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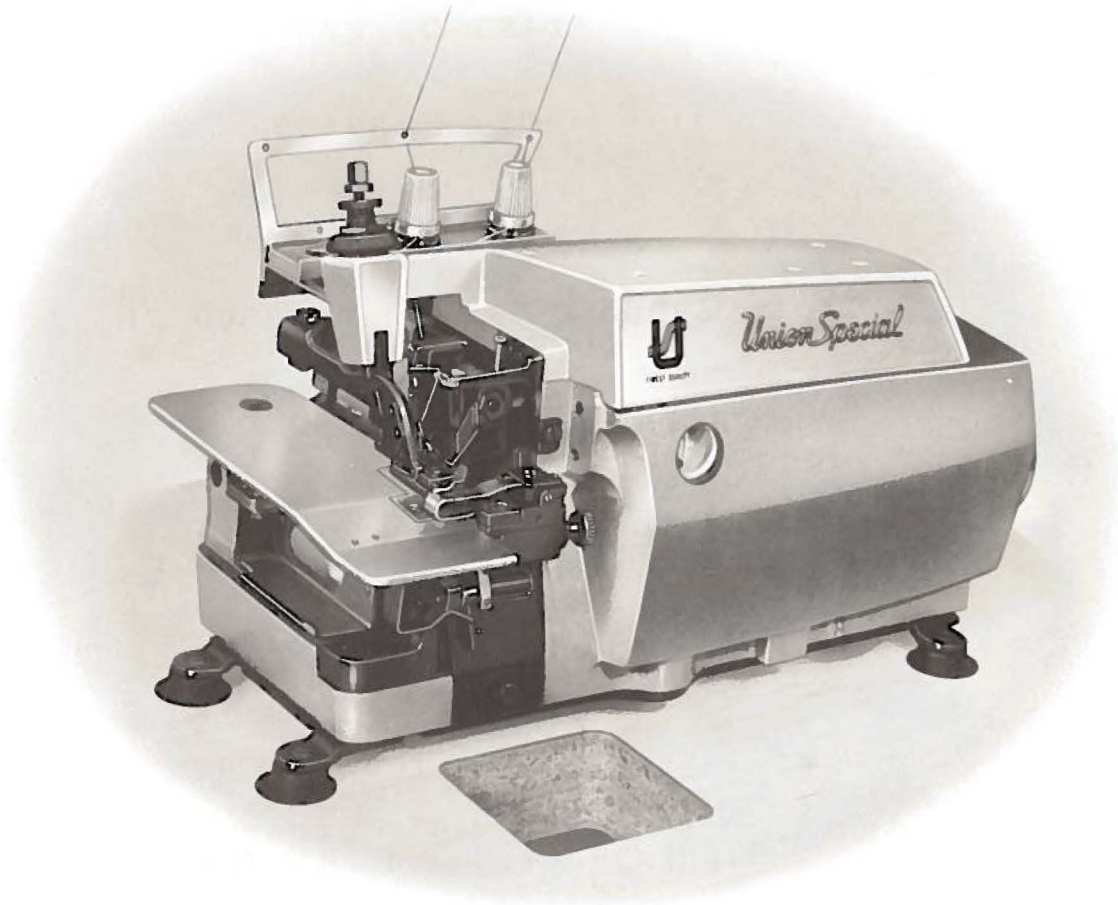
INDUSTRIAL SEWING MACHINES

STYLES
39500FF
39500FG
39500FH
39500GN
39500JD



CLASS 39500

HI-STYLED HIGH SPEED BLIND STITCH HEMMING MACHINE

CATALOG No. 103FF

Second Edition

Union Special CORPORATION
CHICAGO

Catalog No. 103 FF
(Supplement to Catalog No. 103 FA)

INSTRUCTIONS

FOR

ADJUSTING AND OPERATING

LIST OF PARTS

CLASS 39500

Styles

39500 FF
39500 FG
39500 FH
39500 GN
39500 JD

Second Edition

Union Special
CORPORATION
INDUSTRIAL SEWING MACHINES
CHICAGO

Printed in U.S.A.

January, 1975

IDENTIFICATION OF MACHINE

Each Union Special machine is identified by a Style number on a name plate on the machine. Style numbers are classified as standard and special. Standard Style numbers have one or more letters suffixed, but never contain the letter "Z". Example: "Style 39500 FF". Special Style numbers contain the letter "Z". When only minor changes are made in a standard machine, a "Z" is suffixed to the standard Style number. Example: "Style 39500 FFZ".

Styles of machines similar in construction are grouped under a Class number, which differs from the Style number in that it contains no letters. Example: "Class 39500".

APPLICATION OF CATALOG

This catalog is a supplement to Catalog No. 103 FA and should be used in conjunction therewith. Only those parts which are used on Styles 39500 FF, FG, FH, GN and JD, and not on Styles 39500 FA or FB, are illustrated and listed at the back of the book.

This catalog applies specifically to the standard Styles of machines as listed herein. It can also be applied with discretion to some Special Styles of machines in Class 39500. References to directions, such as right and left, front and back, etc., are taken from the operator's position while seated at the machine. Operating direction of handwheel is away from operator.

STYLES OF MACHINES

Hi-Styled High Speed Single Curved Blade Needle, One Looper, One Spreader, Two Thread, Overseaming Machine. Differential Feed, Trimming Mechanism with Spring Pressed Lower Knife, Automatic Lubricating System.

39500 FF Light to medium duty machine for blind stitch welting or hemming on light weight rayon, silk, cotton, wool and nylon flat, warp and ribbed knit material used on panties, slips, nightgowns, tee, athletic and polo shirts. Seam specification, 503-EFc-1; stitch range 8-30 per inch; cam adjusted main and differential feeds. Maximum recommended speed 7000 R. P. M.

39500 FG Same as 39500 FF, except equipped with knee press operated retractable hemming guide, to assure positive needle penetration of garment body when crossing seams. Seam specification, 503-EFc-1; stitch range 8-30 per inch; cam adjusted main and differential feeds. Maximum recommended speed 7000 R. P. M.

39500 FH Same as 39500 FF, except fitted with a long stitch tongue throat plate and a short stitch tongue presser foot which allows maximum spreader point clearance. Seam specification, 503-EFc-1; stitch range 8-30 per inch; cam adjusted main and differential feeds. Maximum recommended speed 7000 R. P. M.

39500 GN Same as 39500 FH, except fitted with an upper looper and a lower spreader, thus the threading of this machine is easier because looper is threaded from the top. Seam specification, 503-EFc-1; stitch range 8-30 per inch; cam adjusted main and differential feeds. Maximum recommended speed 7000 R. P. M.

39500 JD Same as 39500 FF, except fitted with a long stitch tongue throat plate and a short stitch tongue presser foot which allows maximum spreader point clearance. Seam specification, 503-EFc-1; stitch range 8-30 per inch; cam adjusted main and differential feeds. Maximum recommended speed 7000 R. P. M.

OILING

CAUTION! Oil was drained from machine when shipped, so reservoir must be filled before beginning to operate. Oil capacity of Class 39500 is six ounces. A straight mineral oil of a Saybolt viscosity of 90 to 125 seconds at 100° Fahrenheit should be used.

Machine is filled with oil at spring cap in top cover. Oil level is checked at sight gauge on front of machine. Red bulb on oil level indicator should show between gauge lines when machine is stationary.

Machine is automatically lubricated. No oiling is necessary, other than keeping main reservoir filled. Check oil daily before the morning start; add oil as required.

The drain plug screw is located at back of machine near bottom edge of base. It is a magnetic screw designed to accumulate possible foreign materials which may have entered the crank case. It should be removed and cleaned periodically.

NEEDLES

Each Union Special needle has both a type number and a size number. The type number denotes the kind of shank, point, length, groove, finish and other details. The size number, stamped on the needle shank, denotes largest diameter of blade, measured in thousandths of an inch midway between shank and eye. Collectively, type number and size number represent the complete symbol which is given on the label of all needles packaged and sold by Union Special.

These machines use a curved blade needle. Standard needle for Styles 39500 FF, FG, FH, GN and JD is type 154 GAS. It is standard length, single grooved, struck groove, spotted and chromium plated, available in sizes 022, 025, 027, 029, 032, 036, 040, 044, 049, 054 and 060.

To have needle orders promptly and accurately filled, an empty package, a sample needle, or type and size number should be forwarded. Use description on label. A complete order would read: "1000 Needles, Type 154 GAS, Size 027".

Selection of proper needle size should be determined by the size of thread used. Thread should pass freely through needle eye in order to produce a good stitch formation.

Success in the operation of Union Special machines can be secured only by use of needles packaged under our brand name, *Union Special* which is backed by a reputation for producing highest quality needles in materials and workmanship for more than three-quarters of a century.

CHANGING NEEDLES

Release pressure on presser foot by turning presser foot release bushing (AG, Fig. 1 or 1A) and swing presser arm (U) out of position. Turn handwheel in operating direction until needle is at its lowest point of travel. Using hexagonal socket wrench No. 21388 AU, furnished with machine, loosen needle clamp nut about 1/4 turn. Again turn handwheel until needle is at high position, withdraw needle.

To replace needle, leave needle holder at high position and with the flat to the left, insert needle in holder until it rests against stop pin. Keeping needle in this position, turn handwheel until holder is again at its low point of travel, then tighten nut. Return presser arm (U) to position and re-lock presser foot release bushing (AG).

