

FEED ECCENTRICS (Continued)

The 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 one eccentric is supplied with each machine. Additional eccentrics may be ordered separately. To order an eccentric, use number 39540 B with a minor number suffixed to indicate number of stitches desired. Example: "39540 B-5"

INSTRUCTIONS FOR THREADING STYLES 39500 J & K

THREAD STAND

After thread comes from cone on thread stand (R, Fig. 1), it is brought up through back thread eyelet, then down through front thread eyelet (S). Next it is threaded down through right hand hole of each pair of holes in tension thread guide wire (A). Then thread continues between tension discs (AD), through slot (AE), and on through thread guide (B).

THREADING

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

It will simplify threading this machine to follow recommended sequence of threading lower looper first, needle second.

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

Be sure threads, as they come from the tension thread guide, are between tension discs (AD) and in diagonal slots (AE) in tension posts (AC).

TO THREAD LOWER LOOPER

Double end of thread and lead it through both eyes of lower looper thread eyelet (C, Fig. 1) from right to left. NOTE: Thread must pass in front of looper thread pull-off (D). Lead thread behind fabric guard (E) and through both holes of frame looper thread guide (F). Turn handwheel in operating direction until heel of lower looper (H) is all the way to the left; then thread through both eyes from left to right. Right eye of lower looper can be threaded easily if tweezers are in left hand.

TO THREAD THE NEEDLE

Turn handwheel in operating direction until needle (L, Fig. 1) is at its highest position. Insert needle thread from back to front, through eye of needle thread eyelet (N), under neck of top cover casting, then right to left through hole in needle thread pull-off eyelet (M). Thread needle from front.

THREAD TENSION

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

STARTING TO OPERATE STYLES 39500 J & K

Be sure machine is threaded according to threading diagram (Fig. 1, page 8).

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

Operate machine slowly, without presser foot in place, to make sure chain forms and moves off tongue freely.

Swing presser foot into position; insert material; sew slowly.

NEEDLE THREAD CONTROL

While sewing on material, check needle thread control as follows: About 75% of needle thread required for the stitch should be drawn on needle downstroke. To increase thread drawn on downstroke, position needle thread eyelet (N) farther to the rear.

LOWER LOOPER THREAD CONTROL

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

Frame looper thread guide (F) should be set with its left hand eyelet approximately 1/8 inch right of looper (H) heel eyelet 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 effect 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 11.
2. Recheck spreader - lower looper crossing. See "Setting the Spreader", page 12.
3. Check clearance between needle and spreader. See that spreader moves far enough left past needle.

Settings 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 looper thread eyelet (C) by lowering it slightly and bringing eyelet holes in close to bend in looper thread pull-off (D). 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 STYLES 39500 L & M

Be sure machine is threaded according to threading diagram (Fig. 1A, p. 9).

With thread tensions light, set upper and lower looper thread eyelets (C & E) about horizontal and in the middle of their front to back locations.

Operate machine slowly, without presser foot in place, to make sure that chain forms and moves off the tongue freely.

Swing presser foot into position, insert material, and sew slowly.

NEEDLE THREAD CONTROL

While sewing on material, check needle thread control as follows: About 60% of needle thread required for the stitch should be drawn on needle downstroke.

To increase thread drawn on downstroke, position needle thread eyelet (R, Fig. 1A) farther to the rear.

LOWER LOOPER THREAD CONTROL

Set lower looper thread eyelet (E, Fig. 1A) about horizontal and all the way forward in its slot.

Frame looper thread guide (G) should be set with its left hand eyelet approximately 1/8 inch right of lower looper heel eyelet, when lower looper is at the left end of its stroke.

UPPER LOOPER THREAD CONTROL

With material under presser foot, set upper looper thread eyelet (C, Fig. 1A) to rest on top of lower looper thread eyelet (E), and back far enough so upper looper thread is a little slack when upper looper reaches the left end of its stroke.

POSITIONING THE SQUARE EDGE

Position of lower looper thread at the edge is located by balancing needle and upper looper thread tensions.

To reduce amount of lower looper thread in the stitch, or close the edge more, increase lower looper thread tension.

