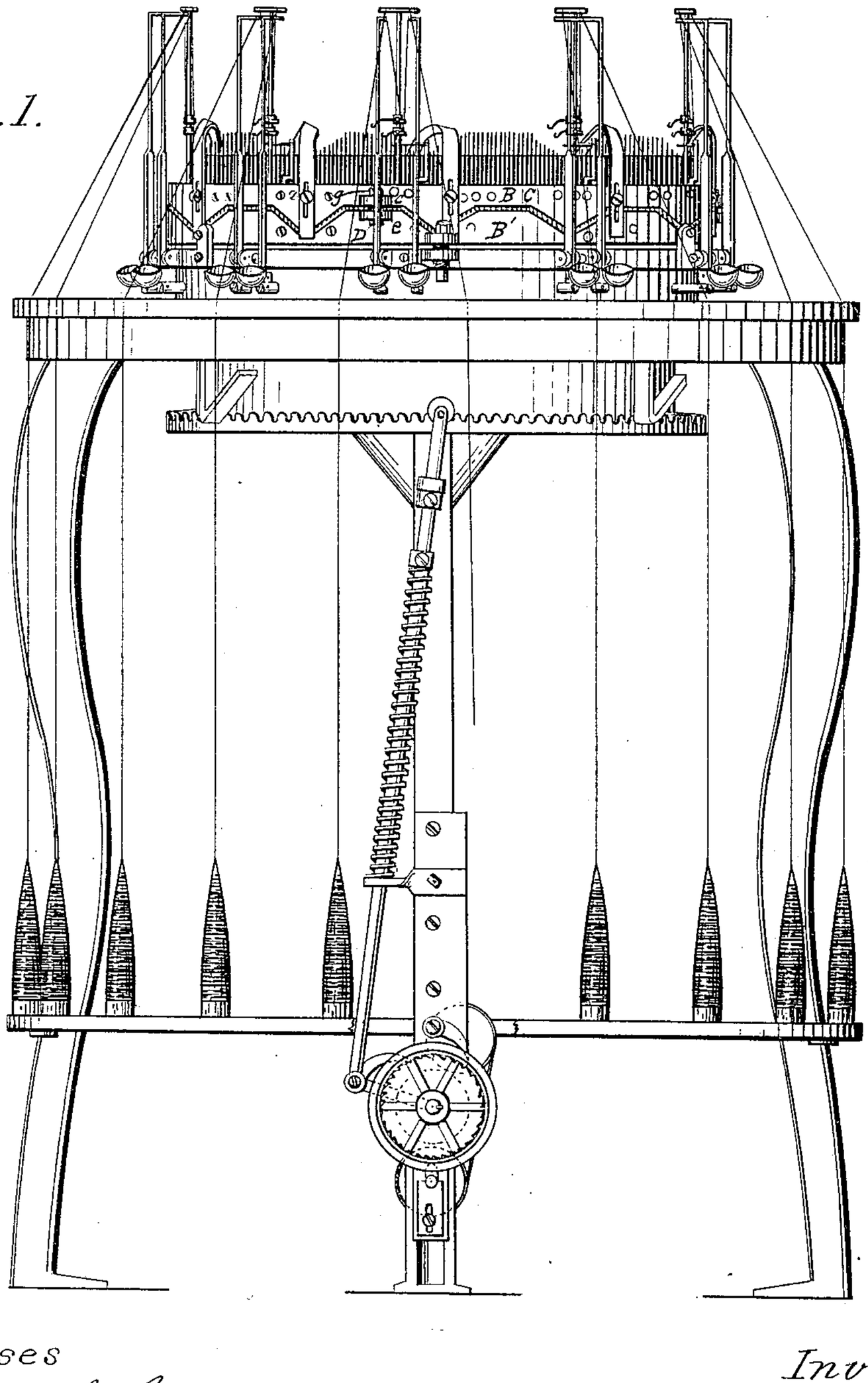
(No Model.) 2 Sheets—Sheet 1.

J. J. ADGATE.

CAM CYLINDER FOR KNITTING MACHINES.

No. 332,373. Patented Dec. 15, 1885.

