Sept. 6, 1932. A. GEE 1,876,218

CUTTING IMPLEMENT

Filed Oct. 27, 1930

FIG. I.

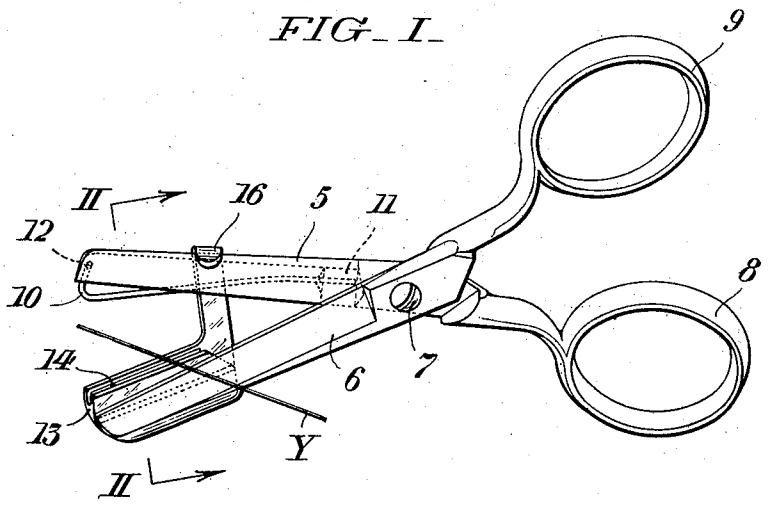


FIG. II.

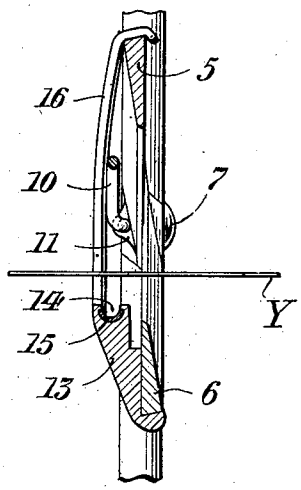
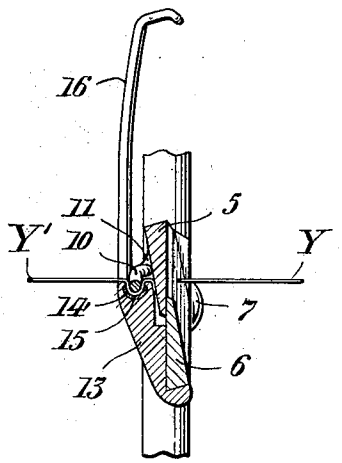


FIG. III.



WITNESSES

Thomas W. Kerr, Jr.

Hubert Hicks

INVENTOR.

Albert Gee,

BY Fraley & Paul

ATTORNEY.

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UNITED STATES PATENT OFFICE

ALBERT GEE, OF ELKINS PARK, PENNSYLVANIA

CUTTING IMPLEMENT

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This invention relates to cutting implements and has reference more particularly to cutting implements in the form of scissors useful to operators of full fashioned hosiery machines.

In the manufacture of full fashioned hosiery, the leg blanks are pressed off the needles of the producing machine with the ends of the knitting yarns from the guides or carriers still attached to the blanks. Thus to remove the blanks it is necessary that these attached yarns be severed; and in order to prevent the cut ends from being drawn out of the eyes of the guides or carriers they are brought under clips, provided on the machine for their temporary retention, in readiness for the knitting of a new set of stocking leg blanks. The performance of these functions ordinarily entails the use of both hands, and is attended by danger of injury to the fingers through contact with the knitting elements of the machine.

The object of my invention is to overcome the above recited drawbacks through provision in connection with knitter's scissors of means operative, upon severance of the yarns, to hold those ends of the yarns extending from the carriers for the purpose of engaging them under the retention clips of the knitting machines without necessitating the use of the fingers.

With reference to the attached drawing,

Fig. I is a perspective view showing a pair of scissors embodying my novel means for holding one end of a yarn after severance.

Fig. II is a cross sectional view taken as indicated by the arrows II—II in Fig. I and drawn to a larger scale; while,

Fig. III is a view corresponding to Fig. II showing the cutting blades of the scissors in closed position.

