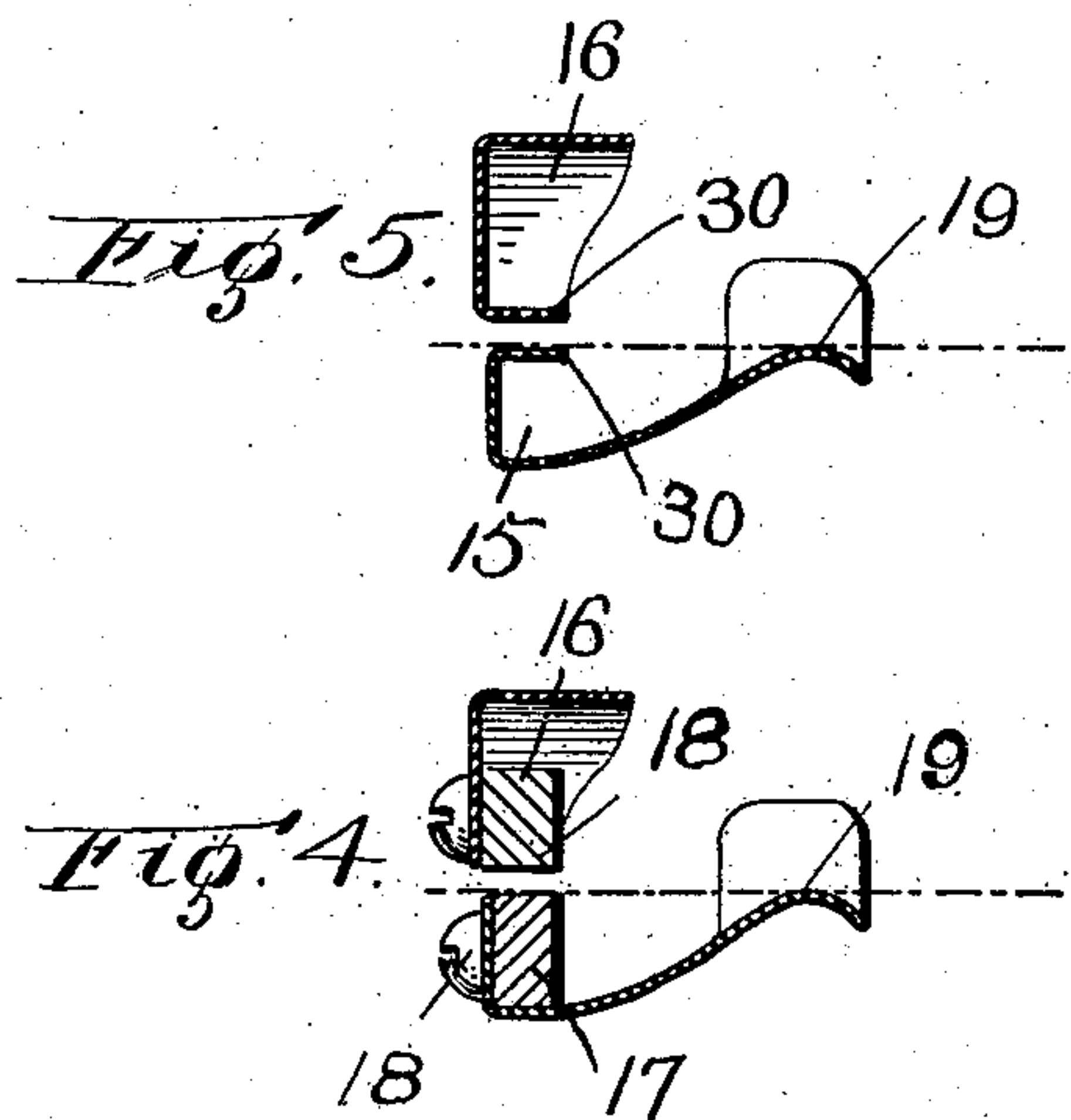
