

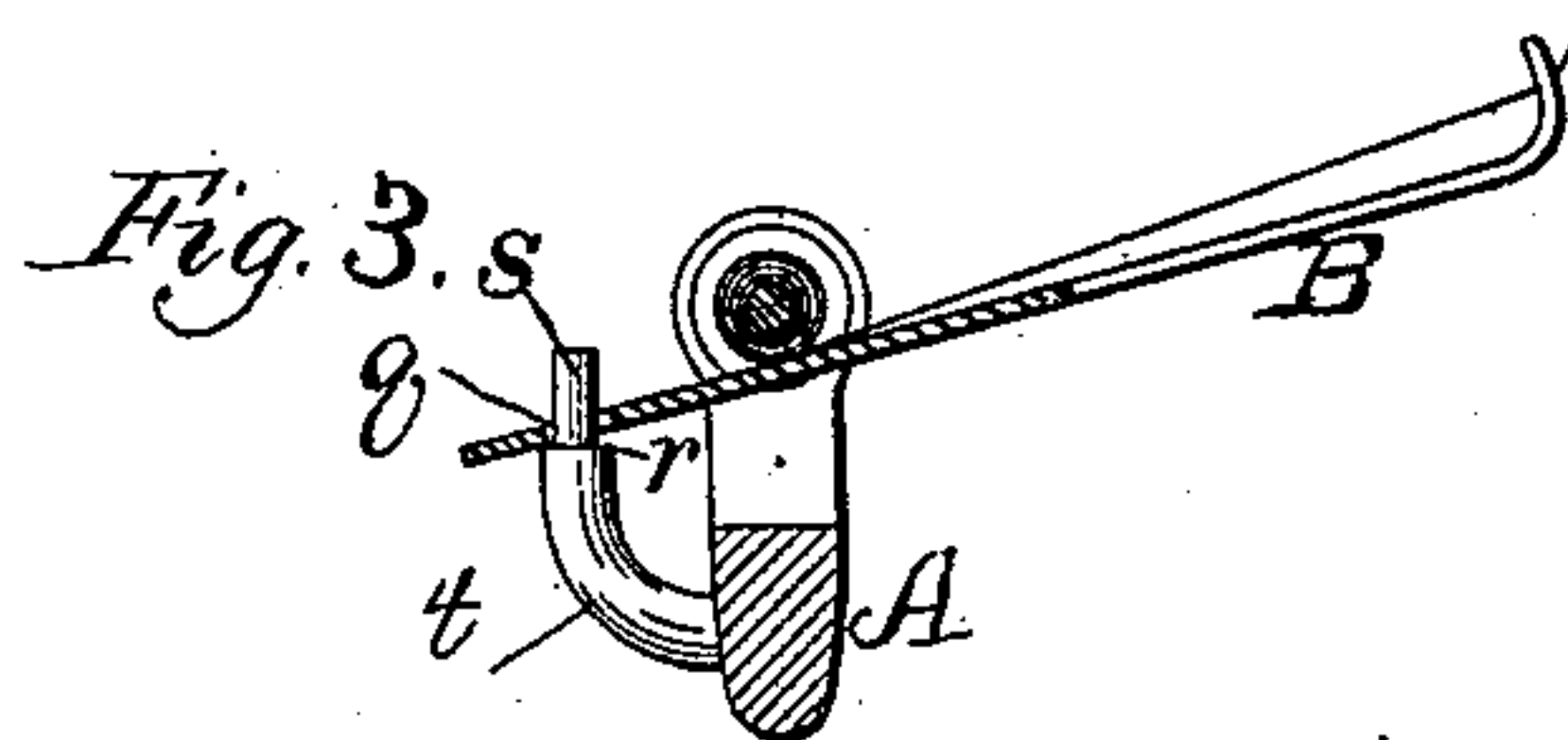
