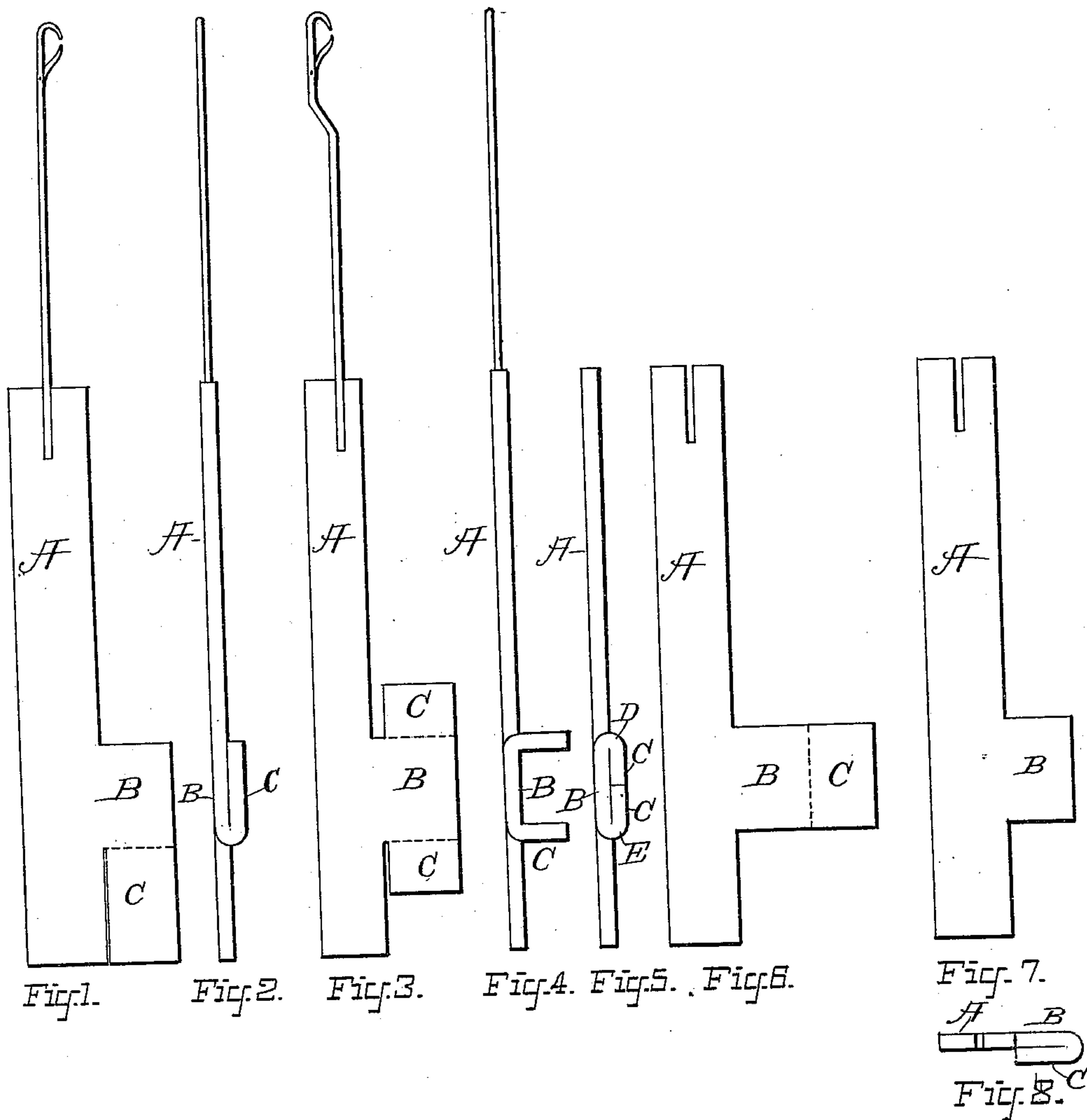


(No Model.)

J. J. ADGATE.
JACK FOR KNITTING MACHINE NEEDLES.

No. 546,984.

Patented Oct. 1, 1895.



WITNESSES:
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JOSEPH J. ADGATE, OF LIBERTY, ASSIGNOR TO JOHN BENTLEY, OF
NEW YORK, N. Y.

JACK FOR KNITTING-MACHINE NEEDLES.

SPECIFICATION forming part of Letters Patent No. 546,984, dated October 1, 1895.

Application filed February 7, 1895. Serial No. 537,605. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH J. ADGATE, of Liberty, Sullivan county, and State of New York, have invented certain new and useful
5 Improvements in Jacks for Knitting-Machine Needles, of which the following is a specification.

My invention relates to the jacks used for holding knitting-machine needles, particularly to the shank or projection on such needle-jack, which travels in the race in the cam-cylinder; and it consists in the details hereinafter set forth.

Heretofore it has been customary in reinforcing the cranks or projections of jacks formed out of a flat piece of metal to bend around and solder to the crank or projection another piece of metal to give additional thickness thereto. This is a difficult operation, requiring skill and care, and frequently there is trouble caused by the breaking off or tearing loose of such soldered pieces when the jack is in use. I avoid these objections and secure a jack which can be cheaply and easily
25 constructed out of a single piece of metal, and will hence have all the strength and firmness incident to the avoidance of soldering or fastening together two separate pieces of metal.

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

A is the jack, formed out of a flat piece of metal and provided with the projection or knee B, to which is left attached the strip C, as shown in Figure 1. The strip C is bent
35 around and upward against the knee B until it comes in the position shown in Fig. 2, and rests evenly against the same, when it may be further secured by solder, if desired.

Figs. 3, 4, and 5 show a jack wherein the
40 metal is bent from both the upper and lower edges of the knee B, bringing the joint in the middle, and presenting solid portions of metal at the top and bottom, which are the points of greatest resistance, and also presenting
45 rounded edges D and E at the top and bottom of the knee B, where the jack comes in contact with the sides of the race.

Figs. 6, 7, and 8 show another modification of my invention, wherein the metal is bent from the forward edge of the knee B sidewise
50 until it comes in position against the knee B, as shown in the end view in Fig. 8.

The object in increasing the thickness of the knee of the jack is to compensate for the space occupied by the partitions or ribs between the needles' grooves in the needle-cylinder, (which are ordinarily of the same thickness as the jacks,) so that, although the bodies of the jacks are separated by such ribs or partitions, the knees B shall rest against and support each other laterally when the machine is in motion. I obtain this result by reinforcing the knee on one side, as above described, while at the same time I secure a jack which is cheaper, simpler, more easy to manufacture, more durable, and less likely to get out of order than those made out of two or more pieces.

The knee B can be given additional thickness, if desired, by turning more than one
70 strip over on it.

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

1. A needle jack formed of a single piece of flat metal, and having the knee B reinforced by a portion C, bent over and resting evenly against the same, substantially as shown and described.

2. A needle jack having a body A and knee B, and being reinforced on one side of the knee B, substantially as shown and described.

3. A needle jack formed out of a single piece of metal having the body A and knee B, reinforced on one side and provided with a rounded top and bottom D, E, substantially as and for the purposes set forth.

JOSEPH J. ADGATE.

Witnesses:

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