(No Model.)

L. F. ADT.

PAPER CLIP.

No. 358,243. Patented Feb. 22, 1887.

Fig. 1

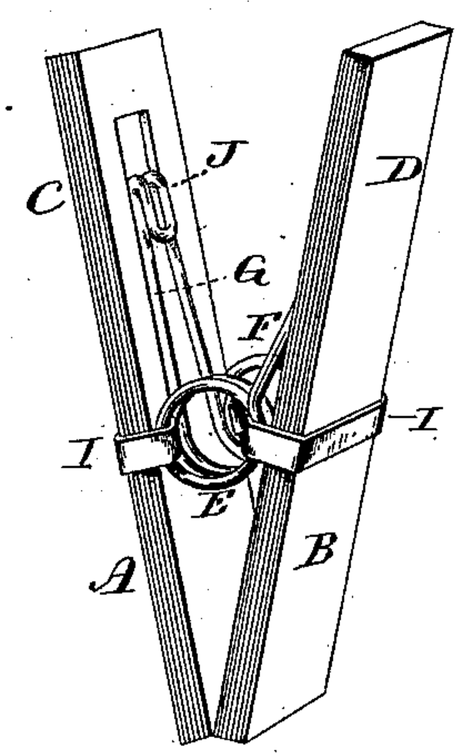


Fig. 2

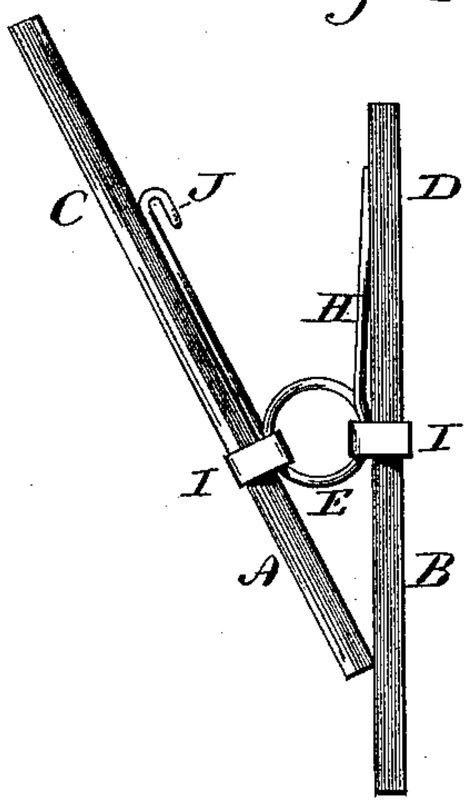


Fig. 3

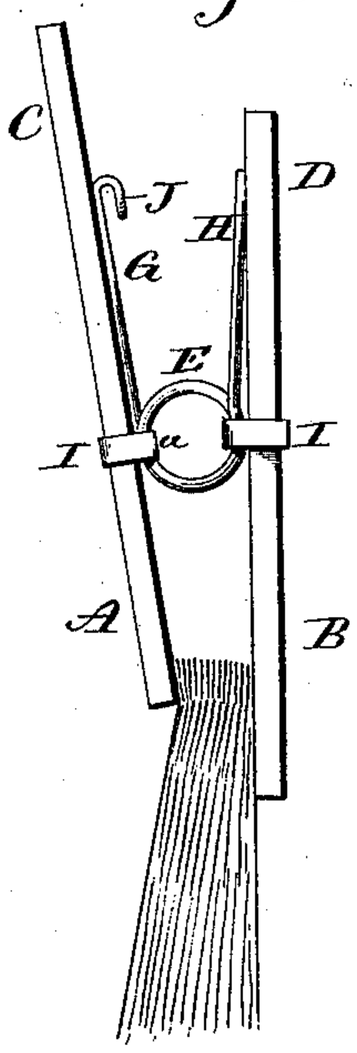


Fig. 4

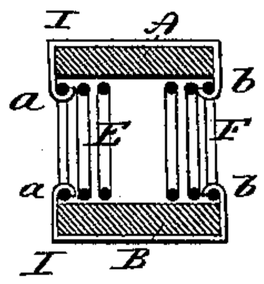
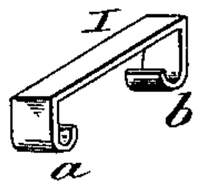


Fig. 5



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UNITED STATES PATENT OFFICE.

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PAPER-CLIP.

SPECIFICATION forming part of Letters Patent No. 358,243, dated February 22, 1887.

Application filed December 6, 1886. Serial No. 220,788. (No model.)

