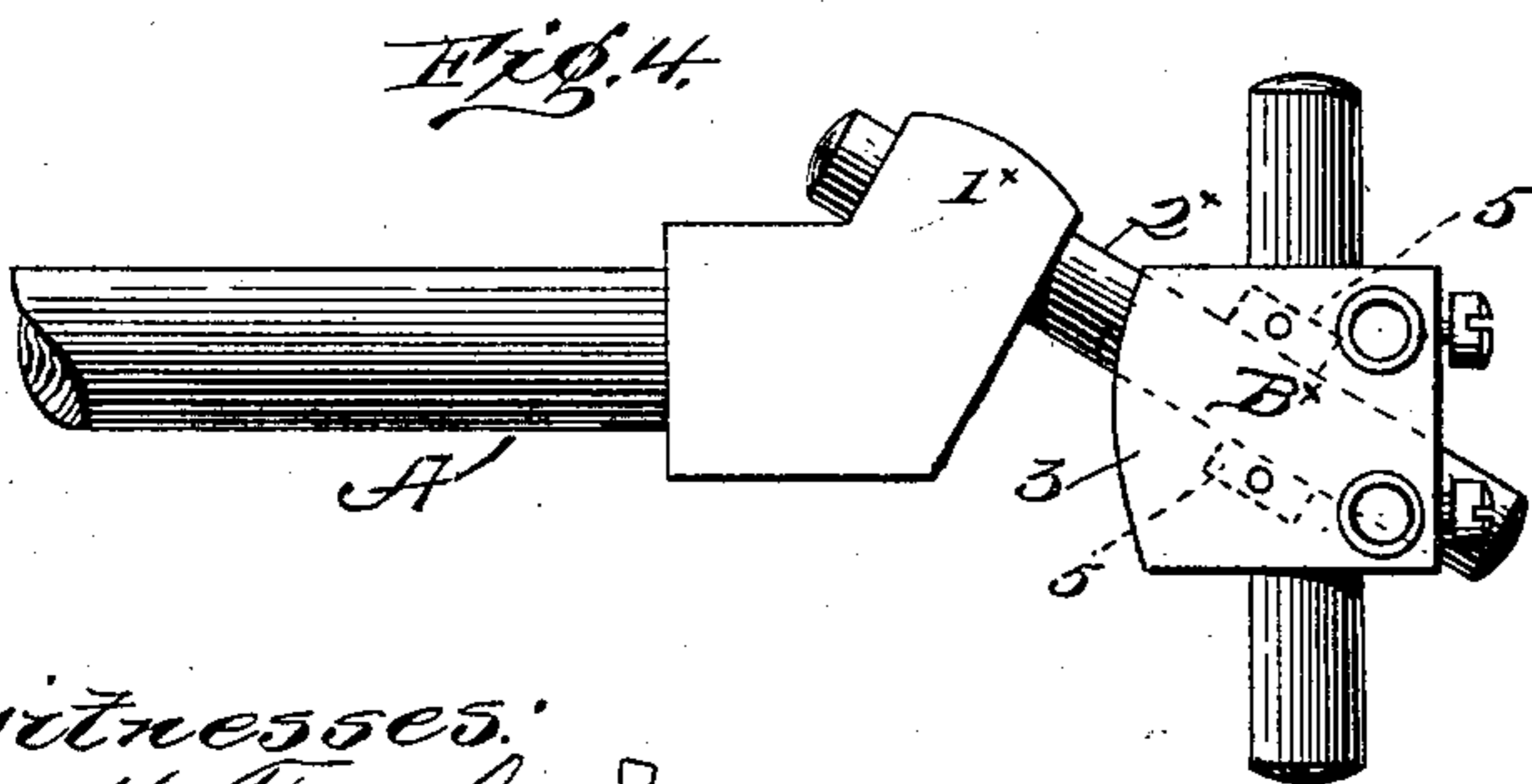