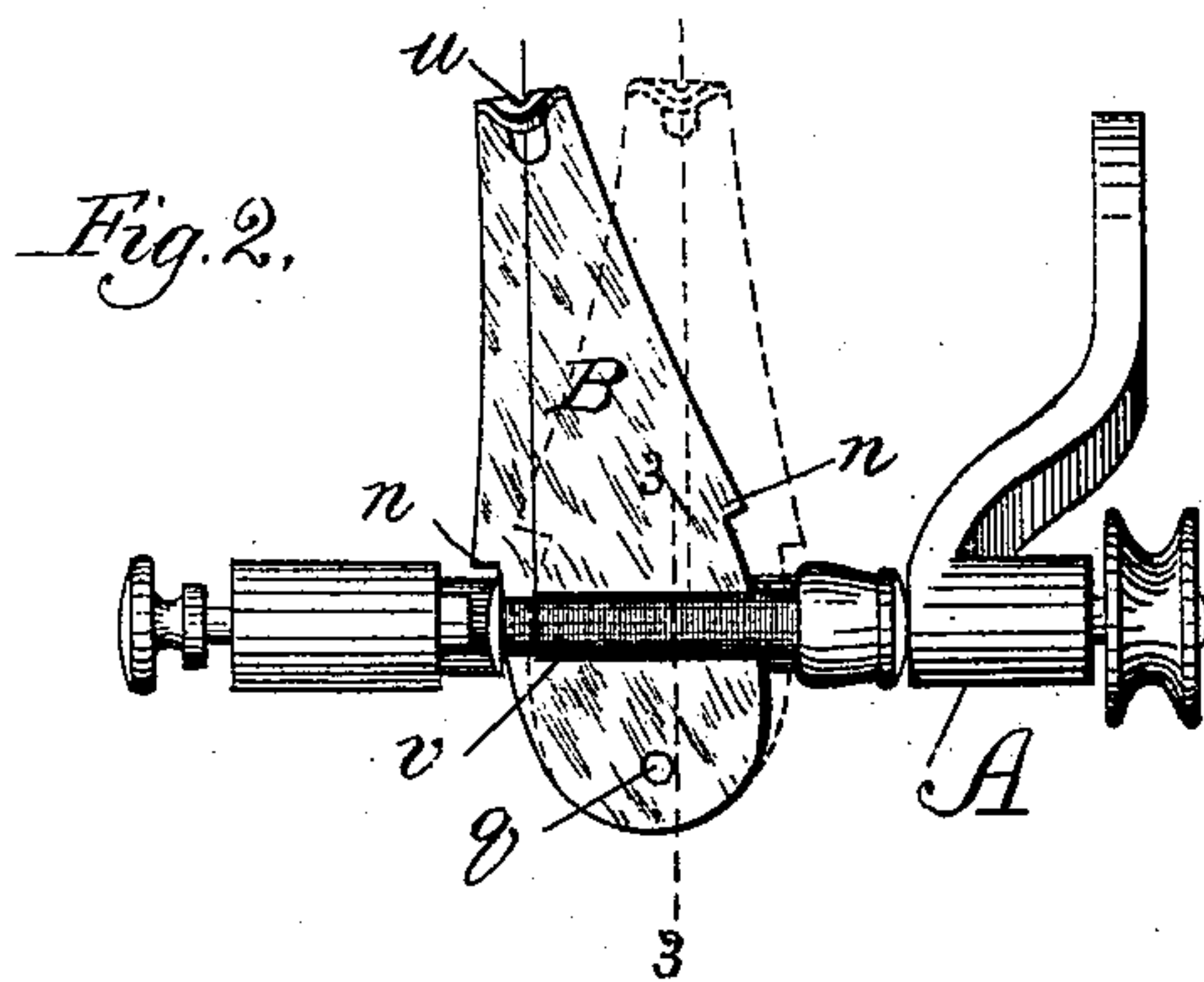