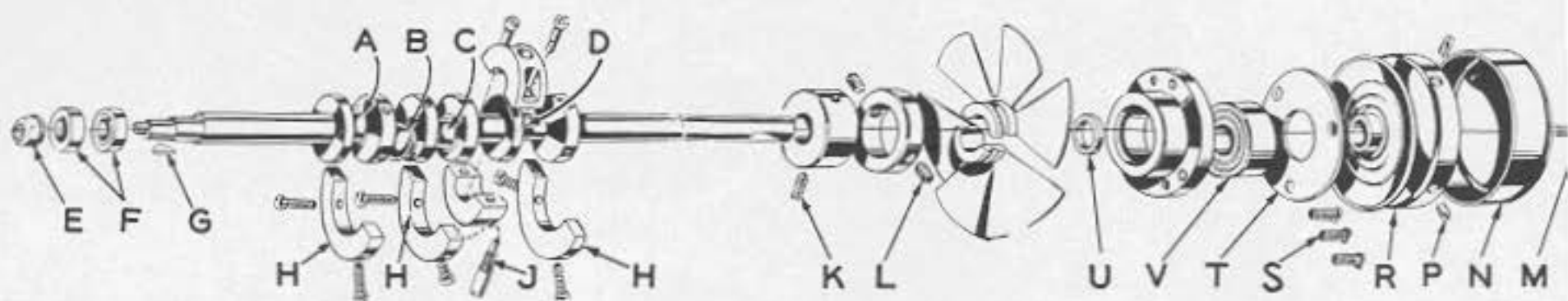


Fig. 17

TO REMOVE CRANKSHAFT

Crankshaft can be withdrawn easier if these steps are followed:

1. Drain oil by removing plug screw located on back of machine near bottom edge of base.
2. Remove top and bottom covers of machine.
3. Remove feed eccentric nut (E, Fig. 17) and, with the aid of the eccentric extractor, slip off the eccentrics (F).
4. Remove key (G).
5. Remove three counterweights (H). Identify these counterweights so that they will be re-assembled in the proper places.
6. Remove screw (J) which holds crankshaft split bearing. This screw is reached through bottom of bed casting.
7. Remove caps of bearings on crankshaft at points A, P, and D. When re-assembling bearing caps make sure they are in their original position. Trade marks are stamped on both halves of the caps and both trade marks should be on the same side of the bearings. Also, screws should be re-assembled in the same holes from which they were removed.
8. Loosen clamp nut (A, Fig. 18) which holds upper knife driving arm (B). Access to clamp nut is through top cover. Draw driving arm to the left until upper knife driving lever (C) and connecting rod (D) drop, allowing removal of bearing cap (E). This is at bearing point (C, Fig. 17) on crankshaft. Observe same precautions when re-assembling cap as described in 7 above.
9. Remove screw (K, Fig. 17) which holds inner right crankshaft bearing. This screw is reached through bottom of bed casting.
10. Loosen two screws (L) in fan collar; remove both halves of cooling fan.
11. Remove screw (M); take off pulley cap (N).
12. Loosen two screws (P); remove pulley (R).
13. Remove three screws (S); take off bearing retaining plate (T).
14. Crankshaft may now be removed.
15. If necessary to replace ball bearing (V), it should be pressed off shaft on an arbor press. In replacing bearing it must be pressed on carefully until it seats against ground thrust washer (U).
16. Carefully observing reverse of the foregoing operations should simplify re-assembly of crankshaft. Checking exploded view drawings for location of various parts and constant testing for binds during re-assembly will also prove helpful.
17. Before re-assembling, thoroughly clean and dry top and bottom covers and gaskets. Before re-assembling bottom cover make sure that spring pressed oil wick which lubricates left crankshaft bearing is inserted in hole in casting and that it contacts shaft. The wick stands vertically on its spring against bottom cover. Coat oil drain plug with a sealing compound before re-assembling to prevent oil leakage. No. 1 Crane Lead Seal is recommended.

