No. 695,912. Patented Mar. 25, 1902.

T. W. COCKER.

SPINDLE FOR BOBBINS.

(Application filed Nov. 20, 1901,)

(No Model.)

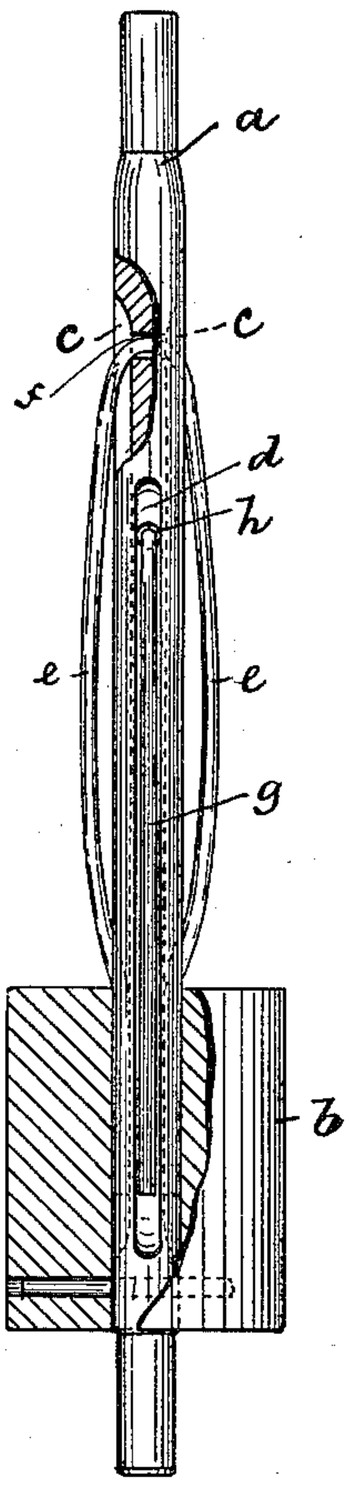

Fig. 1.

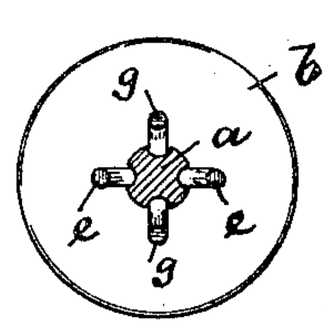

Fig. 3.

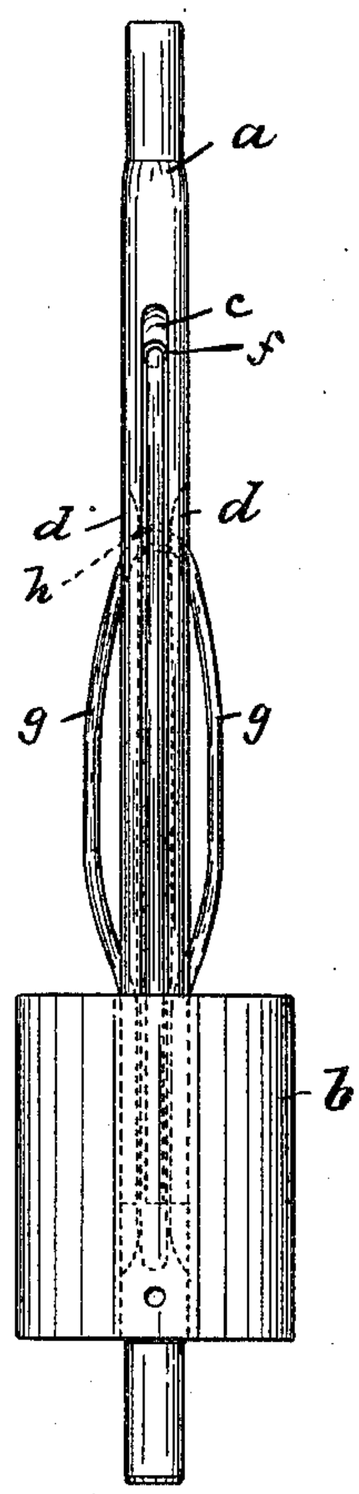

Fig. 2.