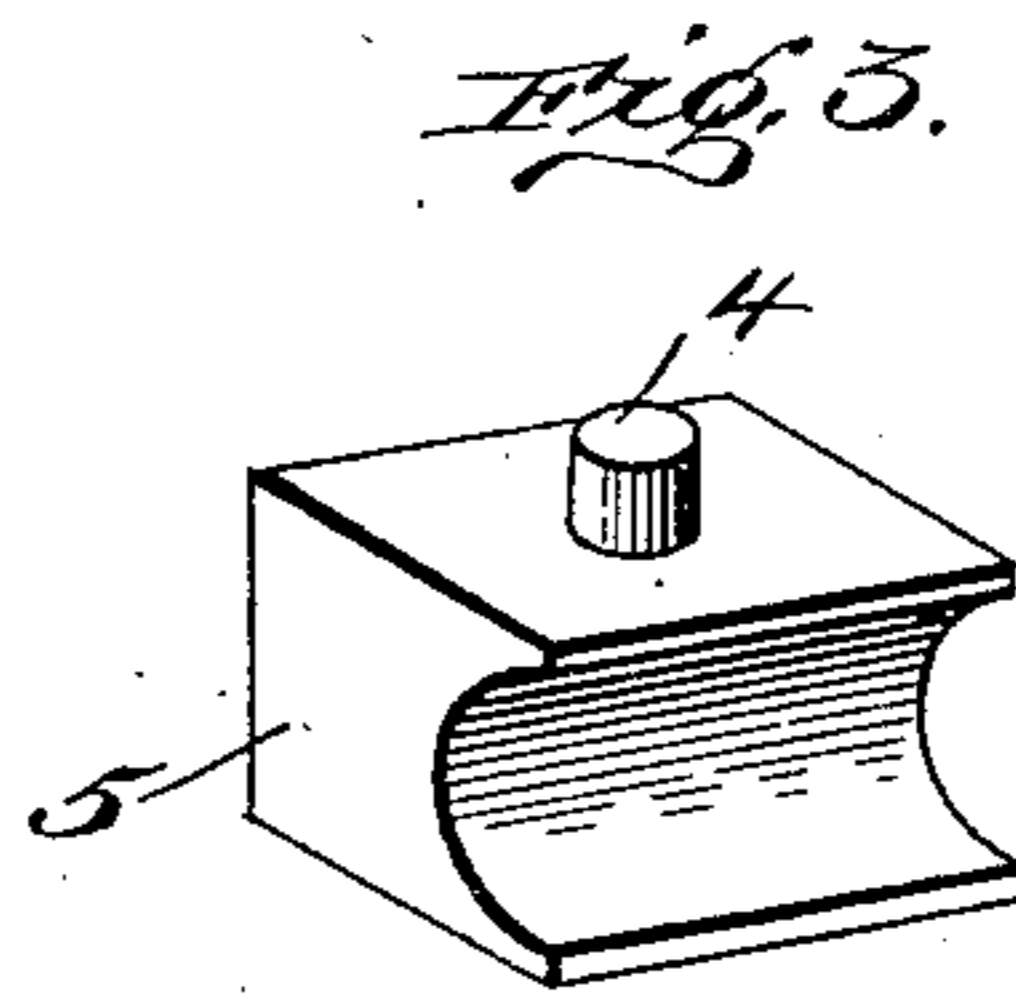