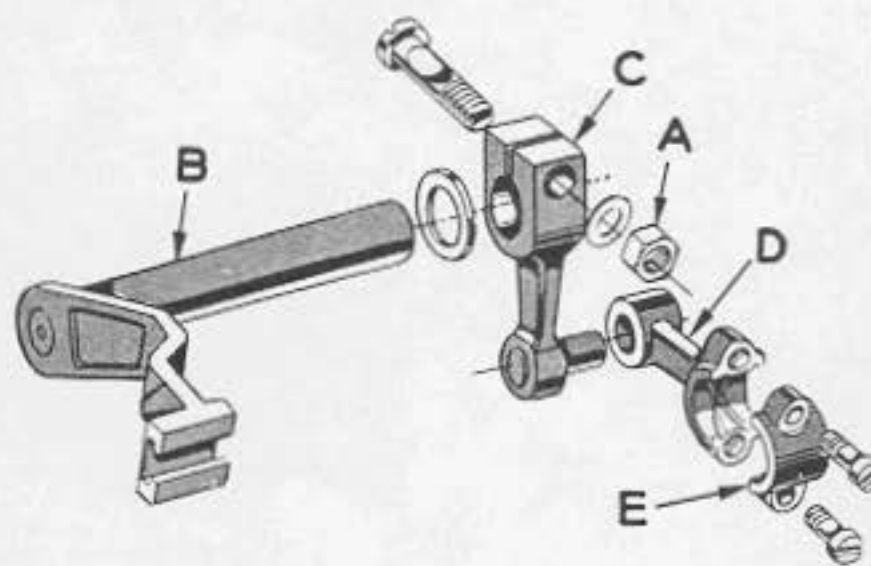


Fig. 18

ORDERING REPAIR PARTS

ILLUSTRATIONS

This catalog has been arranged to simplify ordering repair parts. Exploded views of various sections of the mechanism are shown so that the parts may be seen in their actual position in the machine. On the page opposite the illustration will be found a listing of the parts with their part number, description and the number of pieces required in the particular view being shown.

Numbers in the first column are reference numbers only, and merely indicate the position of that part in the illustration. Reference numbers should never be used in ordering parts. Always use the part number listed in the second column.

Component parts of sub-assemblies which can be furnished for repairs are indicated by indenting their descriptions under the description of the main sub-assembly. Example:

| | | | |
|-----|----------|---|---|
| 41 | 29126 DF | Lower Looper Drive Lever Connecting Rod Assembly----- | 1 |
| 42 | 22729 D | Screw, for No. 39544 N ----- | 2 |
| 42A | 22729 E | Screw, for No. 39544 N ----- | 2 |
| 43 | 97 | Screw, for No. 39544 S ----- | 2 |
| 44 | 39544 S | Ball Joint Guide Fork ----- | 1 |
| 45 | 39544 U | Lower Looper Bar Driving Lever----- | 1 |

It will be noted in the above example that the eccentric, ball stud, and bearing are not listed. The reason is that replacement of these parts individually is not recommended, so complete sub-assembly should be ordered.

Where parts for Styles 39500 J, 39500 K, 39500 L and 39500 M are not the same, the difference will be shown in the illustrations or mentioned in the descriptions. When a part is used in all machines covered by this catalog no machine style will be mentioned.

At the back of the book will be found a numerical index of all the parts shown in this book. This will facilitate locating the illustration and description when only the part number is known.

IDENTIFYING PARTS

Where the construction permits, each part is stamped with its part number. On some of the smaller parts, and on those where construction does not permit, an identification letter is stamped in to distinguish the part from similar ones.

PART NUMBERS REPRESENT THE SAME PART, REGARDLESS OF CATALOG IN WHICH THEY APPEAR.

