A. ROSENTHAL & M. PETROCCHI.

SPECIAL WORK SEWING MACHINE.

APPLICATION FILED OCT. 27, 1913.

1,199,822.

Patented Oct. 3, 1916.

22 SHEETS—SHEET 1.

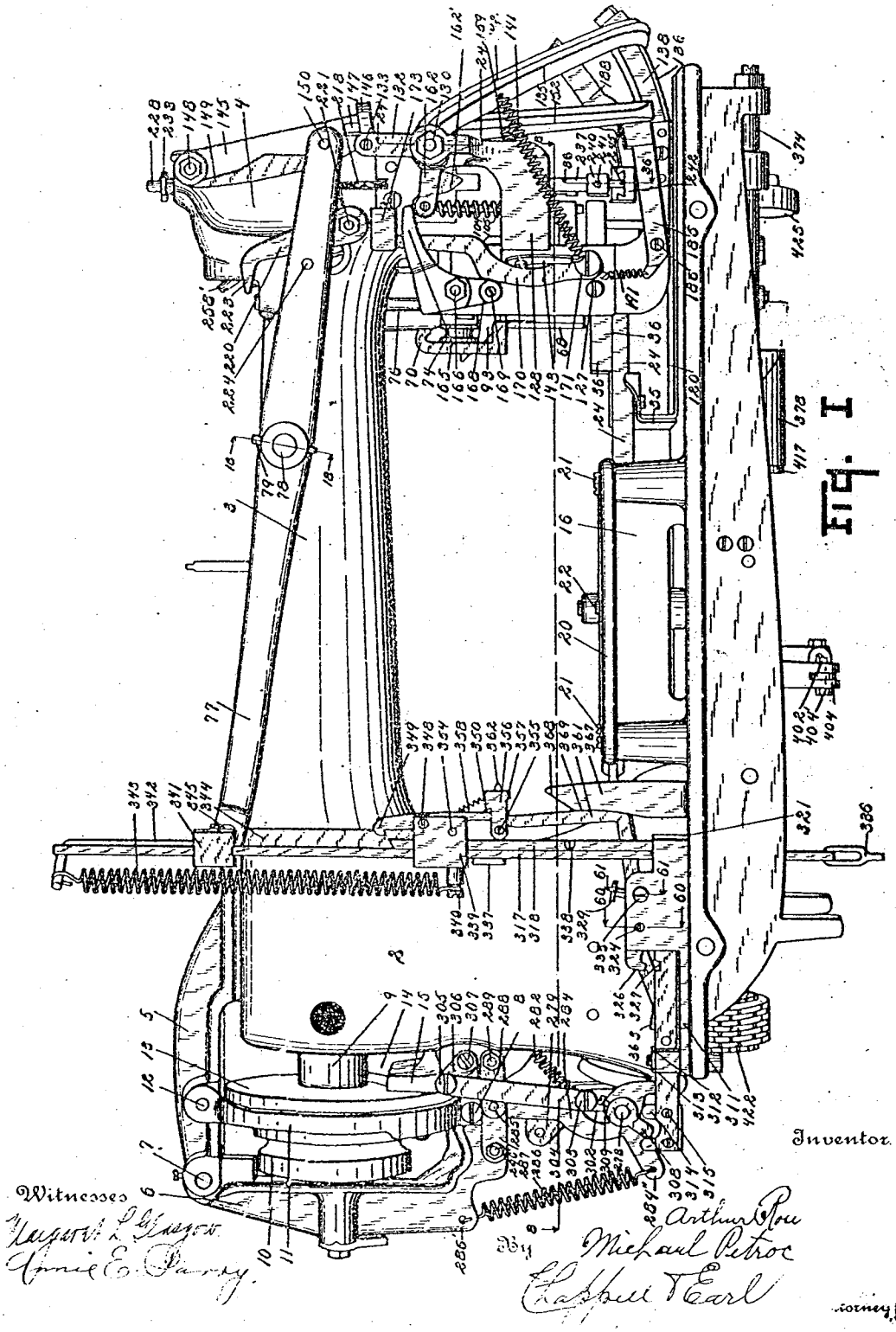


Fig. 1

Witnesses

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22 SHEETS-SHEET 2.

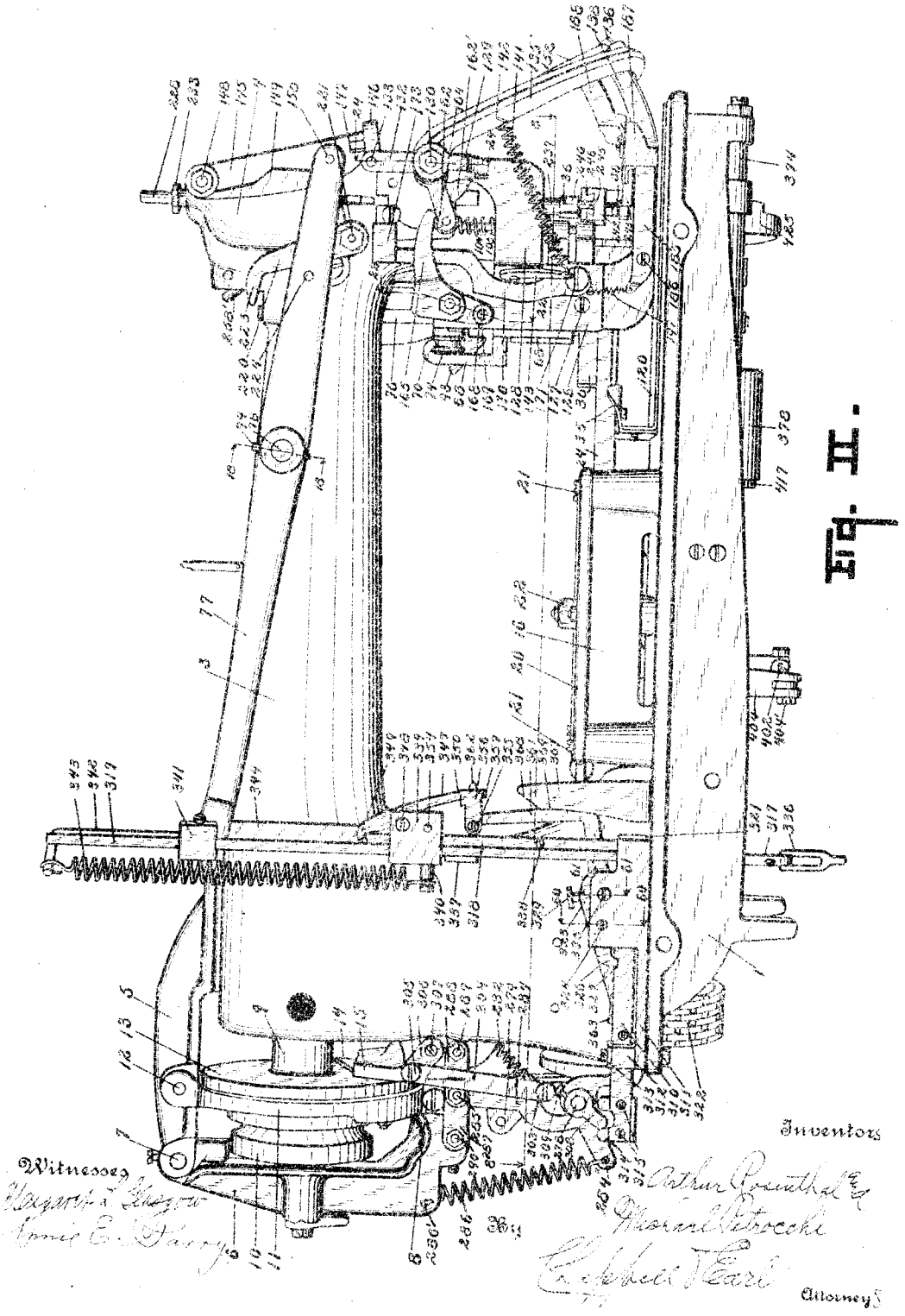


Fig. II.

Witnesses:

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22 SHEETS—SHEET 3.

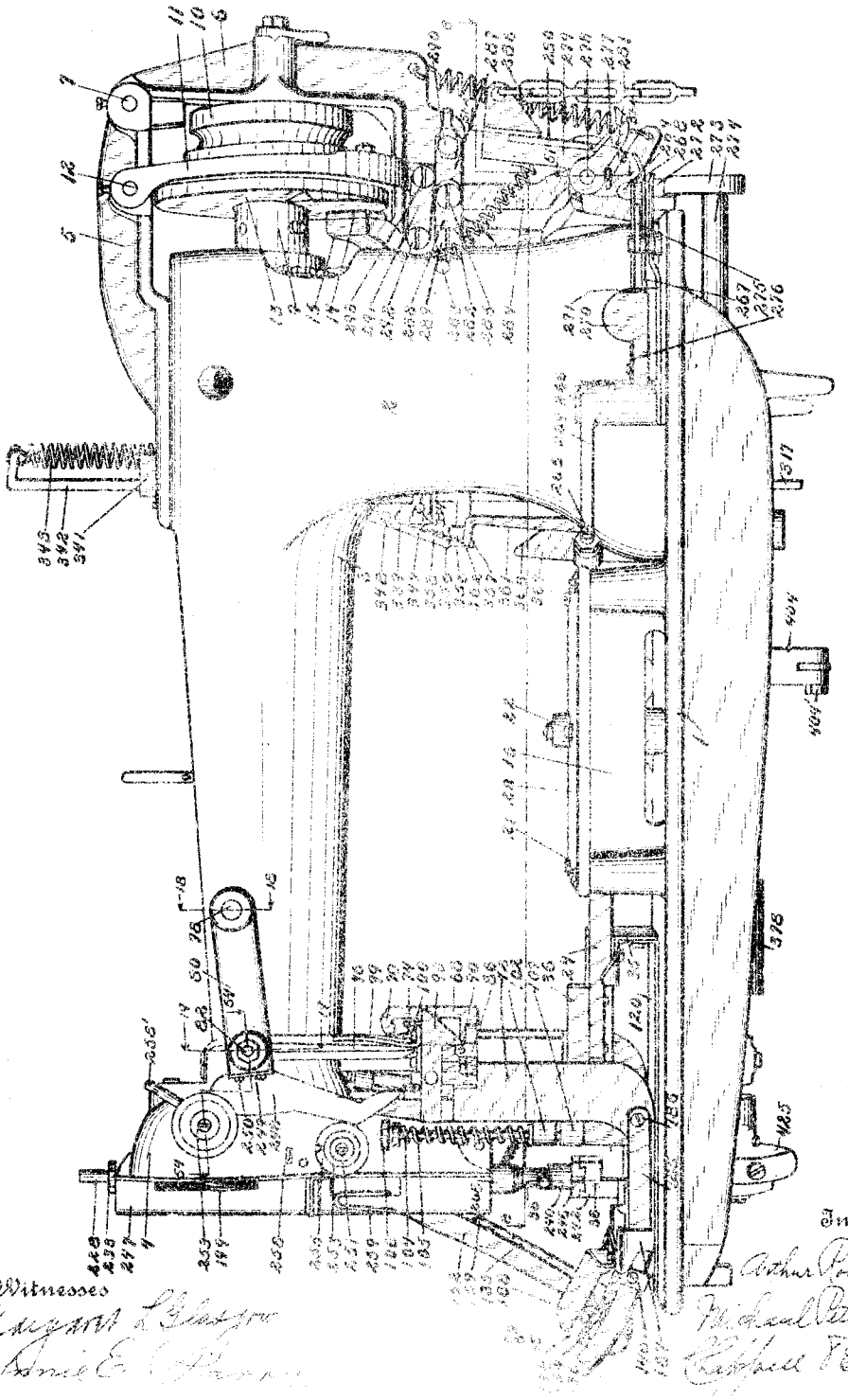


Fig. III.

Witnesses

Inventor

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22 SHEETS—SHEET 4.

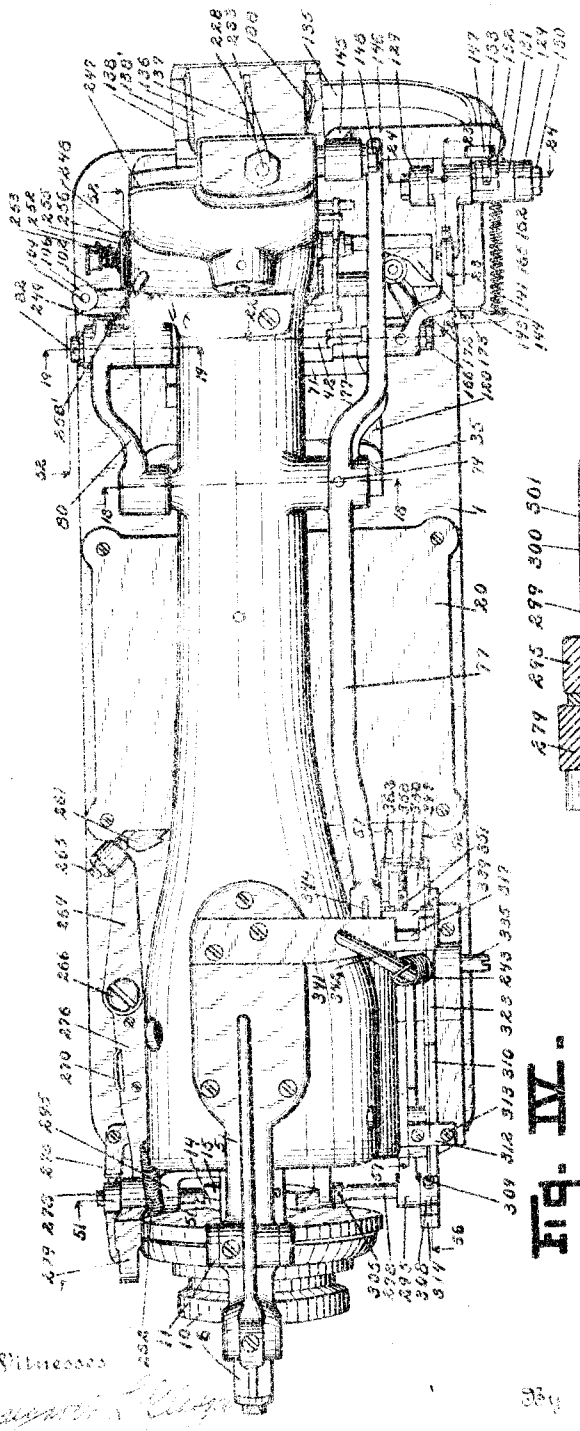


Fig. IV.

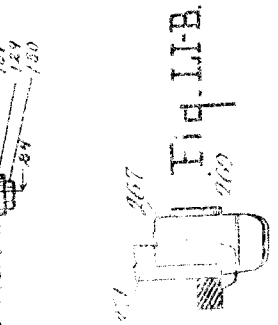


Fig. LI-B.

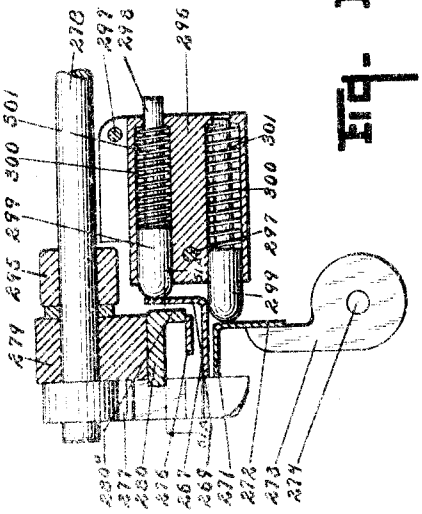


Fig. LI.

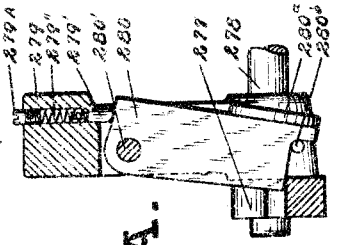


Fig. LI-A.

Witnesses

Inventors

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Michael Petrocchi

By

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22 SHEETS—SHEET 5.

Fig. LII.

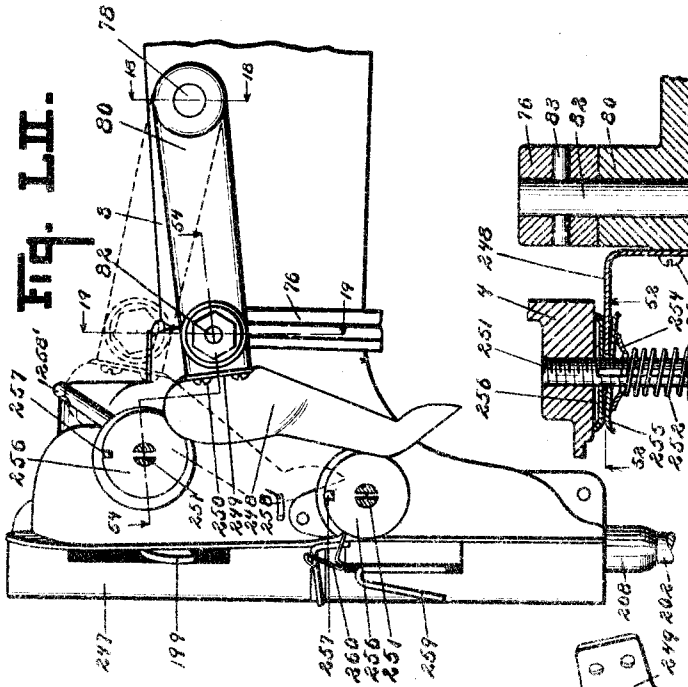


Fig. LIV.

Fig. LIII.

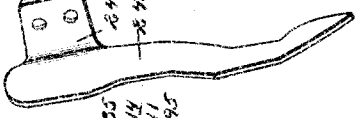
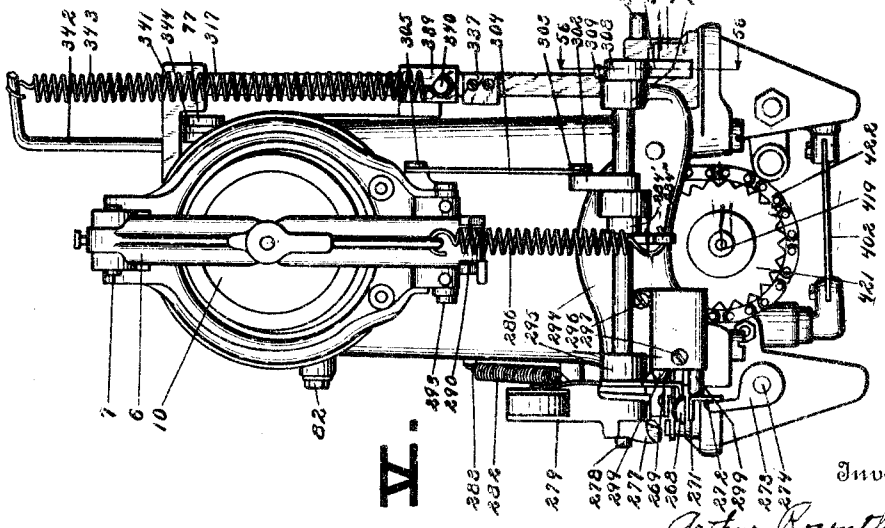


Fig. V.



Witnesses

Margaret L. Glasgow

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Patented Oct. 3, 1916

22 SHEETS—SHEET 6.

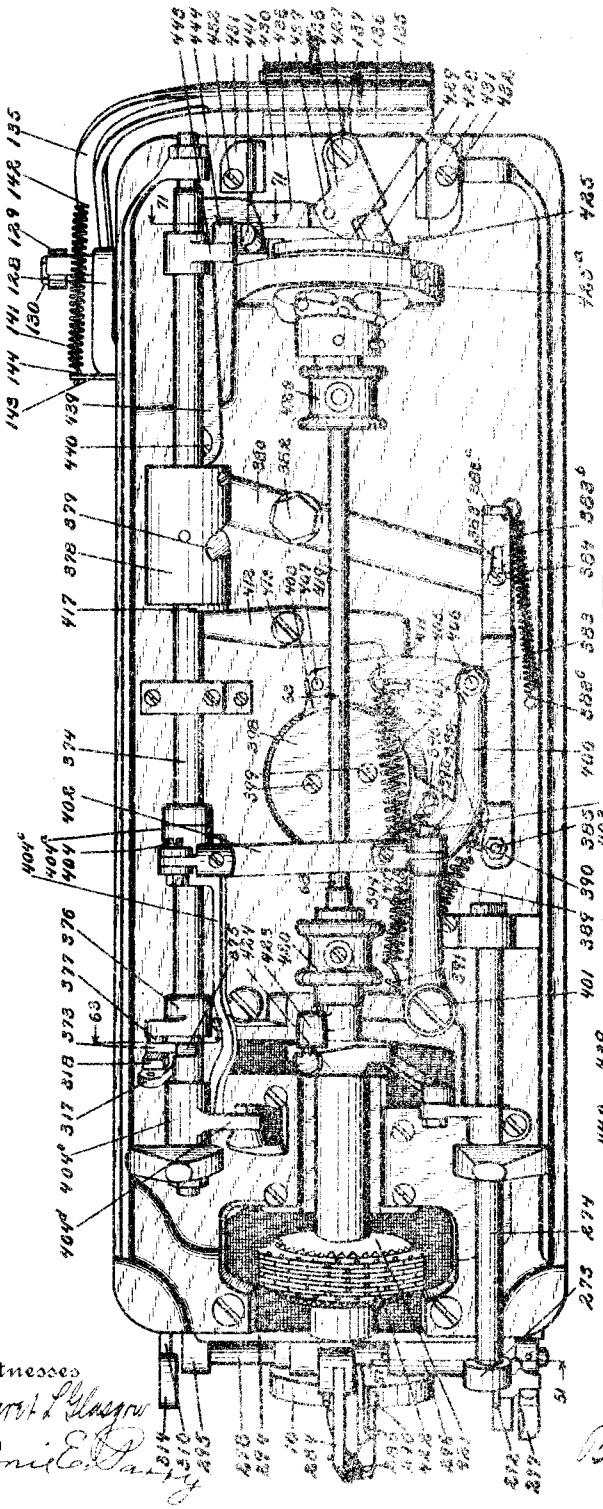


Fig. XI.

