

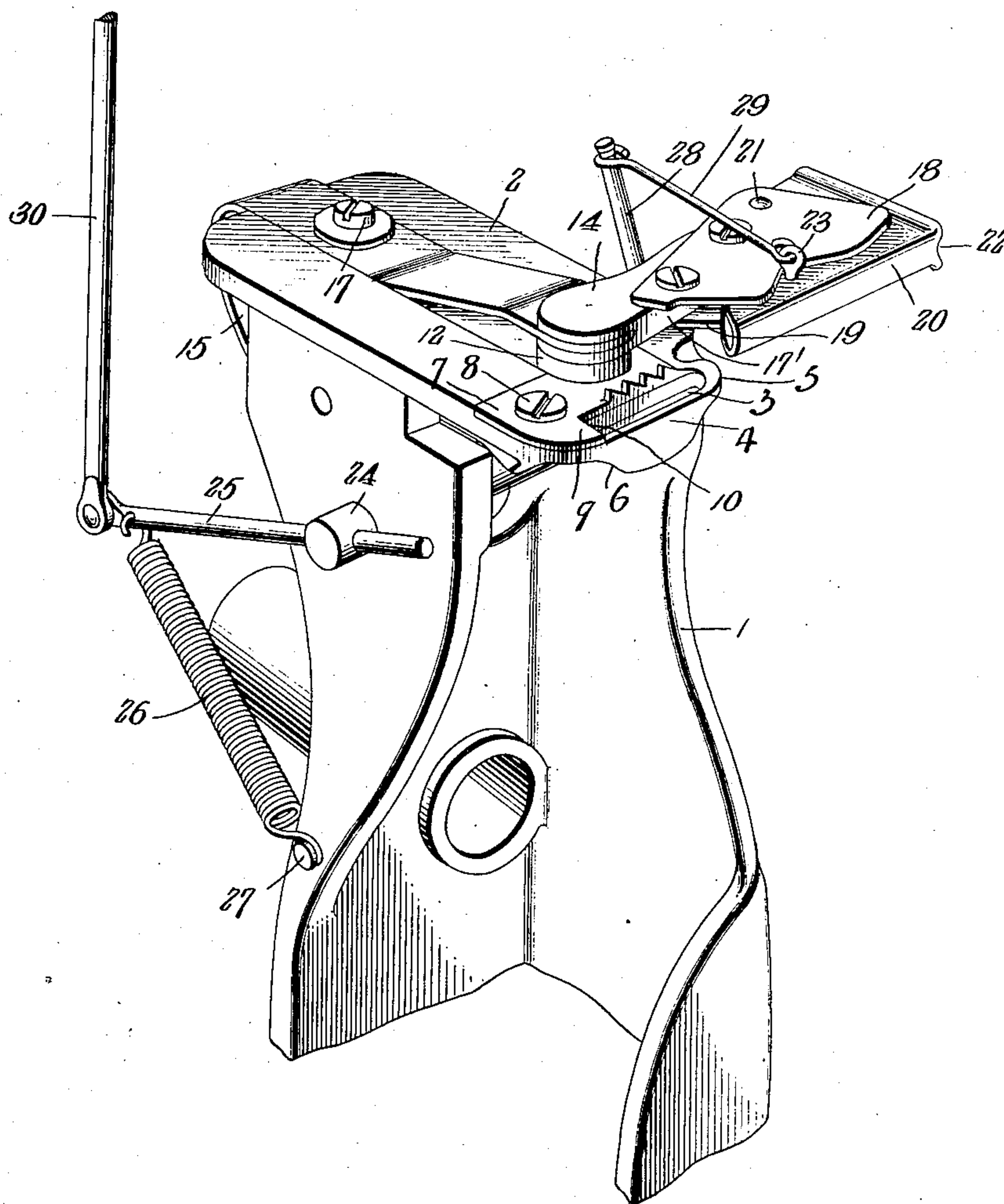
No. 814,730.

PATENTED MAR. 13, 1906.

G. RIEL.
SEWING MACHINE.
APPLICATION FILED JULY 27, 1905.

3 SHEETS—SHEET 1.

Fig. 1.