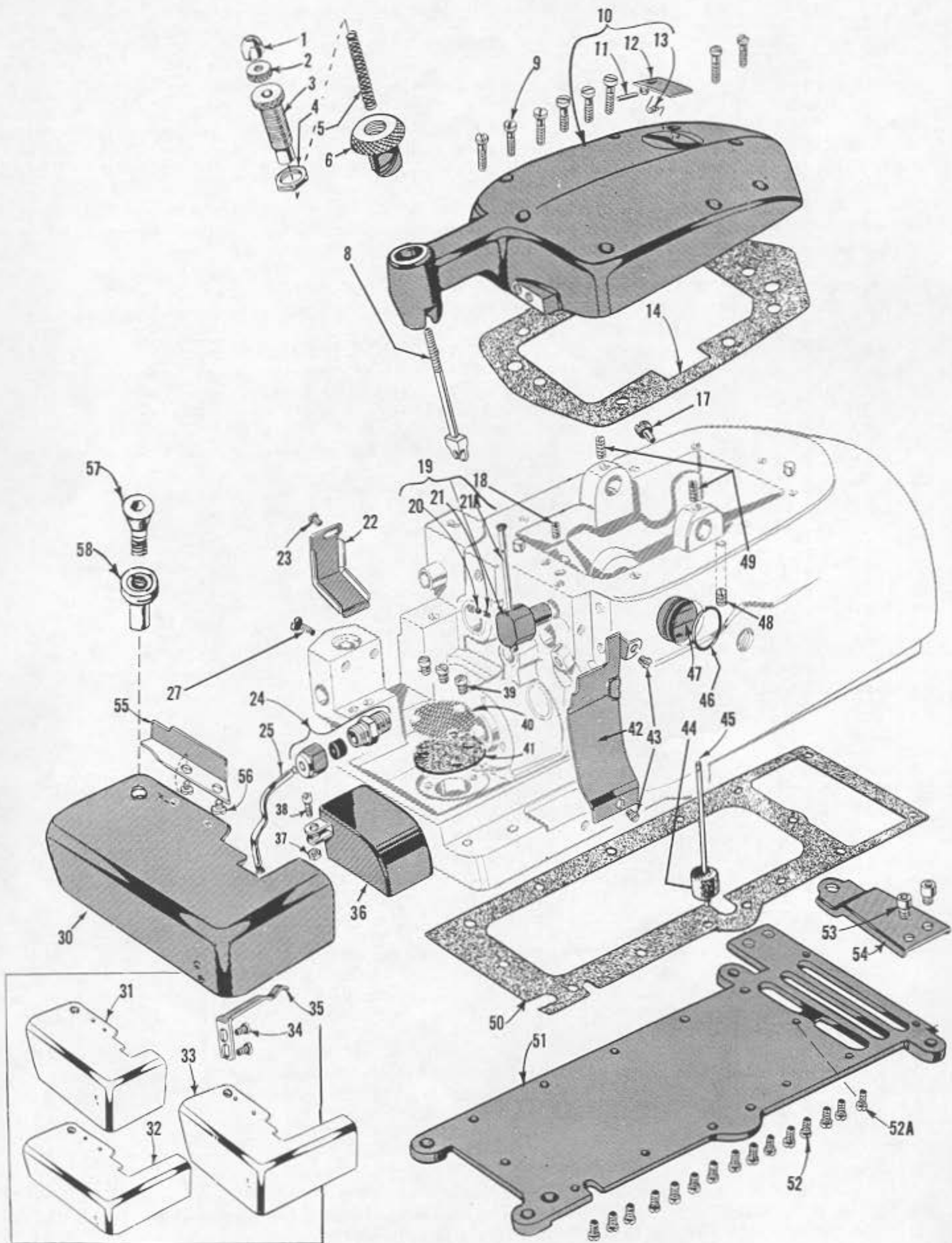
USE GENUINE NEEDLES AND REPAIR PARTS

Success in the operation of these machines can be secured only with genuine Union Special Needles and Repair Parts as furnished by the Union Special Machine Company, its subsidiaries and authorized distributors. They are designed according to the most scientific principles, and are made with utmost precision. Maximum efficiency and durability are assured.

Genuine needles are packaged with labels marked *Union Special*. Genuine repair parts are stamped with the Union Special trademark. Each trademark is your guarantee of the highest quality in materials and workmanship.

