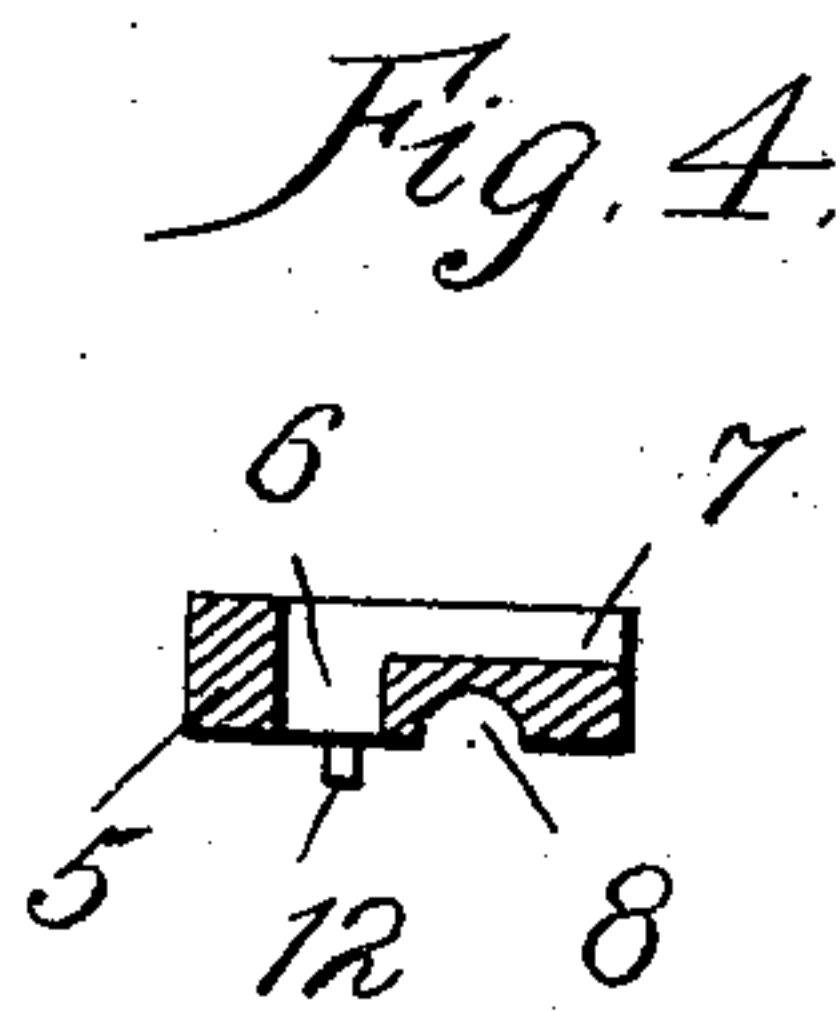