To all whom it may concern:

Be it known that I, LEO F. ADT, of Waterbury, in the county of New Haven and State of Connecticut, have invented new Improvements in Paper-Clips; and I do hereby declare the following, when taken in connection with accompanying drawings, and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a perspective view of the clip complete; Figs. 2 and 3, side views of the clip, illustrating the attachment of the jaws; Fig. 4, a transverse section cutting through the spring at the clip; Fig. 5, a perspective view of the socket detached.

This invention relates to an improvement in that class of articles called "paper-clips," which consists of a pair of jaws with a spring applied between, so that the spring acts to force the jaws together and clasp the papers or whatever may be introduced between, and particularly to that class of such clips in which the jaws are extended to the opposite side of the pivot in the form of handles, and so that by closing the handles the spring is contracted and the jaws opened, and so that when the handles are released the reaction of the spring will cause the jaws to close.

One of the principal objects of the invention is to make the jaws adjustable as to their length or relative position to each other, whereby the power of grasping may be increased or decreased at pleasure.

The clip is made from two pieces of material, alike and preferably of wood, of a length sufficient to form jaws A B at one end and handles, respectively, C D at the opposite end. The spring is of a torsional character, best made from a single piece of wire doubled midway of its length, and with a coil in one of the lengths and a like coil, F, in the other length, the doubled end of the wire extending to form an arm, G, and the other end extended to form an arm, H. At the coils the entire width corresponds substantially to the width of the respective jaws A B. (See Fig. 4.) The spring is secured to the jaws by a clip, I. (Seen detached in Fig. 5.) This clip is made from narrow sheet metal, bent so as to surround the jaws, the two ends *a b* of hook shape, and so as to embrace the outer convolution of the respective parts of the springs E F, as seen in Fig. 4. The clips, with the springs, form sockets, through which the jaw-pieces may be passed to any desired extent, and so that the jaw-pieces are movable therein.

The object of forming sockets in connection with the spring, and through which the jaws may be moved longitudinally, is to increase or facilitate the holding character of the jaws—as, for illustration, if the jaws are arranged, say, as seen in Fig. 1, projecting equidistant from the sockets, then the bearing-surface of the ends of the jaws are alike upon both sides, and such bearing-surface is of very short extent; but, if one jaw be withdrawn or the other thrown farther forward, as in Fig. 2, then the grasp is made by one jaw upon the other back from the end of the jaw, and a larger bearing-surface is given on the other jaw, against which the papers, or whatever it may be, are grasped. In some cases these jaws are used for clasping paper upon a frame, as in photographers' use, in which it is desirable to get a strong bearing upon one side, but lapped to a very small extent upon the face surface, as seen in Fig. 3. In this case, one jaw being extended through the socket and the other drawn backward, the one jaw B has a long bearing upon the reverse side of the frame, while the other jaw grasps near the edge, yet holds firm; whereas, were the jaws in a fixed position and the grasp made on the frame at the same point, the hold of the jaw B upon the frame would be so slight as to be of little practical effect. Again, the power of the jaws may be increased or diminished by moving them through the sockets, say, if a greater force be required, then both jaws may be drawn toward the sockets, so as to bring the bearing of the nose near the pivot. Then the action of the springs under this increased leverage will be increased according to the adjustment of the jaws; or, if a less power be required, then the jaws may be moved farther through the socket, so as to take the pivot or fulcrum farther from the nose of the jaws. In that case the power of the spring is diminished. The doubled end of the arm G of the spring is turned inward to form the hook J, by which the clip may be suspended, say,

on a line, as is frequently required in drying papers.

I am aware that paper-clips consisting of two flat pieces of wood with a torsion helical spring between them, and the two pivoted together, so that the action of the springs upon the tail of the jaws serves to close the jaws, have been made, and therefore do not claim, broadly, such construction; but

What I do claim is—

1. The herein-described clip, consisting of the two parts forming, respectively, the jaw and handle A C and the jaw and handle B D, combined with a helical torsion-spring, a clip, I, around each of the said parts, the outer ends of the clip fixed to the outer convolutions of the springs and forming sockets to secure said parts to the said springs, the arms of the springs extending upon the inner surface of the handle portion.

2. The herein-described clip, consisting of two parts, forming, respectively, the jaw and handle A C and the jaw and handle B D, combined with a helical torsion-spring, a clip, I, around each jaw, the outer end of the clip fixed to the outer convolution of the spring, the clip and spring forming sockets to receive the respective jaw-pieces, and the arms of the spring extending upon the inner surface of the handle portion, the said jaw and handle pieces being adjustable through said socket, substantially as described.

3. A clip consisting of two parts, forming, respectively, the jaw and handle A C and the jaw and handle B D, combined with a torsion-spring between the two, two sockets in connection with said spring, one upon each side, each socket adapted to receive one of said parts and the said parts adjustable in said sockets, substantially as described.

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Witnesses:
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