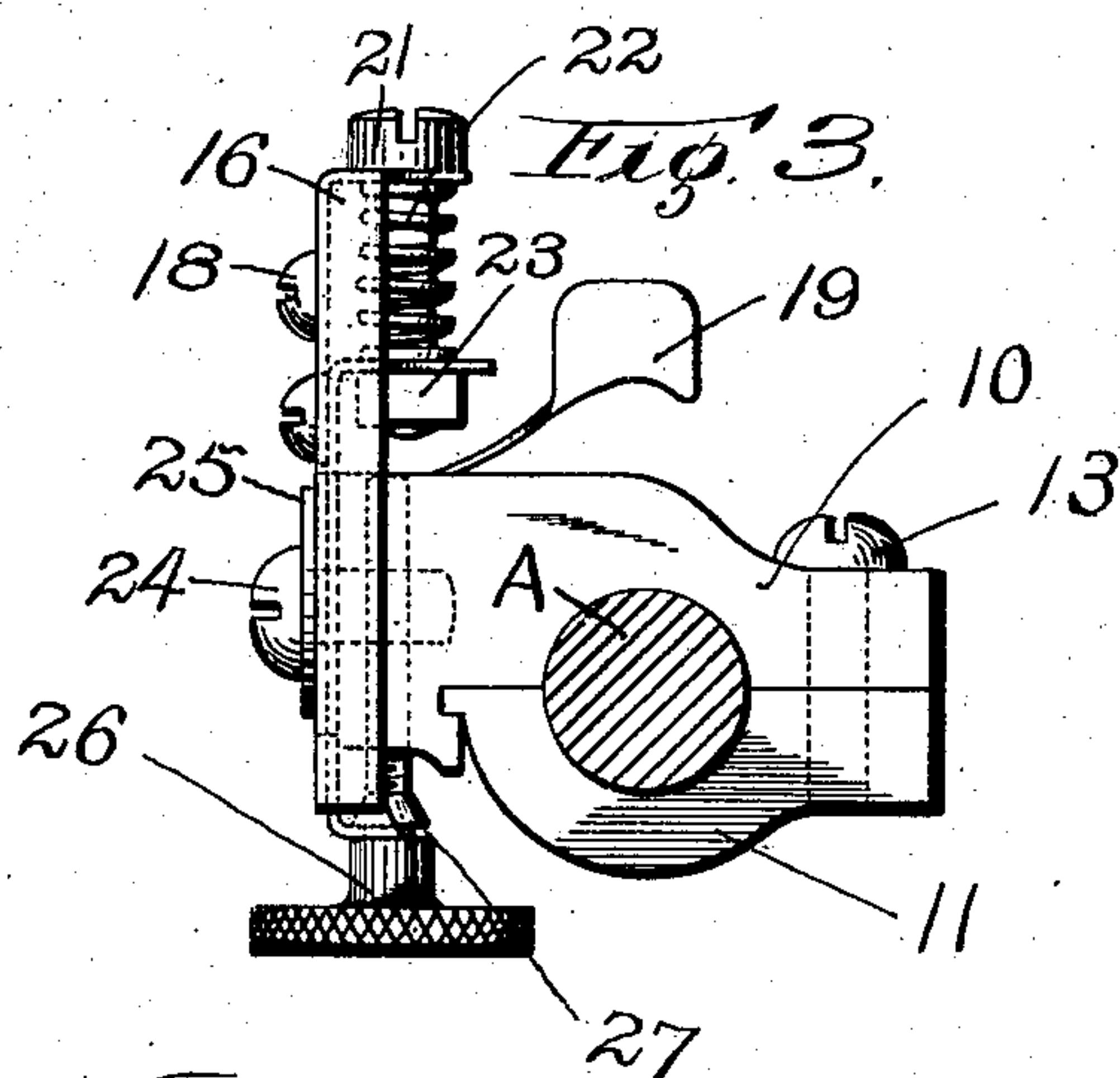
