

(No Model.)

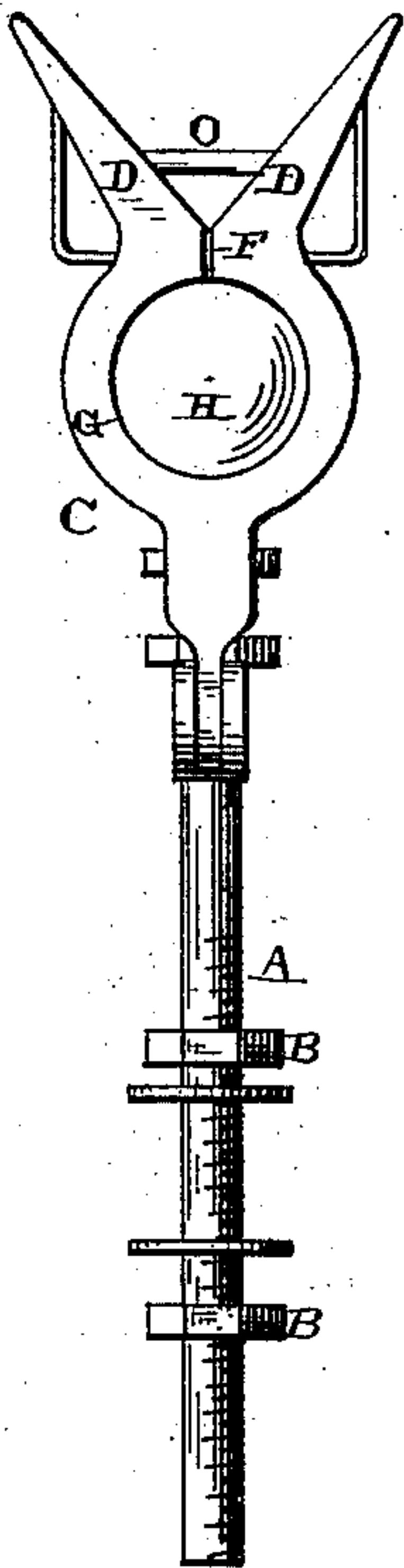
E. B. WILLIAMS.

THREAD GUIDE FOR SPOOLING MACHINES.