Witnesses
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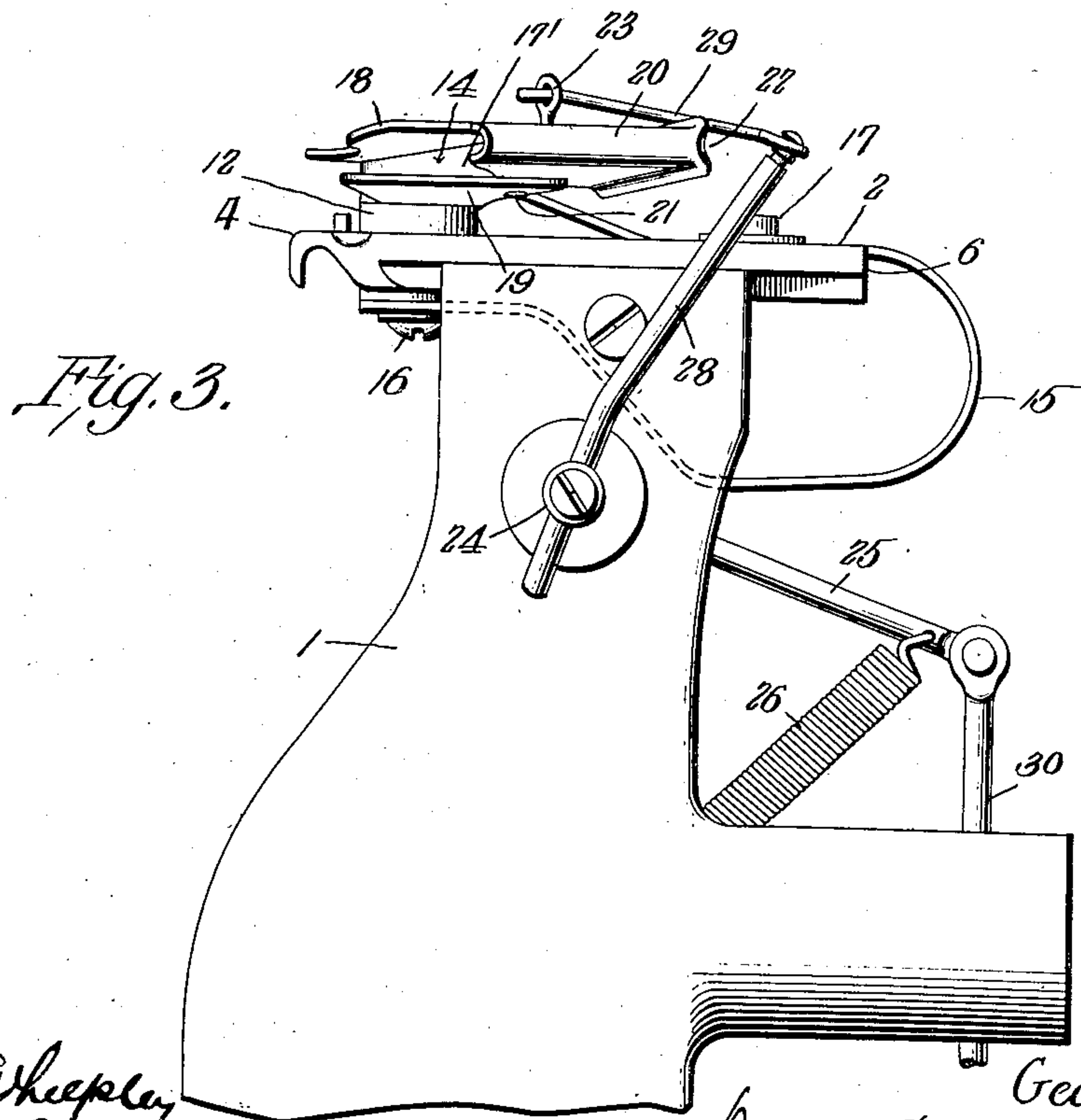
