

(No Model.)

2 Sheets—Sheet 1.

N. W. WESTCOTT.
CIRCULAR KNITTING MACHINE.

No. 502,688.

Patented Aug. 1, 1893.

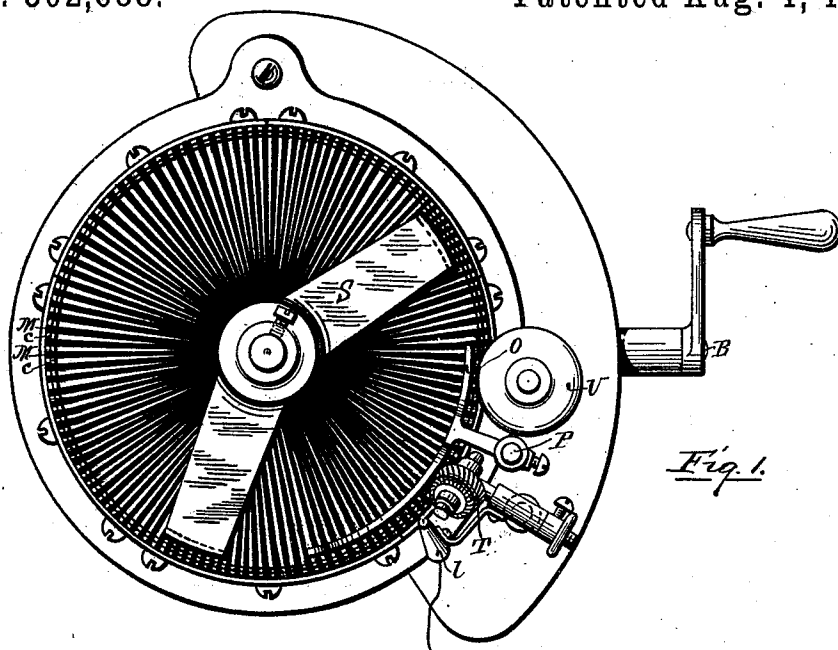


Fig. 1.

