

No. 721,070.

PATENTED FEB. 17, 1903.

G. W. MCGILL.
SPRING WIRE PAPER CLIP.
APPLICATION FILED MAR. 21, 1902.

NO MODEL.

Fig. 1.

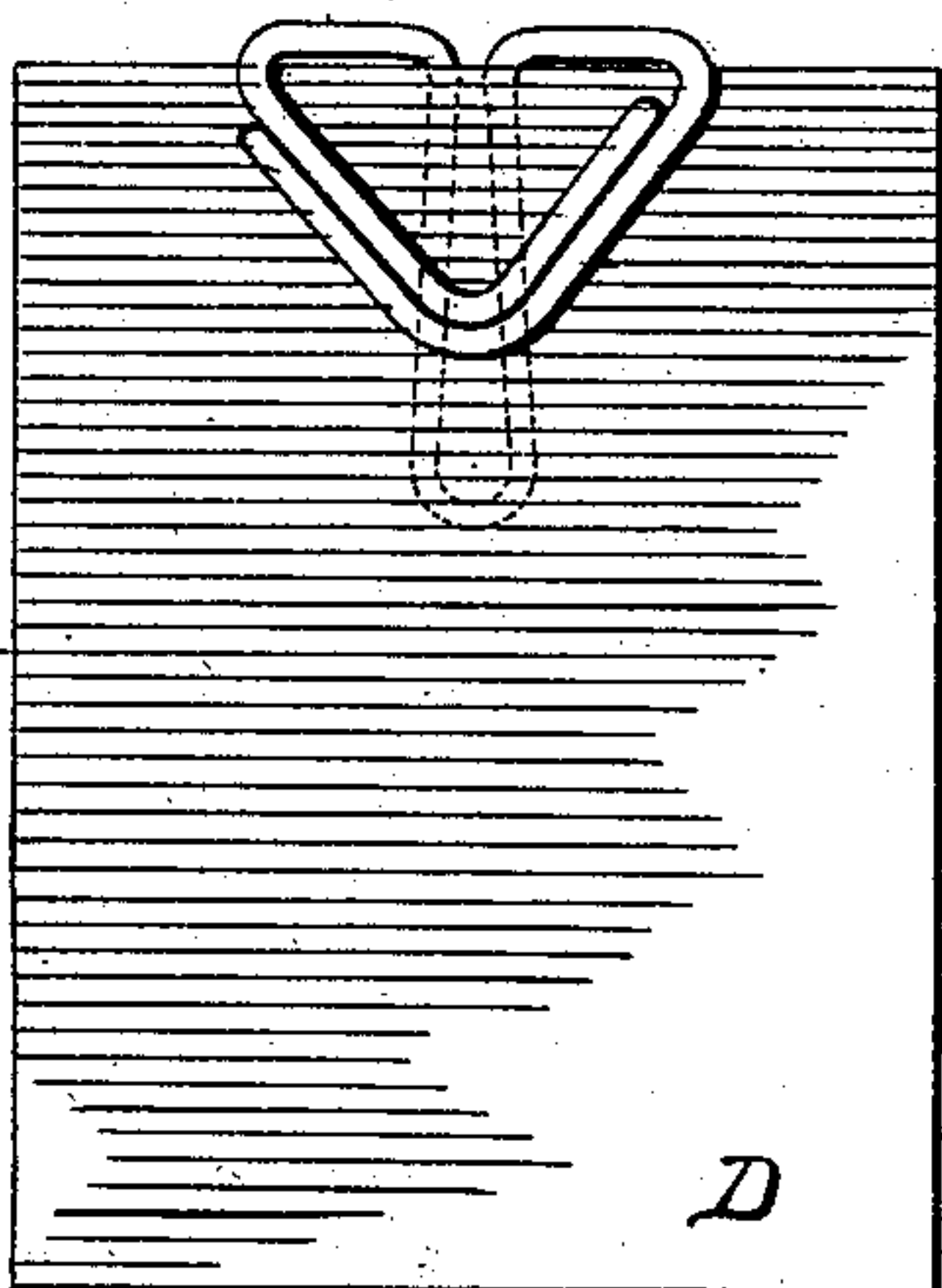


Fig. 4.