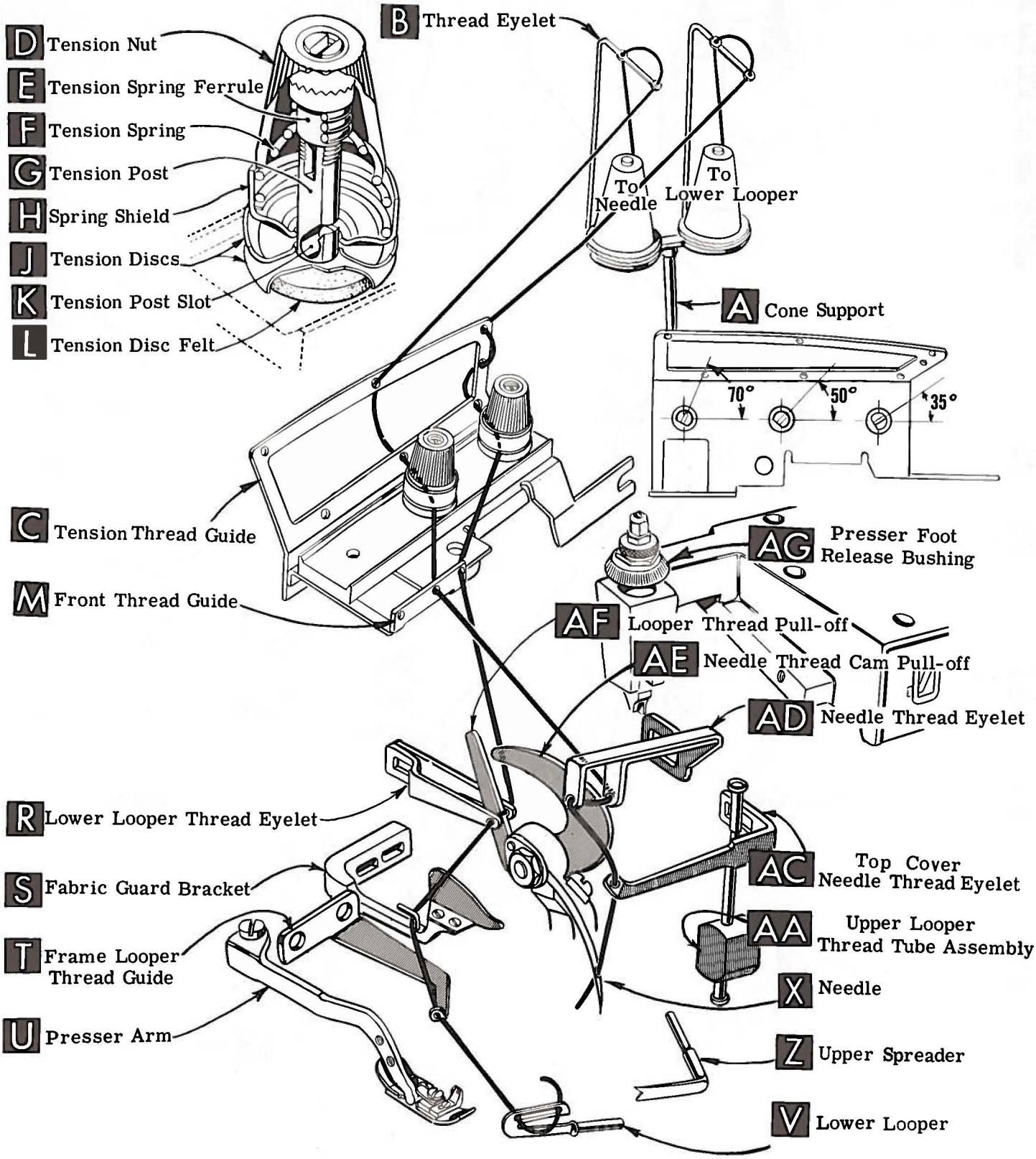


Fig. 1

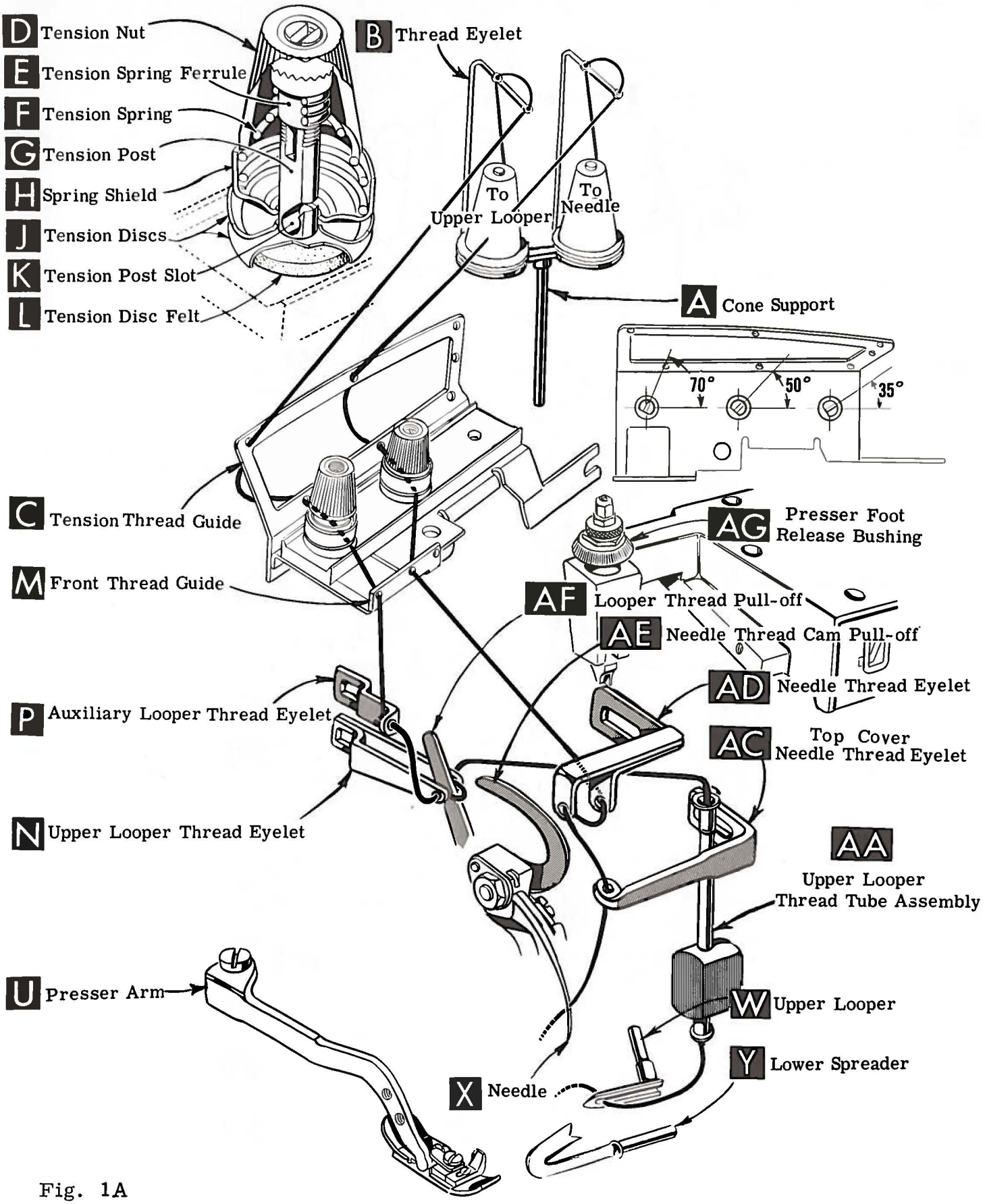


Fig. 1A

CONE SUPPORT

After thread comes from cone on cone support (A, Fig. 1 or 1A) it is brought up through the back hole of thread eyelet, then down through the front thread eyelet (B). Next, it is threaded through the appropriate upper holes from front to back in tension thread guide (C), then through the lower holes from back to front. Then thread continues between tension discs (J) through slot (K) and on through thread guide (M).

THREADING

Only parts involved in threading are shown in threading diagram (Fig. 1 and 1A). Parts are placed in their relative positions for clarity.

It will simplify the threading of these machines to follow the recommended sequence of threading the lower looper on Styles 39500 FF, FG, FH and JD or the upper looper on Style 39500 GN first. Then thread the needle.

NOTE: Use Fig. 1 for threading Styles 39500 FF, FG, FH and JD; use Fig. 1A for Style 39500 GN.

Before beginning to thread, swing cloth plate open, turn handwheel in operating direction until needle (X) is at high position, release pressure on presser foot by turning presser foot release bushing (AG) and swing presser arm (U) out of position.

Be sure the threads, as they come from the tension thread guide, are between tension discs (J) and in tension post slots (K) in tension posts (G).

TO THREAD LOWER LOOPER (Styles 39500 FF, FG, FH, JD)

Double end of thread and lead it through both eyes of lower looper thread eyelet (R, Fig. 1) from right to left. Note; thread must pass in front of looper thread pull-off (AF). Lead thread behind fabric guard bracket (S) and through frame looper thread guide (T). Turn handwheel in operating direction until heel of lower looper (V) is all the way to the left, then thread through both eyes from left to right. Left eye of lower looper can be threaded easily if tweezers are in left hand.

TO THREAD UPPER LOOPER (Style 39500 GN)

Double end of thread and lead it through left eyelet of thread guide (M, Fig. 1A). Turn handwheel until point of upper looper (W Fig. 1A) is all the way left. Lead thread through auxiliary looper thread eyelet (P) from back to front, then through both eyes of upper looper thread eyelet (N) from left to right.

NOTE; thread must pass in front of looper thread pull-off (AF). After pulling up upper looper thread tube assembly (AA, lead thread under neck of top cover casting and down through thread tube assembly (AA). Pull thread out bottom of tube; push tube down, then insert thread through upper looper eye from front to back.

TO THREAD THE NEEDLE

Turn handwheel in operating direction until needle (X, Fig. 1 or 1A) is at its highest position. Insert needle thread from right to left, through both eyes of needle thread eyelet (AD) under neck of top cover casting, then down through hole in top cover needle thread eyelet (AC). Thread needle from front.

