(No Model.)

J. C. EGLY.

NEEDLE CYLINDER FOR KNITTING MACHINES.

No. 422,751. Patented Mar. 4, 1890.

Fig. 1.

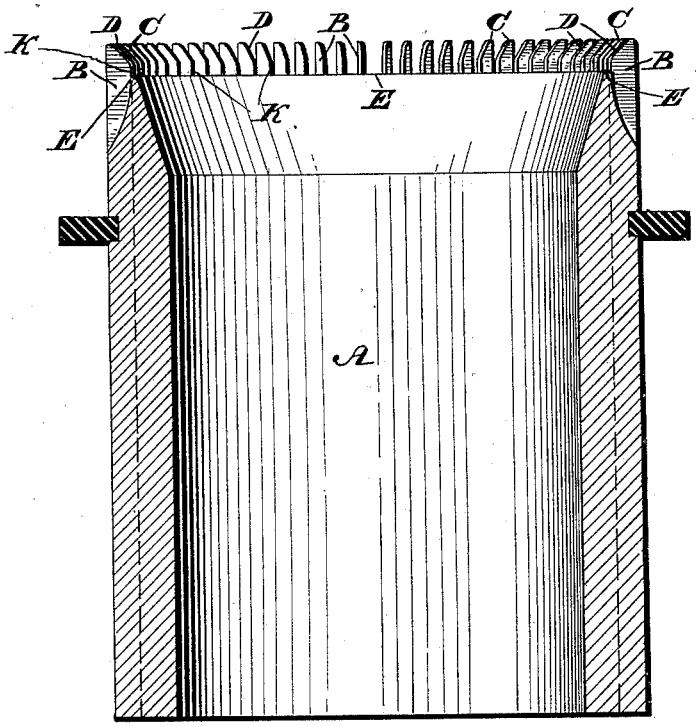


Fig. 2.

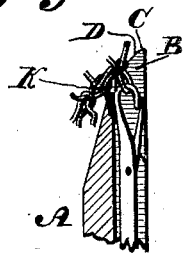
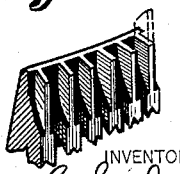


Fig. 3.



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JOHN C. EGLY, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THOMAS A. PEARCE AND ROSE E. EGLY, OF SAME PLACE.

NEEDLE-CYLINDER FOR KNITTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 422,751, dated March 4, 1890.

Application filed June 21, 1889. Serial No. 315,066. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. EGLY, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Needle-Cylinders for Knitting-Machines, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to circular-knitting machines; and it consists in the construction of a novel form of needle-cylinder, as will be hereinafter more fully set forth.

Figure 1 represents a transverse vertical section of a needle-cylinder embodying my invention. Fig. 2 represents a detail sectional elevation of part of a needle-cylinder, showing a needle in position therein. Fig. 3 represents a detail perspective view of a part of the upper end of the old form of needle-cylinder, the difference between the same and the improved construction being shown in dotted lines.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a needle-cylinder formed with needle-grooves, the bars or walls B of which as heretofore constructed terminated flush with the upper or knitting edge of the cylinder, as shown in Fig. 3.

In my improved cylinder the dividing walls or bars are cut away on their sides at the upper ends and extend upward beyond the top edge of the inner part of the cylinder, as at C. A horizontal shoulder E is formed at the upper working-edge of the cylinder, and the said shoulder extends completely to the inner edges of the bars or walls of the needle-grooves. The inner upper portions of the said projected bars or walls are beveled, as at D, and the inner edges of said bars or walls, as at K, extend downward at an angle to said bevel and to the shoulder E. By this means the loops as formed are caught and held by the inner edges of the upper ends of said bars or walls and the said loops caused to be regularly formed and imperfections prevented.

In the cylinders now in use, when the loops are formed, they are held on the upper or working edge of the cylinder during the downward movement of the needles and until the latter again rise through said loops to take the yarn for the formation of successive loops. The said upper or working edge of the cylinder, being in a horizontal plane, will allow the parts of the loops which lie across the bars of the cylinder to be pulled out over the center of the needle-head, and when the needle rises after a loop has been formed the fabric will slacken slightly and allow the needle to pass back through the same loop which it has just been forming, and by so doing will form no loop at all, but form imperfection in the knitting, which is of frequent occurrence even with experienced operators.

By my improved construction the loops as they are formed are knocked over by the projecting ends of the walls or bars B and caused to move for enough inward toward the inner edge of the cylinder to make it impossible, when the needle rises after having formed a loop, for the needle to pass up through that same loop it has just been forming, whereby an inexperienced operator can make perfect work without difficulty, and an additional tension is brought to bear on the yarn or thread and closer knitting is thereby accomplished.

In the formation of heels and toes of hosiery by my improved construction the gore is regular and less weight is required to hold the fabric down in the cylinder.

It is obvious that slight changes in construction might be made and substituted for those shown and described without departing from the nature or spirit of my invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A needle-cylinder having upwardly-projecting bars or walls whose inner edges are formed at an angle to the working-edge of the cylinder and whose uppermost inner corners are cut away to form a bevel, substantially as described.

JOHN C. EGLY.

Witnesses:
JOHN A. WIEDERSHEIM,
JAMES F. KELLY.