G. T. TWIDDY.

CUTTER FOR TRANSFER RINGS.

APPLICATION FILED AUG. 27, 1920.

1,402,323. Patented Jan. 3, 1922.

Fig. 1.

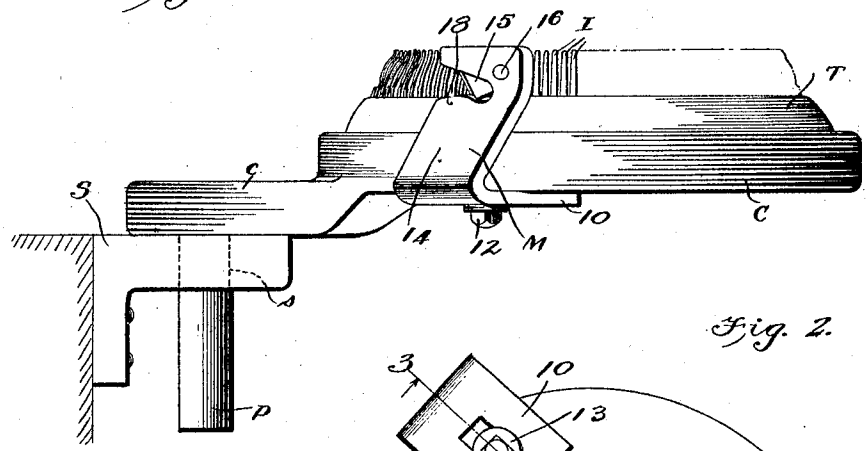


Fig. 2.

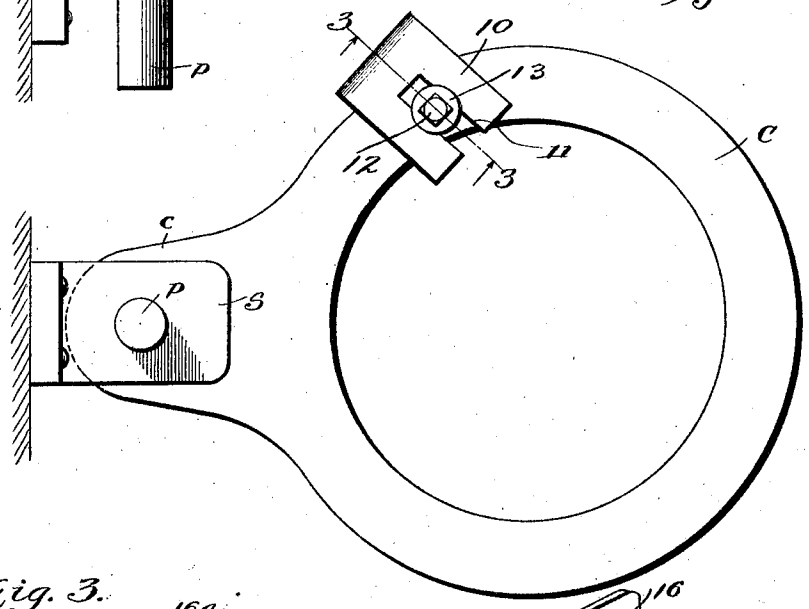


Fig. 3.

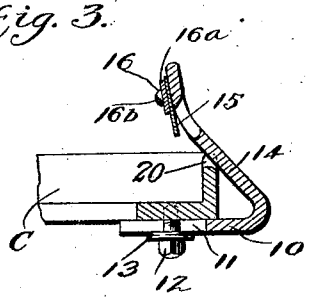


Fig. 4.

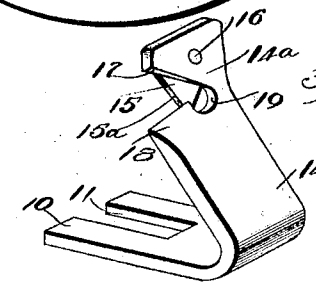
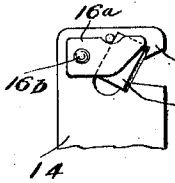


Fig. 5.



WITNESSES

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CUTTER FOR TRANSFER RINGS.

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Application filed August 27, 1920. Serial No. 406,345.

To all whom it may concern:

Be it known that I, GEORGE THOMAS TWIDDY, a citizen of the United States, and a resident of Elizabeth City, in the county of Pasquotank and State of North Carolina, have invented certain new and useful Improvements in Cutters for Transfer Rings, of which the following is a specification.

The present invention relates in general to knitting machines, and more particularly to cutting mechanism especially adapted for use with the transfer mechanism of a knitting machine.

Heretofore in this art in the manufacture of certain articles requiring the use of the transfer mechanism, it follows from the use of the transfer mechanism that an undesirable edge of the material of the article placed upon the transfer is formed, and it is necessary to remove this edge before the article can be transferred. This has usually been done by raveling down the undesirable edge. Such an operation is costly in that it requires the expenditure of a very considerable time and labor on the part of the transfer operatives.

The object of the invention is to provide for the expeditious and complete removal of this undesirable edge and to eliminate the necessity of the operatives raveling down the same; to provide a cutting mechanism for carrying out this purpose which is so associated with the transfer mechanism as to in no way interfere with the placing of an article thereupon and at the same time to be always effective to cleanly and completely remove the undesirable edge in a minimum time, and which is of simple and durable construction and easy and inexpensive to manufacture.

