

(No Model.)

T. HALL.

BOBBIN.

No. 330,784.

Patented Nov. 17, 1885.

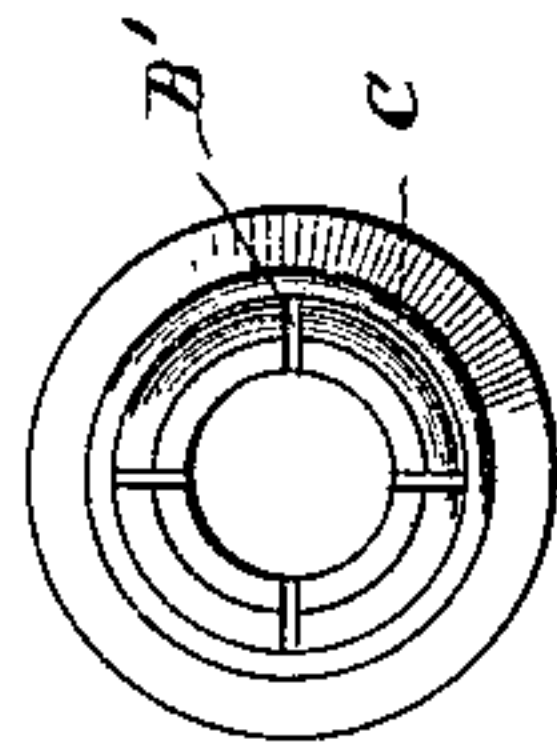


Fig. 3-

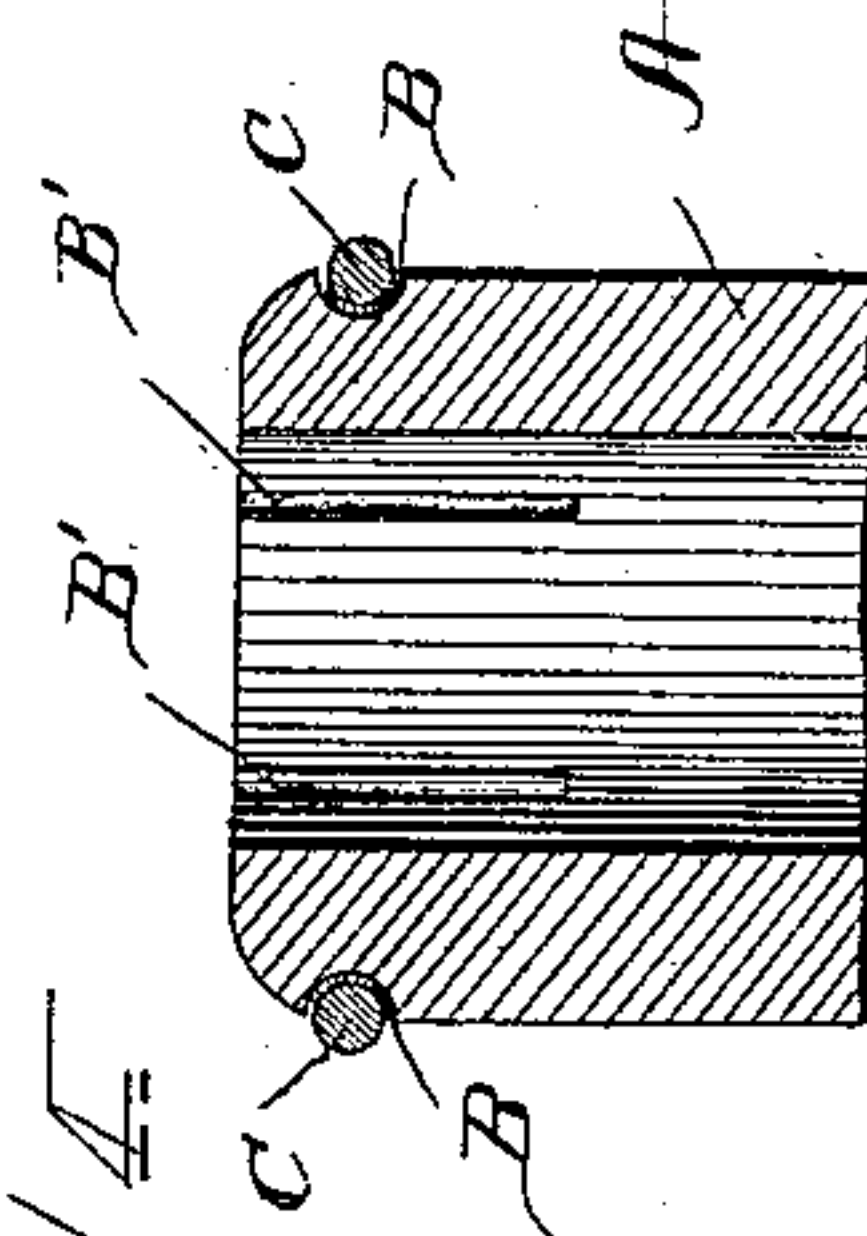


Fig. 4-

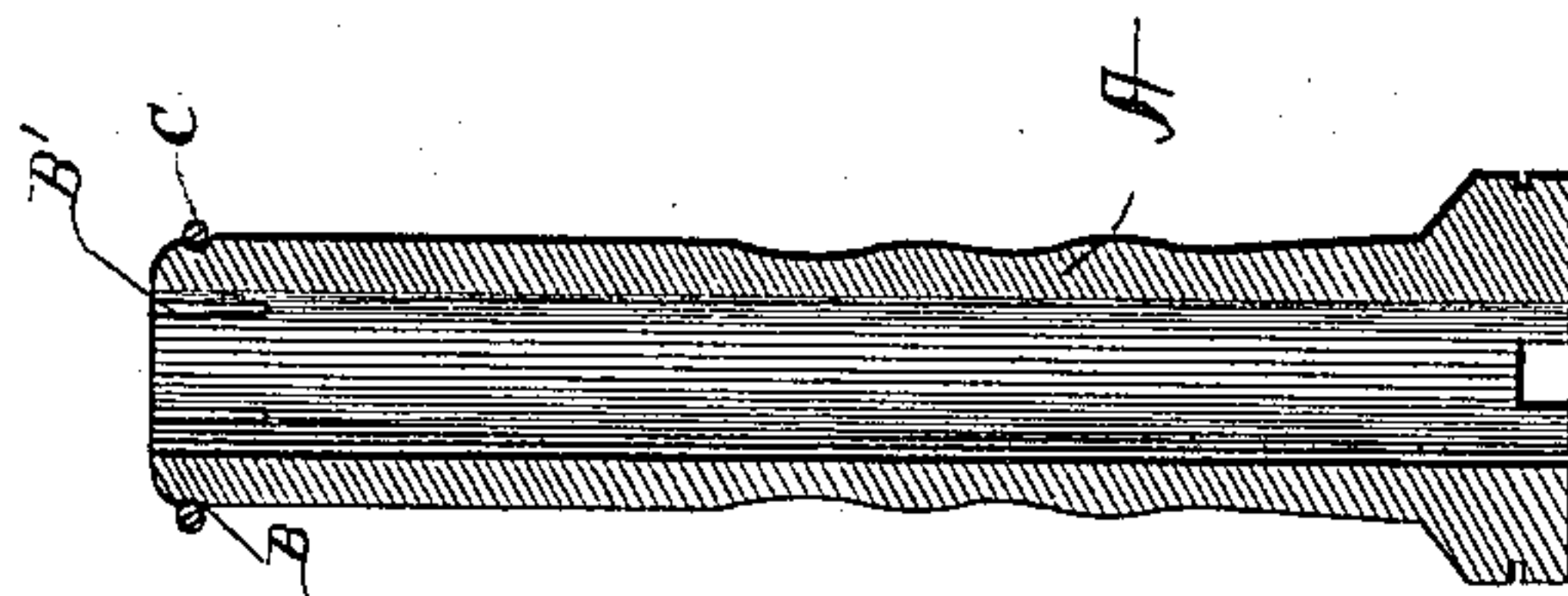


Fig. 2-

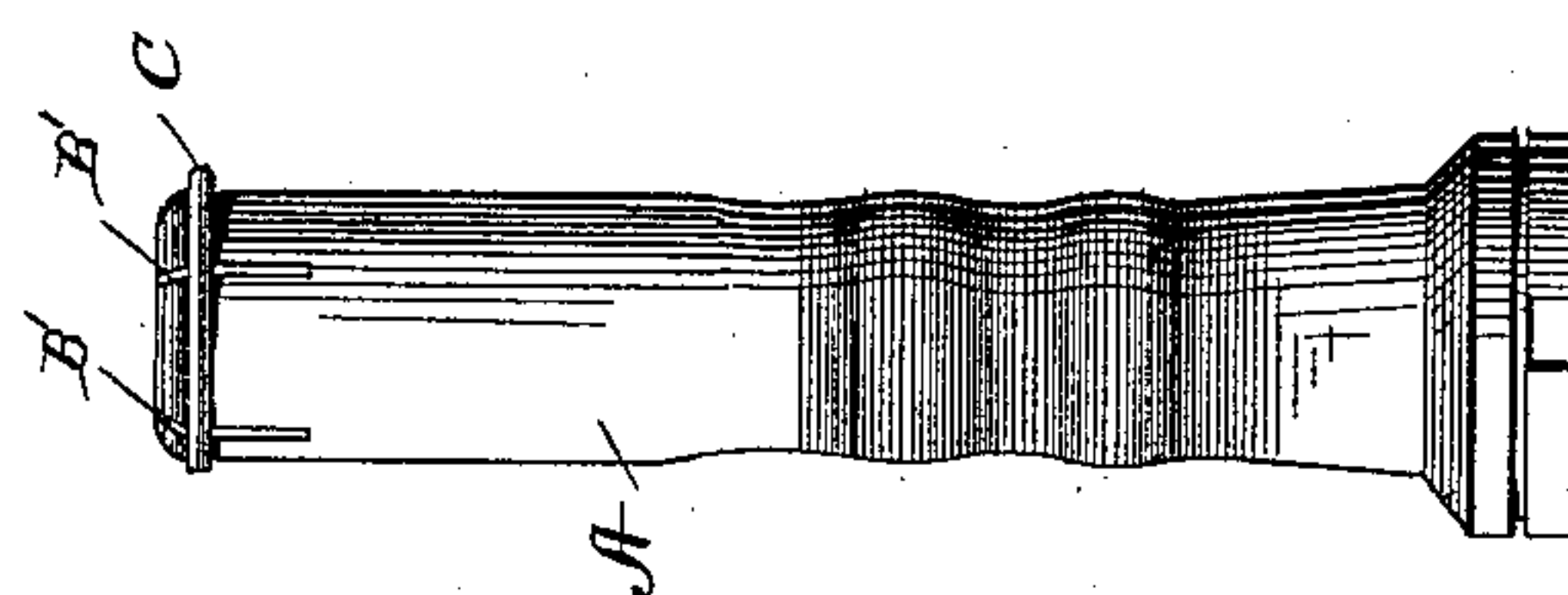


Fig. 1-

WITNESSES

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# UNITED STATES PATENT OFFICE.

THOMAS HALL, OF LAWRENCE, MASSACHUSETTS.

## BOBBIN.

SPECIFICATION forming part of Letters Patent No. 330,784, dated November 17, 1885.

Application filed October 9, 1884. Serial No. 145,065. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS HALL, a citizen of the United States, residing at Lawrence, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Bobbins; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention is in the nature of an improvement in the manner of protecting the ends of the bobbin for weavers' shuttles; and the novelty consists in a bobbin having its upper end slitted, with a circumferential groove formed around such slitted portion, and provided with a ring, into which the said slitted portion is sprung, and in which it is held by spring-pressure, all as will be hereinafter more fully described, and particularly pointed out in the claim.

