(No Model.)

4 Sheets—Sheet 1.

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BUTTONHOLE CUTTER.

No. 471,950. Patented Mar. 29, 1892.

FIG. 1.

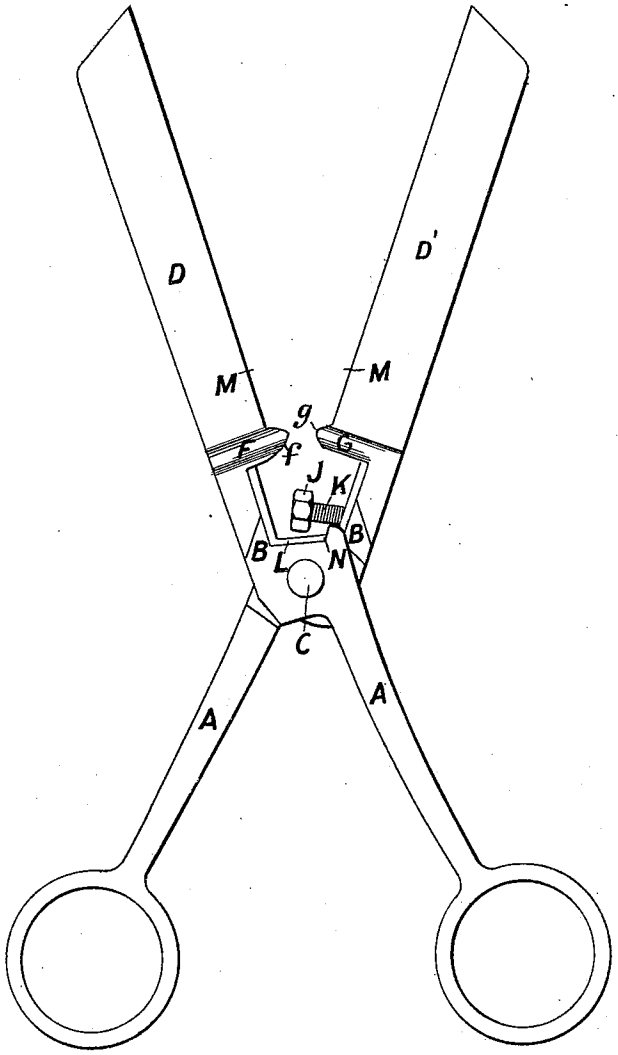

FIG. 2.

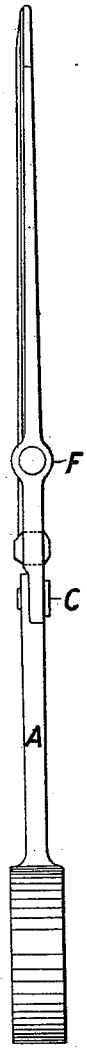

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FIG. 3.

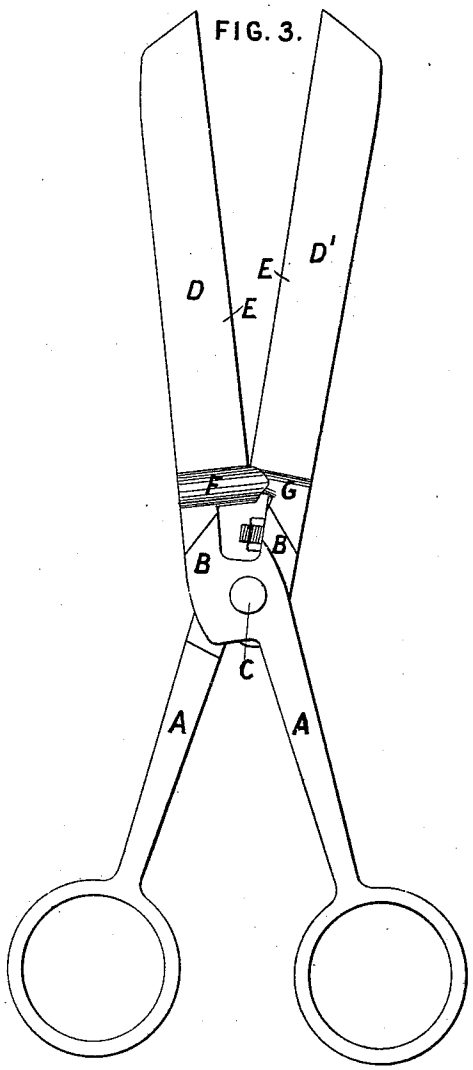

FIG. 8.

