

No. 832,211.

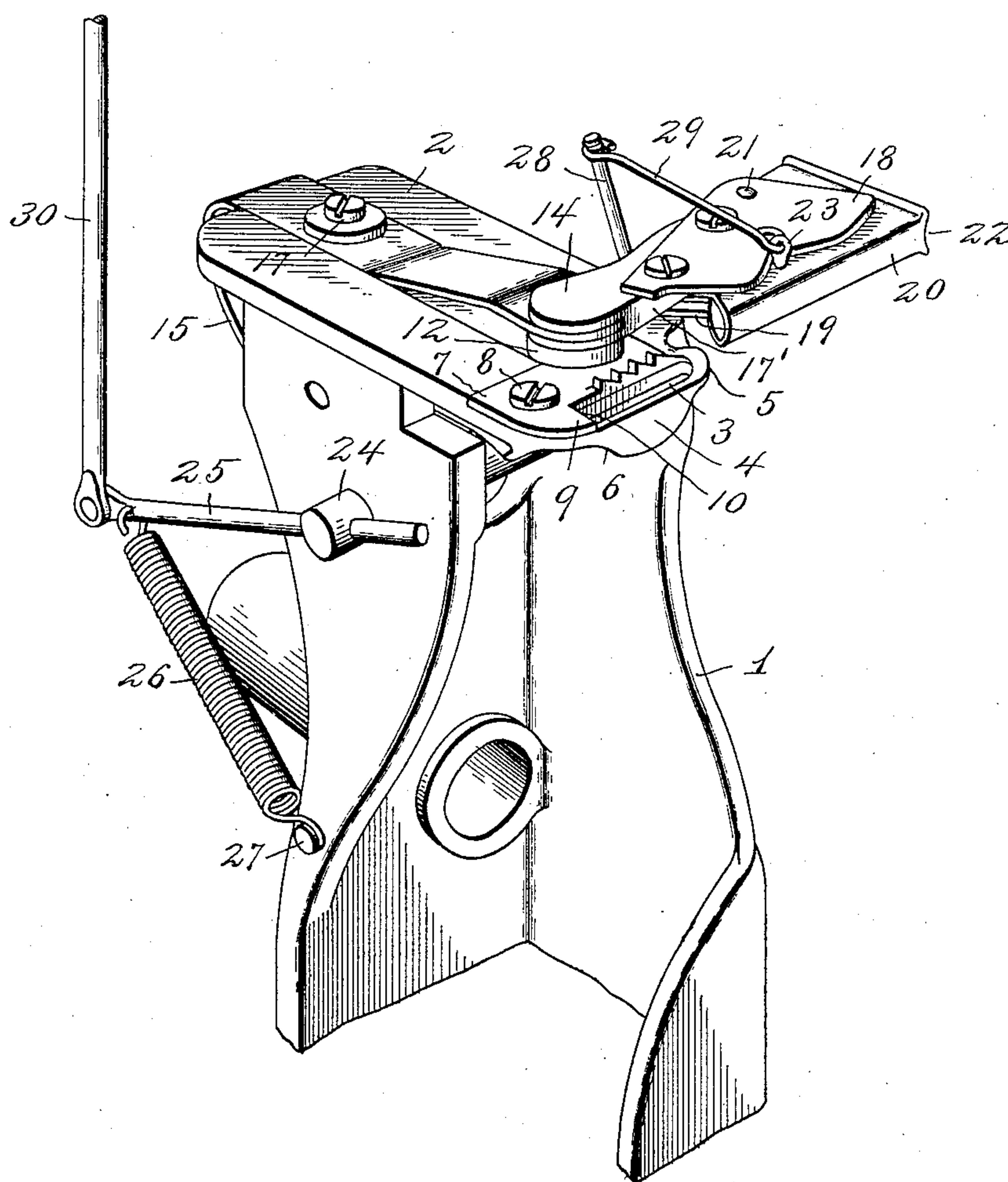
PATENTED OCT. 2, 1906.

G. RIEL.
SEWING MACHINE.

APPLICATION FILED OCT. 16, 1905.

3 SHEETS—SHEET 1.

Fig. 1.



WITNESSES

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3 SHEETS—SHEET 2.

Fig. 2.