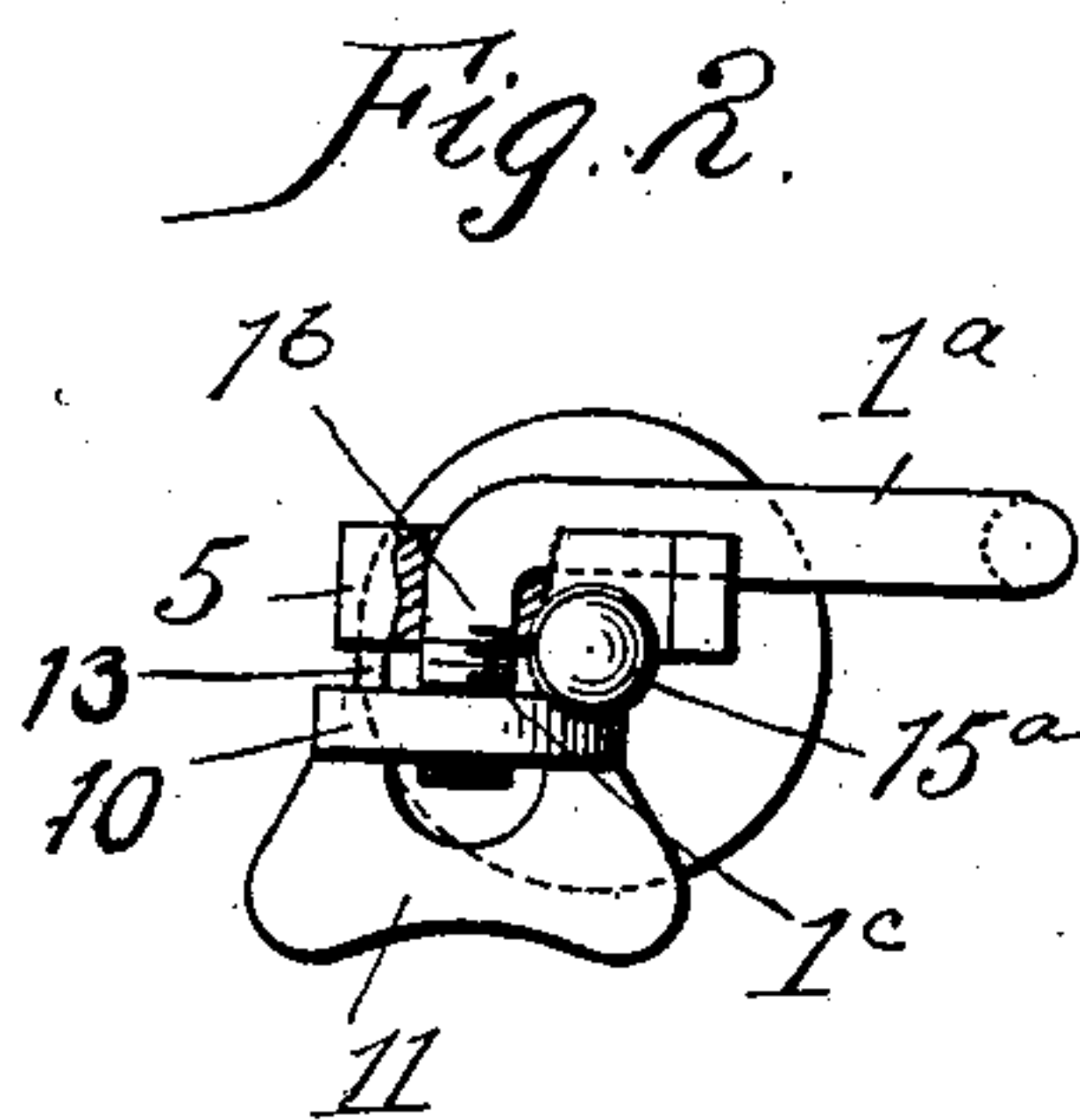
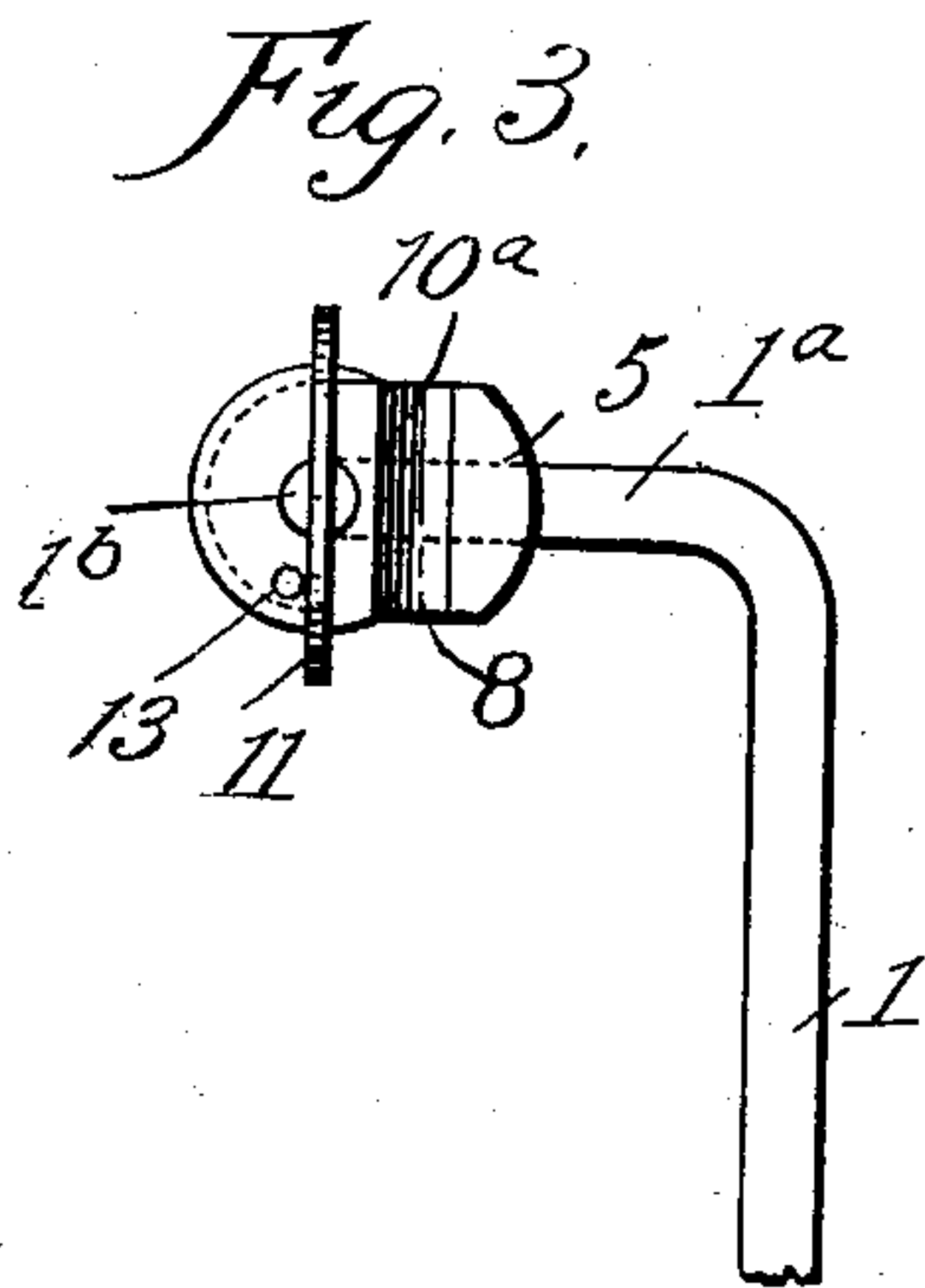
