

No. 673,874.

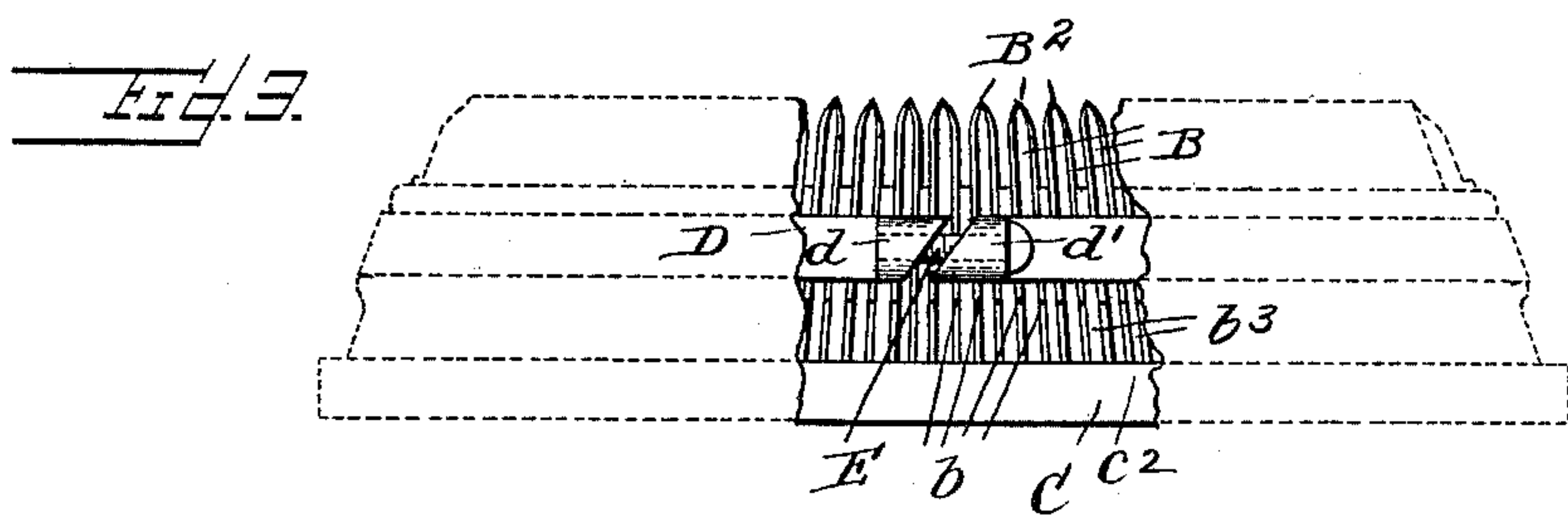
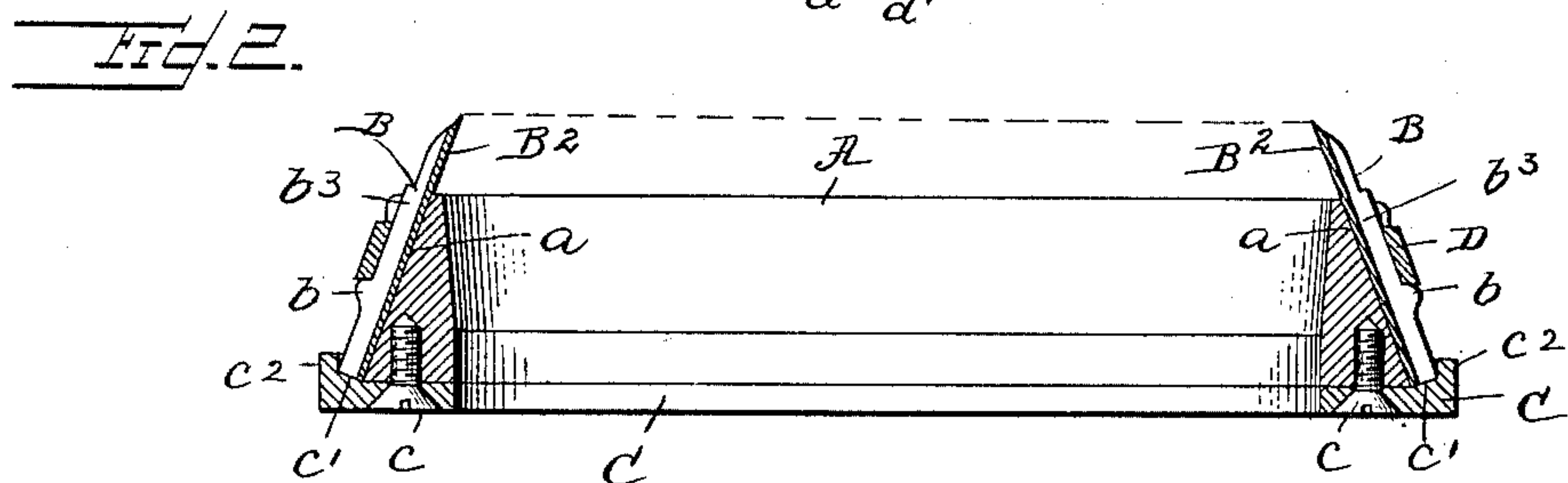
