

(No Model.)

J. J. ADGATE.

CAM CYLINDER FOR KNITTING MACHINES.

No. 546,983.

Patented Oct. 1, 1895.

Fig. 1.

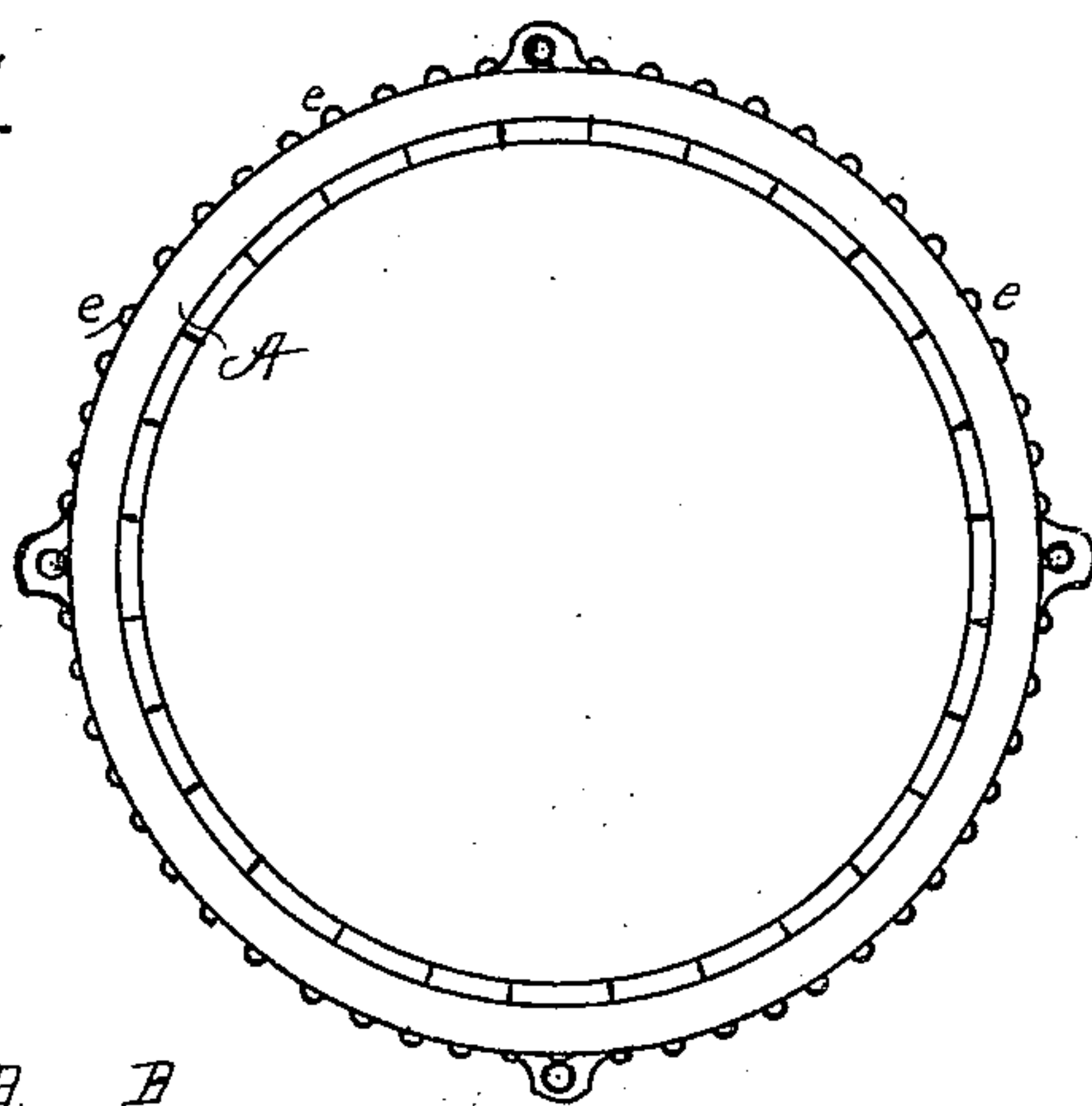


Fig. 2.