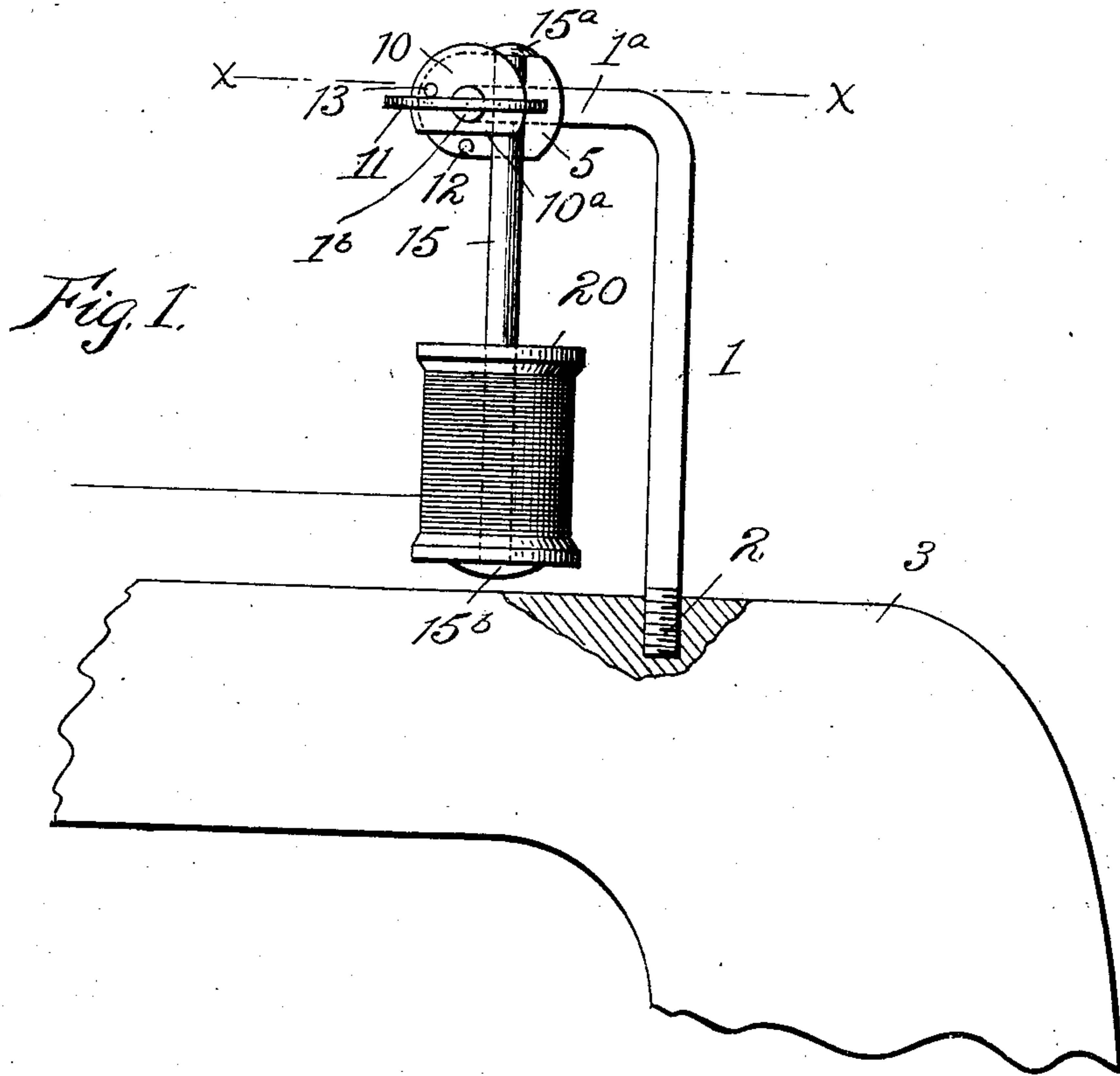


