

(No Model.)

W. W. FORD.

BOBBIN FOR SEWING MACHINES.

No. 331,956.

Patented Dec. 8, 1885.

Fig. 1.

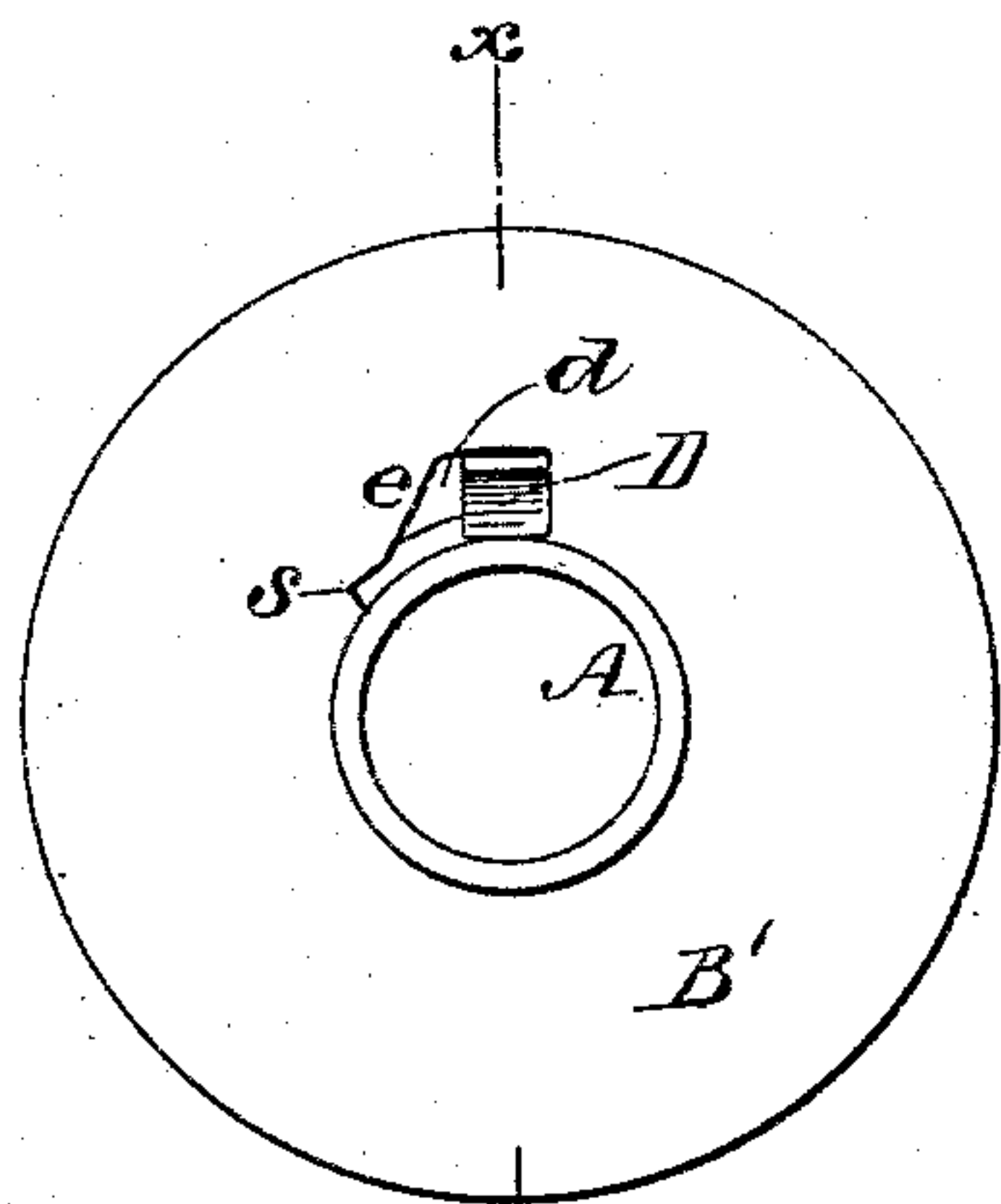


Fig. 2.