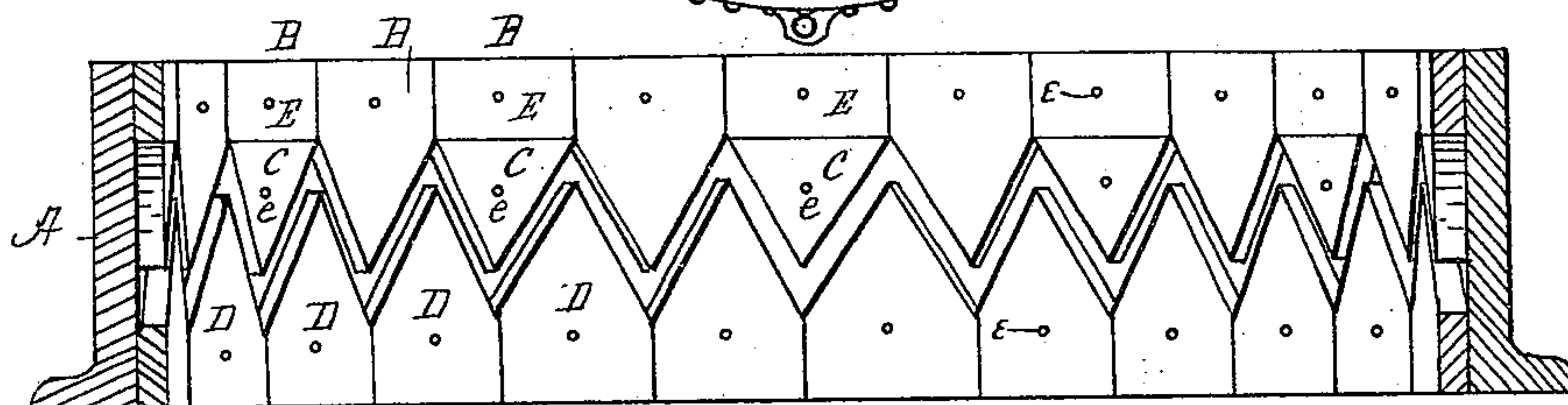
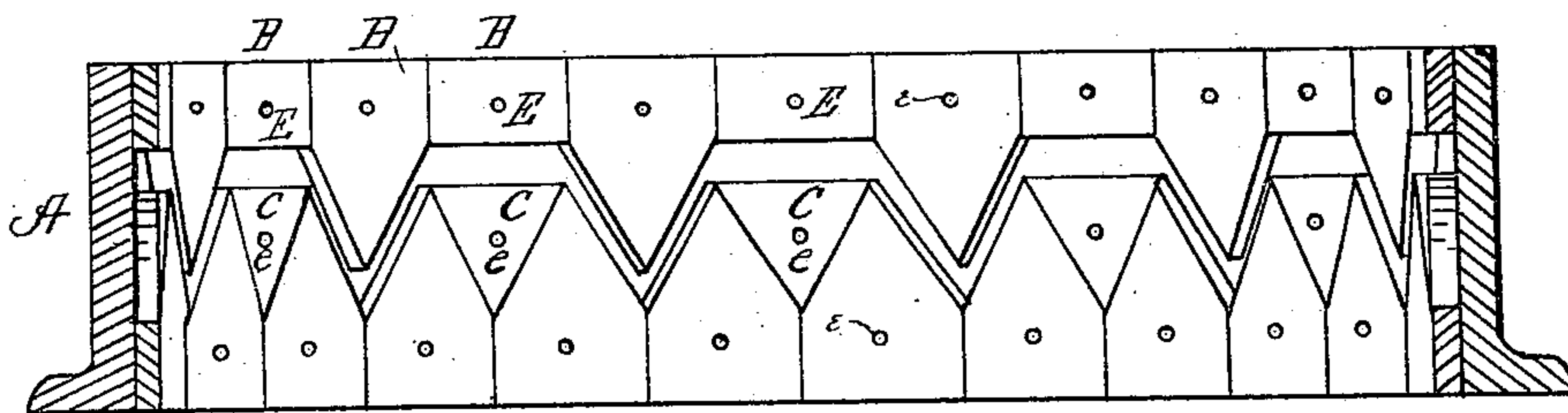


Fig. 3.