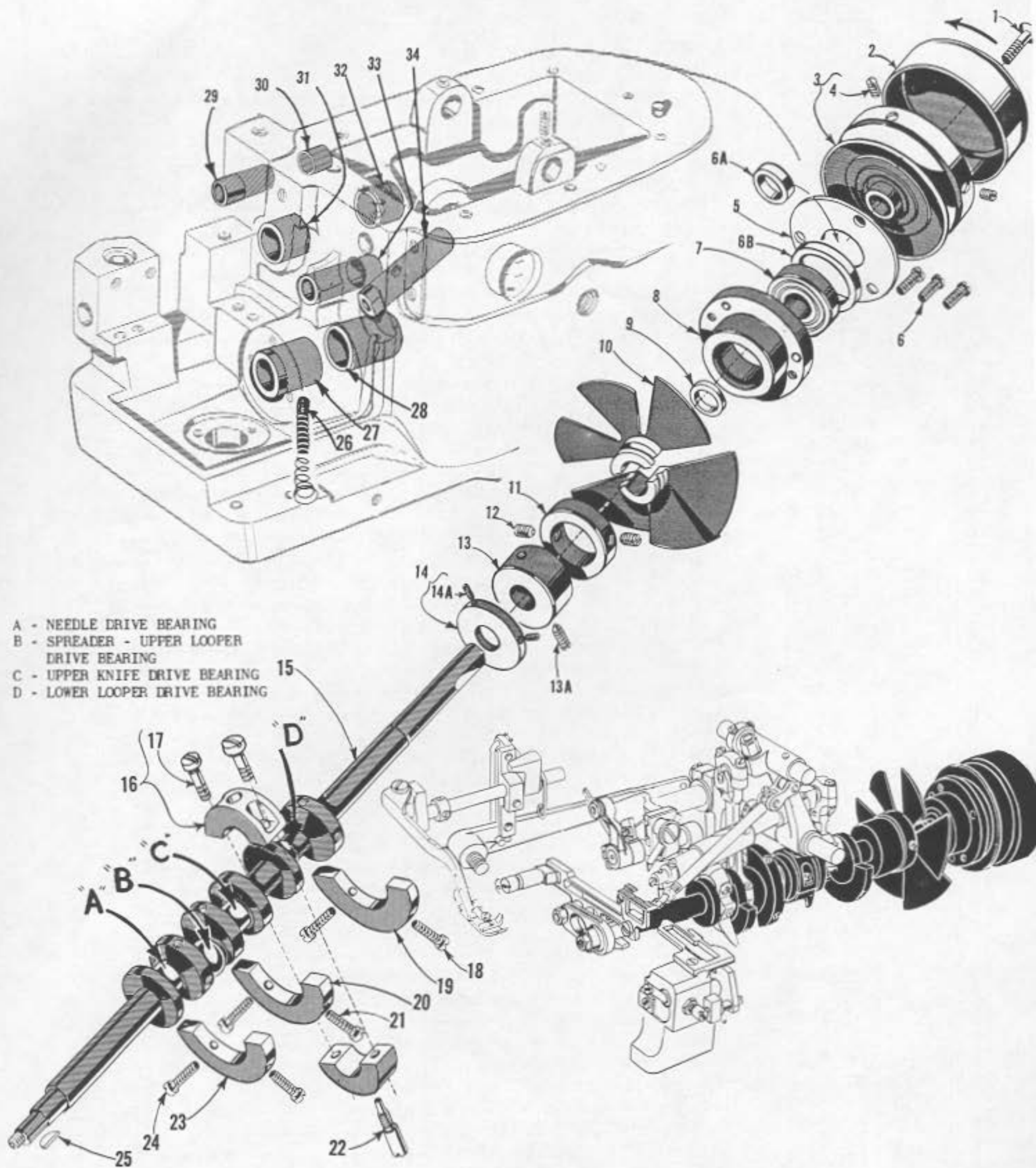
TERMS

Prices are net cash and subject to change without notice. All shipments are forwarded f. o. b. shipping point. Parcel post shipments are insured unless otherwise directed. A charge is made to cover postage and insurance.



MAIN FRAME, MISCELLANEOUS COVERS, PLATES

| <u>Ref. No.</u> | <u>Part No.</u> | <u>Description</u> | <u>Amt. Req.</u> |
|---------------------|---------------------|---|----------------------|
| 1 | 39557 B | Presser Spring Plunger Cap Nut ----- | 1 |
| 2 | 39557 E | Presser Spring Plunger Locking Nut----- | 1 |
| 3 | 39557 C | Presser Spring Plunger Adjusting Screw ----- | 1 |
| 4 | 39557 F | Lock Nut - Adjusting Screw----- | 1 |
| 5 | 39557 | Presser Spring----- | 1 |
| 6 | 39556 A | Presser Foot Release Bushing ----- | 1 |
| 8 | 39557 A | Presser Spring Plunger ----- | 1 |
| 9 | 22541 | Screw - Top Cover ----- | 8 |
| 10 | 39582 S | Top Cover ----- | 1 |
| 11 | 51-103 Blk. | Hinge Pin----- | 1 |
| 12 | 39582 L | Oil Filler Cover----- | 1 |
| 13 | 39582 V | Spring----- | 1 |
| 14 | 39582 AA | Top Cover Gasket ----- | 1 |
| 17 | 22571 E | Oil Drain Plug Screw ----- | 1 |
| 18 | 22565 | Screw - Upper Looper Thread Tube Assembly ----- | 1 |
| 19 | 29477 GW | Upper Looper Thread Tube Assembly----- | 1 |
| 20 | 22743 | Screw - Tube Tension Spring ----- | 1 |
| 21 | 39568 J | Looper Thread Tube Tension Spring ----- | 1 |
| 21A | 39568 G | Thread Tube ----- | 1 |
| 22 | 39534 R | Feed Bar Oil Shield----- | 1 |
| 23 | 90 | Screw - Feed Bar Oil Shield ----- | 1 |
| 24 | 660-234 | Oil Tube Coupling ----- | 1 |
| 25 | 39594 A | Feed Eccentric Spacer Oil Tube----- | 1 |