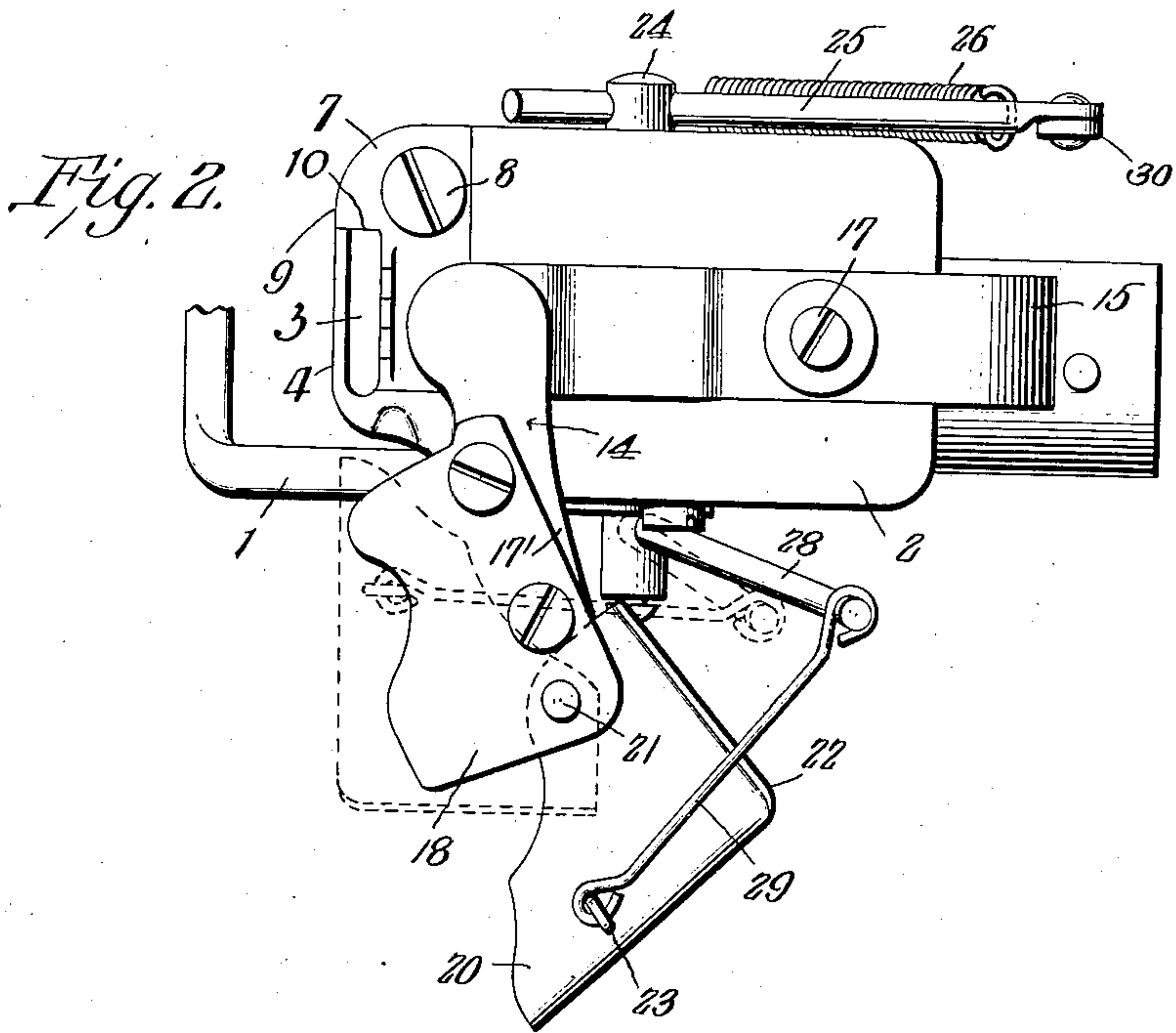
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

