

No. 727,347.

PATENTED MAY 5, 1903.

C. GLOVER.
PAPER CLIP.

APPLICATION FILED NOV. 3, 1902.

NO MODEL.

Fig. 1.

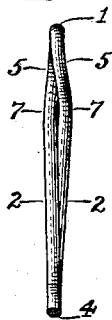


Fig. 2.

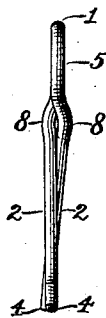


Fig. 3.

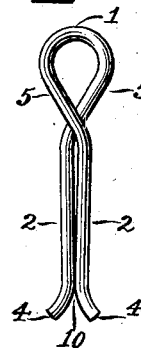


Fig. 4.

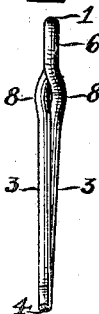


Fig. 5.

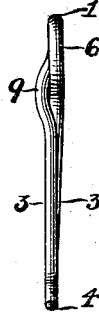


Fig. 6.

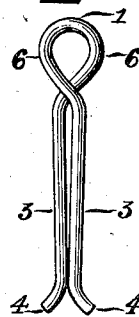


Fig. 7.

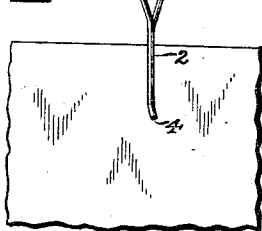
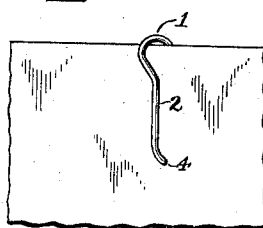


Fig. 8.



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PAPER-CLIP.

SPECIFICATION forming part of Letters Patent No. 727,347, dated May 5, 1903.

Application filed November 3, 1902. Serial No. 129,816. (No model.)

To all whom it may concern:

Be it known that I, CHARLES GLOVER, a citizen of the United States, residing at New Britain, in the county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Paper-Clips, of which the following is a full, clear, and exact description.

My invention relates to improvements in clips or fasteners, particularly to a construction adapted to be used for holding temporarily together loose sheets or pages of papers and the like.

The object of my invention is to provide a clip which may be cheaply manufactured, which may be readily used, which will act effectively, and which when in use will tend as little as possible to obscure any printed matter which may be located at that portion of the papers on which the clip would naturally be attached. The clip is designed to be particularly efficient in these particulars and will be found to possess advantages in other directions which will be apparent to those acquainted with such devices.

The invention consists in forming a clip of spring-wire or similar material so that there will be a loop portion and extending therefrom a pair of substantially parallel shanks turned outwardly at or near the lower ends to form an entrance-passage. The particular construction is shown in the accompanying drawings.

Figure 1 is a side view of a clip embodying my invention. Fig. 2 is a side view of another embodiment of my invention. Fig. 3 is a front view of a clip embodying my invention and which is substantially the same as both forms shown in Figs. 1 and 2. Fig. 4 is a side view of another embodiment of my invention. Fig. 5 is a side view of still another form, while Fig. 6 is a front view of a clip substantially as either clip 4 or 5 would appear. Figs. 1 to 6 are on a rather enlarged scale. Fig. 7 is a view of a clip partially adjusted toward its operative position. Fig. 8 is a view showing the clip in its final holding position.

In all the figures I have designated the top portion or crown of the loop by the numeral 1. The two bars or main members in Figs. 1, 2, and 3 are designated by the numerals 2 2. The corresponding bars or main mem-

bers, Figs. 4, 5, and 6, are designated by the numeral 3. The outer ends of the clip are shown at 4 4 in each form. In Figs. 1, 2, and 3 the sides of the loop portion of the clip are shown at 5 5. The corresponding portions of the loops in Figs. 4, 5, and 6 are shown as 6 6.

It will be noted that the bars or main portions of the clips cross each other at the throat of the loop when viewed from the front and extend substantially equidistant from each other from that point to near the ends, so that there are two gripping-bars which are nearly parallel. This is the preferable construction. The bars may be said to be crossed substantially in the plane of the loop and to have their ends bent back toward the same plane. This latter qualification is preferable, but is not essential to all the advantages of my invention.

In Fig. 1 the sides of the loop lie in slightly-diverging planes and the bars cross at 7 7. The general effect, therefore, of this form is that the wire is twisted from its normal plane at the crown 1, and the two sides of the loop are gradually bent outward to the point 7 of crossing and from there gradually bend back again until the two ends 4 4 approach a common plane.