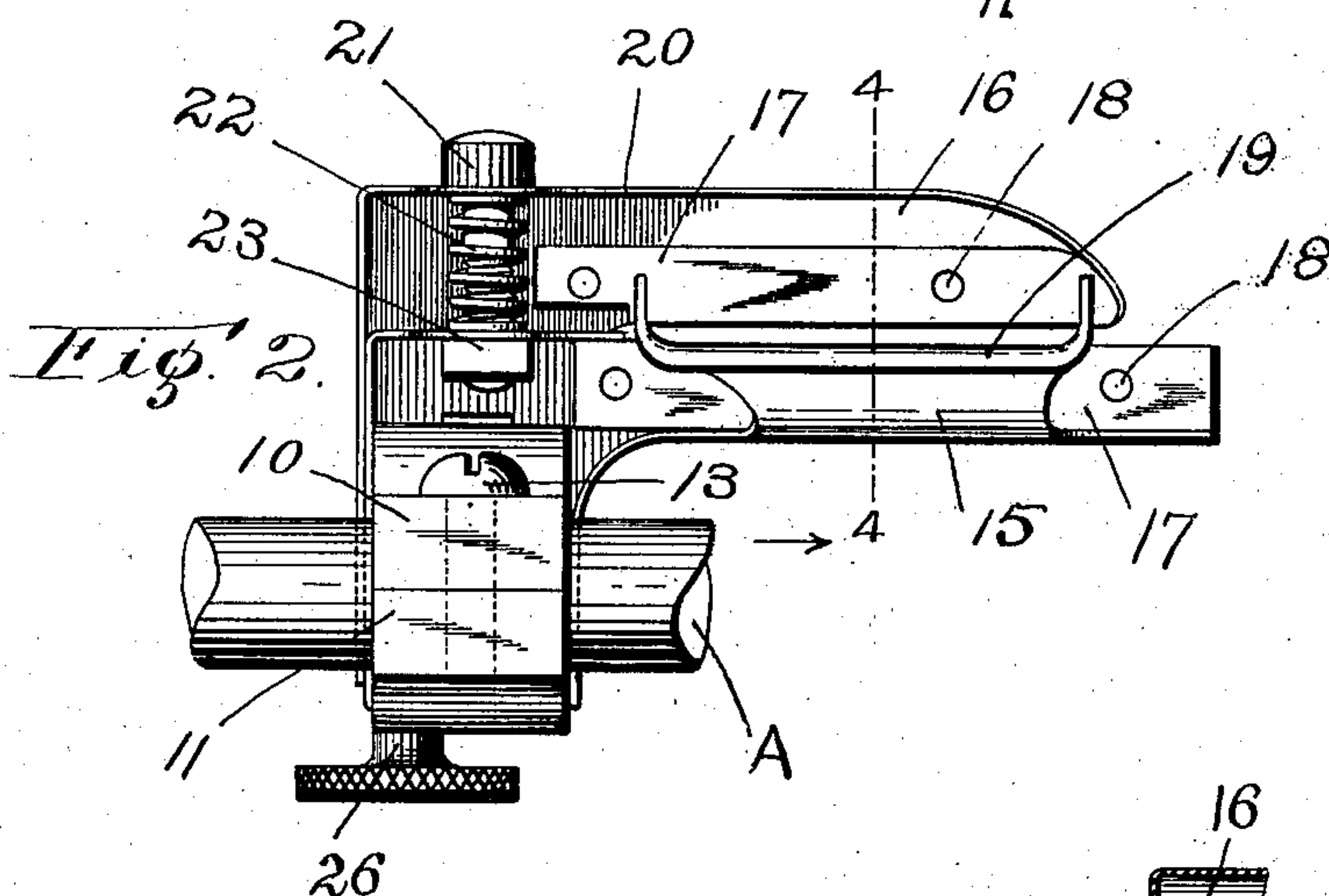