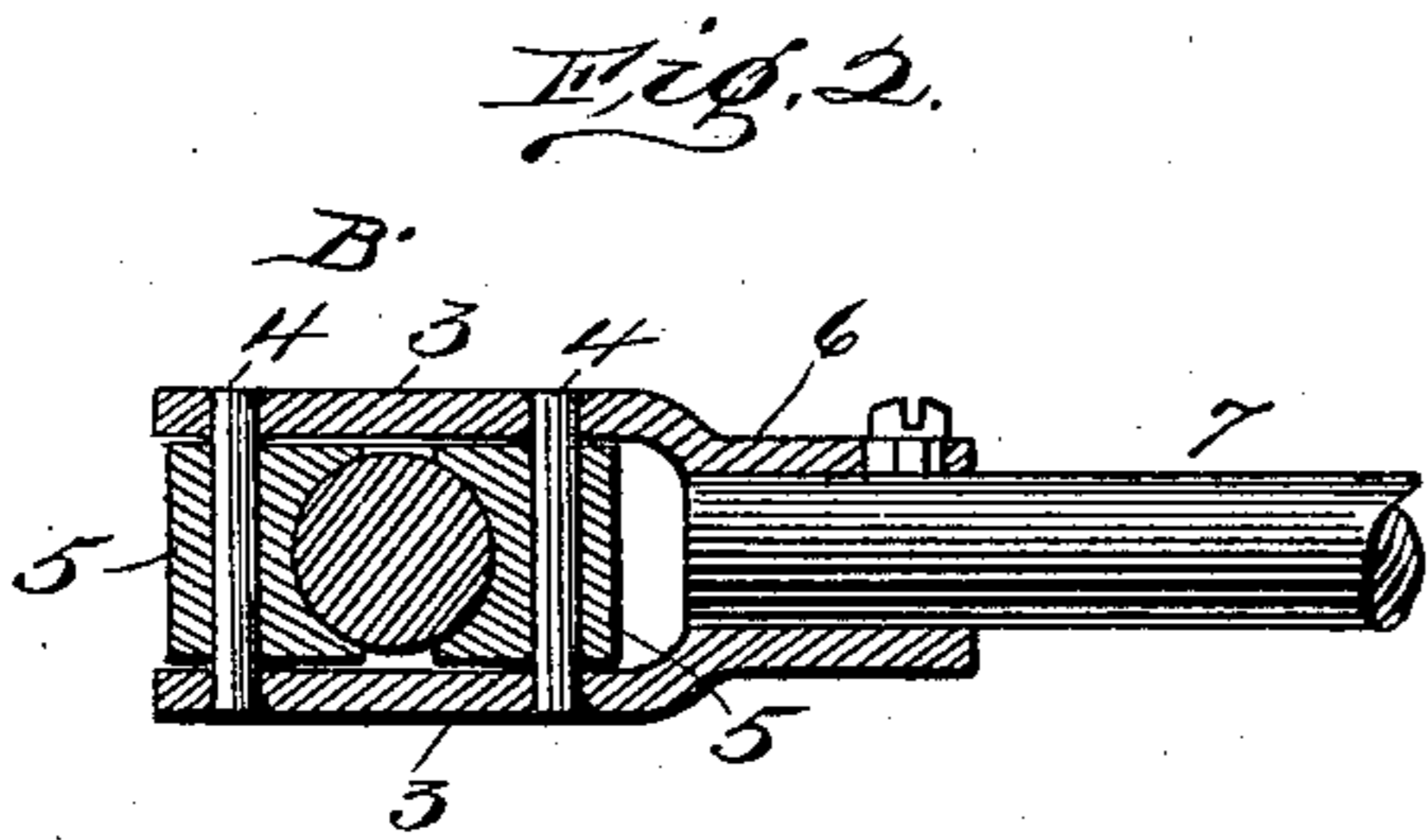