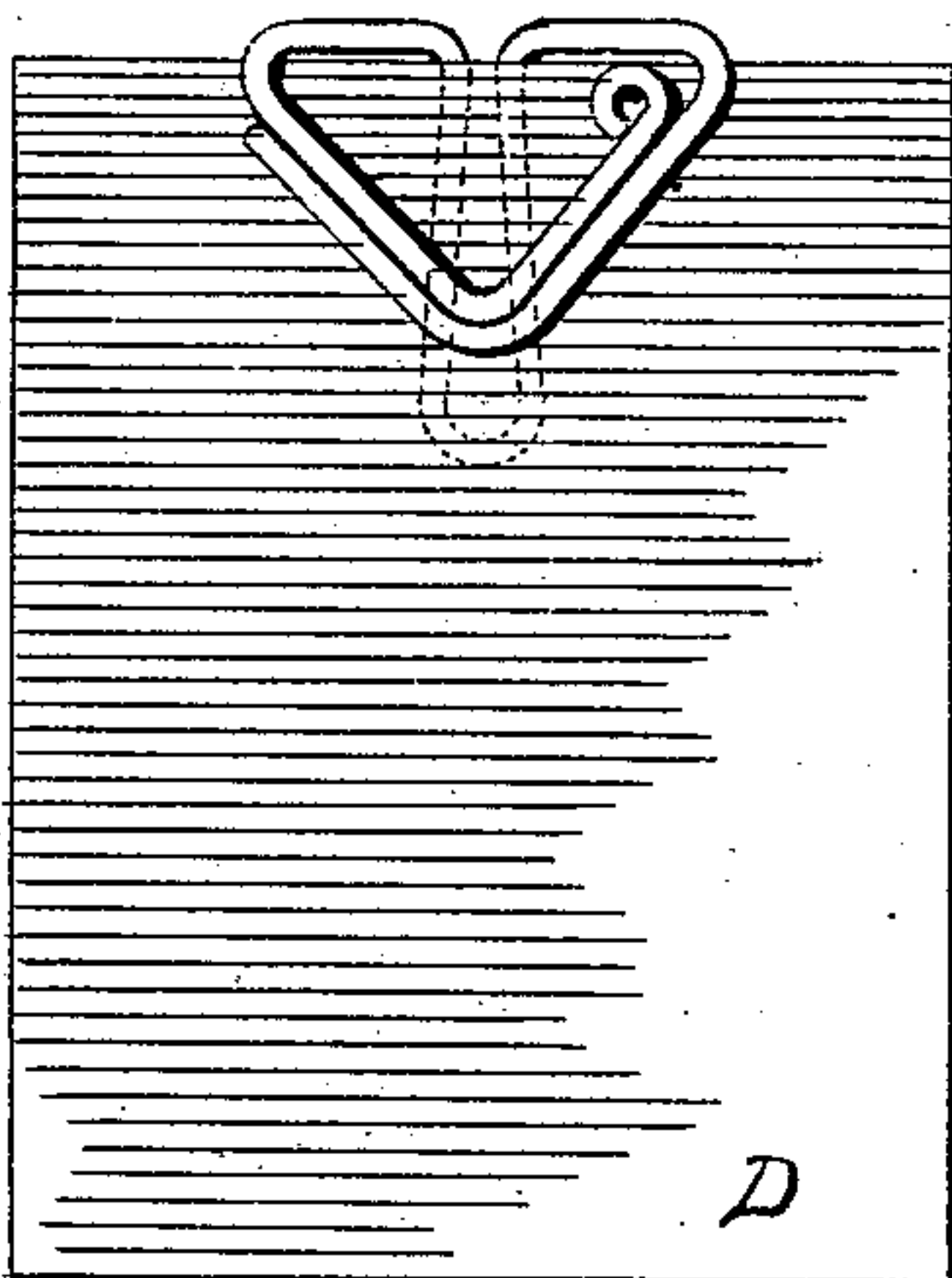


Fig. 7.