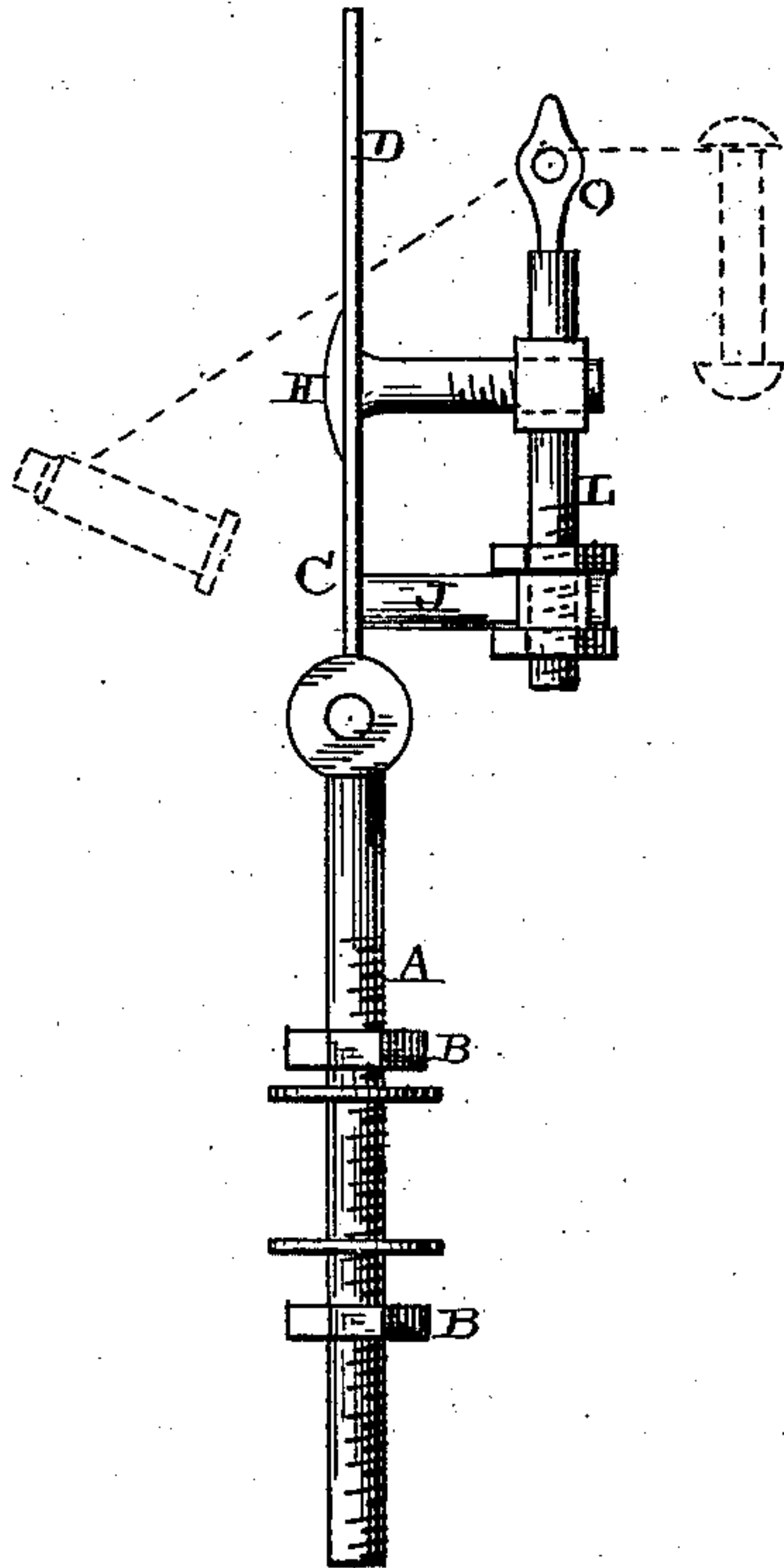
No. 294,712.

Patented Mar. 4, 1884.