Fig. 1.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

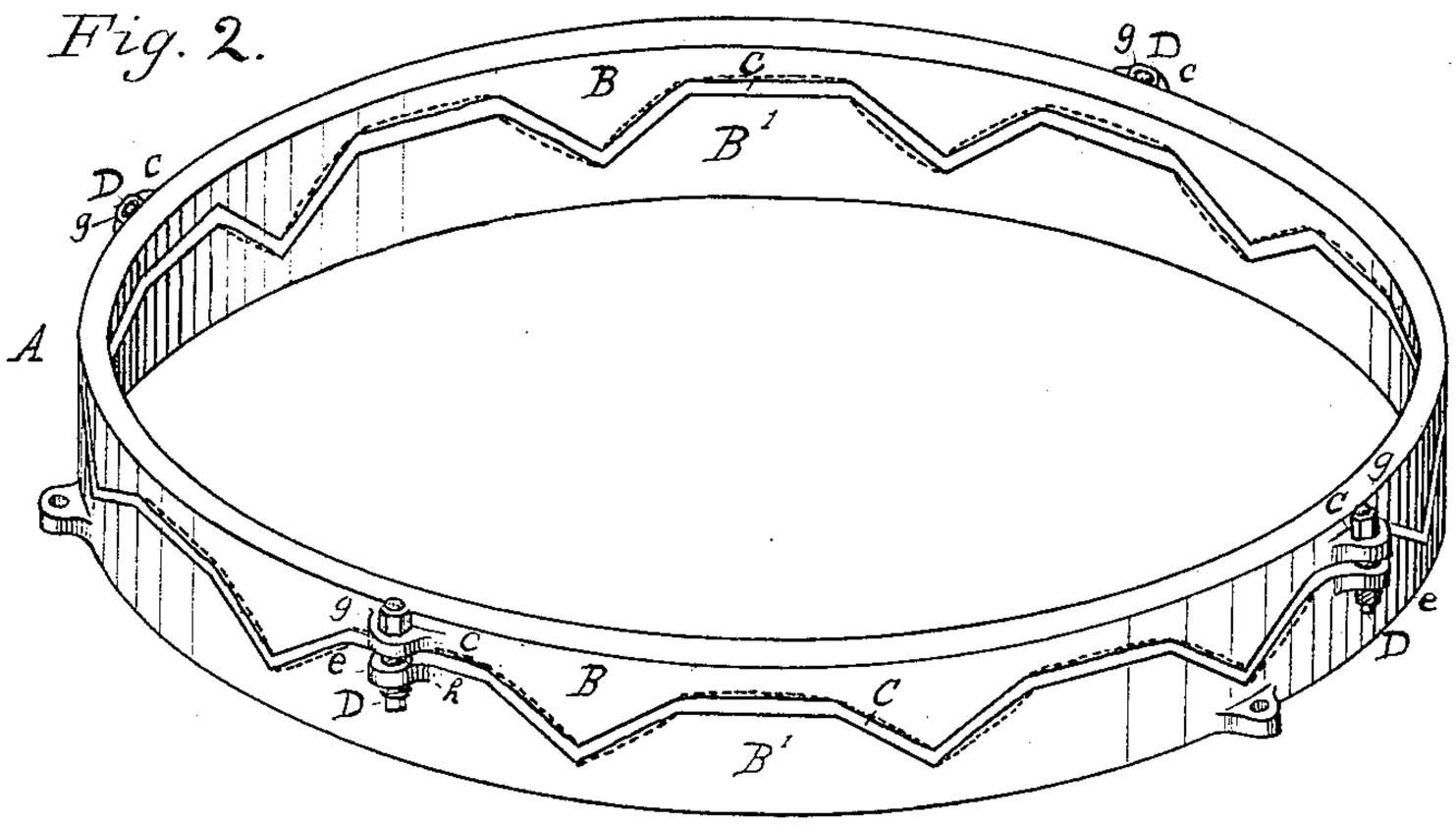


Fig. 3

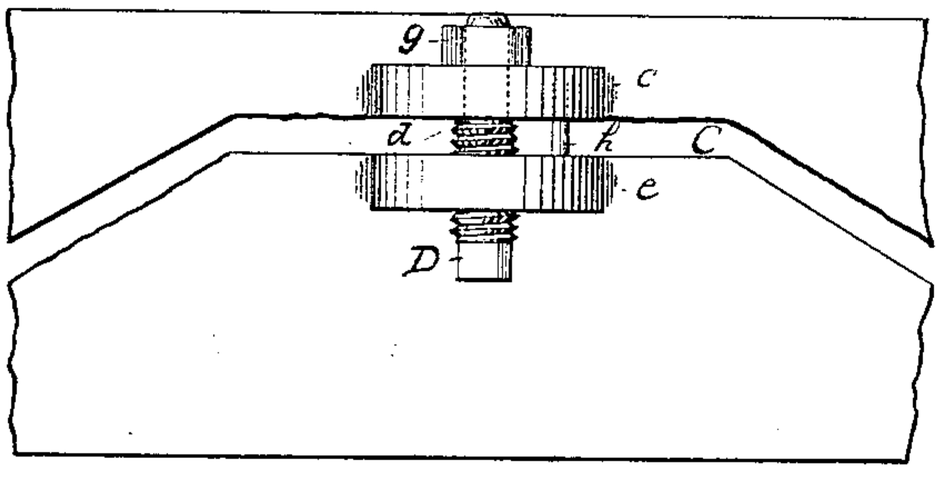


Fig. 4

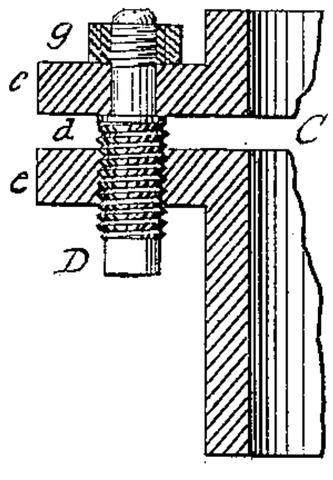
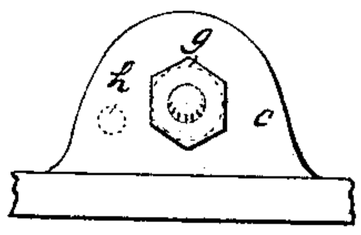


Fig. 5



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Attorney

UNITED STATES PATENT OFFICE.

JOSEPH J. ADGATE, OF NEW YORK, N. Y., ASSIGNOR TO THE ADGATE ROTARY LOOM COMPANY, OF SAME PLACE.

CAM-CYLINDER FOR KNITTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 332,373, dated December 15, 1885.

Application filed November 9, 1883. Renewed May 20, 1885. Serial No. 166,176. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH J. ADGATE, of the city, county, and State of New York, have invented certain new and useful Improvements in Cam-Cylinders for Knitting-Machines, of which the following is a specification.

My invention relates to the cam-cylinders of circular-knitting machines by which the upward and downward movement is imparted to the needles; and it consists in the combination of devices described and claimed, whereby the parts of the cam-cylinder may be adjusted to regulate the width of the needle-operating cam-race to adapt it to needles or jacks with larger or smaller toes.

In the drawings, Figure 1 is a view in elevation of a rotary knitting-machine, showing my improved cam-cylinder applied. Fig. 2 is a view of the cam-cylinder. Fig. 3 is a detail view of the mechanism for adjusting the same. Fig. 4 is a vertical cross-sectional view of the adjusting mechanism, and Fig. 5 is a plan view of one of the lugs and a stud.

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

A is my improved cam-cylinder, consisting of the pieces B B′, between which is formed the cam-race C. The projections on the lower edge of the part B correspond with the depressions in the upper edge of the part B′, or nearly so, and vice versa. These pieces B B′ are cast or made separately, and held together in the manner hereinafter shown.

When the machine is in operation, the needles will rise and fall with reluctance, owing to the tension of the cloth. For this reason the toes of the needles will always engage with the face of the cam-race opposite to the direction in which they are moving—that is, if the needles are going upward they will be lifted by the lower face of the cam-race, and if coming downward they will be driven by the upper