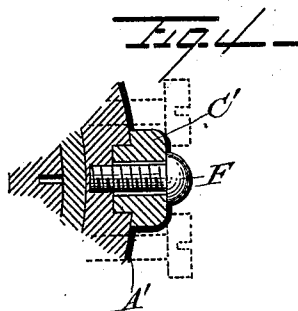
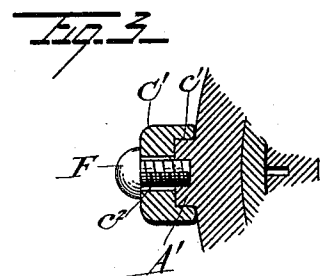
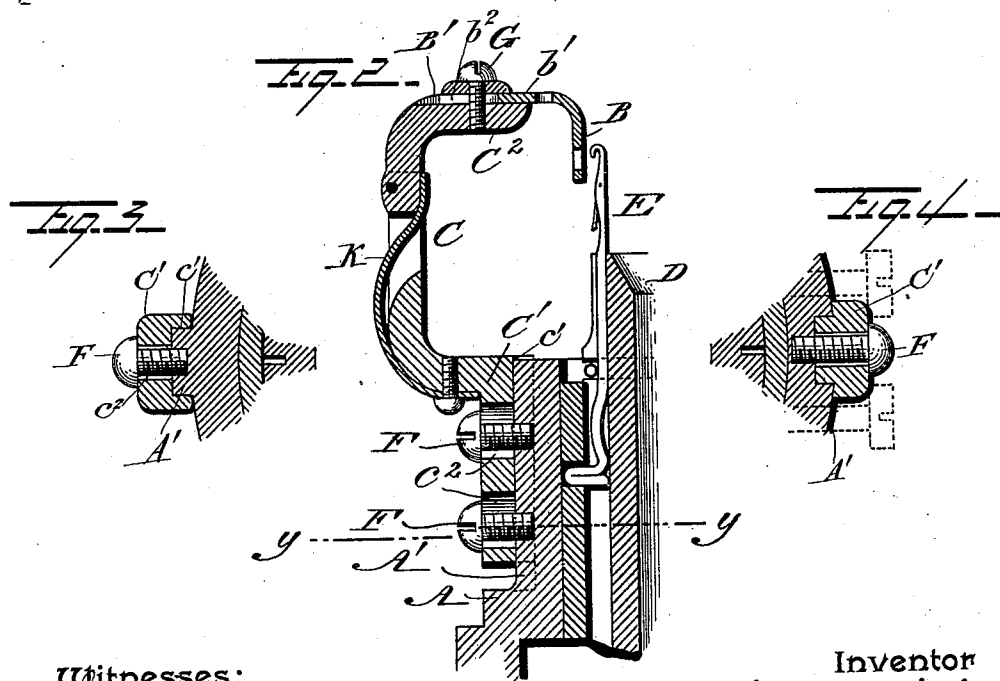
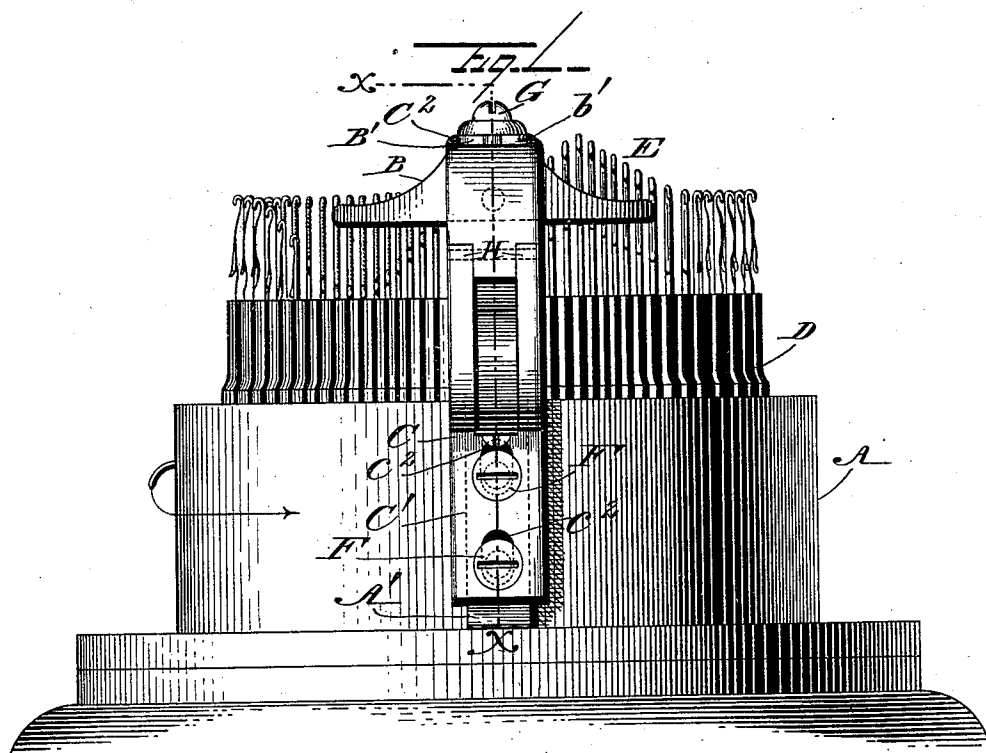