No. 858,934.

PATENTED JULY 2, 1907.

C. J. WOODWARD.  
SPOOL HOLDING ATTACHMENT FOR SEWING MACHINES.

APPLICATION FILED JUNE 15, 1906.



Witnesses  
*L. H. H. H.*  
*R. J. J. J.*

Charles J. Woodward  
Inventor  
By his Attorneys *Knight & Co.*

# UNITED STATES PATENT OFFICE.

CHARLES J. WOODWARD, OF NEW YORK, N. Y.

## SPOOL-HOLDING ATTACHMENT FOR SEWING-MACHINES.

No. 858,934.

Specification of Letters Patent.

Patented July 2, 1907.

Application filed June 15, 1906. Serial No. 321,878.

To all whom it may concern:

Be it known that I, CHARLES J. WOODWARD, a citizen of the United States of America, and a resident of the borough of Brooklyn, city and State of New York, have  
5 invented certain new and useful Improvements in Spool-Holding Attachments for Sewing-Machines, of which the following is a specification.

The object of my invention is to produce a simple and effective device for supporting a spool of cotton vertically on a sewing machine in such manner that the thread will readily pay off laterally from the spool which is loosely mounted by the rotation of the spool upon the supporting spindle without any possibility of the thread catching upon the spool spindle or other part  
15 of the machine.