THREAD TENSION

The amount of tension on needle and looper threads is regulated by two knurled tension nuts (D, Fig. 1 or 1A). Tension on threads should be only enough to secure proper stitch formation.

PRESSER FOOT PRESSURE

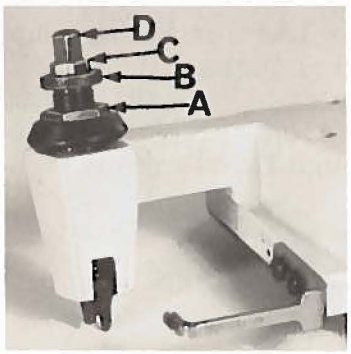


Fig. 2

Sufficient presser foot pressure to feed work uniformly should be maintained. Should it be necessary to increase or decrease amount of pressure on presser foot, loosen lock nut (A, Fig. 2) and turn adjusting screw (B). Adjusting screw has a right hand thread, so tightening increases pressure, loosening decreases pressure. When pressure adjusting screw (B) has been properly set, tighten lock nut (A). With presser foot resting on throat plate, position locking nut (C) so that its under surface is approximately 1/32 inch to 1/16 inch from the top surface of adjusting screw (B). Set cap (D) against locking nut (C).

FEED ECCENTRICS

Feed eccentrics used in these machine have been selected to produce approximately 14 stitches per inch on Styles 39500 FF, FG, FH and JD, while on Style 39500 GN the eccentrics have been selected to produce approximately 9 stitches per inch. It will be noted that on Styles 39500 FF, FG, FH and JD, the part number of the main feed eccentric is No. 39540 B-14 while that of the differential feed eccentric is No. 39540 B-8. On Style 39500 GN the part number of the main feed eccentric is No. 39540 B-9 while that of the differential feed eccentric is No. 39540 B-7. Minor numbers of the part symbol indicate approximately the number of stitches obtainable when using that eccentric. Unless otherwise specified, machines will be shipped with above combinations of eccentrics.

Generally speaking, differential (right hand) feed eccentric determines number of stitches produced; main (left hand) feed eccentric is selected in relation to degree and direction of stretch of material being sewn, or type of operation.

Following stitch number feed eccentrics are available under No. 39540 B-4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 40. Only two eccentrics are supplied with each machine. Additional eccentrics may be ordered separately. To order an eccentric, use No. 39540 B with a minor number suffixed to indicate approximate number of stitches desired. Example: "39540 B-14".

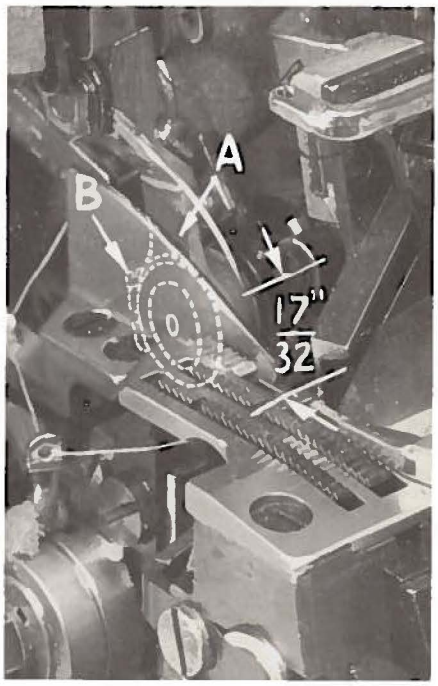


Fig. 3

ASSEMBLING AND ADJUSTING SEWING PARTS

Before assembling and adjusting sewing parts, remove cloth plate, fabric guard, chip guard, upper knife assembly, lower knife holder assembly, hemming guide assembly; then follow this suggested sequence.

SETTING THE NEEDLE

With throat plate assembled in position, needle should center in the front end of needle slot. When needle is at high position, needle point should be set 17/32 inch above throat plate (Fig. 3). To align needle or set the height above throat plate, move needle driving arm (A, Fig. 3) by loosening clamp screw (B). Remove throat plate after making first adjustment.

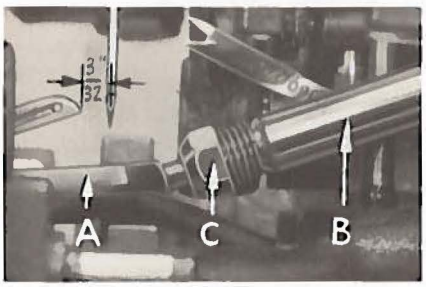


Fig. 4

At this point, insert lower looper (A, Fig. 4) on Styles 39500 FF, FG, FH or JD or lower spreader on Style 39500 GN into bar (B). With lower looper or spreader at left end of its stroke, set looper or spreader point 3/32 inch from center of needle (Fig. 4 or 4A) using looper gauge No. 21225-3/32. Do not have lower looper or spreader deflecting needle. Tighten nut (C). Now assemble differential (front) feed dog.

SETTING THE REAR NEEDLE GUARD

Set rear needle guard (A, Fig. 5) as high as possible, without interfering with either lower looper or spreader or movement of lower knife holder; but still in position to deflect needle forward .002 - .004 inch. Screw (B) is used to set rear needle guard. Make sure there is no interference between rear needle guard and lower looper or spreader.

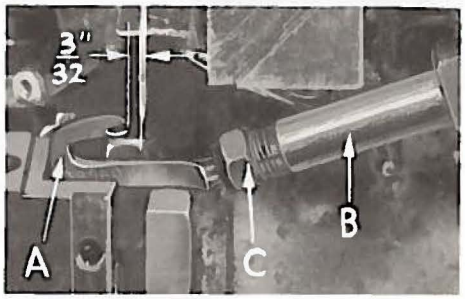


Fig. 4A

SETTING THE LOWER LOOPER OR LOWER SPREADER

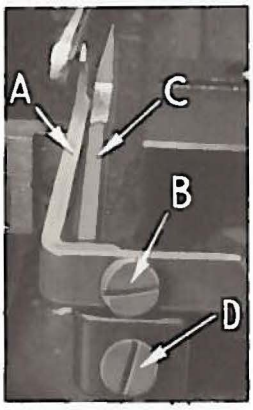


Fig. 5

Now finish lower looper or spreader adjustment. As lower looper or spreader moves to the right, its point should be set into the needle scarf (A, Fig. 6) until the needle springs forward from rear guard surface another .002 - .004 inch.

SETTING THE FRONT NEEDLE GUARD

Assemble front needle guard (C, Fig. 5). When lower looper is springing needle off back guard, set front needle guard as close as possible to needle without touching. Screw (D) is used to adjust and set front needle guard. After this setting, make sure there is no interference between needle guards and differential feed dog.

SETTING THE UPPER SPREADER (STYLES 39500 FF, FG, FH, JD)

Insert spreader (A, Fig. 7) in its holder. Screw (B, Fig. 7) holds spreader in its holder, and permits spreader to be pushed in or out or turned around its shank. Screw (C, Fig. 7) on collar holds spreader holder in the shaft, and allows holder to be rotated or adjusted laterally.

Preliminary Setting: When spreader is at the right end of its stroke, spreader holder should be set to position spreader shank back of vertical (Fig. 7). Top end of spreader shank should extend 1/32 to 1/16 inch above the holder (Fig. 7).

As spreader moves from right to left, the Vee notch of the spreader should pass just behind the eye of the lower looper, with approximately .002 inch clearance between spreader and lower looper (Fig. 8).

Continue turning the handwheel until spreader is at the left end of its travel. At this position, the lower point of the spreader

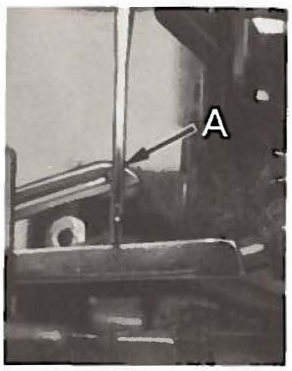


Fig. 6

should extend about 5/32 inch to the left of the centerline of the needle and should be approximately 1/2 inch above the top of the throat plate (Fig. 9).

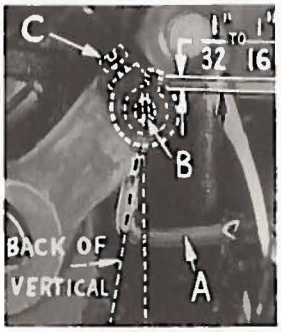


Fig. 7

Now check setting between spreader and needle. If needle rubs the back of spreader, pull spreader out of its holder slightly and rotate spreader holder forward a short distance. These same adjustments, in opposite movement, will reduce the clearance between spreader and needle. Reset to lower looper (Fig. 8).

SETTING THE UPPER LOOPER (STYLE 39500 GN)

Insert upper looper in its holder. When the upper looper is at the right end of its stroke, upper looper holder should be set to position upper looper shank back of vertical. Top end of looper shank should extend 1/16 to 3/32 inch above the holder.

As upper looper moves from right to left the looper should pass behind the lower spreader, with approximately .002 inch clearance between spreader and lower looper.

Fig. 8

Continue turning the handwheel until the upper looper is at the left end of its travel. At this position the point of the looper should extend 5/32 inch to the left of the centerline of the needle and should be approximately 33/64 inch above the top of the throat plate (Fig. 9A).

Now check setting between upper looper and needle. Make adjustment as indicated under, "SETTING THE UPPER SPREADER," except the setting relationship is between the upper looper and the needle.

SETTING FEED DOGS

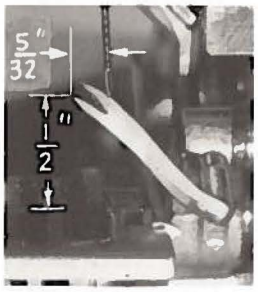


Fig. 9

Now assemble main (back) feed dog (B, Fig. 10) and chaining feed (C). Set all feed dog (A, B, C, Fig. 10) so the top surfaces of the teeth all lie in the same plane. This can be checked by sighting across the teeth with a straight edge. Now assemble throat plate. Feed dogs should now be leveled with throat plate surface by rotating feed tilting adjusting pin (D). This pin raises or lowers the back end of feed bar.