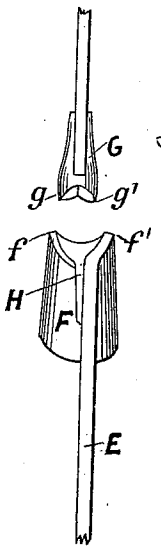

FIG. 7.

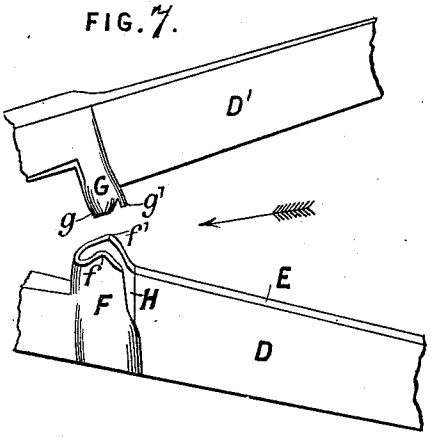

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FIG. 4.

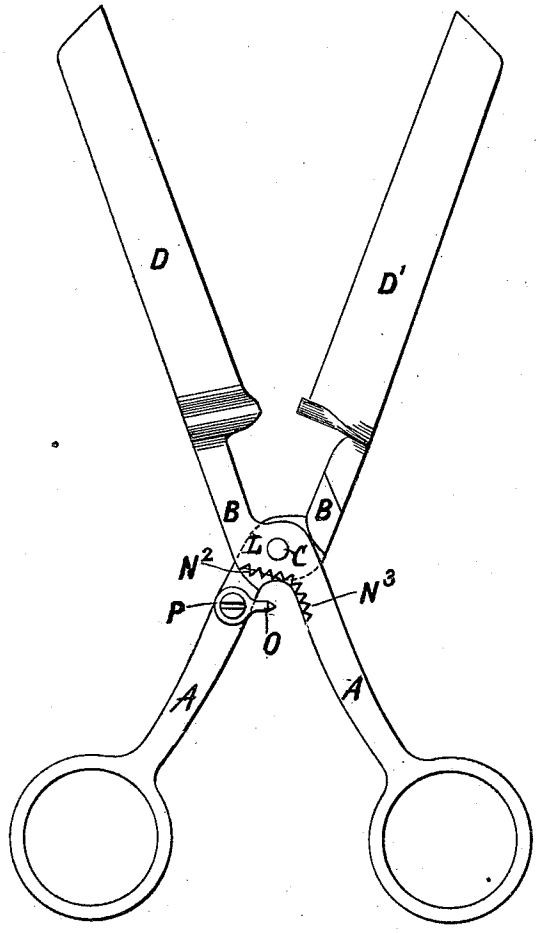
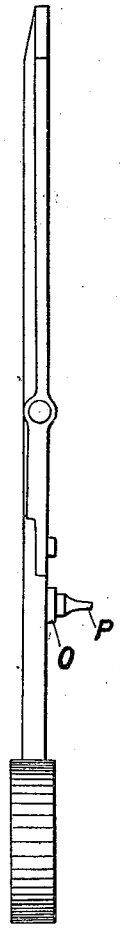


FIG. 5.



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M. CARMODY.

BUTTONHOLE CUTTER.

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FIG. 6.

