

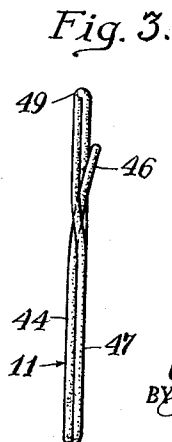
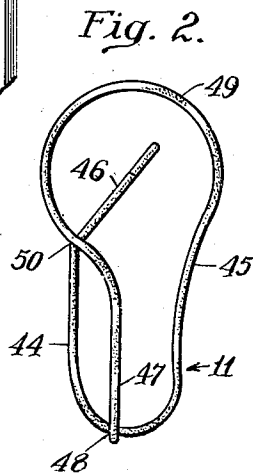
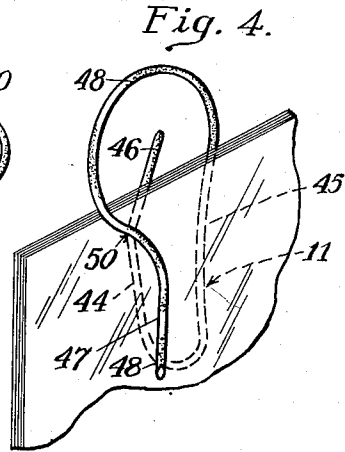
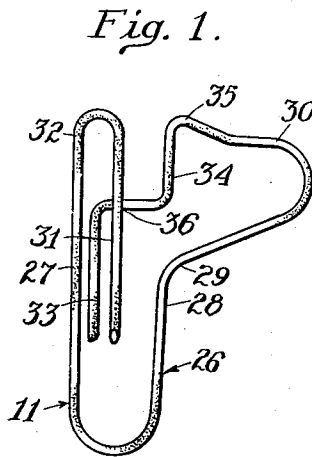
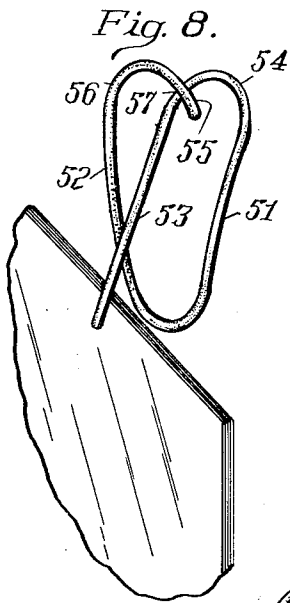
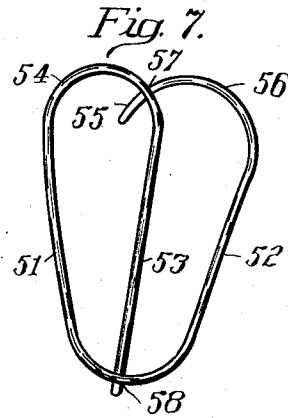
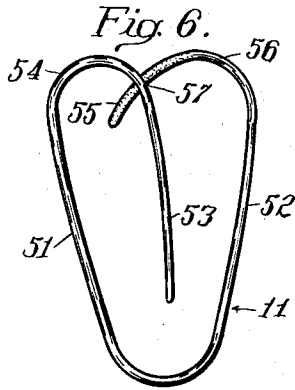
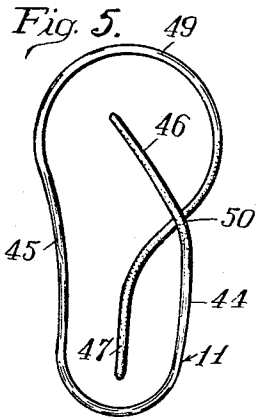
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PAPER CLIPS

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PAPER CLIPS

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6 Claims. (Cl. 24-66)

The present invention relates to clips for holding together sheet material, more particularly to clips in which the pressure of the clamping legs is not diminished as more papers are inserted in the clip.

