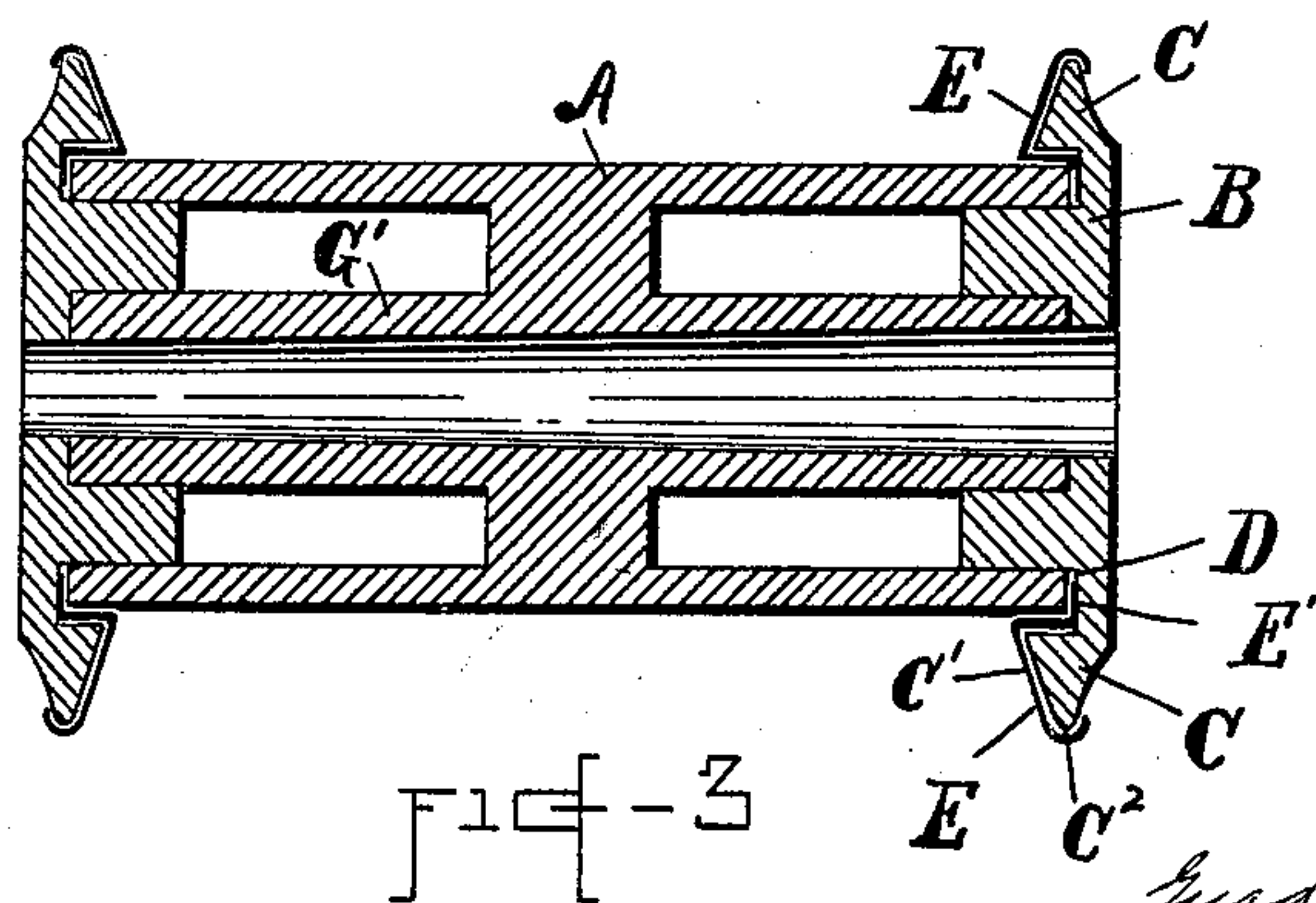