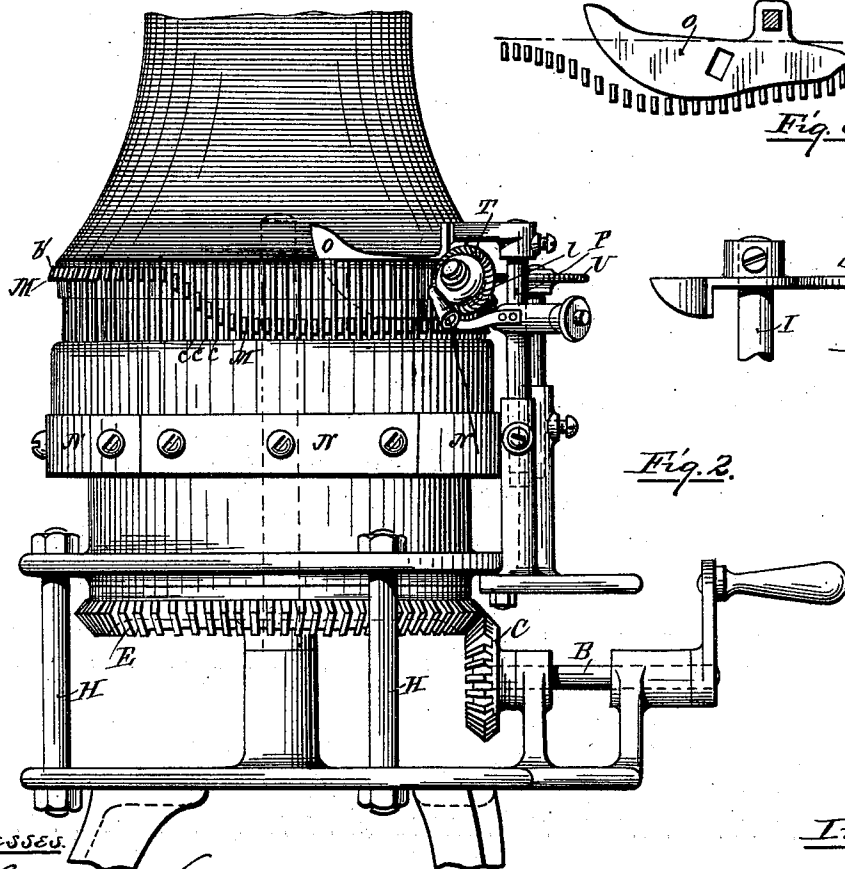


Fig. 2.

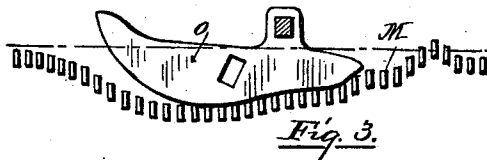


Fig. 3.

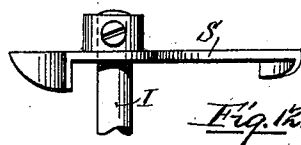


Fig. 4.

Witnesses.

Charles Hamman
Carson D. Tillinghast

Inventor.

Nathaniel W. Westcott
by *S. Scholfield* Att'y.

