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W. BOURASSA.
BOBBIN.
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1,440,959

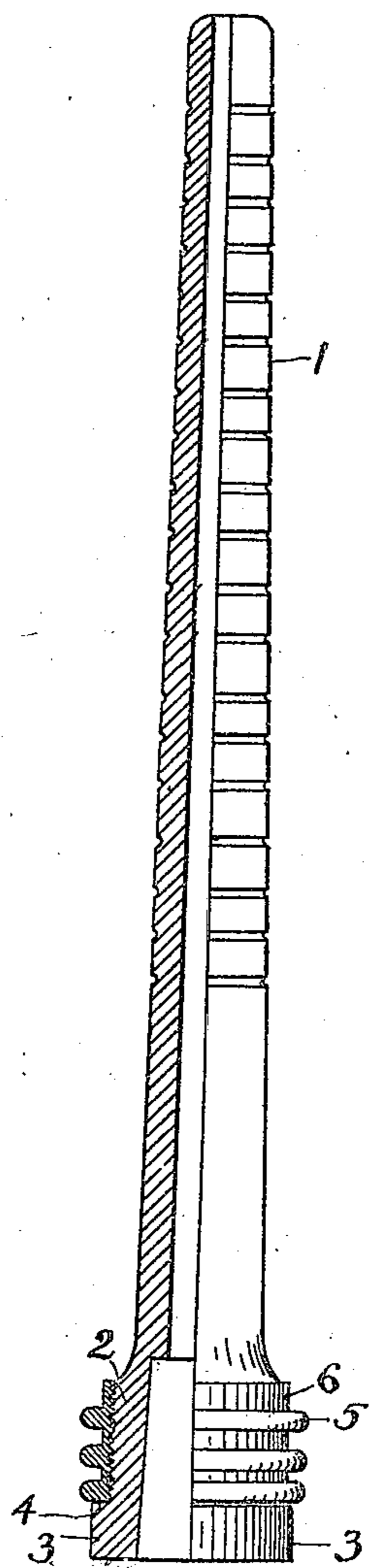


Fig. 1.

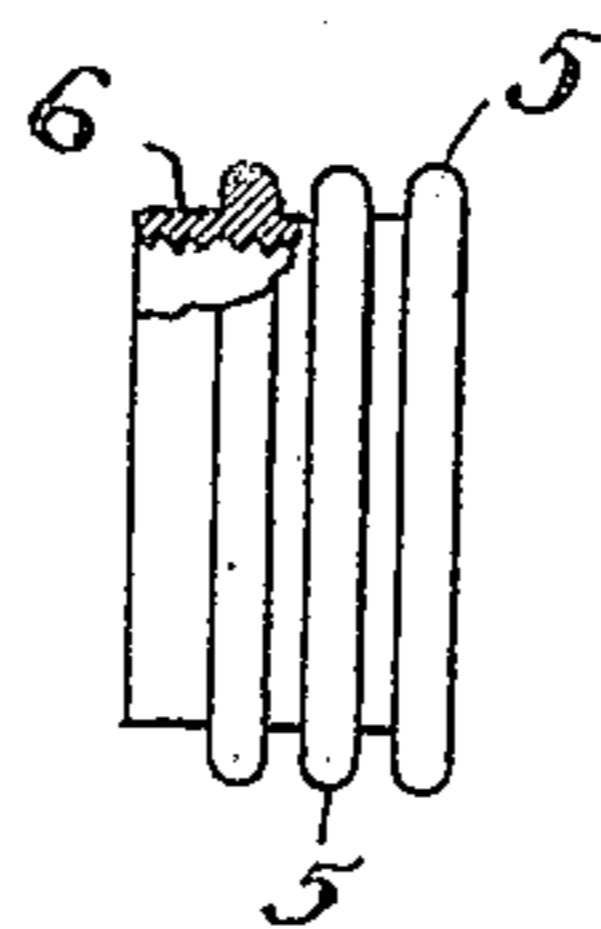


Fig. 2.