In Fig. 2 the two sides of the loop lie substantially in the same plane and do not diverge until they almost reach 8 8. This point of crossing is substantially at the same distance from the crown of the clip as in the form shown in Fig. 1; but a more decided bend is made in the members at this point of crossing. The effect is to give a much closer and tighter grip upon the papers which it is desired to secure together by this form than with the one shown in Fig. 1. Since the side members of the two forms shown in Figs. 1 and 2 are crossed at substantially the same distance from the eye, Fig. 3 may well represent the front view of either of these two forms. The outer ends 4 4 diverge considerably for the purpose of affording an easy entrance to the paper when the clip is being put into operative position.

In Figs. 4, 5, and 6 I have shown a clip in which the point of crossing is much nearer to the crown of the loop. The same general effect in the use of these clips is attained as in the form shown in Figs. 1, 2, and 3. There

is in the former greater gripping tendency at the point of crossing than in the other forms; but the latter are particularly adapted to hold papers when the edges of all of the sheets are not in line. This will be apparent, since the grip portion of the throat is farther removed from the crown of the loop. The form in Fig. 4 is similar to that of Fig. 2, in which the sides of the loop 6 are in substantially the same plane and the bend 8 8 is rather markedly definite. Obviously in Figs. 4, 5, and 6 since the loop is smaller than the loop shown in Figs. 1, 2, and 3 and the clips are shown of the same length the bar portions 3 3 will be longer.

In Fig. 5 I have shown one member of the clip as lying in substantially the same plane from the crown of the loop 1 to the end 4, while the other member diverges from that plane across its opposite member and again approaches the original plane. Since the point at which the crossing occurs in Figs. 4 and 5 is substantially the same distance from the crown 1, the view shown in Fig. 6 may well represent either the clip of Fig. 4 or Fig. 5.

It is preferred that the clip be formed of spring-wire and substantially in the general form shown.

It will be noted that the side members of the clips have a particularly strong gripping action at the throat or point of crossing and also at a point near the end, as at 10. Of course when the clip is in use the end portions 4 4 tend to separate to a greater degree than the throat portion.

The operation or use of this device will be apparent upon an inspection of the drawings. The clip may be simply taken between the fingers, and since the ends 4 4 are spaced apart it may be slid onto the edge of the sheets which it is desired to temporarily secure and pushed directly down as far as desired. It is preferred that the clip shall be pressed down to the amount shown in Fig. 8, at which time the full gripping and holding effect of the clip will be manifest. As the clip is forced down into position it will gradually revolve about an axis passing substantially through the center of the loop. The reason for this will be apparent upon inspection of any of the figures, in which it will be seen that when a body having a substantially flat plane is passed between the ends of the clip 4 4 or the clip is forced over the edge of such a body one or the other

tends to move in order that the plane of least resistance may be encountered. In this manner when the clip is finally in position it is revolved through a relative angle of ninety degrees from its original position. In the form shown in Fig. 1 this turning of the clip is gradual from the beginning until after it passes the throat portion. In the other forms the turning is more abrupt as the clip passes the throat, since the curvature of the side members is more pronounced.

What I claim is—

1. A clip formed of spring-wire having a loop portion, long side members substantially equidistant from each other through part of their length and crossing each other in the plane of the loop, and being turned outwardly at the ends to form an entrance-passage.

2. A clip of the character described having a loop portion, main side portions substantially equidistant from each other through part of their length and end portions turned outwardly, said side portions being crossed.

3. A clip formed of spring-wire having a loop portion, and main side portions, the said side portions being crossed and substantially equidistant from each other through part of their length, the tensional qualities of the wire being so disposed that the gripping action will be effected by the clip when in use throughout substantially the entire length of the main side portions as well as at the point of crossing or throat.

4. A device of the character described formed of wire and having a loop portion, the side members being crossed at the throat, side bar portions substantially equidistant from each other and having the ends curved outwardly, the members being curved convexly toward each other just below the throat or point of crossing.

5. A clip formed of wire and having a loop portion the sides of which cross at the throat and are extended to form main holding portions substantially equidistant from each other through part of their lengths, the entrance to which is widened toward the mouth and which are so disposed that the clip will turn on its axis relatively to the material to be held when being applied thereto.

Signed at New Britain, Connecticut, this 25th day of October, 1902.

CHARLES GLOVER.

Witnesses:

MARGARET SANDERSON,
M. A. NORTH.