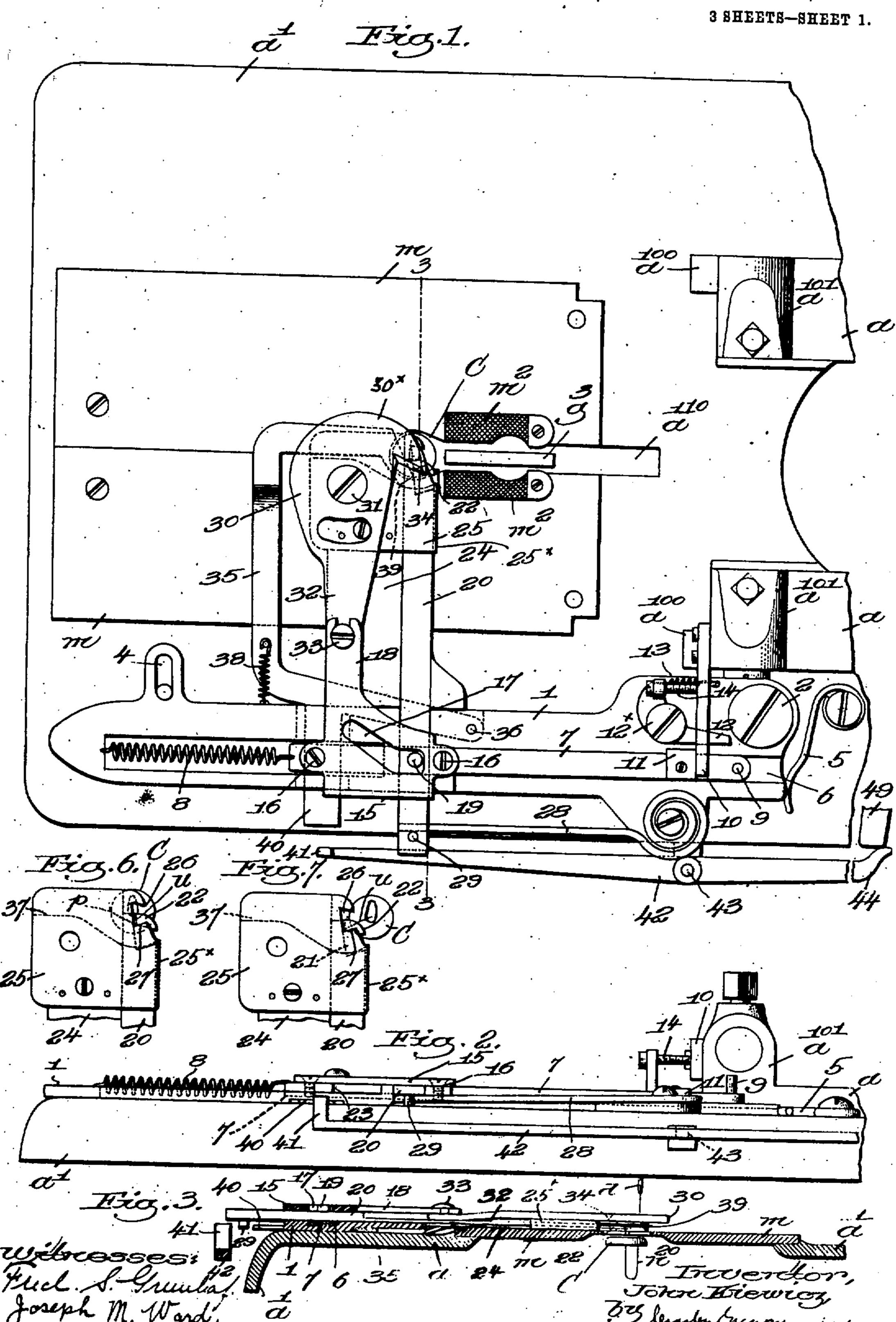
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APPLICATION FILED JAN. 11, 1909.

