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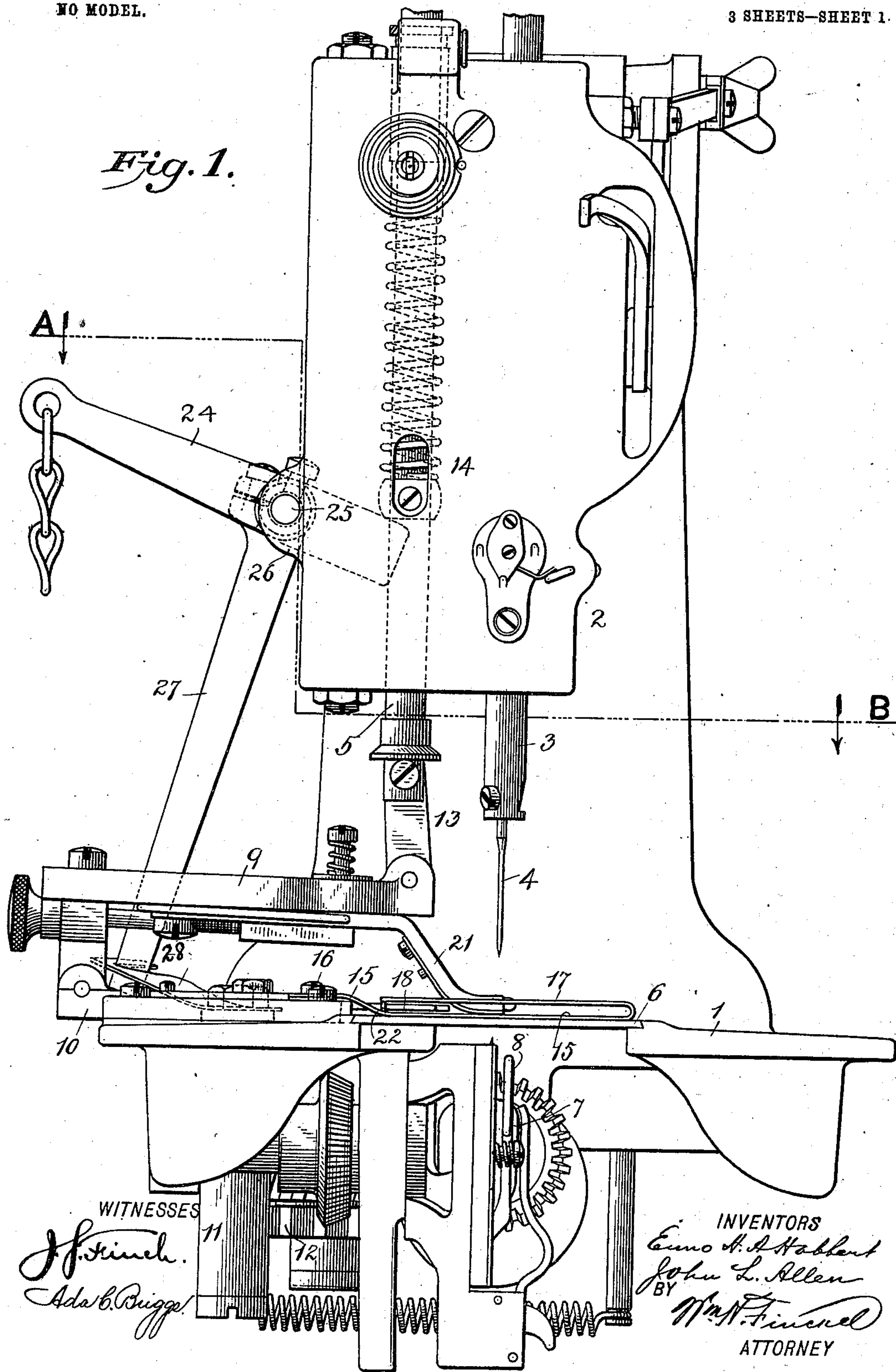
PATENTED MAR. 31, 1903.