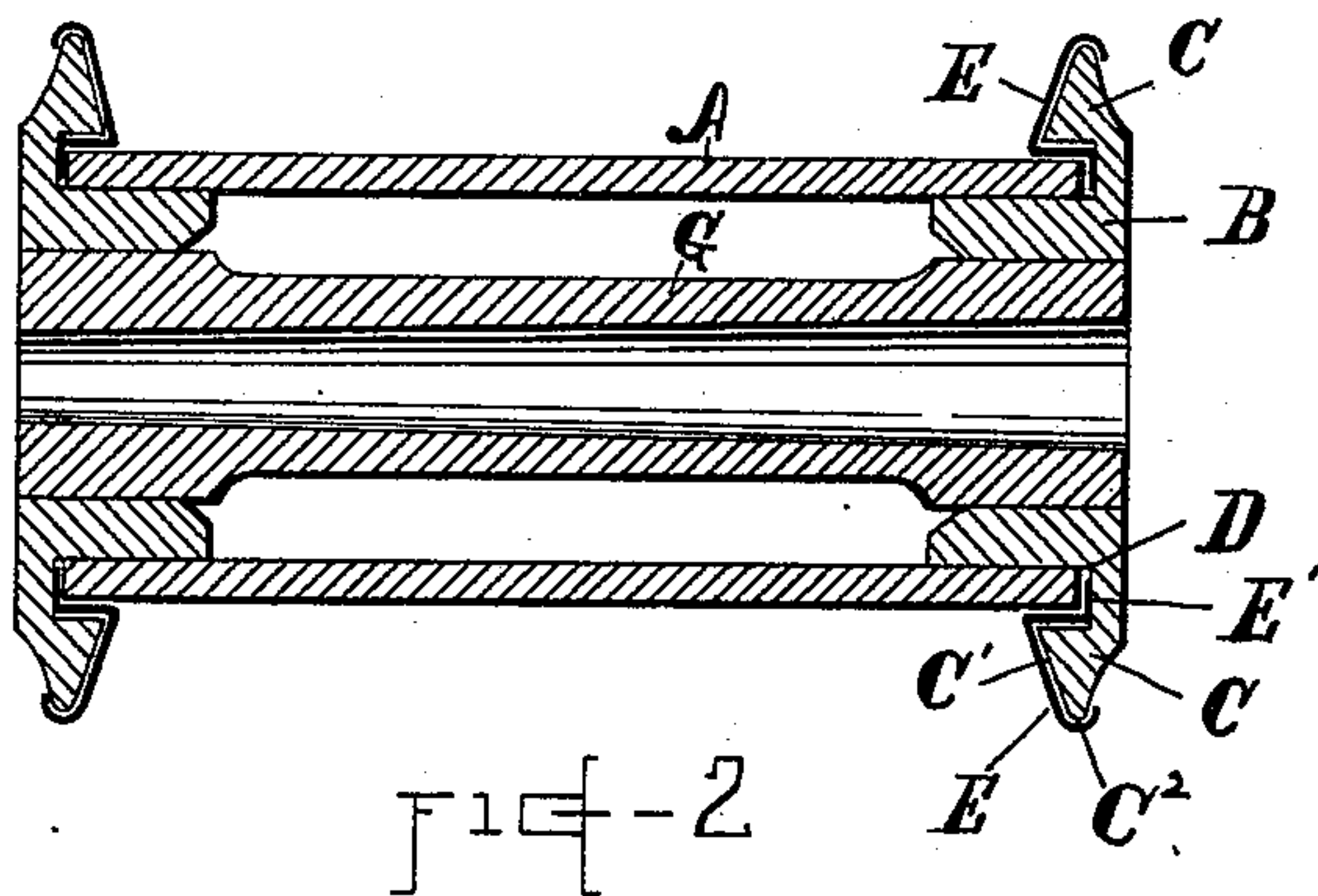