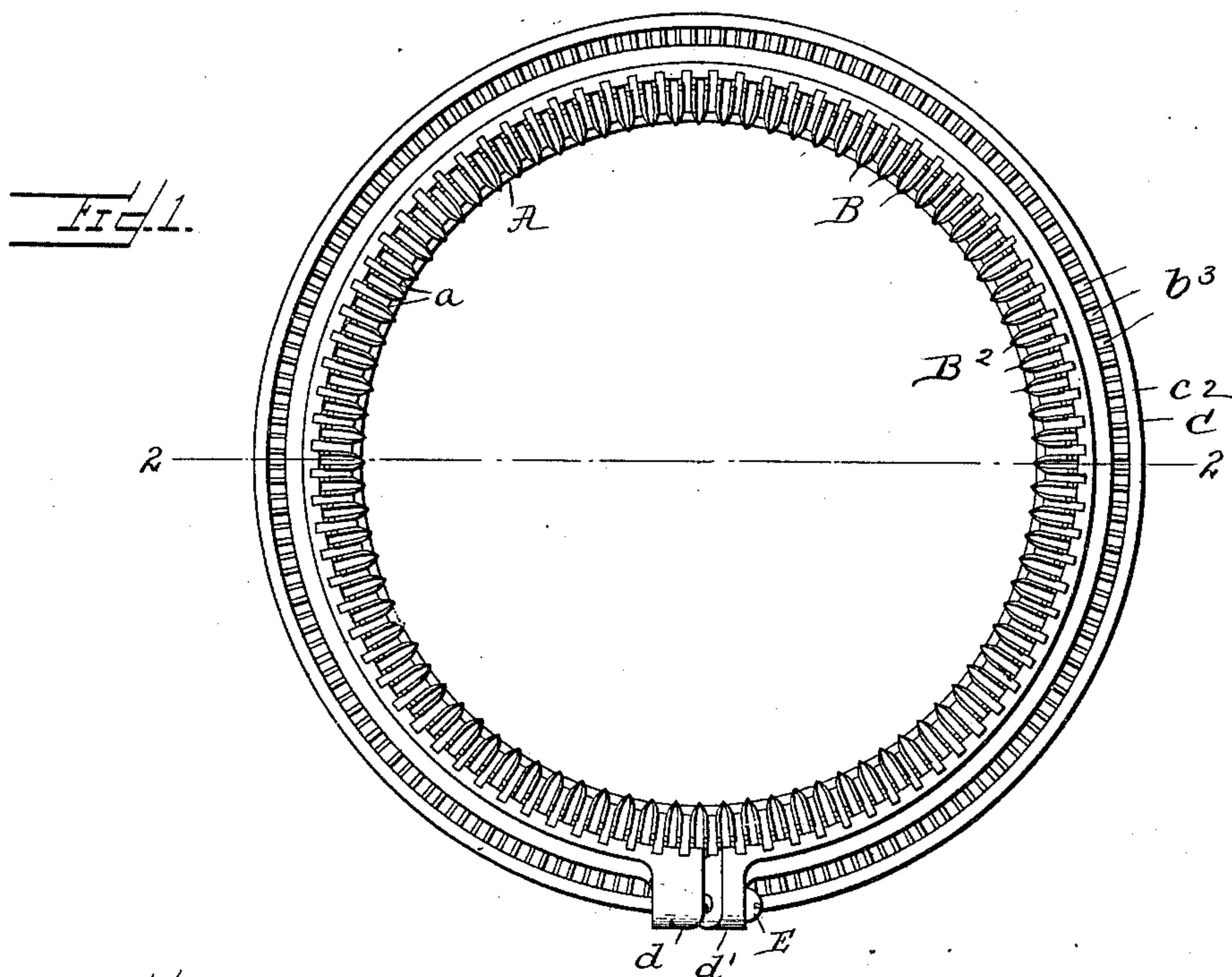
Patented May 14, 1901.