The usual paper clip is formed from a strip of resilient stock and comprises two clamping portions. When such a clip is in position no portion of the clip extends beyond the edges of the paper secured. Consequently, it is difficult at times to remove such a clip. In addition, when a relatively large number of sheets of paper is inserted between the clamping portions of such a clip, the pressure exerted by the clamping portions is reduced. Consequently, the clip either slips from the paper or intermediate sheets of paper work free.

The paper clips heretofore used have an additional disadvantage in that it is necessary to pry under one of the clamping portions in order to remove such a clip from the papers which it is holding together. Furthermore, it is also necessary to pry these clamping components apart when it is desired to place the clip over sheet material.

The present invention discloses a paper clip which eliminates the disadvantages as discussed above. The present paper clip is made from a single strip of resilient stock bent back upon itself. The ends of this stock are bent in a manner so as to form clamping legs between which sheets of paper may be inserted. This paper clip is so constructed that by exerting pressure in opposite directions usually on the loop connections, it is possible to spread open the clamping legs with very little effort. When this pressure is exerted on the clip the clamping legs are caused to pivot about each other. The manner in which a strip of resilient material is bent in order to obtain such a clip constitutes a considerable advance over paper clips heretofore used.

In accordance with this invention a clip is provided that is formed from a single strip of resilient stock to establish a depending loop and at least one and preferably two clamping legs and connections between the clamping legs and the arms of the loop. Consequently gripping action is obtained in the case of the clip having two clamping legs by each of the legs clamping the sheet material against the depending loop, said depending loop being inserted between the sheets of paper and the clamping legs being positioned on the outside of these sheets. In the case of the clip having one clamping leg gripping action is obtained by inserting the sheets of paper between the depending loop and the clamping leg. Each clamping leg has a slant cut across its end so that these clips do not pick up any stray papers.

The object of this invention is to provide an improved paper clip made of one continuous piece of spring wire.

Another object is to provide a paper clip having a portion protruding above the material clipped together in order to facilitate the removal of the clip.

An additional object is to provide a shaped paper clip in the form of an expansion spring until pressure is exerted upon certain places thereon which then makes the clip a compression spring.

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A further object is to provide a paper clip having clamping legs which are spread apart when pressure is exerted on opposite sides of the clip.

A still further object is to provide a paper clip capable of expansion to permit more papers to be inserted therein without reducing the pressure of the clamping legs.

The invention will be better understood and additional objects will become apparent when reference is made to the following description and accompanying drawings in which:

Figure 1 is a front elevational view of the paper clip of this invention;

Figure 2 is a front elevational view of a modification of the clip illustrated in Figure 1;

Figure 3 is a side elevational view of the invention as illustrated in Figure 2;

Figure 4 is a perspective drawing showing the manner in which the clip illustrated in Figures 2 and 3 is used;

Figures 5, 6, and 7 are front elevational views of additional modifications of the clip illustrated in Figure 1; and

Figure 8 is a perspective drawing illustrating the manner in which the paper clips shown in Figures 5, 6, and 7 are used.

Figure 1 shows a modification of the invention indicated generally as 26. The clip 26 has a reverse bend portion 11 having end portions constituting a shorter leg 27 and a longer leg 28. The longer leg 28 is bent at 29 to form a substantially U-shaped grip 30, which is at approximately right angles to the reverse bend portion 11. The shorter leg 27 extends in the direction of the reverse bend portion 11 and is disposed between the end portions and is substantially parallel to the shorter leg 27. The leg 27 has a loop or reverse bend 32 so as to be positioned between the end portions. The leg 28 has bends 34 and 35 and crosses over and contacts the first leg at the point 36.

Figure 2 shows an additional embodiment of this invention wherein depending loop or reverse bend portion 11 has a shorter leg 44 and a longer leg 45 substantially parallel with each other. The leg 44 bends inwardly at 46 as illustrated in Figure 2. The leg 45 is disposed between the end portions forming the loop 11 and crosses over and contacts the leg 44 at the point 50 to close the main portion 44, 45, 49; namely the strip extending to the cross over 50. There is a loop connection or bend 49 in the second leg 45. The leg 45 after the bend 49 extends in the direction of the reverse bend portion 11 and crosses the bend 11 at 50. In this embodiment of the invention the sheet material is clamped between the leg portion 47 and reverse bend portion 11 as shown in Figure 4.

