(No Model.)

J. WARRENER.

BOBBIN SKEWER.

No. 257,419. Patented May 2, 1882.

Fig. 1

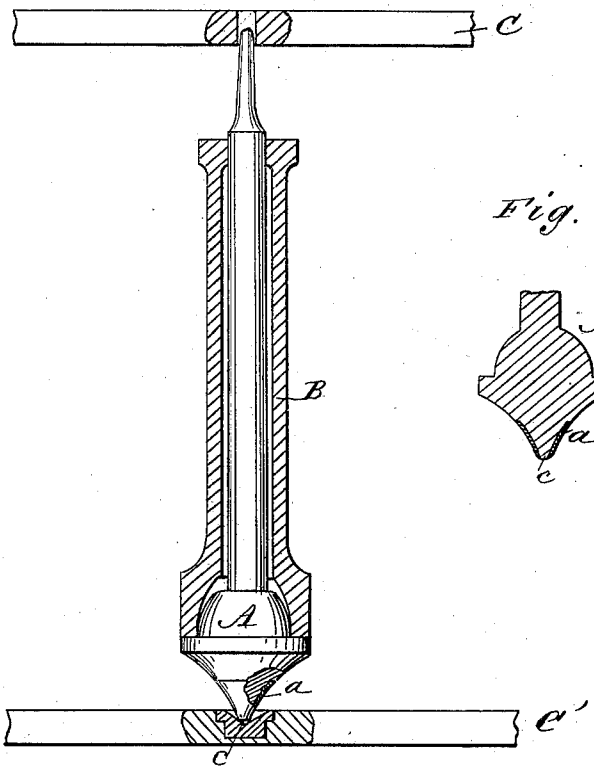


Fig. 3

Fig. 2



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES WARRENER, OF FALL RIVER, MASSACHUSETTS.

BOBBIN-SKEWER.

SPECIFICATION forming part of Letters Patent No. 257,419, dated May 2, 1882.

Application filed October 26, 1881. (No model.)

To all whom it may concern:

Be it known that I, JAMES WARRENER, of Fall River, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Bobbin-Skewers, of which the following is a full, clear, and exact description.

My invention seeks to provide a bobbin spindle or skewer which will have less friction in the creel than those in common use and which will at all times maintain a sufficient and a uniform tension.

My invention consists of a skewer tipped with metal at its lower end or point in such manner that the point of the skewer will protrude slightly from or stand flush with the lower end of the tip, whereby the bearing or contact surface of the skewer with the creel-socket will be made a compound surface, composed partly of wood and partly of metal.

The skewers in common use, the bearing-point being wholly of wood, are easily damaged and wear rapidly, and when they become rough or blunt at the point they run hard and irregularly in the creel, and thus make the tension irregular and too strong, which causes the roving made by them to be stretched and too much twisted, and oftentimes causes the roving to be pulled apart, which injures its quality and causes waste; and, furthermore, the ordinary skewer is always more or less affected by the weather, and as the contact-surface enlarges and diminishes by the shrinking and swelling of the wood or enlarges from the wearing away of the point, the tension increases and diminishes accordingly. These difficulties are to a great extent overcome by my improved skewer, which always maintains a reliable and uniform tension, producing a roving of better quality and with less twist and less waste than can be produced by the ordinary skewer.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents the skewer as it appears when placed in the creel, the bobbin being shown in section, a portion of the skewer and creel-rails being broken away to more clearly show the improvement. Fig. 2 is a perspective view of the lower end of the skewer, and Fig. 3 is a section of the same.

B represents the bobbin, C the upper, and C′ the lower, creel rails, all of which are of the ordinary construction; and A represents the skewer, which is tipped at its lower end or bearing with the metallic tip *a*. This tip is preferably stamped into proper form from sheet-brass, and is perforated at the bottom or small end with the aperture *c*, which, when the tip is in place on the skewer, permits the skewer-point to protrude slightly or stand flush with the lower end of the tip, as shown. The tip is preferably secured upon the end of the skewer by making indentations or perforations in the tip after it is in place on the skewer by means of some sharp instrument—such as a punch or awl. Thus constructed, the friction of the skewer is greatly reduced by reason of the partial metal point, and it is prevented from running too freely in the creel by the contact of the wood of the skewer with the creel-socket, thus insuring sufficient tension, and the tension will not vary so as to break, stretch, or otherwise injure the roving or cause it to be unduly twisted. Besides, the tip is very cheap, and is adapted to be put upon old as well as new skewers, and renders the skewers much more durable and less apt to be roughened and injured at the point by handling.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A bobbin-skewer having its bearing-point composed partly of wood and partly of metal, substantially as and for the purposes set forth.

2. The skewer A, provided at its lower end or bearing-point with the metal tip *a*, substantially as and for the purposes described.

JAMES WARRENER.

Witnesses:
BENJ. S. TERRY,
JOHN A. SPENCER.