E. H. A. HABBERT & J. L. ALLEN.
THREAD CUTTER FOR SEWING MACHINES.

APPLICATION FILED APR. 8, 1902.

NO MODEL.

3 SHEETS—SHEET 1.



WITNESSES

J. F. Finch.
Ada C. Briggs!

INVENTORS

Euno H. A. Habbert
 John L. Allen
 BY
 Wm. H. Finckel
 ATTORNEY

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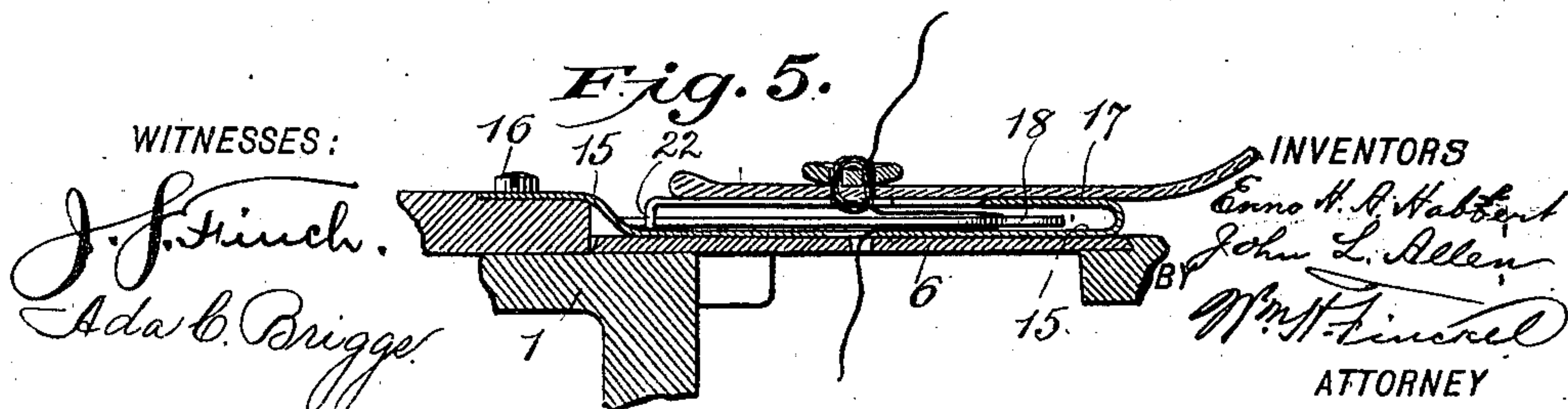
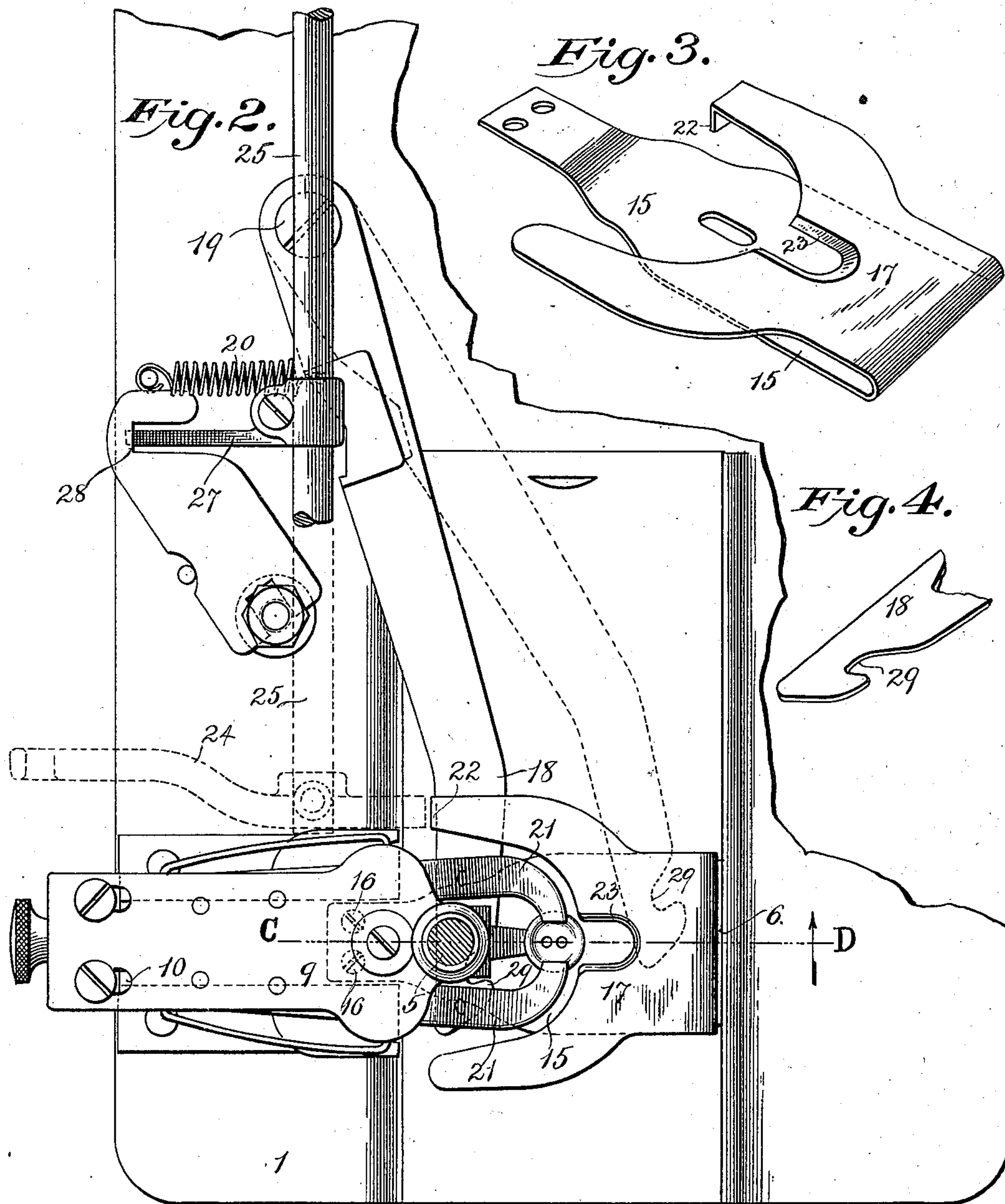
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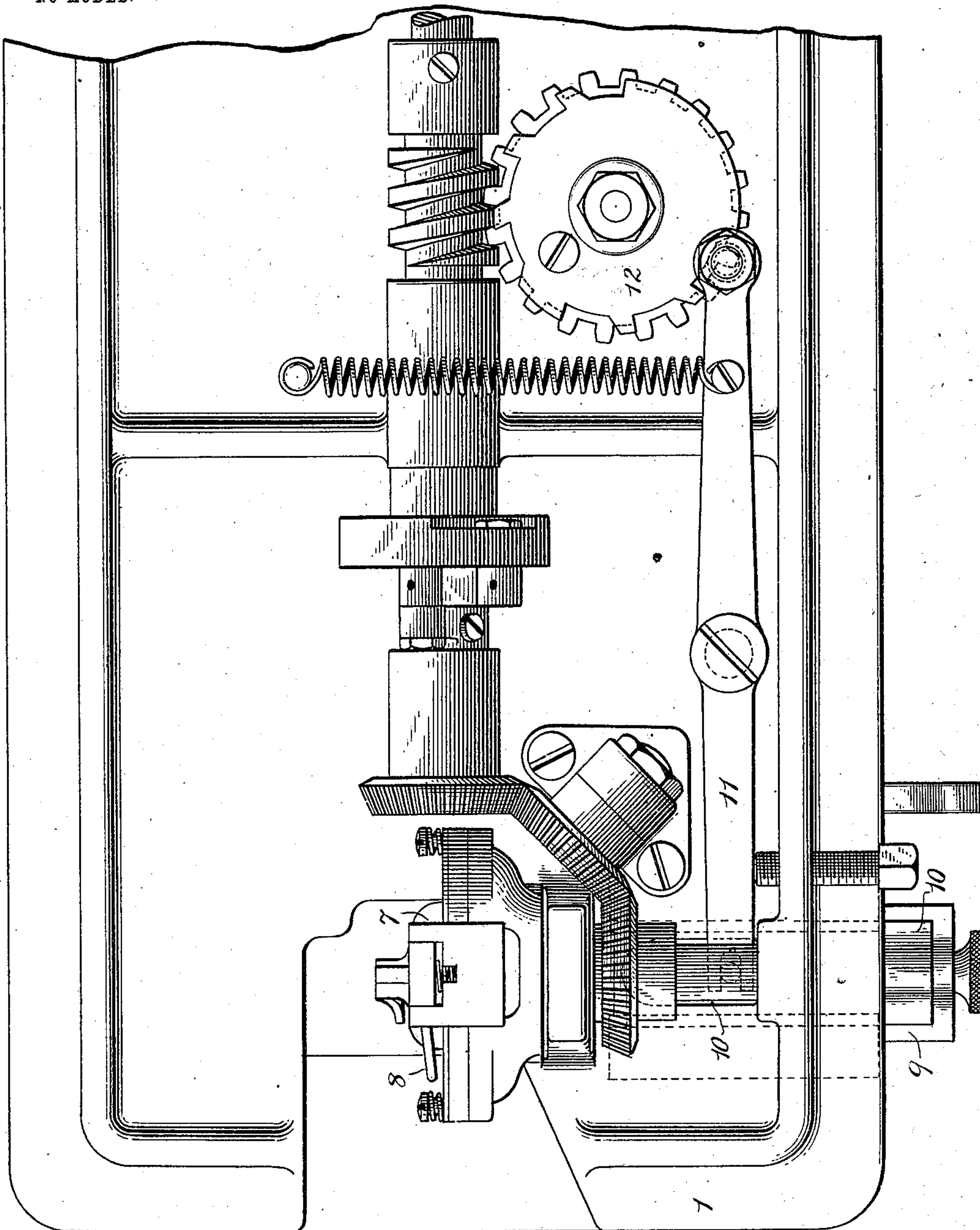
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3 SHEETS—SHEET 3.