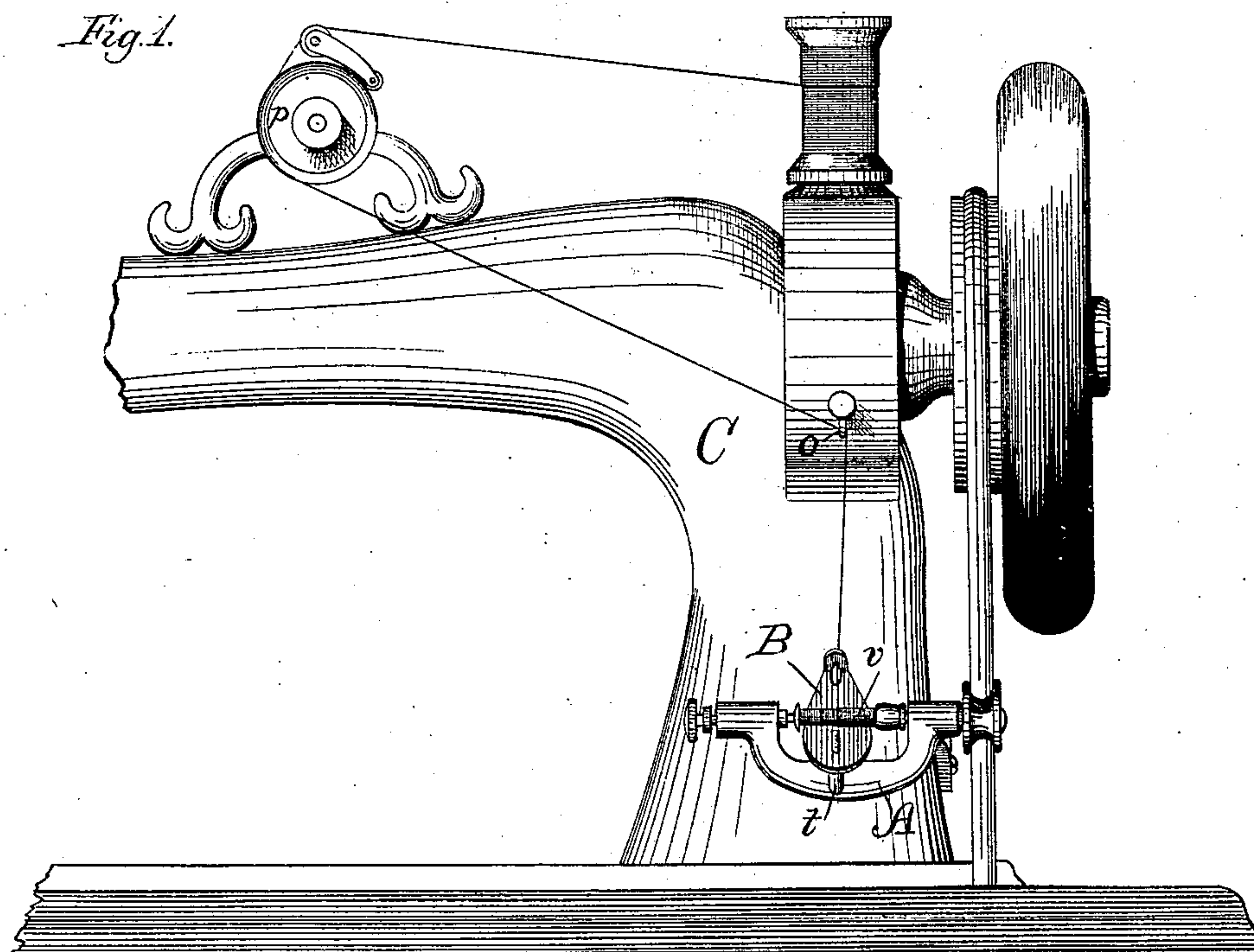
(No Model.)