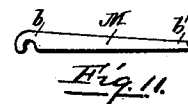
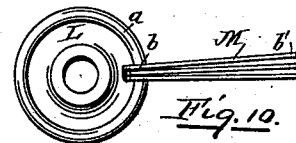
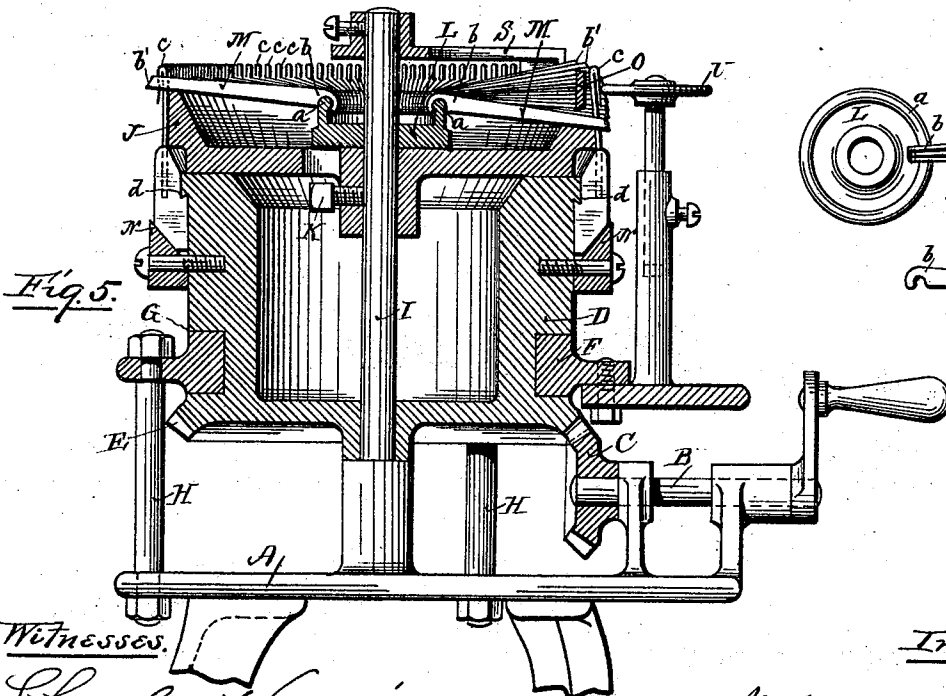
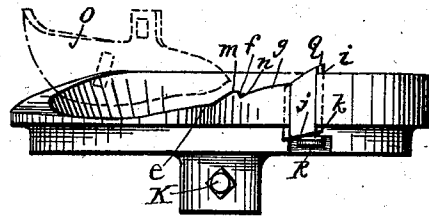
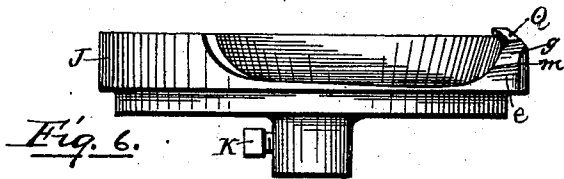
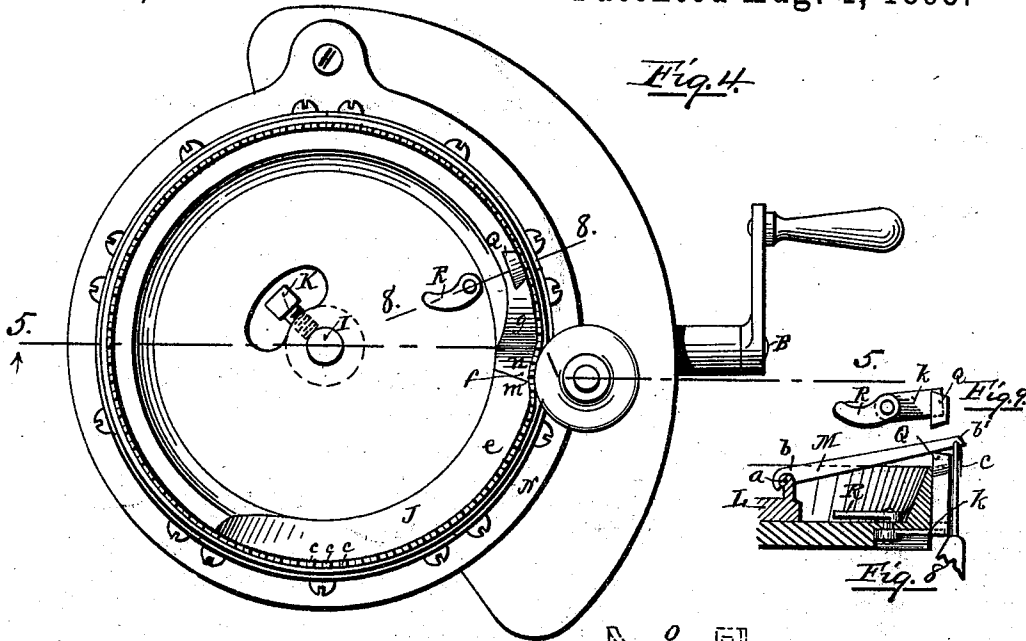
(No Model.)

2 Sheets—Sheet 2.

N. W. WESTCOTT.
CIRCULAR KNITTING MACHINE.

No. 502,688.

Patented Aug. 1, 1893.



Witnesses.

Charles L. Hannigan
Carson W. Ollinghaus

Inventor.

Nathaniel W. Westcott
By S. Scholfield

UNITED STATES PATENT OFFICE.

NATHANIEL W. WESTCOTT, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO
HIMSELF AND JAMES M. GOFF, OF SAME PLACE.

CIRCULAR-KNITTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 502,688, dated August 1, 1893.

Application filed September 12, 1892. Serial No. 445,698. (No model.)

To all whom it may concern:

Be it known that I, NATHANIEL W. WESTCOTT, a citizen of the United States, residing at Providence, in the State of Rhode Island, have invented a new and useful Improvement in Circular-Knitting Machines, of which the following is a specification.

My invention relates to improved means for shedding the stitches from the needle, and it consists in the combination with the spring needles, of intermediate clearing bars, adapted to force the stitches from the needles, and in the improved construction of parts, as herein after fully set forth.