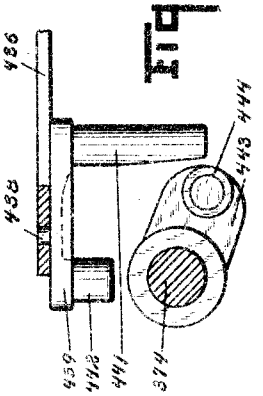


Fig. LXI.

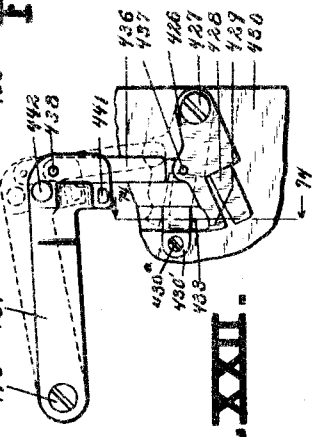


Fig. LXII.

Witnesses

Margaret L. Glasgow

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22 SHEETS—SHEET 7.

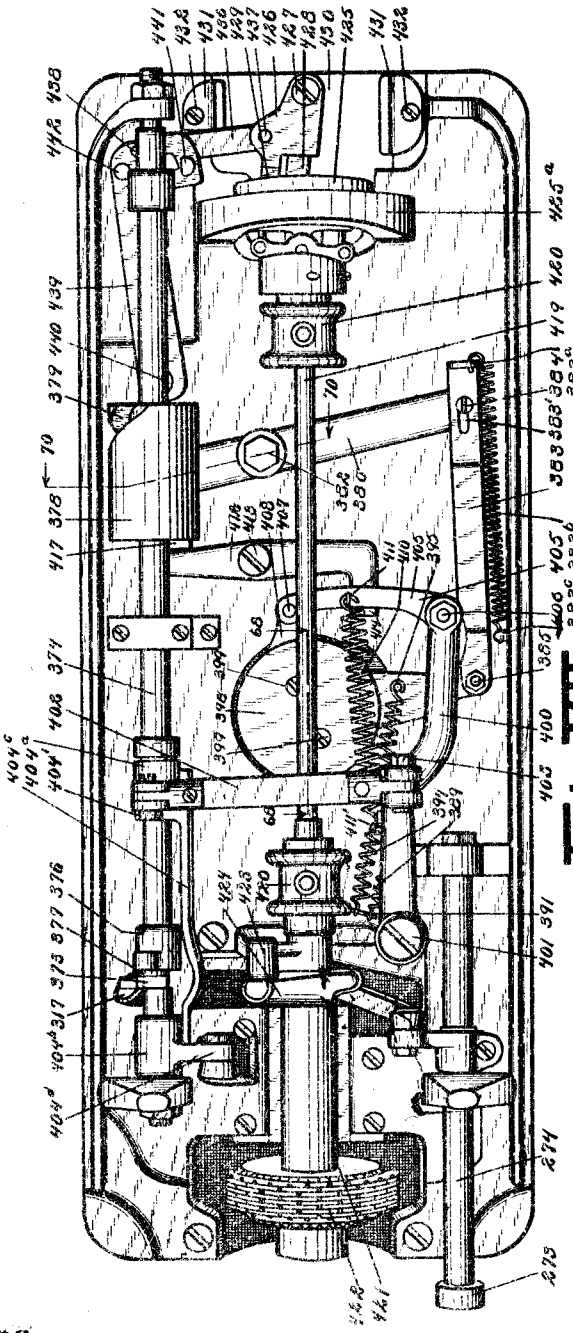


Fig. VII.



Fig. LXXIV.

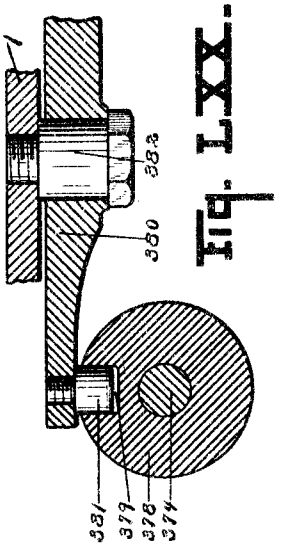


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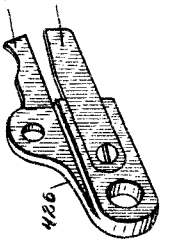


Fig. LXXIII.

Witnesses

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22 SHEETS—SHEET 8.

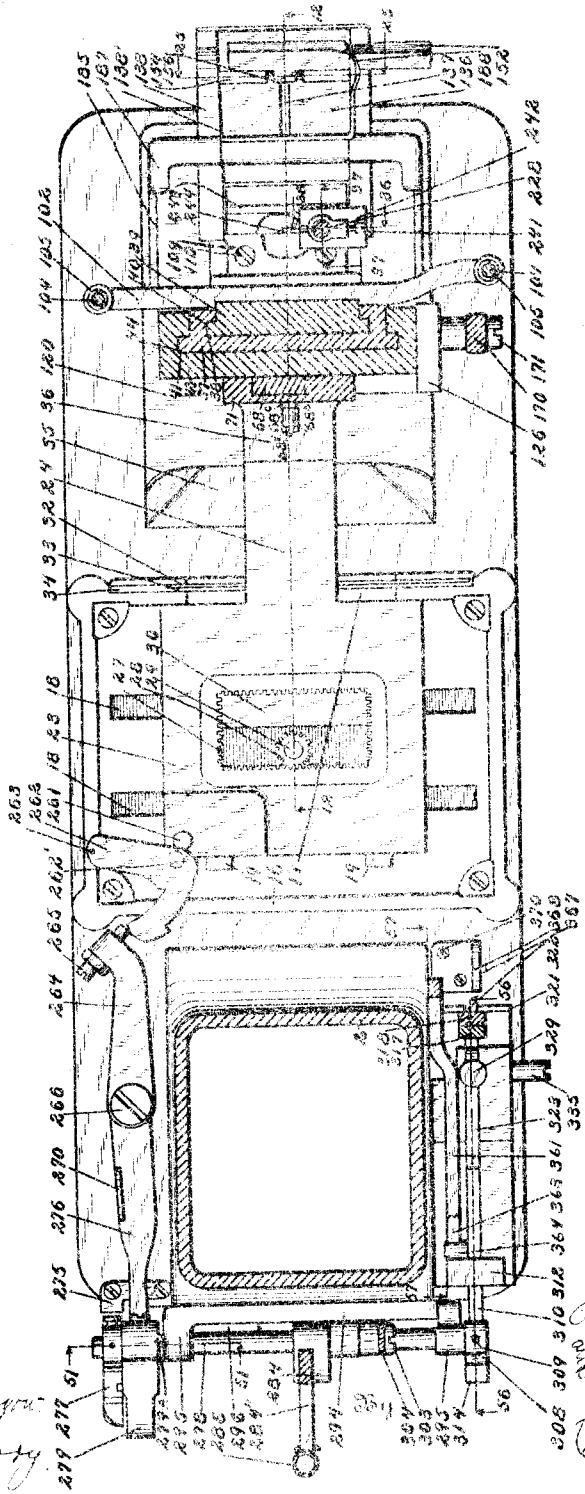


Fig. VIII.

Witnesses

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22 SHEETS—SHEET 9.

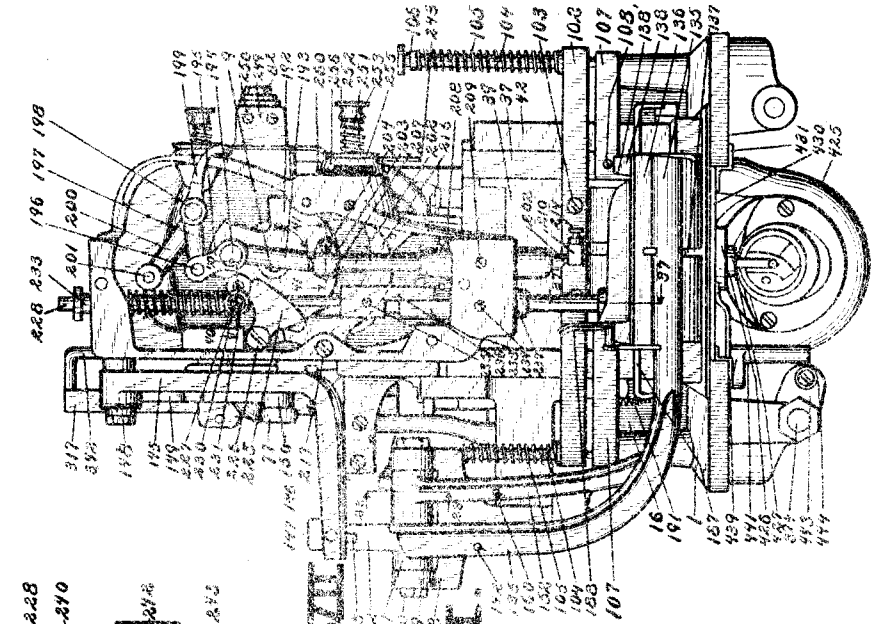


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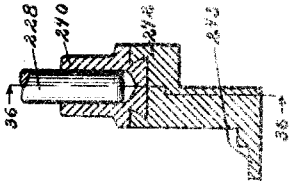


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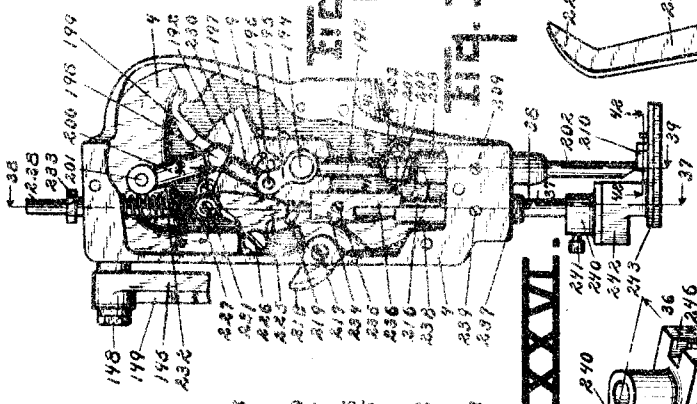


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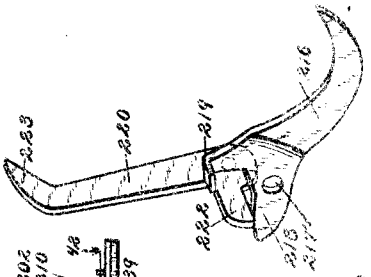


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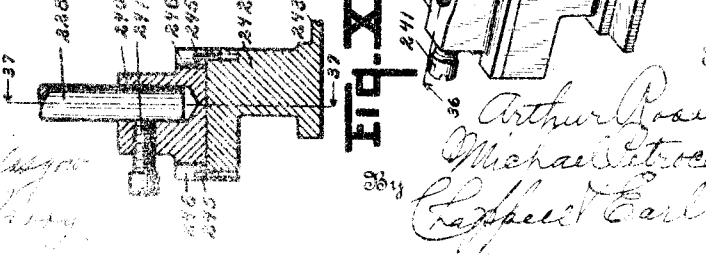


Fig. XXXIV.

Witnesses

Margaret L. Glasgow

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22 SHEETS—SHEET 10.

Fig. XX.

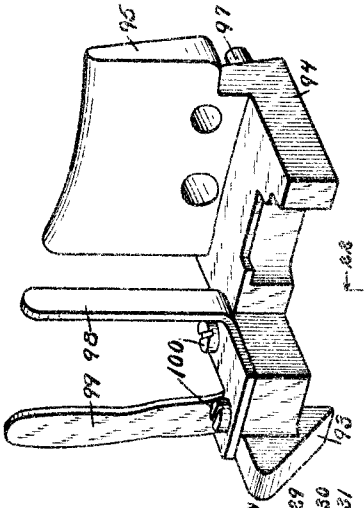


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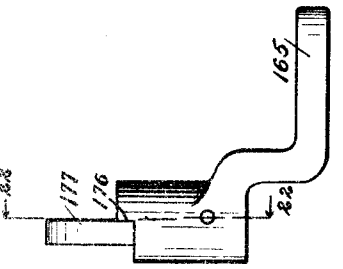
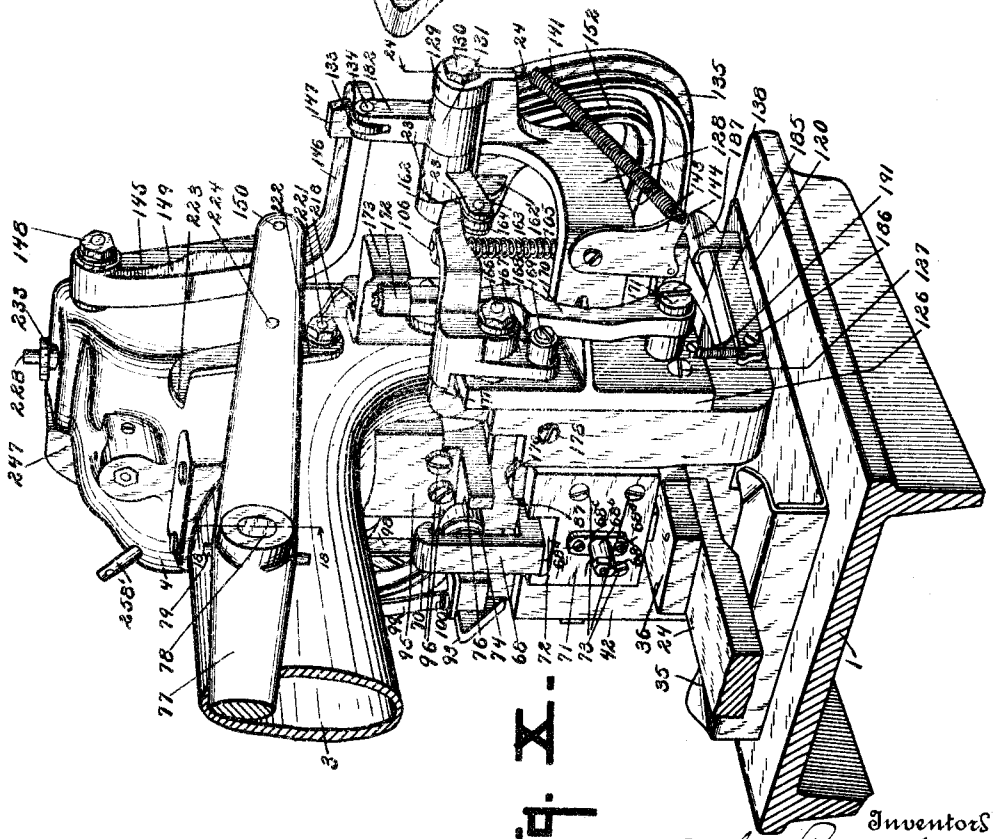


Fig. X.



Witnesses

Margaret P. Glasgow

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SPECIAL WORK SEWING MACHINE.

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Patented Oct. 3, 1916.

22 SHEETS—SHEET 11.

Fig. XIX.

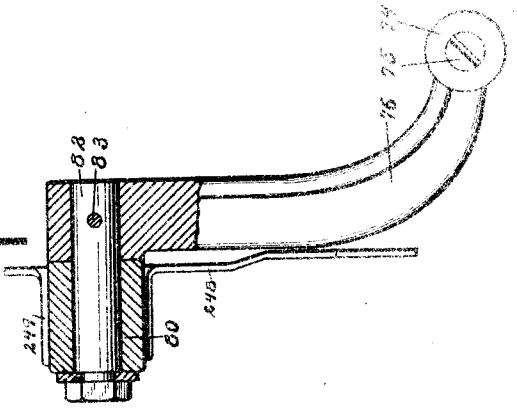


Fig. XVIII.

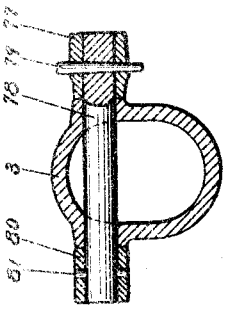
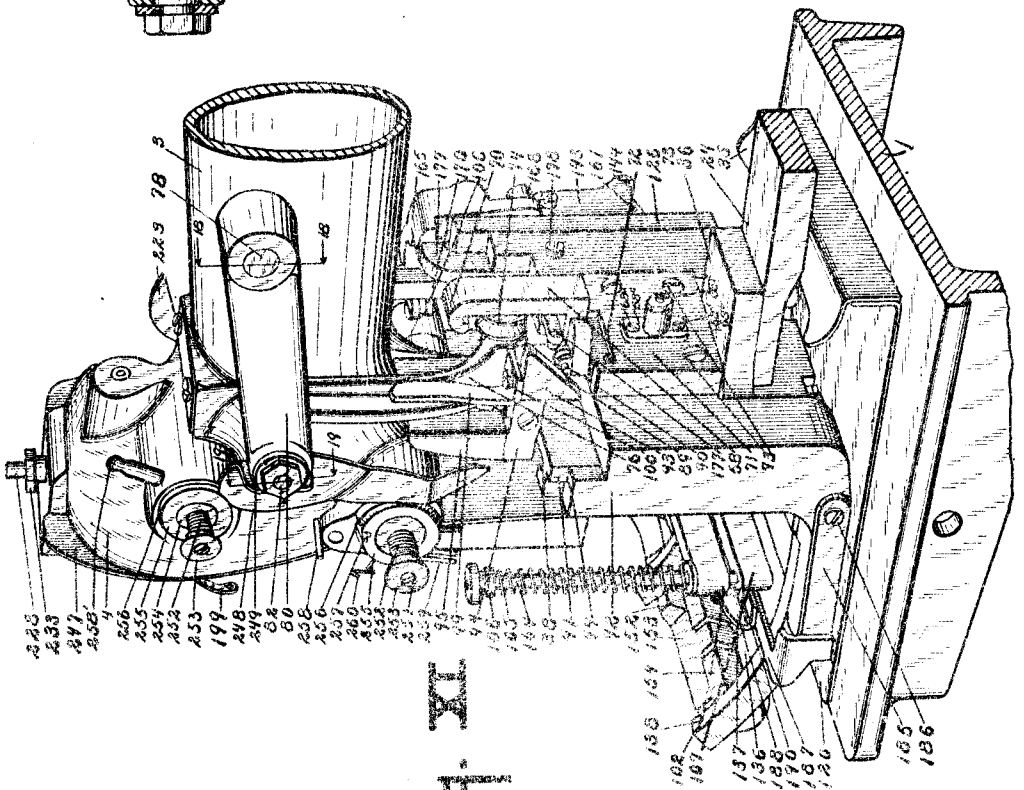


Fig. XI.



Witnesses

Margaret L. Glasgow

Annie E. Patty

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Michael Petrocchi

By Raphael Pearl

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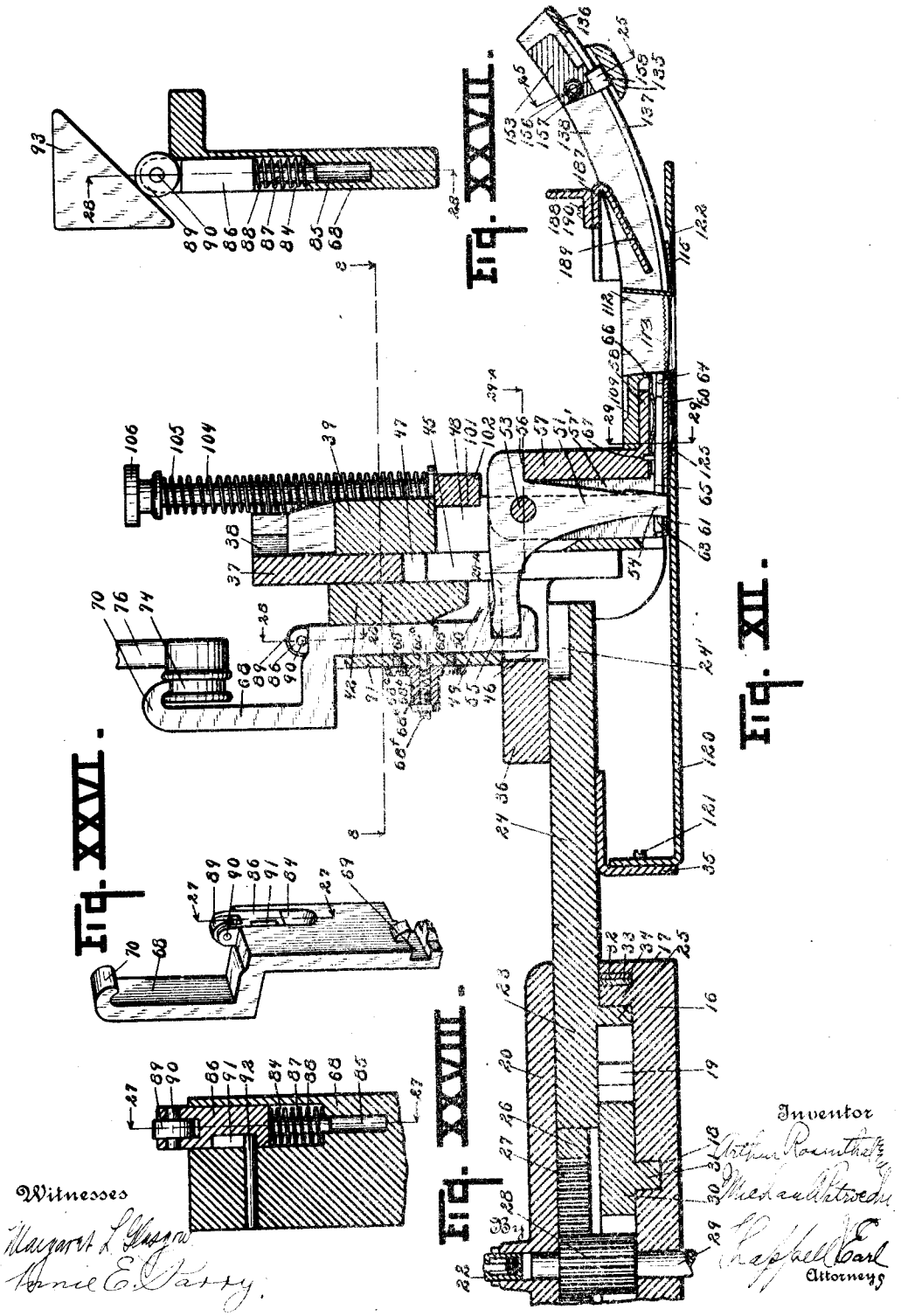
SPECIAL WORK SEWING MACHINE.

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Patented Oct. 3, 1916.

