

(No Model.)

D. MINICH.
CIRCULAR KNITTING DEVICE.

No. 569,463.

Patented Oct. 13, 1896.

Fig. 1.

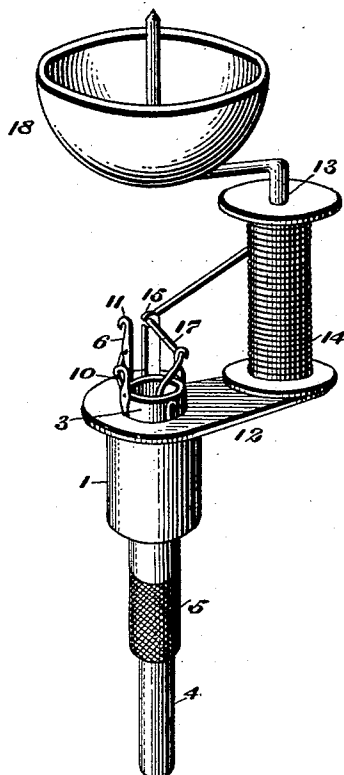


Fig. 2.

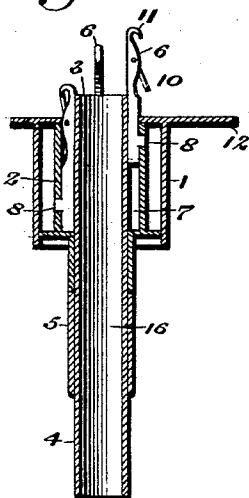
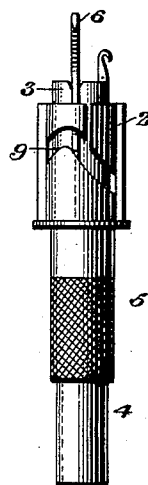


Fig. 3.



WITNESSES:

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DANIEL MINICH, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO DAVID GERSTLAUER, OF SAME PLACE.

CIRCULAR-KNITTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 569,463, dated October 13, 1896.

Application filed October 1, 1895. Serial No. 564,260. (No model.)

To all whom it may concern:

Be it known that I, DANIEL MINICH, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Circular-Knitting Machines, of which the following is a specification.

My invention consists of a new and novel circular-knitting machine constructed of such parts and operated in a manner that it may be readily used by children and persons of little skill and which is capable of producing a woven or knitted cord serviceable for many purposes.

Figure 1 represents a perspective view of a knitting-machine embodying my invention. Fig. 2 represents a vertical section of the machine shown in Fig. 1. Fig. 3 represents a side view of a portion of the machine, showing the cam-groove in cam-cylinder with reference to the needles.

Similar numbers indicate like parts in the different figures.

Referring to the drawings, 1 represents a cylindrical casing adapted to receive the cam-cylinder 2, which is secured to the cylindrical casing by soldering or otherwise, and 3 is a needle-cylinder provided with a shank 4, by which it may be rotated. This cylinder is secured within the cam-cylinder by the ferrule 5, slipped over the shank thereof and secured in position by brazing or otherwise.

6 are needles, preferably four in number, adapted to slide in slots 7, formed in the needle-cylinder and having projecting out from their lower ends the lugs 8, so arranged as to travel within the cam-groove 9, formed in the cam-cylinder. Thus it will be seen that by revolving the needle-cylinder the needles will be carried thereby and their projecting lugs caused to travel upon the surface of the cam-groove, which is of such a shape as to alternately elevate and depress the needle for the purpose of bringing the hooks of said needles into position to receive the yarn.

10 are latches pivoted within slots formed in the upper ends of the needles and adapted to close over the hooks 11 for the purpose of shedding the loops in the yarn at the proper

time, and these hooks are caused to operate by the action of the yarn thereon, as will be hereinafter set forth.

12 is a bracket secured to or formed with the upper end of the cylindrical casing. Projecting from this bracket is a suitable pin 13, upon which a spool of yarn 14 may be placed, and 15 is a guide or tension post having an opening in its upper end through which the yarn is led from the spool to the needles.

The operation of the above-described construction is as follows: The yarn having been placed upon the needles and led through the central opening 16 and preferably weighted with a small metal ball, (not shown,) the needle-cylinder is revolved, whereby the needles will be elevated and depressed, as before described, and their operations are so timed as to bring the hook of the needle next the tension-post, and as this needle continues to revolve and move downward its latch is caused to close over the strand of yarn just caught by its hook by the receding loop of yarn slipping over the latch and forcing it upward. This operation carries the section 17 of the yarn inside of the loop just mentioned as the latter slips from off the needles, the weight drawing each succeeding loop down through the central opening, thus forming a circular hollow-knitted strand.

If it is desired to knit around a core, I place a suitable cord in the cup 18 and lead such cord through the central opening before the knitting is commenced, by which it will be seen that the work will take place around the core and form rope or cord, according to the material used.

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

1. A knitting-machine having a bracket, a spool-holding pin thereon, a stationary cam-groove cylinder secured to said bracket, a needle-cylinder having a shank for rotating it, needles movable in slots in said needle-cylinder and having their lower ends in the cam-groove of the stationary cylinder, and a ferrule encircling said shank and adapted to support said cam-grooved cylinder.

2. A knitting-machine consisting of a sta-

tionary cylinder with a cam grooved in its inner face, a needle-cylinder within said stationary cylinder, a rotary shank connected with the needle-cylinder, needles having their
5 lower ends engaged by said cam-groove and a ferrule connected with said stationary cylinder for supporting the same.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

DANIEL MINICH.

Witnesses:

CHAS. HINKLE,
GEO. W. CLEMENT.