W. H. NEWTON.

BOBBIN WINDER FOR SEWING MACHINES.

No. 270,831.

Patented Jan. 16, 1883.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM H. NEWTON, OF CHICAGO, ILLINOIS.

BOBBIN - WINDER FOR SEWING - MACHINES.

SPECIFICATION forming part of Letters Patent No. 270,831, dated January 16, 1883.

Application filed September 11, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HARRISON NEWTON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Bobbin-Winders for Sewing-Machines; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention consists in employing, in connection with the bobbin-holding attachment, a plate crossing the bobbin, and pivoted at one end to a fixed point near the bobbin in such manner as to have both a vertical and a lateral movement upon its pivot, and provided at its opposite end with an eye for the passage of the thread, and maintained in contact with the bobbin and moved from side to side by the strain and action of the thread; and it consists, also, in certain details of construction and combinations of parts, all as hereinafter more fully set forth.

In the drawings, Figure 1 is an elevation of my device as applied to the arm of a sewing-machine; Fig. 2, an enlarged plan view of the bobbin-winding attachment provided with my improvement, and Fig. 3 a section taken on the line 3 3 of Fig. 2.

A is the attachment for holding the bobbin and permitting it to be rotated by the driving mechanism of the machine. The application of my improvement is not confined to the particular holding device shown; but it may easily be adapted to any of the known forms.

B is a metal plate crossing the bobbin *v*, and provided at one end with an eye, *u*, for the passage of the thread to be wound. The breadth of this plate at the point where it crosses the bobbin is less than the length of the latter between the heads. At the end opposite this eye the plate is pivoted to a fixed object upon the machine in such manner as to have both a vertical and lateral movement on the pivotal point, to the end that the plate may be held against the bobbin by a slight strain upon the thread which passes through the eye, and readily conform to the thickness of thread upon the bobbin, and at the same time sway from side to side as the thread passes back and forth for the separate layers, thus between the eye and the bobbin maintaining the thread at

a right angle, or nearly so, with the latter. A convenient and effective mode of pivoting the plate is by means of the arm *t*, projecting from the base of the holding attachment, terminating in a pin, *s*, and shoulder *r*, a hole, *q*, in the plate fitting loosely upon the pin.

In the practical application of my device I prefer to pivot it, as shown, to the outer side of the holding attachment, below the bobbin, and have it thence cross the bobbin underneath the same, so that an upward strain upon the thread beyond the eye maintains the plate against the bobbin in an oblique position. I prefer, also, to pass the thread through the tension *p*, and thence through an eye, *o*, projecting from the arm C above the center of the bobbin, as in this way the best results are obtained. It is obvious, however, that the thread may be simply held in the fingers, if desired, instead of passing through the tension and eye, *o*. It is also obvious that the relative positions of the plate and bobbin are not material beyond the fact that the plate must have the described movement on its pivot and must cross the bobbin, for all the above effects would be produced if the plate crossed the bobbin above it or on either side instead of below, as shown, though in such case the direction of the thread would have to be changed accordingly.

Unless provision is made to prevent it, there is sometimes a tendency on the part of the thread at the turn, after reaching the end of the bobbin, to pass over the edge of the plate and get behind it. I obviate this difficulty by slightly extending the edges of the plate above the bobbin, as shown at *n*, whereby when the plate reaches its extreme right or left position it extends over the ends of the bobbin beyond the limit of the thread. The same result would be obtained by placing a small stop at or near each edge in the form either of a small pin or a flange upon the edge of the plate.

The application of my device above described is not confined to sewing-machines, though this is the most important one. With slight modifications to suit the altered surroundings, the same invention may be applied to fish-reels and other winding apparatus.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a bobbin-winder, a plate crossing the

bobbin and pivoted at one end in such manner as to have both a vertical and lateral movement upon its pivot, and provided at its opposite end with an eye for the passage of the thread, and maintained in contact with the bobbin and swayed from side to side by the strain and action of the thread, substantially as described.

2. In a bobbin-winding device, the combination, with the holder and bobbin and mechanism for rotating the bobbin, of the plate B, adapted to bear against the bobbin, and provided with an eye at one end and extending across the bobbin, and pivoted at the other end in such manner as to have both a vertical and a lateral movement on its pivot, substantially as described.

3. The plate B, provided with an eye for the thread at one end and a hole at the opposite end for pivoting it in position, and provided

with extensions *n* on its edges, substantially as described, and for the purpose set forth.

4. The plate B, provided with an eye at one end for the thread and with a hole at the opposite end, in combination with the bobbin against which it bears, and bobbin-holding attachment A, having the arm *t*, terminating in a pin, *s*, and shoulder *r*, substantially as described.

5. In a sewing-machine, the combination, with the arm C, tension *p*, eye *o*, and driving mechanism, of a bobbin-holding attachment and bobbin, and pivoted plate B, crossing the bobbin and adapted to bear against it, the whole being constructed and arranged to operate substantially as described.

WM. HARRISON NEWTON.

In presence of—

WM. H. DYRENFORTH,
THOMAS KIRKWOOD.