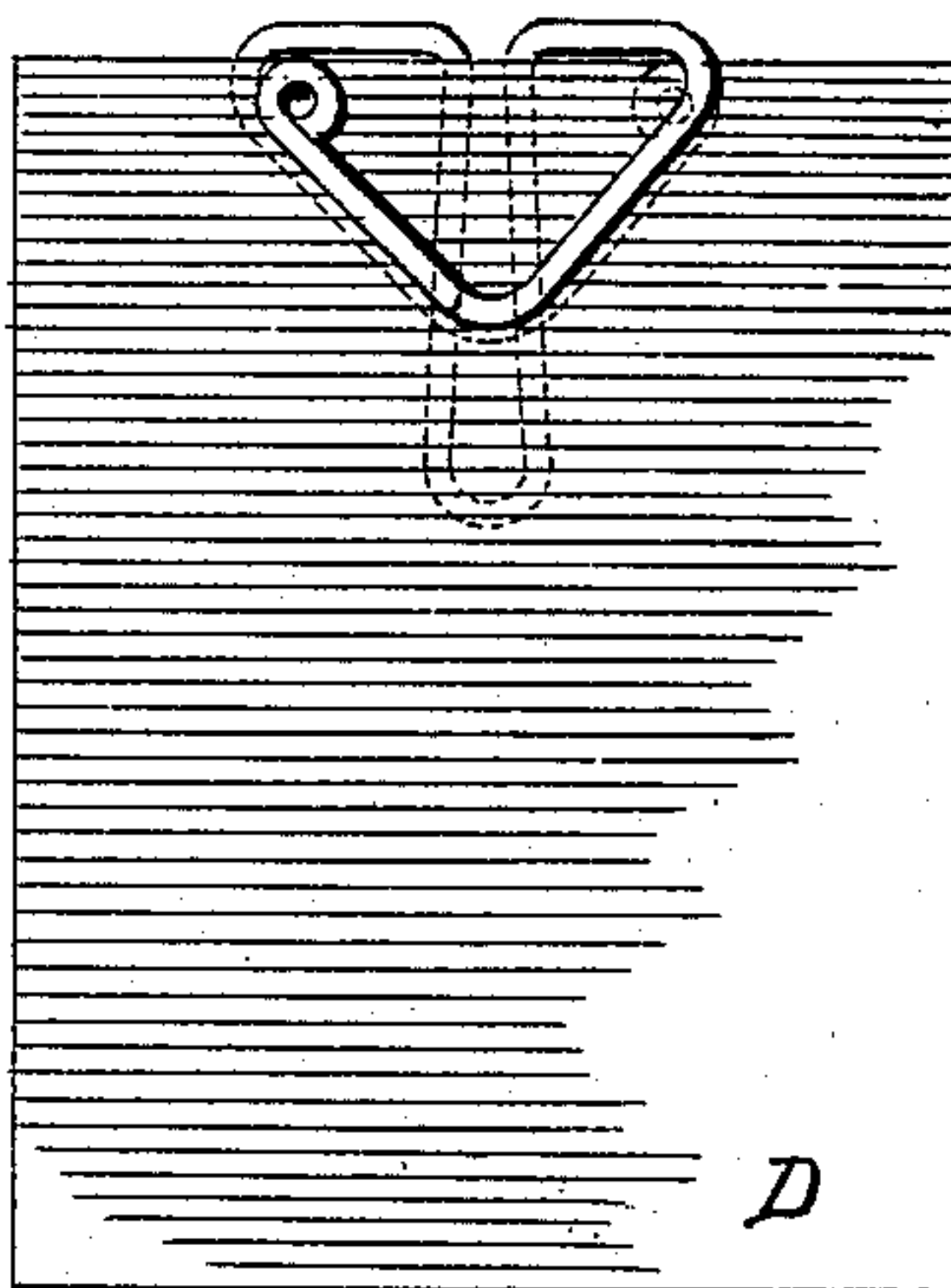


Fig. 2.

