

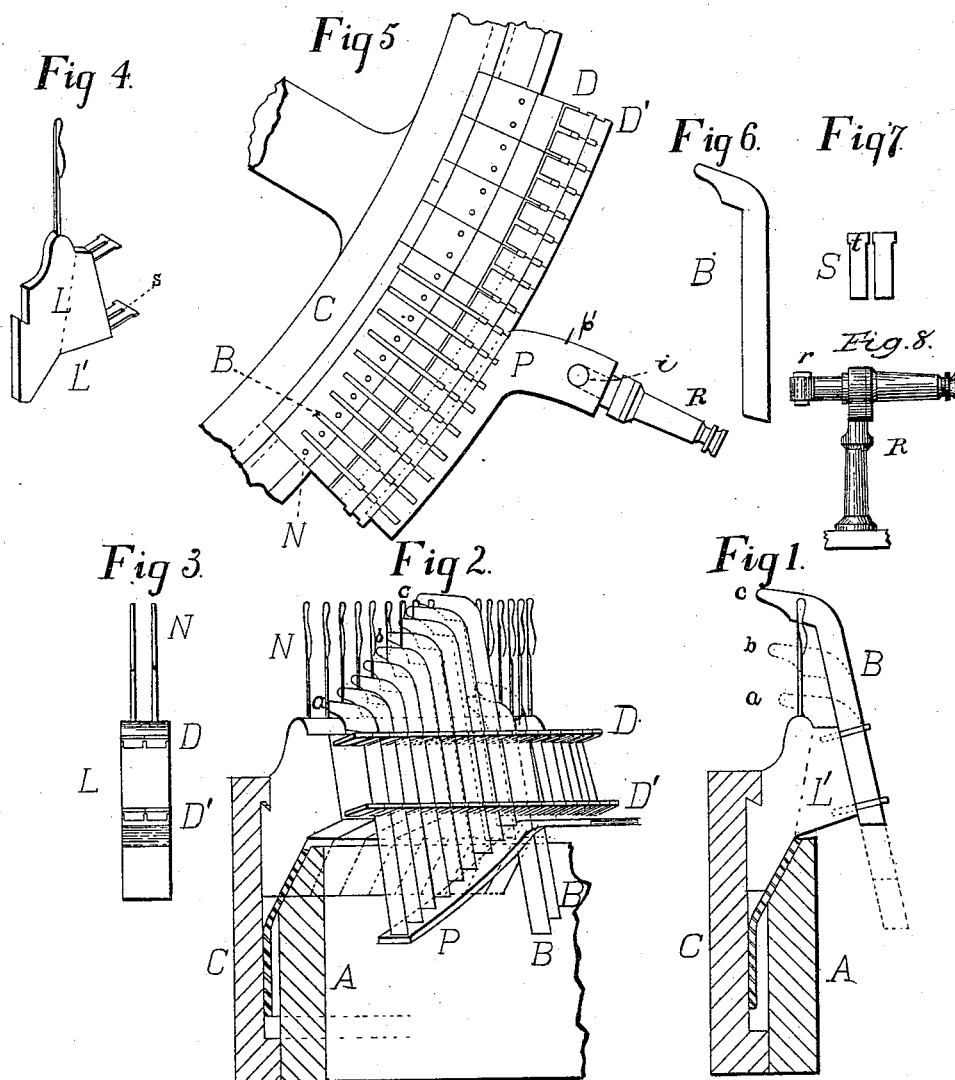
(No Model.)

R. W. GORMLY.

LANDING AND CAST OFF ATTACHMENT FOR KNITTING MACHINES.

No. 346,743.

Patented Aug. 3, 1886.



Witnesses,

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LANDING AND CAST-OFF ATTACHMENT FOR KNITTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 346,743, dated August 3, 1886.

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To all whom it may concern:

Be it known that I, ROBERT W. GORMLY, a citizen of the United States, residing at Troy, in the county of Rensselaer and State of New York, have invented a new and useful improvement in Landing and Cast-Off Attachment is fully set forth in the following specifications for Knitting-Machines, which improvement, reference being had to the accompanying drawings.