22 SHEETS—SHEET 12.



Witnesses

Margaret L. Glassow

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1,199,822.

Patented Oct. 3, 1916.

22 SHEETS—SHEET 13.

Fig. XXII.

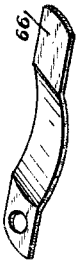


Fig. XXI.

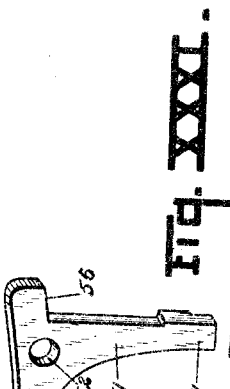


Fig. XX.

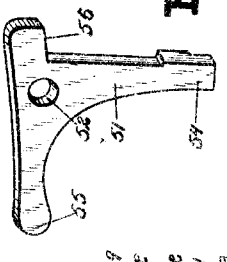


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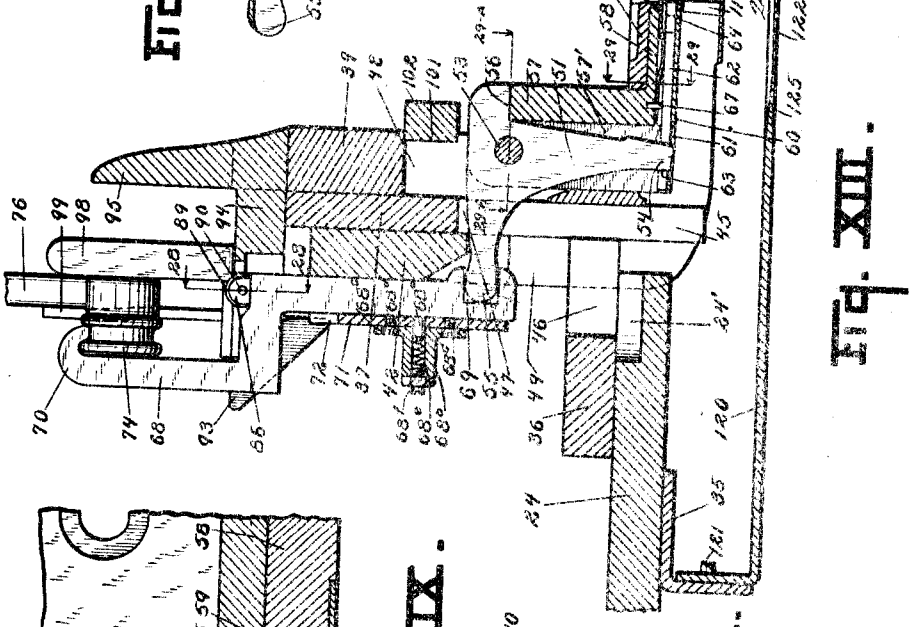


Fig. XXX.

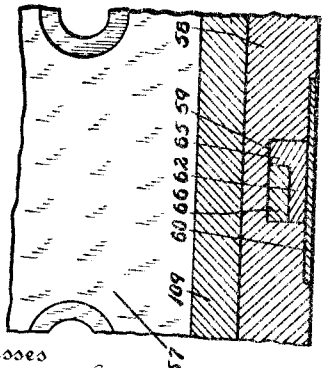
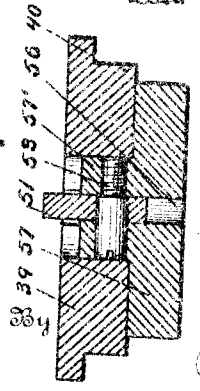


Fig. XIX-A.



Witnesses

Margaret L. Glasgow

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Michael Petrocchi

by Craighill & Earl

Attorneys

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SPECIAL WORK SEWING MACHINE.

APPLICATION FILED OCT. 27, 1913.

1,199,822.

Patented Oct. 3, 1916.

22 SHEETS—SHEET 14.

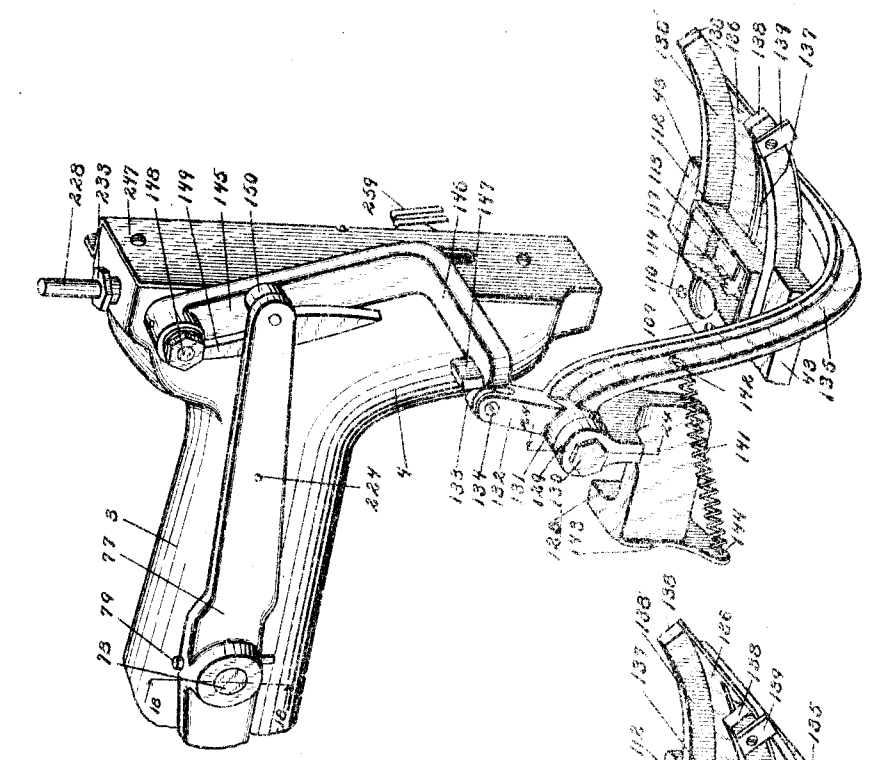


Fig. XV.

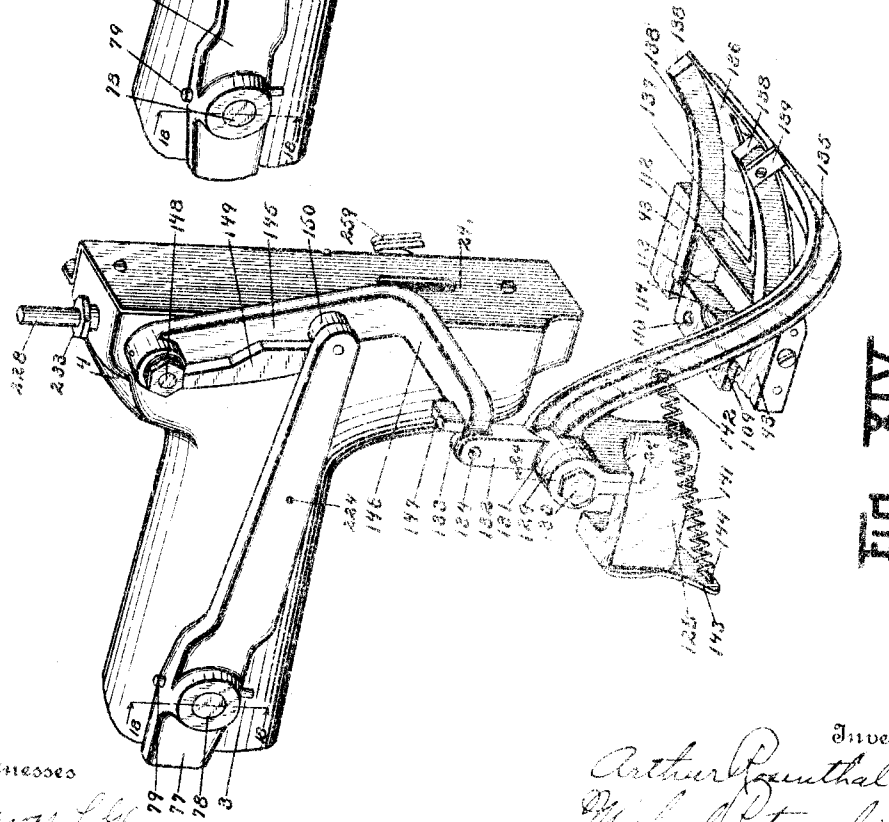


Fig. XV.

Witnesses

Inventors

By

Attorneys

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SPECIAL WORK SEWING MACHINE.

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1,199,822.

Patented Oct. 3, 1916.

22 SHEETS—SHEET 15.

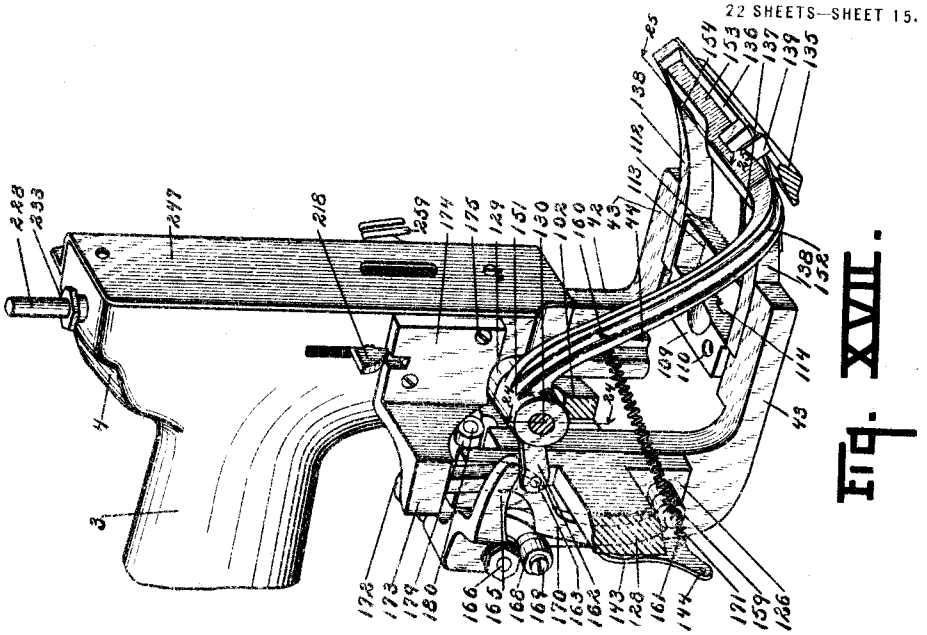


Fig. XVII.

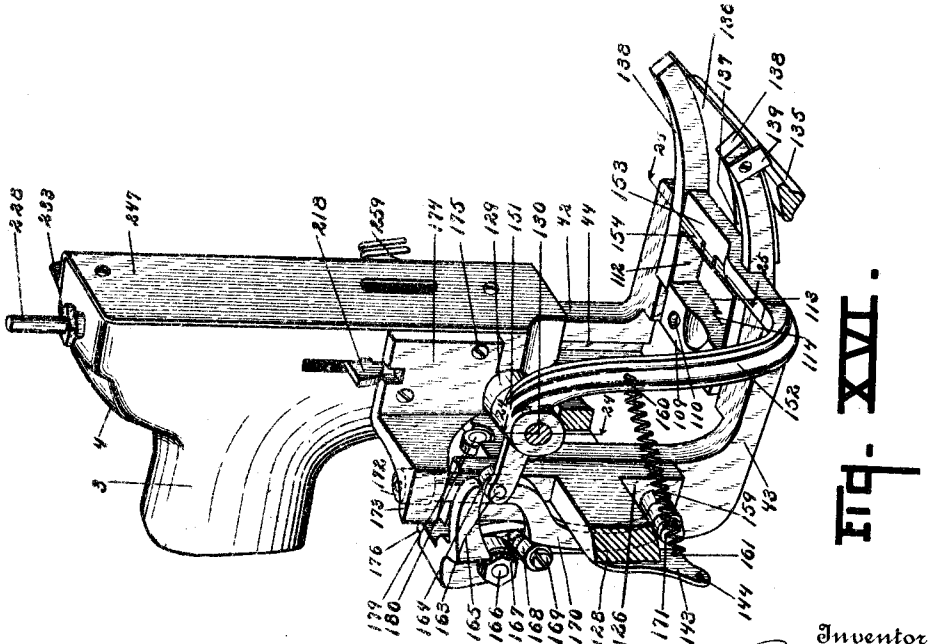


Fig. XVI.

Witnesses

Margaret L. Glasgow

Marie E. Darcy

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By Michael Petrocchi

Chapman & Ward

Attorneys

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SPECIAL WORK SEWING MACHINE.

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Patented Oct. 3, 1916.

22 SHEETS—SHEET 16.

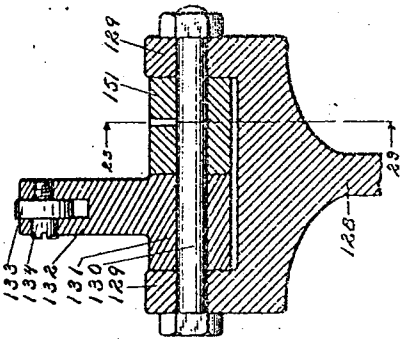


Fig. XXIV.

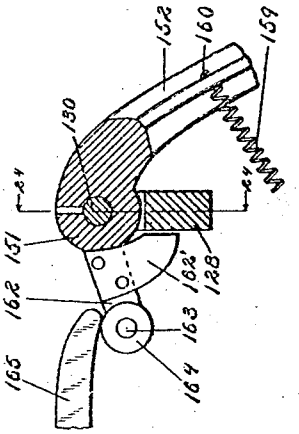


Fig. XXIII.

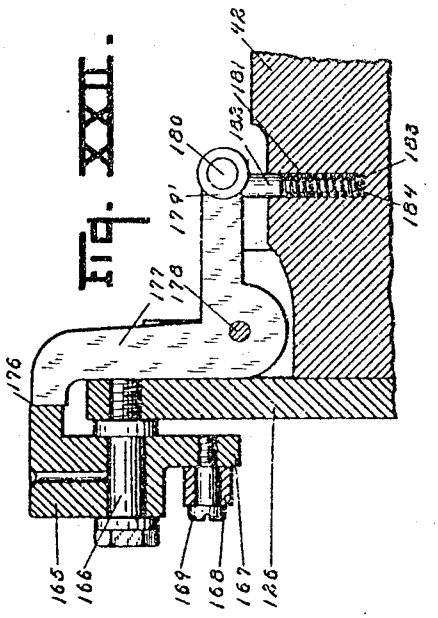


Fig. XXII.

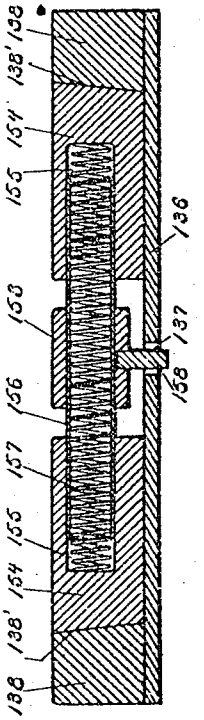


Fig. XXV.

Witnesses:
Margaret L. Glasgow
Annie E. Harry

Inventors:
Arthur Rosenthal
Michael Petrocchi
By Chapfield & Earl
Attorneys

A. ROSENTHAL & M. PETROCCHI.

SPECIAL WORK SEWING MACHINE.

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22 SHEETS—SHEET 17.

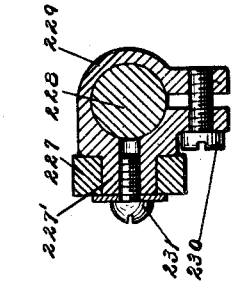


Fig. XL.

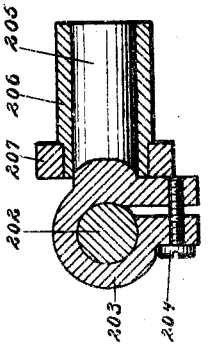


Fig. XLI.

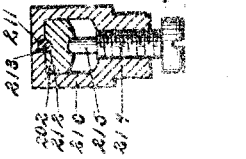


Fig. XLII.

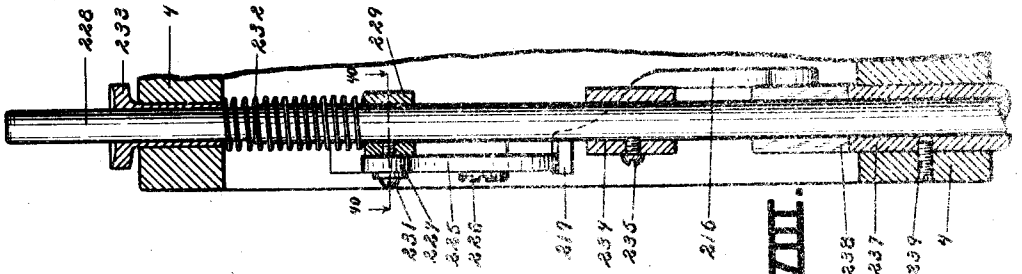


Fig. XXVIII.

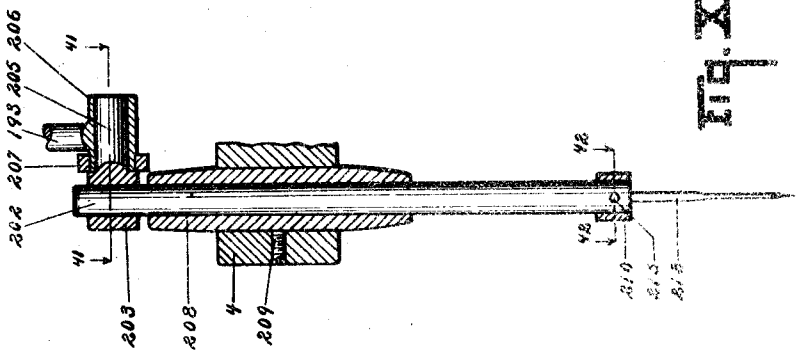


Fig. XXIX.

Witnesses

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SPECIAL WORK SEWING MACHINE.

APPLICATION FILED OCT. 27, 1913.

1,199,822.

Patented Oct. 3, 1916.

22 SHEETS-SHEET 18.

Fig. XLV.

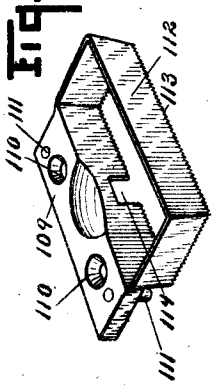


Fig. XLIII.

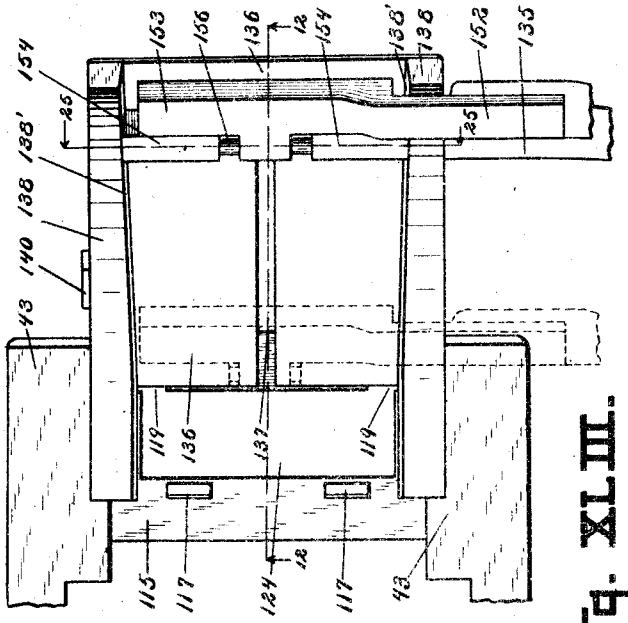


Fig. XLIV.

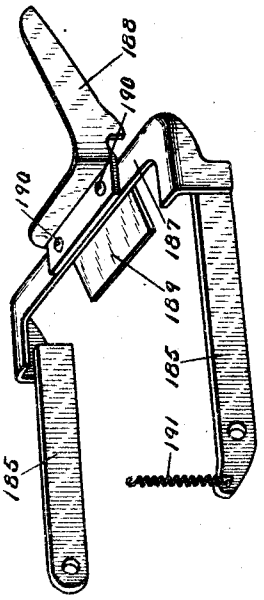


Fig. XLVII.

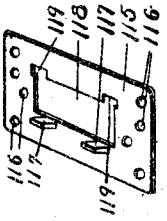
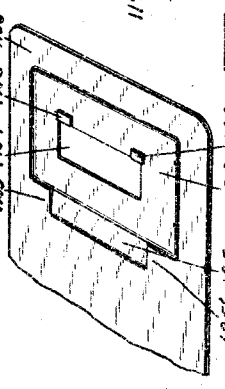


Fig. XLVI.



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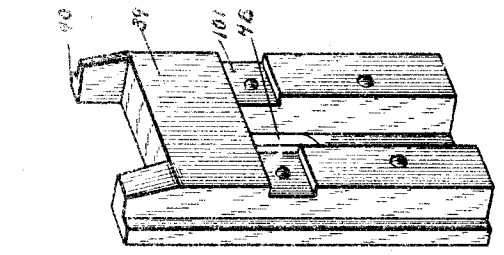


Fig. L.

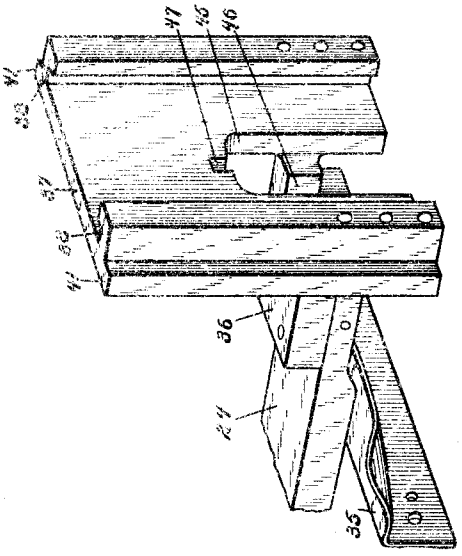


Fig. XLIX.