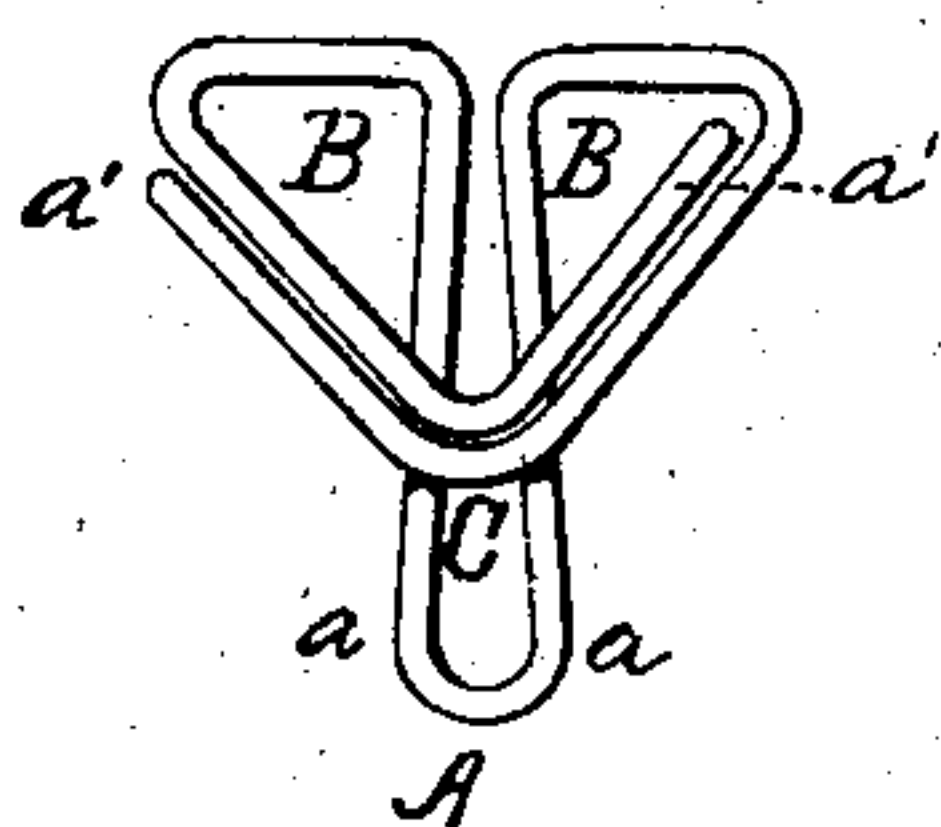


Fig. 5.

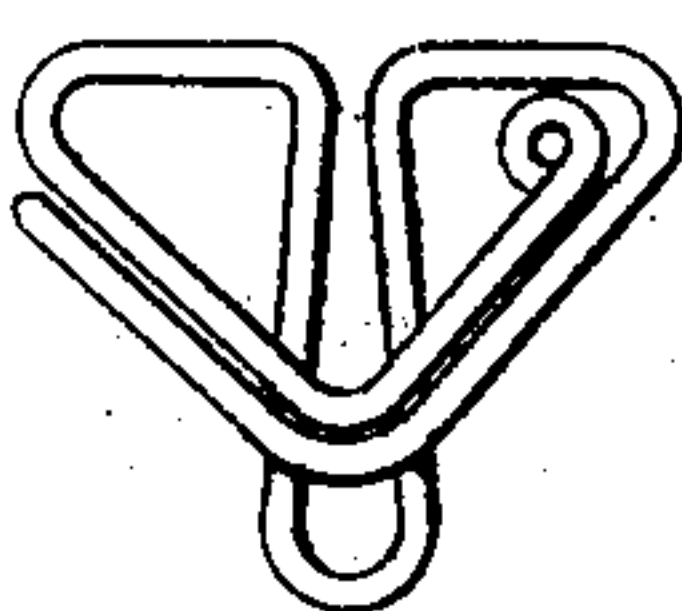


Fig. 8.