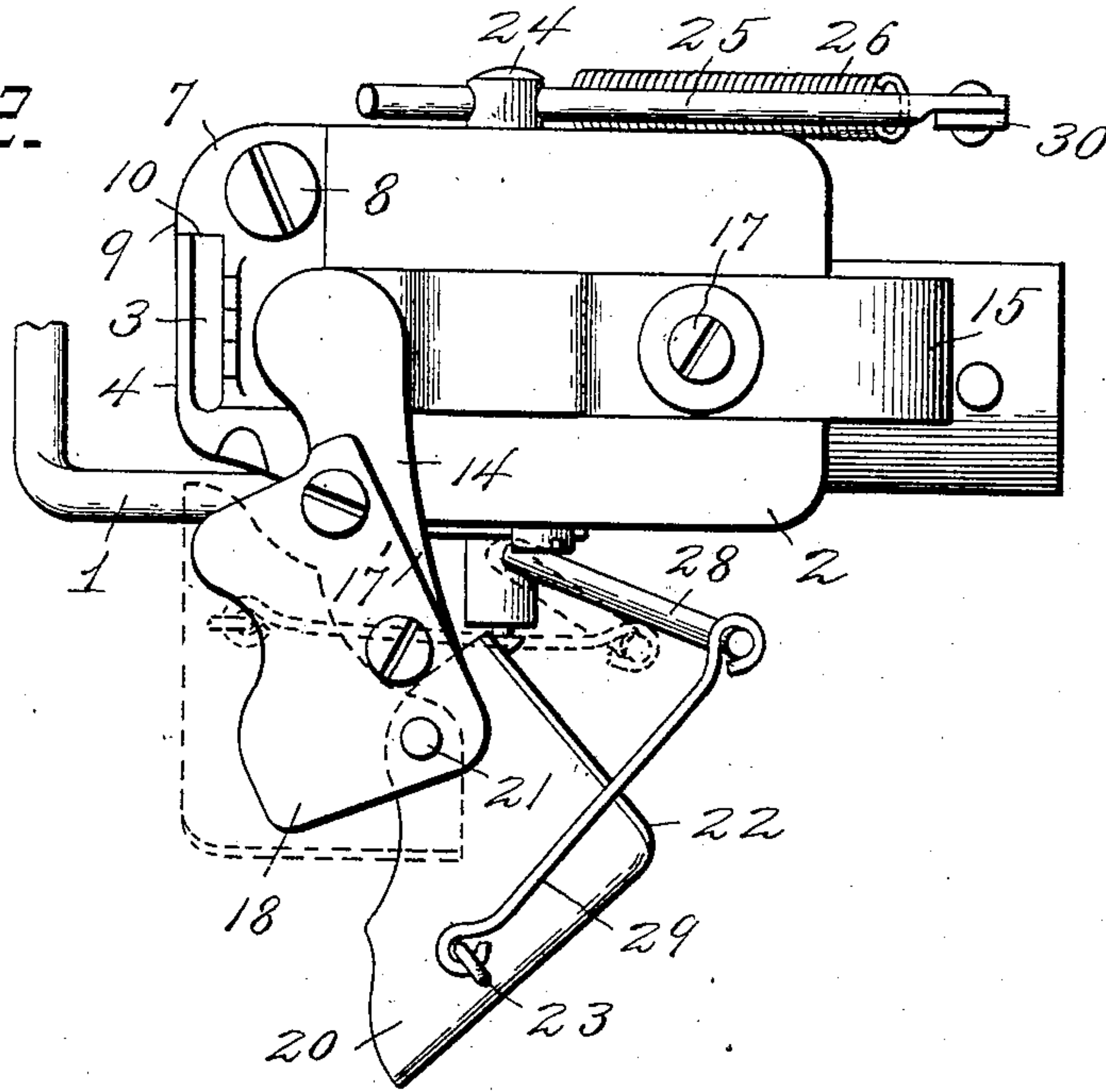
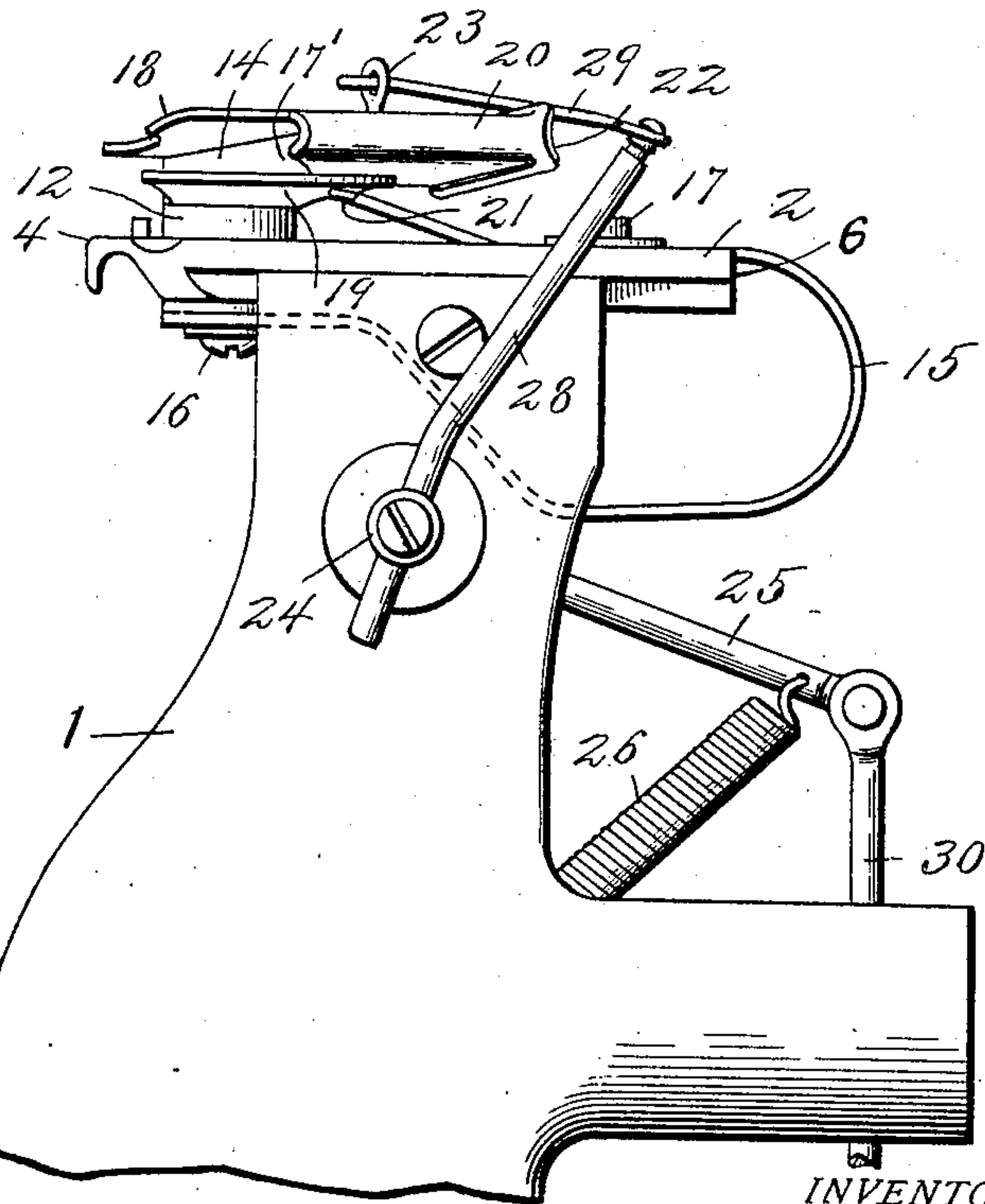