Within needle-guiding cylinders of rotary knitting-machines employing bearded needles are ordinarily placed a landing and cast-off wheel, the former of which takes up the old loop and raises it above the needle-barb, when the latter throws the same loop over the point of the needle.

The object of my invention is to dispense with these landing and cast-off wheels, and to perform their functions more expeditiously and with one operation by my device, as hereinafter set forth.

My invention, therefore, consists in the construction and arrangement of improvements outside of and around the ordinary needle-cylinder, and in operating the same in connection therewith, as hereinafter described, in throwing off the loops from the points of the vertical needle consecutively, as hereinafter set forth.

The illustration of my improvements and their operation may be seen by the accompanying drawings, making part of my specification.

Figure 1 is a vertical section of a needle-cylinder, showing a needle-lead and the landing and cast-off bar applied thereto. Fig. 2 is a sectional view of a part of needle-cylinder with the invention applied thereto, parts being broken away. Fig. 3 is a front view of a set of needles in their carrying-lead with the cast-off bar removed. Fig. 4 is a perspective view of a needle-lead, showing especially the places of the upper and lower slots formed by the separate T-plates S fixed in position. Fig. 5 is a plan view of the parts shown in Fig. 2, showing, also, a stand upon which the inclined plate P is secured. Fig. 6 is a plan of the cast-off bar. Fig. 7 is a plan of a pair of T guide-plates. Fig. 8 shows the stand for supporting the plate P.

In the drawings similar letters in the different figures refer to corresponding parts.

In Fig. 4, to the left of the dotted line, appears the needle-lead as commonly cast. I extend the molds outwardly, and in the outward extension I insert the separate T-plates S, which are securely held when the metal is poured in. When the needle-leads are fixed upon the cylinder, these plates in double row (seen in Fig. 4) form a double line of guide-slots, D and D', as seen in Fig. 2, through which the movable landing and cast-off bars B operate. One of these bars is seen detached in Fig. 6, and they are of such form and are made of suitable length that when sliding up the inclined plate P the lowest end of such bar will be below the lower line of slots, D', when arriving at the position c, where the bar leaves the inclined plate. The leads, having the ordinary needles, N, in position and my fixed guide-plates in place, as shown in Fig. 4, are bolted around the periphery of the cylinder in the ordinary manner and held by cap A, as seen in Figs. 1 and 2, and the cast-off bars B are inserted in the guide-slots. At point i, I attach the arm p' of the plate P to the stand R, the inclined portion of plate P being placed at such an angle that the cast-off bars, in the rotation of the needle-cylinder, may be raised to the different altitudes indicated.

Now, in operation, my improvements being complete and the cast-off bars inserted so as to operate between each two needles, as the needle-cylinder rotates, the old loop of the fabric, being in the ordinary manner pressed down, rests immediately over the point or prong of the cast-off bar at a. As the cylinder rotates, the movable bars are raised, ascending the inclined plate to position b, then to position c, when, by the point of the cast-off bar, the old loop is thrown off the upper end of the needle. Then the bars, passing over the inclined plate, fall or are pressed to the first position by the hold-down wheel, and at the same time the new loop is pressed down from within the barb of the needle and rests on the point of the cast-off bar, which is again in the position shown at a, when by a similar movement and operation the loop is again raised and cast off as before, and so on continually and uniformly the loops are cast off the upper end of

the needle while loops are being formed and knitted to the fabric in the ordinary manner.

What I claim, and desire to secure by Letters Patent, is—

- 5 1. The combination, with the leads having needles secured therein, and the plates S, of bars B, guided between said plates, as and for the purpose set forth.
- 10 2. The combination, with needle-cylinder, the needle-leads, the needles, and the plates S, secured in the leads, of the landing and cast-off bars and inclined plate P, all substantially as described.
3. The combination, with the leads having

needles and double T guide-plates secured 15 therein, of the bars B, substantially as described.

4. The combination, with the needle-cylinder and the leads having needles and double T guide-plates secured therein, of the in- 20 clined plate P, means to sustain it in its inclined position, and the cast-off bars, as and for the purpose set forth.

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Witnesses:

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