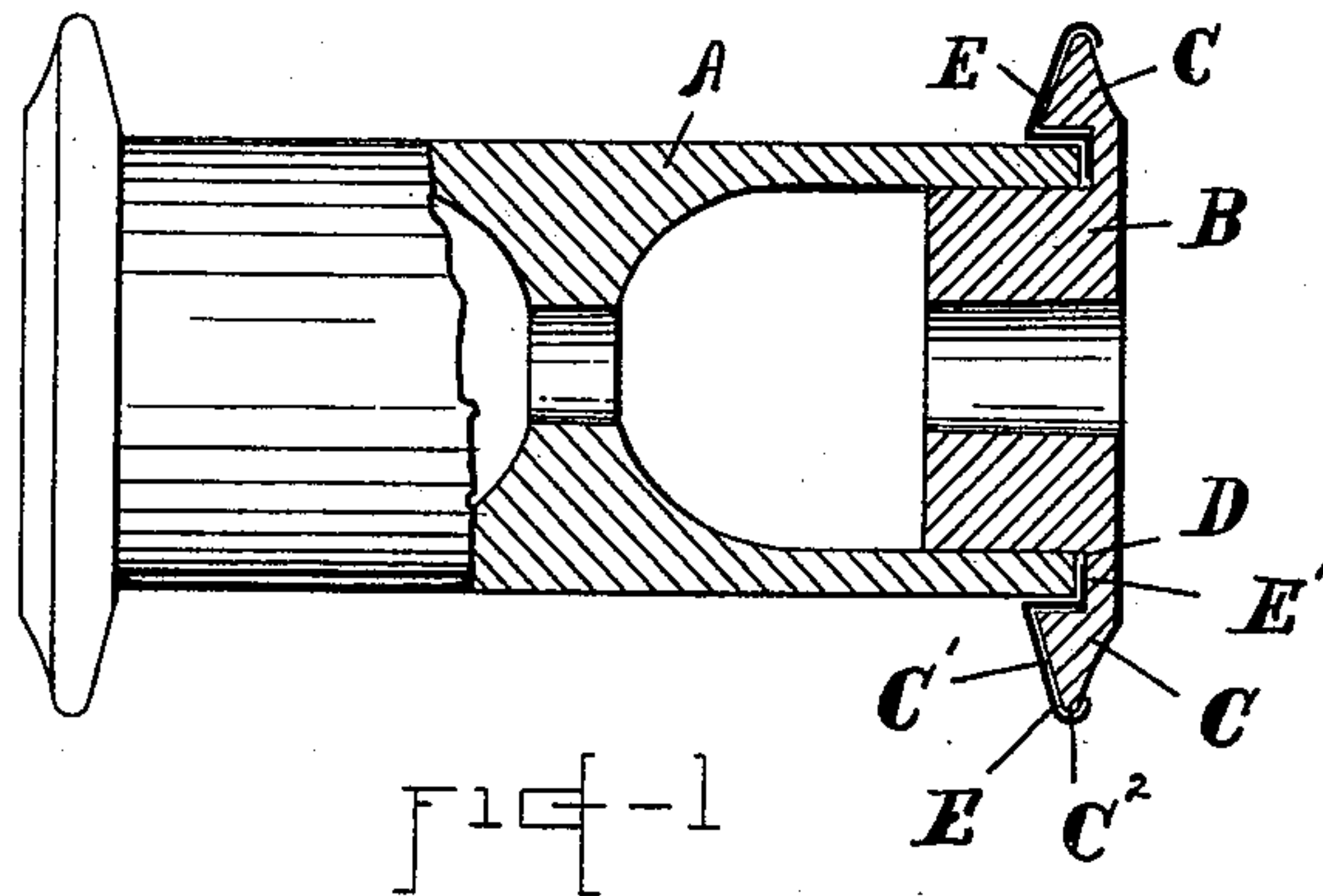