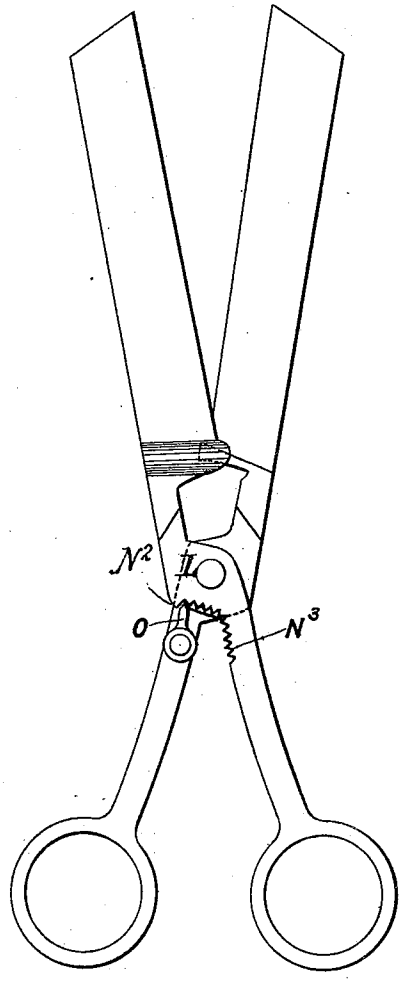

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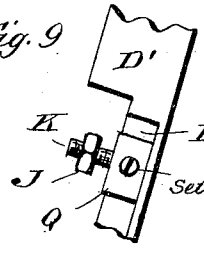
Fig. 9



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UNITED STATES PATENT OFFICE.

MARTIN CARMODY, OF WORKINGTON, ENGLAND.

BUTTONHOLE-CUTTER.

SPECIFICATION forming part of Letters Patent No. 471,950, dated March 29, 1892.

Application filed August 11, 1891. Serial No. 402,364. (No model.)

To all whom it may concern:

Be it known that I, MARTIN CARMODY, tailor's cutter, a subject of the Queen of Great Britain, residing at 49 St. George Terrace, Harrington Road, Workington, in the county of Cumberland, England, have invented a new and useful Improvement in Scissors for Cutting Button Holes and for other Purposes, of which the following is a specification.

In cutting button holes it has hitherto been necessary either to punch the complete hole out by means of a suitable die or cutter, or the eye part of the hole has been punched out and the slit or long part of the button hole cut by means of so-called "buttonhole-scissors"—that is to say, by scissors constructed in such a manner as to cut a slit at a given distance from the edge of the cloth or other material, the length of the said slit being regulated by means of an adjusting-screw. The use of a punch, however, involves a considerable expenditure of force as compared with that required by the shearing action of a pair of scissors. By this invention I produce scissors by means of which a complete button hole can be cut by the shearing action of ordinary scissors, the length of the slit or long part of the button hole being adjustable, the scissors being also adaptable for use as ordinary cutting-scissors when so required.

A further object of this invention is to produce a pair of scissors for cutting a slit at an adjustable distance from the edge of the material—as, for example, the slit or long part of a button hole—wherein the whole length of the blades is effective for cutting purposes, the scissors being also adaptable as ordinary cutting-scissors when so required.

In the accompanying drawings, Figures 1 and 2 show front and side elevations of a pair of scissors constructed in accordance with my invention and designed for cutting a complete button hole at one operation and by the ordinary shearing action. Fig. 3 shows in part elevation another position of the same scissors. Figs. 4, 5, and 6 are similar views of a modification of the scissors shown in Figs. 1 to 3. Fig. 7 shows an enlarged perspective view of the cutters and part of the blades; and Fig. 8 shows the same in elevation, looking in the direction of the arrow X, Fig. 7. Fig. 9 is a view in detail, representing the manner in which the regulating bolt or stop K is made longitudinally adjustable on the extension-arm.

Referring to Figs. 1 to 6, I pivot the handles A together at C and provide each of them with an extension-arm B above the pivot and parallel to the direction of the handles. To these extension-arms B the blades D D′ are secured in any suitable manner. On the bottom of each blade and at right angles to the cutting-edge E thereof (see Figs. 7 and 8) I form or attach a hollow cutter, or a hollow cutter F on one blade and a solid cutter G on the other, the cutter F being large enough to allow the other cutter G to enter thereinto as and when the scissors are closed up. The upper edges of the cutters F and G are convexed or otherwise curved upward on one or on both sides, as shown at $f\,f'$ and $g\,g'$ in Figs. 7 and 8, and these edges $f\,f'$ and $g\,g'$ are sharpened, so as to form the cutting-edges for the eye of the button hole. The front of the large cutter F is furnished with a longitudinal slit H alongside or contiguous to the blade D, so as to allow the opposite blade D′ to enter therein as the scissors are closed up.