The feed dogs should be set level at the time the teeth first appear above throat plate. Screw (E) locks feed tilting adjusting pin in place. Now set the main and differential feed dog teeth 3/64 inch above the throat plate, and chaining feed dog teeth flush with surface of throat plate.

SETTING THE LOWER KNIFE

Replace lower knife holder assembly. In replacing the lower knife holder assembly, tighten screw (A, Fig. 11) so that when the face of the flange on sleeve (B) seats against the throat plate mounting bracket (C) a free lateral motion of the lower knife and holder assembly is obtained when the knife is manually pressed at its upper corner. Lower knife (D) should be set with cutting edge flush with throat plate surface. Adjustments are made with hexagonal head screw which holds lower knife. Lower knife is spring pressed against upper knife, so no lateral adjustment is necessary when width of trim is changed.

SETTING THE LOWER KNIFE (Con't)

Lower knife may be secured in any position by tightening screw (E) against knife holder shaft.

Set the desired width of trim by measuring from the right edge of the lower knife to the needle, lock the lower knife holder shaft with screw (E).

SETTING THE UPPER KNIFE

Fig. 9A

Replace upper knife assembly. Clamp upper knife (F, Fig. 11) in position, setting nut (G) to hold clamp (H) in its most clockwise position against upper knife. At bottom of its stroke, front cutting edge of upper knife should extend not less than 1/64 inch below cutting edge of lower knife. The chain guard should be set down against the upper knife and slightly back from the cutting edge.

After upper knife has been set for proper width of trim, screw (J) should be tightened to lock upper knife holding block (K) in place. This will simplify resetting when upper knife is replaced.

SETTING THE STITCH LENGTH

Length of stitch is determined by the combination of feed eccentrics used. Outer (left) eccentric (A, Fig. 12) actuates main (rear) feed dog; while the inner (right) eccentric (B) actuates the differential (front) feed dog.

In assembling feed eccentrics, be sure hubs are facing each other. Be careful not to damage shaft or key. Tighten nut (C) securely.

To change feed eccentrics, remove nut (C) and washer (D) from end of shaft (E). Turn handwheel in operating direction until key slot in eccentric is toward front. Using hooked eccentric extractor (F), supplied with machine, reach behind eccentrics as shown and withdraw eccentrics. It may be necessary to move handwheel back and forth slightly during extraction.

If eccentrics are unusually tight fitting, in addition to removing nut (C, Fig. 13) and washer (D) from shaft (E), it may be helpful to remove nut (G) and feed driving connection (H). Then continue as originally suggested.

SETTING THE PRESSER FOOT

Assemble the presser foot to presser arm. With needle in high position, swing presser arm into sewing position and set the presser foot to align needle holes (front and back) and flat on throat plate. The front edge of needle hole in presser foot must be aligned with front edge of needle hole in throat plate. It is also important that the bottom of the presser foot be flat on the throat plate. If necessary, presser foot can be realigned with throat plate slots by

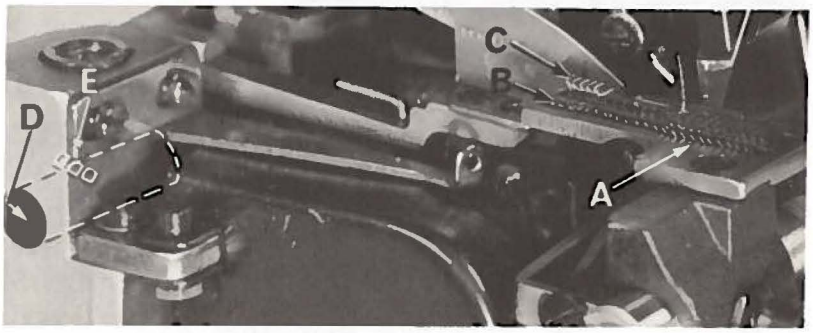


Fig. 10

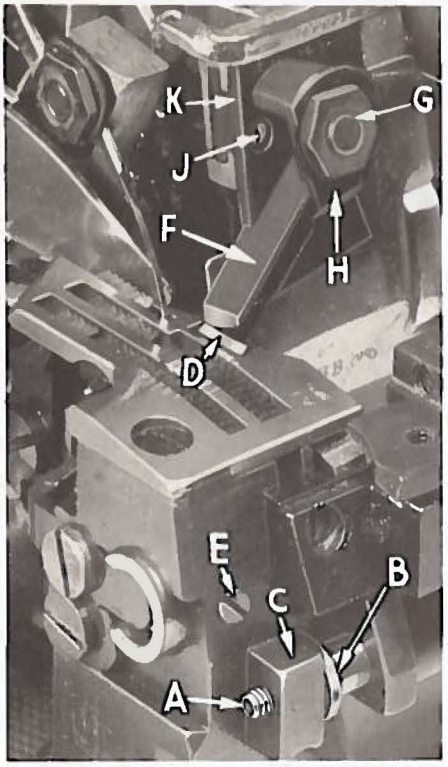


Fig. 11

SETTING THE PRESSER FOOT (Cont.)

shifting the foot lifter lever shaft (H, Fig. 14). To move the shaft, loosen collar screws (B, Fig. 14) and clamp screw (G) and then shift the foot lifter lever shaft to the left or right as required. Retighten collar screws and clamp screw.

The foot lifter lever arm (A, Fig. 14) and the collar (B) secure the shaft. Be sure the presser arm does not bind and rise when presser foot release bushing is unlocked.

Adjust lifter lever stop screw (C) so that presser foot can be raised no higher than upper looper or spreader will permit: then lock the nut (D). There should be from 1/16 to 1/8 inch free motion of foot lifter lever before the presser foot begins to rise. This adjustment should be made with screw (E) and locked with nut (F). Re-assemble the chip guard, fabric guard and cloth plate. To assemble chip guard, turn handwheel until upper knife assembly reaches its highest position.

NEEDLE THREAD CONTROL

While sewing on material, check needle thread control as follows: Usually all needle thread is drawn on needle down stroke. At top of needle stroke, thread should be just tight enough to feed chain off stitch tongue. Stitch tends to pull down slightly if excessive thread is pulled on the up stroke. With needle at bottom of stroke, position needle thread eyelet (AD, Fig. 1) so that needle thread cam pull-off (AE) just contacts needle thread.

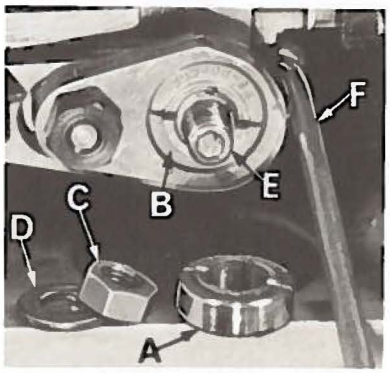


Fig. 12

LOWER LOOPER THREAD CONTROL

With material under presser foot, set lower looper thread eyelet (R, Fig. 1) back and down far enough so thread is a little slack when spreader reaches its extreme left position. Lower looper thread eyelet (R) should be about horizontal.

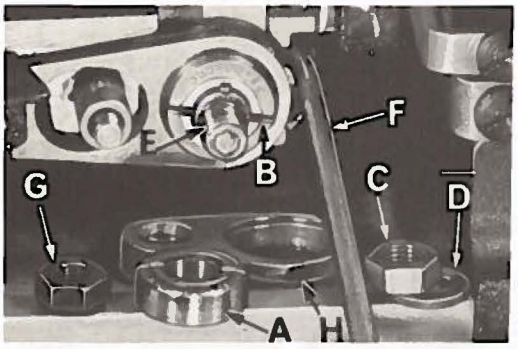


Fig. 13

NOTE: If looper thread breakage occurs at high speed, move lower looper thread eyelet (R) upward slightly at an angle away from the needle arm binder screw.

Frame looper thread guide (T) should be set with its eyelet approximately 1/8 inch to the right of heel eyelet of looper (V) at the time lower looper is at extreme left end of its travel.

THREAD TENSIONS

Before proceeding, balance both tensions to give a normal appearing stitch. Moderate change in these tensions will not markedly affect the purl.

SPECIAL ADJUSTMENTS

SKIPPING: For occasional skipping, check and/or adjust as outlined below:

1. Recheck lower looper - needle setting. See "Setting the Needle" Page 8.

2. Recheck spreader - lower looper crossing. See "Setting the Spreader", Page 9.

3. Check clearance between needle and spreader. See that spreader moves far enough left past needle.

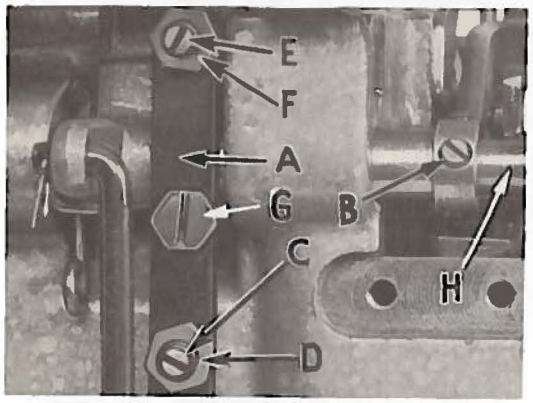


Fig. 14

Setting 1 and 2 should be made quite carefully. If it can be determined by appearance that skip is definitely not a needle loop skip, reposition lower looper thread eyelet (R, Fig. 1) by lowering it slightly and bringing eyelet holes in close to bend in looper thread pull-off (AF). After this change, increase looper thread tension as much as possible without distorting stitch.

CAUTION: Looper thread must, as before, be slightly slack as spreader reaches its extreme left position, or stitch will appear tight on top side.