(No Model.)

H. BRINTON & B. M. DENNEY.
YARN GUIDE FOR KNITTING MACHINES.

No. 426,761.

Patented Apr. 29, 1890.



Witnesses:
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UNITED STATES PATENT OFFICE.

HENRY BRINTON, OF PHILADELPHIA, PENNSYLVANIA, AND BARCLAY M. DENNEY, OF CAMDEN, NEW JERSEY.

YARN-GUIDE FOR KNITTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 426,761, dated April 29, 1890.

Original application filed December 17, 1888, Serial No. 294,025. Divided and this application filed October 17, 1889. Serial No. 327,302. (No model.)

To all whom it may concern:

Be it known that we, HENRY BRINTON, of the city and county of Philadelphia, State of Pennsylvania, and BARCLAY M. DENNEY, of the city and county of Camden, State of New Jersey, both citizens of the United States, have invented certain new and useful Improvements in Yarn-Guides for Knitting-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, of which—

Figure 1 is a front elevation of our improved yarn-guide in connection with so much of a knitting-machine as is necessary to show the invention. Fig. 2 is a partial vertical section on the line *xx*, Fig. 1. Fig. 3 is a partial transverse section on the line *yy*, Fig. 2. Fig. 4 is a like partial section showing slight modifications.

This invention relates to an improvement in knitting-machine yarn guides or carriers, whereby the same shall be adjustable either vertically or horizontally, or both, to meet special requirements, and shall be rigidly and positively held at the point or points of adjustment. The desirability of a yarn-guide possessing these features has long been recognized, and there have been attempts to secure the same; but such attempts, so far as we can learn, were practically unsuccessful, in that after use the connections of the parts loosened, and, the yarn-guide thus becoming displaced, a readjustment of the parts was necessary.

The construction, operation, and scope of our improvement will be readily understood from the following description and claims.

In the annexed drawings, A represents an ordinary knitting-machine cam-cylinder; B, the yarn-guide; C, its supporting-post; D, the needle-cylinder, and E the needles therein contained.

The cam-cylinder A we provide with a vertical rib or projection A' at or about the point where the yarn-guide post is usually secured—viz., just back of the vertical median line of the knitting-cams. This rib may be integral with the cam-cylinder, or it may be a

separate piece firmly secured to said cylinder. The lower part C' of the yarn-guide post has in its inner side a longitudinal groove or recess *c'*, which registers with the rib or projection A'. Part C' has also one or more vertical slots *c*²—two in the present instance—through which pass clamping-screws F, that enter said rib or projection. Thus, by loosening these screws the post C may be adjusted vertically, and by tightening the screws it will be held at the point of adjustment.

The upper part of the yarn-guide post is hinged or pivoted in the usual manner in and between vertical lugs H H, formed on the lower part C' of said post, as seen in Figs. 1 and 2, the upper part being maintained in the position shown by means of a flat curved spring K, which is so secured to the lower part as to act against the pivoted end of the upper part. By this construction the latter may be swung away from the needles as occasion may require.