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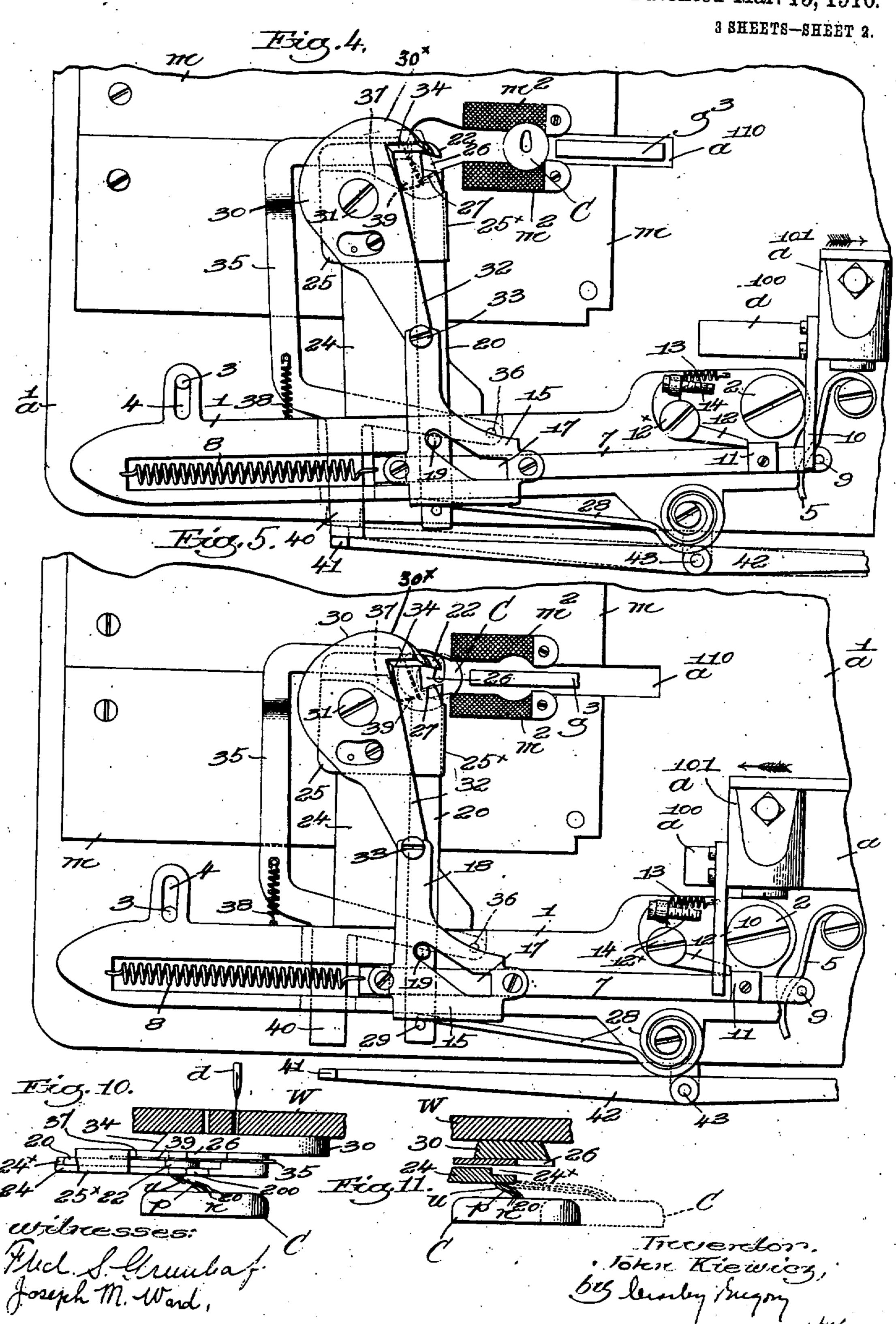