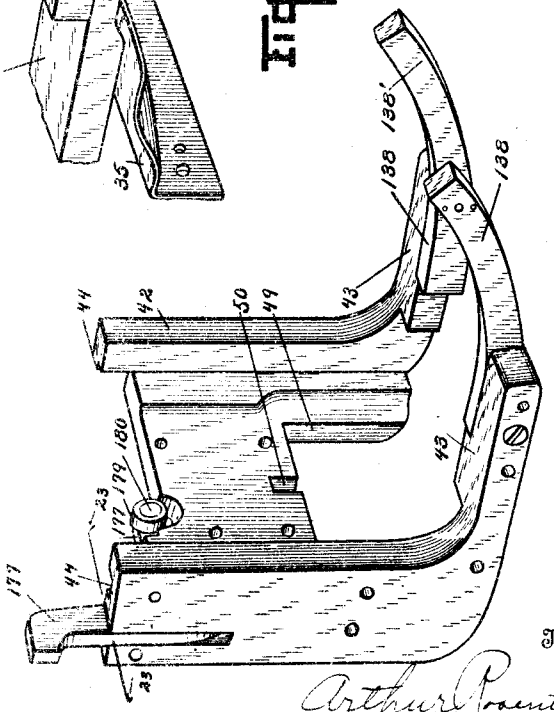


Fig. XLVIII.

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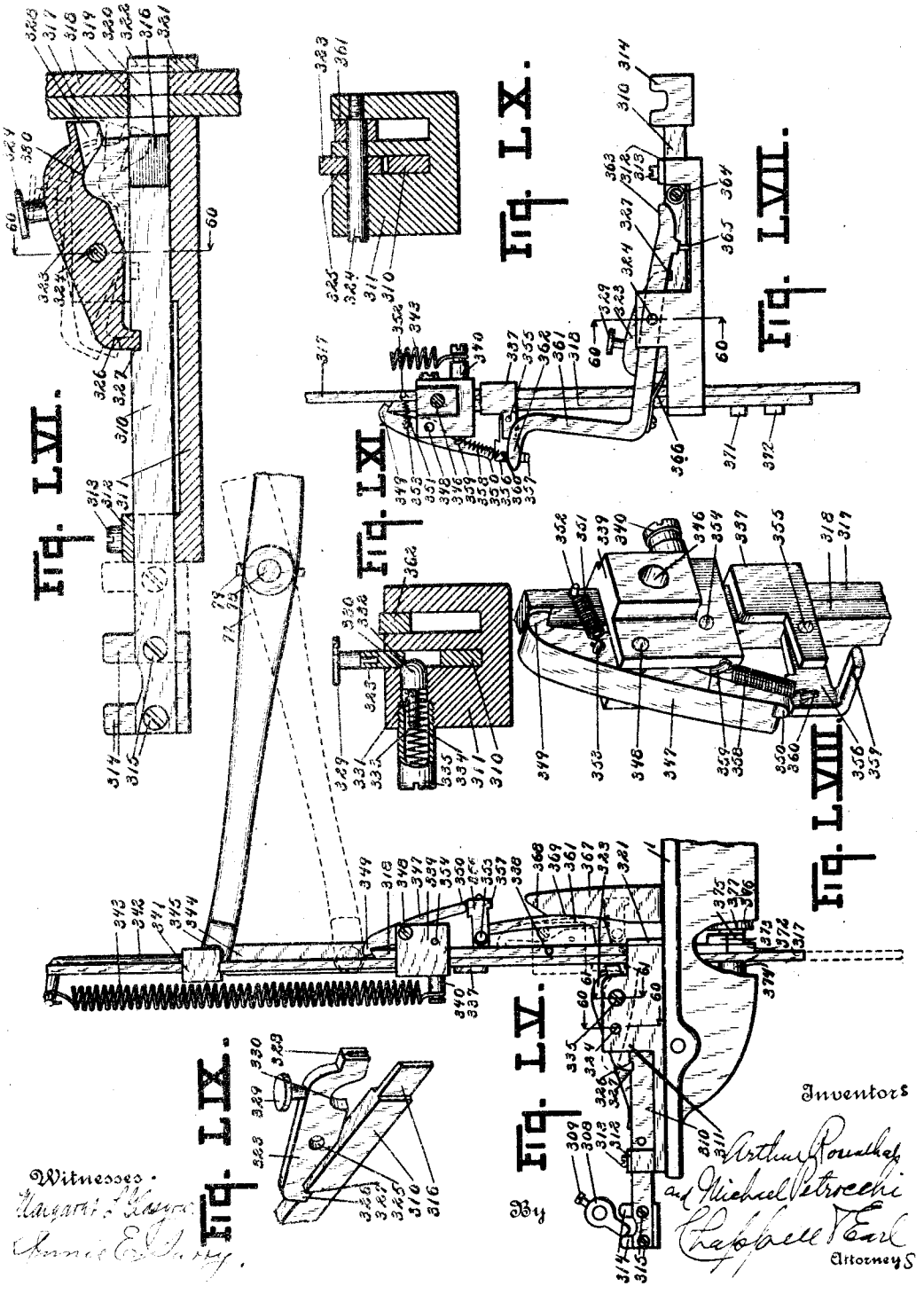


Fig. LVI.

Fig. LX.

Fig. LXI.

Fig. LVII.

Fig. LVIII.

Fig. LV.

Fig. LIX.

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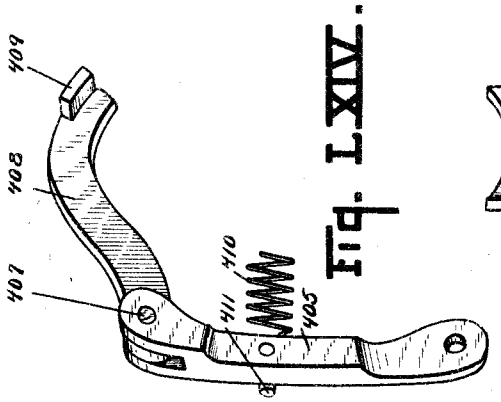


Fig. LXIV.

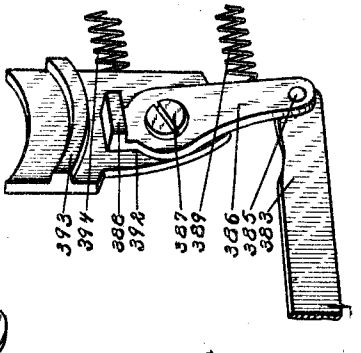


Fig. LXV.

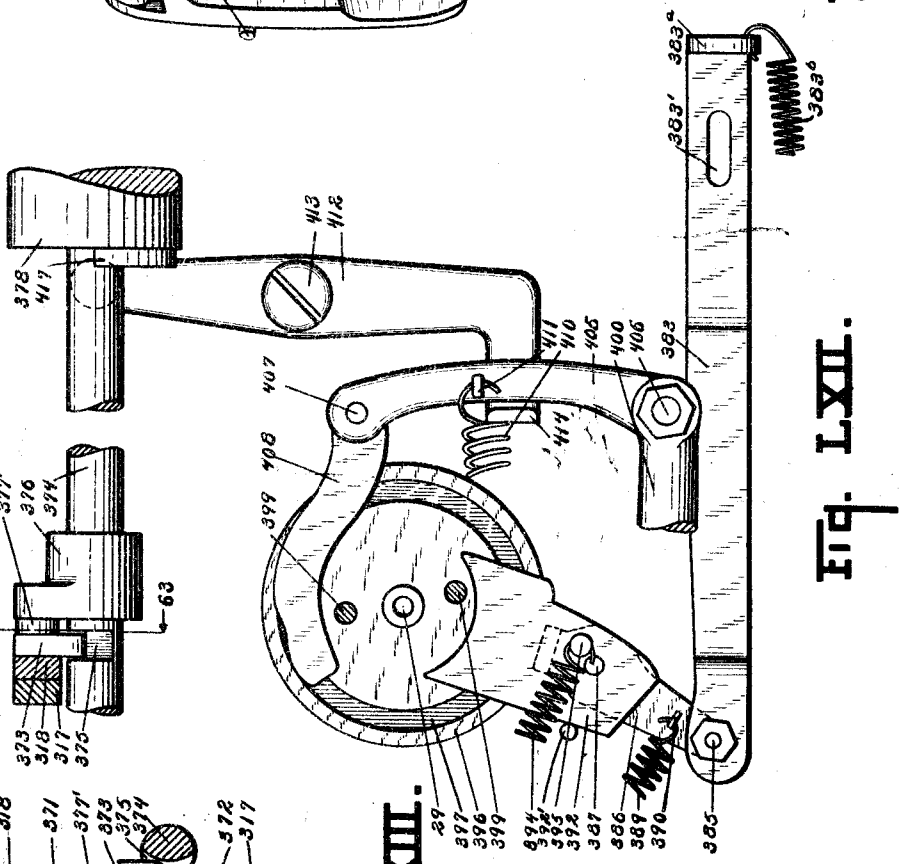


Fig. LXII.

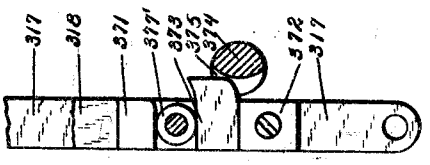


Fig. LXIII.

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SPECIAL WORK SEWING MACHINE.

APPLICATION FILED OCT. 27, 1913.

1,199,822.

Patented Oct. 3, 1916.

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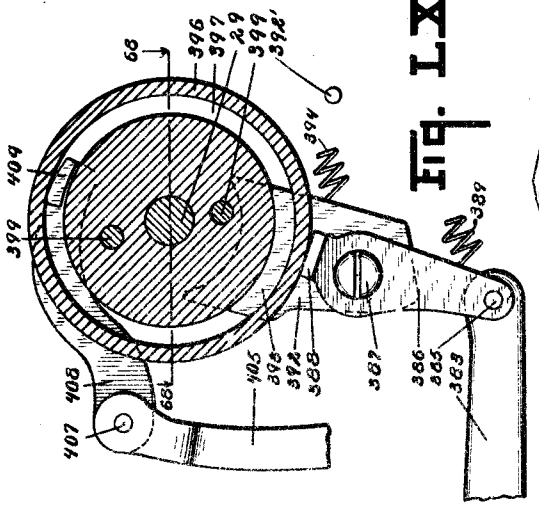


Fig. LXVII.

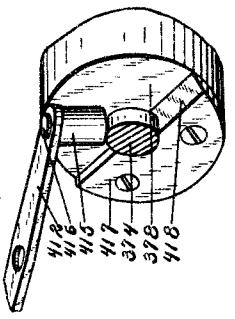


Fig. LXIX.

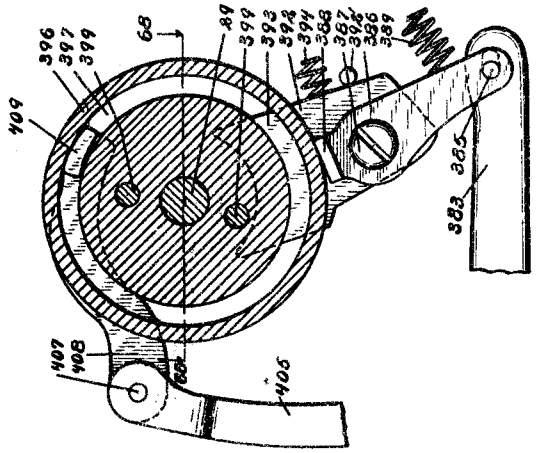


Fig. LXVI.

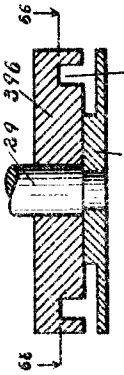


Fig. LXVIII.

Witnesses

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UNITED STATES PATENT OFFICE.

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SPECIAL-WORK SEWING-MACHINE.

1,199,822. Specification of Letters Patent. Patented Oct. 3, 1916.

Application filed October 27, 1913. Serial No. 797,661.

To all whom it may concern:

Be it known that we, ARTHUR ROSENTHAL and MICHAEL PETROCCHI, citizens of the United States, residing at Grand Rapids, Michigan, United States of America, have invented certain new and useful Improvements in Special-Work Sewing-Machines, of which the following is a specification.

This invention relates to improvements in special sewing machines for stitching labels and for similar work.

The objects of the invention are: First, to provide a generally effective organized structure that will, after a label has been dropped in the feed slide and a garment or article put in place for the attachment of the label thereto, automatically place, clamp, completely stitch and automatically stop the machine at the end with the needle in elevated position ready for the series of movements for attaching another label, of the machine. Second, to provide an improved automatic means for feeding the labels into the holder. Third, to provide improved automatic means for clamping the label when in the holder, by its edges so that the same may be stitched by a continuous row of stitching. Fourth, to provide improved automatic means to back shift the label holder after completing the attaching of one label so that the line of stitches will overlap at the meeting end. Fifth, to provide improved means for automatically releasing and discharging the completed work. Sixth, to provide an improved interlock means to control the starting and stopping and compel complete accurate movement of the machine. Seventh, to provide improved safety devices. Eighth, to provide improved automatic means for cutting off the threads both above and below, and holding the upper thread in a proper position for the next operation of the machine.

Further objects, and objects relating to details and economies of construction and operation will definitely appear from the detailed description to follow.

We accomplish the objects of our invention by the mechanism described and illustrated in the following specification.

The invention is clearly defined and pointed out in the claims.

A machine constituting a preferred embodiment of our invention is fully illustrated in the accompanying drawing forming a part of this specification, in which:

Figure I is a side elevation of the machine with the parts in the position and relation which they assume when the machine is ready to start the operation of stitching a label. Fig. II is a side elevation view of the machine with the parts in the position which they assume at the completion of the label-stitching operation, and in the relation they assume when the label holder is about to be back-set to insure the overlapping of the ends of the stitching. Fig. III is an elevation view from the right hand of the machine when in the position assumed at the completion of the stitching of a label, the same as in Fig. II. Fig. IV is a plan view of the machine. Fig. V is a rear elevation view of the machine showing the starting and stopping mechanism and the driving mechanism in this behalf. Fig. VI is an inverted plan view of the machine removed from its support with the parts in the position for starting the stitching of a label. Fig. VII is an inverted plan view of the machine after the completion of the stitching operation and the ratchet set back for the overlapping of the ends of the stitching. Fig. VIII is a sectional plan view taken on a line corresponding to line 8—8 of Figs. I, II, III, and XII. Fig. IX is a front elevation view of the machine with the front cover plate removed showing details of the mechanism. Fig. X is a detail angular perspective view of the sewing machine head taken from the left-hand side of the machine from a rearward position. Fig. XI is a detail angular perspective view of the head from the right-hand side from a rearward position. Fig. XII is an enlarged detail vertical longitudinal sectional elevation taken on a line corresponding to line 12—12 of Figs. VIII and LIII with the foot depressed in position to hold the work. Fig. XIII is a detail sectional view on the same line 12—12 of Figs. VIII and LIII showing the presser foot in raised position. Fig. XIV is a detail perspective of the head showing the feed slide and connected parts, other parts being largely omitted. Fig. XV is a similar detail perspective view showing the feed slide lowered to deliver the label. Fig. XVI is a detail perspective view of the head showing the follower and connections with the fol-

lower in the lower-most position. Fig. XVII is a similar detail perspective view showing the follower in the elevated position. Fig. XVIII is a detail sectionel view showing the operative rock shaft for elevating the presser foot and the like and its connections, taken on a line corresponding to line 18—18 of Figs. I, II, III, IV, X, XI, XIV, XV, and LII. Fig. XIX is an enlarged detail view, partly in section, on line 19—19 of Figs. III, IV, XI, and LIII, showing the connection to the rock shaft arm for elevating the presser foot and other associated parts. Fig. XX is an enlarged detail perspective view of the follower release block, upper knife cam, and connected devices. Fig. XXI is a plan view of the lock lever 165 for the follower and the latch 177 therefor. Fig. XXII is an enlarged detail sectional view on a line corresponding to line 22—22 of Figs. II, IV, and XXI, showing details of the said follower lock and latch. Fig. XXIII is a detail sectional view on line 23—23 of Figs. IV, IX, X, XXIV, and XLVIII, showing details of the said lock lever and its relation to the follower arm. Fig. XXIV is an enlarged detail sectional view on line 24—24 of Figs. I, II, X, XIV, XV, XVI, XVII, and XXIII, showing details of the pivoted parts and their arrangement for locking said follower mechanism. Fig. XXV is an enlarged detail sectional view on line 25—25 of Figs. VIII, XII, XIII, XVI, XVII, and XLIII, showing details of the yielding follower block in the feed slide. Fig. XXVI is an enlarged detail perspective view of the catch and its connection for controlling the upper thread cut-off knife and raising the foot. Fig. XXVII is an enlarged detail sectional view on a line corresponding to line 27—27 of Figs. XXVI and XXVIII, showing details of cam and yielding cam roller for controlling the movements of the upper thread cutting knife. Fig. XXVIII is an enlarged detail sectional view on line 28—28 of Figs. XII, XIII, and XXVII, showing details of the said yielding roller construction. Fig. XXIX is an enlarged detail perspective view on line 29—29 of Figs. XII and XIII showing details of the upper thread cut-off knife structure and its support. Fig. XXIX^{A} is an enlarged detail sectional view on line 29^{a}—29^{a} of Figs. XII and XIII, showing details of the label presser foot bar and the knife actuating lever fulcrumed thereon. Fig. XXX is an enlarged detail perspective view of the bent lever which controls the movements of the said upper thread cut-off knife and parts. Fig. XXXI is an enlarged detail perspective view of the said upper thread cut-off knife. Fig. XXXII is an enlarged detail perspective view of the spring 66 which engages and holds the said knife yieldingly in position and coöperates with the knife to hold the thread. Fig. XXXIII is a detail front elevation view of the head part with the front cover plate removed, with the parts in position to release and drop the center presser foot. Fig. XXXIV is a detail perspective view of the cam lever part which operates in the release and elevates the said central presser foot. Fig. XXXV is an enlarged detail perspective view of the said central presser foot. Fig. XXXVI is an enlarged sectional view on line 36—36 of Figs. I, II, III, VIII, XXXV and XXXVII showing details of the sliding connection for the center presser foot. Fig. XXXVII is an enlarged detail sectional view on line 37—37 of Figs. VIII, IX, XXXIII, and XXXVI showing details of the said movable central presser foot. Fig. XXXVIII is an enlarged detail vertical central sectional view, certain parts being shown in full lines, taken on a line corresponding to line 38—38 of Fig. XXXIII, showing details of construction and arrangement of location of parts and the said central foot presser bar. Fig. XXXIX is an enlarged detail sectional view on line 39—39 of Fig. XXXIII showing details of construction and connection of the needle bar and its support. Fig. XL is an enlarged detail sectional view on line 40—40 of Fig. XXXVIII showing the coupling of the trip and its actuating means to the said presser foot plunger bar. Fig. XLI is an enlarged detail sectional view taken on a line corresponding to line 41—41 of Fig. XXXIX showing details of connections between needle bar and the trip actuating connection. Fig. XLII is an enlarged detail sectional view on line 42—42 of Fig. XXXIX showing the needle coupling means. Fig. XLIII is a top view of the curved guiding slide, label follower and the like, and connected parts, the inner or lower-most position of the follower being indicated by dotted line. Fig. XLIV is a perspective view of the pivoted label guide arm for guiding the label into proper position in the placing of the same in the feed slide. Fig. XLV is a detail perspective view of the upper member of the label and work holder. Fig. XLVI is a detail perspective view of the front portion of the bottom plate of the work holder. Fig. XLVII is a detail perspective view of the bottom member of the label holder which is intermediately the upper and lower members of the work holder. Fig. XLVIII is an enlarged detail perspective view of portions of the work holder, showing certain guiding parts for the follower and feed slide. Fig. XLIX is a detail perspective view of the vertical guides on which the said work holder parts are adjustable up and down. Fig. L is a detail perspective view of the upper label holder bar or slide portion of the work holder which is adjustable upon the said vertical guide. Fig. LI is an enlarged detail sectional view on line 51—51 of Figs.

III, IV, VI, and VIII showing the details of the release of the stop mechanism for stopping the machine at the end of the row of stitches with the needle in the upper position. Fig. LI[A] is a detail sectional view on line 51[a]—51[a] of Fig. LI showing a yielding latch member. Fig. LII is a detail perspective view of the thread tension release means in section, taken on a line corresponding to line 52—52 of Figs. IV and LIV. Fig. LIII is a detail perspective view of the thread release finger detached. Fig. LIV is a sectional view on line 54—54 of Fig. LII of the said tension release means parts. Fig. LV is an enlarged detail side elevation view of the connecting and actuating means for elevating the work holder and for the set-back for the label holder to secure the overlapping of the ends of the row of stitches, and the automatic safety and locking devices in that behalf. Fig. LVI is an enlarged detail section view on line 56—56 of Figs. IV, V and VIII showing details of the interlock devices. Fig. LVII is a detail sectional view on line 57—57 of Figs. IV and VIII, showing the automatic safety and locking devices for preventing the operation of said set-back mechanism more than once for any given operation. Fig. LVIII is an enlarged detail perspective view of the catch means for coupling these parts together. Fig. LIX is an enlarged detail perspective view of the interlock catch means for retaining parts in interlocked position. Fig. LX is an enlarged detail sectional view on line 60—60 of Figs. I, II, LV, LVI and LVII, showing details of construction of the latch on the interlock safety devices. Fig. LXI is a sectional view on line 61—61 of the Figs. I, II and LV, showing details of the yielding catch for the interlock latch means. Fig. LXII is a bottom view of the feed ratchet. Fig. LXIII is a detail sectional view taken on line 63—63 of Figs. VI and LXII, showing the connection of the actuating plunger bar for the label holder set-back. Fig. LXIV is a detail perspective view of the pawl for the friction feed ratchet. Fig. LXV is an enlarged perspective view of the detent pawl and the reverse ratchet for setting back the label holder. Fig. LXVI is a detail sectional view on line 66—66 of Fig. LXVIII showing details of the ratchet feed mechanism. Fig. LXVII is a detail section view on the same line 66—66 of Fig. LXVIII with the pawls engaged for the set-back. Fig. LXVIII is an enlarged detail sectional view on line 68—68 of Figs. VI, VII, LXVI and LXVII. Fig. LXIX is a detail perspective view of the ratchet feed releasing cam. Fig. LXX is an enlarged detail sectional view on line 70—70 of Fig. VII, showing details of the feed set-back cam and its connections. Fig. LXXI is an enlarged detail sectional view on line 71—71 of Fig. VI, showing details of construction of the under thread cut-off knife actuating means. Fig. LXXII is a detail inverted plan view of the said under thread cutter, take-up and actuating connections. Fig. LXXIII is a detail perspective of the lower thread knife and take-up. Fig. LXXIV is an enlarged detail sectional view on line 74—74 of Fig. LXXII, showing details of the lower cut-off knife and take-up.