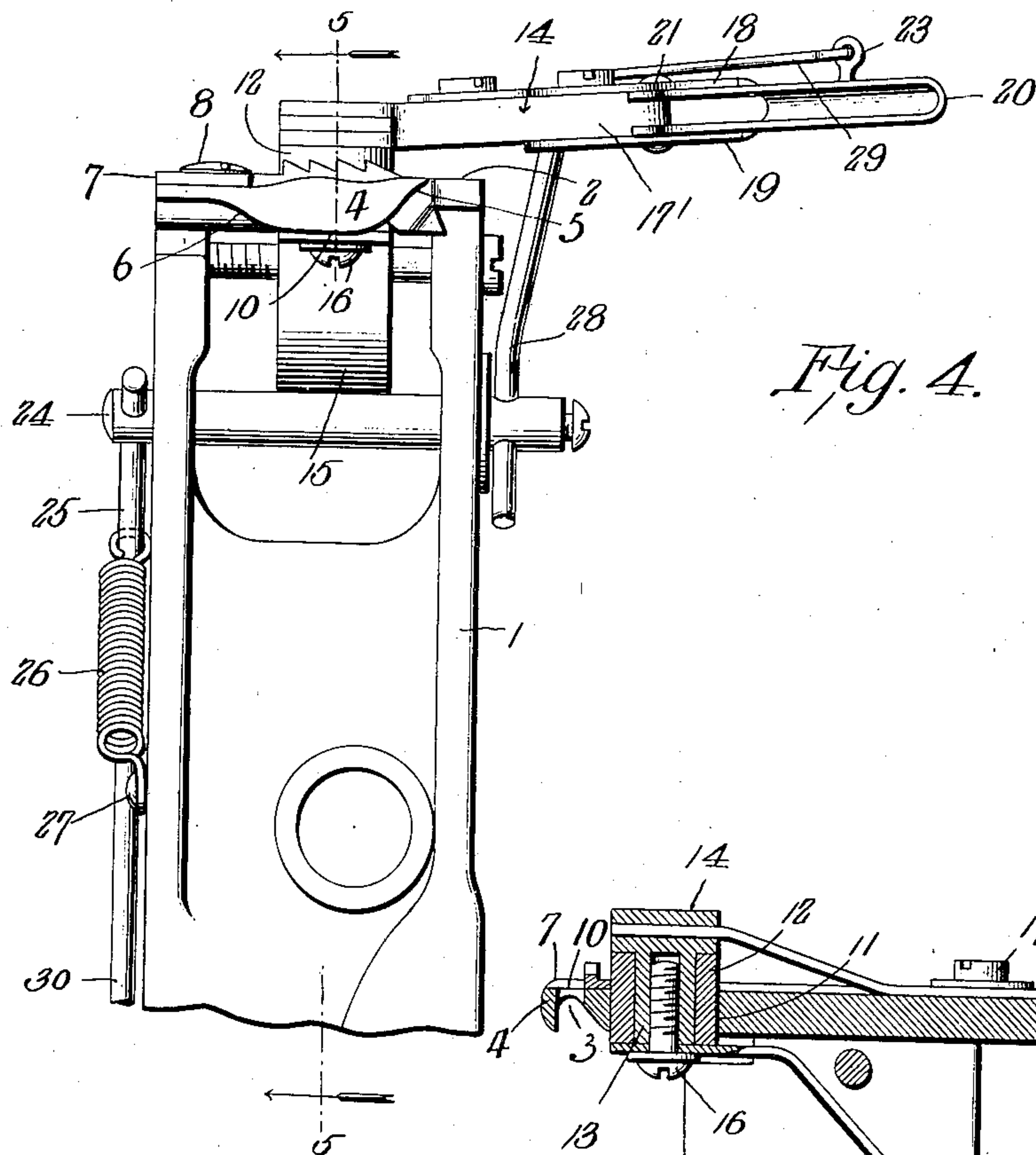
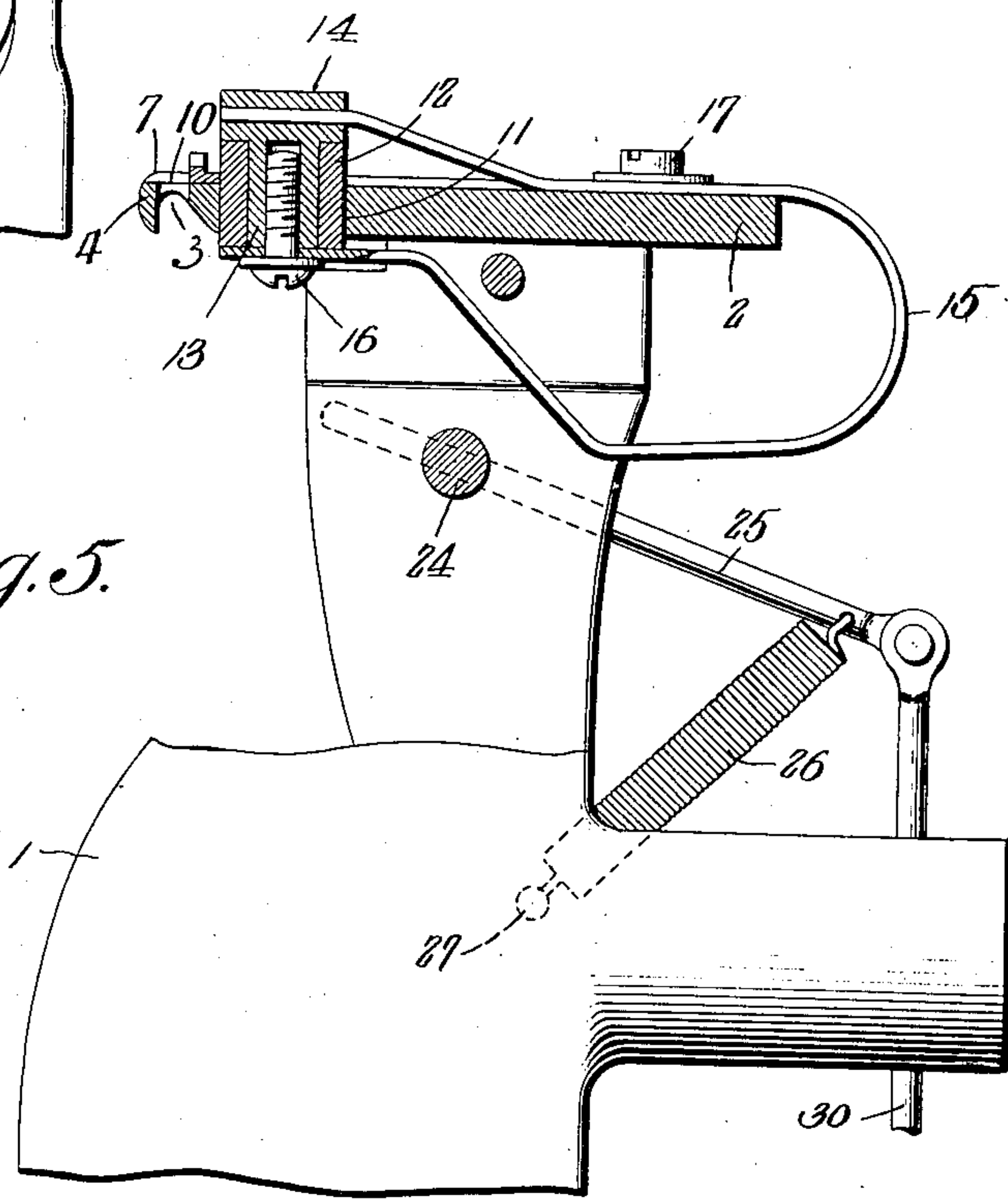