STARTING TO OPERATE

Be sure machine is threaded according to threading diagram (Fig. 1, Page 5).

With thread tensions light, set lower looper thread eyelet (R) about horizontal and in the middle of its front to back location.

Operate machine slowly, with presser foot in place; make sure chain forms and moves off tongue freely.

SETTING THE HEMMING GUIDE SUPPORT BRACKET

Assemble the hemming guide support bracket onto the lower knife support bracket by means of screw (A, Fig. 15). With the knurled adjusting screw (B), set the edge guide (C) so that the left side of its tip is even with and parallel to the right side of the right feed slot in the throat plate.

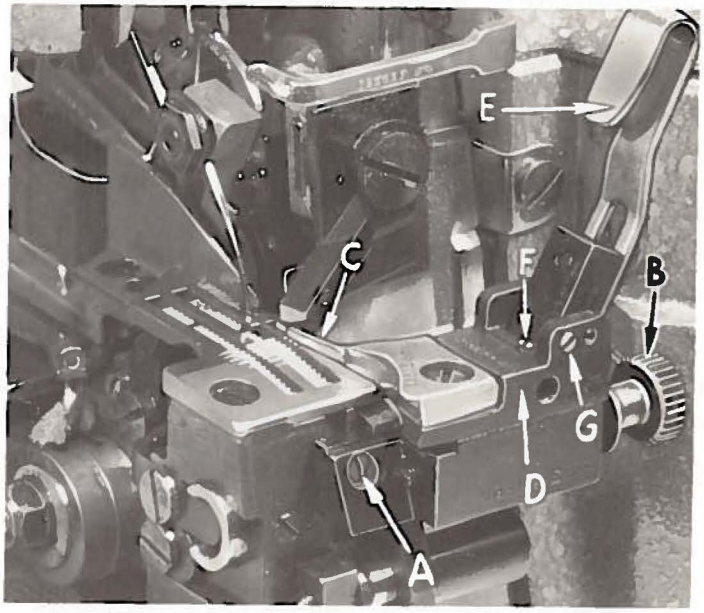


Fig. 15

When the edge guide tip is in this position, the front or leading edge should be slightly to the right of parallel. This adjustment can be made by positioning the stop screw located towards the front of the hinge block and edge guide support bracket (D, Fig. 15).

Under normal conditions, the edge guide is spring pressed to compensate for the differences in material thickness. For example, as in going over seams. The amount of movement and pressure applied to the edge guide tip is controlled by adjusting the screw which presses against the spring located in the hinge block and edge guide support bracket (D, Fig. 15). Removing this spring and turning the screw all the way out against the edge guide prevents movement of the edge guide.

FOR STYLE 39500 FG ONLY

Mount the retractable edge guide lever bracket (A, Fig. 16) onto the casting with

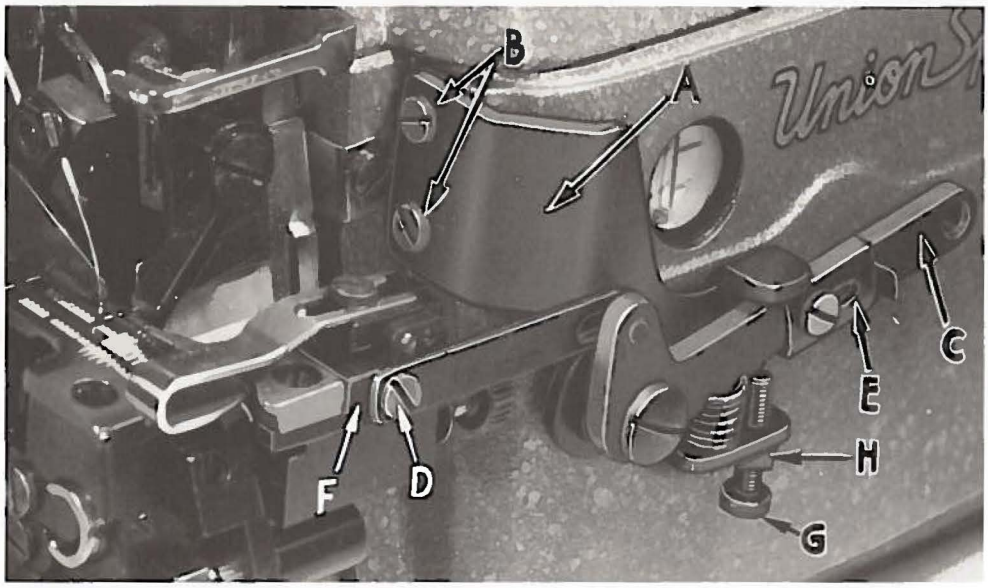


Fig. 16

screws (B). Attach the knee press chain to the lever arm (C) and the lever arm to the hemming guide support bracket with screw (D). The adjustable stop lever slide (E) should be positioned to the extreme left when in normal operation. The slide is moved to the right as shown in the illustration, only when making repairs on garments.

FINAL ADJUSTMENT OF HEMMING GUIDE

Adjust the edge guide (C, Fig. 15) by turning the knurled adjusting screw (B) so that the stitches are located in the folded edge, yet do not show on the face of the fabric. Adjust the overhanging guide (E) so that the space between its guiding edge and the edge guide corresponds with the thickness of the material to be hemmed. Adjust the stop screw (F) for the overhanging guide so that the tip of the overhanging guide is located at the center of the edge guide vertically. If desired, the overhanging guide can be locked into position by tightening the locking screw (G) located in the hinge block and edge guide support bracket (D).

FOR STYLE 39500 FG ONLY

Adjust the amount of retraction of the edge guide bracket (F, Fig. 16) by positioning the adjusting stop screw (G). The position of the screw will depend on the thickness of the seam to be crossed. The locking nut (H) should then be tightened into place.

SETTING THE HEMMING GUIDE SUPPORT BRACKET FOR STYLES 39500 GN AND JD WITH IMPROVED HEMMING GUIDE ASSEMBLY

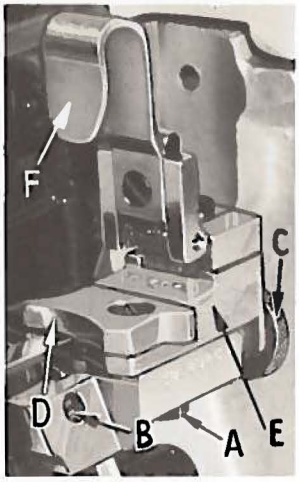


Fig. 17

NOTE: Be sure that lock screw (A, Fig. 17) has been loosened, then proceed as follows:

Assemble the hemming guide support bracket onto the lower knife support bracket by means of screw (B, Fig. 17). With the knurled adjusting screw (C), set the edge guide (D) so that the left side of its tip is even with and parallel to the right side of the right feed slot in the throat plate.

When the edge guide tip is in this position, the front or leading edge should be slightly to the right of parallel. This adjustment can be made by positioning the stop screw (A, Fig. 18) located towards the front of the hinge block and edge guide support bracket (E, Fig. 17).

Under normal conditions, the edge guide is spring loaded to compensate for the differences in the material thickness. For example, as in going over seams. The amount of movement and the pressure applied to the edge guide tip can be set by removing lock screw (B, Fig. 18) and adjusting the screw which presses against the spring and pin, located in the hinge block and edge guide support bracket (E, Fig. 17). Replace lock screw and tighten securely.

If movement of the edge guide is not required, then remove lock screw (B, Fig. 18), set screw and spring; then replace set screw and lock screw. Be sure set screw is tightened against pin and lock screw is tightened against set screw.

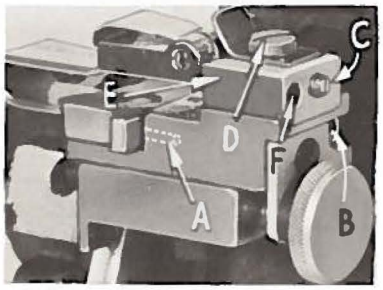
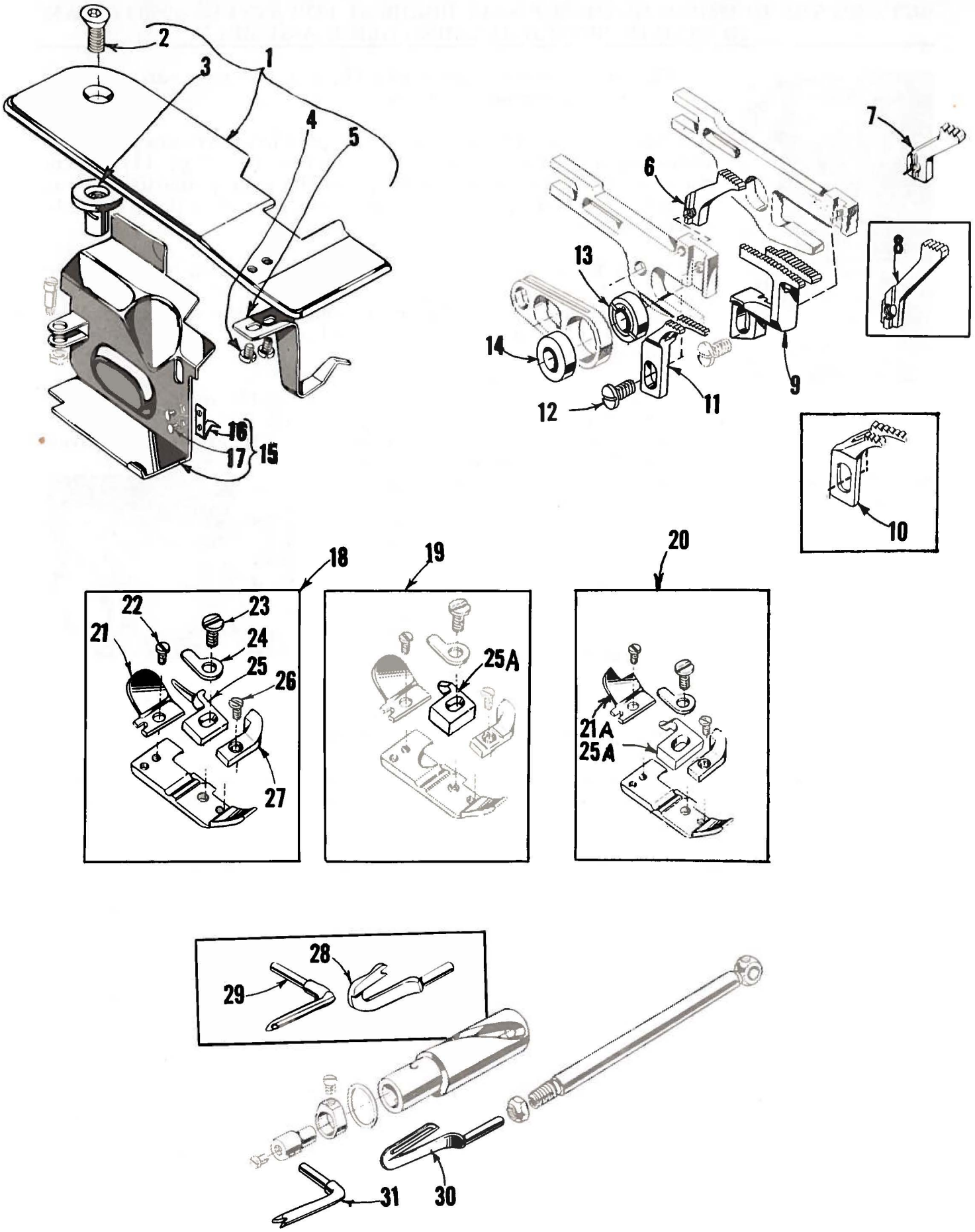