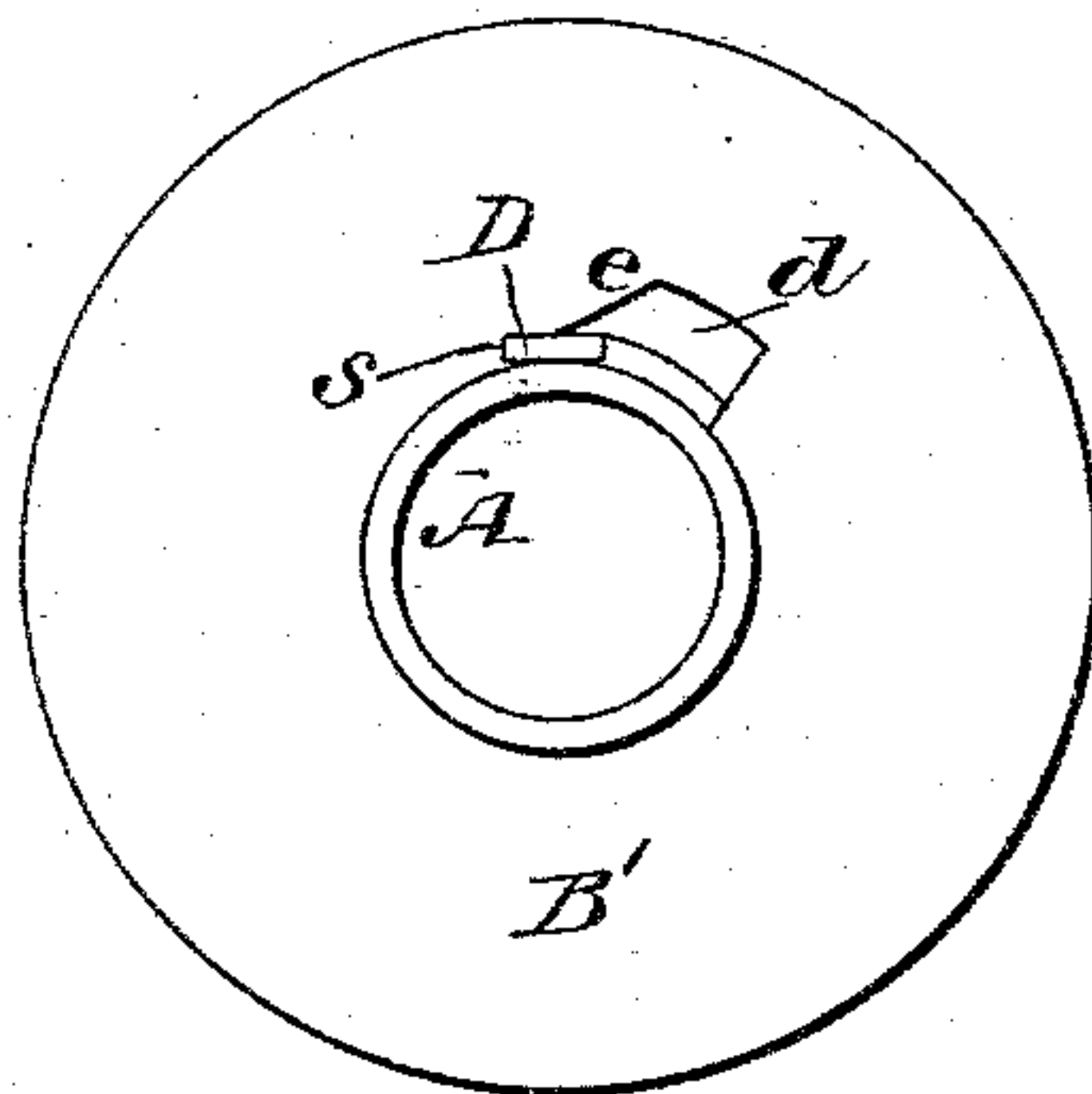


Fig. 4.