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CAM-CYLINDER FOR KNITTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 546,983, dated October 1, 1895.

Application filed February 7, 1895. Serial No. 537,604. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH J. ADGATE, a citizen of the United States, residing at Liberty, Sullivan county, and State of New York, have
5 invented certain new and useful Improvements in Cam-Cylinders for Knitting-Machines, of which the following is a specification.

My invention relates particularly to the
10 form and arrangement of the cams used in the cam-cylinder, and is intended to provide a cam-cylinder which can be readily adapted for use in knitting either single-thread goods or in knitting weft-thread goods. As is well
15 understood, the form of the cam-race necessary in making weft-thread goods is essentially different from the form of cam-race required for knitting single-thread goods. The
20 introduction of the weft-thread requires the needles to be raised and maintained in their elevated position for some distance, which is not the case with single-thread goods.

By means of my improvement I am enabled
25 to convert a weft-thread machine into a single-thread machine, and vice versa, as the occasion may require.

In the drawings, Figure 1 is a plan view from above of the cam-cylinder. Fig. 2 is a sectional view showing the interior of the cylinder with the cams adjusted for making single-thread goods, and Fig. 3 is the same with
30 the cams adjusted for making weft-thread goods.

Similar letters of reference designate similar parts in all the drawings.

A is the cam-cylinder.

B B B are the upper series of cams, and D D D are the lower series of cams. The alternate cam-plates B B B are made in two parts
40 E and C. These cam-plates are secured to the cam-cylinder A by screws *e e e*. The parts C of the cams B correspond with the openings between the cams D D of the lower series. Therefore when the parts C C are detached
45 from their positions, as shown in Fig. 2, and lowered into the positions shown in Fig. 3, they fill the spaces between the cams D D D, where they are inserted, and leave above them

a cam-race of the correct size for the needles to travel in while receiving the weft-thread. 50
In changing the cams C C C from one position to another the screws *e e e* are loosened and inserted in different holes in the cam-cylinder, or, if preferred, the screw *e* may travel in a vertical slot from one position to the other 55
and then be tightened into place.

It will be understood by those familiar with the art that the thread-guides must be adjusted for the proper introduction of the threads to correspond with the changes in the 60
cam-cylinder.

In making different styles of weft-thread goods it is sometimes desirable to have the needles elevated for a longer distance than between two of the cams D D. In that case 65
I lower two or more adjacent points C from the cam-plates B into the lower series, to obtain the greater or less length of the straight part of the cam-race.

By means of my improvement a cam-cylinder 70
can be readily adjusted for making either single-thread or weft-thread goods.

In making single-thread goods twice the number of heads can be used that can be employed in making weft-thread goods, for the 75
reason that it is not necessary for the needles to travel any distance in an elevated position, and the arrangement of cams in my improvement accomplishes this in an exact manner. The number of heads being reduced by half 80
when the cams are adjusted for the introduction of the weft-thread will leave half of the bobbins previously used for the single threads to be then employed to carry the weft-threads, and the position of the threads will be gov- 85
erned by the adjustment of the thread-guides.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States, is—

1. A cam cylinder for knitting-machines 90
consisting of the cylinder A, an upper and lower series of cam plates and intermediate adjustable cam plates whereby the course of the cam race may be changed substantially
as and for the purposes set forth. 95

2. The combination with the cam cylinder

A of the lower series of cam plates D D D, the
upper series of cam plates B B B, a portion of
said cam plates B B being made in two parts
C and E, substantially as and for the purposes
5 set forth.

3. The combination with the cam cylinder
A of the cam plates D D D, B B B, E E E, and

C C C, substantially as and for the purposes
set forth.

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Witnesses:

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