In the drawings, all of the sectional views are taken looking in the direction of the little arrows at the ends of the section lines, and similar numerals of reference refer to similar parts throughout the several views. In the drawings, also, we desire to remark that many of the views denominated plan views and elevation views are really views made by camera, which are traced, but they so nearly approach to plans and elevations that they have been denominated as such.

Considering the numbered parts of the drawing, we will state for convenience in explanation and following the description that the parts numbered 1 to 35 relate to general features to and including the cloth guard on the work holder carrying arm. The parts numbered 36 to 50 have to do with the general structure of the guide head and presser foot carrying head for the work holder and vertically movable parts thereon. Parts 51 to 73 have to do with the upper knife structure and the elevating hook and its connections and their relations to the upper knife structure, as well as to the general matter of elevating the presser foot parts of the work holder. Parts 74 to 83 relate to the general work holder elevating structure and its connections. Parts numbered 84 to 100 are the guides for the general elevating connections, and the means for actuating the upper knife. Parts numbered 101 to 114 relate particularly to the top member of the label holder and its connections. Parts numbered 115 to 119 relate to the bottom member of the label holder. Parts numbered 120 to 125 relate to the bottom plate of the work holder generally, the garment or article to which the label is attached being placed above this work holder plate and beneath the bottom member of the label holder. Parts numbered 126 to 141 relate to the reciprocating label feed slide and its connections. Parts 145 to 150 are the cam lever and roller and connections to the operating lever 77 for actuating the reciprocating label feed slide. Parts numbered 151 to 161 are the label follower and its pivoted supporting arm. Parts 162 to 176 are the actuating means to set the follower so that it may be released at the proper time to carry the label into proper position beneath the upper member of the label holder. Parts 177 to 184 are the lock latch means for the said follower mecha-

nism, the same being released by part 94. Parts 185 to 191 are the upper label guide and finger and connected associated parts. Parts 192 to 215 are the needle bar and its connections to actuate and raise the central presser foot. Parts 216 to 224 are the central presser foot and bar and its connections to the actuating lever and trip. Parts 225 to 246 are the elevating connections from the central presser foot to the needle bar. Part 247 is the cover plate for the head. Parts 248 to 260 constitute the thread tension control whereby the thread is automatically released on the raising the work holder on completion of the stitching of the label. Parts 261 to 309 are the automatic stop means and the starting mechanism for the stitching mechanism. Parts 310 to 370 inclusive constitute the control means for the work holder and related parts, including the connection to the automatic feed set-back and the interlocking means between these parts and between the parts on the one hand and the machine starting levers and the automatic stop means on the other hand. Parts 371 to 418 are the feed ratchet connections including the set-back ratchet for the work holder feed ratchet. Parts 419 to 425 are the rotary shuttle and its connection and drive. Parts 426 to 444 are the lower cut-off and thread holder mechanism.

Having thus indicated in a general way the numbered parts, we will now proceed to describe them step by step in the groups indicated. Considering the said numbered parts of the drawing and having regard to the general features, our improvements are incorporated in a machine having a general base structure 1, a standard portion 2, arm 3, and a head 4, of any usual design for power sewing machine. The arm 5 projects to the rear of the standard 2 and supports the driving means and the clutch and stop brake mechanism. A yoke 6 is pivoted at 7 to the said arm 5 and acts as a lever to clutch the pulley 10 against the driven disk 13 for driving the shaft 9. This yoke carries brake 15 disposed to act on the projection 14 on the disk 13. A clamp 11 coöperates with the brake 15 on the opposite side of the wheel 13 to apply the said stop brake 15 for stopping the sewing machine in the predetermined position with the needle up. The clamp 11 is controlled by the connection at 8, as appears in Fig. I. Details of this mechanism will be hereafter described in conjunction with the starting and automatic stopping means.

We make use of the work carrier head 23 and arm 24 for carrying the work holder that is illustrated in the patent application of Michael Petrocchi, Ser. No. 736,257, filed December 12, 1912, and of certain features appearing and illustrated in the patent application of Arthur Rosenthal, Serial No. 736,258, filed December 12, 1912. The work carrier head 23 with a projecting arm 24 for carrying the work holder, is made according to the design appearing in the said patent application of Petrocchi. This comprises a guide base 16 disposed on the base of the sewing machine, having an upwardly projecting rectangular flange 17 around the same, and an upwardly projecting guide pin 19 toward each corner and transverse guiding grooves 18. The guide head 23 is provided with downwardly projecting flanges 25 of less dimensions than the flange on the base to permit the structure to be properly reciprocated and guided. These parts are retained in place by the cover 26 retained by screws 27, and an oil hole 22 is provided for oiling the journal of the vertical shaft 29 which drives pinion 28. An intermediate apertured guide block 30 engages the lateral sides of the flanges of the head 23 and has guide ribs 31 corresponding to the groove 18 in the base 16, and is interposed between the head and guide plate. The same is apertured to permit the necessary movement of the head and block without clashing with pinion 28. These parts are inclosed by suitable guide guards 32, 33, disposed in transverse groove 34, see particularly Fig. XII. The work holder arm 24 is recessed at 24' to permit of the clearance of vertically moving parts. The cloth guard 35 is secured to the under side of the same. These parts are described fully in the said patent application of Petrocchi and are here only identified and the operation pointed out so far as the general combination of structure is concerned. These parts are not claimed here in detail as they constitute the structure claimed as the sole invention of the said Petrocchi. They are shown here because they are associated in the general structure and combination which constitutes our present invention.

To the work holder carrying arm 24 is secured a vertical carrying head or presser foot guide head 37 to receive the various work and label holder presser foot devices and their associated parts. This presser foot head is secured to the work carrying arm 24 by the lateral lug or ear 36. The presser foot head 37 is provided with interior vertical guide grooves 38, 38 for the label holder presser foot bar 39 which is provided with guide ribs 40 corresponding to the grooves 38. The label presser foot 112 is a serrated frame constituting the top member of the label holder. Vertical guide ribs 41 project laterally on the said presser foot carrying head 37 and engage in the grooves 43 on the lower presser foot bar slide 42, see Figs. VII and XLVIII. The plate 115 is the general work holder presser foot which constitutes also the lower member of the label holder.

Because the actuation of the work holder elevator device in its operation first grasps and then cuts off the upper thread of the sewing machine, we will describe these parts first because they are interposed in this connection.

A bent lever 51 is provided which contains a journal bearing at 52 and is journaled upon the pin 53 in the adjustable presser bar or block 39. A downwardly projecting arm 54 engages the knife 62 in the slot 63. A hooked portion 64 of the knife serves to cut off the thread on its under edge after it has been clamped above the same. A rounded finger 55 projects rearwardly. A forwardly projecting stop portion 56 rests in a notch 50′ in the upright portion 57 of the presser foot bar. In front of the upright arm 54 of lever 51 is a vacant space 57′ permitting the forward movement of the downwardly projecting portion 54 of the lever 51. A horizontal portion 58 is made integral with the upright portion 57 of the presser bar and is provided with a recess 59 in which is disposed the reciprocated thread cut-off knife 62, having the upwardly projecting stiffening rib 65. The knife 62 is thus provided with a recess on which is disposed a spring 66 which is secured in place by a rivet or pin 67. These parts are retained in position in a suitable recess on the under side of the horizontal part 58 by the plate 60. The forward edge of plate 60 is in line with the rear edge of the upper label holder 112 and cooperates with the label holder parts to clamp the label at that point.

The upright portion 57 is secured to the guiding head 39 by a pair of screws clearly indicated in Figs. XXIX and L. The vertical slide 68 is supported in a suitable guide on the presser bar 42 in the guide plate 71, see Fig. VIII. Slide 68 terminates in a transversely disposed hook 70 with a broad, flat, transverse engaging portion adapted to coöperate with the grooved wheel 74 on the link 76, see Figs. I, XII and XIII. The plate 71 is notched at 72 to receive an offset portion of the slide 68 and is retained in position by suitable screws 73 extending into the presser bar for the main presser shoe which constitutes the lower label holder member and the principal work holder presser shoe.

The roller 74 is journaled on the screw pin 75 and is the immediate connection by which the upper thread cutting knife is operated and the upper member of the label holder is first raised to an elevated position. This roller 74 is carried on the vertical link or arm 76. The arm 76 is secured by a cross pin 85 to a journal pin 82 which is disposed therethrough. This pin is journaled in the forward end of the rock shaft arm 80. The arm 80 is carried upon the rock shaft 78, which rock shaft 78 is operated by the main elevating lever 77 which is secured thereto, see Figs. I, II and IV. The slide 68 is notched at 69 and provided with suitable lugs which engage the projecting end 55 of the bent lever 51. The head 42 is recessed to accommodate these parts and to permit the movement of the same sufficient to withdraw the knife and then elevate the upper member 112 of the label holder before contacting with the presser bar 42, to raise the lower label holder member or plate 115.

The slide 68 is actuated and pushed downward to carry the knife forward into the cutting position which forces the end 55 of the lever 51 down and moves the upper cut-off knife forward into its cutting position. To prevent too free a movement of this slide 68, we provide a spring-pressed friction pin 68^a in a socket 68^b secured by its flange 68^c and screws 68^d to plate 71, see Fig. XIII. Spring 68^e is in the socket and adjustable by screw 68^f.

A yielding slide structure is provided, comprising a yielding block 86 carrying at its upper end a roller 89 on the pin 90 and retained in position by pin 92 in a slot 91. The block 86 is provided with a downwardly projecting pin 87 which reciprocates in a socket 85, the pin being surrounded by a coiled spring 88 in the recess 84, see Fig. XXVIII. These parts are depressed by moving into contact with the inclined cam surface 93, which is carried on a fixed part of the sewing machine head. The position and relation and action of the parts is indicated in Fig. XXVII, the form of the parts 93 and its attaching block or bracket 94 clearly appearing in Figs. XI and XX, where it is shown provided with the upwardly projecting guiding fingers 98 and 99 for guiding the depending link 76. The relation of these parts clearly appears in Fig. XI, and the detached parts with the guide parts clearly appear in Fig. XX. Cam 93, it will be seen, is secured to the block or bracket 94 which has an upwardly projecting ear portion 95 which is secured to the back side of the sewing machine head by screws 96, see Fig. X. The guide fingers 98 and 99 are formed of a single piece of sheet metal which is secured to the upper side of the block 94 by screws 100, see Fig. XX. This fully describes the guiding and the elevation of the main structure and the actuating of the knife bar.

The upper member 112 of the label holder is also actuated by the further movement of the slide 68 in its engagement with the lever 51, this being accomplished when the projection 56 contacts with the stop on the part 57 and couples the same rigidly therewith so that the parts are raised together. The part 57 is secured to the vertically moving slide bar 39. This slide bar 39 is held yield-

ingly downward by the cross bar 102 which is secured thereto, it being in the notch 101, see Fig. L and the front elevation view in Fig. IX. Suitable laterally projecting arms 107 are secured by a series of screws 108 to the presser foot carrying head 37, see Figs. IX, XII and XLIX, and are disposed beneath the cross bar 102 and carry vertical rods 104 on which are disposed springs 105. Bar 102 is free to reciprocate on the vertical rods 104 which are disposed through the ends of the bar 102. The springs 105 are adjustable by the set screws 106 and urge the said cross arms 102 yieldingly downward and thereby put yielding pressure upon the upper member of the label holder.

The upper shoe or upper label holder member comprises a metal frame-like part 112, a little smaller than and of an outline corresponding to the label to be attached, and provided with serrations 113 on its under side and notched at 114 for the inward projection of the knife 62. A projecting lug 109 at one side serves as a means of attaching the said label holder to the horizontal portion 58 of the shoe presser bar. The same is located definitely in place by a pair of pins 111, and is retained by screws through the holes 110, see Fig. XLV (on Sheet 18). It will be seen from this that after the knife has been withdrawn by the upward movement of the slide 68 and the projection 56 has contacted with the stop on the vertical portion 57, the continued upward movement of the slide 68 raises the upper member 112, of the label holder up eventually to the elevated position indicated in Fig. XIII. The same appears in the lower position in Fig. XII.

The upper member 112 of the label holder coöperates with the lower member 115, which is shown in Fig. XLVII. To disclose the parts coöperating directly with the said upper member, attention is directed to Fig. XLVII, where the said lower member is shown in reduced dimensions in perspective, and to Fig. XLIII, where the same appears in plan of substantially full size in connection with the parts coöperating therewith.

The thin edge of the upper label holder 112, serrated at 113, surrounds the aperture 118 and engages the entire outer edge of the label, seen more particularly in Figs. XLV and XLVII. The front corners of this aperture are further recessed at 119 to accommodate the lugs 123 on plate 120, and a pair of vertical lug guides 117 are a little distance back of the rear edge of this aperture so that the serrations 113 on the under side of the upper foot member 112 embrace a label interposed between these parts substantially through its entire periphery, the little gaps at 119 being filled by the lugs 123, the purpose of which will be explained.

The upper label holder member 112 is notched at 114 for the upper thread cutter and holder, and the clamp for the label is completed by the forward edge of plate 60 at this point.

The presser plate 115 is secured by screws through the holes 116 to the under side of the forwardly projecting bars 43 on the presser foot bar 42, see particularly Figs. XLVIII and XLIII.

The bottom movable plate 120 of the work holder is secured by an up-turned rear edge to the downwardly projecting cloth guard 35 on arm 24 by screws 121, see Figs. XII and XIII, so that the same is carried over the base plate of the sewing machine by the carrying arm 24. It has a slightly depressed central portion 122 apertured at 124 to substantially the size of the label and provided with upwardly projecting lugs 123 toward each front corner corresponding to the notched portions 119. These portions 123, 123, co-act with the corners of the upper member 112 of the label holder. The parts are recessed at 125 to permit the ready depression of the fabric of the garment to which a label is to be attached and has corner portions 125′ to promptly locate and clamp the fabric between the presser shoe and this movable work plate.

The lower member of the label holder 115, which constitutes the bottom of the principal presser shoe because it is secured to the reciprocating parts 43, will be elevated by the continued upward movement of the slide 68 so that when the actuating lever 77 is actuated it first operates the knife 62, grasping the upper thread and then severing it from the work, then raises the upper member 112 of the label holder, and then releases the presser foot from the work plate enabling the work with the attached label to be readily removed by pulling it from between the work plate and the main presser shoe. This is facilitated because the front corners of the label have been held between the front corners of the upper member 112 of the label holder which coöperates with the projections 123 of plate 122 in the cut-away corners 119 of the lower label holder member. Thus when the fabric is pulled downwardly these corners are brought out of their seat and the label as a consequence is very readily disengaged and withdrawn from the holder.

The label, we have not here deemed it necessary to illustrate because it is usually cut from a piece of tape with its ends creased and folded upon each other, is delivered to this label holder by a reciprocating feed slide which is carried on a suitable pivoted arm. The reciprocating feed slide 136 is carried by the block 126, see Figs. X and XI, which is secured to the side 44 of the main presser shoe bar 42 by the screw 127, see particularly Figs. X, XI, and

the cross-section in Fig. VIII. The forwardly projecting bar 128 is provided with the ears 129 through which extends a journal bolt 130 on which is journaled the hub 131 carrying the upwardly projecting arm 132. The roller 133 is on the pin 134 at the upper end of said arm 132, by means of which the feed slide is withdrawn as the upper label holder member 112 is permitted to descend. The connections for accomplishing this will be hereafter described. The feed slide 136 is carried on the downwardly and laterally curved arm 135 which is carried by the hub 131. The feed slide 136 is slotted longitudinally at 137 and is conformed to the under surface of the forwardly projecting upwardly curved guides 138 which curve on the arc of a circle concentric with the axis of rotation of the said arm. The reciprocating slide is adapted to pass beneath the said upper member 112 of the label holder and above the lower member 115 thereof. A longitudinal slot 137 receives and guides the lug or pin 158 on the under side of the follower 153. Feed slide 136 is guided in its movement by a lug 140, see Fig. XLIII, and its outward movement is limited by stop 139. See Fig. XVII.

The arm 135 is urged downwardly by the coiled spring 141 secured to the pin 142 thereon at one end and to the projecting eye 144 on the bracket 143 at the opposite end.

On the side of the sewing machine 4 is pivoted a lever 145 on the pin 148, having a laterally projecting portion 146, carrying a flat projecting contact finger 147. This finger 147 co-acts with the roller 133 at the upper end of arm 132, already described, and serves to elevate the reciprocating feed slide when the presser foot and label holder is let down. This is accomplished by cam 149 which is on the side of the said lever 145 and is disposed to coact with the roller 150 carried upon the forward end of lever 77 so that when the arm 77 is let down the roller 150 acts upon the cam portion 149 and thereby forces the roller 133 backward, thereby forcing the arm 132 backward and raising the arm 135 with the feed slide 136 and withdrawing it from beneath the upper label holder member 112.

The label follower 153 for feeding the label to the label holder, reciprocates over the feed slide 136. These parts are particularly illustrated in their relation to the slide in Figs. XVI and XVII. Fig. XVI shows the follower in the lower position where it has delivered the label to the label holder, and Fig. XVII shows the same withdrawn ready to receive and act on the next label. These parts are also supported on the journal pin 130, the position and relation of which has already been described.

The hub 151 carries the arm 152 which is curved downwardly and laterally to form the label follower 153 which reciprocates between the guides 138, 138 and upon the slide 136. A pin 158, see Figs. XII, XIII and XXV, projects downwardly from the follower 153 and extends into the slot 137. This is to insure that the follower will extend to a point below the under surface of the label and thus insure that it will be advanced by the action of the follower. The sides of the guides, 138, 138 are slightly beveled, see Fig. XXV, and also converge slightly as seen in Fig. XLIII. Yielding lateral portions 154, 154, are freely movable upon a tube 156 which is arranged in a transverse aperture through the central portion of follower 153, and within this tube 156 and extending into apertures 155 in the movable side parts 154, 154, is a coiled spring 157 which enables this follower to contact closely and rub against the guides 138, 138, as it is moved toward the label holder and cause the label dropped within the same to assume a central position as if is advanced into the label holder by the action of the said follower. The spring 159 is connected at 160 to the arm 152 and to a suitable eye 161 on the bracket 143 already referred to, which spring serves to advance the follower and deliver the label over the reciprocating slide to the label holder. The movements of the arm 152 are controlled by a cam finger 165 acting on the roller 161, carried by the pin 163 on the arm 162, which is integral with the hub 151, which carries the arm 152, see particularly Figs. XVI and XVII. A stop 162' projects from beneath the lever 162 and contacts with the bracket 128 to limit the outward movement of the label follower.

The cam finger 165 is pivoted at 166, see Figs. I, XVI and XVII, and has a downwardly projecting arm 167 carrying roller 168 on the journal pin 169. This roller 168 is acted upon by the lever 170 which is fulcrumed at 171, to actuate cam finger 165 to return the follower to the initial position. The upper end of lever 170 is provided with a roller 172 which coacts with the cam 173 when the label carrier is being fed laterally. Cam 173 is suitably secured to the side of the head of the sewing machine by plate 174 having screws 175 therethrough, see Figs. XVI and XVII. These parts are so disposed that as the label feed is traveling the first portion of the first side of the label, the roller 172 is carried against the cam 173 and swings the label follower 153 quickly out to the initial position, as appears in Fig. XVII. As soon as the follower reaches this position the latch 177 engages the catch 176 on cam finger 165 and locks the same until the said latch is released to permit the feeding of the next label over the feed slide. Latch 177 is pivoted at 178 to the presser foot bar 42 and extends above the plate 126

where it engages the catch 176 on cam finger 165, see Fig. XXII. This latch 177 is held yieldingly in the engaging position by spring pin 182. Pin 182 has a reduced stem 181 inside of coiled spring 183 disposed in socket 184 in the said presser foot bar 42, against which it is compressed. A friction roller 179 is provided on pin 180 on the horizontal end of the latch 177 and serves as a trip means for releasing the latch 177, and thereby the follower 153 to deliver a label over the feed slide.

It will be seen from the action described that as the label begins feeding along the slide where the stitching begins this follower is drawn out to the initial position and latched there. The follower is released by the withdrawal of the latch 177. These parts are shown in position in Figs. XXII and XLVIII and it will be seen that when the presser shoe is elevated the roller 179 and the pin 180 will, during the elevating movement of the presser shoe, contact with the under side of the block 94, see Fig. X, which will release the follower, and the spring will cause the same to quickly pass the label along the label feed slide into the label holder, where the same will be clamped by the serration 113 of the upper member 112 against the lower member 115, as has already been pointed out.

To facilitate the placing of the label upon the feed slide, we provide a guide comprising the pivoted bars 185, 185, see Fig. XLIV, which are secured by pivots 186, see Figs. X and XI, to the sides of the main presser foot and are provided with an upper cross-bar portion 187, carrying an upwardly and forwardly and projecting guide finger 188 and a downwardly and forwardly projecting guide plate 189, both of which are secured by screws or rivets 190 to the said cross-bar 187. By this it will be seen that the finger 188 and the upwardly projecting flange associated therewith serve as a sort of a hopper for guiding the label which is still further guided by the downwardly and forwardly projecting guide stop 189 beneath which the follower delivers the label to the label holder. These parts are angular under the front surface to permit the label follower to pass readily under the same, and the guide is held yieldingly downward by the coiled spring 191, see Figs. I and XLIV, which is secured to a rearwardly projecting portion of one of the arms 185 and at its upper end to the presser foot structure, see Fig. I.

The central presser foot, and parts controlling the same will now be described. This presser foot 243, see Fig. XXXV, is notched at 244 for the passage of the sewing machine needle. The needle bar and its connections and the presser foot structure comprise the parts bearing numbers from 192 to 246 inclusive. The general relation of the parts appears in the front elevation, see Fig. IX, in which the cover plate 247 has been removed, the parts being detailed from Figs. XXXIII to XLII inclusive. The needle bar is driven from the driving disk 192 on the needle driving shaft 9. Disk 192 carries crank pin 194 which is connected by the link 193 to the needle bar 202. The lower end of the link 193 by the bearing sleeve 206 engages the journal pin 205, which is connected by adjustable collar 203 and set screw 204 to the said needle bar 202, see Figs. IX, XXXIII, XXXIX and XLI. Link 195 extends upwardly from the crank pin 194 and connects by pin 196 to the arm 197, which is pivoted at 198 to the link 200 which is pivoted at 201 to the sewing machine head. These parts with the projecting finger and eye 199 constitute the sewing machine take-up, which is of a usual and well known construction.