| 27 | 22569 | Screw - Cloth Plate Stud ----- | 1 |
| 30 | 39501 A | Cloth Plate, semi-submerged installation ----- | 1 |
| 31 | 39501 | Cloth Plate, nonsubmerged installation ----- | 1 |
| 32 | 39501 C | Cloth Plate, semi-submerged installation ----- | 1 |
| 33 | 39501 B | Cloth Plate, nonsubmerged installation ----- | 1 |
| 34 | 90 | Screw - Latch Spring ----- | 2 |
| 35 | 39532 A | Cloth Plate Latch Spring ----- | 1 |
| 36 | 39582 K | Feed Mechanism Cover----- | 1 |
| 37 | 41071 G | Nut - Feed Mechanism Cover ----- | 1 |
| 38 | 86 X | Screw - Feed Mechanism Cover----- | 1 |
| 39 | 22569 A | Screw - Oil Screen and Strainer----- | 3 |
| 40 | 39594 G | Oil Filter Screen ----- | 1 |
| 41 | 39594 H | Oil Strainer----- | 1 |
| 42 | 39578 BB | Chip Guard ----- | 1 |
| 43 | 22569 D | Screw - Chip Guard----- | 2 |
| 44 | 39593 C | Oil Gauge Float ----- | 1 |
| 45 | 39593 D | Oil Gauge Indicator ----- | 1 |
| 46 | 660-243 | Oil Gauge Seal Ring----- | 1 |
| 47 | 39593 E | Oil Sight Gauge----- | 1 |
| 48 | 22894 AD | Screw - Lower Looper Bar Lever Shaft ----- | 2 |
| 49 | 22565 | Screw - Upper Looper Drive Lever Shaft----- | 2 |
| 50 | 39582 Y | Bottom Cover Gasket----- | 1 |
| 51 | 39582 X | Bottom Cover ----- | 1 |
| 52 | 22569 C | Screw - Bottom Cover ----- | 14 |
| 52A | 22586 R | Screw - Bottom Cover ----- | 1 |
| 53 | 22653 D-4 | Screw - Bottom Cover Extension ----- | 2 |
| 54 | 39582 F | Bottom Cover Extension----- | 1 |
| 55 | 39578 F | Cloth Plate Fabric Guard----- | 1 |
| 56 | 138 | Screw - Fabric Guard----- | 2 |
| 57 | 22657 D-12 | Screw - Cloth Plate----- | 1 |
| 58 | 39501 K | Stud - Cloth Plate ----- | 1 |