(No Model.)

G. PENDLETON, Jr.  
BOBBIN.

No. 602,241.

Patented Apr. 12, 1898.



WITNESSES:

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ATTORNEYS.



# UNITED STATES PATENT OFFICE.

GURDON PENDLETON, JR., OF CARBONDALE, PENNSYLVANIA, ASSIGNOR TO  
THE PENDLETON MANUFACTURING COMPANY, OF SAME PLACE.

## BOBBIN.

SPECIFICATION forming part of Letters Patent No. 602,241, dated April 12, 1898.

Application filed August 26, 1897. Serial No. 649,661. (No model.)

*To all whom it may concern:*

Be it known that I, GURDON PENDLETON, Jr., a citizen of the United States, residing at Carbondale, in the county of Lackawanna and State of Pennsylvania, have invented a new and useful Improvement in Bobbins; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to the construction of bobbins, particularly those used for spinning, winding, and doubling silk and cotton, and has for its special purpose the improvement of wooden bobbins so that their flanges will be stronger and more durable, with less thickness and weight and a relatively greater traverse, and the inner faces of such flanges, over which the silk or cotton threads run, will be smooth and not catch or injure the threads. I attain this and other ends by facing and reinforcing the wooden flanges of the bobbins with sheet metal in the manner hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which like letters designate corresponding parts in the various figures.

Figure 1 is a side view, partly in section, of a bobbin embodying my invention. Fig. 2 is a sectional view of another form of bobbin embodying my invention. Fig. 3 is a sectional view of still another form of bobbin embodying my invention.

In each of the forms of bobbin illustrated in the drawings, A designates the cylindrical barrel, of wood, and B the wooden plugs forming the heads of the bobbin, fixed, usually by gluing, in the ends of the barrel and formed with the integral peripheral flanges C, having the outwardly-inclined inner faces C' and the rounded edges C<sup>2</sup>. The ends of the barrel A are inserted and secured in annular recesses D, surrounding the cylindrical portion of the plugs B.

I accomplish the ends of my invention by reinforcing each flange C with a hard smooth non-corrosive metal E—brass, for example—with which I cover the inclined face C' of the flange C, and the outer edge of which I then press and bend around to the outside of the rounded edge C<sup>2</sup> of the flange, so as to cover, protect, and strengthen the same, while

at the same time securing the outer edge of the metal E in place thereon. The inner edge of the metal E, I bend inward at an angle around the outer edge of the annular recess D prior to inserting the end of the barrel therein and then radially inward again, forming an annular flange E', resting on the bottom of the recess D. The end of the barrel being then inserted and secured in the recess D fixedly binds the flange E' therein, and thus secures the inner edge of the metal reinforcement E against displacement both laterally and longitudinally. The smooth metal E thus facing the flanges and edges of the flanges C causes the silk or cotton to run smoothly thereover without danger of catching or injury, while the flanges themselves are strengthened and protected from injury by the metal formed and secured thereon as described. Greater strength, lightness, and durability may thus be obtained with flanges of reduced thickness and a correspondingly greater traverse or distance from flange to flange. The form of bobbin shown in Fig. 1 has a central spindle-bearing formed integrally with the barrel and separate end spindle-bearings formed in the plugs B. In Fig. 2 the plugs B are joined together by a separate central wooden core G, formed with a continuous spindle-bearing. In Fig. 3 the central core G', containing the continuous spindle-bearing, is formed integrally with the barrel A, as shown, and the spindle-bearing may be lined with metal, the ends of the core G' being inserted and secured, as by gluing, in annular recesses in the plugs B.

I claim as my invention—

1. A bobbin formed of a barrel, end plugs formed with peripheral flanges and with annular recesses within which the ends of the barrel are fixed and a metal reinforcement covering the inner face of each flange, its outer edge bent around the edge of the flange and its inner edge bent axially at an angle to form a flange or collar bound between the periphery of the barrel and the outer wall of said recess.

2. A bobbin formed of a barrel, end plugs formed with peripheral flanges and with annular recesses within which the ends of the barrel are fixed, and a metal reinforcement covering the inner face and the outer edge of

each flange, the inner edge of said metal being bent axially at an angle to form a collar or flange between the periphery of the barrel and the outer wall of said recess, and then  
5 again bent inward radially to form a flange bound between the end of said barrel and the bottom of said recess.

In testimony whereof I have hereunto set my hand this 29th day of June, 1897.

GURDON PENDLETON, JR.

In presence of—

CLARENCE L. BURGER,  
B. M. SCOTT.