

No. 749,429.

PATENTED JAN. 12, 1904.

G. B. DUSINBERRE

PAPER CLIP.

APPLICATION FILED SEPT. 24, 1901.

NO MODEL.

Fig. 1.

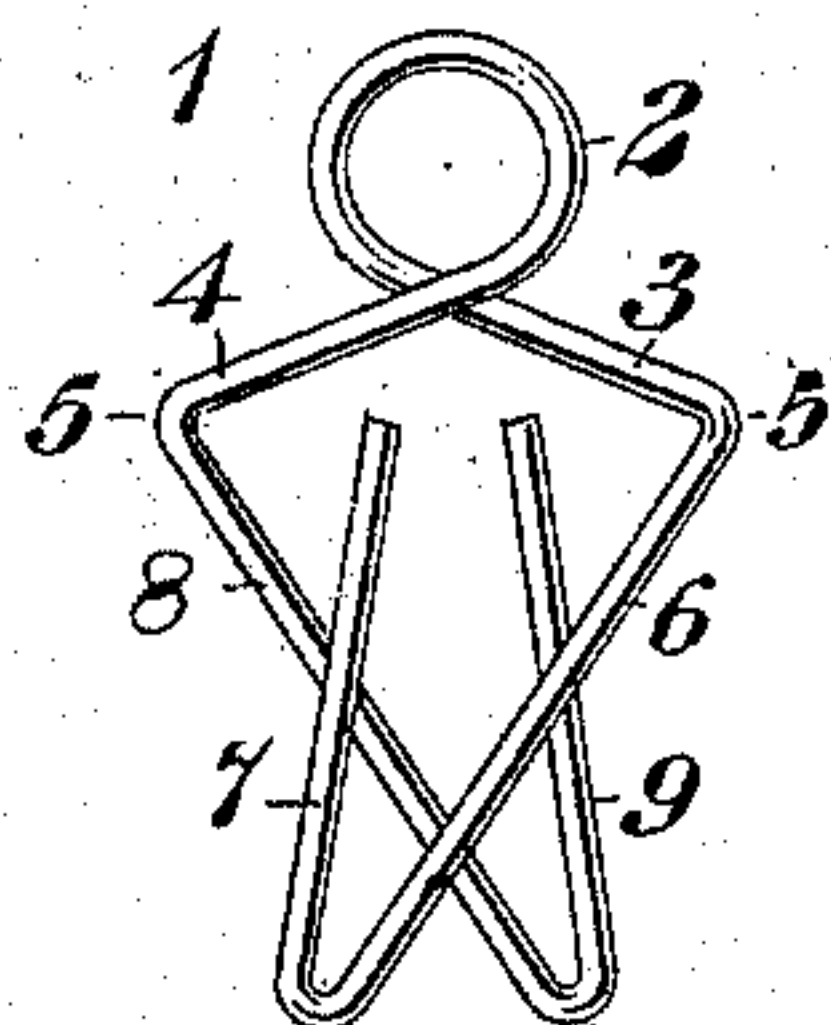


Fig. 2.