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Fig. 6.

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UNITED STATES PATENT OFFICE.

ENNO HENRY AUGUST HABBERT AND JOHN LEON ALLEN, OF TROY, NEW YORK, ASSIGNORS TO WHEELER & WILSON MANUFACTURING COMPANY, OF BRIDGEPORT, CONNECTICUT, A CORPORATION OF CONNECTICUT.

THREAD-CUTTER FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 724,282, dated March 31, 1903.

Application filed April 8, 1902. Serial No. 101,924. (No model.)

To all whom it may concern:

Be it known that we, ENNO HENRY AUGUST HABBERT and JOHN LEON ALLEN, citizens of the United States, residing at Troy, in the
5 county of Rensselaer and State of New York, have invented a certain new and useful Improvement in Thread-Cutting Devices for Sewing-Machines, of which the following is a full, clear, and exact description.

10 The object of this invention is to provide a sewing-machine with means for drawing off the under thread to any desired length at the completion of the sewing of the desired figure or object and frictionally holding it as thus
15 drawn off until it is severed.

In carrying out the invention a lever is provided which is adapted to act upon the under thread upon the completion of the sewing to draw out a length of under thread and
20 frictionally detain such thread so drawn out while the work is moved to another position, the thread being severed by the movement of the work in changing the position of the work relatively to the needle, or it may be otherwise severed, all as we will proceed now more
25 particularly to set forth and finally claim.

For purposes of illustration we have shown our invention as applied to a machine for sewing on buttons, but wish it to be understood that it is applicable to machines for
30 other purposes.

