(No Model.)

J. W. FOSTER.

SHELL HOLDER FOR SPOOLING OR WINDING MACHINES.

No. 535,617. Patented Mar. 12, 1895.

Fig: 1.

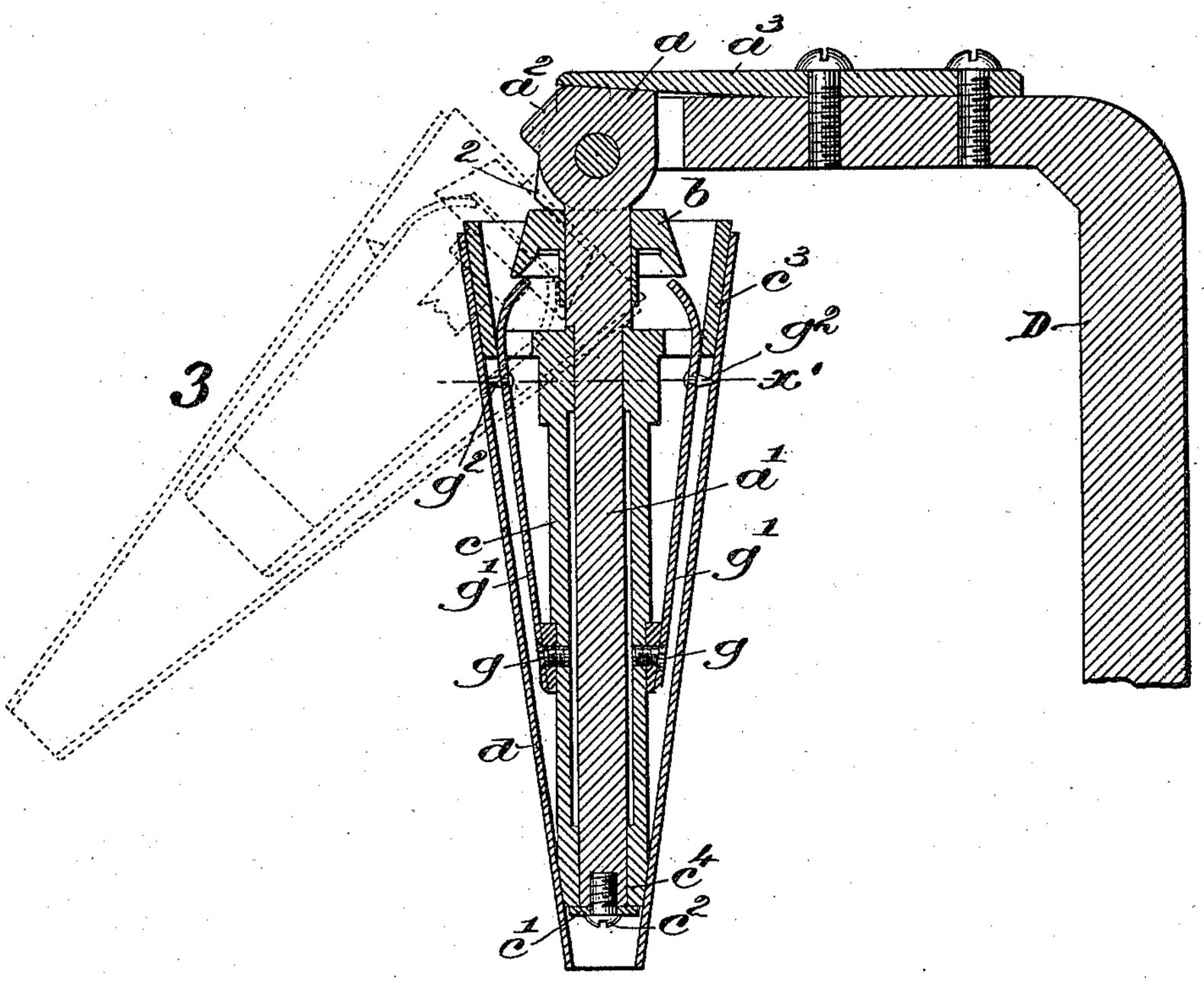


Fig: 2.

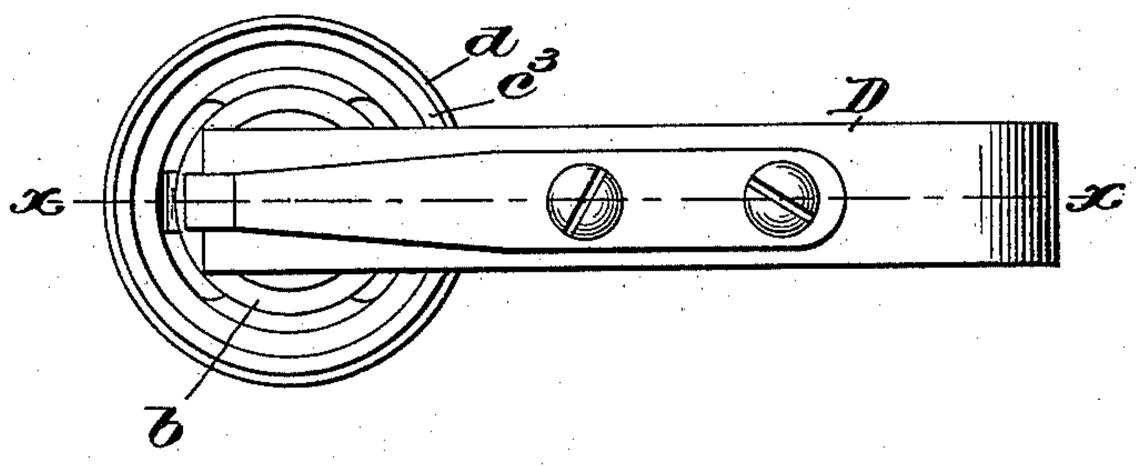
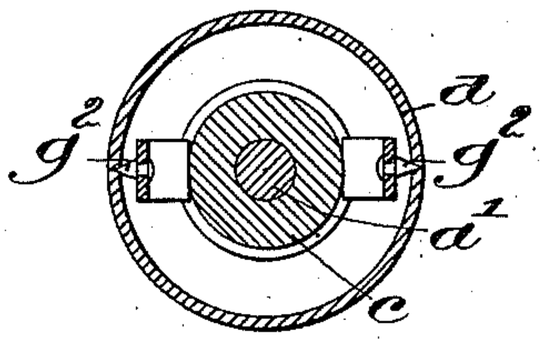