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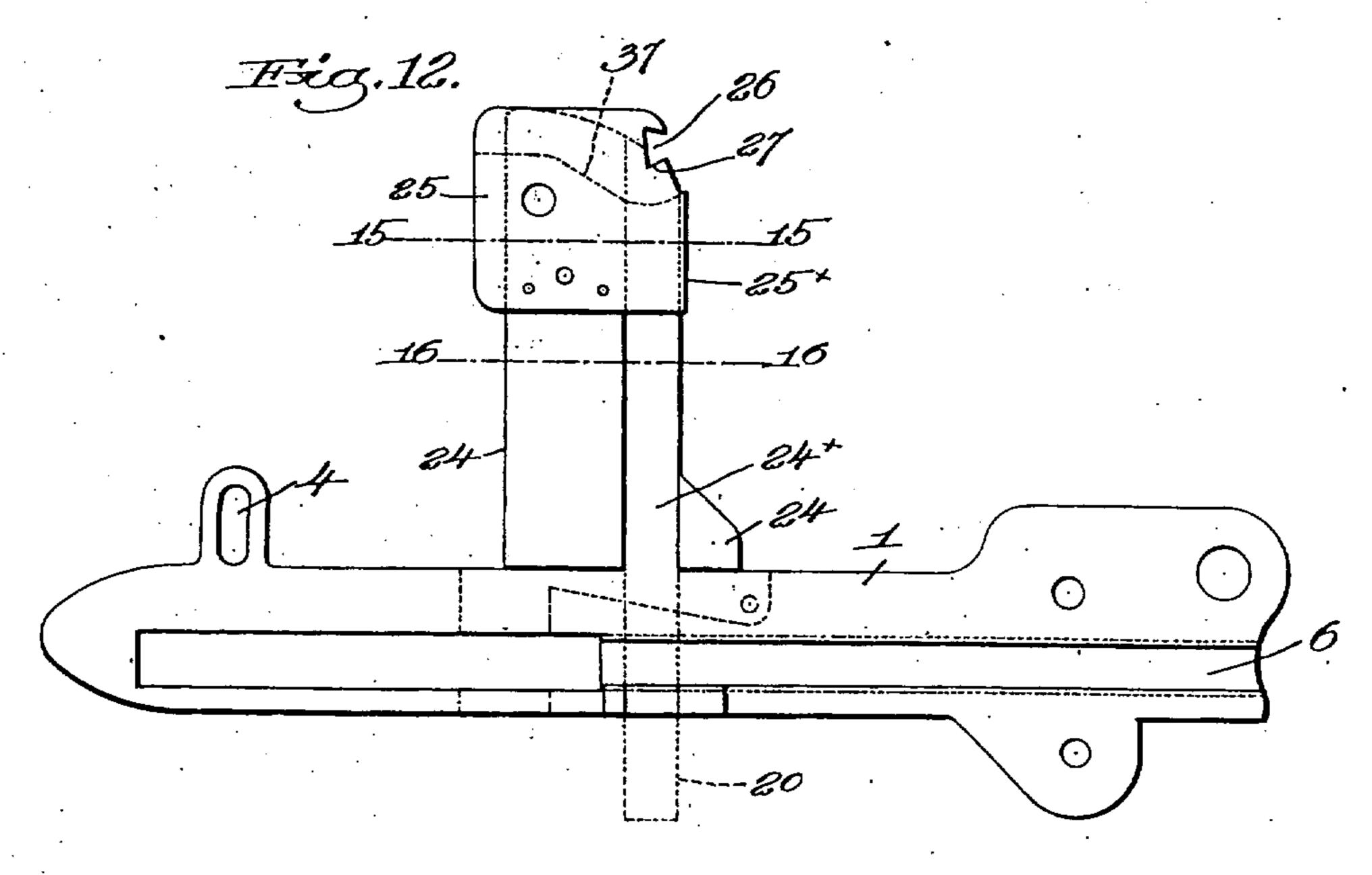
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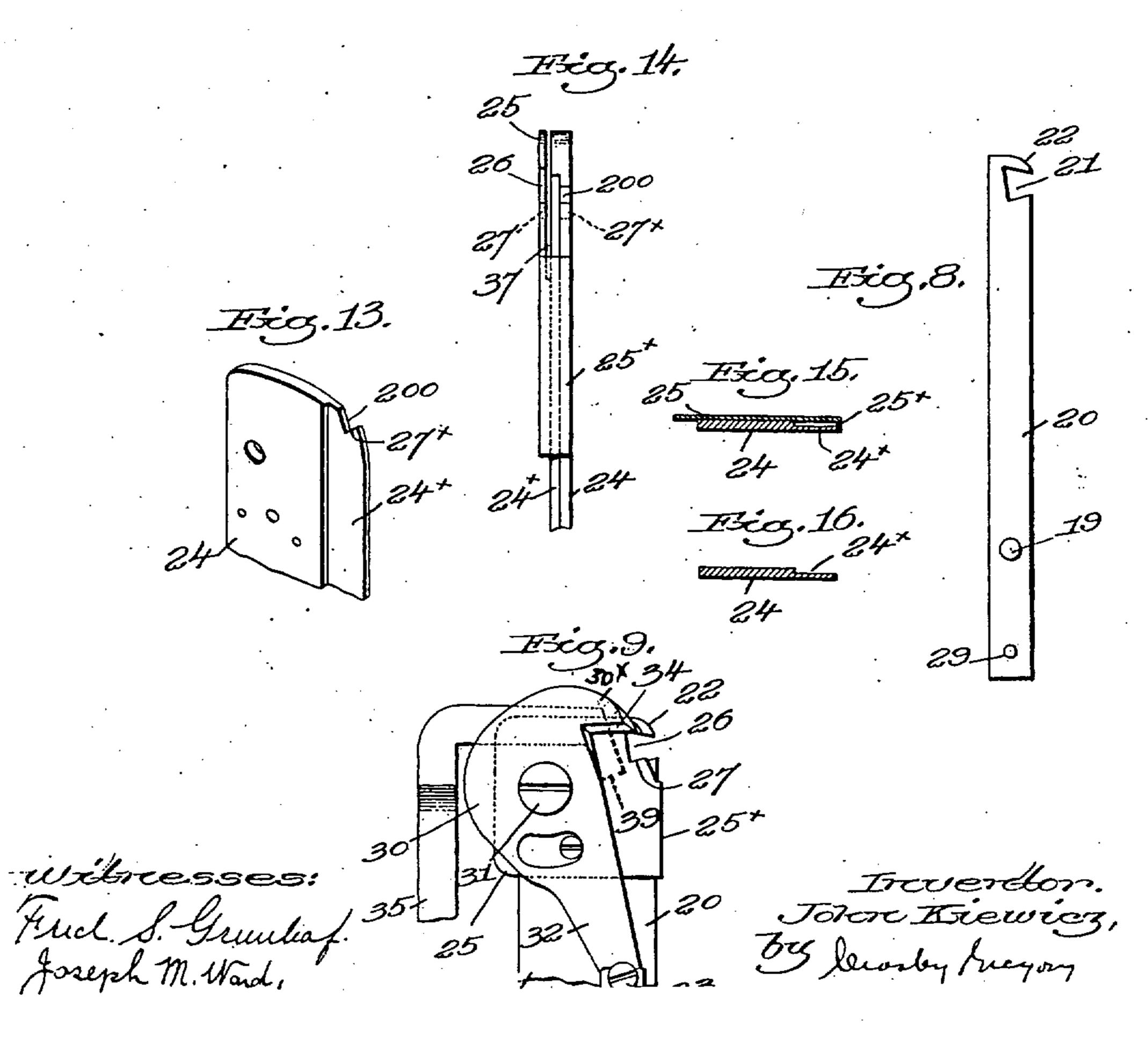
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3 SHEETS-SHEET 3.