The needle bar 202 is carried in the adjustable guide 208 which is retained by the set screw 209 in the frame 4. The needle 213 is secured in place by the set screw 214 having a projecting point 215 which forces the clamp 211 by yoke 210 against the needle as seen in Fig. XLII. These parts of the needle bar are of the usual construction with the exception of the sleeve 206 which is somewhat elongated where it is journaled upon the pin 205. The outside of this sleeve 206 is provided with a journal on which is journaled an actuating roller 207 which contacts on the down stroke with the mechanism hereinafter described for elevating the central presser foot 243 at the first down stroke of the needle when the label is being attached.

The internal presser foot 243 is connected and carried by the presser bar 228, see Figs. XXXIII, XXXVI and XXXVIII, which is carried in suitable guides on the head that will be described in describing the structure and operation of the same.

The presser bar 228 carries the split collar 229 which is clamped to it by the clamping screw 230. A roller 227 is journaled on pin 227' and is retained on this bearing by the screw 231, see Fig. XL. The presser bar 228 is in the bushing 233 at the upper part of the sewing machine head and a spring 232 acting against the collar 229 urges the same downwardly. Collar 234 is retained on the presser bar adjustably by the screw 235 and has a downwardly projecting guide finger 236 which coöperates with the upwardly projecting guide finger 238 which projects upwardly from the guide collar 237, which is retained in the frame 4 by the set screw 239 to insure the proper locating and positioning of the presser bar 228 which is round in cross-section. The presser foot 243 is connected by collar 240, having a set screw

241, to the bottom of the presser bar 228. The bottom portion of this collar is elongated and provided with a horizontal dovetail. The presser foot 243 has an upwardly projecting shank portion 242 provided with a dovetail slot fitting the dovetail on collar 240. The member 240 is slotted at its opposite ends at 246 and stop pins 245 are provided, in the presser foot shank to permit a limited lateral movement of the presser foot. The presser foot 243 thus has slight movement in the direction of the flange which is transverse to the machine, permitting the central presser foot 243 to accommodate itself to the upper member 112 of the label holder and permit slight initial travel of the same.

The presser foot is elevated by the action of the needle bar, on its first down stroke. A lever 216 is provided with a hole 217′ and is fulcrumed at 217, the said lever having a downwardly and laterally curved portion which projects normally under the roller 207 carried on the sleeve 206, by the needle bar 202. The lever 216 has a finger 218 which projects beyond the outside of the head as seen in Fig. XXXIII and has an upwardly and laterally projecting portion 219 which co-acts with the pivoted cam block 225 which is pivoted on the head at 226, and provided with a cam surface disposed to coact with the roller 227 carried on the journal 227′ and secured to the side of the presser bar 228 by collar 229. It will thus be seen that when the needle bar 202 descends, the roller 207 acts upon the curved projecting portion of the lever 216 and the projecting part 219 acts upon the cam block 225 swinging it upwardly so that it raises the presser foot bar. This is done at the first down stroke of the needle bar. The projecting portion 219 passes under the projecting portion of the cam and supports the presser foot bar securely in the elevated position until the projection 219 is withdrawn. The presser foot is tripped by the action of the lever 220. The external portion of this lever is best seen in Figs. I and II, and the same is detailed in perspective with lever 216 in Fig. XXXIV. The lever 220 has a rearwardly projecting portion 223 which is positioned to be acted upon by the pin 224 on the side of the lever 77 so when the rear end of this lever is pulled down its front end will act upon the lever 223. This lever 223 is pivoted at 221, as seen in Fig. I, and has a projecting finger 222 disposed to act upon the projection 218 beyond the side of the sewing machine head. It will be seen that when the lever 77 is actuated the pin 224 strikes against the beveled portion 223 of the lever 220 and the finger 222 will act upon the projection 218, depress the same and thereby withdraw the projection 219 from beneath cam 225. This allows the presser foot immediately to descend and press the label out flat in position to be engaged by the upper label holder member 112, already described, which embraces the said foot 243 and permits the serrated lower edge of member 112 to engage the compressed label by its edges all the way around so that a row of stitching can then be made just within the same, thereby attaching the label through its margin by a row of stitching completely around the same. It will therefore be observed that this central foot is allowed to descend upon the label and flatten it out just previous to the engaging of the same by the upper member 112 of the label holder.

It is, of course, necessary in a device of this kind to release the thread tension and permit the same to be drawn out somewhat while the machine is being adjusted. This we accomplish by the wedging member 248 which is secured by an ear 249 by suitable screws 250 to the squared end of the lever arm 80, see Figs. III, XI, LIII and LIV. The tension disks 255, 256 are carried by the screw 251, which is provided with a head 253, against which the coiled spring 252 acts forcing washer 254 against said disks to hold the same yieldingly together. The tension disks are retained in proper relation against rotation to each other by the pin 257, see Fig. LII. When the lever 77 is depressed the arm 80 is thrown upward and carries this blade like member 248 between the said tension disks, releasing the hold on the thread and permitting it to be withdrawn and the take-up to operate to the extent desired. The perspective detail of the blade 248 appears in part section in Fig. LIII and details of the specific relation of the parts appear in part section in Fig. LIV. Pin 258, guide 258′, hook 259 and spring 260 are all a part of the thread guide and take-up coöperating with the tension means.

Proceeding now to the consideration of the starting and automatic stopping means and the safety devices in that behalf, comprising the numbered parts from 261 to 309, certain of the general features of the automatic stop appear in the patent application, Serial No. 736,258, of Arthur Rosenthal, filed December 12, 1912, and the features here presented are features which cause the structure to coöperate with the remaining parts of the machine effectively, and insure the complete coöperation in operation without error on account of the automatic and safety devices associated therewith. The parts constituting this stop means are illustrated in Figs. I, II, III, IV, V, VIII, LI and LI^A. Certain of the parts appear in other views where they are distinctly numbered.

Carried on the guide head 23 is a trip pin 261 in a suitable recess in the corner of the said head, see Fig. VIII. A bent lever 262 is pivoted or fulcrumed at 263 on the

casing 16 and provided with a coöperating pin 262′ on its under side which coöperates with the stop pin 261, whereby the lever is moved outwardly to trip the automatic stop means. The automatic stop comprises a lever 264 with an adjustable contact screw 265 for regulating the contact of the bent trip lever 262. This lever 264 is fulcrumed on the screw 266 and the rearwardly projecting portion 267 terminates in a laterally engaging hook and upturned end, see Figs. III and V, with a laterally curved end. An upturned ear 269 is provided for the spring contact device to hold the same yieldingly in place. An upturned ear 270 affords a convenient means for manipulating the same. An arm 271 is pivoted on the same pivot 266 and extends rearwardly and has a down turned ear portion 272. These parts distinctly appear in cross section in Fig. LI. On a rock shaft 274 connected to be actuated by the movements of the needle bar driving means is an upwardly projecting finger 273 arranged and disposed to contact with the downwardly projecting ear 272 on the swinging arm 271. The arm 271 is provided with an outwardly projecting hook, the engaging portion of which is slightly to the rear of the engaging portion of hook 268 so that it is free to oscillate. An L shaped stop and guide 275, see Fig. VIII, is carried by a pair of screws 275′, and is disposed to space and guide the laterally moving rearwardly projecting arms. A spring 276 is secured to the arm 267 at its forward end and projects above the said arm 267. The relation of the ends of these parts clearly appears in Fig. LI.

The finger 273 being operated by the needle bar drive, is carried toward the right hand of Fig. LI on the upstroke of the needle, so that its hook will disengage the automatic stop only when the needle is in the elevated position. Pivoted trip arm 277 is carried on the rock shaft 278 which extends across the rear of the machine as seen in elevation in Fig. V, and serves by connected devices to start and stop the machine, depending on the position of the said trip arm. The rock shaft is supported in bearings 295, 295, on the cross bar 294 secured to the rear of the machine by suitable means. The trip 277 is controlled by the actuating lever 279 which is also suitably pivoted upon the shaft 278 and operates thereon independent of the said arm 277 except when the same is latched thereto. A latch 280 is pivoted at 280′ with an engaging portion to engage the lever 277 and is held yieldingly in position against stop pin 280ᵇ by a spring means here exemplified by spring pin 279′ against which acts the spring 279″, the tension of which is adjustable by the spring screw 279ᵃ. A downwardly projecting ear 280ᵃ is on the latch 280, the operation of which will be explained in this connection. A chain 281, illustrated in Fig. III, may be connected to a suitable foot lever or other means for starting the machine. The pulling down of chain 281 pulls down lever 279, the latch 280 engaging the trip 277. This rocks shaft 278 and pulls down link 284 and link 304 and throws the driving pulley 10 into engagement with disk 13 and throws the brake 15 out of engagement. This continues till the automatic trip levers are disengaged by the means already described.

The rock shaft 278 is connected to control the friction clutch means in a manner common to machines of this type. A spring 282 is connected to the pin 283 on the upright 2 and connects with the lever 279 to urge the same into the upward position so that its yielding latch 280 may be sufficiently elevated to engage trip 277 to force it downward. A link 284 connects rock shaft arm 284′ on rock shaft 278 by the pivot 285 to the toggle joint 287, 288, which parts are pivoted at 289 on the upright and 290 on the clutch and brake yoke 6 for actuating that yoke. The rearward projection 284″ of the said link is connected by a coiled spring 286 to eye 286′ at the rear of the yoke 6, see particularly Figs. II, V, and VIII, to hold the same normally in the free position. A rock shaft arm 302 is secured to the rock shaft 278, see Fig. V, and a link 304 is secured by a pivot 303 to the end of said arm and the opposite end of said link 304 is secured by pivot 305 to arm 306 which is secured to rock shaft 307, which rock shaft is connected by a suitable arm and eccentric to the pin 8 on the brace clamp 11, whereby when the link 304 is forced down the clamp 11 will be relieved from clamping and brake will be disengaged from wheel 13, and when the link 284 is raised it serves by the toggle joint to swing the clutch yoke 6 to disengage the pulley 10 from the driven wheel 13 and to apply the brake 15 by throwing it into contact with the projection 14 on the face of the said pulley 13. When the chain 281 is pulled down the sewing machine is thrown into gear and continues to be so driven until the trip stops the same.

The oscillating arm 271, and also the lever 267, are held yieldingly in the engaging position by a suitable spring pin structure contained in the case 296 and secured to the rear of the machine by screws 297, 297, see particularly Figs. V and LI. Yielding spring pins 299, 299, are held yieldingly in position by the compressing coiled springs 300, 300, surrounding reduced portions 298 of the said pins which are disposed to reciprocate through small apertures in the rear of the said casing 296. It will thus be seen that whenever the pressure on the oscillating arm 271 or on the lever 267 is released the springs

throw the same into the engaging position and by this means it is only possible to release the lever and stop the machine with the needle in the upper position, owing to the presence of the oscillating arm 271. The machine continues to operate so long as the yielding trip 277 is held down but that is released absolutely by the automatic release owing to the peculiar construction of the latch 280 with its downwardly projecting ear 280ª. If the operator holds his or her foot down on the starting treadle while the machine is in operation the upper spring pin 299, as soon as the stopping position is reached, becomes disengaged and swings the lever 267 to the left of Fig. LI. The ear 280ª drops behind the yielding spring 276 and becomes engaged thereby soon after the starting of the machine. It will thus be seen that when the machine reaches the tripping point to stop the machine, that the spring 276 being in engagement with the ear 280ª, will first withdraw the latch from engagement with the finger 277, and the further movement of the said lever 267 will disengage the finger 277 so that on the next upstroke of the needle when the arm 271 is thrown out of engagement, the finger 277 throws upwardly and thereby rocks the rock shaft 278 to actuate the stopping mechanism and stop the machine. Also in this behalf, the spring 276 presents a broad surface for engagement by the ear 280ª and permits the stitching mechanism to be set back for the two or three stitches necessary for the meeting ends of the line of stitching to overlap in properly stitching the label. For this reason the structure has an important cooperative relation with these other parts of the machine; and its coöperative relation is also important as it secures the complete operation of the machine in affixing the label and stopping it at the desired and proper point without interfering with the mechanism.

On the rock shaft 278 is a downwardly projecting finger 308 which performs an important function in securing the coöperation of the presser foot elevating and the back setting mechanism which we will now proceed to describe. This arm or finger 308 is secured adjustably to the rock shaft 278 by the set screw 309. This finger 308 actuates an interlocking plunger bar 310, which is supported on a base plate 311 suitably secured to the bed of the sewing machine. Plunger 310 is retained in a suitable guide by the cross piece 312 by a pair of screws 313, see Figs. LV, LVI, I, II, and IV. Upwardly projecting lugs 314 secured by screws 315 to said plunger 310, are engaged by and coöperate with the said finger 308. The reduced end portion 316 of the bar 310 is disposed to engage transversely the upright reciprocating control bars 317 and 318 by engagement in transverse holes 319 and 320 therethrough. The bars 317 and 318 are retained in a suitable guideway by cross plate 321 which is notched at 322 to receive the reduced end 316 of the bar 310, as clearly appears in Figs. L, LI, LII and LVIII. An interlock latch 323 is fulcrumed on pin 324 having a journal bearing 325 to receive the same. A tooth 326 on the rear end of the same engages in notch 327 in the top of the bar 310. A forwardly projecting notched stop portion 328 is in proximity to the upright reciprocating bar 317 which can only be fully depressed when the bar 310 is in the rear position. A handle 329 is provided on the top of the latch 323 for manipulating the same and it is notched at 330 to receive the rounded head 332 of the spring pin 331, which is held yieldingly in position by the spring 334 on the reduced portion 333, which is adjustable by the screw part 335, see particularly Fig. LXI, for the details of these parts.

A chain 336 is connected to the lower end of the upright control bar 317 and the lower end is connected to a suitable treadle or other means for pulling the same downward to release the work and reset the machine in the process of the proper manipulation of the machine. A stop 337 is on this bar 317 and is disposed to coöperate with the stop 328 and the latch 323 so that when the bar 317 has been pulled downward to the limit of its movement it will assume the position indicated by the dotted lines in Fig. LVI, and the interlocking cross bar 310 will be released.

A stop pin 338 is on the side of the upright reciprocating control bar 318 and contacts with the side of the case which limits its downward movement. A slide 339 is secured to the vertical reciprocating bar 317 and is provided with a rearwardly projecting pin 340 to which is connected the tension spring 343 which is secured to the upwardly projecting arm 342, carried by bar 341 secured on the top of the head or standard of the machine. A guide notch 341′ for the upright bar 317 is formed in bar 341, see Fig. IV. A link 344 is secured to the actuating lever 77 at its upper end and by pin 346 to slide 339 at its lower end, whereby when the upright control bar 317 is pulled down it will actuate and pull down the rear end of the lever 77. Latch 347 is pivoted at 348 on slide 339 and provided with a hook 349 for engaging the projecting upper end of the upright control bar 318 so that when the latch 347 is in the position indicated in Figs. II and LV, the upright control bar 317 will be coupled to the upright control bar 318 and will be depressed when the same is pulled downward. The lower end 350 of the latch 347 is adapted to engage a pivoted latch piece 356. The latch 347 is held yield-

ingly in position by the spring 351 connected to a pin 352 on the side of the bar 317 and the pin 353 disposed on said latch 347 above the pivot 348, so that the said latch is urged yieldingly into the engaging position. The yielding latch 356 is carried on pivot 355 on the bracket 337 secured to control bar 317. It has a laterally projecting finger 357 and is held normally upward by spring 358 connected by a pin 359 on the slide 339 and 360 on the latch 356. A bent lever 361, see Figs. LV and LVII, with a forwardly projecting engaging finger 362 is carried on the pivot 324 which also carries the latch 323. This has an upwardly curved cam like portion 363 at its rear end which is acted upon by roller 364, see Fig. LVII, which is carried on the side of the interlocking bar 310. A stop 365, see Fig. LVII, limits the downward movement at the rear end of the said lever 361. A spring 366 throws the forward end of said lever up. On the bed of the machine is supported a wedge like or cam like finger 367, see Figs. I, II and VIII, more especially, which is secured to the bed of the machine by screws 370 and has an upwardly and rearwardly curved cam portion 369 and upper beveled portion 368, see particularly Figs. I, II, and LV. This cam is disposed to act upon the lower end 350 of the latch 347 and carry the same inward to the proper point to be engaged by the yielding latch 356, and retained in the position indicated in Fig. I, with the said latch 347 disengaged so that the engaging portion 349 of the latch 347 engages the upright plunger bar 318 only on the first descent and thereafter the same plays free without engagement thereof until the latch 356 is tripped. This is for the purpose of insuring that no matter how many times the control bar 317 may be depressed, the bar 318 which has the definite work of setting back the feed device will be operated but once. When the sewing machine is operated and bar 310 is moved through the bars 317 and 318, the roller 364 raises the rear end of the lever 361 and depresses the hooked portion 362 at the front thereof and depresses finger 357 of latch 356 and disengages latch 356 permitting the same to swing into engaging position again. Thus it is possible to fully complete the operation of the machine. To the forward side of the bar 318 are secured a pair of lugs 371, 372, with a laterally engaging finger 373 therebetween. The rock shaft 374 is notched at 375 to permit vertical reciprocation of the finger 373 and is provided with a hub 376 carrying a laterally projecting arm on which is an engaging roller 377 disposed to be acted upon by lug 371 on the down stroke of the bar 318 and by the finger 373 on the upstroke of the same, whereby the said rock shaft arm is oscillated by the manipulation up and down of the said vertical control bar 318.

To the rock shaft 374 is secured a cam roller 378, having a cam groove 379 in its periphery, see Fig. VII, and a cam 417 on the rear face thereof. The cam groove 379 serves to actuate the lever 380 which is provided with a roller 381 which coöperates with cam groove 379. The lever 380 is fulcrumed at 382, see Figs. VII and LXX. The lever 380 is connected by link 383 to dog 386 by pivot 385. Link 383 is slotted at 383′ to receive pivot pin 384. Link 383 has an upturned ear 383^a connected by coiled spring 383^b to pin 383^c on the underside of the sewing machine base. The slot 383′ permits time for release lever 412, hereafter to be described, to act before the set back occurs. Dog 386 is pivoted at 387 upon the swinging member 392, which is provided with the curved engaging rib 393 which coöperates with the friction ratchet for controlling the sewing machine feed. The detent pawl 388 engages the rim 396 of the ratchet wheel. The rocking of the shaft 374 by the actuating of the cam 379 operates this lever 380 and serves to set back the feed by changing the detent pawl to a driving pawl that sets back the feed. A detail of the pawl mechanism will be explained in conjunction with the said feed devices.

The cam 417 operates a release to permit this return or set-back movement, and the operation of this will be now explained in conjunction with the explanation of the ratchet means. On the lower end of the vertical shaft 29 is secured a ratchet wheel comprising an upper member 396 containing the groove 397 and the retaining disk part 398, all of these parts being retained together by the screws 399. A lever 400 is fulcrumed at 401 on the under side of the base of the machine and is actuated by the link 402 which is connected thereto at 403 at one end, and is connected at 404′ to arm 404 which is carried on a collar 404^a which is journaled on the shaft 374. A collar 404^b with an arm 404^d is also journaled on the shaft and connected by the rigid bar 404^c to the collar 404^a. The arm 404^d is connected to a suitable moving part of the sewing machine such as the feed eccentric or cam for actuating the same. The friction ratchet made up of the members 396 and 398 is normally actuated, in the usual operation of the mechanism, by the friction pawl 408 connected by link 405 to the lever 400 which is connected by link 402 with the collar 404, and collars 404 and 404^b are connected by cross bar 404^c, said collars being journaled on the rock shaft 374. The arm 404^d carried by the collar 404^b is connected to any suitable moving part of the machine, such as the feed eccentric, so that during

the operating of the machine the friction feed ratchet may be driven by a step by step movement imparted to it by the friction pawl 408, as will readily be seen. The end of the lever 400 is connected by link 405 which is pivoted thereto at 406 to the ratchet 408 which is provided with the engaging lug 409. The said pawl 408 is pivoted to the link 405 at 407, the details of these parts appearing in Figs. LXVI and LXVII. The dog is shown in the engaging position in Fig. LXVI, and is shown in the disengaged position in Fig. LXVII.

The disengagement of the ratchet pawl is accomplished by means of the lever 412 which is fulcrumed at 413 on the under side of the base of the machine, and is disposed to be actuated by the cam block 417 with a sloping surface 418 which acts upon and cooperates with the roller 415 pivoted on the vertical pin 416 on the end of the said lever 412. The opposite end of the lever 412 is provided with an upturned engaging lug 414 disposed to engage and act upon the link 405 to pull the engaging pawl to one side so that it will be disengaged as appears in Fig. LXVII. It will thus be seen that when the shaft 374 is rocked to effect the set-back of the feed that the action of the cam 417 is to disengage the feed pawl of the feed mechanism and when thus disengaged the feed can be readily set back.

The feed pawl 408 is held in engagement by the action of the spring 410 connected to the eye 411 on the arm 405 at one end and to the eye 411′ on the lever 400 at the other end. The detent for the ratchet feed is very readily understood from the general inverted plan view appearing in Figs. VI and VII, and from the details illustrated in Figs. LXII, LXV, LXVI, LXVII, and LXVIII. The detent comprises the oscillating member 392, having the curved segment rib 393 adapted to reciprocate in the annular groove 397 of ratchet wheel 396. The dog 388 serves as a detent when the parts are in the position indicated in Fig. LXVI, as has already been explained. Spring 394 is connected to the oscillating member 392 by the pin 395 and at its opposite end to the hook 391 on the under side of the base plate of the sewing machine. The lever 386 is acted upon by the spring 389 through the eye 390 on the upper side thereof, which is also connected to the hook 391 on the under side of the sewing machine and holds the said dog in engagement to act as a detent except when the link 383 is pulled by the release lever 380. The action of these springs is very clear in considering Figs. LXII, LXVI, and LXVII. In Fig. LXVI the dog is acting as a detent and the feed pawl 409 is in the engaging position. In Fig. LXVII the detent pawl has been thrown to the other side so that it becomes an actuating pawl and as the feed pawl is released the feed is set back to the point desired to permit the lapping of the meeting ends of the row of stitching by which the label is attached. From this description it will be seen that by very simple devices and by manipulation of the parts that when the presser foot is raised by the action of the lever control, the feed is released and is by the same movement of the control bar automatically set back so that the meeting ends of the row of stitching will overlap and thereby the label will be completely stitched. We believe that the drawing taken in connection with the description given will disclose very clearly how all of this occurs.