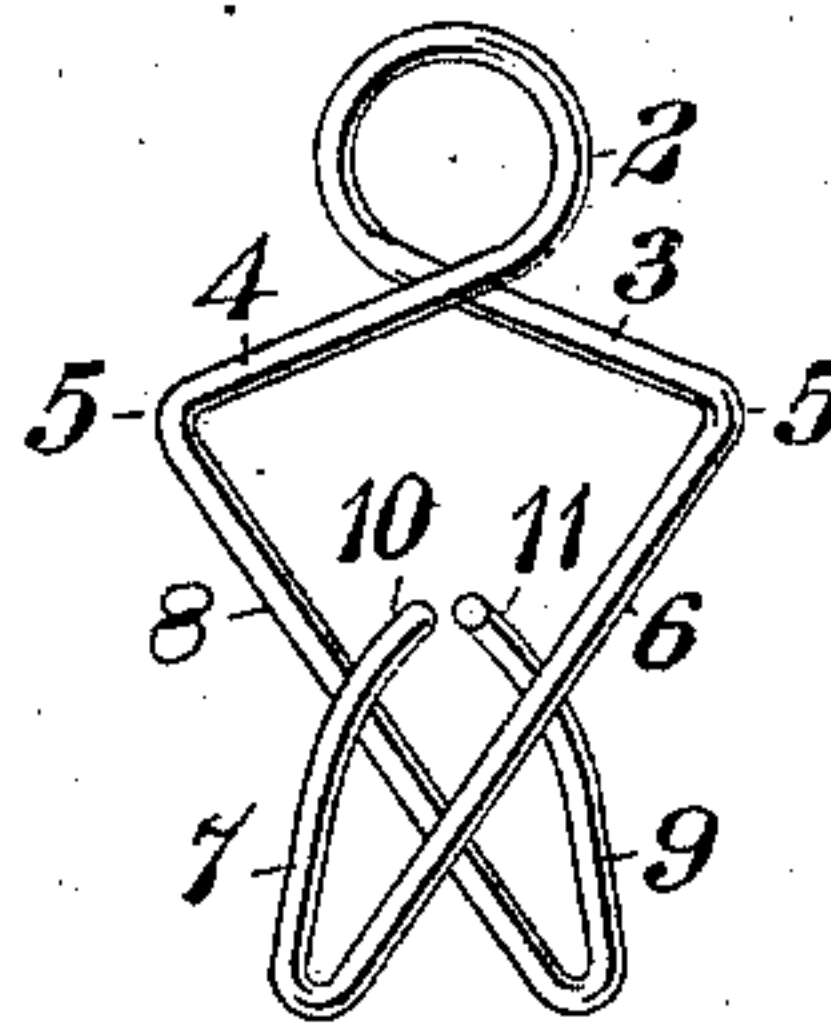


Fig. 3.

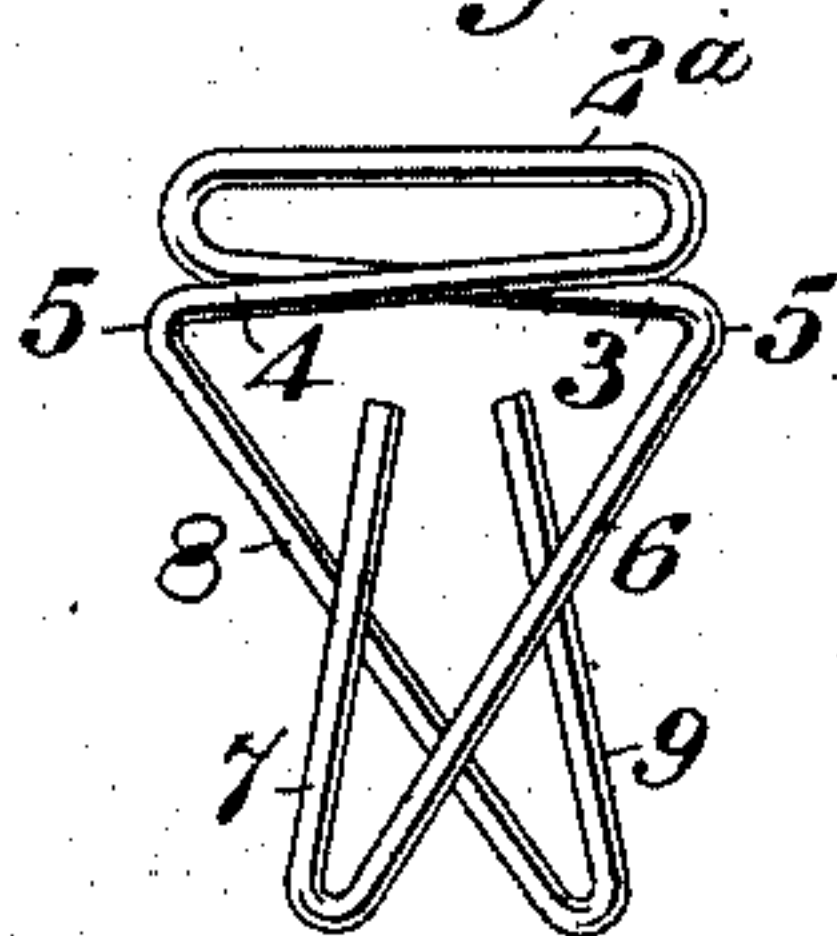


Fig. 4.