Fig. 4.

Fig. 5.



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UNITED STATES PATENT OFFICE.

GEORGE RIEL, OF MANCHESTER, NEW HAMPSHIRE.

SEWING-MACHINE.

No. 814,730.

Specification of Letters Patent.

Patented March 13, 1906.

Application filed July 27, 1905. Serial No. 271,490.

To all whom it may concern:

Be it known that I, GEORGE RIEL, a citizen of the United States, residing at Manchester, in the county of Hillsboro and State of New Hampshire, have invented certain new and useful Improvements in Sewing-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 appertains to make and use the same.

This invention relates to sewing-machines, and has for its purpose the production of an improved appliance which, while adapted for embodiment in shoe, harness, and other like sewing-machines, is more especially designed for use in machines for sewing welted shoe-soles.

The welt guide and gage herein shown and described forms the subject-matter of a divisional application for patent filed by me October 16, 1905, Serial No. 282,964.

Heretofore in sewing welts on channeled soles, whether plain or tapped, the channel throughout its length was turned or opened previous to the sewing operation, then turned back or closed for the molding operation, and then again opened for attachment to the upper. It has been found objectionable to mold the soles with turned-up channels, for the reasons that an imperfect shape of sole is obtained and that the channel is liable to break. Consequently the several steps above described are necessary in the production of a more or less perfect sole.

An object of my invention is to reduce the number of steps in attaching the welt and preparing the sole for the upper, whereby a saving in time and labor is obtained and the cost of production materially lessened. This and other objects of the invention, together with the details of construction and operation, are fully set forth in the following description, in connection with which reference is to be had to the accompanying drawings, illustrating the appliance in its preferred form of embodiment, it being understood that various modifications may be made therein without exceeding the scope of the concluding claims.

In the drawings, Figure 1 is a perspective view of an appliance embodying my invention. Fig. 2 is a top plan view, full and dotted lines indicating the positions of the welt-guide. Fig. 3 is a side elevation. Fig. 4 is a

front elevation. Fig. 5 is a vertical section on line 5 5 of Fig. 4.