Figure 1, represents a top view of a knitting machine provided with my improvement. Fig. 2, represents a side elevation of the same. Fig. 3, represents a side view of the cam employed to depress the stitches and the stitch clearing bars. Fig. 4, represents a top view of the machine, with the stitch clearing bars removed to show the operating cam. Fig. 5, is a vertical section taken in the line 5, 5, of Fig. 4, with the stitch clearing bars in position. Figs. 6 and 7 are edge views of the cam bar operating the clearing bars taken at right angles to each other. Fig. 8, represents a detail section taken in the line 8, 8, of Fig. 4, showing an adjustable portion of the cam for operating the clearing bars. Fig. 9, shows a top view of the lever for adjusting the cam. Fig. 10, represents a top view of some of the stitch clearing bars, and of the disk upon which they are held. Fig. 11, represents a side view of one of the bars. Fig. 12, represents a side view of a cam for depressing the clearing bars.

In the accompanying drawings, A represents the bed frame of the machine, B the driving shaft, C the driving pinion and D the revolving head, the said head being provided with the gear E, which engages with the driving pinion C. The revolving head D is supported by the fixed ring F, which enters the circumferential groove G in the head D, the said ring F being supported from the bed A by means of the posts H.

Upon the upright rod I, attached to the bed piece A, is placed the cam J, which serves to raise the stitch clearing bars M, the said cam being firmly held upon the rod by means of

the set screw K, and upon the rod I above the cam J, is placed the loose disk L provided with the annular flange *a*, which serves to support the inner ends *b* of the stitch clearing bars M, the outer ends *b'* of which pass between the adjoining needles *c*, *c*. The needles *c* are made in hook form, and are firmly connected to the revolving head D, by means of the clamping segments N, and the undercut flange *d*. The cam J is made with a gradual rise *e*, a succeeding fall *f*, and gradual rise *g*, and the clearing bars M, and the stitches of the fabric are held below the barbs of the needles *c*, by means of the cam O, which is adjustably supported by a standard P and in order to raise the outer ends *b'* of the stitch clearing bars M, to the proper height for shedding the stitches, the nose piece Q of the cam J is made adjustable, the same being held in a dove-tailed groove *i*, and provided with an inclined under surface *j*, so that the movement of the lever R in the proper direction, will cause the required up or down movement of the nose piece, the arm *k* of the said lever shown in Fig. 8, being a flat spring which serves to support the said nose piece so that it may be allowed to yield in case of a knob or other obstruction, and the cam S which is attached to the rod I above the disk L, serves to again bring the clearing bars to their proper position for continuing around the machine and for re-engagement with the cam O. The thread runs through the guide *l* and is pressed down below the barbs of the needles by the feed wheel T, and at the rise of the thread, the barbs of the needles are pressed back by the press wheel U, so that the previously formed stitch may be shed over the barb. When the clearing bars are at the point *m* of the cam J the stitches will be just above the barbs of the needles, and I provide the recess *n* beyond the point *m* of the cam J, so that when the stitches become disarranged when mending the thread, they may be pushed below the barbs of the needles as required, by hand, which is a great convenience in operating the machine.

I claim as my invention—

1. In a knitting machine, the combination with the circular series of needles, and the intervening series of clearing bars, of the lift-

ing cam, provided with an adjustable nose piece for shedding the stitches from the needles, substantially as described.

2. In a knitting machine, the combination
5 with the circular series of needles and the intervening series of clearing bars, of the lifting cam provided with a yielding adjustable nose piece for shedding the stitches, substantially as described.

10 3. In a knitting machine, the combination with the circular series of needles, the intervening series of clearing bars, and the presser wheel, of the cam for lifting the said bars at

the presser wheel, and the downward recess in the cam beyond the presser wheel, substantially as described. 15

4. In a knitting machine, the combination with the circular series of needles of the intervening series of clearing bars, the cam for raising the outer ends of the clearing bars, 20 and the loose ring for supporting the inner ends of the same, substantially as described.

NATHANIEL W. WESTCOTT.

Witnesses:

SOCRATES SCHOLFIELD,
JOHN L. LYNCH.