Fig. 3.



WITNESSES

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3 SHEETS—SHEET 3.

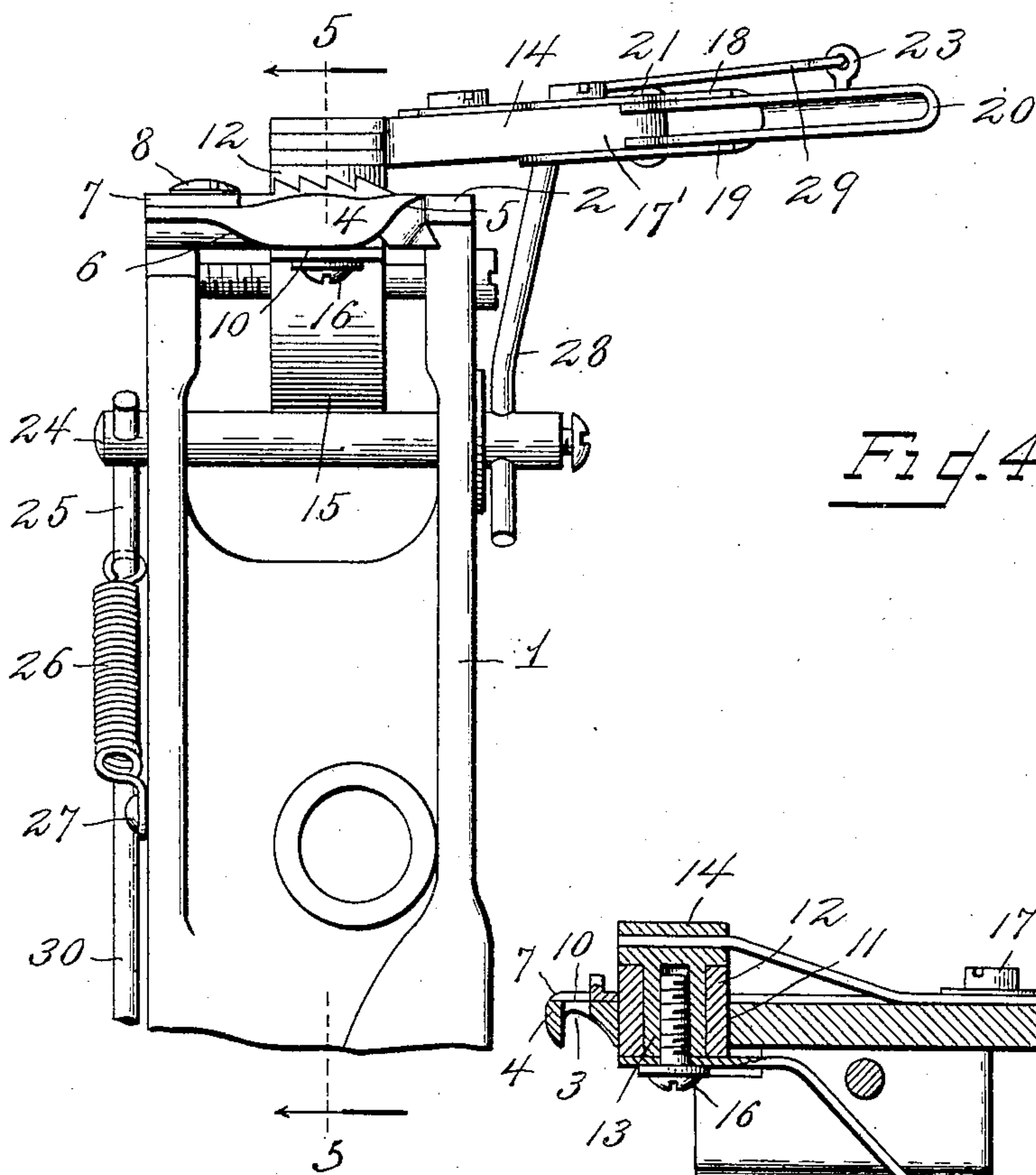
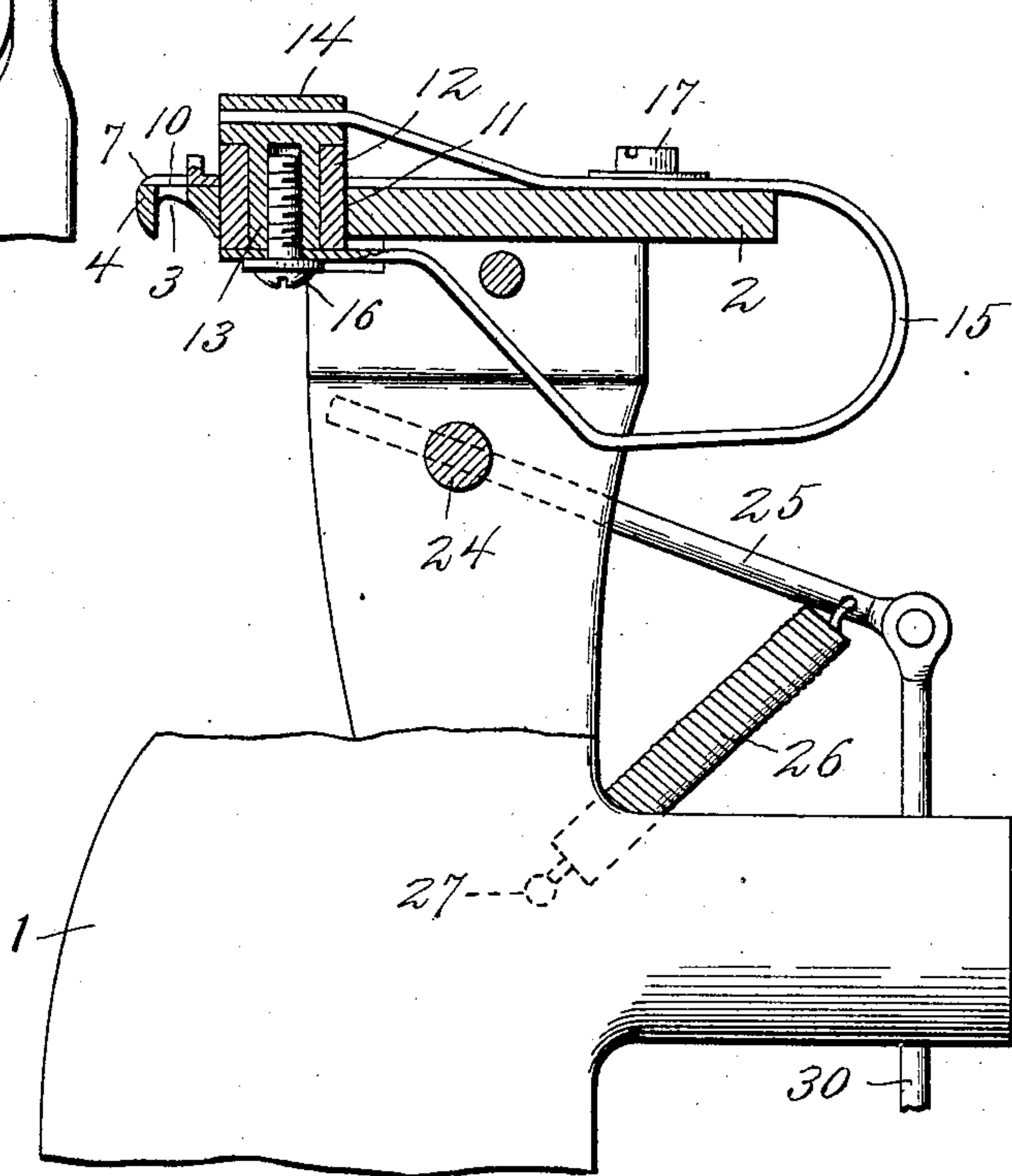