UNITED STATES PATENT OFFICE.

JOHN KIEWICZ, OF HYDE PARK, MASSACHUSETTS, ASSIGNOR TO THE REECE BUTTON-HOLE MACHINE COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MAINE.

THREAD CUTTING AND CLAMPING MECHANISM FOR SEWING-MACHINES.

952,010.

Specification of Letters Patent. Patented Mar. 15, 1910.

Application filed January 11, 1909. Serial No. 471,584.

To all whom it may concern:

Be it known that I, JOHN KIEWICZ, a citizen of the United States, and resident of Hyde Park, county of Norfolk, State of 5 Massachusetts, have invented an Improvement in Thread Cutting and Clamping Mechanism for Sewing-Machines, of which the following description, in connection with the accompanying drawing, is a specifica-10 tion, like characters on the drawing repre-

senting like parts. This invention relates more particularly to sewing machines for making button-holes, and it has for its object the production of

15 mechanism to cut and clamp or hold the upper and under threads, and the purl thread gimp or cord, when the stitching of a buttonhole is completed, the several threads being clamped and severed below the work and

20 close thereto.

After the threads have been severed the clamp holds the under thread or threads, as the stitch-forming dovices begin the stitching of a new button-hole, relieving the oper-25 ator of the duty of holding those threads in proper position, and by effecting the severance beneath and close to the work subsequent hand trimming or cutting of threads is obviated.

30 Heretofore in button-hole stitching machines the under threads have extended from the barred end of one button-hole to the barred end of the next one, on the under side of the work, and a separate trimming or fin-35 ishing operation has been necessary to cut off such threads and finish the work, which separate operation I have obviated herein.

I have shown my invention as applied to a button-hole stitching machine substantially 40 such as forms the subject-matter of United States Patents No. 462,865 granted November 10, 1891, to G. S. Hill, and No. 349,359 granted September 21, 1886 to John Reece, the later of said patents relating to and be-45 ing an improvement on the earlier patent. In said patents the frame carrying the stitch-forming mechanism carrying the upper and under threads, the throat-plate, and the mechanism for cutting the button-hole, 50 has a inovement relatively to the work-clamp in the direction of the length of the buttonhole, the stitch-forming mechanism operating during such movement to over-stitch the straight sides of the button-hole, and as is for a purpose to be described; Fig. 5 is a

well known to those skilled in the art after 55 the sides and eye-end of a button-hole have been stitched the opposite end thereof is finished by barring, and the button-hole is cut. After such completion of the buttonhole the work-clamp releases the work and 60 the needle rises and, with the under-thread mechanism, moves forward, moving the work with it a short distance, and in my present invention I utilize this forward movement of the work from stitching position to bring 65 the upper and under threads into position to be acted upon by the thread-cutting and clamping mechanism, which is located beneath the work position, the said mechanism operating immediately thereafter upon the 70 threads. The stitch-forming mechanism now moves back into position to begin the stitching of another button-hole after the work has been fed and clamped, and the under-threads are held by the thread-clamp 75 until the stitching of the next button-hole has begun.

I have also provided a device, to remove automatically from the thread-clamp a short piece of the needle-thread left by the opera- 80 tion of the thread-cutter, as will appear hereinafter.

The various novel features of my invention will be fully described in the subjoined specification and particularly pointed out in 85

the following claims. Figure 1 is a top plan view of a sufficient portion of the mechanism of a button-hole stitching machine to be understood, with one embodiment of my present invention 90 applied thereto, the thread-cutting and clamping mechanism being shown in the position assumed just after the threads have been clamped and cut; Fig. 2 is a side elevation of the mechanism shown in Fig. 1; 95 Fig. 3 is a transverse section on the line 3-3, Fig. 1, looking toward the left, to show more clearly certain features of construction and relative location of parts; Fig. 4 is a view similar to Fig. 1 but show- 100 ing the thread-cutting and clamping mechanism moved away from operative position, by movement of the stitch-forming mechanism as one side of a button-hole is being stitched, the thread-clamp being open to re- 105 lease the threads previously held by it and permit them to drop down out of the way,

top plan view of the parts after the buttonhole has been finished and the work unclamped, but just before the final forward inovement of the work to place the threads 5 in position to be acted upon by the cutting and clamping mechanism; Fig. 6 is a detail in plan of the thread-clamp, with the movable cutting member omitted, the clamp being in the position shown in Fig. 1, clamp-10 ing the cut threads; Fig. 7 is a similar view of the same parts but after the stitch-forming mechanism has begun its movement to stitch another button-hole; Fig. 8 is a separate plan view of the relatively movable 15 member of the thread-clamp; Fig. 9 is a plan view of the relatively movable threadcutting member and adjacent parts; Fig. 10 is an enlarged view partly in section on substantially the line 3-3, Fig. 1, showing the 20 thread-cutting and clamping members after the threads have been clamped and cut; Fig. 11 is a view of such parts, at right angles to the line 3-3, Fig. 1, but showing in full lines their relative position corresponding to Fig. 6, and in dotted lines their relative position corresponding to Fig. 7; Fig. 12 is a top plan view of the swinging carrier on which the thread-cutting and clamping devices are mounted; Fig. 13 is a perspective 30 detail of the end of a lateral extension or arm forming a part of the carrier, with the cover-plate or head removed; Fig. 14 is a right-hand edge view of said carrier extension with the head in place thereon; Fig. 15 35 is a transverse sectional detail on the line 15—15, Fig. 12; Fig. 16 is a similar view on line 16—16, Fig. 12, to more clearly illustrate the construction.