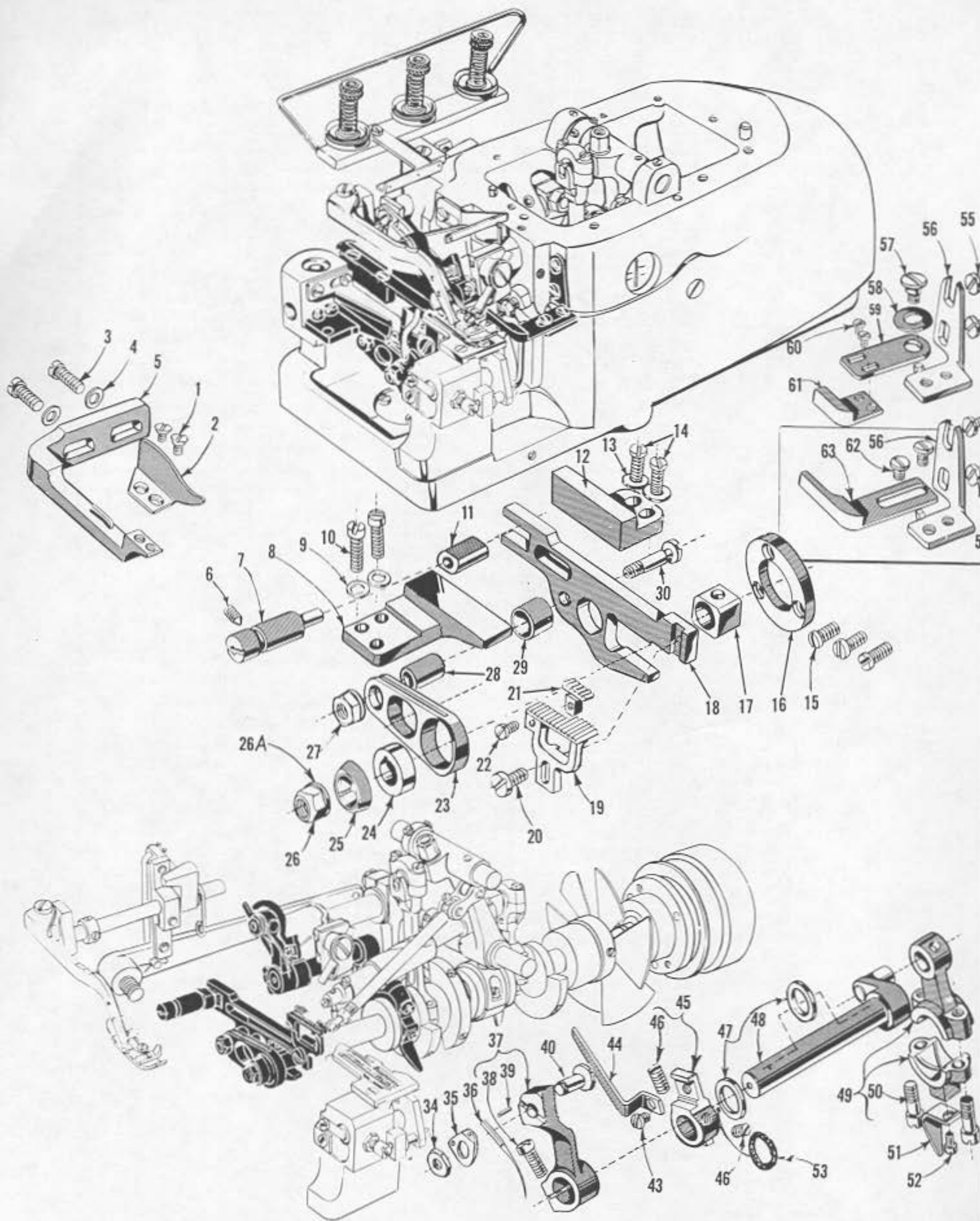


CRANKSHAFT MECHANISM AND BUSHINGS

| Ref. No. | Part No. | Description | Amt. Req. |
|-------------|-------------|---|--------------|
| 1 | 22769 A | Screw, for pulley cap ----- | 1 |
| 2 | 39521 A | Pulley Cap ----- | 1 |
| 3 | 39521 | Pulley ----- | 1 |
| 4 | 95 | Screw ----- | 2 |
| 5 | 39590 H | Crankshaft Ball Bearing Retaining Plate ----- | 1 |
| 6 | 22569 | Screw ----- | 3 |
| 6A | 39590 S | Spacer Collar ----- | 1 |
| 6B | 39590 R | Ball Bearing Stop Collar ----- | 1 |
| 7 | 660-268 | Crankshaft Ball Bearing ----- | 1 |
| 8 | 39590 G | Crankshaft Ball Bearing Housing ----- | 1 |
| 9 | 39590 J | Thrust Washer ----- | 1 |
| 10 | 39591 L | Crank Chamber Cooling Fan ----- | 1 |
| 11 | 39591 H | Crank Chamber Cooling Fan Collar ----- | 1 |
| 12 | 22894 D | Screw ----- | 2 |
| ‡13 | | Crankshaft Bearing, inner right ----- | 1 |
| 13A | 22565 F | Screw ----- | 1 |
| 14 | 39590 P | Oil Slinger Collar ----- | 1 |
| 14A | 77 Q | Screw ----- | 2 |
| *15 | | Crankshaft ----- | 1 |
| 16 | 39590 D | Crankshaft Split Bearing ----- | 1 |
| 17 | 97 A | Screw, for split bearing ----- | 2 |
| 18 | 22747 B | Screw, for crankshaft counterweight ----- | 2 |
| 19 | 39591 B | Crankshaft Counterweight, right ----- | 1 |
| 20 | 39591 A | Crankshaft Counterweight, middle ----- | 1 |
| 21 | 22747 B | Screw, for crankshaft counterweight ----- | 2 |
| 22 | 39590 N | Stud, for crankshaft split bearing ----- | 1 |
| 23 | 39691 | Crankshaft Counterweight, left ----- | 1 |
| 24 | 22747 B | Screw, for crankshaft counterweight ----- | 2 |
| 25 | 39541 | Feed Driving Eccentric Key ----- | 1 |
| 26 | 666-94 | Oil Wick and Spring ----- | 1 |
| 27 | 39590 | Crankshaft Bushing, left ----- | 1 |
| 28 | 39590 C | Crankshaft Bushing, inner left ----- | 1 |
| 29 | 39555 E | Foot Lifter Shaft Bushing, left ----- | 1 |
| 30 | 39142 G | Foot Lifter Shaft Bushing, right ----- | 1 |
| 31 | 39573 K | Upper Knife Driving Arm Bushing, left ----- | 1 |
| 32 | 39573 AA | Upper Knife Driving Arm Bushing, right ----- | 1 |
| 33 | 39552 B | Needle Driving Arm Crank Bushing ----- | 1 |
| 34 | 39544 L | Lower Looper Bar Bushing ----- | 1 |

‡ Discontinued - For customer repair, order Kit of Parts No. 29480 LB.