At the same time that the work is withdrawn from the machine it is desirable to cut off the bottom thread. This work is done at the same time that the presser foot of the work holder is being raised and it is done by the actuation of the cam shaft for the feed set-back. In this behalf we might state that the shuttle shaft 419 is of the usual construction employed in sewing machines of this kind, the same being carried in suitable bearings 420, 420, on the under side of the base of the machine, and that this shaft is coupled by the coupling members 423, 424, to driving shaft 421, which is driven by the chain 422, see particularly Fig. VII. The rotary shuttle 425 revolves within the shuttle case 425ª, see Figs. VII and IX for the location of these parts to the details of which our invention does not in any way pertain. The lower thread cutter and pull off is carried on the oscillating plate 426, which is pivoted at 427 to the detachable plate 430, which is retained in the bed of the machine by the switch 431, 431, secured by the screw 432, 432. A pull-off finger 429 coöperates with the blade 430′, secured by the screw 430ª to the underside of the blade 430, to pull off the thread. A knife 428 on the same swinging plate 426 is disposed just back of the pull-off finger 429 and coöperates with the hardened block 434, retained in a suitable recess on the under side of the plate 430 by the screw 435, see Fig. LXXIV, to cut off the lower thread. The needle comes down through the hole 433, see Figs. LII and LIV. The thread cutter plate 426 is actuated by the actuating arm 439 pivoted at 440 on the under side of the bed plate and provided with a pair of pins 441, 442 see Fig. LXXI, which are acted upon by the roller 444 carried on the rock shaft arm 443, which is secured to the rock shaft 374, the relations of these details distinctly appearing in Fig. LXXI. Link 436 is pivoted at 438 on the upper side of the arm 439 on the pivot pin 438, and is connected to pivot pin

437 on the plate 426, thereby actuating the lower thread pull-off and cutting off the thread whenever the rock shaft 374 is oscillated, said shaft being oscillated by the mechanism connected to the vertically reciprocating bar 318, already described in connection with and in relation to the feed setback devices.

From the description of the parts given above the operation of the machine should be very readily understood. Fig. XII shows in cross section the work holder guide head, label holder members, label feeding guides, slide and label follower and the actuating parts therefor and the other parts carried by the work holder arm 24, said parts being in the position which they assume during the major part of the stitching of the label after the follower has been withdrawn to initial position and before the upper thread cutting knife has been projected over the label. All of these parts are moved back and forth in a horizontal plane by means of the work carrying arm 24 and the guide head 23 provided with the internal rack 27 meshing with the pinion 28. As the shaft 29 is revolved by means of the friction ratchet feed mechanism, the pinion engaging the internal rack 27 causes the guide 23 and the work carrying arm to move back and forth to form the stitching in the desired form.

Fig. VIII is a top plan view partly in section, showing the guide head and the work carrying arm, and it will be seen that, in stitching the label, the entire guide head and work carrying arm moves first toward the bottom of Fig. VIII, then toward the left of Fig. VIII, then toward the top of said figure, then toward the right, and back toward the bottom of the figure to the starting point, at which position the parts are shown in said figure. As the guide head 37 carried by arm 24 is moved from left to right of Fig. VIII, with the pinion in mesh with the upper side of the internal rack, the roller 89 carried by the slide 68 will be brought into contact with the inclined edge of the cam 93, which is carried by the sewing machine head. This will depress the slide 68 operating the bell crank lever 51 and projecting the upper thread cutting knife 62 through the opening 114 in the side of the upper label holder member 112 so that the outer end of the knife will be disposed over the label. As the work holder guide head finishes its movement to the initial position the roller 89 will be brought out from under the cam 93 and the thread cutting knife 62 carried by the presser foot will be moved so as to bring the thread into the notch 64 of the knife. When the guide head reaches its initial position the machine will be stopped by the automatic stop mechanism and the control bars will be released so that it is possible to actuate the lever 77 to lift the presser foot and label holder mechanism.

To elevate the presser feet and label holder members the operator places his foot upon the treadle connected by the chain 336 with the lower end of the control bar 317, the upper end of which is connected with the front end of lever 77 to actuate the same. This lever is connected with lever 76 on the other side of the sewing machine arm and carrying the roller 74. When the parts are in initial position slide 68 is disposed to be engaged by roller 74 to lift said slide. The first part of the lifting movement of said slide retracts the thread cutting knife 62 to grip and cut-off the thread. The continued movement of the slide 68 brings the shoulder 56 into engagement with the top of the member 57, and lifts the presser bar 39 and the parts carried thereby including the upper label holding member 112. The further movement of the slide 68 causes the end of the bell crank lever 51 to engage the presser foot bar 42 to lift the same, carrying with it the guide arms 138 and the lower work holder member 115. The roller 150 on the end of lever 77 acts on the cam surface 149, as shown in Figs. XIV and XV to withdraw the plate or abutment 147 from engagement with the roller 135 so as to allow the spring 141 to reciprocate the label feed slide 136 into label feeding position between the upper label holder member 112 and the lower label holder member 115, the two positions of the label feed slide being clearly shown in Figs. XIV and XV.

The label follower is reciprocated by means of the arm 152 which is controlled by the arm 165 and the cam lever 170. When the follower has been retracted to its initial position, by means which I will presently describe, it is held in such position by means of the latch 177 until released by the roller 179 striking the under side of the block 94 which is secured to the sewing machine head. This takes place when the presser foot 42 is elevated, as heretofore described. It will thus be seen that when the lever 77 is actuated to lift the label holder members the label feed slide will be reciprocated into its feeding position and the label follower will be actuated to feed a label into position between the upper and lower label holder members. When the guide head 23 moves from the position shown in Fig. VIII at the beginning of the stitching, cam block 173 will be engaged by roller 172 on the upper end of the cam lever 170 so as to push said cam lever outwardly to withdraw the label follower to its initial position.

In Fig. XII the label follower and the label feed slide are shown in their normal position which they occupy during the

greater part of the stitching of the label. In this position the label can be placed by the operator on the label feed slide in front of the follower. When the lever 77 is actuated the upper thread is cut above the label, the upper label holder member and lower label holder members are lifted from the work plate so that the work can be withdrawn, the label feed slide reciprocates into position between the upper and lower label holder members and the follower moves forwardly advancing the label into position over the label feed slide between the upper and lower label holder members. The actuation of lever 77 also causes the pin 224 to engage the lever 220 to trip the central presser foot and allow it to descend within the upper label holder member 112 into engagement with the label to smooth it out flat. When the operator moves his foot from the treadle, allowing the lever 77 to return to its normal position, the label feed slide is withdrawn from between the upper and lower label holder members, the upper label holder member descends clamping the label against the lower label holder member, and both of these label holder members and the central presser foot descend into position clamping the label against the work which has been placed on the work plate 120. On the upward movement of the needle, at the beginning of the stitching of the label, the central presser foot 243 is elevated and the work holder guide head and parts carried thereby commence their movement to stitch the first side of the label. This movement brings the roller 172 against the cam block 173 to retract the label follower and the latch 177 moves into place to hold the follower retracted until this latch is tripped by the elevation of the presser foot bar 42. When arm 80 is lifted to elevate the upper and lower label holder members and the presser foot bars the tension of the thread is released by the tension release arm 248.

The start and stop mechanism is controlled by the rock shaft 278 in the well known manner. To start the machine, the operator presses down on a treadle connected by the chain 281 with the end of the lever 279 which is coupled by the latch 280 to the arm 277 on the rock shaft 278. This rocks the shaft 278 to start the machine. The action of pulling down the arm 279, to start the machine, forces the ear 280ª on the latch 280 behind spring 267 so that the latch is held out of engagement with the arm 277 and when the machine has once been started any further manipulation of the foot treadle has no effect on the machine until the machine has been stopped by the automatic stop mechanism and is to be started again. When the work holder guide head 23 reaches its position at the end of the stitching of the label, pin 261 contacts with pin 262' on the lever 262 and actuates lever 264. This moves the end 276 of said lever against the pressure of the spring pressed pin 299 to disengage the hook on the end thereof from the arm 277. The hook in the end of the lever 271, which is pivoted on pivot 266 common to levers 264 and 271 still engages the arm 277. The arm 273 is on the rock shaft 274 and the said rock shaft is connected with the driving shaft and so timed that, on the upstroke of the needle arm 273 engages lever 271 to move it out of engagement with arm 277. When the stitching of the label is finished and the needle starts on its upstroke, the arm 277 will be entirely released and spring 286 will rock the shaft 278 to stop the machine. This action is entirely automatic. The rocking of shaft 278 to start the machine reciprocates slide 310 so as to cause the reduced end thereof to pass through the openings 319 and 320 in the control bars 317 and 318, control bar 317 being the means by which control lever 77 is actuated. It will thus be seen, that, when the machine is running the control lever cannot be actuated. Furthermore, the machine cannot be started unless the control bars 317 and 318 are in their uppermost position. This prevents a premature starting of the machine. Due to latch 323, after the machine has been stopped it cannot be started again, without a manual manipulation of latch 323, until the control bars 317 and 318 have been actuated and returned to normal position.

In Figs. LV and LVI the control bars, the interlocking bar and the parts connected therewith are shown in the position which they assume when the machine has just stopped running. The control bar 317 is pulled downwardly to actuate lever 77 lifting the rear end of latch 323 to release it from the slide and allow the slide to reciprocate. The spring pin 332 engages the side of the latch to hold it in raised position. As the bar 310 is reciprocated through the opening in the control bars 317 and 318 the nose of the bar strikes the rear end of the latch and forces it upwardly so that the nose 326 engages the top of bar 310. When bar 310 is withdrawn the spring pin 332 forces the nose 326 into notch 327 to hold the bar 310 withdrawn. The control bar 318 operates the back setting mechanism and is coupled with control bar 317 by the latch 347 so that as the control bar 317 descends for the first time after the stopping of the machine the back setting mechanism will be operated. A lever 361 and latch 356 are provided, together with the cam 367, so that when the bars 317 and 318 descend to actuate the lever 77 and the back setting mechanism the latch 347 will be withdrawn to uncouple the control bar 318 from the control

bar 317. When the slide 310 is reciprocated through the openings in the control bar this actuates the lever 361 to trip latch 356 and allow latch 347 to again couple the control bars 317 and 318 together. By this mechanism the back setting mechanism will only be operated on the first descent of the control bar 317 after the stopping of the machine, and subsequent actuation of the control bar 317 will not affect the back setting mechanism. The starting of the machine on a new label will recouple the control bars together so that on the first descent of the control bar 317 thereafter the back setting mechanism will again be operated.

The beveled lugs 371 and 373 on the control bar 318 engage roller 377 on the arm 376 carried by the rock shaft 374 so that when the control bar 318 descends it rocks the shaft 374 which carries the cylinder 378 having the cam groove 379 and the end cam 417. The end cam actuates lever 412 to release the actuating pawl which normally moves the friction ratchet feed mechanism and the cam groove 379 actuates lever 380 which operates the friction pawl 392 to back set the machine at the end of the stitching.

The lower thread cutting knife 428 is actuated through the link with the pins 441 and 442 which is actuated by an arm and roller 444 carried by the rock shaft 374 which operates the back setting mechanism.

We have described in detail the operation of the machine in order to show how all the parts operate together and coact to produce a machine in which the various movements are properly timed and can occur only at the proper time and in which the machine is stopped automatically at the end of the label stitching movement, and a machine in which the work holder member can be lifted only when the machine is stopped. This will appear from a consideration of the drawings and specification.

We have shown a label stitching machine, but this machine also operates very effectively to form stitching in any desired pattern, such as reinforcing stitching. In using the word "label", we desire to have it understood that we mean to include patches.

This completes the description of the details of our improved machine and shows the intimate relation of the parts from beginning to end, and how the same coöperate to form a complete and effective machine, very simple to operate and very complete in its workings.

We desire to claim the general combination which we have produced and also to claim such combinations as are properly applicable in the same relation. It has been necessary for us to show details of construction so that the relations of these various parts shall fully appear. They constitute one preferred embodiment of our invention. We desire, besides claiming the invention broadly, to claim the invention specifically, and also various sub-combinations and details as indicated in the appended claims.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:

1. In a special work sewing machine, the combination with the base, standard, arm and head, of the needle and shuttle driving mechanism; a work holder guide head, with ratchet means for driving the same in a predetermined path, disposed on the base of said machine; an apertured work plate carried thereby; an upright presser bar guide head carried thereby; a main presser foot with an aperture corresponding to the work plate, with suitable means for controlling the same constituting the lower member of the label holder; an upper label holder presser foot member, with serrations for coöperating with the lower label holder member; an upper presser foot conformed to and disposed within the upper label holder member for pressing out the label in advance of its being clamped by the label holder; a reciprocating thread holder and cut-off knife carried by the said main work holder; a thread pull-off and cut-off knife in the base of said machine; connections for elevating the said presser feet and label holders; a ratchet feed release; a set back means for the said feed, with connections to the work and label holder actuating means; starting means with a trip for automatically stopping the sewing machine; and interlocking connections between the said starting means and the said work holder control means disposed to compel full operation of each, coöperating for the purpose specified.

2. In a special work sewing machine, the combination with the base, standard, arm and head, of the needle and shuttle driving mechanism; a work holder guide head, with ratchet means for driving the same in a predetermined path, disposed on the base of said machine; an apertured work plate carried thereby; an upright presser bar guide head carried thereby; a main presser foot with an aperture corresponding to the work plate, with suitable means for controlling the same constituting the lower member of the label holder; an upper label holder presser foot member, with serrations for coöperating with the lower label holder member; an upper presser foot conformed to and disposed within the upper label holder member for pressing out the label in advance of its being clamped by the label holder; connections for elevating the said presser feet and label holders; a ratchet feed release; a set back means for the said feed, with connections to the work and label holder actuating means; starting means with a trip for automatically

stopping the sewing machine; and interlocking connections between the said starting means and the said work holder means, disposed to compel full operation of each, coöperating for the purpose specified.

3. In a special work sewing machine, the combination with the base, standard, arm and head, of the needle and shuttle driving mechanism; a work holder guide head, with ratchet means for driving the same in a predetermined path, disposed on the base of said machine; an apertured work plate carried thereby; an upright presser bar guide head carried thereby; a main presser foot with an aperture corresponding to the work plate, with suitable means for controlling the same constituting the lower member of the label holder; an upper label holder presser foot member, with serrations for coöperating with the lower label holder member; an upper presser foot conformed to and disposed within the upper label holder member for pressing out the label in advance of its being clamped by the label holder; connections for elevating the said presser feet and label holders; starting means with a trip for automatically stopping the sewing machine; and interlocking connections between the said starting means and the said work holder control means, disposed to compel full operation of each, coöperating for the purpose specified.

4. In a special work sewing machine, the combination with a base, standard, arm, head, and needle and shuttle driving mechanism, of a work holder guide head disposed on the base of said machine, means for driving said guide head in a predetermined path, a work plate carried by said guide head, a work holder carrying arm on said guide head, a presser bar guide head carried by said arm, a presser bar slidably carried thereby, a presser foot carried by said presser bar and provided with forwardly projecting guide arms, an apertured plate carried by said presser foot and constituting the lower label holder member, a reciprocating label feed slide carried by said presser bar and adapted to move into position over said lower label holder member, a follower adapted to reciprocate over said label feed slide, a second presser bar slidably carried by said presser bar guide head, a presser foot carried thereby and constituting the upper label holder member, said foot being adapted to clamp a label against said lower label holder member, a central presser bar carried by the sewing machine head, a central presser foot carried thereby fitting within said upper label holder member and adapted to engage the lower label holder member, and means for elevating said central presser foot when the stitching operation begins, all coacting substantially as described for the purpose specified.

5. In a special work sewing machine, the combination with a base, standard, arm, head, and needle and shuttle driving mechanism, of a work holder guide head disposed on the base of said machine, means for driving said guide head in a predetermined path, a work plate carried by said guide head, a work holder carrying arm on said guide head, a presser bar guide head carried by said arm, a presser bar slidably carried thereby, a presser foot carried by said presser bar and provided with forwardly projecting guide arms, an apertured plate carried by said presser foot and constituting the lower label holder member, a reciprocating label feed slide carried by said presser bar and adapted to move into position over said lower label holder member, a second presser bar slidably carried by said presser bar guide head, a presser foot carried thereby and constituting the upper label holder member, said foot being adapted to clamp a label against said lower label holder member, a central presser bar carried by the sewing machine head, a central presser foot carried thereby fitting within said upper label holder member and adapted to engage the lower label holder member, and means for elevating said central presser foot when the stitching operation begins, all coacting substantially as described for the purpose specified.

6. In a special work sewing machine, the combination with the base, standard, arm and head, of the needle and shuttle driving mechanism; a work holder guide head, with ratchet means for driving the same in a predetermined path, disposed on the base of said machine; an apertured work plate carried thereby adapted to travel above the bed of the sewing machine; a work holder carrying arm on said guide head; an upright presser bar guide head carried by said arm; a main presser foot with presser bar means engaging said guide head, with an apertured plate for contact with the garment to which the label is to be attached and constituting the lower member of the label holder; a label holder presser foot supported on a presser bar independently movable from the main presser foot, said label holder presser foot corresponding in form to the label to be attached, and with engaging serrations for engaging and clamping the edge of the label, the said presser foot and bar being carried by the said presser bar guide head; an upper label presser foot and bar coöperating with and disposed within the label holder presser foot to press the label flat in advance of engagement by said label holder presser foot; and means for removing said upper label presser foot when the stitching operation begins, coöperating for the purpose specified.

7. In a special work sewing machine, the

combination with the base, standard, arm and head, of the needle and shuttle driving mechanism; a work holder guide head, with ratchet means for driving the same in a predetermined path, disposed on the base of said machine; an apertured work plate carried thereby adapted to travel above the bed of the sewing machine; a work holder carrying arm on said guide head; an upright presser bar guide head carried by said arm; a main presser foot with presser bar means engaging said guide head, with forwardly projecting guide arms and an apertured plate for contact with the garment to which the label is to be attached and constituting the lower member of the label holder; a reciprocating feed slide carried on a pivoted arm supported by the said presser bar structure, with a slotted plate adapted to move into position and deliver a label above the said apertured plate and above the aperture therein; a spring actuated follower adapted to reciprocate over said feed slide and advance a label over the same in position to be attached and to retain it there while the said feed slide is being withdrawn; and a label holder presser foot supported on a presser bar independently movable from the main presser foot, said label holder presser foot corresponding in form to the label to be attached, and with engaging serrations for engaging and clamping the edge of the label, the said presser foot and bar being carried by the said presser bar guide head, coöperating for the purpose specified.

8. In a special work sewing machine, the combination with the base, standard, arm and head, of the needle and shuttle driving mechanism; a work holder guide head, with ratchet means for driving the same in a predetermined path, disposed on the base of said machine; an apertured work plate carried thereby adapted to travel above the bed of the sewing machine; a work holder carrying arm on said guide head; an upright presser bar guide head carried by said arm; a main presser foot with presser bar means engaging said guide head, with forwardly projecting guide arms and an apertured plate for contact with the garment to which the label is to be attached and constituting the lower member of the label holder; a reciprocating feed slide carried on a pivoted arm supported by the said presser bar structure, with a slotted plate adapted to move into position and deliver a label above the said apertured plate and above the aperture therein; and a label holder presser foot supported on a presser bar independently movable from the main presser foot, said label holder presser foot corresponding in form to the label to be attached, and with engaging serrations for engaging and clamping the edge of the label, the said presser foot and bar being carried by the said presser bar guide head, coöperating for the purpose specified.

9. In a special work sewing machine, the combination with the base, standard, arm and head, of the needle and shuttle driving mechanism; a work holder guide head, with ratchet means for driving the same in a predetermined path, disposed on the base of said machine; an apertured work plate carried thereby adapted to travel above the bed of the sewing machine; a work holder carrying arm on said guide head; an upright presser bar guide head carried by said arm; a main presser foot with presser bar means engaging said guide head, with an apertured plate for contact with the garment to which the label is to be attached and constituting the lower member of the label holder; and a label holder presser foot supported on a presser bar independently movable from the main presser foot, said label holder presser foot corresponding in form to the label to be attached, and with engaging serrations for engaging and clamping the edge of the label, the said presser foot and bar being carried by the said presser bar guide head, coöperating for the purpose specified.

10. In a special work sewing machine, the combination with the base, standard, arm and head, of the needle and shuttle driving mechanism; a work holder guide head, with ratchet means for driving the same in a predetermined path, disposed on the base of said machine; an apertured work plate carried thereby adapted to travel above the bed of the sewing machine; a work holder carrying arm on said guide head; an upright presser bar guide head carried by said arm; a main presser foot with presser bar means engaging said guide head, with forwardly projecting guide arms and an apertured plate for contact with the garment to which the label is to be attached and constituting the lower member of the label holder; a reciprocating feed slide carried on a pivoted arm supported by the said presser bar structure, with a slotted plate adapted to move into position and deliver a label above the said apertured plate and above the aperture therein; a spring actuated follower adapted to reciprocate over said feed slide and advance a label over the same in position to be attached and to retain it there while the said feed slide is being withdrawn; a label holder presser foot supported on a presser bar independently movable from the main presser foot, said label holder presser foot corresponding in form to the label to be attached, and with engaging serrations for engaging and clamping the edge of the label, the said presser foot and bar being carried by the said presser bar guide head; an upper presser foot and bar with a sliding joint therebetween, the foot corresponding to the internal dimensions of the upper

label holder presser foot, and adapted to fit within the same, carried by the sewing machine head, the joint permitting horizontal movement between the said presser foot and presser bar; and connections from the needle bar for elevating the said presser bar on the first down stroke of the needle and retaining the same in elevated position, coöperating for the purpose specified.