In the accompanying drawings, illustrating our invention, in the several figures of which like parts are similarly designated, Figure 1
35 is a front end elevation of a button-sewing machine equipped with our improvements. Fig. 2 is a horizontal section or plan view, partly broken, taken in the plane indicated by the line A B on Fig. 1, the needle-bar being omitted. Fig. 3 is a detail perspective
40 view of the thread-detaining plate. Fig. 4 is a detail perspective view of the thread-detainer. Fig. 5 is a sectional elevation, partly broken, taken in the plane indicated by the line C D on Fig. 2, illustrating the detainer in position after the under thread has been
45 drawn from the bobbin, the button-clamp, &c., being omitted; and Fig. 6 is a bottom view, partly broken, of a button-sewing ma-

chine, showing the usual means for actuating the button-clamp slide. 50

In describing our improvement only such limited reference will be made to the usual well-known parts of a sewing-machine as is deemed necessary for a proper understanding of our invention. 55

1 is the frame or bed plate, 2 the arm, 3 the needle-bar, 4 the needle, 5 the presser-bar, 6 the throat-plate, and 7 is the bobbin-case inclosed within the loop-taker 8, all of which
60 parts are constructed and operated in the usual or any approved manner.

9 is a button-clamp of any approved construction, which in the present instance is pivoted at its heel end to a slide 10, operated
65 by a lever 11, Fig. 6, pivoted to the under side of the frame and actuated from a cam 12. The forward end of the clamp 9 is connected by a link 13, Fig. 1, to the presser-bar 5, which latter is provided with the usual
70 presser-spring 14, by means of which the clamp is caused to press downwardly toward the throat-plate.

15 is a plate, the rear end of which is secured to the clamp-slide 10 by screws 16, and
75 the front portion 17 of which is folded or bent upon itself to form a pocket in which is adapted to work a blade 18, which for want of a better name we will hereinafter term a "thread-detainer." The thread-detainer 18
80 in the present instance comprises a flat blade or lever pivoted at 19 to the bed-plate and held in retracted position, as shown in Fig. 2, by a spring 20.

The upper portion 17 of the plate 15 is cut
85 away to accommodate the shape of the gripping-fingers 21 of the button-clamp 9, and formed upon said plate is a stop 22, against which the thread-detainer 18 abuts in its retracted position, as shown by the full lines
90 in Fig. 2. A U-shaped notch 23 in the upper portion 17 of plate 15 is provided with a cutting edge by means of which the lower or bobbin thread is severed, as will be presently explained. 95

24 is a presser-lifting lever adapted to engage the presser-bar 5 in the usual manner to raise the same in order to release the mate-

rial, said lever being fast on a rock-shaft 25, journaled in suitable bearings 26 on the arm

2. Secured rigidly on said rock-shaft 25 is a lever 27, the lower end of which is adapted to engage the thread-detainer 18 to move the same forward in the pocket in plate 15, as shown in dotted lines in Fig. 2. The presser-spring 14 besides actuating the presser-bar also serves to keep the lever 27 in retracted position against a stop 28. The presser-lifting lever 24, rock-shaft 25, and lever 27, secured on said rock-shaft, form, in effect, a bell-crank, and when said lifting-lever is depressed, which may be done either by hand or by the usual treadle apparatus, the presser-bar and button-clamp will be lifted to permit the material to be shifted or removed and at the same time the thread-detainer 18 will be thrust forward to the position shown in dotted lines in Fig. 2, thereby drawing a quantity of underthread from the bobbin, as shown in Fig. 5. By shifting the material, with the parts in this position, after the predetermined figure or button has been sewed the underthread will be brought into contact with the cutting edge 23, formed on the plate 17, and thereby severed, as will be readily understood, sufficient friction being exerted by the thread-detainer and the plate with which it coöperates upon the thread to prevent the latter drawing farther from the bobbin. The cutting edge 23 is located in distance from the sewed figure or button equal to the length of thread desired to be left hanging loose from the material.

Although not actually necessary, we prefer to form the thread-detainer with a hook-shaped or notched extremity 29 the better to insure its effective operation; but we do not wish to be limited in this respect, since satisfactory results may be obtained without shaping the detainer in such manner.

