No. 850,185. PATENTED APR. 16, 1907.

R. W. ROBERTS.

CLIP.

APPLICATION FILED MAR. 14, 1905.

Fig. 8.

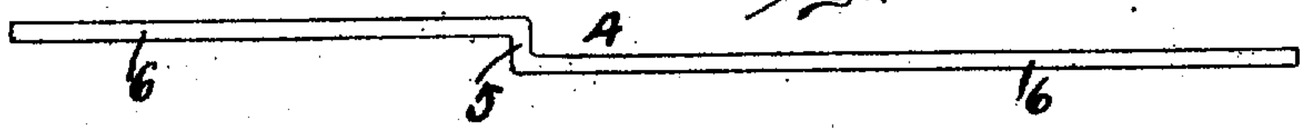


Fig. 1.

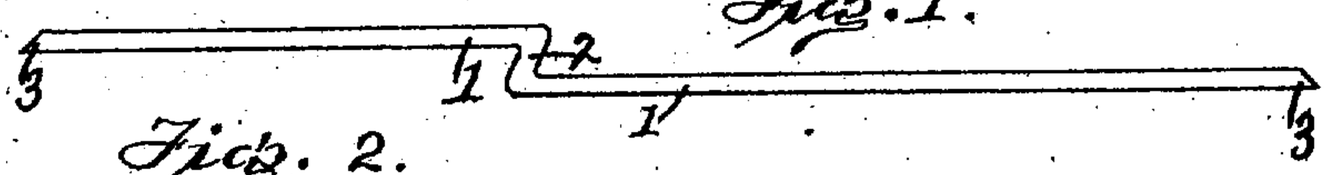


Fig. 2.

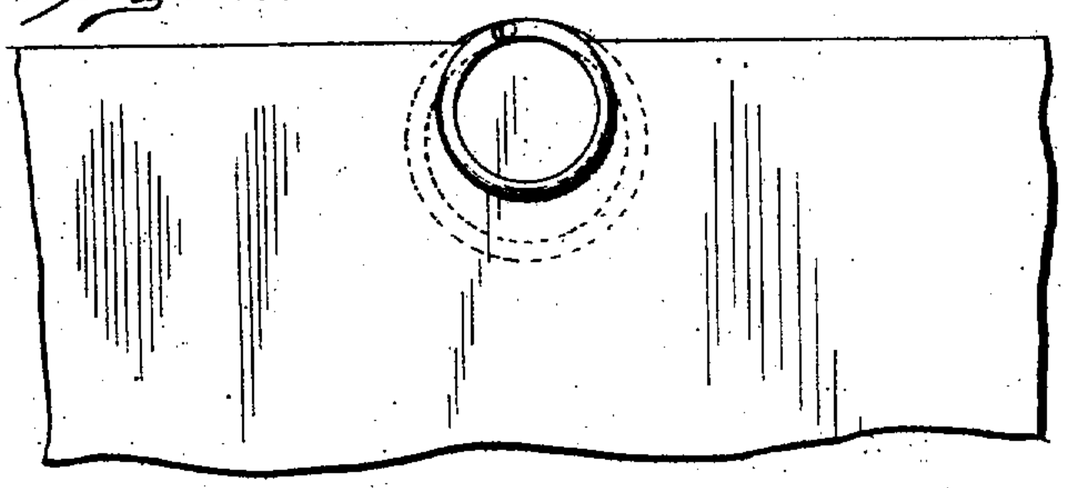


Fig. 4

Fig. 5.

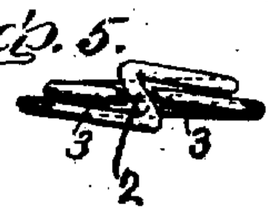


Fig. 6.

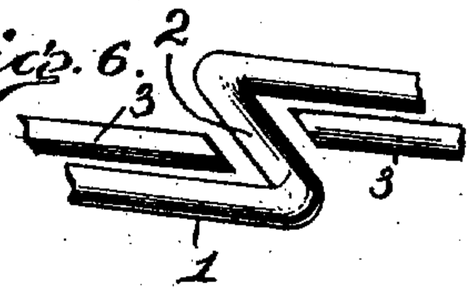


Fig. 7.

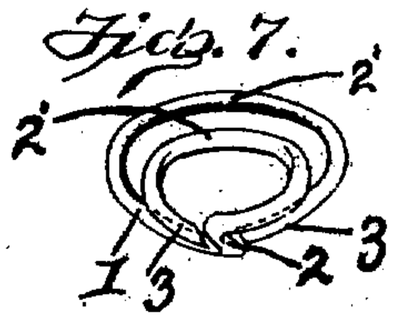


Fig. 3.

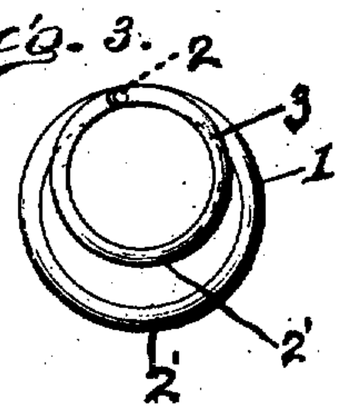
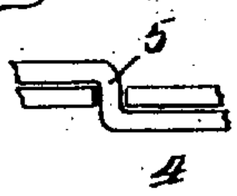


Fig. 10.

Fig. 9.



Inventor

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UNITED STATES PATENT OFFICE.