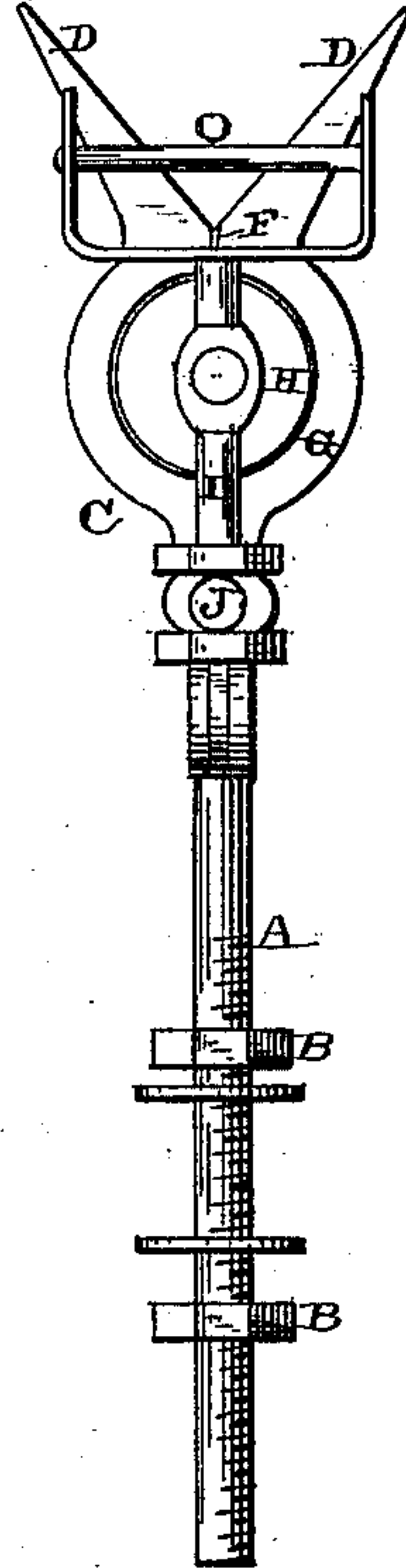
*Fig. 1.*



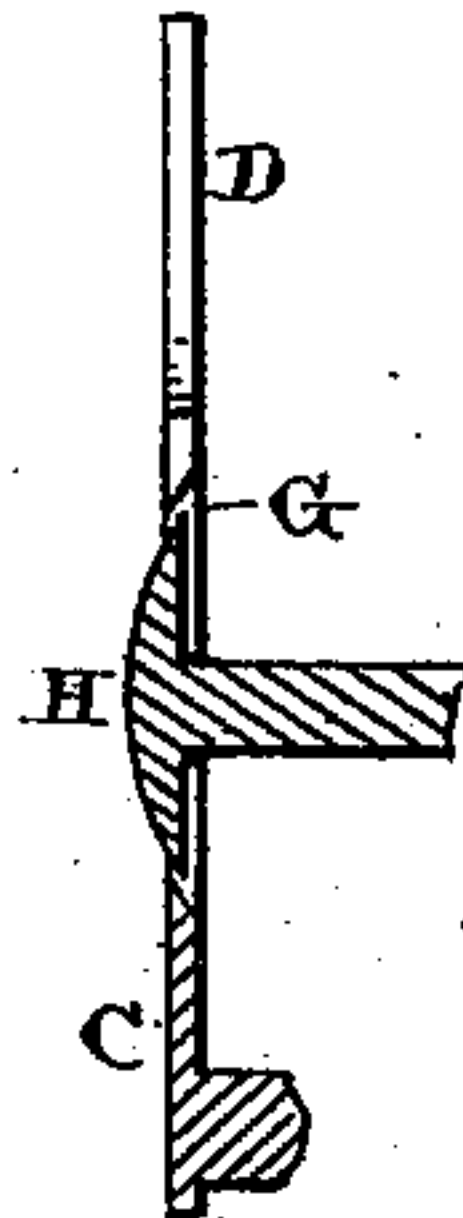
*Fig. 2.*



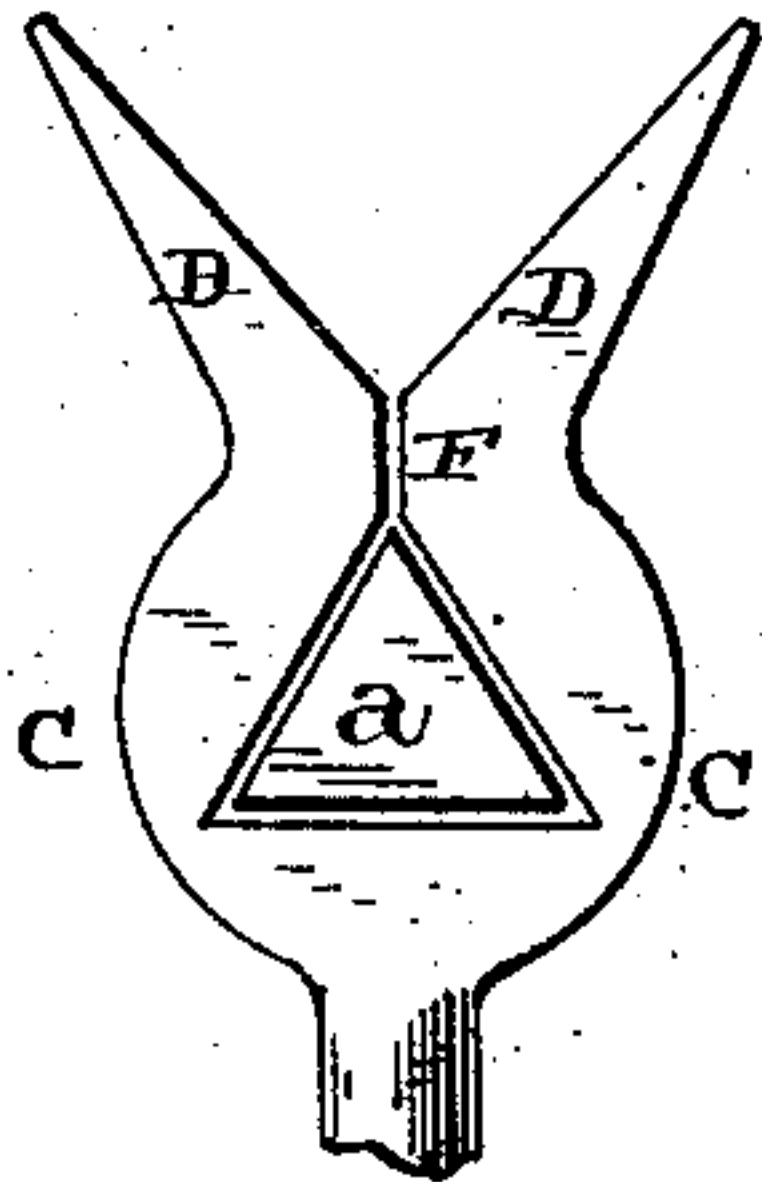
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



- Witnesses -

Louis F. Gardner

J. W. Garner

- Inventor -

E. B. Williams

per

J. A. Lehmann, atty.

# UNITED STATES PATENT OFFICE.

EBEN B. WILLIAMS, OF FORESTDALE, ASSIGNOR, BY MESNE ASSIGNMENTS,  
OF PART TO DANIEL D. EARLE, OF NORTH SMITHFIELD, RHODE ISLAND.

## THREAD-GUIDE FOR SPOOLING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 294,712, dated March 4, 1884.

Application filed April 30, 1883. (No model)

*To all whom it may concern:*

Be it known that I, EBEN B. WILLIAMS, of Forestdale, in the county of Providence and State of Rhode Island, have invented certain  
5 new and useful Improvements in Thread-Guides for Spooling-Machines; 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  
10 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to thread-guides for spooling-machines; and it consists in, first, a  
15 thread-guide provided with a supporting-stem having a joint therein, with an opening through said guide in which the thread will sink, with the device for partially filling the opening, around which device the thread will pass, and  
20 the support for the device; second, the combination of a thread-guide pronged at its upper end and provided with a vertical slot, and an opening provided with beveled edges, with a device that is adjustable in relation to the  
25 opening, and a support for the device, the opening and device being shaped as described, whereby the thread will automatically sink down, after catching between the prongs, through the slot and upon either side of the de-  
30 vice; third, the combination of a suitable support for the frame, the frame having an opening provided with beveled edges made through it, with a device having a screw-threaded stem arranged within said opening, the stem  
35 for supporting the stem connected to the device, and the support for the second stem, the second stem being provided with means for vertical adjustment, whereby a double adjust-  
40 ment may be given to the device; fourth, the combination of the frame having a circular opening provided with beveled edges made through it, with a device having a screw-threaded stem arranged within said opening, and a  
45 second stem for supporting the first, the second stem being capable of vertical adjustment, whereby a double adjustment may be given to the device, all of which will be more fully described hereinafter.

Figure 1 is a front elevation of a guide embodying my invention. Fig. 2 is an edge  
50 view, and Fig. 3 is a rear view, of the same. Fig. 4 is a detail sectional view. Fig. 5 shows a modification.