H. A. HOUSEMAN.

TRANSFER DEVICE FOR KNITTING MACHINES.

(Application filed Feb. 2, 1901.)

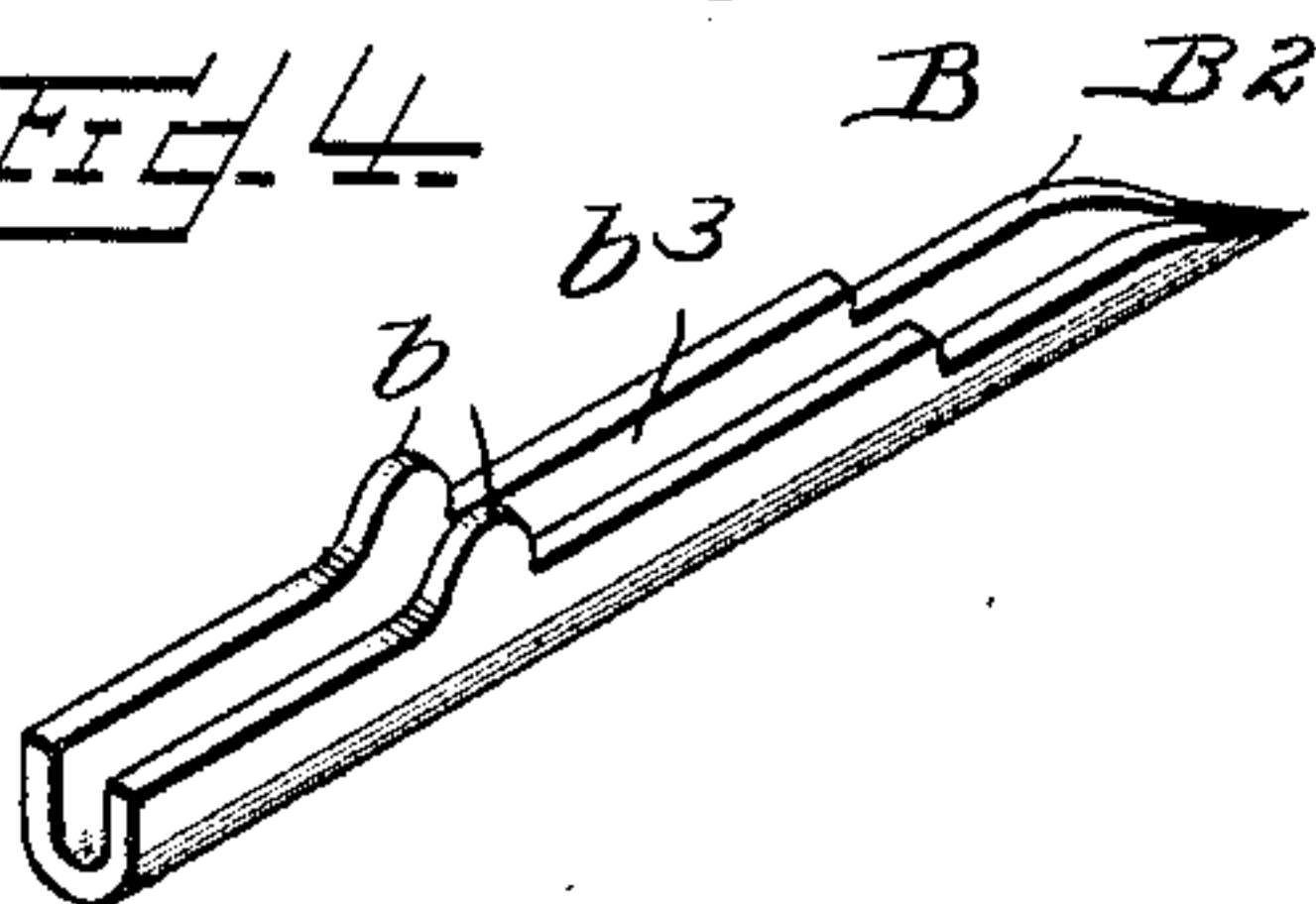
(No Model.)