In the form of my invention shown in Figs. 1, 2, and 3 the length of the slit or long part of the button hole is regulated by the position of the nut J on the bolt or threaded rod K, forming part of or attached to the extension-arm B. The two extension-arms, the cutters F and G, and the shoulder L form an open frame or throat to the scissors, the length measured from the cutters F and G being the distance which the scissors can be passed from the edge of the cloth or other material before the eye of the button hole is cut. The position of the nut J on the bolt K will determine the amount of closing up of the scissors, and thus will regulate the length of the slit or long part of the button hole.

In the position shown in Fig. 1 the scissors can be closed up, so that the cutting-blades will meet as far as the points marked M. To make a longer slit to the button hole, the nut J is screwed farther onto the bolt K, and to make a shorter slit the nut is turned in the opposite direction.

The manner in which the scissors may be adapted as ordinary cutting-scissors is shown in Fig. 3. In this case the nut J is screwed

down home onto the bolt K, and the nut J, being somewhat larger in cross-section than the extension-arm B, will partly overlap the same, and will thus form a stop against which the projection N on the shoulder L will abut, as shown in Fig. 3, and thus prevent the scissors being farther opened. In this position the scissors cannot be opened sufficiently to open the cutters F and G and the scissors may be completely closed up. Thus the cutting-blades D and D′ only are in operation, and the scissors can thus be used as ordinary cutting-scissors.

In the modified form shown in Figs. 4, 5, and 6 the stop-piece O, with the set-screw P, takes the place of the nut J and bolt K. The stop O is attached to the handle A below the pivot C and is capable of being rotated so as to abut against the opposite handle and fit into any of the notches N^3 shown, and thus prevent the scissors from closing up more than the required distance. A notch N^2 is formed on the under side of the shoulder L of the handle, and when the stop-piece O is placed in this notch N^2, as shown in Fig. 6, the scissors cannot be opened beyond the position shown, but may be completely closed up. The scissors are thus adapted for use as ordinary cutting-scissors.

In Fig. 9 the bolt K is attached to a block Q, sliding in the slot R and secured in any position therein by a set-screw. By this means the distance of the commencement of the hole cut from the edge of the material can be regulated when so required.

If desired, the bolt K in the form of scissors shown in Figs. 1 to 3 may also be made to slide longitudinally in the extension-arm.

What I claim is—

1. The combination, in a pair of scissors, of handles, cutting-blades cut away substantially as shown and described, oppositely-arranged cutters F and G, a bolt J, situated in said cut-away portion of one of the cutting-blades, a nut or block playing on said bolt, and a shoulder arranged in such relation to the path of the said nut or block that the distance of opening and closing of the cutting-blades is regulated, as set forth.

2. In a pair of scissors, the combination of a pair of ordinary cutting-blades formed adjacent to their pivot with an open frame or throat and oppositely-arranged cutters formed with or attached to said blades at the throat, one of said cutters being constructed or shaped to receive the other when the blades are closed, substantially as shown, and for the purpose described.

3. In a pair of scissors, the combination of a pair of ordinary cutting-blades formed adjacent to their pivot with an open frame or throat, oppositely-arranged cutters formed with or attached to said blades at the throat, one of which being adapted to receive the other when the blades are closed, a bolt situated in the frame of one of the blades, a nut or block playing on said bolt, and a shoulder arranged in the path of said nut or block, substantially as shown, and for the purposes set forth.

4. In a pair of scissors, the combination of a pair of cutting-blades formed adjacent to their pivot with an open frame or throat, oppositely-arranged cutters formed with or attached to said blades, one of said cutters being constructed or shaped to receive the other or opposite one when the blades are closed, and means for regulating or adjusting the opening and closing of the said cutting-blades, substantially as and for the purposes hereinbefore set forth.

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