leaves by means of extraneous tools have been used to some extent. With such filing binders however it is necessary to pry the jaws apart against the resiliency of the metal when inserting the papers to be bound between the jaws and then allow such jaws to spring into place to secure the papers. Binding clips having attached or detachable operating levers and manipulated in the same manner as filing binders have been known and are very advantageous devices for office and other uses. Each such filing binder and binder clip however is adapted for use with limited sizes or batches of papers to be bound, and therefore several different sizes are usually necessary to meet requirements of office filing systems. When such devices are repeatedly used upon large batches of paper to their extreme limits, the inherent resiliency of the metal is gradually lost so that the same devices at times become less useful for smaller batches of paper.

It is a desideratum in the art to which this invention relates to provide a universal file binder and binding clip, *i. e.*, one which may be used upon small or large batches while at the same time maintaining its effective clamping strength; and one which is inexpensive in production and simple in operation.

My invention provides such a universal clip. I provide opposing clamping jaws preferably of spring metal, having means, preferably the backs of such members, arranged in slidable relation so that the clamping members or jaws may be brought into juxtaposition or spread apart as the exigencies of any particular use may require. The slidable means are provided with devices which cause the sliding members to be removably but firmly secured against sliding movement, or in other words to cause them to become "set" at predetermined positions of the clamping members. Advantageously the clip as a whole is substantially triangular in cross section, the clamping jaws converging and the backs of such jaws are arranged preferably at acute angles to the clamping members. The backs are arranged to slide relative to each other preferably by means of integral sliding members in the form of tongue-and-groove arrangement or the like. Each of the backs is provided with a catch or latch member arranged to coöperate, preferably automatically, to prevent relative sliding movement of backs when the catch of each back is brought into juxtaposition with the catch of the other back. Two or more sets of these catches may be arranged on the backs in order that the clamping jaws may be "set" to a plurality of different positions. The clamping jaws are passed over the edge of papers to be bound together and are placed under necessary spring stress, the backs sliding relative to each other until catches on them snap into position. There are many different forms in which my invention may be made, but the general construction of two opposing gripping jaws adapted to be slidably adjusted laterally with respect to each other and arranged to be automatically placed under spring stress to bind loose leaves is advantageously present in all such forms, and I consider my invention broad enough in its application to cover devices made accordingly, the materials, size, proportions, and specific construction being immaterial as far as the broad aspects of the invention are concerned.

In the accompanying drawings several forms of a specific embodiment of my invention are shown and in the several views similar reference numerals designate corresponding parts.

Figure 1 is a perspective of one form of my combined filing binder and binding clip;

Fig. 2 is a similar view showing the two sides adjusted with the gripping jaws in proximity to each other;

Fig. 3 is a section along line A—A of Fig. 2;

Fig. 4 is a section along line B—B of Fig. 2;

Fig. 5 is a rear elevation of another form of my combined filing binder and binding clip;

Fig. 6 is a transverse section along line C—C of Fig. 5;

Fig. 7 is a rear elevation of still another form of my invention showing the two separable parts separated preparatory to inserting papers between the jaws;

Fig. 8 is a similar view of the same form as that shown in Fig. 7 with the separable sides secured or locked together;

Fig. 9 is a transverse section along line D—D of Fig. 8;

Fig. 10 is a rear elevation of another modification of my invention showing a portion of one of the sides cut away so as to allow the thumb free access to the latch. It also shows a hanger journaled in the top piece of the clip by means of which articles clamped by the clip may be hung up, and also a different construction of stop to prevent the two parts of the clip from becoming separated;

Fig. 11 is a cross section along the line E—E of Fig. 10 showing the construction of the stops; and

Fig. 12 is a view similar to Fig. 11 showing another form of stops.

In the drawings, reference numeral 1 designates the lower clamping member or what may be termed gripping jaw, and 2 designates the upper jaw. 3 and 4 are the backs of jaws 1 and 2 respectively. Either the one or the other of the backs is provided with grooves adapted to receive tongues on the other back. In Fig. 1, I have shown the back of lower member 1 provided with turned-over edges 5 affording slots in which the edges 6 of the back of the corresponding member may operate. These edges 6 may be made by stamping the member 4 to form shoulders 7 and sides 8 which are guided by the edges and sides of the turned-over portions 5 of the lower member. One of such backs, here shown as the inner one, has a catch 9 preferably struck out from the body of the metal, as this is one of the cheapest ways in which it may be made, and the other back, here shown as the outer one, is provided with a corresponding spring tongue 10 adapted to engage the catch 9 when brought into engagement therewith. This tongue 10 is made in the form shown in Fig. 1 by cutting or slitting a portion of the body of the back shown at 11 so that it may be readily released from engagement with the catch 9. 12 is a lip struck from the surface of this tongue coöperating with the catch 9, the two forming a spring latch. If deemed advisable, I may provide tangs 13 for the reception and retention of indexing cards or the like to be used when the device of my invention is to be attached for permanent records. When the parts are assembled they may be secured adjustably together through the turned-over edges or stop 14 of the lower member and 15 of the upper member. It will thus be seen that the two sides cannot be easily disengaged although they may be readily separated to the extent of the length of their backs.