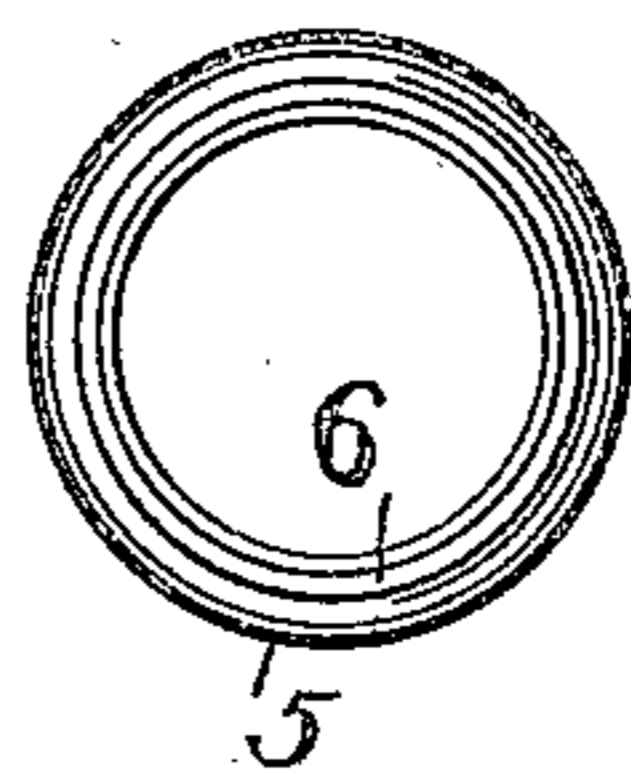


Fig. 3.

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UNITED STATES PATENT OFFICE.

WILLIAM BOURASSA, OF LEWISTON, MAINE.

BOBBIN.

Application filed May 13, 1921. Serial No. 469,117.

To all whom it may concern:

Be it known that I, WILLIAM BOURASSA, a citizen of the United States, residing at Lewiston, in the county of Androscoggin and State of Maine, have invented certain new and useful Improvements in Bobbins, of which the following is a specification.

My invention relates to bobbins of that class used in weft replenishing looms.

10 In such shuttles, the bobbins are secured by one end to the shuttle in such a manner that they can be knocked out when the weft or filling is substantially exhausted.

15 The shuttle is usually supplied at one end with a pair of spring jaws having opposing perpendicular recesses and the base of the bobbin is provided with annular rings which snap into said opposing recesses when the head of the bobbin is forced between said jaws from the top or the bottom.

These jaws are made exceedingly strong and stiff and they hold the base of the bobbin with a heavy tension.

25 When the bobbin is struck from the shuttle by a blow on the body of the shank from on top, the rings of the base are twisted in the opposing recesses of the jaw, separating the jaws slightly and forcing the bobbin bodily downward through the open bottom of the shuttle.

30 The annular rings which are usually of hardened metal, are applied to the base of the shuttle in various ways, the bobbin now in most common use having these annular rings applied as independent rings open at one point, expanded and allowed to contract into annular grooves on the wooden head of the bobbin.

40 The object of my invention is to apply these annular metal rings to the head of the bobbin in such a manner that they will resist the very great strain which comes from striking the bobbin from the shuttle and the twist put on the rings, with the tendency also to slip from the end of the head.

50 According to my invention, I form the annular ribs integral with a ferrule, the internal surface of the ferrule being provided with screw threads or projections which embedding themselves in the substance of the wood hold the ferrule from sliding in either direction and fastens it firmly on the head

of the bobbin. The ferrule is further secured in place by abutting against an annular projection formed on the end of the head at the base of the bobbin so as to resist absolutely any tendency of the ferrule to slide from the head in the direction of the base.

60 The head and the ferrule are made to taper slightly in the direction of the point of the bobbin so that the ferrule may be driven in place after being passed over the point and thence onto the head and thus forced into contact with the annular projection.

65 A specially strong construction may be made by screwing the ferrule into place so that the threads of the ferrule will cut into the body of the wood without rupturing the wood, as it would be if driven on.

70 I have illustrated my invention in the accompanying drawing in which Fig. 1 is a half longitudinal section and half elevation of the spindle.

Fig. 2 is a side elevation of the ferrule with a portion cut away and,

Fig. 3 is an end elevation of the ferrule.

Referring to the drawing, the body of the bobbin is preferably constructed of wood with a shank 1 and an enlarged head 2 having the usual form.

At the base of the head 2 is formed an annular projection 3 making a shoulder 4 on the side next to the body of the spindle.

75 The annular ribs 5 which are as shown three in number are formed integral on the outer surface of a ferrule 6 having an internal screw thread cut in it. A slight taper is given to the head of the bobbin and to the body of the ferrule so that the ferrule may be screwed onto the head by a rotary motion or pressed or hammered on as desired.

80 One end of the head comes in contact with a shoulder 4, thus preventing the ferrule from moving in that direction and holding it firmly in place.

95 Instead of a screw thread projections may be made of any suitable form which will embed themselves in the body of the wood so as to secure the ferrule against turning on the wooden head or against a longitudinal movement toward the point.

100 A bobbin constructed in this manner will wear for a long time, the ribs will remain

firmly in place, there will be no chance for the yarn to catch as in the split ring bobbin.

I claim:

5 A bobbin for automatic loom shuttles including a hollow tube with a substantially cylindrical base, said base being enlarged to form an annular shoulder, an integral cylin-

drical ferrule arranged on and fitting said base adjacent to said shoulder and provided on its interior surface with screw threads 10 embedded in said base, the outer surface of said ferrule being provided with a plurality of annular ribs.

WILLIAM BOURASSA.