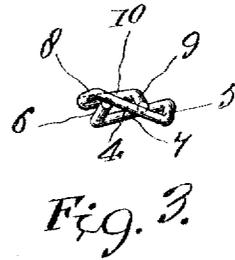
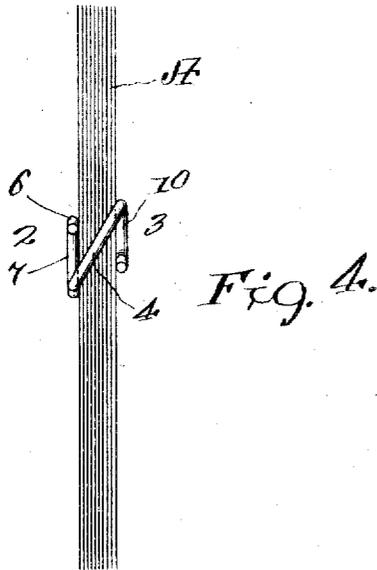
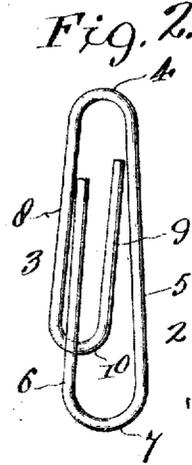
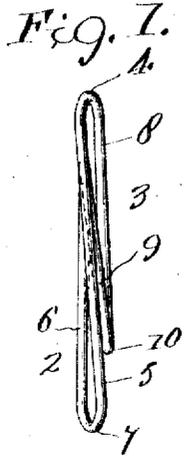


1,298,542.

Patented Mar. 25, 1919.



Inventor.
Benjamin L. Mink
by John S. Barber, Attorney.

UNITED STATES PATENT OFFICE.

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PAPER-CLIP.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, BENJAMIN L. MINK, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented new and useful Improvements in Paper-Clips, of which the following is a specification.

My invention relates to paper clips made from elastic wire, and has for its object to construct the clip in such manner that two opposite clamping members, each having considerable lateral dimensions, shall lie flat against the faces of the sheets of paper to which the clip is applied, whether the mass of papers be thick or thin.

In the accompanying drawings Figure 1 is an edge view, Fig. 2 is a side view, and Fig. 3 is an end view of a clip formed according to my invention. Fig. 4 is an end view of the clip applied to and uniting a mass of papers.

The clip is made from elastic or spring wire and is of a general style and form in common use. It has two opposite clamping members 2 and 3, united by a central bend or loop 4, adapted to straddle the edge of a mass of papers, A, to which the clip may be applied. The clamping member 2 consists of two legs 5 and 6, united by a loop 7, the leg 5 being a connecting leg between the loops 4 and 7, and the leg 6 being free at one end. The other clamping member 3 consists of two legs 8 and 9 united by a loop 10, the leg 8 being a connecting leg and 9 a free leg.

I am well aware that paper clips having the features thus far described, and when the several parts thereof—the three loops and the four legs—lie in a common plane, are well known and in common use. A characteristic of such well known form of clip is that the two opposite clamping members, when the clip is applied to a mass of papers, do not lie flat against and parallel with the opposite faces of the paper sheets, but instead the legs of the clamping members spring away, to a greater or less extent, from the faces of the sheets against which they are supposed to bear, this being especially noticeable when the clip is applied to a mass of considerable thickness, and near the loops 7 and 10. An incident to the use of the said common form of clip is that it becomes distorted in use, especially when applied to a thick mass of papers, the central straddling

loop 4 becoming twisted in the act of applying it to the papers, with the result that a clip, after being once used, is of a different shape from that it had originally, the clamping members being bent out of the common plane of the clip, but the two legs of each clamping member being still substantially parallel with each other.

Another form of paper clip is made of a short cylindrical section of coiled wire, the convolutions of which lie close together and side by side. Considering such form of clip it may be assumed that a certain arc of the central convolution thereof, the upper for instance, (the clip being held opposite the eye so that vision can be through the opening inclosed by the convolutions), lies in a plane (as it does, however, only approximately) which, for purposes of description I shall term the central plane of the clip. The convolutions on either side of this central one are connected thereto by loops, which at the opposite side of the clip—the lower side—lie substantially parallel to each other, at some distance apart, and inclined to the central plane of the clip. As the convolutions progress, they being regular, each successive part is farther out to one side of the central plane of the clip than each preceding part, this holding good to the ends of the clip, whatever number of convolutions there may be.

This clip that I have invented possesses some of the characteristics of both the forms of clips that I have referred to. As stated, in general construction it is like the form first mentioned and has all of the advantages thereof without any of its undesirable characteristics that have been pointed out. To secure the advantages incident to my invention I twist the wire of which the clip is formed, so that the loops, 7 and 10, corresponding in a general way with the lower loops of the spirally coiled clip last above referred to, not only lie substantially parallel with each other but are also close together; and so that the free legs of the clamping members, 6 and 9, instead of receding from the central plane of the clip—the plane in which lies the central loop 4—incline toward that plane, that is inwardly. In other words the clip, formed of a sort of elongated or oblong convolution of wire, has the portions thereof that progress from the loop 4 to first recede from that plane and then approach that plane. Since it is

formed of convoluted wire, the coils of which are bent in an irregular manner, in this respect it differs from the second form of clip referred to, as well as from the first form.

The clip is shaped so that the loops 7 and 10 are in substantially parallel, though not coincident, planes, and are close together. The free legs of the two clamping members incline inwardly from their connected to their free ends. The central loop 4 is preferably so disposed that when the clip is applied to a mass of papers it crosses the edge of the paper mass diagonally, as represented in Fig. 4, without necessitating distortion and bending of the clip in the act of applying it, but a mere springing or yielding of its elastic parts. This disposition of the middle loop, produced by properly twisting the wire of which the clip is formed, while advantageous, is not essential to my invention, as some of the advantages incident thereto are retained, even if the middle, straddling loop of the clip as it is manufactured lies parallel with the loops 7 and 10. The outer ends of the free legs are the parts of the clip most easily deflected, and hence it is that when they incline inwardly as described they readily yield as the clip is applied when in use, and come into approximate parallelism with the legs to which they are united, by the loops 7 and 10. When the middle loop 4 is twisted as shown, the legs 5 and 8 are inclined from their ends that are united with the loop 4 inwardly, with the result that they will lie closely

against the opposite faces of the sheets to which the clip is applied. The middle loop 4 inclines in one direction, while the loops 7 and 10 incline in different directions crossing the plane of the middle loop, as represented in Fig. 3.

In using a clip such as I have invented and herein described, not only do its opposite clamping parts lie more nearly parallel with the sheets to which the clip is applied than do the corresponding elements of a clip all the parts of which lie in a common plane, but the clip is less distorted in use than is said other form, and hence it may be used many times before becoming so out of shape that it is necessary to discard it.

What I claim is:

A paper clip of oblong shape formed of wire convoluted to produce two clamping members united by a central loop that is located at one end of the clip, each clamping member having two legs united by a loop, which latter loops are at the end of the clip opposite the central loop, characterized by having the central loop located in a plane inclined in one direction and the loops of the clamping members at the opposite end of the clip located in planes inclined in the other direction, which latter planes are approximately parallel, the free legs of each clamping member being inclined from the loops to which they are respectively joined toward the plane in which is located the central loop.

BENJAMIN L. MINK.