WITNESSES.

Jesse B. Heller,
Jas S. Heller.

FIG. 4.



INVENTOR.

Harry A. Houseman
Inventing & Making

ATTORNEYS.

UNITED STATES PATENT OFFICE.

HARRY A. HOUSEMAN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
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TRANSFER DEVICE FOR KNITTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 673,874, dated May 14, 1901.

Application filed February 2, 1901. Serial No. 45,686. (No model.)

To all whom it may concern:

Be it known that I, HARRY A. HOUSEMAN, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Transfer Devices for Knitting-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to certain improvements in transfer devices for knitting-machines. This class of devices consists, essentially, of a transfer-cylinder having grooves, in which are placed the quills having points. My invention relates to a specific improvement for holding the quills from moving longitudinally in the grooves. In the ordinary construction of quills the shank of the quill throughout lies flush with the groove. A ring has been used encircling the cylinder midway. I have pending an application for such a device, filed January 8, 1901, Serial No. 42,535. This invention is an improvement upon the device of that application; and it consists, essentially, in providing the shank of the quills with a projection of sufficient extent to project beyond the groove. The ring encircles the cylinder above these projections, but substantially in contact therewith. By this arrangement the points are held from longitudinal movement in the grooves.

I will now describe the embodiment of my invention illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of a transfer device embodying my invention. Fig. 2 is a section on line 2 2, Fig. 1. Fig. 3 is a partial side elevation showing a portion of the split ring. Fig. 4 is a side elevation of one of the quills.

A is the transfer-point cylinder, having grooves a , corresponding in number to the transfer-quills B, having the points b^2 . These

quills B are constructed in the novel manner clearly shown in Fig. 4, in that the shank b^3 of the quill is provided with a projection b of extent sufficient to project beyond the grooves a . The quills B are inserted in the grooves, and the projections b of the shank of the quills extend beyond the grooves. Surrounding the base of the shanks of the quills is the ring or cap C, secured to the base by screws c . This ring or cap closes the bottom of the grooves a . It has the inclined ledge c' and the flange c^2 , which together hold the lower end of the shanks in position. Surrounding the cylinder is the split ring D. This ring D surrounds the cylinder at a point above the projections b , but substantially in contact therewith. The ends of the ring D are inclined, as shown at $d d'$. This ring is secured upon the cylinder by means of the screws E. By means of the ring and the projections b the quills B are prevented from moving longitudinally in the grooves.

Having now fully described my invention, what I claim, and desire to protect by Letters Patent, is—

1. In a transfer device of the character described, in combination with the transfer-cylinder having grooves, of quills in said grooves, there being a projection of the shanks of said quills of extent sufficient to project beyond the outer surface of the groove, and a ring encircling said cylinder above and substantially in contact with said projecting portion of the shanks.

2. A transfer-quill provided with a projection on its shank between its ends.

In testimony of which invention I have hereunto set my hand, at Philadelphia, Pennsylvania, on this 28th day of January, 1901.

HARRY A. HOUSEMAN.

Witnesses:

M. F. ELLIS,

M. M. HAMILTON.