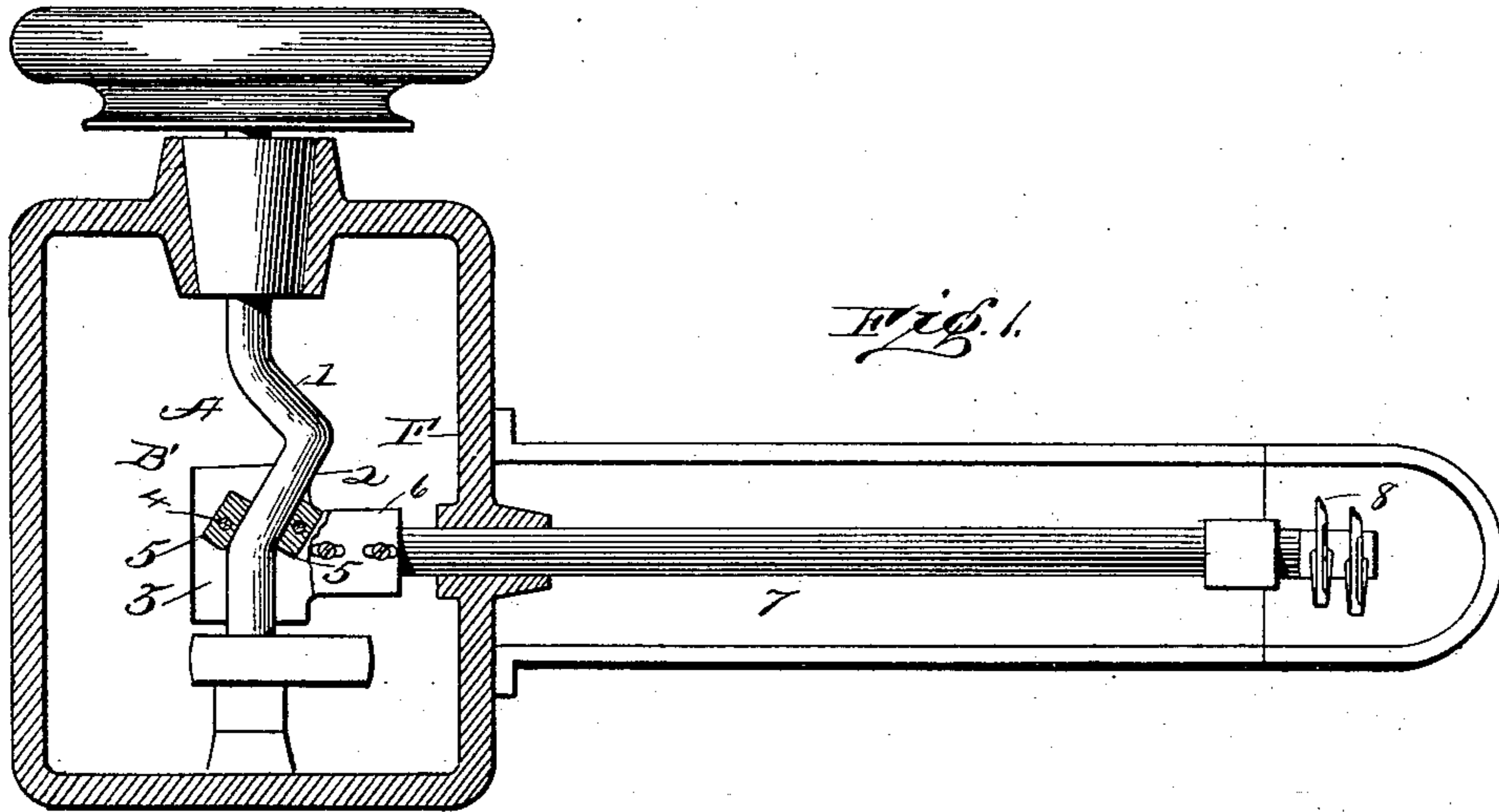