It may be desirable in some instances to make the embodiment of the invention as shown in Figure 2 with the second leg 47 not intersecting the closed end of the depending loop 11. A clip employing this structure is illustrated in Figure 4.

Figure 6 shows an embodiment of the invention wherein depending loop 11 has end portions 51 and 52 of substantially equal length which constitute legs 53 and 55, respectively. A bend 54 connects the first leg 53 with the end portion 51. A second leg 55 which is much shorter in length than the first leg 53 is disposed between the end portion 51 and first leg 53. A bend 56 connects the second leg 55 with the arm 52 so as to cross over the first leg 53 at the point 57 to close the strip to form a main portion 51, 52, 54, and 56.

Figure 7 illustrates a clip which is similar to that shown in Figure 6 except that the first leg 53 is extended so as to cross over the closed end of the depending loop 11 at the point 58.

To use the clips illustrated in Figures 6 and 7 pressure

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is applied on opposite sides of the clip thereby resulting in the legs pivoting about each other at the point 57 and thereby causing the leg 53 to open away from the depending loop 11.

It will be understood that various modifications and arrangements in structure could be made without departing from the spirit of my invention and, accordingly, I desire to comprehend such modifications and substitutions of equivalents as may be considered to come within the scope of the appended claims.

I claim:

1. A clip for sheet material comprising a single continuous strip of resilient stock having a reverse bend portion, end portions of said strip constituting legs, at least one of said legs extending in the direction of said reverse bend and between said end portions, said other leg crossing said one leg only and contacting said one leg at the point of crossing over whereby the resiliency of the strip permits said legs to pivot about each other when pressure is applied to said clip in opposite directions substantially perpendicular to the plane of the reverse bend and sheet material is adapted to be retained between said leg extending in the direction of said reverse bend and said reverse bend.

2. A clip for sheet material comprising a single strip of resilient stock having a first reverse bend portion, end portions of said strip forming legs of unequal length, a substantially U-shaped bend in said longer leg at right angles to said reverse bend and in the same plane therewith, said shorter leg having a bend so as to be positioned within said first reverse bend and extending substantially in the direction thereof, said longer leg crossing over said shorter leg and having a bend portion substantially parallel to said shorter leg beyond said cross over and positioned within said first reverse bend whereby said legs are pivotal about the crossing-over point when pressure is applied to said clip in opposite directions substantially perpendicular to the plane of the reverse bends.

3. A clip for sheet material comprising a continuous resilient strip having a reverse bend to form a main portion, the end portions of said strip forming legs, said legs crossing over each other at a single point to close said main portion and projecting into said closed main portion, said closed main portion and legs being in substantially the same plane.

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4. A clip for sheet material comprising a single continuous strip of resilient stock having a reverse bend comprising two arms, each of said arms having a reverse bend thereon with the portions of said strip outwardly of said arm reverse bends forming legs, one of said legs crossing over the other said leg outwardly of said arm reverse bends and being in contact therewith whereby the resiliency of the strip permits said legs to pivot about each other when pressure is applied to said clip in opposite directions substantially perpendicular to the plane of the reverse bend and sheet material is adapted to be retained between one of said legs and said reverse bend.

5. A clip for sheet material comprising a continuous strip of resilient stock having a bend portion constituting a main portion, said main portion having end portions forming legs, each of which has a reverse bend to project into said main portion and to cross over to close said main portion, said legs and closed main portion being in substantially the same plane with at least one of said legs adapted to secure sheet material against the main closed portion.

6. A clip for sheet material comprising a single strip of resilient material having a bend in a single plane to form a closed main portion, and legs adapted to cross over each other and extend into the main portion at the same point, at least one of said legs being positioned with respect to said main closed portion to retain sheet material in said clip between said one leg and said main portion.

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