C. H. Reynolds,

Bobbins,

No. 44,016, Patented Aug. 30, 1864.

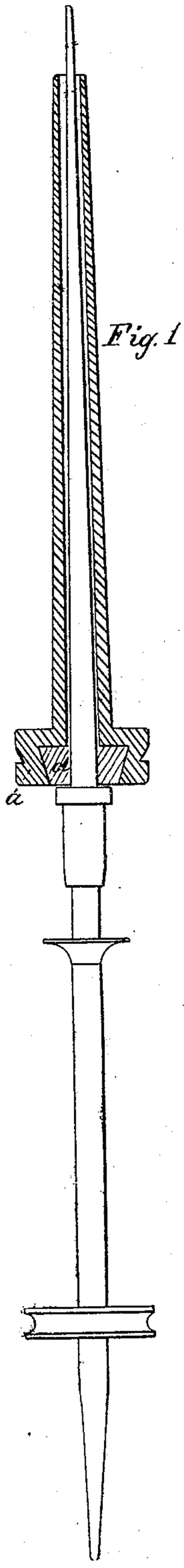

Fig. 1

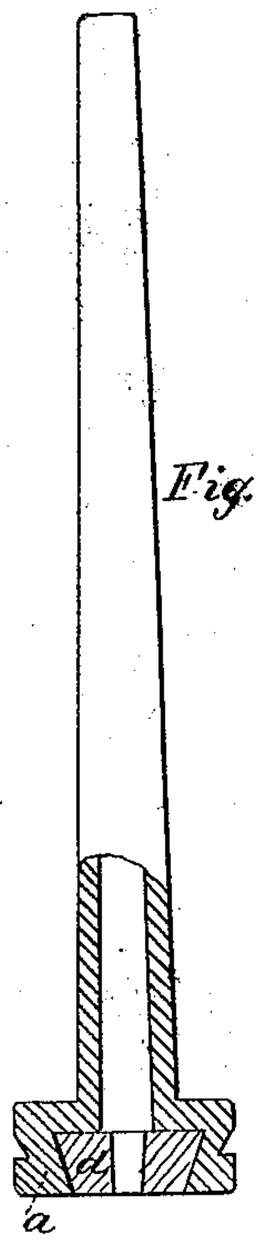

Fig. 2

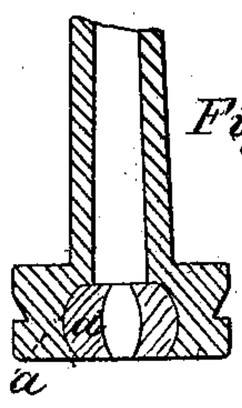

Fig. 3

Witnesses

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Henry Morris.

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Attys

UNITED STATES PATENT OFFICE.

CHARLES H. REYNOLDS, OF NORTH KINGSTON, RHODE ISLAND.

IMPROVEMENT IN BOBBINS.

Specification forming part of Letters Patent No. **41,016**, dated August 30, 1864.

To all whom it may concern:

Be it known that I, CHARLES H. REYNOLDS, of North Kingston, in the State of Rhode Island, have invented a new and useful Improvement in Bobbins; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a bobbin fitted after one example of my invention to its spindle. Fig. 2 is a view of the same bobbin when off the spindle, and Fig. 3 shows another mode of carrying out my invention.

Similar letters of reference indicate corresponding parts.

In spinning wool and other yarns and threads on spools and bobbins it is necessary that they be held stationary upon their spindles, so as not to revolve during the process of spinning, and it is also necessary that they be held upon the spindle in such a manner as to be easily removed when the bobbin is full without the use of tools or of much force. It is also requisite that the bobbin be easily fixed upon and removed from the spindle of the shuttle, and that it be held in one position therein during the process of weaving. The devices hitherto used for this purpose have been confined to the use of string or cloth packing wound upon the heel of the spindle near its shoulder, over which the bobbin was to be forced, so as to fit tightly. This method of holding the bobbin in one position on the spindle has always proved to be uncertain as well as laborious and troublesome.

My invention consists in turning a cavity or chamber, *a*, in the base of the bobbin of either of the shapes shown in Figs. 1 and 3, or of any other equivalent shape, and driving therein a section, *d*, of an elastic tube made of rubber or other suitable material. I usually take a piece of rubber tubing of the proper diameter and bore and cut it into pieces of the proper length, about as shown in the drawings, and insert one of the pieces in the chamber *a* of each bobbin. The elastic sides of the ring will conform to the shape of the chamber, and in Figs. 1 and 2, where the base of the conical chamber is at its deepest part, those sides will form a dovetail joint with the sides of the cavity, and thus present a great resistance to the pull of the bobbin when it is jerked off the spindle of the jack or of the shuttle. So, likewise, the base of the chamber prevents the elastic ring from being forced out of its seat and carried farther up into the bore of the bobbin, when it is forced down upon the spindle.

Fig. 3 shows another shape of the chamber, its sides being curved or cylindrical, so as to cause the outer and inner edges of the elastic ring to contract, thus making the bore of the ring to be of an oval shape.

In Fig. 1 the ring takes the shape of the conical chamber and its edges are contracted the most at the narrow part of the chamber at the foot of the bobbin.

I do not limit myself to any particular shape of chamber, as any shape will answer that will hold the packing securely when the workman is shifting the bobbins, and will also sufficiently compress its sides to make it work successfully when the bobbin is in use in the spindle.

This invention is useful not only in bobbins but also in the spools of drawing frames, and in any other kinds of spinning machinery where spools and bobbins are to be held in positions more or less secure against rotation or slipping.

I claim as new and desire to secure by Letters Patent—

1. The use of an elastic packing, made part of the bobbin or spool, or secured thereto, so as to bear upon the surface of the spindle and hold the bobbin or spool thereto, substantially as described.

2. Making the packing or friction-surface of the bobbins or spools, whereby to hold them to their spindles, of a ring of elastic material secured within the foot of the bobbin or spool, substantially as described.

C. H. REYNOLDS.

Witnesses:

M. M. LIVINGSTON,

WM. F. MCNAMARA.