There are several advantages in this construction over the construction shown in clips heretofore known because the sides may be tempered before they are assembled, or, in other words, they may be tempered while in their natural state, that is, not under spring stress. In the construction of filing binders and binding clips it is necessary that they be struck into their shapes and then be tempered, which in itself is a considerable item of expense in the manufacture, because it is a difficult matter to accurately temper the metal in such form. In actual manufacture quite a percentage of old filing binders and binding clips are "thrown out" because it has been impossible to temper them correctly. In both the binder and filing binder clips the opening levers may be pressed so hard as to expand the jaws of the clip to the breaking strain. And in fact many clips are so broken, which is a loss and disadvantage. In the clips which is the subject of this application no such excess of expansion is possible and therefore there is no consequent loss.

In Fig. 5 I have shown my invention in a slightly different form from the preceding figures. The tongue 10 in this instance comprises a lever which normally stands out at its inner end, so that in order to unlatch it from the catch 9 it is necessary to press it down, whereas in order to unlatch the other forms the outer or latch end of the tongue must be lifted. In this figure I also show two catches 9 and 9′ which serve to accommodate the clip to a greater range of thickness of the papers, the higher one 9′ taking the greater thickness. I do not limit myself to two such catches, as it will readily be seen that a greater number can be employed. Nor do I limit myself to the plurality of catches to this form of the invention, as it may as readily be applied to all the other forms.

In Figs. 7, 8 and 9 I have shown still another form of backs of the clips, the tongues 10 in this instance being turned over at its under side and one of the backs being provided with the catch 9. In this form the turned over portion 15 not only serves as a stop to coöperate with the catch 9 but also serves as a stop to coöperate with the turned over edge 14 of the other portion of the clip.

In Figs. 10 and 11 I show a modification of the stops 14 and 15. Instead of turning over the edges as shown in Figs. 3 and 4 the metal is simply offset to form the stops. This is a simpler and cheaper process than that of turning over the edges. In Fig. 12 is shown another modification of the stop which differs from that shown in Figs. 10 and 11 in that the stop is not punched through the metal.

These clips are useful for many purposes, some of which require means by which they can be readily suspended. To this end the hanger H is provided and journaled in the back of the clip as shown in Fig. 10. This hanger can also be used as an index retainer.

In all the forms of the invention the tongue 10 is shown as not extending beyond the edge of the clip sides. This is the better construction for if it did extend beyond the sides of the clip it would not only scratch any article or desk on which the clips were laid, but might tend to accidentally release the latch and spill the papers from the clips. It is advantageous to make the tongue more accessible to the thumb or fingers in the act of releasing the latch than in the form shown in Figs. 1, 2, 7 and 8. To meet this requirement the metal of the side of the clip immediately under the end of the tongue is cut away leaving the opening 16 which amply provides for free access to the tongue.

In operating, the two sides of the clip are separated to the fullest extent permitted by the stops 14 and 15, the loose leaf papers inserted between them, and then the two sides are pressed together by the thumb and fingers until they are placed under considerable spring stress; the latch snaps and locks them together under stress. It is obvious that the back parts may be made any desirable length to make clips of different capacity. The jaws of clips having a capacity of $\frac{5}{8}$ of an inch and under will close together so as to hold a single sheet of paper. In all sizes above $\frac{5}{8}$ of an inch as now made the jaws do not touch although they can be made to do so by making the sides longer or deeper.

What I claim is:—

1. A paper binding clip composed of two converging clamping sides ending in clamping jaws, with back pieces on each side, one of said back pieces having ways formed therein at its ends, and the other back piece sliding in said ways, a spring member on the last named back piece, and coöperating latch parts on said spring member and the first named back piece respectively to automatically lock when the two said back pieces are pushed together, and which may be unlocked by upward pressure on said spring members.

2. A paper binding clip composed of two spring metal converging sides, ending in clamping jaws, with a back piece integral with each side, one of said back pieces being slidable on, and its ends within ways on the other, a spring member on the first named back piece and pressing resiliently toward the last named back piece, and coöperating latch parts on the said spring member and the second named back piece respectively to automatically lock when pushed together, and which may be unlocked by pressing them apart, and the said last named back piece being cut away under the end of said spring member to facilitate thumb access thereto to release it by upward pressure.

3. A paper binding clip composed of two spring metal paper clamping sides, a back part integral with each side, said back parts being slidable one on the other, stops to prevent the backs being separated, means whereby the two sides may automatically be locked in binding position by pressing the same together with bound papers interposed between the sides, one of the sides and its back being cut away in the neighborhood of said locking means, and means exposed at said cut away part for manually releasing said locking means.

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

EDWIN BALTZLEY.

Witnesses:

ELLA F. BRAMAN,

FLORENCE J. GALLIKSEN.