The scissors herein shown are, generally speaking, of ordinary construction with opposing blades 5, 6 interpivoted at 7 and respectively provided with finger loops 8 and 9. In adapting such a pair of scissors to the purposes of my invention, I suitably secure to the end of the blades, in this instance the upper blade 5, a flexible finger 10. This finger may be of spring wire with its rear end anchored to the blade 5 at 11, and its outer end, turned up as at 12, lying flat against the outer face of the blade. For cooperation with the flexible finger 10, I secure to the corresponding side of the other blade 6, a member 13 having a longitudinal groove 14 to receive the free end of the finger 10 when the blades 5, 6 are closed as shown in Fig. III.

In the use of the scissors, as the blades 5, 6 are closed to cut a yarn Y extending from the eye of a carrier of a knitting machine to a pressed-off stocking leg blank, the flexible finger 10 engages the yarn Y and forces it into the groove 14 of the member 13. Thus, when the yarn Y is finally severed, as shown in Fig. III, the end Y′ thereof extending to the carrier of the knitting machine is firmly held by the finger 10, and while so held, engaged under the clip provided for its temporary retention on the knitting machine.

For better grippage of the yarn, the groove 14 of the member 13 may be lined with friction material such as rubber or the like conventionally indicated at 15 in Figs. II and III. Also, to limit the extent of opening of the scissors and at the same time limit the introduction of the yarn Y between the blades 5, 6, the member 13 is formed at its inner end with a perpendicular upward portion 16 terminating in a hook to engage over the upper blade 5.

The free forward end portion of the spring finger 10 yields easily, with gradually increasing tension, as the coacting blade edges approach and shear past one another, after engagement of the finger 10 with the holding member 13, so as to hold the yarn end Y′ surely but gently. The stop arm 16 at the rear end of the member 13 prevents entry of the yarn Y between the blade edges beyond the more freely movable forward portion of the finger 10, which normally lies in advance of the edge of the corresponding blade 5. The shoulder afforded by the member 13 is located to engage the finger 10 before the blade edges pass one another, and is spaced from the corresponding blade 6 to allow the edge of the blade 5 to shear past that of the blade 6 after the engagement of finger and shoulder.

The anchorage 11 and the clamp member 14 may be made respectively as integral parts of the scissor blades 5, 6; or ordinary scissors may be converted for the purposes of my invention by soldering or welding a separately formed anchorage 11 and member 13 to the shear blades 5, 6.

While I have herein shown and described my invention in connection with scissors intended to be used by knitters, it is obvious that it may be embodied with equal advantages in cutting implements generally where it is essential or desirable that one end of the severed material be held. I therefore wish to be accorded all modifications and applications possible within the scope of the appended claims.

Having thus described my invention, I claim:—

1. The combination of a cutting implement for severing yarn and the like comprising a pair of coacting blades; a spring finger anchored at its rear end to one of the blades, and having its forward end free alongside said blade for flexure relative thereto; and a holding member on the other blade in the path of the spring finger with means to prevent entry of yarn therebeyond when the blades close.

2. The combination of a cutting implement for severing yarn and the like comprising a pair of coacting blades; a spring finger anchored at its rear end to one of the blades, and having its forward end free alongside said blade for flexture relative thereto; a holding member on the other blade in the path of said spring finger when the blades close; and a stop arm on said member, at an intermediate point in the length of said spring finger, for limiting opening of the blades and preventing entry of yarn between them beyond the more freely movable forward portion of the finger.

3. The combination of a cutting implement for severing yarn and the like comprising a pair of coacting shearing blades; a spring finger anchored at its rear end to one of the blades, with its forward portion free alongside said blade and normally lying in advance of the blade edge; and a holding member in advance of the edge of the other blade having a groove therein located to engage said spring finger before the blade edges pass one another, said groove being spaced from the blade edge to which the member is attached to permit the first mentioned blade edge to shear past the same after the spring finger engages said groove.

4. The combination of a cutting implement for severing yarn and the like comprising a pair of coacting shearing blades; a spring finger anchored at its rear end to one of the blades, with its forward portion free alongside said blade and normally lying in advance of the blade edge; a holding member on the other blade affording a shoulder located to engage said spring finger before the blade edges pass one another, and spaced from the blade edge to which the member is attached to permit the other blade edge to shear past the same after the spring finger engages said shoulder; and a stop arm at the rear end of said shoulder for limiting opening of the blades and preventing entry of yarn between them substantially beyond said finger portion lying in advance of the corresponding blade edge as aforesaid.

In testimony whereof, I have hereunto signed my name at Philadelphia, Pennsylvania, this 22nd day of October, 1930.

ALBERT GEE.