Fig. 18

FINAL ADJUSTMENT OF IMPROVED HEMMING GUIDE

Adjust the edge guide (D, Fig. 17) by turning the knurled adjusting screw (C) so that the stitches are located in the folded edge, yet do not show on the face of the fabric. At this point retighten screw (A, Fig. 17) securely.

Adjust the overhanging guide (F, Fig. 17) so that the space between its guiding edge and the edge guide (D) corresponds with the thickness of the material to be hemmed. Loosen set screw (C, Fig. 18) and holding screw (D), now move the hinge block (E) to obtain the proper distance between the edge guide and the overhanging guide. Retighten screws (C) and (D). Remove lock screw (F) and adjust stop screw that is in front of lock screw, so that the tip of the overhanging guide is located at the center of the edge guide vertically. Replace lock screw (F) and tighten against stop screw.



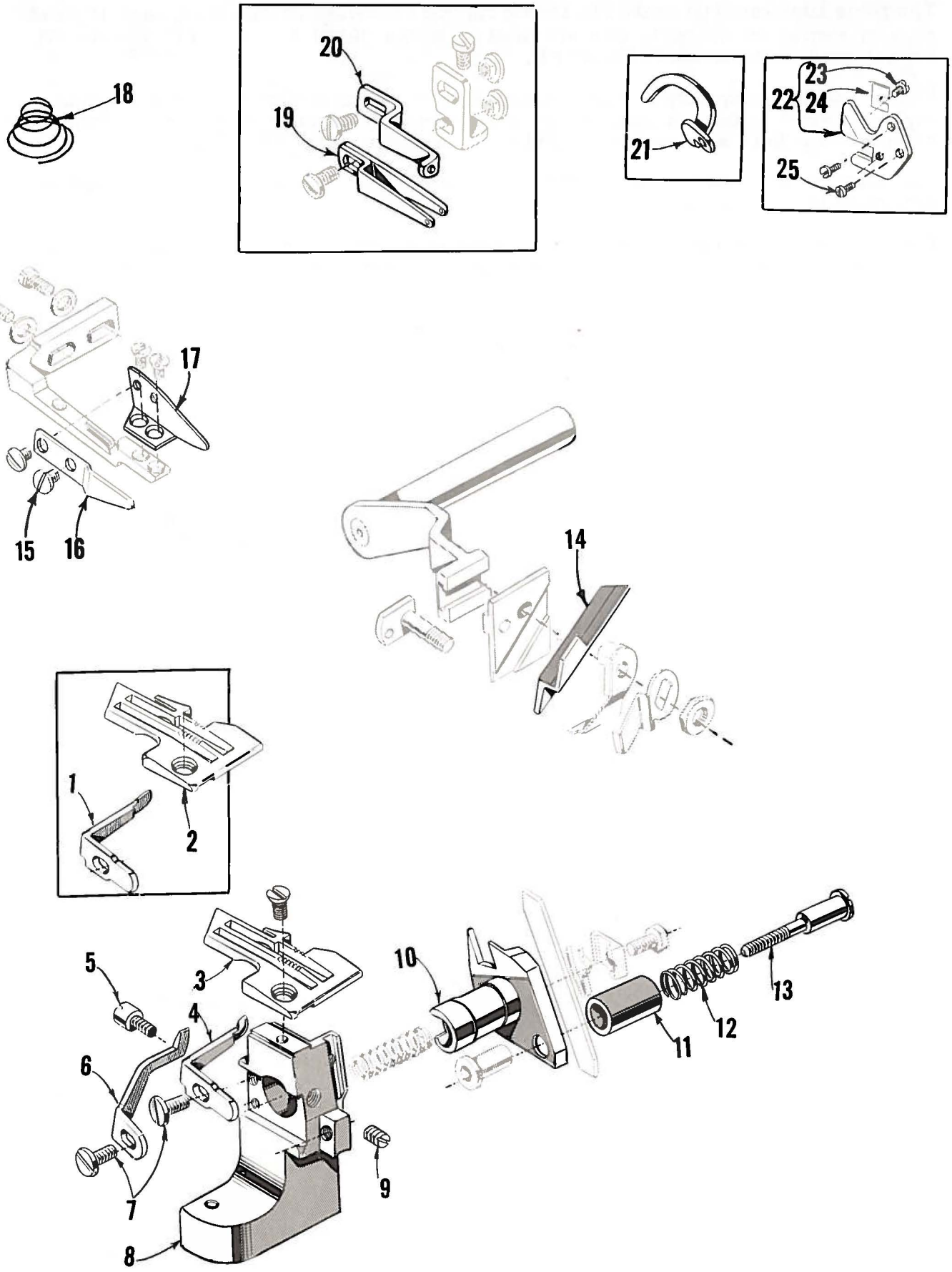
The parts illustrated on pages 16, 18 and 20, and described on this page, page 19, and page 21 represent the parts that are used on Styles 39500 FF, FG, FH, GN and JD, but not used on Styles 39500 FA or FB.

Unless otherwise specified in the description, the parts are used on all the machine styles covered in this catalog. Those parts shown in phantom views and bearing no reference numbers are common to Styles FA, FB, FF, FG, FH, GN and JD.

Use Catalog No. 103 FA (Styles 39500 FA or FB) for all parts not illustrated or described in this catalog.

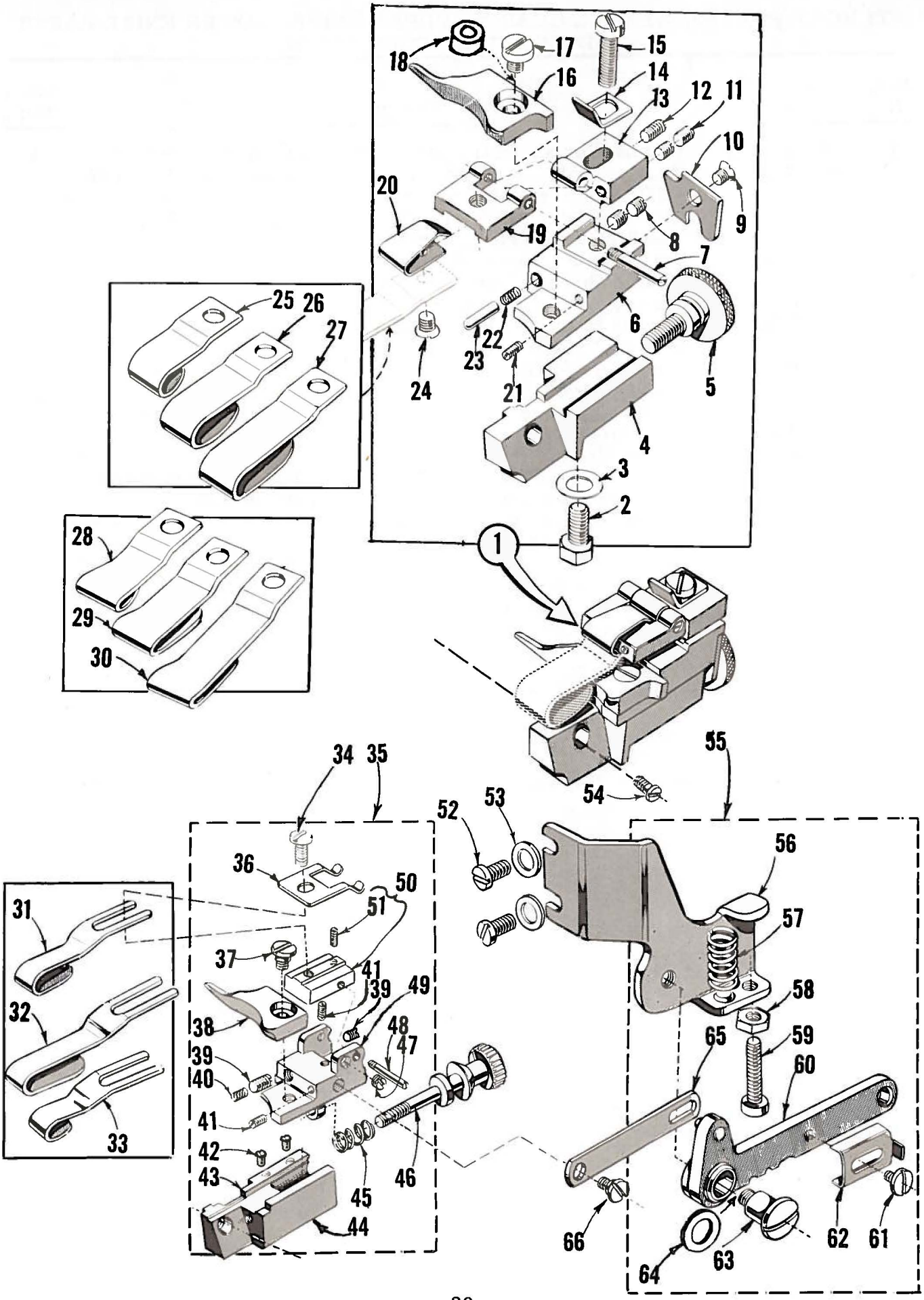
Reference numbers that are inside a bracket on the picture plates and have indented descriptions, indicate they are component parts of a complete part or assembly.