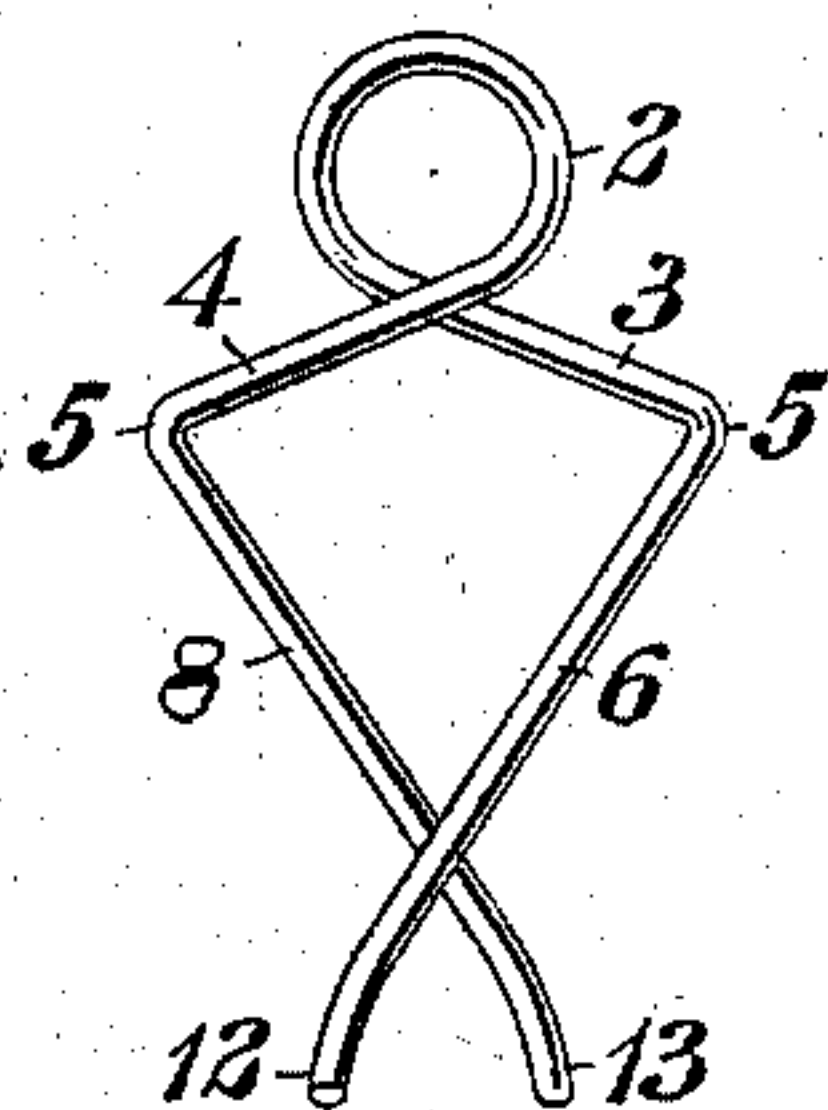
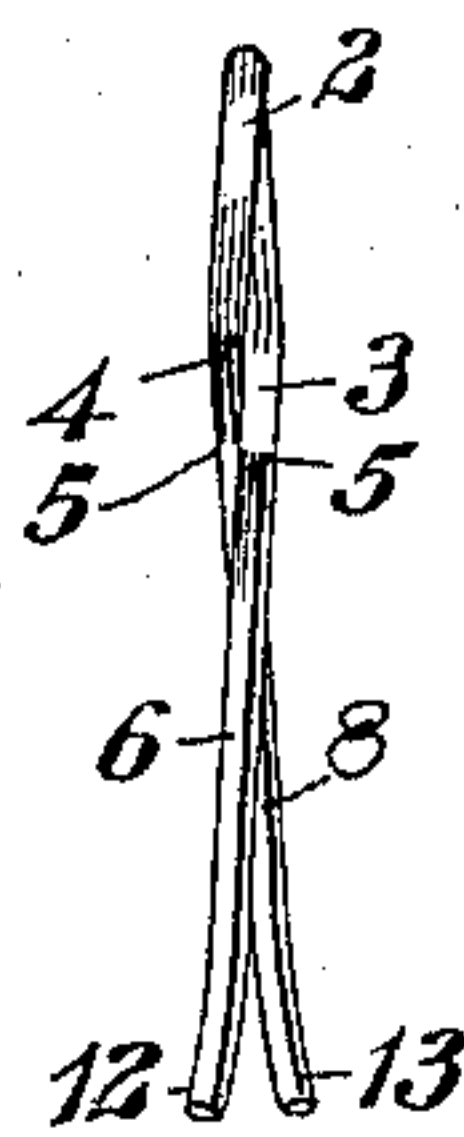


Fig. 5.



WITNESSES:

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PAPER-CLIP.

SPECIFICATION forming part of Letters Patent No. 749,429, dated January 12, 1904.

Application filed September 24, 1901. Serial No. 76,360. (No model.)

To all whom it may concern:

Be it known that I, GEORGE BROWN DUSINBERRE, a citizen of the United States, residing at Edgewood Park, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Paper-Clips, of which the following is a specification.

My invention relates to devices for clamping together sheets of paper; and it has for its object to provide a device of this character which shall be simple and inexpensive in construction, which shall be adapted for securely holding together with equal facility either a small or a large number of sheets, and which may be readily applied and detached without danger of permanent distortion from the original shape.

My invention is susceptible of embodiment in a variety of forms, some of which are illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of one form of my invention. Fig. 2 is a front elevation of a device similar to that shown in Fig. 1, but embodying a slight modification. Fig. 3 is a front elevation of a device similar to Fig. 1, but having a still further modification of form. Fig. 4 is a front view of another modification, and Fig. 5 is an edge view of the device shown in Fig. 4.