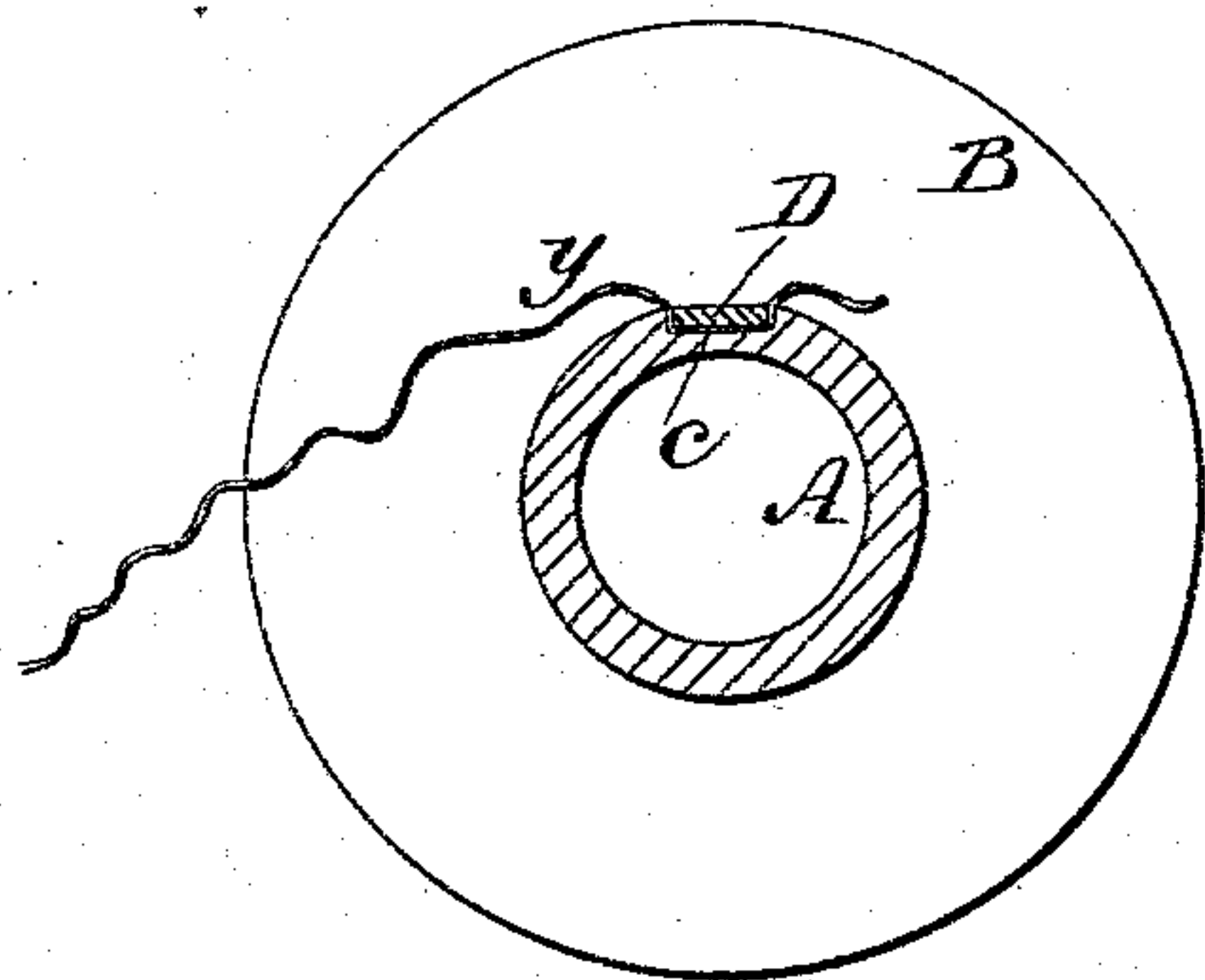