A represents the supporting-stem, which is made screw-threaded any suitable part of its  
55 length, and which is passed down through the traverse-rail and held in position by means of the jam-nuts B. Pivoted or otherwise loosely attached to this stem is the guide-frame C, which consists of a flat plate of any suitable  
60 shape, and which has the horns or prongs D formed on its upper ends, so as to catch the thread and guide it down toward the vertical slot F, through which the thread passes into the guide. These prongs save the trouble and  
65 time of adjusting the thread to the slot, for if the thread is once made to catch in between the prongs it presses downward into the slot at once. Through the frame is made a round  
70 opening, G, which has its edge beveled away on its rear side, so as to permit of the adjustment of the disk H in relation to the front edge of the opening, and thus regulate the size of  
75 the circular slot which extends entirely around the disk, and which slot forms the guide for the thread. This disk H is made rounding on its face, and by being adjustable horizontally  
80 back and forth its outer edge comes more or less within the beveled edge of the opening, and thus enlarges or decreases the size of the slot, according to the size of the thread. The disk H is made circular in form, as shown in  
85 Figs. 1 and 3, so that the thread will pass down upon either side of it as the thread sinks down into the opening G. Projecting from the rear side of the frame is the support J, for  
90 the screw-threaded stem L, which can be adjusted into any desired position, and then held in place by jam-nuts. The stem of the disk H is made screw-threaded and passes into or  
95 through this stem L, so that the disk can be freely adjusted in relation to the opening in the frame. The stem L serves to adjust the disk vertically, and then it can be adjusted back and forth by means of its own stem. By means of this double adjustment the disk can



be fitted to the hole in the frame with the greatest precision. Upon the top of the screw-threaded stem L is placed the rest or guide O, which is provided with a screw-socket to receive the upper end of the stem, and to enable the rest to be adjusted vertically. As the traverse-rail carries the thread-guide up and down in front of the spool, the yarn is made to pass through the circular slot, formed by the frame and the disk, from the bobbin to the spool on which it is wound. Should any bunches or enlargements in the yarn be encountered, the yarn will break. A guide made in the manner here shown exerts the least amount of friction on the yarn. The center of the disk is set parallel with the outside of the spool when it is half-full, so that when the spool is empty the thread will run first on one side of the disk until it gets half-full, and then it will run over the top and upon both sides for a time, and then it will run on the other side until the spool is full. As the thread adjusts itself from side to side, it is automatic in its action in every way.

25 Instead of the circular piece H, as above described, a triangular piece, *a*, as shown in Fig. 5, may be used. In this case the thread will also sink down upon either side of the device, as above described.

30 Either a triangular or a circular form of device may be used, as may be preferred.

Having thus described my invention, I claim—

35 1. A thread-guide provided with a supporting-stem having a joint therein, with an opening through said guide in which the thread will sink, with the device for partially filling the opening, around which device the thread

will pass, and the support for the device, substantially as described. 40

2. The combination of a thread-guide pronged at its upper end and provided with a vertical slot, and an opening, G, the opening being provided with beveled edges, with a device which is adjustable in relation to the opening, and a support for the device, the opening and the device being shaped as described, whereby the thread will automatically sink down, after catching between the prongs, through the slot and upon either side of the device, substantially as set forth. 45 50

3. The combination of a suitable support for the frame, the frame having an opening provided with beveled edges made through it, with a device having a screw-threaded stem arranged within said opening, the stem L for supporting the stem connected to the device, and the support for the stem L, the stem L being provided with means for vertical adjustment, whereby a double adjustment may be given to the device, substantially as shown. 55 60

4. The combination of the frame having a circular opening provided with beveled edges made through it, with a device having a screw-threaded stem arranged within said opening, and a second stem for supporting the first, the second stem being capable of vertical adjustment, whereby a double adjustment may be given to the device, substantially as shown. 65

In testimony whereof I affix my signature in presence of two witnesses. 70

EBEN B. WILLIAMS.

Witnesses:

GEORGE H. SMITH,  
JONAS WHITCOMB.