The movable frame a, the stationary plate a' having ways a^{100} upon which the frame a travels, said frame having bearings a^{101} for the pivots of the blade (not shown) for cutting the button-hole; the cutting-bed g^3 mounted to move with the frame a in the slot a^{110} , the lower members m of the work-clamp, and their serrated parts m^2 ; the throat-plate C which supports the edges of the material to be stitched while held in the work-clamp, and the vibrating clutch-dog 49, (the end thereof being shown in Fig. 1) may be and are all substantially as in the patents referred to and operate as therein set forth.

It will be understood that the stitch-forming mechanism, including the needle d for the upper or needle-thread, and the devices for controlling the under-threads (not shown) are mounted upon the traveling frame a and in practice are or may be of the construction shown in said patents and form no part of my present invention.

In accordance with my invention I mount upon the stationary plate a' at one side of the clamp-members m an elongated, flat cartier 1 shown separately in Fig. 12 ful-

crumed at its inner end at 2 to swing upon the plate a' toward and from the path of the throat-plate C, a stud 3 entering a slot 4 in the carrier limiting its swinging movement.

A spring 5 acting upon the carrier tends to maintain it in the position shown in Figs. 1 and 5, the carrier having formed in it a longitudinal, undercut groove or guideway 6 in which is mounted a longitudinally-slid-76 able bar 7 constituting a controller for the thread-cutting and clamping devices, a spring 8 attached to the outer end of the carrier and to the nearer end of the controller serving to move the latter to the left, 80 Figs. 1, 2, 4 and 5.

At its inner end the controller is provided with an upright pin 9 in the path of movement of a finger 10 fast on a part of the movable frame a, it being seen that the pin 85 9 is beyond the carrier-fulcrum 2, so that as the frame a moves to the right, Fig. 1, the finger 10 will engage the pin and slide the controller 7 to the right, stretching spring 8 and also causing the carrier to swing outward into the position shown in Fig. 4.

The spring permits continued movement of the controller after the carrier reaches the position shown in Fig. 4 and is stopped by the stud 3, as will be manifest, such movement of the carrier compressing its returning spring 5.

Attached to the controller 7 is an abutment 11 adapted to be engaged by a locking dog 12 pivoted at 12* on the carrier and having its tail connected by a spring 13 with the carrier, the spring acting to swing the dog toward the controller, so that when the latter is retracted by the finger 10 into the position shown in Fig. 4 said dog will engage the abutment 11 and hold the controller locked in retracted position.

An adjustable trip 14 is mounted on the tail of the dog at such a height that it is in 110 the path of the finger 10 when the frame moves forward, or to the left, Figs. 4 and 5, so that at a certain point in such movement the trip will be engaged to swing the dog 12 away from the abutment, releasing controller 7.

A cam-plate 15 is shown as fixedly secured by screws 16 to the controller near its outer end, said plate having a cam-slot 17 and an extension 18, the latter shown as extended 120 laterally from said controller toward the members m of the work-clamp. This cam-slot 17 receives a follower-stud 19 projecting upward from the elongated shank 20 of the movable member of the thread-clamp, the 125 thread-engaging end of said shank, see Fig. 8, having an open recess 21 to receive the threads and presenting a hook-like extremity 22 to act upon the threads, as will be explained, the part 22 being in practice the 130

movable clamping member, per se. The shank 20 crosses the controller 7 beneath the cam-plate, in a recess 23, Fig. 2, in said controller, to permit reciprocating movement 5 thereof, the shank 20 being slidably supported and confined in bearings in a lateral extension or arm 24 of the carrier, clearly shown in Fig. 12. A guideway 24x is formed in the upper face of the extension at the 10 right-hand side thereof, in which the shank 20 slides at right angles to the path of movement of the controller 7, and a cap-plate or head 25 is secured to the end of the extension and overturned across the guideway 24x, 15 as at 25*, Figs. 12 and 15. The extension 24 is provided with a notch 200, Fig. 13, and the head is provided with an open recess 26 which registers with the edges of the Vshaped notch 200, above the same.

The parallel edges 27, 27× above and below, respectively, the path of the movable member 22 of the thread-clamp constitute the relatively fixed member of such clamp, and the edge 27 also serves as the relatively 25 fixed member of the thread-cutting device.

When the member 22 is operated as will be described, it engages the threads beneath the work and draws them into the lower corner of the recess 26 and against the edges 30 27, 27* clamping such threads tightly, while the movable cutting member coöperates with the upper edge 27 to sever the threads cleanly.