The inner end of the limb C² of the upper hinged part of the yarn-guide post has therein a recess B', within which snugly fits the horizontal extension *b'* of the yarn-guide B. In this extension is a slot *b*², through which passes into the limb C² a screw G. Thus, by loosening the latter the guide may be moved to or from the needles, and by tightening the screw the guide will be fixed at the desired point.

From the foregoing-described construction it will be seen that the yarn-guide post will always be parallel with the axis of the cylinder and the yarn-guide be in proper relative position with said post, both being guided in their vertical and horizontal adjustments, respectively, by the side supports and held thereby against lateral displacement. Were it not for these lateral supports the yarn-guide—i. e., the guide proper and its post—though rigidly held at first by the screws, would in a comparatively short time in practice become loose and displaced, thus necessitating a readjustment of the parts. This arises from the great pressure of the yarn-guide and post against the screws during the

rapid rotation of the cam-cylinder, which not only wears away the sides of the screws and their slots, but works the screws loose.

Nice adjustment of the yarn-guide with respect to the needles is absolutely necessary for good results, and this adjustment is governed by the kind of needles used in the machine—that is, long and short shank and fine and coarse hook-needles. The long and short shank-needles require, respectively, high and low adjustment of the yarn-guide. The fine and coarse hook-needles each require vertical and horizontal adjustment of the guide—that is to say, with fine hook-needles the guide must be lower and more inward than with the coarse hook-needles, in order to compensate for the difference in the size of the hooks.

We do not restrict ourselves to the specific arrangement and construction of parts above specified, as the same may be modified without departing from our invention—as, for example, the rib or projection and the groove in the cam-cylinder and yarn-guide post, respectively, may be reversed—that is, the groove may be formed in the cylinder and the registering rib or projection be on the yarn-guide, as shown in Fig. 4. Again, the slots may be dispensed with, in which case the screws would work in the cam-cylinder adjacent to the sides of the guide-post, so that the screw-heads would bear upon and bind said post, as also shown in Fig. 4 in dotted lines.

This application is a division of an application for Letters Patent filed by us December 17, 1888, Serial No. 294,025.

Having thus described our invention, we claim as new and wish to secure by Letters Patent—

1. In a knitting-machine, the combination of the rotatable cam-cylinder, the yarn-guide and its supporting-post, the upper or horizontal arm of said post, and the horizontal extension of the yarn-guide, having one a horizontal groove or recess with which the other is adapted to register, together with the screw or screws, substantially as described.

2. In a knitting-machine, the combination of the rotatable cam-cylinder, the yarn-guide and its supporting-post, the upper or horizontal arm of said post having a recess therein, with which the horizontal extension of the yarn-guide is adapted to register, together with the screw or screws connecting said horizontal extension and recessed arm, substantially as described.

3. In a knitting-machine, the combination of the rotatable cam-cylinder, the slotted yarn-guide and its supporting-post, the upper or horizontal arm of said post having a recess therein, with which the horizontal extension of the yarn-guide is adapted to register, together with the screw connecting said horizontal extension and recessed arm, substantially as described.

4. In a knitting-machine, the combination, with the rotatable cam-cylinder, of the slotted yarn-guide post, the one provided with a longitudinal recess and the other with a rib fitted and vertically adjustable with relation to said recess, the screw or screws F, adapted to fix the said post at various positions of adjustment, the slotted yarn-guide attached to the horizontal arm of said post, said guide and arm having one a recess with which the other registers, together with the screw G, substantially as described.

5. In a knitting-machine, the combination of the rotatable cam-cylinder provided with the exterior vertical projection or rib, the yarn-guide-supporting post provided with the longitudinal groove fitted to said projection, and also provided with the vertical screw slot or slots, the screw or screws F, the yarn-guide provided with the horizontal screw slot therein, and the screw G, substantially as described.

In testimony whereof we have hereunto affixed our signatures this 25th day of September, A. D. 1889.

HENRY BRINTON.
BARCLAY M. DENNEY.

Witnesses:

JOHN NOLAN,
GEO. W. REED.