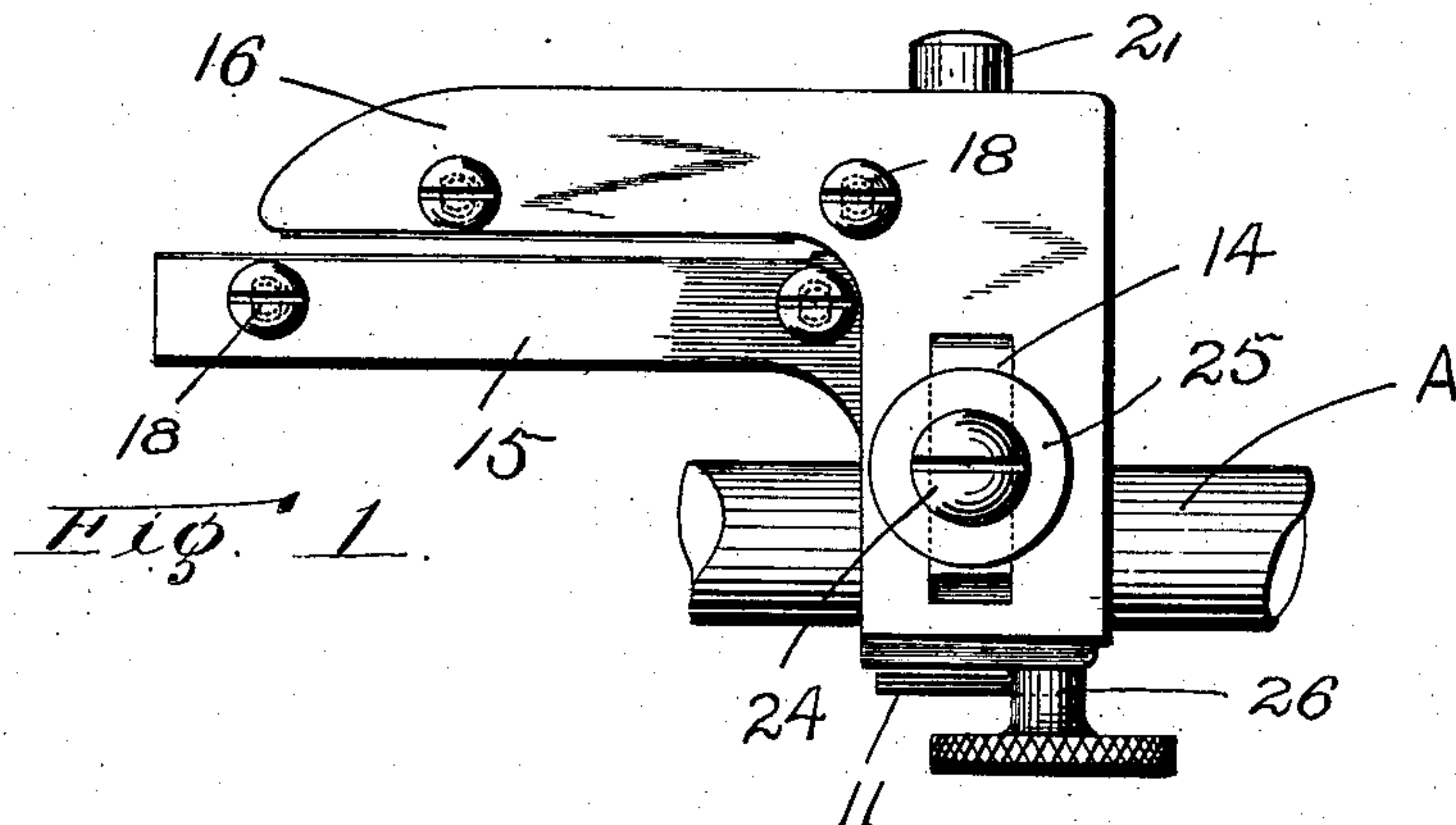