The thread-clamp is closed by a strong 35 spring 28 fixedly attached at one end to the carrier 1 and having its free end bearing against a pin 29 depending from the shank 20, and the clamp is opened by the cooperation of the cam-slot 17 with the follower 40 19 when the controller 7 is retracted, as

shown in Figs. 4 and 5. A blade-carrier 30 is fulcrumed at 31 on the carrier-extension 24 above its head 25, see Fig. 9, and has a prolongation 32 pro-45 vided with a stud 33 which pivotally connects it with the extension 18 of the camplate 15, so that as the latter is moved back and forth by the controller the blade-carrier will be swung on its fulcrum 31. Said 50 blade carrier has a hook-shaped free end 30× Figs. 1, 4, 5 and 9, presenting a cutting blade 34 which is adapted to swing across the recess 26 and sweep over the face of the head 25 and thereby cross the combined 55 cutting-blade and clamp presented by the 7, the spring 8 instantly acting to slide the 120 upper edge 27, previously referred to. The cutting action thus effected is substantially that of a pair of shear-blades, as will be apparent, the threads being clamped before the cutting is effected.

The position of the carrier and its extension, shown in Figs. 1 and 4, brings the recess 26 of the carrier-extension with its opening into position at the outer end of C, and when the thread-clamp is open, Figs. 5 and 9, the upper and under threads are brought into position to be clamped and cut.

The work W, Figs. 10 and 11, extends over the thread-clamping and cutting de- 70 vices, which are located beneath the work position so that they can act upon the threads at the underside of the work, said clamping and cutting devices being above the path of the throat-plate C and operat- 75 ing wholly independently of said throat-

Starting with the parts as shown in Fig. 1, with the threads clamped and cut, the operation is as follows:—As the frame a so moves to the right the finger 10 engages pin 9 and retracts the controller 7; swinging the carrier 1 and its extension 24 outward, as shown in Fig. 4, the dog 12 automatically engaging the abutment 11 and locking the 85 controller in retracted position. The camplate 15 at the same time acts upon the shank 20 and opens the thread-clamp, by moving the member 22 away from between the edges 27, 27× and the recess 21 then 90 substantially registers with the recess 26, as shown in Figs. 4, 5 and 9. At the same time the blade-carrier 30 is swung on its fulcrum to place the blade 34 in the relative position shown in said figures.

Referring to Fig. 4, it will be understood that after the controller has been retracted and locked the frame a will move to the left, to complete the overstitching of the second side of the button-hole, and on such return 100 movement the finger 10 moves to the left away from the pin 9. The spring 5 acts immediately to swing the carrier and parts thereon into the position shown in Fig. 5, and now all is in readiness for the clamping 105 and cutting of the threads. When the button-hole has been barred the needle d rises, Fig. 3, leaving a loop n^{20} , Fig. 3, formed by the usual looper, and after the needle clears the work and the latter has been released 110 by the work-clamp the frame a moves forward about 3/8 of an inch, moving the work with it and thereby bringing the sides of the loop n^{20} , the under-thread u and the purl-thread p into the open and registering 115 recesses 21 and 26, in range of the cutting and clamping mechanism. Just as this is accomplished the finger 10 strikes the trip 14. causing the dog 12 to release the controller controller to the left into the position shown in Fig. 1, while the spring 28 acts upon the shank 20 to move it outward at right angles to the controller. The change in the position of the cam-plate 15 allows the spring 125 28 to move the thread-clamping member 22 toward and between the edges 27, 27*, thereby drawing the threads against and between said edges and down in the corner of the 65 the path of movement of the throat-plate recess 26, nipping or clamping such threads 130

and tightly holding the same, while the joutward into the position shown in Fig. 4 the blade 34 against the threads, between the vibrator, which at such time is in mothe underside of the work and the top of the 5 head 25, said blade wiping across the face. of the head and across the upper edge 27, cutting the threads with a shear-cut. The clamping and cutting is thus effected by the time the parts again assume the position 10 shown in Figs. 1 and 10, and the clamping threads as the frame a moves back into position to begin the stitching of the next button-hole, as in dotted lines Fig. 11, showing 15 the clamped threads and throat-plate. Such movement of the frame a will not open the. clamp as the finger 10 will not yet engage the pin 9 on the controller 7, so that the under threads are held automatically until 20 stitching begins, relieving the operator of that duty. Manifestly the opening of the thread-clamp and retraction of the blade 34 leave the previously held threads free to drop out of the clamping means, and the 25 loop n²⁰ of the needle or upper thread can then drop out. As these various threads are tightly nipped or clamped in the corner of the recess 26 they may at times stick to the relatively fixed part of the thread-clamp, 30 and in order to clear the latter I have provided a thread-clearer, which acts intermittingly and automatically to remove such threads. Herein the thread-clearer is made us a lent arm 35 of thin, stiff plate-metal 35 pivoted at 36 to the underside of the carrier 1 and having its free end extended beneath the head 25 in a cutaway part 37 therein, extending to the back of the recess 26, a spring 38 tending to keep the arm 35 . 40 in the position shown in Figs. 1, 4 and 5. The extremity of the arm is turned diagonally at 39 to form the clearer proper, which is practically a thin flat blade inserted between the movable member 22 of the thread-*5 clamp and the overhanging part of the head 25, the clearer being so shaped and positioned that when swung on its pivot to the right, Figs. 4, 5 and 9, it will project into the recess 26 and thereby push out or clear away any threads or pieces of thread which may be sticking to the combined clamping and cutting member 27.