Fig: 3.



Witnesses.
Fred S. Grunbaf.
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UNITED STATES PATENT OFFICE.

JOHN W. FOSTER, OF WESTFIELD, MASSACHUSETTS, ASSIGNOR TO THE FOSTER MACHINE COMPANY, OF SAME PLACE.

SHELL-HOLDER FOR SPOOLING OR WINDING MACHINES.

SPECIFICATION forming part of Letters Patent No. 535,617, dated March 12, 1895.

Application filed September 21, 1894. Serial No. 523,688. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. FOSTER, of Westfield, county of Hampden, State of Massachusetts, have invented an Improvement in Shell-Holders for Spooling or Winding Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object the production of a novel holder to hold a paper or like shell on which thread or fibrous material is being wound.

In United States Patent No. 494,467, dated June 13, 1893, I have shown a holder having a truncated base provided with pivoted dogs actuated by suitable cams which not only cause the dogs to be swung outwardly about their pivots to engage the shell, but also to be drawn inwardly to release the shell as when the latter is to be removed from the base and spindle carrying it.

In this present invention I have provided a pivoted spindle with a sleeve having bearings at each end for the shell and having one or more spring arms provided with points which in one position of the spindle or when turned into working position, act to enter the shell, the turning of the spindle into its other or non-working position causing the said spring arms to be moved toward the spindle to release the shell.

Figure 1 in full lines shows part of a spindle carrying yoke and a spindle and shell holder in longitudinal section, the dotted lines showing the spindle and parts carried by it out of working position. Fig. 2 is an end view of the yoke, spindle and holder, the dotted line x showing the line of section for Fig. 1, and Fig. 3 is a cross section in the line x', Fig. 1.

The yoke D, but partially shown, is and may be substantially the same as the yoke designated by like letter in United States application, Serial No. 511,681, filed May 18, 1894.

The yoke has pivoted to it at a, a spindle a' having a head provided with two like faces a^2, against which may act a spring a^3 to retain the spindle in working position, as by full lines, or out of working position, as shown by dotted lines.

The spindle is shown as surrounded loosely by a spring mover b, shown as a conical-faced or cone-like slide or plate, the acting surface of said plate, as herein shown, being at the interior. The spindle has a shoulder, against which acts the inner end of a sleeve c, mounted loosely on the spindle and kept thereon by a washer c' and screw c^2, the latter entering the end of the spindle.

The sleeve has at or near each end a bearing, as at c^3, c^4, for the shell d, to be used, the latter being composed preferably of paper. The bearings c^3, c^4, are shown as shaped to receive a cone-shaped shell, and the bearing c^3 constitutes what has been heretofore called a base. The shell has attached to it in suitable manner acting screws g, spring arms g', having suitable points g^2, which when the spindle is in operative position, as shown by full lines, enter the interior of the shell and hold the same on the spindle.

When a shell is to be put on or taken off the spindle, the spindle will be turned out of its working position, as shown by dotted lines 3, and in so doing, the plate b will meet the projection 2 forming part of the yoke, and as the outward movement of the spindle is completed, the said plate is made to travel longitudinally on the spindle, and at such time the cam face of the plate b acts on the ends of the spring arms g', causing said arms to effect the withdrawal of the said pins from the shell.

When the jaws are retracted, as shown by dotted lines, the shell may be removed or applied thereto, and when the spindle is put in place, the spring arms will immediately be released to let the points enter the sleeve.

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

1. A pivoted spindle, a sleeve mounted thereon loosely and provided with bearings for a shell, and a spring arm connected to said sleeve, combined with a beveled slide or plate, and means to cause the same to be moved longitudinally upon the spindle and engage said arm when the spindle is swung in one direction to thus effect the movement of said spring arm, substantially as described.

2. The combination with a yoke having a projection 2, a spindle pivoted on said yoke, a sleeve mounted loosely on said spindle and

provided with spring arms having each a point and curved ends and normally held outwardly to enable said points to engage the interior of a thread-receiving shell, of a bevel slide or plate adapted to be moved in one direction by said projection when the spindle is swung outwardly about its pivot on said yoke, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN W. FOSTER.

Witnesses:
ALFRED F. LILLEY,
A. W. WARREN.