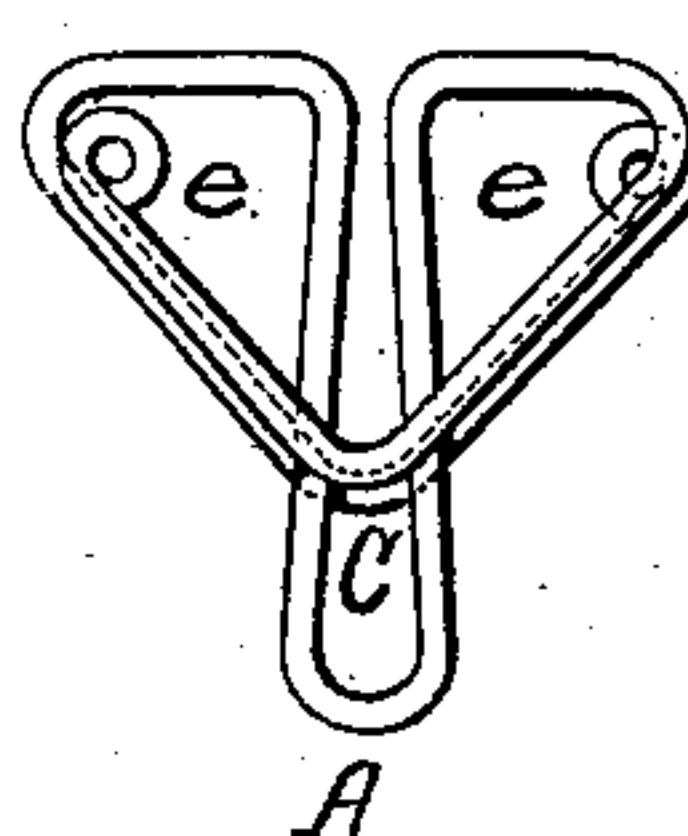


Fig. 3.

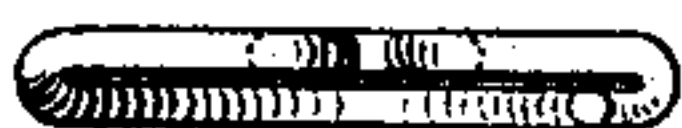


Fig. 6.

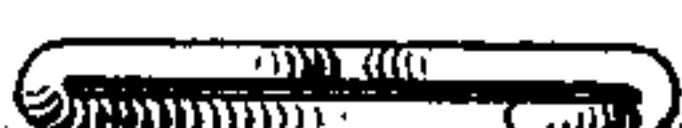
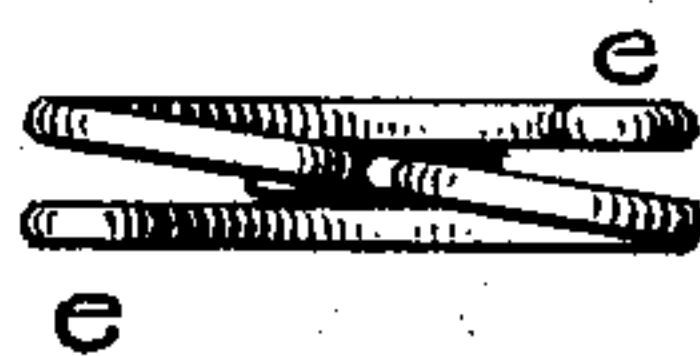


Fig. 9.



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SPRING-WIRE PAPER-CLIP.

SPECIFICATION forming part of Letters Patent No. 721,070, dated February 17, 1903.

Application filed March 21, 1902. Serial No. 99,327. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. MCGILL, a citizen of the United States, and a resident of Riverdale, in the county of New York and State of New York, have invented certain new and useful Improvements in Spring-Wire Paper-Clips, of which the following is a specification.

My invention consists in a spring clip or holder for papers fashioned from a single piece of spring-wire of suitable gage and length and folded to represent somewhat in its outline a trefoil—that is to say, the wire is first given a central, open, or looped fold, providing a back member, with the two arms formed by such fold converging toward each other at their free ends. About one-third their length from such loop the arms so formed are then bent apart in opposite directions at right angles with themselves, and intermediate such second fold or bend and their free ends they are again folded at an angle in toward their first or looped fold in manner to form with the arms thereof two adjacent right-angle triangles, their free ends being still further folded along the sides of such triangles, with their termini occupying guarded positions, respectively, beneath the outer shoulders of the second fold of the wire, providing the device with a front member or frame of right-angular formation bisected by the arms of the first fold or loop of the wire and having its sides and vertex superimposed upon the neck of such loop and the latter projected outward beyond said vertex, for a purpose hereinafter described.

In the accompanying drawings, forming part of this specification, and in which similar letters of reference indicate corresponding parts, the device is shown in three several modifications of configuration, all embodying the same principle and features—to wit, a spring-wire paper-clip consisting of two adjacent right-angle triangular members within a right-angle frame provided with a connecting two-armed central dependent support or guide member bisecting the right angle of such frame and projecting beyond the vertex of same in a loop, adapting the device to receive and clamp between such supporting or looped guide member and the strands of the wire forming the sides and vertex of

the angle of such frame the papers to be held and securely holding them therein by the resilience inherent in the wire and the additional resilience provided the device through the torsional strain imparted by each of its two adjacent right-angle triangular members to the wires in the sides and vertex of its right-angular frame and to the wires forming its support or looped guide member, all of which bear upon each other near the center of the device and to a greater extent on articles placed between them.