55 clamp releases the threads, and to this end the bent arm 35 has an extension 40 projecting under the carrier into the path of movement of the upturned end 41 of a vibrator, shown as a lever 42 fulcrumed at 43 on the front part of the plate a' and having its rear end provided with a cam-lump 44, Fig. 1. This cam-lump is at times acted upon and vibrated by the vibrating clutch-dog 49 (a) part or member of the button-hole stitching mechanism located beneath the work posi-

blade-carrier 30 is swung around to bring | the extension 40 is engaged by the end 41 of tion, and thereby the clearer-arm 35 and clearer 39 are given a rapid oscillation on 70 the fulcrum 36. At this time the threadclamp and cutter are open, see Fig. 5, and as the clearer 39 rapidly oscillates into and out of the recess 26 any threads which may be sticking in the recess or in the notch 200 will 75 device retains its hold upon the severed be removed therefrom. When the carrier swings back to the position shown in Figs. 1 and 4 the extension 40 is withdrawn from coöperation with the vibrator 42 and the spring 38 draws the clearer 39 back out of 80 the way, so that it cannot interfere with the operation of clamping and cutting the threads.

From the foregoing description, in connection with the drawings, it will be clear 85 that not only is the thread-clamping and cutting mechanism mounted on and bodily movable with the swinging carrier and located beneath the work position, but the controller for governing the operation of said 90 mechanism is also mounted on the carrier, as is the thread-clearer, so that by the removal of the carrier-fulcrum 2 the entire apparatus forming the subject-matter of my present invention can be removed bodily. Its appli- 95 cation to a button-hole stitching inachine of the character hereinbefore referred to is, in consequence, readily effected, the addition of the retracting finger 10, carrier spring 5; and vibrator 42 being matters of small mo- 100 ment and simple as to construction and attachment. The finger 10 not only retracts the controller to locking position, whereby the various parts are set in readiness for operation, but it also acts to release or unlock 105 the controller by tripping the dog 12, so that said finger may be termed an actuator for said controller.

The thread-clamping member 22 and the cutting blade 34 are termed movable clamp- 110 ing and cutting members, respectively, inasmuch as they are movable with relation to the combined clamping and cutting member, herein shown as the edge 27 of the recess 26, as will be apparent, said combined member 115 being fixed relatively to the carrier.

Various changes or modifications in dif-I have provided means to automatically | ferent details of construction and arrangeand rapidly vibrate the clearer when the ment may be made by those skilled in the art without departing from the spirit and 120 scope of my invention as set forth in the appended claims.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a sewing-machine provided with bodily movable stitch-forming mechanism, including a throat-plate in combination, .65 machine) and when the carrier 1 is swung tion and above and independent of the 130

throat-plate, for engaging the upper and under threads immediately beneath and close to the work and clamping and cutting such threads independently of the throat-5 plate, and means actuated by engagement with the bodily movable stitch-forming mechanism to effect automatically the actuation of said clamping and cutting mechanism.

2. In a button-hole stitching machine provided with bodily movable stitch-forming mechanism including a needle and a throat-plate movable back and forth, a carrier independent of the throat-plate thread-15 clamping and cutting devices mounted on said carrier and located beneath the work position, means controlled by bodily movement of the stitch-forming mechanism to move said carrier and the clamping and cut-20 ting devices thereon beneath the work into and out of position to cooperate with the upper and under threads, and means also mounted on the carrier to actuate automatically the clamping and cutting devices when posi-25 tioned adjacent the throat-plate by movement of the carrier to operative position, to clamp and cut the threads independently of the throat-plate and beneath and immediately adjacent the work.

30 3. In a button-hole stitching machine provided with a bodily movable stitch forming mechanism, including a throat-plate, in combination, devices located beneath the work position and above the path of the 35 throat-plate to clamp and cut the upper and under threads independently of the throatplate and beneath and immediately adjacent the work, and means directly engaged and controlled by bodily movement of the stitch-40 forming mechanism to move said devices into and out of operative position and to effect the clamping and cutting movement

thereof when in operative position.

4. In a button-hole stitching machine provided with stitch-forming mechanism bodily movable with relation to the work, in combination, devices located beneath the work position to clamp and cut the upper and under threads beneath and immediately adjacent the work, means, including a swinging carrier and a controller longitudinally movable thereon, operated by movement of said stitch-forming mechanism in one direction to position said devices for 55 coöperation with the threads, and means, including a locking dog for the controller, controlled by movement of said mechanism in the opposite direction, to release the dog from engagement with the controller and 60 thereby cause said devices to clamp and cut the threads after the formation of a buttonhole is completed.