No. 741,666.

PATENTED OCT. 20, 1903.

L. T. HOUGHTON.
THREAD GUIDE FOR SPOOLING MACHINES.
APPLICATION FILED JUNE 27, 1901.

NO MODEL.



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UNITED STATES PATENT OFFICE.

LEWIS T. HOUGHTON, OF WORCESTER, MASSACHUSETTS.

THREAD-GUIDE FOR SPOOLING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 741,666, dated October 20, 1903.

Application filed June 27, 1901. Serial No. 66,193. (No model.)

To all whom it may concern:

Be it known that I, LEWIS T. HOUGHTON, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Thread-Guide for Spooling-Machines, of which the following is a specification.

This invention relates to that class of thread-guides which are primarily designed for use in connection with spooling-machines; and the especial object of this invention is to provide a strong, simple, efficient, and inexpensive thread-guide for spooling-machines which can be made up to a considerable extent of sheet metal and in which the parts are not only constructed so that they may be adjusted to vary the width of the slot between the jaws of the guide, but which may also be readily and quickly adjusted to vary the position of the jaws with respect to the rail on which the thread-guide is mounted and which is also preferably provided with a turner-bar or guide for introducing the threads parallel with the face of the thread-guide jaws.

To these ends this invention consists of the thread-guide for spooling-machines and of the combinations of parts therein, as hereinafter described, and more particularly pointed out in the claims at the end of this specification.

In the accompanying drawings, Figure 1 is a rear view of a thread-guide for spooling-machines constructed according to this invention. Fig. 2 is a front view of the same. Fig. 3 is an end view. Fig. 4 is a transverse sectional view taken on the line 4-4 of Fig. 2, and Fig. 5 is a similar view illustrating a slightly-modified form of construction in which the guide-jaws may be formed integrally with the L-shaped sheet-metal pieces.

One of the most serious difficulties encountered in the use of that class of spooling-machines in which the spools are mounted on vertical spindles arises from the difficulty of securing an accurate adjustment of the vertically-movable thread-guides through which the threads pass before being wound on the spools. This difficulty arises from the fact that it is not only necessary to adjust the width of the space or slot between the jaws

of the thread-guide according to the different numbers and gages of thread being spooled, but it is also desirable to secure an individual vertical adjustment of the thread-guides to compensate for variations which are always found to exist in the lengths of the spools themselves and in the thickness of the spool-heads. To secure an adjustment to compensate for this variation in the spools, it has heretofore usually been customary to tip or rock the individual thread-guides to different positions on the lifter-rod on which they are mounted. This practice I have found to be objectionable, as it rocks or tips the thread-guide jaws to different relative angles, varying the tension placed on different threads, while at the same time the thread-guides cannot be readily set or adjusted with that degree of accuracy which is desirable.

One especial object of my present invention is therefore to provide means for adjusting the thread-guide jaws to different elevations with respect to the lifter-rail without rocking or oscillating the thread-guide jaws to different angles. To accomplish this object, a thread-guide for spooling-machines constructed according to my invention consists, essentially, of a hub which is clamped upon or otherwise secured to or formed with the lifter-rail and jaw-carrying pieces preferably stamped from sheet metal and having a sliding connection with the hub or clamp which will permit the jaw-carrying pieces to be moved up or down to vary the elevation of the thread-guide jaws and which will also permit an individual adjustment of the jaw-carrying pieces to vary the width of the slot between the guide-jaws.

Referring to the accompanying drawings and in detail, A designates a traverse or lifter rail, which may be moved up and down in the operation of a spooling-machine in the ordinary manner and which carries a plurality of thread-guides.

As herein illustrated, a thread-guide constructed according to my invention comprises a clamp secured on the lifter-rail A and comprising two pieces or castings 10 and 11, the top piece or casting 10, as illustrated in Fig. 3, being provided with a transverse groove receiving a tongue or projection from the bottom

piece 11, said parts being drawn together and fastened onto the lifter-rail A by a screw 13.

Projecting rearwardly from the top clamp-piece 10, as shown most clearly in Fig. 1, is a projection or lug 14, forming a vertical way upon which the L-shaped jaw-carrying pieces 15 and 16 may be individually or simultaneously adjusted, as desired. The jaw-carrying pieces 15 and 16 are preferably stamped from sheet metal and are provided with flanges 20, which serve to stiffen said jaw-carrying pieces and also permit the jaw-carrying pieces to be fitted accurately together. The marginal flange 20 of the jaw-carrying piece 16 extends along the upper side and one vertical edge thereof. The marginal flange 20 of the jaw-carrying piece 15 extends along the lower side, also along the two vertical sides, and part way along the upper edge thereof.

Mounted in each of the jaw-carrying pieces 15 and 16 is a steel jaw-piece 17, adjustably secured in place by screws 18.

To regulate the space between the steel jaws 17 to set the guide to different numbers or gages of thread, I provide a screw 21, which is threaded into a nut 23 and has a coiled spring 22 mounted thereon, normally tending to separate the thread-guide jaws, so that by means of this construction by tightening the screw 21 the slot between the jaws can be narrowed, while by loosening the screw 21 the slot can be widened.