Referring to the drawings by numerals, 1 designates the post, on which is adjustably fastened the throat-plate 2, having the throat 3. The outer wall or side 4 of the throat is of peculiar form and forms an important feature of my invention. Said wall or side is extended below the body of the plate and, together with the portion of the plate at the front of the throat, is beveled to provide a sharp nose 5, and said wall or side is rounded at its rear end 6, whereby to form a plow-shaped channel turner or opener which in the operation of sewing the welt onto the sole opens the channel in advance of and allows of the self-closing of the channel after the sewing operation. In other words, the channel is by this plow-shaped device turned outwardly immediately preceding the sewing and sufficiently only to allow of the operation of the stitching means, the channel immediately springing back or closing after passing the plow, whereby when the welt is attached the sole and welt is ready for the molder. By this provision is avoided the former steps of completely opening the channel previous to the attachment of the welt and of closing the turned channel before the molding operation. Thus, as before stated, considerable time and labor in the preparation of the welt-sole for the upper are saved, and the cost of this preparation is materially reduced. In practice an end of a channel is raised sufficiently to admit the nose of the plow, and this I accomplish by the use of a carding or like brush while a number of soles are stacked together. The channeled sole is fed through the machine horizontally and with the channeled side downward.

7 denotes the tooth-plate, removably secured in a recess in the throat-plate by a screw 8. An extension 9 of the tooth-plate extends across the throat and is sharpened to provide a thread-cutter 10.

In the throat-plate adjacent to the throat is a circular opening 11, and 12 is a roller vertically slidable in said opening and forming a gage for the work. The roller is rotatably mounted on a pin 13, secured to and depending from a bracket 14 and is confined between said bracket and one end of a spring 15, the latter being fastened against the lower end of the pin by a screw 16. The spring 15, which is approximately U form,

straddles the throat-plate and is intermediately fastened to the latter by a screw 17. The other or upper end of the spring is secured to the bracket 14, and the roller and bracket may thus move vertically against spring action. The end of the bracket from which the pin depends is curved to conform to the roller and provides an extension of the gage-surface. In practice the bracket and roller rise and fall with the presser-foot against the action of the spring 15 as the thickness of the work varies. Consequently there is always presented to the work a rigid gaging-surface, and the plies—for example, a sole and welt or a sole, tap, and welt—are brought into exact coincidence at their edges and a firm and smooth surface is obtained. The function of the roller is to minimize edge friction in the feed of the work.

The welt or the like is fed to the sole or other article by an improved guide, which forms a part of my invention. The bracket 14 has an arm 17' extending transversely of the throat-plate, and to the upper and under sides of this arm are fastened plates 18 19, between which is confined the guide 20 for the welt or the like, said guide being of U form in cross-section and pivoted to the outer end of the arm by a pin 21. The guide has a flaring mouth 22, and in guiding position its delivery end is relatively contracted and cooperates with the inner side of the arm 17' to positively direct the welt or the like to the sewing means and the gage above described. The inward movement of the guide is limited by the engagement of a lug 23 on the guide with the upper plate 18, and its outward movement is against spring action. Extending transversely through the post is a rock-shaft 24, to one end of which is secured an arm 25, and 26 is a coiled spring connected at its ends respectively to said arm and a pin or screw 27 on the post. Secured to the other end of the rock-shaft is an arm 28, and 29 is a link connecting the upper end of this arm

with the lug 23 on the guide. By this described means the outward movement of the guide is against the action of the spring 26, and said guide is therefore yielding and will operate to guide welts or the like of varying widths. To "open" the guide at its delivery end when a welt or the like is introduced, a connection is made with the presser-foot or with a treadle through the medium of a rod 30, attached at one end to the arm 25. Raising the arm 25 rocks the shaft and moves the arm 28 to open the guide, as will be understood. The guide and bracket are vertically movable against the action of the spring 15, according to the thickness of the work. In sewing soles or the like without welts the guide is swung to the idle position shown in full lines in Fig. 2, which position is maintained by the action of the spring 26.

I claim as my invention—

1. In a sewing-machine, a throat-plate and a channel entering and turning nose integral therewith and formed by beveling the forward end and the outer side of said plate.

2. In a sewing-machine, a throat-plate, a plow integral with said plate at the forward end and side thereof and formed to open a channel in advance of the sewing operation and to allow said channel to close after said operation.

3. In a sewing-machine, a throat-plate, a channel entering and turning plow integral with said plate the point of the plow being at the front of the plate, a downward extension of the plate forming at its forward end a continuation of the plow and having its rear end beveled to permit self-closing of the turned channel.

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

GEORGE RIEL.

Witnesses:

MAGGIE KERIN,
ALBERT GIGUERE.