Other objects and advantages of the invention reside in certain novel features of construction, combination and arrangement of parts as will be hereinafter more fully described and particularly pointed out in the appended claims, reference being had to the accompanying drawings forming part of this specification, and in which:

Figure 1 is a side elevational view of the transfer mechanism, the associated cutting mechanism being shown in perspective;

Figure 2 is a bottom plan view of the transfer mechanism and cutting mechanism;

Figure 3 is a transverse vertical sectional view, on line 3—3 of Figure 2; and

Figures 4 and 5 are detail perspective views of the cutting mechanism detached from the transfer.

Referring to the drawings, it will be seen the invention contemplates a transfer mechanism of conventional construction which as usual includes a transfer cup C having an integral lug *c* from which the pin *p* depends. The pin *p* is adapted to be received in a socket *s* provided in the bracket S which is secured to any suitable support. A transfer ring T having quills *t* as usual is rotatably received in the transfer cup C. As is well known in the art, the quills *t* are adapted to receive the fabric of the article being manufactured and the undesirable edge which it is desired to remove extends exteriorly from the quills and lying upon the outside surface of the transfer ring T.

The cutting mechanism for removing this undesirable edge is designated generally at M. The cutting mechanism includes a base 10 which is provided with a slot 11 which extends from the outer end of the base and centrally thereof for a greater portion of its length. The base 10 of the cutting mechanism is adapted to be disposed against the under side of the transfer cup C and is adjustably secured thereto, preferably by means of a bolt 12, the shank of which extends through the slot 11 of the base 10 and is then threaded into the transfer cup. A washer 13 is interposed between the head of the bolt 12 and the base 10 to more securely fasten the base in adjusted position. A body portion 14 is formed integral with the base 10 and extends upwardly and inwardly over the base 10, so that when the cutting mechanism is associated with the transfer mechanism the body portion 14 extends upwardly and inwardly over the transfer cup and the transfer proper, the transfer cup C being cut away slightly for this purpose, as shown at 20 in Figure 3. A cutter 15 which has a highly sharpened knife edge 15^a is secured, as at 16, to the upper end 14^a of the body portion 14. The upper end 14^a of the body portion is curved backwardly from the incline of the body portion 14 so as to extend substantially vertically. The securing means 16 for the cutter proper includes a holder or clamp plate 16^a and a set screw 16^b which extends through the holder plate and is seated in the end 14^a of the body portion.

Adjacent the knife or cutter 15 the body

portion 14ª is cut away, as at 17, and this forms a beveled table 18, upon which the edge is received as it is fed to the knife. A discharge opening 19 for the cuttings is also formed.

In practice, it will be noticed that the cutting mechanism is first adjusted to the character of the transfer mechanism by adjustment of the slotted base 10. It is then clamped in position by tightening of the bolt 12. The cutter or knife 15 may also be adjusted by operating its set screw 16 and adjusting its clamp plate 16ª. When this adjustment has been effected and it is desired to remove the edge, it is simply necessary to grasp the edge and pull on the same across the table 18 and past the cutter. The cutter severs the edge from the remainder of the fabric on the transfer, the transfer ring rotating to accommodate a complete removal of the edge. This operation may be carried out very rapidly as a simple grasping and pull is all that is necessary to cleanly and completely remove the edge.

I claim:

1. In a device of the character described, in combination, a transfer mechanism including a cup and a transfer ring rotatably mounted in said cup and adapted to carry a fabric having an edge overlying the exterior thereof, cutting mechanism for removing the edge of the fabric comprising a base provided with a slot, means for adjustably clamping the base to the transfer cup including a bolt having its shank extending through the slot of said base and seated in the transfer cup and a washer interposed between the head of the bolt and the base, a body portion integral with the base and extending over the transfer mechanism, said body portion being cut away at its upper end to provide a beveled table and a discharge opening for the body portion, a cutter having a highly sharpened knife edge arranged adjacent said table, means for clamping the cutter to the body portion including a clamping plate, and a set screw, whereby when the edge is grasped and drawn across the table it will be severed from the remainder of the fabric on the transfer ring.

2. In a device of the character described, in combination, a transfer mechanism including a cup and a transfer ring rotatably mounted in said cup and adapted to carry a fabric having an edge overlying the exterior thereof, cutting mechanism for removing the edge of the fabric comprising, a base, a body portion integral with the base and extending over the transfer mechanism, said body portion being cut away at its upper end to provide a beveled table and a discharge opening for the body portion, a cutter having a highly sharpened knife edge arranged adjacent said table, whereby when the edge is grasped and drawn across the table it will be severed from the remainder of the fabric on the transfer ring.

3. In a device of the character described, in combination with a transfer mechanism including a cup and a transfer ring rotatably mounted therein, cutting mechanism including a base adjustably secured to the transfer cup, a body portion extending from said base over the transfer mechanism, and a cutter secured to the upper end of the body portion and disposed closely adjacent said transfer ring.

4. In combination with transfer mechanism including a cup and a rotatable transfer ring in said cup, cutting mechanism carried by the cup and cooperably arranged with respect to the transfer ring for removing the edge of the fabric carried by the transfer mechanism upon rotation of the transfer ring.

5. In combination with a rotatable transfer ring, cutting mechanism including a cutter cooperably arranged with respect to the transfer ring and adapted to remove the edge of the fabric carried by the transfer ring when the edge of the fabric is grasped and drawn across the cutter, the rotatable transfer ring partaking of rotary motion to accommodate this action.

GEORGE THOMAS TWIDDY.