Figure 1 is a front elevation of the device applied as intended in clamping or holding together sheets of paper, &c. Fig. 2 is a similar view of the device proper unattached to papers. Fig. 3 is a top view of the device. Figs. 4, 5, and 6, respectively, are figures similar to Figs. 1, 2, and 3, excepting that the inner strand of the wire forming one arm of the angular frame of the device terminates in a convolution forming an eye. Figs. 7, 8, and 9, respectively, are views similar to Figs. 1, 2, and 3, excepting that the free end of both strands of wire forming the frame terminate in eyes similar to the one shown in Figs. 4, 5, 6 and that such strands instead of being bent over one side of the wire forming the looped guide or support member cross the same respectively fore and aft at their vertex and on the same horizontal line and are superimposed one above the other with such guide or support member intervening between them to enable sheets of paper to be clamped on both sides of such member and removed from one side thereof without disturbing any that may be clamped on its opposite side.

A is the dependent central loop or supporting guide member formed by the first fold of the wire, and *a a* are its two arms produced by such fold.

B B are the two adjacent right-angle triangular members which provide the device with its torsional clamping-spring or principal clamping resilience.

a' a' are the two free ends of the wire providing the arms of the right-angle-shaped frame of the device and its duplex vertex C, and *e e* are volutes or eyes forming the terminal thereof.

D represents papers or other material inserted in the clip.

In applying the device the clip is held by the base of its angle-frame, or, more properly speaking, by the base of each of its adjacent triangles, and the edges of the papers to be secured are pressed down against and along the guiding and supporting loop A, in under the wires forming the vertex C of the angle-frame, and pressed upward into the adjacent angles B B until the base of said triangles rests upon and rides the edges of such papers, the loop A serving as a guide to lead the papers to the point of entrance between it and the wires forming the vertex of the angle-frame and assisting in separating these parts and facilitating the entrance of the papers between them, the round configuration and smooth surfaces of the loop and of the adjacent vertex of the angle-frame preventing any abrading of the surfaces of the papers in such entry or exit therefrom.

The device provides four separate meeting points of eight surfaces in spring contact between the clamping members, four of which surfaces bear upon the front surface and four upon the back surface of the papers or other material inserted therein.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a spring-wire paper clip or holder the formation from the wire composing the clip of two adjacent right-triangular members within the boundary or confines of an angular frame, the angle of such frame being bisected by a dependent central member composed of the inner legs of both triangles prolonged beyond the vertex of such frame and intersecting each other in forming a looped extension beyond such vertex.

2. In a spring-wire paper-clip, the formation from the wire composing the same of two adjacent right triangles within the boundaries of an angular frame the wires forming the vertex of the angle of such frame crossing in resilient spring contact a looped central member extending from the base of said frame to a point below its vertex.

3. In a wire clip the formation from the wire composing the same of two right-angle triangular members within the confines of an an-

gular frame, the vertex of which frame is composed of two bent strands of such wire in combination with a central dependent supporting member and guide projecting from the base of such frame to and beyond its vertex.

4. In a device of the character described, the single wire forming the same, folded in its center to provide a central longitudinal looped member composed of two strands, part of such strands folded into two angular lateral loops, with the end part of one of said strands bent along the outer side of the arm of one of such angular loops and the end part of the other strand bent along the inner side of the arm of the other, or opposite, loop, both such end parts crossing in opposite directions the two strands forming the looped central member and bearing thereon in spring contact.

5. A paper-clip made from a single piece of suitable spring-wire folded in manner to provide a narrow dependent supporting looped back member and a triangular and broad front member in spring contact with each other at four points.

6. In a device of the character described, the single wire composing the same bent and folded in a manner to provide the device a frame or front member of triangular formation with the wires in two of its angle-arms doubled and folded together in parallel lateral proximity and occupying the same plane; and integral with such front member a back member composed of two strands of the wire projecting at right angles downward from the central top part of such triangular front member in near proximity with each other and in a manner to bisect vertically the triangular formation of such front member and intersecting each other in looped connection below the vertex of the angle forming the pointed base of such triangular front member.

Signed at Riverdale, in the county of New York and State of New York, this 18th day of March, A. D. 1902.

GEORGE W. MCGILL.

Witnesses:

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