(No Model.)

L. ONDERDONK.  
SEWING MACHINE.

No. 591,420.

Patented Oct. 12, 1897.



witnesses:  
J. M. Fowler  
Giles P. Moore

Inventor  
L. Onderdonk  
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Attorney

# UNITED STATES PATENT OFFICE.

LANSING ONDERDONK, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE UNION SPECIAL SEWING MACHINE COMPANY, OF CHICAGO, ILLINOIS.

## SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 591,420, dated October 12, 1897.

Application filed August 6, 1896. Renewed August 23, 1897. Serial No. 649,244. (No model.)

*To all whom it may concern:*

Be it known that I, LANSING ONDERDONK, a citizen of the United States, residing at Boston, in the county of Suffolk, State of Massachusetts, have invented certain new and useful Improvements in Sewing-Machines, of which the following is a description, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon.

This invention relates to stitch-forming mechanism for sewing-machines; and its object is to provide a simple and effective device for imparting to the looper the requisite movements for entering and receding from the needle-loop and otherwise cooperating therewith to make a chain or double-chain stitch accordingly as the looper does or does not carry a thread.

The invention consists in the matters hereinafter described, and referred to in the appended claims.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a sectional plan view of a portion of a sewing-machine embodying my invention. Fig. 2 is a cross-section through the looper-frame and inclined pin. Fig. 3 is a detail view of one of the pins and its bearing-block, and Fig. 4 is a view of another form of machine embodying the invention.

In the drawings the machine is similar to that shown in an application heretofore filed by me, (Case H,) April 6, 1896, Serial No. 586,312, and the frame thereof is indicated at F.

A is the main shaft, journaled therein and extending transversely of the work-supporting arm of the machine. Said shaft is preferably composed of two straight portions, as shown in Fig. 1, arranged in axial alinement and joined by two inclined crank-arms 1 and 2, the latter being the actuating medium for the looper carrier or frame B', while the former is the means whereby the said arm 2 is eccentrically connected with the main shaft. This construction of actuating-shaft is particularly applicable to what are known as "side-wheel cylinder-machines." It is obvious, however, that one straight portion and

its inclined arm 1 might be dispensed with in certain classes of machines.

The looper carrier or frame B' has on one side the wings 3 3, between which is an opening for the shaft A. Extending between the wings are properly-spaced pins 4 4, the distance between said pins and between said wings being sufficient to enable the crank 2 to pass freely and yet have a proper bearing to actuate the looper-carrier and give it the four motions.

To avoid undue friction and provide easy and noiseless operation of the parts, the pins 4 4 may be and preferably are provided with bearing-blocks 5, journaled thereon and having concaved faces to conform to the outline of the crank 2.

The carrier or frame B' has a laterally-extending tubular portion 6, in which is detachably and adjustably secured the looper-supporting shaft 7, upon the outer end of which the loopers 8 are secured.

In Fig. 4 I have shown a construction in which A is the driving-shaft. 1<sup>x</sup> is an inclined arm supported thereby. 2<sup>x</sup> is an inclined pin or rod attached to the arm 1<sup>x</sup>; and the looper-carrier or frame B<sup>x</sup> does not have the tubular portion for the attachment of a shaft 7, as in Figs. 1 and 2, but the loopers are secured directly in sockets on said carrier or frame B<sup>x</sup>, said carrier having oppositely-extending trunnions, as shown. As far as the wings and connecting-pins are concerned the carrier shown in Fig. 4 is the same in construction as that shown in Figs. 1 and 2.

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

1. A looper mechanism for sewing-machines comprising an actuating device, a looper-carrier, and operative connecting means between the actuating device and the looper-carrier, the said means including a pair of wings and transverse pins connecting the same, substantially as described.

2. A looper mechanism for sewing-machines, comprising an actuating device, a looper-carrier, and operative means between the said device and carrier for imparting to the latter a right-line reciprocation and trans-

verse oscillation, said means including a pair of wings and transverse pins connecting the same, substantially as described.

3. A looper mechanism for sewing-machines comprising a main shaft, a looper-shaft, and operative connections between the two, the latter comprising a frame having wings, and connecting transverse pins; substantially as described.

4. A looper mechanism for sewing-machines, comprising a main shaft, a looper-shaft and operative connections between the same, the latter comprising an actuating-frame, having parallel wings and transverse connecting-pins; substantially as described.

5. A looper mechanism for sewing-machines comprising a main shaft, a looper-shaft, and operative connections between the two, the latter comprising a frame, having wings and transverse connecting-pins, and an inclined crank for actuating the frame; substantially as described.

6. A looper mechanism for sewing-machines comprising a main shaft, a looper-shaft and operative connections between the two, the latter comprising a frame having wings and connecting transverse pins the latter having bearing-blocks journaled thereon; substantially as described.

7. The herein-described looper-operating mechanism for sewing-machines comprising the driving-shaft, the looper-supporting carrier or frame an inclined crank driven from the driving-shaft, wings on said carrier or frame embracing the inclined crank, and pins extending transversely of the wings, between which pins the inclined crank also works; substantially as described.

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

LANSING ONDERDONK.

Witnesses:

A. H. HATCH,  
F. S. FAWCETT.