5. In a button-hole stitching machine having bodily movable stitch-forming mechan-35 ism, clamping and cutting devices located

beneath the work position, to act upon the threads beneath the work, a swinging carrier on which said devices are mounted, means actuated by bodily movement of said mechanism to swing the carrier into and out of 70 operative position, a device to lock automatically said carrier when swung out of operative position, and means the operation of which is governed by bodily movement of the stitch-forming mechanism to release 75 the carrier from the control of the locking device and to effect the operation of the thread-clamping and cutting devices.

6. In a button-hole stitching machine having bodily movable, stitch-forming mech- 80 anism, a swinging carrier movable beneath the work position and having a head provided with a combined thread-clamping and cutting member and a thread-receiving recess, movable clamping and cutting members 85 mounted on said carrier to coöperate with said combined clamping and cutting members, a controller longitudinally movable on said carrier, operating connections between the controller and the movable clamp- 90 ing and cutting members, means to retract the controller by bodily movement of the stitch-forming mechanism, to thereby open the clamping and cutting devices, and spring-actuated means to effect opposite 95 movement of the controller and thereby cause the upper and under threads to be clamped and cut beneath the work, swinging movement of the carrier being controlled by movement of the stitch-forming mech- 100 anism.

7. In a sewing machine of the class described, devices located beneath the work position to clamp and cut the upper and under threads beneath the work, means to 105. effect the operation of said devices, and a clearer to remove loose threads from the clamping device when the same is open.

8. In a sewing machine of the class described, devices located beneath the work 110. position to clamp and cut the upper and under threads beneath the work, means to intermittingly open and close said devices, a clearer to remove loose threads from the clamping device when open, and means to 115 vibrate said clearer at such time.

9. In a button-hole stitching machine provided with bodily movable stitch-forming mechanism, a carrier located beneath the work position and having a thread-receiving 120 recess and a combined thread clamping and cutting member forming one side of such recess, a movable cutting blade pivoted on the carrier, a clamping member slidably mounted on the carrier, a controller opera- 125 tively connected with said blade and clamping member, to bring them into coöperation with the combined member and retract them therefrom, a device to lock the controller when retracted to open the clamping 180

and cutting members for the reception of the threads, means to retract the controller by movement of the stitch-forming mechanism during the stitching of a button-hole and to effect unlocking of the controller after completion of the button-hole, and springs to return the unlocked controller and thereby effect clamping and cutting of the threads.

10. In a button-hole stitching machine provided with bodily movable mechanism including a throat-plate, to stitch a button-hole and move the work forward after completion of the button-hole, devices located beneath the work position to clamp and cut the upper and under threads independently of the throat-plate and beneath and imme-

diately adjacent the work when moved forward, means to operate said devices automatically, controlled by bodily movement of said mechanism, and means directly engaged and actuated by said mechanism to move the clamping and cutting devices bodily away from operative position while still holding the under threads.

11. In a sewing-machine provided with bodily reciprocating stitch-forming mechanism, in combination, mechanism for engaging the upper and under threads beneath and close to the work, and clamping and cutting such threads, means mounted independently of the stitch-forming mechanism, to effect automatically the actuation of said

clamping and cutting mechanism, said means including a longitudinally movable 35 controller moved in one direction by engagement with the stitch-forming mechanism, a spring to move it oppositely, a camplate movable with the controller, and operating connections between said camplate 40 and the clamping and cutting members.

12. In a sewing-machine provided with bodily movable stitch-forming mechanism, in combination, a swinging carrier, threadclamping and cutting devices mounted 45 thereon and located beneath the work position and comprising a movable clamping member, a movable blade, and a cooperating member common to both and fixed relatively to the carrier, to engage the upper 50 and under threads beneath and immediately adjacent the work and clamp and cut such threads, and means movable with and also relatively to the carrier and governed by bodily movement of the stitch-forming 55 mechanism to effect opening and closing movement of the movable clamping member and the blade.

In testimony whereof, I have signed my name to this specification, in the presence 60 of two subscribing witnesses.

JOHN KIEWICZ.

Witnesses:

THOMAS J. CARTY, WM. J. McLaughlin.

It is hereby certified that in Letters Patent No. 952,010, granted March 15, 1910, upon the application of John Kiewicz, of Hyde Park, Massachusetts, for an improvement in "Thread Cutting and Clamping Mechanism for Sewing-Machines," an error appears in the printed specification requiring correction as follows: Page 5, line 14, after the compound word "throat-plate" a comma should be inserted; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 5th day of April, A. D., 1910.

[SEAL.]

C. C. BILLINGS,

Acting Commissioner of Patents.

Sorrection in Letters Patent No. 952,01

and cutting members for the reception of the threads, means to retract the controller by movement of the stitch-forming mechanism during the stitching of a button-hole and to effect unlocking of the controller after completion of the button-hole, and springs to return the unlocked controller and thereby effect clamping and cutting of the threads.

10. In a button-hole stitching machine provided with bodily movable mechanism including a throat-plate, to stitch a button-hole and move the work forward after completion of the button-hole, devices located beneath the work position to clamp and cut the upper and under threads independently of the throat-plate and beneath and imme-

diately adjacent the work when moved forward, means to operate said devices automatically, controlled by bodily movement of said mechanism, and means directly engaged and actuated by said mechanism to move the clamping and cutting devices bodily away from operative position while still holding the under threads.

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