Ref. No.	Part No.	Description	Amt. Req.
1	39501 AP	Cloth Plate	1
2	22657 D-12	Screw, for cloth plate	1
3	39501 K	Cloth Plate Stud	1
4	22513	Screw, for latch spring	2
5	39532 D	Latch Spring	1
6	39505 G	Chaining Feed Dog, marked "S", for Styles 39500 FF, FG	1
7	39505 AL	Chaining Feed Dog, marked "CN", for Style 39500 GN	1
8	39505 H	Chaining Feed Dog, marked "U", for Styles 39500 FH, JD	1
9	39526 H	Differential Feed Dog	1
10	39505 BH	Main Feed Dog, marked "CM", for Style 39500 GN	1
11	39505 F	Main Feed Dog, marked "F", for Styles 39500 FF, FG, FH, JD	1
12	93 A	Screw, for main feed dog	1
13	39540 B-8	Differential Feed Driving Eccentric, for Styles 39500 FF, FG, FH, JD	1
-	39540 B-7	Differential Feed Driving Eccentric, for Style 39500 GN	1
14	39540 B-14	Main Feed Driving Eccentric, for Styles 39500 FF, FG, FH, JD	1
-	39540 B-9	Main Feed Driving Eccentric, for Style 39500 GN	1
15	39582 BR	Side Cover	1
16	39582 H	Spring	1
17	39582 J	Rivet	2
18	39520 G	Presser Foot, for Styles 39500 FF, FG	1
19	39520 H	Presser Foot, for Styles 39500 FH, JD	1
20	39520 BH	Presser Foot, for Style 39500 GN	1
21	39530 E	Presser Foot Chain Shield, for presser feet No. 39520 G and 39520 H	1
21A	39530 U	Presser Foot Chain Shield, for presser foot No. 39520 BH	1
22	22738	Screw, for chain shield	1
23	22768 B	Screw, for tongue and spring	1
24	39530	Presser Foot Hinge Spring	1
25	39597 F	Stitch Tongue, marked "DV", for presser foot No. 39520 G	1
25A	39597 A	Stitch Tongue, marked "DS", for presser feet Nos. 39520 H and 39520 BH	1
26	22738	Screw, for chip guard	1
27	39530 B	Chip Guard	1
28	39560 B	Lower Spreader, for Style 39500 GN	1
29	39508 A	Upper Looper, marked "CC" for Style 39500 GN	1
30	39508 B	Lower Looper, for Styles 39500 FF, FG, FH, JD	1
31	39560 A	Upper Spreader, marked "E", for Styles 39500 FF, FG, FH, JD	1



THROAT PLATES, NEEDLE GUARDS, UPPER KNIFE, LOWER KNIFE PARTS AND MISCELLANEOUS PARTS

Ref. No.	Part No.	Description	Amt. Req.
1	39525 K	Needle Guard, rear, for Style 39500 GN	1
2	39524 D	Throat Plate, marked "AM", for Styles 39500 FH, GN, JD	1
3	39524 G	Throat Plate, marked "AF", for Styles 39500 FF, FG	1
4	39525 E	Needle Guard, rear, for Styles 39500 FF, FG, FH, JD	1
5	22585 G	Screw, for locking side cover	1
6	39525 D	Needle Guard, front	1
7	90	Screw, for needle guards	2
8	39580 BA	Throat Plate and Lower Knife Support Bracket	1
9	88 B	Screw, for lower knife holder	1
10	39550 T	Lower Knife Holder	1
11	39550 K	Spring Cover	1
12	39550 J	Knife Pressure Equalizing Spring	1
13	22559 H	Adjusting Screw	1
14	39570 L	Upper Knife, for Style 39500 GN	1
15	22561	Screw, for presser foot tilt lever, for Style 39500 GN	2
16	39556 N	Presser Foot Tilt Lever, for Style 39500 GN	1
17	39578 V	Fabric Guard, for Style 39500 GN	1
18	39592 AR-4	Needle Thread Tension Spring	1
	39592 AR-4	Looper Thread Tension Spring, for Styles 39500 FF, FG, FH, GN	1
	39592 AR-5	Looper Thread Tension Spring, for Style 39500 JD	1
19	39568 B	Upper or Lower Looper Thread Eyelet	1
20	39568 E	Auxiliary Upper Looper Thread Eyelet, for Style 39500 GN	1
21	39563 J	Needle Thread Cam Pull-off	1
22	39556 M	Chain Cutting Knife	1
23	22798	Screw, for chain cutter blade	1
24	39556 L	Chain Cutter Blade	1
25	605	Screw, for chain cutting knife	2



HEMMER GUIDES ASSEMBLIES, OVERHANGING GUIDES AND OPERATING LEVER ASSEMBLY

Ref. No.	Part No.	Description	Amt. Req.
1	29481 L	Hemmer Guide Assembly, for Styles 39500 GN, JD	1
2	303	Screw, for edge guide support	1
3	61303 D	Cup Washer, for screw No. 303	1
4	39589 AC	Hemming Attachment Base	1
5	22873 C	Adjusting Screw, for edge guide support	1
6	39589 AD	Edge Guide Support	1
7	22799 B	Hinge Screw, for overhanging guide hinge block	1
8	22743	Screw, for edge guide tension spring	2
9	222 D	Screw, for hemmer guide end plate	1
10	39589 AF	Hemmer Guide End Plate	1
11	HA73 B	Stop Screw, for overhanging guide hinge block	2
12	73 C	Set Screw, for No. 22729 A	1
13	39589 AB	Hinge Block	1
14	39589 AJ	Hemmer Guide Stop	1
15	22729 A	Screw, for hemmer guide stop	1
16	39503 L	Edge Guide	1
17	22513 C	Screw, for edge guide	1
18	39589 AG	Sleeve, for edge guide	1
19	39589 AA	Overhanging Guide Hinge Block	1
20	39589 AH	Holding Spring	1
21	79077	Stop Screw, for edge guide	1
22	39568 J	Spring, for edge guide tension	1
23	39589 AL	Pin, for edge guide tension spring	1
24	222 D	Screw, for overhanging guide	1
25	39589 AK-1/2	Overhanging Guide, for 1/2 inch hem, for Style 39500 JD	1
26	39589 AK-3/4	Overhanging Guide, for 3/4 inch hem, for Style 39500 JD	1
27	39589 AK-1	Overhanging Guide, for 1 inch hem, for Style 39500 JD	1
28	39589 AE-1/2	Overhanging Guide, for 1/2 inch hem, for Style 39500 GN	1
29	39589 AE-3/4	Overhanging Guide, for 3/4 inch hem, for Style 39500 GN	1
30	39589 AE-1	Overhanging Guide, for 1 inch hem, for Style 39500 GN	1
31	39589 H-3/4	Overhanging Guide, for 3/4 inch hem, for Styles 39500 FF, FG, FH	1
32	39589 H-1	Overhanging Guide, for 1 inch hem, for Styles 39500 FF, FG, FH	1
33	39589 H-1/2	Overhanging Guide, for 1/2 inch hem, for Styles 39500 FF, FG, FH	1
34	98 A	Screw, for overhanging guide, for Styles 39500 FF, FG, FH	1
35	29481 F	Hemming Guide Assembly, for Styles 39500 FF, FG, FH	1
36	39589 U	Hemming Guide Hinge Spring	1
37	22760 A	Screw, for edge guide	1
38	39503 G	Edge Guide	1
39	22565 C	Screw	2
40	39568 J	Edge Guide Tension Spring	1
41	79077	Screw	2
42	22738	Screw	2
43	28-176 Blk.	Adjustable Insert Blank	1
44	39589 E	Overhanging Guide Base	1
45	39589 J	Spring	1
46	22873 B	Adjusting Screw	1
47	22743	Screw	1
48	22799 E	Hinge Screw	1
49	39589 G	Hinge Block and Edge Guide Support	1
50	39589 F	Overhanging Guide Hinge	1
51	77 Q	Screw	1
52	22569 C	Screw, for operating lever assembly, for Style 39500 FG	2
53	8372 A	Washer, for screw No. 22569 C	2
54	22593	Screw, for hemming guide assembly	1
55	29481 E	Operating Lever Assembly, for Style 39500 FG	1
56	39589 M	Operating Lever Bracket	1
57	36279 B	Spring	1
58	9937	Nut	1
59	22874	Screw	1
60	39589 K	Operating Lever	1
61	22726 A	Screw	1
62	39589 N	Operating Lever Slide Member	1
63	22557 D	Screw	1
64	61256 G	Washer	1
65	39589 L	Operating Lever Link	1
66	22560 A	Screw, for operating lever link, for Style 39500 FG	1