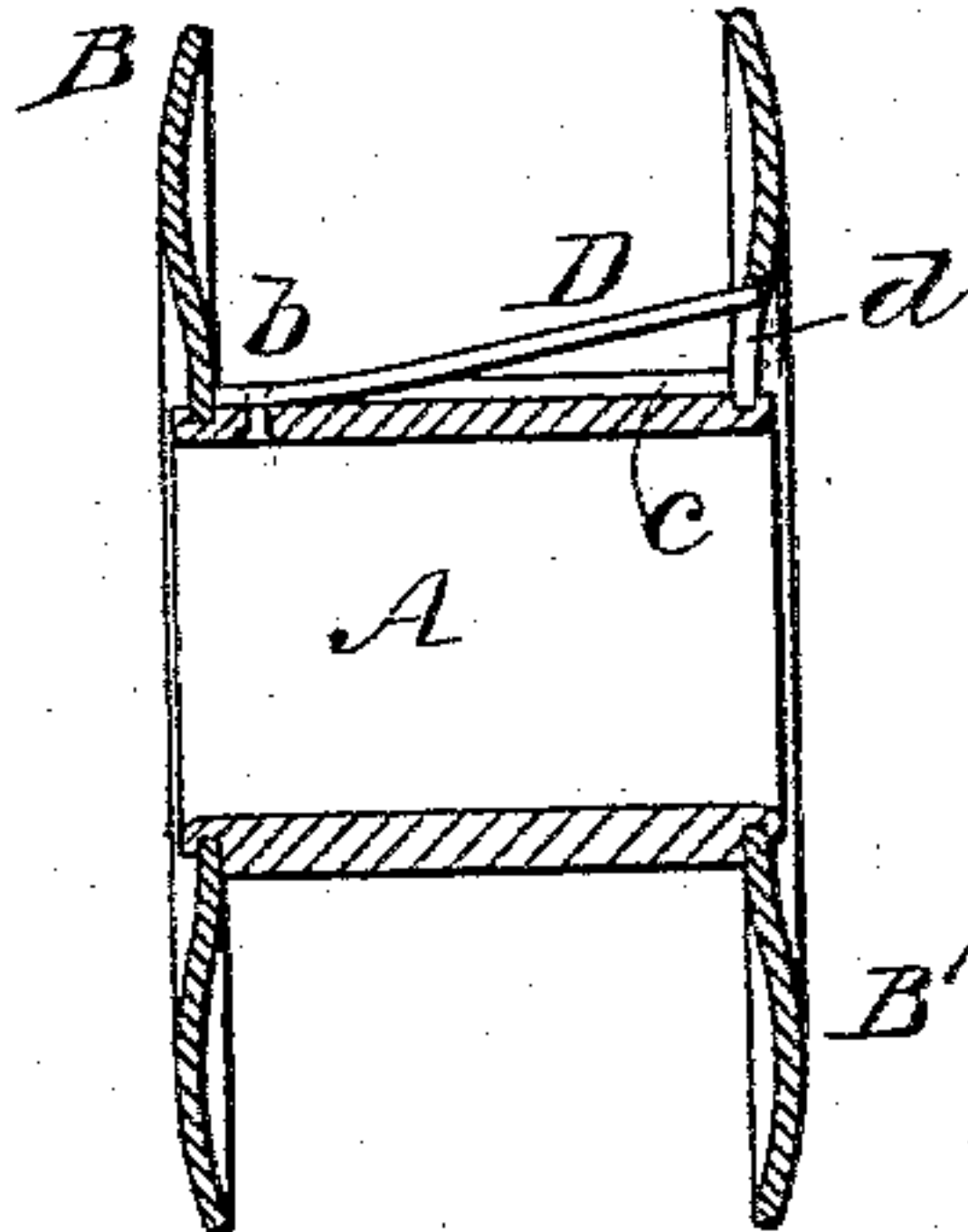


