

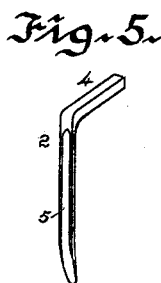
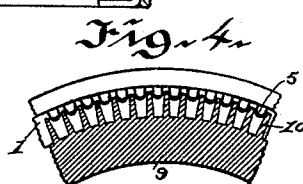
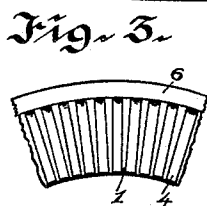
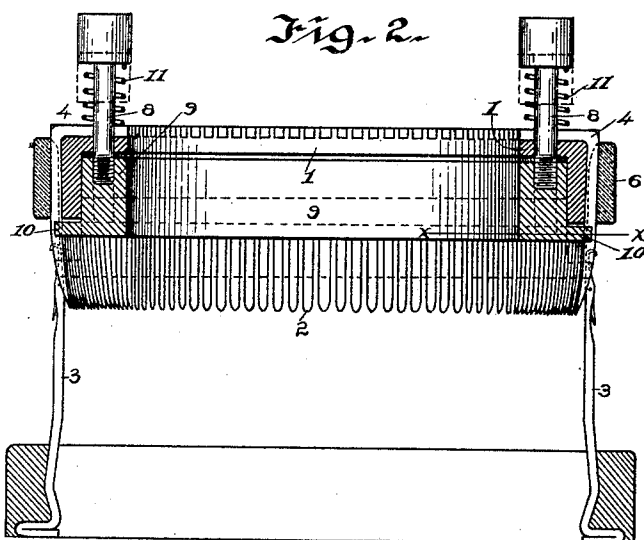
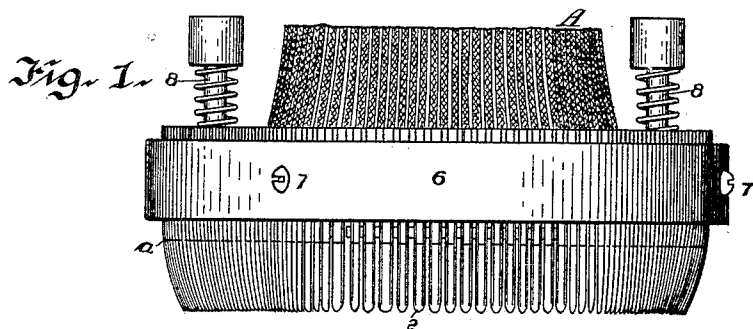
(No Model.)

W. H. ALMY.

TRANSFER DEVICE FOR KNITTING MACHINES.

No. 467,907.

Patented Feb. 2, 1892.



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UNITED STATES PATENT OFFICE.

WILLEY H. ALMY, OF ROCHESTER, NEW YORK, ASSIGNOR TO THE ROCHESTER
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TRANSFER DEVICE FOR KNITTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 467,907, dated February 2, 1892.

Application filed September 15, 1891. Serial No. 405,765. (No model.)

To all whom it may concern:

Be it known that I, WILLEY H. ALMY, of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Transfer Device for Knitting-Machines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference marked thereon.

My present invention has for its objects to provide a device for transferring or applying the stitches of knit goods to the needles of a knitting-machine, which, if desired, may be of a different kind from the one which performed the first knitting operation—as, for instance, applying the knit wristbands or ribbed ends of garments or hosiery to machines for forming the body of the garment or stocking, or vice versa—it being capable of many uses, either in the form shown herein or in other forms particularly adapted to any variety of machine; and to these and other ends the invention consists in certain improvements in construction and combinations of parts, all as will be hereinafter fully described, and the novel features pointed out in the claims at the end of this specification.

In the drawings, Figure 1 is a side elevation of a device constructed in accordance with my invention, with a piece of knit-goods applied thereto ready to be transferred to a knitting-machine. Fig. 2 is a sectional view showing the device applied to the needles of a knitting-machine; Fig. 3, a top view of a portion of the main supporting-ring; Fig. 4, a sectional view on the line *xx* of Fig. 2, looking upward; Fig. 5, a view of one of the transfer-needles or stitch-supports detached.

Similar reference numerals and letters in the several figures denote similar parts.

The form of the invention shown in the drawings is adapted for transferring tubular knit fabrics, such as the ribbed bands or end pieces of hosiery or other garments, to the machines that form the body portion thereof, and accordingly the main frame consists of a ring 1, having secured to it a series of grooved transfer-points 2 for receiving the stitches of the goods to be transferred, corresponding in

number to the needles 3 of the knitting-machine that is to form the balance of the garment. The preferred form of transfer-point 2 is made from a single piece of wire with its upper end 4 bent at an angle and its lower or body portion reduced and provided with the groove 5 in its outer side, with which the knitting-needle co-operates. These points are secured to the ring 1 by forming in the outer side of the latter a series of grooves, one for the reception of the body of each point, and in the top a corresponding radial groove for the bent upper end 4, as shown in Figs. 2 and 3. The outer side of ring 1 tapers toward the bottom (as it is located in the drawings) and the points are held and securely clamped in position by an outer ring 6, (tapered on the inside to correspond to ring 1,) which engages their outer sides, as they are slightly thicker than the depth of the grooves in ring 1, said ring 6 being secured in position when forced on by screws 7 or other securing devices. This construction enables me at any time to replace any of the points that may become broken or bent and, as the ring 1 is made to a gage, to readily assemble the parts.

Passing vertically through the ring 1 are two pins 8, secured at their lower ends to a sinker or doffer-plate 9, arranged inside the transfer-points and having fingers or points 10 projecting between the latter, as shown in Figs. 2 and 4, the upper ends of said pins 8 having heads, between which and ring 1 are arranged springs 11, normally pressing the pins upward and holding the sinker in the position shown in Fig. 2 in full lines.

The manner of using the device will now be apparent to those skilled in the art. The operator first places the stitches *a* of the ribbed cuff or knit band A (shown in the drawings) upon the transfer-points 2 of the device in the usual manner, preferably by inserting the first open series of stitches over the said points and then raveling the yarn down, so as to leave only this last series of stitches on the points. Having done this, he places the device over the needles of the machine to which the work is to be transferred, as in Fig. 2, with one of the needles 3 in the groove of each of the transfer-points, and then

presses down on the pins 8, the points 10 of the sinker engaging the stitches and moving them down on the needles, as in dotted lines Fig. 2, when the transfer device may be removed and the knitting-machine operated in the usual manner.

While I have shown a form of device adapted for circular-knitting machines, it is evident that substantially the same mechanism could be adapted for straight goods, and I do not therefore desire to be confined to precisely the construction shown and described, except as stated in the claims.

I claim as my invention—

1. The combination, with the supporting-

ring and the series of grooved transfer-points secured thereto, of the annular sinker having the fingers projecting between the transfer-points and adapted to be moved longitudinally thereof, substantially as described. 20

2. The combination, with the supporting-ring and the series of grooved transfer-points secured thereto, of the annular sinker, the operating and steadying pins co-operating with the ring, and springs for retracting the sinker, substantially as described. 25

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