To this end I provide a bracket having an overhanging bracket arm from which the spool-supporting spindle is suspended. The bracket arm is provided with a suitable clamping device for detachably engaging the upper end of the spindle. The lower end of the spindle is formed with a spool-supporting head having an upper smooth bearing face and a rounded lower face and located adjacent to the arm of the sewing machine, the head being of less diameter than the ordinary spool  
25 and just large enough to afford proper support for the spool. The spool rests upon the smooth bearing face of the head and is allowed to turn freely thereon, there being practically no friction to retard the rotation of the spool and the cotton paying off laterally from the spool without danger of becoming entangled with the spindle or its head. The spindle is supported with its lower end free from the machine frame.

In order that my invention may be fully understood I will first describe the same with reference to the accompanying drawing and afterwards point out the novelty more particularly in the annexed claims.  
35

In said drawings Figure 1 is a front elevation of my spool holding attachment showing its application to a machine; Fig. 2 is a detail plan view of the same; Fig. 3  
40 is a detail front elevation of the bracket having an overhanging bracket arm showing the clamp open, the spool supporting spindle being omitted, and Fig. 4 is a sectional view of the clamping plate of the overhanging bracket arm, said section being taken on the line  $x-x$  of Fig. 1.  
45

The bracket of my spool holding attachment is formed of a wire or rod 1, which is bent into approximately inverted L-shape and formed with a threaded lower end 2 adapted to be screwed into a tapped opening of the machine arm or frame 3 of an ordinary sewing machine. This tapped opening in the sewing machine arm may be the opening in which the ordinary spool supporting spindle is mounted. The bracket 1 has an overhanging bracket arm or horizontal extension 1<sup>a</sup>  
50 with a laterally bent end 1<sup>b</sup> which is threaded as shown at 1<sup>c</sup>.

5 is the stationary plate of the clamp. This plate 5 has an opening 6 extending through it, and a longitudinal groove 7 in its rear face. The plate 5 is fitted upon the angular end of the bracket arm 1<sup>a</sup>, the  
60 threaded laterally bent end 1<sup>b</sup> extending through the opening 6, and a portion of the bracket arm 1<sup>a</sup> resting within the groove 7. These parts are rigidly secured together in this position either by soldering or other suitable means.

In the front face of the clamping block 5 is formed a vertical groove 8 adapted to receive the spool supporting spindle hereinafter referred to.

10 is a clamp nut formed with a thumb plate 11, and with the central threaded opening which screws on to the threaded portion 1<sup>c</sup> of the bent end 1<sup>b</sup> of the bracket arm. The clamp nut 10 is cut away, as shown at 10<sup>a</sup>  
70 to correspond with the groove 8 of the plate 5 when the clamp nut is in opened position. The stop pin 12 projecting from the face of plate 5 is adapted to be engaged by a stop pin 13 projecting inwardly from the  
75 clamp nut 10 when the clamp nut is rotated into open position, as shown in Fig. 3, to limit the movement of the nut upon the threaded bent end of the bracket arm.

15 is the spool supporting spindle formed at its upper end with a small head or flange 15<sup>a</sup> having a flat lower face which is adapted to rest upon the upper edge of the clamp plate 5 when inserting and removing the spindle, so as to support the spindle upon the plate 5 while the clamp nut is being operated. The spindle  
80 15 is formed at its lower end with the spool supporting head 15<sup>b</sup> having an upper smooth bearing face and a rounded outer face so as not to interfere with the thread which is unwound from the spool. The circular edge of the head 15<sup>b</sup> is very thin so as to closely contact with  
85 the lower end of the spool and avoid the possibility of the thread becoming engaged between the head and the lower end of the spool.

20 is an ordinary spool of cotton which can be placed upon the spindle 15 and supported upon the head 15<sup>b</sup>,  
95 the upper head 15<sup>a</sup> being so small as not to interfere with the free insertion and removal of the spindle through the spool opening.

The clamp being in the position shown in Fig. 3, and the spindle being inserted through the spool opening, the spindle is placed in the groove 8 of the clamping plate with the head 15<sup>a</sup> resting upon the upper edge of the clamping plate. The clamp nut is then rotated to the position shown in Figs. 1 and 2 for securely clamping the spindle upon the bracket arm 1<sup>a</sup> when the spool  
100 of thread will be in position for use, the head 15<sup>b</sup> which sustains the spool being supported a little above the sewing machine arm.