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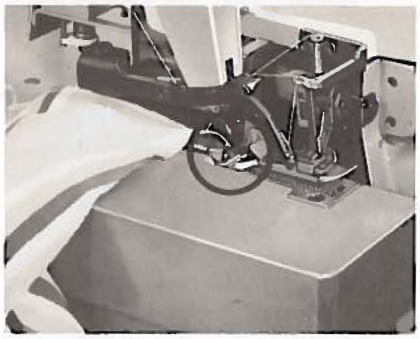
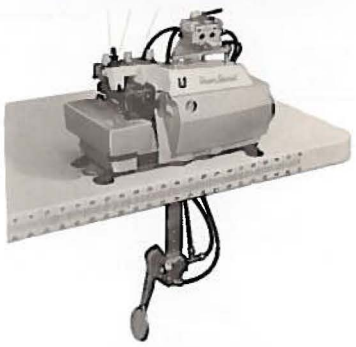
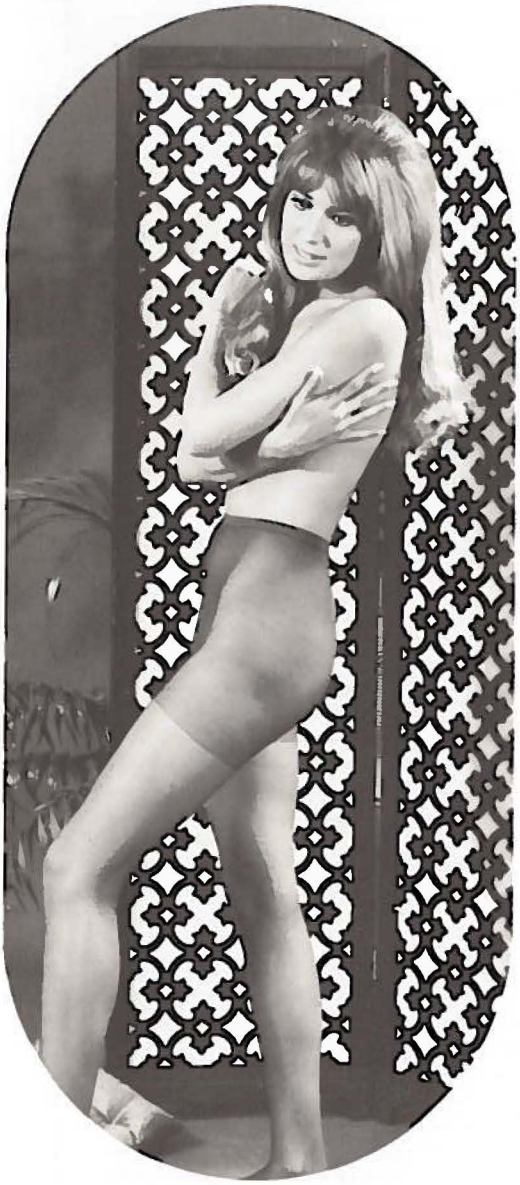
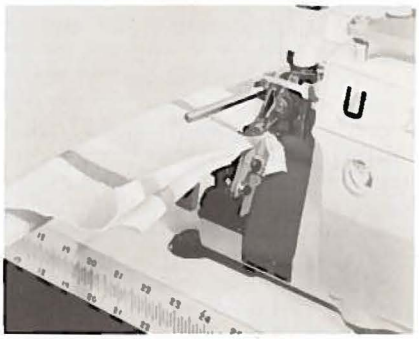


PNEUMATIC CHAIN-CUTTER—for use on conventional Class 39500 and 39600 is a durable scissor-action mechanism that makes a clean positive cut. Style 2899 A-1

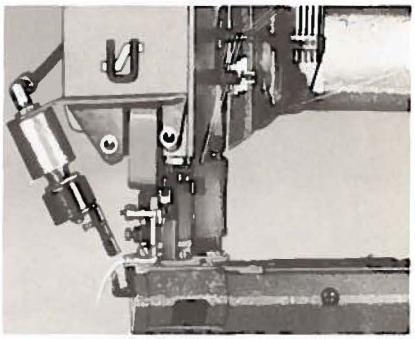


PNEUMATIC FOOT LIFTER—The air-operated foot lifter for use on Class 39500 machines allows the operator to raise the foot simply by knee-touching an actuating switch.



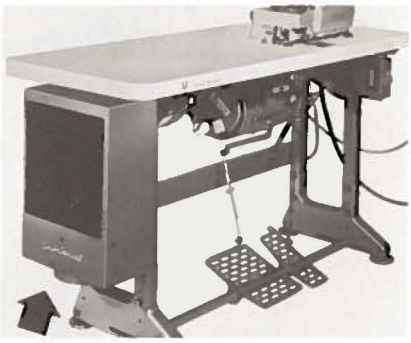


AIR FABRIC UNCURLER—This unit, designed for Class 39500 machines, uses air jets to remove curls from top and bottom plies of flat knit materials as fabric passes through sewing area. Style 2899 B-1

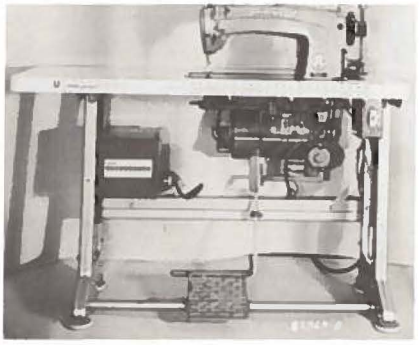


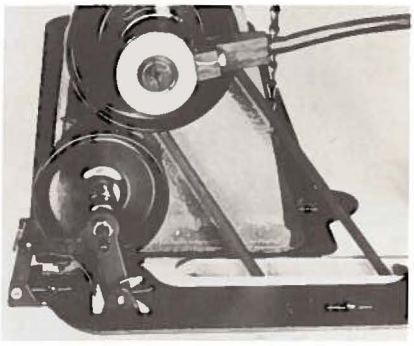
CHAIN CUTTER—The above photo shows the small pneumatic chain cutter that is available for installation as an accessory unit on Class 36200 Flatseamers. Style 2899A-6

KNIFE GRINDER sharpens straight or angle type knives, is simple and easy to operate, eliminates defective garments caused by dull knives.



HEAT DISPELLER—Union Special's auxiliary unit (arrow) is an effective means for reducing oil temperature where heavy duty service requires it. Style 2899 E-1





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No. 750, "Fusing Presses"
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"Columbia Blindstitch, Saddle Stitch, and Tie Closing Machines"
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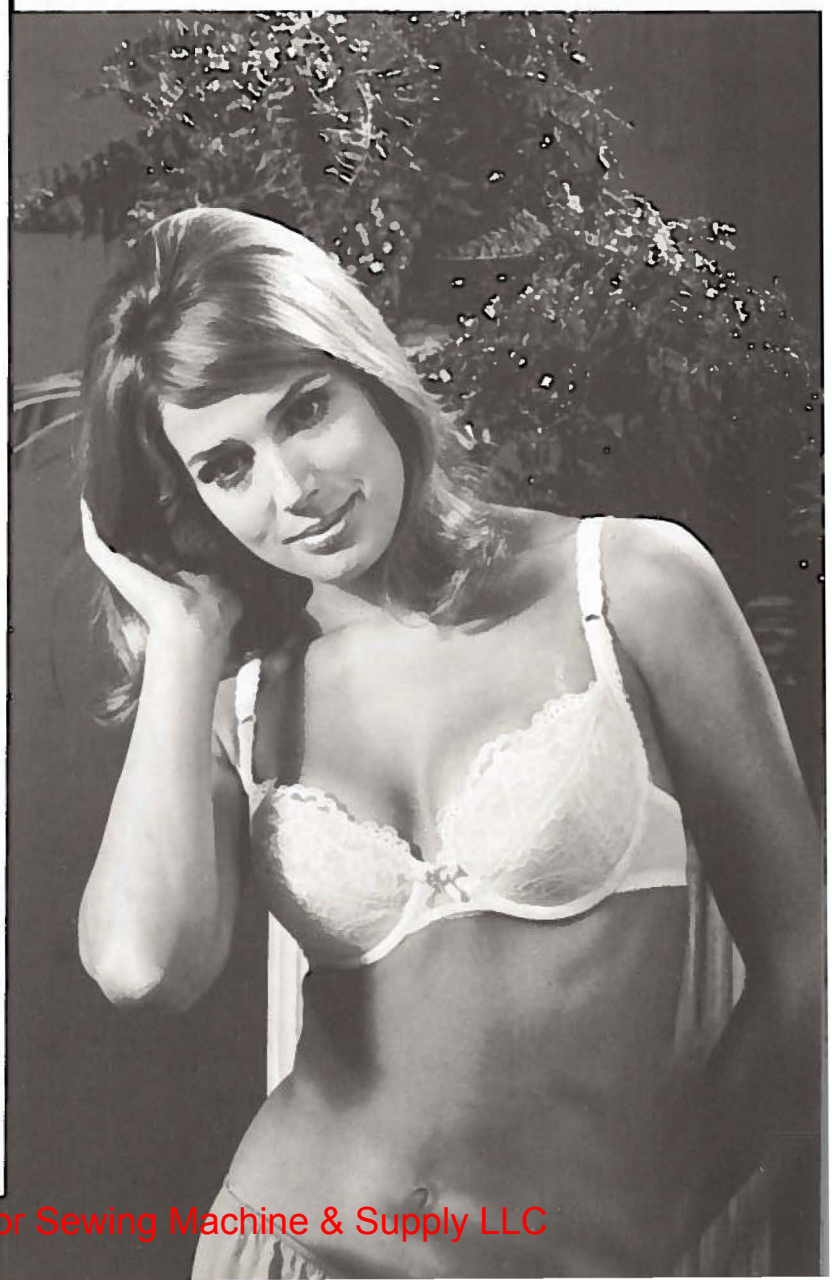

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