11. In a special work sewing machine, the combination with the base, standard, arm and head, of the needle and shuttle driving mechanism; a work holder guide head, with ratchet means for driving the same in a predetermined path, disposed on the base of said machine; an apertured work plate carried thereby adapted to travel above the bed of the sewing machine; a work holder carrying arm on said guide head; an upright presser bar guide head carried by said arm; a main presser foot with presser bar means engaging said guide head, with an apertured plate for contact with the garment to which the label is to be attached and constituting the lower member of the label holder; a label holder presser foot supported on a presser bar independently movable from the main presser foot, said label holder presser foot corresponding in form to the label to be attached, and with engaging serrations for engaging and clamping the edge of the label, the said presser foot and bar being carried by the said presser bar guide head; an upper presser foot and bar coöperating with the label holder presser foot to press the label flat in advance of engagement by said frame-like label presser foot; means for removing said upper presser foot when the stitching operation begins; a reciprocating thread holder and cut-off knife in a suitable block carried by the label holder presser bar; and a yielding pressure spring therefor, cooperating for the purpose specified.

12. In a special work sewing machine, the combination of a label holder comprising an apertured lower member and an apertured upper member, having vertical walls corresponding in form to the label, the lower edges of said walls being serrated and one side wall having an open space therein; a reciprocating cut-off knife adapted to project through the open space in said upper label holder member; a clamping plate beneath the cut-off knife to complete the clamping edge of the upper member and hold the label securely at the point of beginning of the stitching; and means for actuating the said cut-off knife, as specified.

13. In a special work sewing machine, the combination with a base, standard, arm, head, and needle and shuttle driving mechanism, of a work holder guide head disposed on the base of said machine, means for driving said guide head in a predetermined path, a work plate carried by said guide head, a work holder carrying arm on said guide head, a presser bar guide head carried by said arm, a presser bar slidably carried thereby, a presser foot carried by said presser bar, an apertured plate carried by said presser foot and constituting the lower label holder member, a second presser bar slidably carried by said presser bar guide head, a presser foot carried thereby and constituting the upper label holder member, said foot being adapted to clamp a label against said lower label holder member, a central presser bar carried by the sewing machine head, a central presser foot carried thereby fitting within said upper label holder member and adapted to engage the lower label holder member, means for elevating said central presser foot when the stitching operation begins, a reciprocating thread holder and cut-off knife carried by said work holder presser foot, a yielding pressure spring therefor, and means for elevating said work holder presser feet and label holder members connected and timed to first reciprocate the said thread holder and cut-off knife and raise the upper label holder member and then the work holder presser foot and lower label holder member to release the work, all coacting substantially as described for the purpose specified.

14. In a special work sewing machine, the combination with a base, standard, arm, head, and needle and shuttle driving mechanism, of a work holder guide head disposed on the base of said machine, means for driving said guide head in a predetermined path, a work plate carried by said guide head, a work holder carrying arm on said guide head, a presser bar guide head carried by said arm, a presser bar slidably carried thereby, a presser foot carried by said presser bar and provided with forwardly projecting guide arms, an apertured plate carried by said presser foot and constituting the lower label holder member, a reciprocating label feed slide carried by said presser bar and adapted to move into position over said label holder member, a follower adapted to reciprocate over said label feed slide, a second presser bar slidably carried by said presser bar guide head, a presser foot carried thereby and constituting the upper label holder member, said foot being adapted to clamp a label against said lower label holder member, a central presser bar carried by the sewing machine head, a central presser foot carried thereby fitting within said upper label holder member and adapted to engage the lower label holder member, means for elevating said central presser foot when the stitching operation begins, and a trip on the sewing machine head to release the central presser bar, said trip being actuated by the elevation of the work holder presser feet and label holder members, all

coacting substantially as described for the purpose specified.

15. In a special work sewing machine, the combination with a base, standard, arm, head, and needle and shuttle driving mechanism, of a work holder guide head disposed on the base of said machine, means for driving said guide head in a predetermined path, a work plate carried by said guide head, a work holder carrying arm on said guide head, a presser bar guide head carried by said arm, a presser bar slidably carried thereby, a presser foot carried by said presser bar and provided with forwardly projecting guide arms, an apertured plate carried by said presser foot and constituting the lower label holder member, a reciprocating label feed slide carried by said presser bar and adapted to move into position over said lower label holder member, a follower adapted to reciprocate over said label feed slide, a second presser bar slidably carried by said presser bar guide head, a presser foot carried thereby and constituting the upper label holder member, said foot being adapted to clamp a label against said lower label holder member, and a pivoted label guide carried above the label feed slide and adapted to be deflected upwardly by the movement of the label follower in feeding a label, all coacting substantially as described for the purpose specified.

16. In a special work sewing machine, the combination with a base, standard, arm, head, and needle and shuttle driving mechanism, of a work holder guide head disposed on the base of said machine, means for driving said guide head in a predetermined path, a work plate carried by said guide head, a work holder carrying arm on said guide head, a presser bar guide head carried by said arms, a presser bar slidably carried thereby, a presser foot carried by said presser bar and provided with forwardly projecting guide arms, an apertured plate carried by said presser foot and constituting the lower label holder member, a reciprocating label feed slide carried by said presser bar and adapted to move into position over said lower label holder member, a follower adapted to reciprocate over said label feed slide, a second presser bar slidably carried by said presser bar guide head, a presser foot carried thereby and constituting the upper label holder member, said foot being adapted to clamp a label against said lower label holder member, and means for reciprocating said label feed slide into position between said upper and lower label holder members, all coacting substantially as described for the purpose specified.

17. In a special work sewing machine, the combination with a base, standard, arm, head, and needle and shuttle driving mechanism, of a work holder guide head disposed on the base of said machine, means for driving said guide head in a predetermined path, a work plate carried by said guide head, a work holder carrying arm on said guide head, a presser bar guide head carried by said arm, a presser bar slidably carried thereby, a presser foot carried by said presser bar and provided with forwardly projecting guide arms, an apertured plate carried by said presser foot and constituting the lower label holder member, a reciprocating label feed slide carried by said presser bar and adapted to move into position over said lower label holder member, a follower adapted to reciprocate over said label feed slide, a second presser bar slidably carried by said presser bar guide head, a presser foot carried thereby and constituting the upper label holder member, said foot being adapted to clamp a label against said lower label holder member, means for reciprocating said label feed slide into position between said upper and lower label holder member, and a trip for the label follower to hold the same in its initial position, all coacting substantially as described for the purpose specified.

18. In a special work sewing machine, the combination with a base, standard, arm, head, and needle and shuttle driving mechanism, of a work holder guide head disposed on the base of said machine, means for driving said guide head in a predetermined path, a work plate carried by said guide head, a work holder carrying arm on said guide head, a presser bar guide head carried by said arm, a presser bar slidably carried thereby, a presser foot carried by said presser bar and provided with forwardly projecting guide arms, an apertured plate carried by said presser foot and constituting the lower label holder member, a reciprocating label feed slide carried by said presser bar and adapted to move into position over said lower label holder member, a follower adapted to reciprocate over said label feed slide, a second presser bar slidably carried by said presser bar guide head, a presser foot carried thereby and constituting the upper label holder member, said foot being adapted to clamp a label against said lower label holder member, means for reciprocating said label feed slide into position between said upper and lower label holder member, a trip for the label follower to hold the same in its initial position, and means timed to act at the beginning of the feeding movement of the work holder guide head for withdrawing the label follower to its initial position, all coacting substantially as described for the purpose specified.

19. In a special work sewing machine, the combination with the base, standard, arm and head, of the needle and shuttle driving

mechanism; a work holder guide head, with ratchet means for driving the same in a predetermined path, disposed on the base of said machine; an apertured work plate carried thereby; an upright presser bar guide head carried thereby; a work holder presser foot and label holder presser feet and parts coöperating therewith, presser foot bars associated with the said upright presser bar guide, a thread holder and cut-off knife associated therewith; elevating hook connections suitably connected and timed for actuating said knife and raising the said presser foot; and a lever with separable hook connections timed to be engaged at the feed starting point for engaging the said elevating hook connections, coacting for the purpose specified.

20. In a special work sewing machine, the combination with the base, standard, arm and head, of the needle and shuttle driving mechanism; a work holder guide head, with ratchet means for driving the same in a predetermined path, disposed on the base of said machine; an apertured work plate carried thereby; an upright presser bar guide head carried thereby; a work holder presser foot and label holder presser feet and parts coöperating therewith, presser foot bars associated with the said upright presser bar guide; elevating hook connections suitably connected and timed for actuating said knife and raising the said presser foot; and a lever with separable hook connections timed to be engaged at the feed starting point for engaging the said elevating hook connections, coacting for the purpose specified.

21. In a special work sewing machine, the combination with a base, standard, arm, head, and needle and shuttle driving mechanism, of a work holder guide head disposed on the base of said machine, a work holder presser foot, label holder members and parts coöperating therewith carried by said work holder guide head, a connection for elevating the same, a lever disposed to engage said connection at the feed-starting point for actuating the same, a main control bar for actuating said lever, said control bar having a lateral aperture therethrough, a friction ratchet and a pawl for driving said work holder guide head in a predetermined path, means for releasing said pawl from said ratchet, a reverse pawl for moving said pawl in a reverse direction, a feed control bar, connected to actuate said release means and said reverse pawl, disposed in proximity to the main control bar and provided with a lateral aperture therethrough, a latch for coupling said control bars together, a latch for holding said coupling latch in disengaged position, a cam on the sewing machine base for disengaging said coupling latch, an interlocking bar disposed to pass through the lateral apertures in said control bars when said bars are in their elevated positions, a latch for said interlocking bar disposed to be released by the downward movement of said main control bar, a bent lever adapted to be actuated by said interlocking bar to release said coupling latch, a driving control means for said sewing machine operatively connected with said interlocking bar, and an automatic trip connection with said control means for stopping the machine at the end of the stitching movement, all coacting substantially as described for the purpose specified.

22. In a special work sewing machine, the combination with a base, standard, arm, head and needle and shuttle driving mechanism, of a work holder guide head disposed on the base of said machine, a work holder presser foot, label holder members and parts coöperating therewith carried by said work holder guide head, a connection for elevating the same, a lever disposed to engage said connection at the feed starting point for actuating the same, a main control bar for actuating said lever, said control bar having a lateral aperture therethrough, a friction ratchet and pawl for driving said work holder guide head in a predetermined path, means for releasing said pawl from said ratchet, a reverse pawl for moving said pawl in a reverse direction, a feed control bar, connected to actuate said release means and said reverse pawl, disposed in proximity to the main control bar and provided with a lateral aperture therethrough, an interlocking bar disposed to pass through the lateral apertures in said control bars when said bars are in their elevated position, a latch for said interlocking bar disposed to be released by the downward movement of said main control bar, a driving control means for said sewing machine operatively connected with said interlocking bar, and an automatic trip connection with said control means for stopping the machine at the end of the stitching movement, all coacting substantially as described for the purpose specified.

23. In a special work sewing machine, the combination with a base, standard, arm, head and needle and shuttle driving mechanism, of a work holder guide head disposed on the base of said machine, a work holder presser foot, label holder members and parts coöperating therewith carried by said work holder guide head, a connection for elevating the same, a lever disposed to engage said connection at the feed starting point for actuating the same, a main control bar for actuating said lever, said control bar having a lateral aperture therethrough, a friction ratchet and pawl for driving said work holder guide head in a predetermined path, means for releasing said pawl from said ratchet, a reverse pawl for moving said pawl in a reverse direction,

a feed control bar, connected to actuate said release means and said reverse pawl, disposed in proximity to the main control bar and provided with a lateral aperture therethrough, a latch for coupling said control bars together, a latch for holding said coupling latch in disengaged position, a cam on the sewing machine base for disengaging said coupling latch, an interlocking bar disposed to pass through the lateral apertures in said control bars when said bars are in their elevated positions, a bent lever adapted to be actuated by said interlocking bar to release said coupling latch, a driving control means for said sewing machine operatively connected with said interlocking bar, and an automatic trip connection with said control means for stopping the machine at the end of the stitching movement, all coacting substantially as described for the purpose specified.

24. In a special work sewing machine, the combination with a base, standard, arm, head and needle and shuttle driving mechanism, of a work holder guide head disposed on the base of said machine, a work holder presser foot, label holder members and parts coöperating therewith carried by said work holder guide head, a connection for elevating the same, a lever disposed to engage said connection at the feed starting point for actuating the same, a main control bar for actuating said lever, said control bar having a lateral aperture therethrough, a friction ratchet and pawl for driving said work holder guide head in a predetermined path, means for releasing said pawl from said ratchet, a reverse pawl for moving said pawl in a reverse direction, a feed control bar, connected to actuate said release means and said reverse pawl, disposed in proximity to the main control bar and provided with a lateral aperture therethrough, an interlocking bar disposed to pass through the lateral apertures in said control bars when said bars are in their elevated positions, a driving control means for said sewing machine operatively connected with said interlocking bar, and an automatic trip connection with said control means for stopping the machine at the end of the stitching movement, all coacting substantially as described for the purpose specified.

25. In a special work sewing machine, the combination with the base, standard, arm and head, of the needle and shuttle driving mechanism; a work holder guide head, with ratchet means for driving the same in a predetermined path, disposed on the base of said machine; a work holder carried by said guide head; a clutch and brake mechanism for driving the parts of the said sewing machine; mechanism with a trip finger for actuating the said clutch and brake mechanism; a control lever with a yielding latch and engaging lug for actuating the said trip finger to start the machine; a trip on the said work holder guide head; and notched levers with stops disposed to be acted upon by the guide head to trip the stop means at the end of the operation of the machine, and with yielding engaging members to permit the operation of the control lever, coacting as specified.

26. In a special work sewing machine, the combination with the base, standard, arm, head, and needle and shuttle driving mechanism, of a work holder guide head, ratchet means for driving the same in a predetermined path, a work holder carried by said guide head, clutch and brake mechanism constituting a driving control means for said sewing machine, a rock shaft for actuating said clutch and brake mechanism, a trip arm on said rock shaft, a control lever journaled on said rock shaft, a yielding latch carried by said control lever and adapted to engage said trip arm to actuate the rock shaft, a pair of notched levers spring pressed into engagement with said trip arm to hold it against movement, means operatively connected with the needle driving mechanism and engaging one of said levers to withdraw it from engagement with the trip arm, a trip on the work holder guide head adapted to engage the second of said levers to withdraw it from engagement with the trip arm, a main control bar having a lateral aperture therethrough and connected to the work holder for actuating the same, a release device and a set back mechanism for said driving ratchet means, a feed control bar having a lateral aperture therethrough and connected to said release device and set back mechanism, an interlocking bar disposed to pass through the apertures of said control bars when in their elevated positions, and connections between said rock shaft and said interlocking bar whereby said interlocking bar is reciprocated through the apertures of said control bars when the rock shaft is actuated to start the machine.

27. In a special work sewing machine, the combination with the base, standard, arm, head, and needle and shuttle driving mechanism, of a work holder guide head, ratchet means for driving the same in a predetermined path, a work holder carried by said guide head, clutch and brake mechanism constituting a driving control means for said sewing machine, a rock shaft for actuating said clutch and brake mechanism, a trip arm on said rock shaft, a control lever journaled on said rock shaft, a yielding latch carried by said control lever and adapted to engage said trip arm to actuate the rock shaft, a pair of notched levers spring pressed into engagement with said trip arm to hold it against movement, means operatively con-

nected with the needle driving mechanism and engaging one of said levers to withdraw it from engagement with the trip arm, a trip on the work holder guide head adapted to engage the second of said levers to withdraw it from engagement with the trip arm, a main control bar having a lateral aperture therethrough and connected to the work holder for actuating the same, a release device and a set back mechanism for said driving ratchet means, a feed control bar having a lateral aperture therethrough and connected to said release device and set back mechanism, an interlocking bar disposed to pass through the apertures of said control bars when in their elevated positions, connections between said rock shaft and said interlocking bar whereby said interlocking bar is reciprocated through the apertures of said control bars when the rock shaft is actuated to start the machine, and a lower thread cutter and pull off operatively connected with said feed control bar.

28. In a special work sewing machine, the combination with the sewing machine head, of the needle bar and presser foot bar adjustable in said head; a presser foot connected to said bar by a horizontally yielding joint, with suitable stops, notched for the passage of the needle; a frame-like label holder presser foot conformed to the said movable presser foot; a spring for said presser bar and presser foot; a lever with cam surfaces; a pivoted cam coöperating therewith to elevate said bar against said spring; a pin and roller on the needle bar acting on said lever and cam, and a pin and roller on the presser foot bar disposed to be acted upon by said cams whereby on the down stroke of the needle bar the presser foot is elevated and retained in elevated position; a projecting trip finger on said lever; a control lever on the sewing machine head; and an actuating pin on the control lever for tripping the cams which support the presser foot to permit it to descend, coöperating as specified.

29. In a special work sewing machine, the combination with the sewing machine head, of the needle bar and presser foot bar adjustable in said head; a presser foot connected to said bar by a horizontally yielding joint, with suitable stops, notched for the passage of the needle; a frame-like label holder presser foot conformed to the said movable presser foot; a spring for said presser bar and presser foot; a lever with cam surfaces; a pivoted cam coöperating therewith to elevate said bar against said spring; a pin and roller on the needle bar acting on said lever and cam, and a pin and roller on the presser foot bar disposed to be acted upon by said cams whereby on the down stroke of the needle bar the presser foot is elevated and retained in elevated position; a control lever on the sewing machine head and a trip means actuated by the control lever for releasing the presser foot and permitting it to descend, coöperating as specified.

30. In a special work sewing machine, the combination with the sewing machine head, of the needle bar; a presser foot bar adjustable in said head; a movable presser foot connected to said bar; a frame-like label holder presser foot conformed to the said movable presser foot; separable connections between said needle bar and said presser foot bar whereby the presser foot bar will be elevated on the descent of the needle bar and retained in elevated position; a control lever on the sewing machine head and trip means disposed to be actuated by the control lever for dropping the presser bar when manipulating the machine.

31. In a special work sewing machine, the combination with the sewing machine head, of the needle bar; a presser foot bar adjustable in said head; a movable presser foot connected to said bar; a frame-like label holder presser foot conformed to the said movable presser foot; and separable connections between said needle bar and said presser foot bar whereby the presser foot bar will be elevated on the descent of the needle bar and retained in elevated position.

32. In a special work sewing machine, the combination of the sewing machine head; a work holder with suitable feed devices comprising an apertured work plate; an apertured presser shoe coöperating therewith and forming the lower member of a label holder; an apertured upper label holder, with suitable clamping surfaces; a reciprocating curved label feed slide with longitudinal central slot adapted to deliver under the upper member of the label holder, with tapered guide slides; and a label follower with central projecting pin for traveling in said slot and with collapsible sides arranged to travel in the said feed slide and deliver a label to the rearward end thereof beneath the label holder, the lateral sides of said follower being movable toward the center and retained in expanded position by suitable springs, coacting for the purpose specified.

33. In a special work sewing machine, the combination of a reciprocating label feed slide with tapered guide sides, and a label follower with collapsible sides adapted to reciprocate between the said tapering sides and deliver a label to central position, coacting as specified.

34. In a special work sewing machine, the combination of a label feed slide with tapered guide sides, and a label follower with collapsible sides adapted to reciprocate between the said tapering sides and deliver a label to central position, coacting as specified.

35. In a special work sewing machine, the combination of a label feed slide with guide sides, and a label follower with collapsible sides adapted to reciprocate between the said sides and deliver a label, coacting as specified.

36. In a special work sewing machine, the combination of a reciprocating label feed slide with tapered guide sides, a label follower with collapsible sides adapted to reciprocate between the said tapering sides and deliver a label to central position, and a pivoted label guide disposed above the said label feed slide to facilitate the placing of a label therein, coacting as specified.

37. In a special work sewing machine, the combination of a reciprocating label feed slide with guide sides, a label follower adapted to reciprocate between the said sides and deliver a label, and a pivoted label guide disposed above the said label feed slide to facilitate the placing of a label therein, coacting as specified.

38. In a special work sewing machine, the combination of a label feed slide with tapered guide sides, a label follower with collapsible sides adapted to reciprocate between the said tapering sides and deliver a label to central position, and a label guide disposed above the said label feed slide to facilitate the placing of a label therein, coacting as specified.

39. In a special work sewing machine, the combination with the base, standard, arm and head, of the needle and shuttle driving mechanism; a work holder guide head, friction ratchet means for driving the same in a predetermined path comprising a friction ratchet, a drive pawl, and a detent pawl coacting therewith, disposed on the base of said machine; a rock shaft with a cylinder thereon disposed beneath the bed of the said machine; a face cam on the end of said cylinder; a lever operated by said cam and connected to release the friction ratchet drive pawl when the shaft is rocked; a cam groove in the periphery of said cylinder; a reverse lever for reversing the movement of said friction ratchet feed, pivoted on the under side of the base of the machine, with a roller pin disposed in said cam groove whereby the same will be actuated on the locking of the roller; and a link with a slotted connection connecting said reverse lever to the friction detent pawl whereby on the actuation of said roller the detent pawl will be thrown to the reverse and become an actuating pawl to reverse and set back the feed movement, coacting as specified.

40. In a special work sewing machine, the combination with the base, standard, arm and head, of the needle and shuttle driving mechanism; a work holder guide head, with friction ratchet means for driving the same in a predetermined path, comprising a friction ratchet, a drive pawl, and a detent pawl coacting therewith, disposed on the base of said machine; a rock shaft with a cylinder thereon disposed beneath the bed of the said machine; a face cam on the end of said cylinder; a lever operated by said cam and connected to release the friction ratchet drive pawl when the shaft is rocked; a cam groove in the periphery of said cylinder; and a reverse lever connected to reverse the movement of said friction ratchet feed, pivoted on the under side of the base of the machine, with a roller pin disposed in said cam groove whereby the same will be actuated on the locking of the roller, coacting as specified.

41. In a special work sewing machine, the combination with the base, standard, arm and head, of the needle and shuttle driving mechanism; a work holder guide head, with friction ratchet means for driving the same in a predetermined path comprising a friction ratchet, a drive pawl, and a detent pawl coacting therewith, disposed on the base of said machine; a rock shaft with a roller thereon disposed beneath the bed of the said machine; connections to the said ratchet drive pawl for releasing the same; and a connection to the detent pawl for reversing the engaging member and setting back the feed, coacting as specified.

In witness whereof we have hereunto set our hands and seal in the presence of witnesses.

ARTHUR ROSENTHAL.
MICHAEL PETROCCHI. [L. S.]

Witnesses to signature of Arthur Rosenthal

ROSE L. SALMI,
WM. VANDENBERG.

Witnesses to the signature of Michael Petrocchi:

F. F. BURT,
CHARLES L. BOHGNEY.