In the accompanying drawings, the same letters of reference indicate the same parts of the invention.

Figure 1 is a side elevation of my improved bobbin, and Fig. 2 a longitudinal section of the same. Fig. 3 is a top plan view of the same, and Fig. 4 an enlarged section of the end of the bobbin.

A is the ordinary form of wooden bobbin, and its smaller end is provided with a circumferential groove, B, extending around it. B' B' are longitudinal saw cuts or slots in the end, and C is a metallic ring, its inner diameter corresponding to the groove B, while its outer diameter is greater than that of the bobbin. This ring is made solid. When forced over the end, the cuts B allow the end to spring inwardly, and when the ring is in place in the groove the end springs outwardly or resumes its normal position, thus securing the ring in

place by spring-pressure. It will thus be seen that the ring acts as a ferrule, and prevents the end of the bobbin from cracking or splitting, and as the ring projects beyond the diameter of the bobbin the yarn as it unwinds from the end has the smooth metallic surface of the ring to travel over instead of the wood, thus insuring an even and regular delivery of the yarn through the shuttle.

In the bobbins heretofore used which have had their ends protected by metal ferrules a groove of a dovetail form has been cut in the periphery of the bobbin, and the bobbin put in a mold, and the melted metal poured in. This is a complicated and expensive process, and only lead can be used, as brass or other metal when fluid would be of such a high temperature as to destroy the wood, and in the case of lead it would have to be polished afterward, and then being very soft and ductile would rapidly wear away and leave the end of the bobbin in a weakened condition, or worse than it would be without it. The manner in which I protect the end of the bobbin overcomes all these objections, is cheap, and simply applied to old bobbins as well as new ones, it only being necessary to slot the end, turn the groove, and slip the ring on.

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

The combination, with the bobbin A, slitted longitudinally at its upper end and provided with a circumferential groove, B, around such slitted portion, of the ring C, into which the said slitted portion is sprung, and in which it is held by spring-pressure, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS HALL.

Witnesses:

JAMES NEWTON,  
FRANCIS A. HALL.