Referring now particularly to Fig. 1, the clip 1 is formed of a single piece of wire of such composition that it may be readily bent sufficiently to perform its functions, but sufficiently resilient so that it will return to its original condition when released from the force that holds it in the deflected position. The device comprises a loop 2 at one end, which may constitute a handle for use in applying the device to sheets of paper and for removing it therefrom. The ends 3 and 4 of the loop 2 project away from each other at a considerable angle to the points 5 and thence toward each other, so that their ends overlap, and then backward upon themselves to form double arms 6 7 and 8 9. Either side of the device may be regarded as the front; but for convenience of description and definition the

side presented to view in the drawings will be designated as the "front" and the opposite side as the "rear." It will be observed that the front arm 6 7 constitutes a continuation of the rear loop end 3, and consequently that the rear arm 8 9 constitutes a continuation of the front loop end 4, from which it follows that the pressure exerted by the sheets to force the arms 6 7 and 8 9 away from each other is resisted by the loop and its ends and that consequently with this arrangement of parts the arms 6 7 and 8 9 grip the sheets to which they are applied firmly, whether the number be small or large, and the restoration of the parts to their original positions when the clip is removed from the sheets to which it has been applied is insured. A further important and characteristic feature of this embodiment of my invention is the coöperative relation of the gripping-arms, whereby three gripping or pressure points are provided—viz., one between the arms 6 and 9, one between the arms 7 and 8, and the third between the arms 6 and 8. Inasmuch as the gripping or pressure points are symmetrically located and two of them are side by side and substantially the same distance from the loop 2, which distance is comparatively short, the gripping action is so exerted as to hold together either a small or a large number of sheets without substantial difference of efficiency.

In the device shown in Fig. 2 the several parts are the same in form and relative location as in the device shown in Fig. 1 except that free ends 10 and 11 of the arms 6 7 and 8 9 are bent inwardly slightly toward the plane of the clip, so that when the clip is applied to a plurality of superimposed sheets the bent-in ends grip the outer sheets and serve to lock the device in position. This prevents the accidental slipping off or removal of the clip, but does not prevent its ready removal, provided the arms 7 and 9 are grasped and sprung apart.

In the device shown in Fig. 3 the parts are exactly the same in construction and arrangement as in the device shown in Fig. 1, except that the loop 2^a is flattened and elongated, so

as to project a materially less distance from the edges of the sheets to which the device is applied. The other parts, being designated by the same reference-numerals as in the preceding figures, need not be again described.

The device shown in Figs. 4 and 5 has a loop 2 and loop ends 3 and 4, that are substantially the same as the corresponding parts shown in Fig. 1. The arms 6 and 8, however, terminate with their free ends at the extreme limit of the device instead of being extended to form supplemental arms 7 and 9 opposite the loop 2. The free ends 12 and 13 are bent slightly outward from the plane of the clip in order to facilitate the application and removal of the device from the sheets held by it. This last feature is not essential, but it facilitates the use of the device. It will be noted that in this case, as in Fig. 1, the front arm 6 is a continuation of the rear loop end 3, and consequently that the gripping action of the clip, which has been described in connection with the device shown in Fig. 1, obtains also in this form.

Other variations in the form of the device may obviously be made, and I therefore do not desire or intend to limit my invention to exactly what is shown in the drawings.

I claim as my invention—

1. A paper-clip formed of a single piece of wire and comprising a loop and gripping-arms that first diverge from the loop and then converge toward and across each other in such manner that the front arm is a continuation of the rear terminal of the loop.

2. A paper-clip comprising a loop and two angular gripping-arms that first diverge from the loop and then converge toward and across each other near their outer ends so that the front arm is an extension of the rear terminal of the loop and the arms exert a gripping ac-

tion substantially at right angles to the plane of the clip.

3. A wire paper-clip comprising a loop and two arms that cross each other and are bent backward upon themselves to form supplemental arms that cross the main arms, thus providing three gripping-points, the front arm being a continuation of the rear terminal of the loop.

4. A wire paper-clip comprising a loop and two projecting arms that cross each other and are bent backward upon themselves to form supplemental arms which cross the main arms, thus providing three gripping-points.

5. A wire paper-clip comprising a loop and two projecting arms that cross each other and are bent backward upon themselves to form supplemental arms which cross the main arms, thus providing three gripping-points, the free ends of the supplemental arms being bent inward toward each other for locking the clip in position.

6. A wire paper-clip having two gripping-arms severally embodying single return-bends and crossing each other at both sides of said bends thereby providing three gripping-points.

7. A paper-clip formed of a single piece of wire and comprising a loop and gripping-arms that first diverge from the loop, then converge toward and across each other and are then bent backward across each other toward the loop, thus providing three gripping-points.

In testimony whereof I have hereunto subscribed my name this 18th day of September, 1901.

GEO. B. DUSINBERRE.

Witnesses:

JAMES B. YOUNG,
WESLEY G. CARR.