WITNESSES:

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UNITED STATES PATENT OFFICE.

THOMAS W. COCKER, OF PATERSON, NEW JERSEY, ASSIGNOR TO THE SHAW & COCKER COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

SPINDLE FOR BOBBINS.

SPECIFICATION forming part of Letters Patent No. 695,912, dated March 25, 1902.

Application filed November 20, 1901. Serial No. 82,984. (No model.)

To all whom it may concern:

Be it known that I, THOMAS W. COCKER, a citizen of the United States, residing in Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Spindles for Bobbins; and I do hereby 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 letters of reference marked thereon, which form a part of this specification.

The object of the present invention is to provide a spindle or bobbin-carrier of simple, strong, and durable construction, reliable in operation, and which spindle will permit the ready, firm, and accurate adjustment of the spool or bobbin and will prevent the dislodgment or moving of said bobbin or spool after being once adjusted.

The invention consists in the improved spindle, the bobbin securing and fastening means, and in the combination and arrangement of the various parts, substantially as will be hereinafter more fully described, and finally embodied in the clauses of the claim.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several figures, Figure 1 is a front elevation of my improved spindle, certain portions being broken away to better illustrate the nature of my invention. Fig. 2 is a view similar to Fig. 1, and Fig. 3 a detail cross-sectional view through the lower part of the spindle.

In said drawings, *a* represents the spindle, at or near one end of which is securely mounted the head or cylinder *b*. The spindle *a* is provided in its periphery with diametrically oppositely arranged longitudinal grooves or recesses *c c* and *d d*, one set of which (in the drawings *c c*) is longer than the other set, and it may be well to remark that the sets are substantially at right angles to each other and that the corresponding grooves of each set are connected by holes or channels *f* and *h*, respectively. Spring-wires *e e* and *g g* penetrate the respective holes or channels *f* and *h* and are arranged in said recesses, but project beyond the periphery of the spindle, as clearly illustrated in the drawings. For said purpose the spring-wires are looped in their central portions, while their free ends are arranged in the lower portions of the grooves or recesses and are held firmly therein by means of the head *b*, as will be manifest. Preferably the central portion of each shank of the spring-wire is flattened, so as to give a firmer hold on the spool or bobbin after the same has been placed on the spindle and the lower portion of the bobbin has been arranged in close contact with the top of the head *b*.

By the peculiar arrangement of the spring-wires a bobbin or spool once placed upon the spindle will be firmly held in operative position and is not liable to be displaced or dislodged and, as will be manifest, will permit a more true movement or rotation.

Heretofore spindles or bobbin-carriers of the class to which my invention relates have been provided with either one or two spring-wires; but such spindles did not give satisfaction. The spool or bobbin was not firmly held on the spindle, was frequently moved out of position, and finally its rotation was not true.

By providing the spindle with elongated grooves or recesses adapted to engage the spring-wires bobbins of various makes or construction and with different-sized bores can be used with equal facility.

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

1. A bobbin-carrier consisting of a spindle, a head securely mounted thereon, the spindle being provided with two sets of elongated grooves or recesses, diametrically opposite each other, one set being at right angles to the other, and spring-wires arranged in the corresponding recesses but projecting beyond the periphery of the spindle, all said parts substantially as and for the purposes described.

2. A bobbin-carrier comprising a spindle, a head securely mounted thereon, the spindle being provided with two sets of elongated grooves or recesses arranged diametrically opposite each other, one set being shorter than

the other and at right angles thereto, and spring-wires arranged in the respective grooves or recesses, all said parts substantially as and for the purposes described.

3. The combination of a spindle, a head secured on said spindle, and a spring-wire penetrating said spindle and having its end portions projecting into said head and interposed between the same and the spindle, substantially as described.

4. In a bobbin-carrier, the combination of a spindle, a head secured on said spindle, and a spring-wire penetrating said spindle and having its end portions normally held spaced at approximately the diameter of the adjacent portion of the spindle, the intermediate portions of said wire being normally spaced greater than the diameter of the spindle, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of November, 1901.

THOMAS W. COCKER.

Witnesses:
ALFRED GARTNER,
ROBERT J. POLLITT.