Fig. 3.



WITNESSES:

John H. Deemer
C. Sedgwick

INVENTOR:

W. W. Ford

BY

Munn & Co
ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM W. FORD, OF ELMIRA, NEW YORK.

BOBBIN FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 331,956, dated December 8, 1885.

Application filed April 30, 1885. Serial No. 163,966. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. FORD, of Elmira, in the county of Chemung and State of New York, have invented a new and useful Improvement in Bobbins for Sewing-Machines, &c., of which the following is a full, clear, and exact description.

This invention is more particularly designed for bobbins of sewing-machines, but may be used on bobbins in mills for making cloth and on bobbins of different kinds, either long or short, carrying thread, rope, or cord. It will suffice here, however, to describe it as applied to sewing-machine bobbins.

The invention consists in a bobbin having one of its heads loose, and provided with a spring on the exterior of its barrel adapted to be engaged by the said loose head to lock it closed on the barrel, whereby provision is made for catching and holding the end of the thread or other material on the bobbin preparatory to filling, to facilitate the winding of the thread, &c., and for afterward releasing the thread, &c., from its lock or hold on the bobbin, whereby much time is saved in filling the bobbin, and the thread, &c., is as free to run off the bobbin as if it had not been locked or secured thereon, thus avoiding breakage of it, or of the needle or other device used in working it, and of any interference with tension that may be applied to it.

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

Figures 1 and 2 represent end views of a sewing-machine bobbin, showing the devices for locking and releasing hold of the thread in different positions; Fig. 3, a longitudinal section on the line *xx* in Fig. 1; and Fig. 4 a transverse section of the bobbin with the inner end portion of the thread as locked on the bobbin.

A indicates the cylinder or barrel of the bobbin, which is provided with a fast head, B, and an opposite loose or turning head, B'. D is a spring arranged longitudinally of the barrel, and secured at its one end, *b*, thereon, but free or loose at its opposite end, which, except when specially restrained, is free to spring outward. It is preferred to make a longitudinal groove, *c*, in the barrel, to receive said spring

within it when shut down, so that it may be flush with the exterior of the barrel, and so offer no obstruction to the winding of the thread on the barrel. The free end of the spring D is arranged to project within or through an opening, *d*, in the loose or turning head B' of the bobbin. This aperture *d* is of sufficient width to allow of the head B' being turned sufficiently to admit of the opening and closing of the spring, and is made with one of its sides, *e*, beveled, and to terminate on the inner and spread end of the bevel in a groove or notch, *s*.

It is not absolutely necessary that the aperture *d* should pass wholly through the head B', as it might be a mere recess in the inner face of said head.

This construction of the head B' gives it a cam-like action on the spring to close it. Thus when the head B' is turned in the one direction it admits of the spring D rising, as shown in Figs. 1 and 3, to allow of the inner end of the thread being passed beneath it preparatory to winding the thread on the barrel, and when said head B' is turned in a reverse direction the beveled side *e* of the aperture *d* acts upon the spring to close it on the thread and to pass the closed spring into the notch or groove *s*, as shown in Fig. 2, and so to lock the thread on the bobbin to facilitate the winding of the thread on the latter. After the bobbin, however, has been filled the head B' is turned back again to release its hold on the spring D, thus leaving the inner end of the thread loose on the bobbin, whereby in sewing with the thread by the machine there will be no pull on the thread to break it as it is unwound from the bobbin, or to break or interfere with the needle, or to interfere with whatever tension may be put upon the thread.

It should be observed that while the notch or groove *s* serves a useful purpose in holding the spring locked down to its place, the same is but an extension of or forms part of the aperture *d*, the closing side *e* of which might be suitably bent or beveled as to hold the spring closed without forming the aperture *d* with a special notched extension.

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

1. The bobbin provided with a spring on the exterior of its barrel for locking or hold-

ing the thread or material to be wound upon the bobbin, and having one of its heads fitted to turn upon the barrel, and constructed to close and release the spring, substantially as
5 specified.

2. The combination, with the barrel A of the bobbin, of the spring D and the loosely-fitted or turning head B', having an aperture, *d*, arranged to receive the free end of the
10 spring within it, said aperture having its one side wall constructed to close the spring, and terminating in a notch or groove to hold the spring closed when said head is turned in a given direction, and to release the spring when

said head is turned in a reverse direction, 15 essentially as and for the purpose or purposes herein set forth.

3. The barrel A of the bobbin, having a longitudinal groove, *c*, in combination with the spring D, and the loose or turning head B', 20 provided with an aperture, *d*, having a sloping or bevel side, *e*, terminating in a notch or groove, *s*, substantially as specified.

WILLIAM W. FORD.

Witnesses:

HENRY E. BROWN,
WILMOT E. KNAPP.