Fig. 4.

Fig. 5.



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UNITED STATES PATENT OFFICE.

GEORGE RIEL, OF MANCHESTER, NEW HAMPSHIRE.

SEWING-MACHINE.

No. 832,211.

Specification of Letters Patent.

Patented Oct. 2, 1906.

Original application filed July 27, 1905, Serial No. 271,490. Divided and this application filed October 16, 1905. Serial No. 282,964.

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, which is a divisional part of the subject-matter of my application for patent, filed July 27, 1905, Serial No. 271,490, 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.

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.

A further object of my invention is to obtain the proper guiding and gaging of the sole and welt, whereby the edges of the sole and welt are in exact coincidence and a firm smooth surface is produced.

A further object of the invention is the provision of an improved guide for a welt or the like which is simple in construction and very efficient in operation and is movable into and out of operative position, dependent upon the work to be performed.

These 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 the invention covered in my application for patent before referred to. Said wall or side, 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 are 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.

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
 5 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.
 10 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
 15 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
 20 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 coöperates with the inner side of the arm
 25 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
 30 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 connect-
 35 ed 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
 40 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 vary-
 45 ing 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
 50 the arm 28 to open the guide, as will be understood. The guide and bracket are verti-

cally 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 main- 55 tained by the action of the spring 26, it being understood by reference to Fig. 2 that in the movements of the guide to idle and to working positions the connection 23 of the link 29 passes the dead-center, or, in other words, a 60 line passing through the lug 23, pivot 21, and the upper end of arm 28.

I claim as my invention—

1. In a sewing-machine, a throat-plate having a circular opening adjacent to the 65 throat, a roller-equipped gage for the work vertically movable in said opening to extend in all positions above the surface of the throat-plate, and a spring straddling and se-
 70 cured intermediately to the throat-plate and fastened at its ends respectively to the top and bottom of the gage.

2. In a sewing-machine of the character described, a throat-plate having an opening 75 adjacent to the throat, a work-gage including a roller vertically movable in said opening, and a spring straddling the plate and fastened intermediately to the latter and fastened at its ends respectively to the top and
 80 bottom of the gage.

3. In a sewing-machine of the character described, a spring, an arm extending from said spring, plates secured to said arm, a guide for welts and the like pivoted to said arm to swing between said plates, the out- 85 ward movement of said guide being against spring action.

4. In a sewing-machine of the character described, a horizontally-swinging guide for welts and the like, a rock-shaft, arms on said 90 shaft one of which is connected with the guide, a spring connected with the other arm, and means for opening said guide including a rod attached to one of said arms.

In testimony whereof I affix my signature 95 in presence of two witnesses.

GEORGE RIEL.

Witnesses:

W. M. ROCKWELL,
 JOHN O'NEILL.