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CLIP.

No. 850,185. Specification of Letters Patent. Patented April 16, 1907.

Application filed March 14, 1905. Serial No. 250,114.

To all whom it may concern:

Be it known that I, RICHARD W. ROBERTS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Clips, of which the following is a specification.

This invention relates to improvements in paper fasteners or clips, and among the several objects in view is the production of a clip free from projecting points or overhanging portions destined to contact with foreign objects and dislocate the clip or cause the foreign objects to be bound up with the paper sheets or other articles held by the clip.

A further object is the provision of a clip which shall be free to expand to the required extent without danger of lateral separation of the ends of the clip.

With these and further objects in view the invention involves certain novel constructions and arrangements of parts, as will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 represents a view in side elevation of a piece of material from which the preferred embodiment of the present improved clip is adapted to be made, the intermediate bend being shown. Fig. 2 represents a view in side elevation of the preferred embodiment of the invention, the clip being seen applied to a sheet of paper or other article. Fig. 3 represents a similar view of the same with the paper omitted. Fig. 4 represents an edge view thereof, illustrating the relation of the two coils. Fig. 5 represents a similar view thereof, illustrating the intermediate bend and its relation to the ends of the rod from which the clip is formed. Fig. 6 represents a detail fragmentary view of the same, the parts being seen on an enlarged scale. Fig. 7 represents a perspective view of the clip. Fig. 8 represents a view similar to Fig. 1 of a blank for a modified form of clip. Fig. 9 represents a fragmentary edge view of the said modification. Fig. 10 represents a view in side elevation of a further modification.

In paper-clips as heretofore constructed it is to be noted that projecting ends or shoulders are usually found, which are objectionable for the above-mentioned reason, and, further, many of the well-known clips are so constructed that a twisting strain is liable to separate the arms of the clip to such an extent as to render the same useless, and in order to provide a simple, cheap, and durable clip which may be formed from a spring-rod of the ordinary type, which clip shall have no projecting points and which shall not be liable to become useless from a slight twisting strain, I propose to embody the invention disclosed in the accompanying drawings into a practical structure by employing the elements illustrated in said drawings, in which—

1 indicates a bar or rod of suitable spring material, which is bent intermediate its length, as at 2, into a connecting portion or spacing member, producing two relatively sharp angles. Each of the portions of the rod 1, extending from the connecting portion or spacing member 2, is formed into a loop, and the end 3 extends beneath the respective overhanging portion of the bend 2, so that in operation when a sheet or sheets of paper are passed between the two loops, so that each of the ends 3 is forced away from its respective contiguous portion of the rod 1, such end 3 will contact with the overhanging portion of the bend 2, and thus be prevented from unduly spreading, whereby injurious twisting strain is largely obviated, the said bend or connecting member 2 thus constituting a stop for the ends 3 and limiting the amount of movement thereof. The bar 1 is thus formed into two loops, which, of course, may be of any size; but, by preference, I make one of the loops larger than the other, and, as will be best seen in Fig. 4, the smaller loop is preferably depressed at its outer free edge into the larger loop, whereby separation of the loops can be accomplished only against spring-pressure, the clip being designed to be applied to a sheet after the manner illustrated in Fig. 2, wherein the sheet or sheets has or have been passed between the two loops and is or are clamped between the same. Considering the construction of the clip from another view-point the same may be said to be a two-spiral conical spring, the lesser spiral being depressed at one point into the greater and being spaced from the greater at another point. At the point where the spirals are spaced apart the edges of the spirals are connected by member 2, and it is preferably at the point of the diametrically opposite edges 2′ 2′ of the spirals that the lesser spiral is depressed into the greater.

As seen in Figs. 8 and 9, it is not absolutely necessary that the intermediate bend be formed with acute angles, as by reference to said last-mentioned figures it will be obvious that the present invention involves the employment of a spring bar or rod 4, bent intermediate its length, as at 5, for forming an offset, the remaining portions 6 6 of the rod being bent into loops and having their ends 3 3 extending contiguous to the offset 5, as illustrated, so that no projecting points are produced, and the loops may be subjected to any reasonable amount of twisting strain without injury and considerable lateral spreading before the ends of the loops will pass beyond the offset.

While I have illustrated the loops in Figs. 2 to 7, inclusive, as perfectly circular, it will be obvious that various-shaped loops may be employed—as, for instance, as seen in Fig. 10, the loops may be elliptical.

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

1. A clip, comprising a bar of material bent intermediate its length into a connecting member and into loops beyond said connecting member, said loops being spaced apart at the point of their connection, and one of said loops being smaller than the other, the smaller loop being arranged with its free edge disposed within the larger loop.

2. A clip comprising a bar bent intermediate its length into a spacing member and beyond said spacing member at each side thereof formed into a loop, the said spacing member being formed to limit the lateral movement of the free ends of the loops.

3. A clip, comprising a pair of loops and a member connecting said loops, said connecting member being arranged across the path of movement of the free end of each of the loops and forming a stop therefor.

4. A clip, comprising a bar bent intermediate its length into a connecting member, the said connecting member being disposed at an acute angle to each of the portions of the bar extending beyond the connecting member, the portions of the bar extending beyond the connecting member being bent into loops with the free end of each loop extending beneath an overhanging portion of the connection member.

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

RICHARD W. ROBERTS.

Witnesses:
JOHN ROBERTS,
W. CARL WYATT