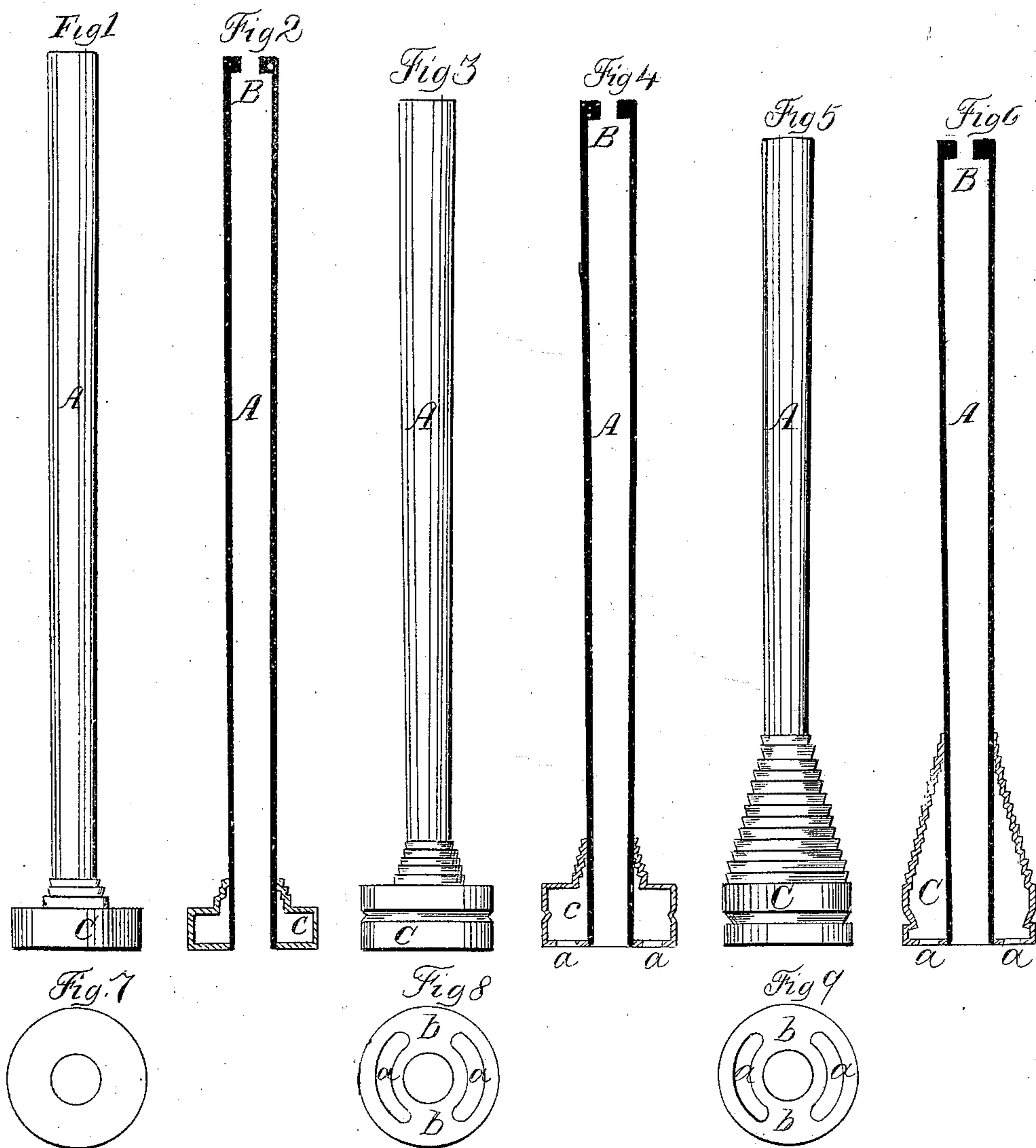


W. B. Rice, Bobbin.

No. 63,813.

Patented Apr. 16. 1867.



William B. Rice

INVENTOR

WITNESSES

John W. Shumway
A. J. White

By his Attorney.

John E. Cook

United States Patent Office.

WILLIAM B. RICE, OF UTICA, NEW YORK, ASSIGNOR TO HIMSELF,
JOHN RICE, AND E. S. MUNSON.

Letters Patent No. 63,813, dated April 16, 1867.

IMPROVEMENT IN METALLIC BOBBINS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM B. RICE, of Utica, in the county of Oneida, and State of New York, have invented a new Improvement in Bobbins; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figures 1, 3, and 5, side views of respectively a warp, a filling, and a twist bobbin.

Figures 2, 4, and 6, respectively, vertical central sections of the same; and in

Figures 7, 8, and 9, respectively, lower end views.

This invention relates to an improvement in the construction of bobbins, the object being to overcome the well-known objections to the common wood bobbin, and to produce a bobbin more durable and free from the aforesaid objections, and consists in forming the spindle from a metallic tube combined with a hollow metallic base, and also in the peculiar formation of the base of the bobbin whereby the thread upon the start more readily clings to the base so that it cannot slip up; and in order to the better understanding of my invention, as well as to enable others to construct the same, I will proceed to a description thereof as illustrated in the accompanying drawings.

The metal which I employ is zinc, and I form the tubes A in like manner as for organ tubes, filling the upper end, B, as seen in figs. 2, 4, and 6, and the upper end of larger diameter than the base, as in common bobbins. The base C is formed from the same metal, only of sufficient thickness to afford the necessary strength. The base is formed and secured to the tubes as seen in the several drawings, the tube extending through and being secured to the bottom plate of the base to form a lower bearing for the spindle. Those of the filling and twist, which, in the ordinary wood bobbins, are provided with a pin, I form with a recess or recesses, *a*, leaving solid parts *b* for the same object that the pins are set into the wood bobbins, (see figs. 8 and 9.) The warp-bobbin requiring nothing of this kind, the base is left smooth and apparently solid, as seen in fig. 7. At the base of the warp and filling bobbin I form several shoulders, each shoulder being the section of an inverted cone, so that the base of each shoulder is of smaller diameter than at the top. By this arrangement, when the thread is placed at the base and the winding commences, after having passed two or three times around, is prevented by the inverted cone-shaped shoulders from slipping up on the spindle, and no difficulty is experienced at the commencement of the winding as in common wood spindles, neither can the thread, after being wound, slip from the bobbin when it is so firmly held at the base, and therefore it is not necessary to form the spindle so much larger at the top as in the common wood bobbin. The shoulders upon the cone of the twist-bobbin are formed in like manner, as seen in figs. 5 and 6, and with a like object. Constructed in this manner the bobbins are extremely light, very smooth and durable, do not absorb the oil, are very cheap in their construction, cannot be split, a difficulty so common with a wood bobbin, and when, if ever, from accident or otherwise, the spindles may become bruised they are easily repaired to be as good as new; therefore, costing a trifle more at first, are in the end cheaper by far than the common wood spindles.

I am aware that metal tubes for bobbins are not new, and therefore do not broadly claim constructing a bobbin with a metallic tube, but having thus fully described my invention, what I claim as new and useful, and desire to secure by Letters Patent, is—

1. The combination of a hollow metal base, C, with a tubular metal spindle, A, constructed and united substantially as and for the purpose set forth.

2. I claim the inverted conical shoulders, formed at the base of the hollow spindle, when the said spindle is attached to the hollow metallic head, substantially as and for the purpose specified.

W. B. RICE.

Witnesses:

JOHN H. SHUMWAY,
A. J. TIBBITS.