face of the cam-race. I therefore finish or polish only the faces of the cam-race against which the needle or jack toes engage; but to prevent any danger of the toes catching against the unfinished surfaces by accident it might be preferable to make the parts of the cam-cylinder with these unfinished and alternate sections of their faces cut away, so as to retreat somewhat from a line parallel to the opposite and needle-actuating surfaces, as shown by dotted lines, Fig. 2. The pieces B B′ are held together by the studs D D D D, passing through the lugs *c c c c* on the piece B, and *e e e e* on the piece B′. The thread on the lower end of each stud D engages with a thread in the lug *e*, through which the stud passes. The upper end of each stud D passes up through one of the lugs *c*, which lug *c* rests upon the shoulder *d* of the stud D.

g is a nut on the upper end of the stud D, which nut is screwed tightly down against the lug *c* when the parts have been adjusted to the desired position, thus holding the part B firmly against the shoulder *d* of the stud D, and preventing the stud D from being turned. The pieces B B′ are steadied by the dowel-pins *h h h h*, which are fastened to the lugs *e e e e* and pass into holes in the lugs *c c c c*.

By loosening the nuts *g g g g* so that the studs D D D D may be turned, and then screwing each stud D upward or downward through its lug *e*, the relative positions of the parts B B′ may be adjusted so as to give the cam-race C any desired width.

I claim as new—

1. The combination of the parts B B′, provided with lugs *c* and screw-threaded lugs *e*, with the screw-threaded studs D, provided with the shoulders *d*, for connecting and adjusting said parts, substantially as and for the purposes set forth.

2. The combination of the parts B B′, provided with lugs *c* and screw-threaded lugs *e*, with the screw-threaded studs D, provided with the shoulders *d*, for securing and adjusting said parts, and the nuts *g*, substantially as and for the purposes set forth.

3. The combination of the parts B B′, provided with lugs *c* and screw-threaded lugs *e*, with the screw-threaded lugs D, provided with the shoulders *d*, for securing and adjusting said parts, and nuts *g*, for securing, and dowel-pins *h*, for steadying, the parts, all substantially as and for the purposes set forth.

JOSEPH J. ADGATE.

Witnesses:
BERNARD P. RYAN,
S. P. KITTLE.