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L. N. D. WILLIAMS

METHOD OF AND MEANS FOR TRANSFERRING KNITTED WEBS

Filed Dec. 14, 1922

FIG. I.

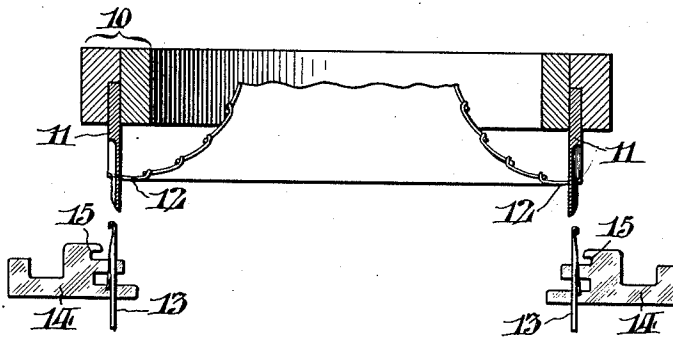


FIG. II.

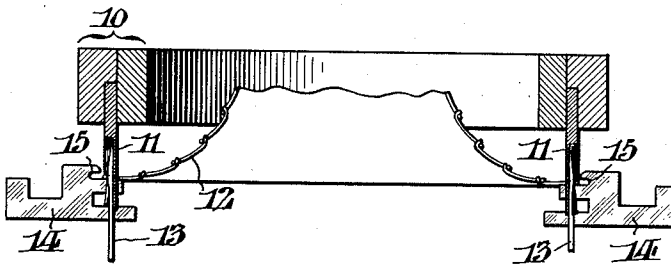


FIG. III.

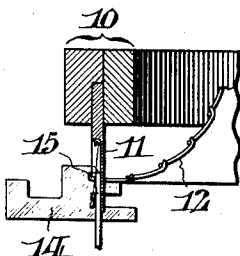
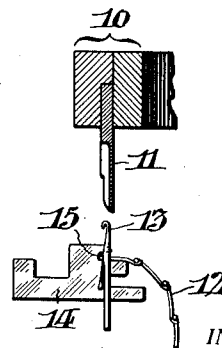


FIG. IV.



WITNESSES:

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METHOD OF AND MEANS FOR TRANSFERRING KNITTED WEBS.

Application filed December 14, 1922. Serial No. 606,789.

To all whom it may concern:

Be it known that I, LOUIS N. D. WILLIAMS, a citizen of the United States, residing at Ogontz, county of Montgomery, and State of Pennsylvania, have invented certain new and useful Improvements in Methods of and Means for Transferring Knitted Webs, whereof the following is a specification, reference being had to the accompanying drawings.

This invention relates to circular knitting, and more particularly to transferring knitted webs to the needles of a knitting machine.

The object of the invention is to provide a method and means to facilitate the transfer of knitted webs by operators not specially skilled in this accomplishment, the invention being particularly characterized by utilization of the web holders of an ordinary knitting machine to hold the stitches and to strip them from the stitch carrying points of the transfer device as the latter is withdrawn from the needles.

I have illustrated in the accompanying drawings several views which disclose the relation of the parts of a circular knitting machine and a web transferring device in the form of a ring, and their relative movements to effect transfer of the stitches in accordance with my invention; in which drawings Fig. I is a more or less diagrammatic illustration in section of a conventional form of transfer ring in position ready to be brought into operative engagement with the needles.

Fig. II is a similar view showing the transfer ring in position upon the needles.

Fig. III is a view of one side of the transfer ring showing the web holders in projected position to aid in stripping the stitches; and

Fig. IV is a view similar to the immediately preceding showing the transfer ring as having been withdrawn and the stitches transferred to the needles.

In transferring a knitted web to the needles of a knitting machine as ordinarily practiced with the aid of a transfer ring, it is necessary, after the points of the latter are brought into proper relation to the needles, to so manipulate the ring that the points can be withdrawn from the stitches without dislodging or dropping any of them from the needles. To do this properly re-

quires a high degree of skill, and it frequently happens, even with most careful and skilled operators, that not only are some stitches lost or dislodged, but the points of the transfer ring, or the needles, or both, are bent, broken or otherwise injured incidentally to removal of the ring. These disadvantages I overcome by employing the web holders of an ordinary knitting machine, to hold the stitches while the transfer ring is removed.

The manner in which the web holders are controlled in their movements to function as above noted is illustrated in the drawings in which 10 indicates generally a transfer ring of conventional type, the same supporting in clamped relation, an annular series of points or quills 11 upon which the stitches 12 of a knitted web are impaled. The quills are fluted as shown so as to be capable of sheathing the needles. In transferring the web, the ring is lowered upon the needle bed of the machine to the position shown in Fig. II in such manner that the needle hooks are individually sheathed by the quills 11, thereby enabling the fabric stitches 12 to glide over said needle hooks and on to the needle shanks after a manner well understood by skilled knitters.

The web holders indicated at 14 are of conventional type, and adapted, in their normal function of assisting stitch formation, to be reciprocated back and forth in the intervals between the needles in the usual way. Preparatory to applying the transfer ring 10 to the needles 13 in accordance with my invention as above explained, I first withdraw or retract all the web holders 14 as shown in Fig. I. This enables me to bring the stitches 12 on the quills 11 of the transfer ring 10, to the level of the sinker wale notches 15 in the web holders when the ring is placed in position on the needle bed as shown in Fig. II of the drawings. Then by projecting or advancing the web holders 14 to the inward position which they normally occupy as shown in Fig. III, the sinker wales of the web are engaged within the notches 15 of the web holders 14 so that the stitches 12 are thereby held or retained as the ring 10 is removed, the web holders thus serving in an additional capacity as a means for stripping the fabric stitches from the quills of the ring 10. Any suitable means not shown, may be provided for ac-

tuating the sinkers for the purposes of my invention and need not therefore be further referred to herein.

Having thus described my invention, I claim:

1. The method of transferring the stitches of knitted webs from the points of a transfer device to the needles of a knitting machine, which consists in projecting the web holders to engage all the stitches and retain the same on the needles while the transfer device is withdrawn.

2. The method of transferring the stitches of knitted webs from the points of a transfer device to the needles of a knitting machine, which consists in withdrawing the web holders, engaging the points over the needles for impalement of the stitches upon the needles, projecting the web holders so as to engage and retain the stitches on the needles, and withdrawing the transfer device and leaving the stitches on the needles.

3. The method of transferring the stitches of knitted webs from the points of a transfer

device to the needles of a knitting machine, which consist in withdrawing the web holders to permit the stitches to slip over the needles, and projecting the web holders to retain the stitches on the needles while the transfer device is withdrawn.

4. In a knitting machine the combination of knitting needles and a transfer device including stitch carrying points adapted to embrace the needles for impalement of the stitches thereupon, and web holders capable of being withdrawn to permit of such impalement and then projected simultaneously to engage all the stitches and retain the same on the needles while the transfer device is removed.

In testimony whereof, I have hereunto signed my name at Philadelphia, Pennsylvania, this 11th day of December, 1922.

LOUIS N. D. WILLIAMS.

Witnesses:

JAMES H. BELL,
E. L. FULLERTON.