The advantages of my spool holding device are its simplicity in construction and operation and its effectiveness in properly paying off the thread laterally by the rotation of the spool without any possibility of the  
110



thread becoming entangled upon the spindle or between the spool and the supporting spindle head.

My device is to be distinguished from the form of spool holding device in which the spool supporting spindle is supported upon an incline from the machine arm, and is provided with a spool supporting head of larger diameter than the spool, the spool being held against rotation upon the spindle, and the cotton paid off endwise of the spool by being unwound round the large head while the spool remains stationary.

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

1. A spool holder comprising an overhanging bracket arm, and a spool spindle, upon which a spool is permitted to freely rotate, suspended from the bracket arm and having a spool supporting head provided with a rounded lower face and a thin circular edge against which the spool closely seats so as to avoid the entanglement of the thread.
2. A spool holder comprising a bracket having an overhanging bracket arm, a spool spindle, upon which a spool is permitted to freely rotate, suspended from the bracket arm and having a spool supporting head provided with a rounded lower face and a thin circular edge so as to avoid the entanglement of the thread and clamping means for securing the spool spindle to the bracket arm.
3. A spool holder comprising a bracket having an overhanging bracket arm and adapted to be mounted upon a machine frame, a spool spindle, suspended vertically from said bracket arm, and having a supporting head provided with an upper smooth bearing face upon which a spool is permitted to freely rotate, and clamping means for securing the spool spindle to the bracket arm.
4. A spool holder comprising a bracket having an overhanging bracket arm and adapted to be mounted upon a machine frame, a spool spindle, suspended vertically from said bracket arm, and having a supporting head provided with an upper smooth bearing face upon which a spool is permitted to freely rotate, and a rounded lower face formed with a thin circular edge and clamping means for securing the spool spindle to the bracket arm.
5. A spool holder comprising a bracket having an overhanging bracket arm and adapted to be mounted upon a

machine frame, a spool spindle, suspended vertically from said bracket arm, and having a supporting head provided with an upper smooth bearing face upon which a spool is permitted to freely rotate, and clamping means for securing the spool spindle detachably to the side of the bracket arm.

6. The combination of an overhanging bracket arm adapted for attachment to a machine frame, a grooved clamp plate secured to the bracket arm, a spool spindle adapted to rest in the groove of the clamp plate, and a clamp nut mounted upon the clamp plate and adapted to clamp and support the spindle.

7. The combination of an overhanging bracket arm, adapted for attachment to a machine frame and formed with a laterally projecting threaded end, a clamp plate fitted over said laterally projecting threaded end and rigidly secured to the bracket arm, a clamp nut engaging the said threaded end, and a spool supporting spindle adapted to be clamped between the clamp plate and nut.

8. The combination of a bent wire bracket arm of approximately inverted L-shape formed with a laterally bent threaded end, a clamp plate formed with an opening through which said threaded end projects, and a groove in which a part of the bracket arm rests, said clamp plate being rigidly secured to the bracket arm, a clamp nut cut away on one side and engaging the said threaded end, and a spool supporting spindle adapted to be clamped between the clamp plate and nut.

9. The combination of a bent wire bracket arm of approximately inverted L-shape formed with a laterally bent threaded end, a clamp plate formed with an opening through which said threaded end projects, a horizontal groove in one face in which a part of the bracket arm rests, and a vertical groove in its opposite face in which the spool spindle is adapted to rest, said clamp plate being rigidly secured to the bracket arm, a clamp nut cut away on one side and engaging the said threaded end, and a spool supporting spindle adapted to be clamped between the clamp plate and nut, and co-operating stops upon the clamp plate and nut for limiting the movement of the latter.

CHARLES J. WOODWARD.

Witnesses:

WM. P. HAMMOND,  
WM. E. KNIGHT.