In some cases instead of employing thread-guide jaws formed by separate steel pieces 17, as shown in Fig. 2, I may, if desired, have the thread-guide jaws formed by flanges 30, which are integral with the jaw-carrying pieces 15 and 16, as most clearly illustrated in Fig. 5.

To prevent the thread from binding while passing between the thread-guide jaws, it is desirable that it should pass between the jaws on a line parallel with the faces thereof, and to accomplish this the lower L-shaped jaw-carrying support 15 may be provided with an integral extension 19, having a rounding upper surface for guiding the thread in the desired direction and turned-up ends acting as stops for preventing the thread from passing out from between the thread-guide jaws.

To secure either an individual or simultaneous adjustment of the jaw-carrying pieces in a thread-guide constructed according to my invention, the clamp-screw 24 is turned to loosen the washer 25, which holds the jaw-carrying pieces in place, and when this has been done the jaw-carrying pieces can be adjusted with respect to each other by turning the adjusting-screw 21, or the jaws may be simultaneously raised or lowered to the desired position to compensate for variations in the length of spools or thickness of spool-heads. This last adjustment can, if desired, be done by hand; but in practice I prefer to employ an adjusting-screw 26, having a cir-

cumferential groove 27, which is engaged by a finger extending therein from the jaw-carrying piece 15, as shown most clearly in Fig. 3.

When a thread-guide constructed according to my invention is provided with an adjusting-screw 26, the jaw-carrying pieces can be mounted in any desired form of vertical ways or slots and need not be clamped in place by the screw 24, or the screw 24 and its washer 25 may be employed simply to hold the jaw-carrying pieces in place, so that the adjusting-screw 26 may be manipulated at any time without first loosening the screw 24.

I am aware that numerous changes may be made in the construction of my thread-guide for spooling-machines by those who are skilled in the art without departing from the scope of my invention as expressed in the claims. I do not wish, therefore, to be limited to the construction I have herein shown and described; but

What I do claim and desire to secure by Letters Patent of the United States, is—

1. In a thread-guide for spooling-machines, the combination of a supporting-piece, two sheet-metal jaw-carrying pieces having vertical flanges at their edges, whereby the sheet-metal pieces are fitted together and capable of being simultaneously or individually adjusted as desired, and means for clamping said pieces in their adjusted positions.

2. In a thread-guide for spooling-machines, the combination of a supporting-piece, and two vertically-slotted substantially L-shaped sheet-metal jaw-carrying pieces, the lower one of said jaw-carrying pieces having vertical flanges fitting onto the supporting-piece, and the upper jaw-carrying piece having a guide-flange along its vertical edge, and a screw passing through the slots of the jaw-carrying pieces, and threaded into the supporting-piece to hold the jaw-carrying pieces in their adjusted positions.

3. In a thread-guide for spooling-machines, the combination of two sheet-metal jaw-carrying pieces having turned-up marginal flanges for stiffening the same, a screw passing through the flanges of the jaw-carrying pieces, and arranged to be tightened to bring the jaws of the jaw-carrying pieces toward each other, and a spiral spring mounted on said screw, and normally separating the jaws.

4. In a thread-guide for spooling-machines, the combination of a supporting-piece or clamp having a rearwardly-extending lug, two vertically-slotted jaw-carrying pieces mounted on said lug, so that they may be individually or simultaneously adjusted, an adjustable connection between the jaw-carrying pieces consisting of an adjusting-screw with a coiled spring mounted thereon, and a single clamping device for fastening the jaw-carrying pieces in their adjusted positions.

5. In a thread-guide for spooling-machines, the combination of a supporting-piece or clamp, two jaw-carrying pieces having a sliding connection therewith, an adjusting-screw

for adjusting the jaw-carrying pieces with respect to each other, an adjusting-screw for simultaneously adjusting the jaw-carrying pieces upon the supporting-piece or clamp, and a single clamping device for fastening the jaw-carrying pieces in their adjusted position.
In testimony whereof I have hereunto set

my hand in the presence of two subscribing witnesses.

LEWIS T. HOUGHTON.

Witnesses:

LOUIS W. SOUTHGATE,
PHILIP W. SOUTHGATE.