It is not necessary to provide the cutting edge in the notch 23, since the thread may be severed by contact with the plate itself or otherwise.

While we show the forming of the pocket for the lever by folding or bending over plate 17 from plate 15, it is to be understood that said pocket may be otherwise made—as, for example, by affixing a plate, such as 17, to the plate 15.

We do not wish to be limited to the details of construction shown and described, since they may be greatly varied without departing from the spirit of our invention, the gist of which resides in equipping a sewing-machine with instrumentalities for drawing a quantity of under thread from the bobbin-case and detaining the same with sufficient friction to enable the operator to shift the material without drawing further thread from the bobbin, whereby the operator may in the act of shifting the material draw the thread into contact with a suitable cutting edge and sever it.

Having thus described our invention, what

we claim as new, and desire to secure by Letters Patent, is—

1. In a sewing-machine, a stitch-forming mechanism, a thread-detaining lever, and a plate coöperating with said lever for effecting a retention of the bobbin-thread, and means to move said lever across the path of vertical movement of the needle, in combination with a thread-cutter for severing the thread by removal of the material from sewing position.

2. In a sewing-machine, a stitch-forming mechanism, a thread-detaining lever, and a plate coöperating with said lever for effecting a retention of the bobbin-thread, and means to move said lever across the path of vertical movement of the needle, in combination with a thread-cutter fixed relatively to said plate for severing the thread by removal of the material from sewing position.

3. In a sewing-machine, a stitch-forming mechanism, a thread-detaining lever, a plate coöperating with said lever for effecting a retention of the bobbin-thread, and means to move said lever across the path of vertical movement of the needle, said plate having an edged notch formed in it for severing the thread as the material is removed from sewing position.

4. In a sewing-machine, stitch-forming mechanism, a work-clamp, means to actuate it, a plate movable with said work-clamp and having a pocket, a thread-cutting notch in said plate, a lever having one end projecting into said pocket and movable within the line of the under thread, and means to move said lever to engage the said under thread and to pull off a predetermined length and detain it until severed.

5. In a sewing-machine, stitch-forming mechanism, a work-clamp, means to actuate it, a plate movable with said work-clamp and having a pocket, a thread-cutting notch in said plate, a lever having one end projecting into said pocket and provided with a notch or hook, movable within the line of the under thread, and means to move the said lever to engage the said under thread and to pull off a predetermined length and detain it until severed.

6. In a sewing-machine, stitch-forming mechanism, a work-clamp, means to actuate it, a plate movable with said work-clamp and having a cutting edge and a pocket, a lever having one end projecting into said pocket and movable within the line of the under thread, and means to move the said lever to engage the said under thread and to pull off a predetermined length and detain it until severed by the cutting edge in the act of moving the work.

7. In a sewing-machine, stitch-forming mechanism, a work-clamp, means to actuate it, a plate aligned with the work-clamp and having a superposed portion one end of which is provided with a stop, and beneath which portion is a pocket, a thread-cutter provided

on said superposed portion, a lever, one end of which projects into said pocket in line with the under thread, and the movement of which in one direction is arrested by said stop, and
5 means to move the said lever in the opposite direction to pull off a length of under thread.

8. In a sewing-machine, a bed-plate, stitch-forming mechanism, a spring presser-foot, a work-clamp, means to move it longitudinally,
10 a pocketed plate secured to and movable with the work-clamp, a thread-cutter on said plate, a lever pivoted to the bed-plate and having one end working within said pocket, a spring

for moving the said lever in one direction, a rock-shaft and connections between said rock- 15 shaft and lever and presser-foot for moving said lever in the opposite direction to pull off a length of under thread and hold it until severed.

In testimony whereof we have hereunto set 20 our hands this 2d day of April, A. D. 1902.

ENNO HENRY AUGUST HABBERT.

JOHN LEON ALLEN.

Witnesses:

THOMAS GALVIN,

JOSEPH C. RYAN.