* Discontinued - For customer repair, order Crankshaft and Needle Driving Crank Sub-Assembly No. 29477 JA.



NEEDLE DRIVE AND FEED MECHANISM

| Ref. No. | Part No. | Description | Amt. Req. |
|-------------|-------------|--|--------------|
| 1 | 87 | Screw - Fabric Guard----- | 2 |
| 2 | 39578 M | Fabric Guard, for Style 39500 J----- | 1 |
| - | 39578 R | Fabric Gaurd, for Styles 39500 K, L, M----- | 1 |
| 3 | 22569 B | Screw - Mounting Bracket----- | 2 |
| 4 | 8372 A | Mounting Bracket Washer----- | 2 |
| 5 | 39578 P | Fabric Guard Mounting Bracket----- | 1 |
| 6 | 22565 F | Screw - Adjusting Pin----- | 1 |
| 7 | 39535 C | Feed Tilting Adjusting Pin----- | 1 |
| 8 | 39535 F | Main Feed Bar Guide, left----- | 1 |
| 9 | 53634 C | Feed Bar Guide Washer----- | 2 |
| 10 | 22569 | Screw - Feed Bar Guide, left----- | 2 |
| 11 | 39535 J | Feed Bar Guide Block----- | 1 |
| 12 | 39535 D | Feed Bar Guide, right----- | 1 |
| 13 | 53634 C | Feed Bar Guide Washer----- | 2 |
| 14 | 22569 B | Screw - Feed Bar Guide, right----- | 2 |
| 15 | 22569 G | Screw - Thrust Washer----- | 3 |
| 16 | 39534 H | Feed Bar Thrust Washer----- | 1 |
| 17 | 39538 | Feed Lift Block----- | 1 |
| 18 | 39534 G | Main Feed Bar----- | 1 |
| 19 | 39505 J | Main Feed Dog----- | 1 |
| 20 | 22528 | Screw - Main Feed Dog----- | 1 |
| 21 | 39505 K | Chaining Feed Dog----- | 1 |
| 22 | 22768 B | Screw - Chaining Feed Dog----- | 1 |
| 23 | 39536 A | Main Feed Bar Driving Connection----- | 1 |
| 24 | 39540 B-5 | Main Feed Driving Eccentric, .124 inch throw----- | 1 |
| 25 | 39540 J | Feed Eccentric Spacer and Oil Slinger----- | 1 |
| 26 | 18 | Nut - Crankshaft----- | 1 |
| 26A | 20 | Washer----- | 1 |
| 27 | 39536 E | Nut - Feed Bar Driving Stud----- | 1 |
| 28 | 39536 C | Feed Bar Driving Connection Bushing----- | 1 |
| 29 | 39536 D | Feed Bar Spacer----- | 1 |
| 30 | 39536 B | Feed Bar Driving Stud----- | 1 |
| 34 | 14077 | Nut - Needle Clamp Stud----- | 1 |
| 35 | 39563 Z | Needle Thread Pull-off Eyelet----- | 1 |
| 36 | | Needle----- | 1 |
| 37 | 39552 | Needle Driving Arm----- | 1 |
| 38 | 22596 E | Screw - Needle Driving Arm----- | 1 |
| 39 | 50-774 Blk. | Stop Pin - Needle Driving Arm----- | 1 |
| 40 | 39551 F | Needle Clamp Stud----- | 1 |
| 43 | 22564 | Screw - Looper Thread Pull-off----- | 1 |
| 44 | 39568 A | Looper Thread Pull-off----- | 1 |
| 45 | 39568 Y | Looper Thread Pull-off Lever----- | 1 |
| 46 | 88 B | Screw - Looper Thread Pull-off Lever----- | 2 |
| 47 | 39552 C | Needle Driving Arm Crank Thrust Washer----- | 2 |
| 48 | 39552 A | Needle Driving Arm Crank----- | 1 |
| 49 | 39552 E | Needle Driving Arm Crank Connecting Rod----- | 1 |
| 50 | 22587 J | Screw - Connecting Rod----- | 2 |
| 51 | 39594 N | Oil Splasher----- | 1 |
| 52 | 77 | Screw - Oil Splasher----- | 1 |
| 53 | 660-207 | Oil Seal Ring----- | 1 |
| 55 | 22569 C | Screw - Mounting Bracket----- | 2 |
| 56 | 39503 C | Edge Guide Mounting Bracket----- | 1 |
| 57 | 22758 E | Screw - Swinging Arm, for Styles 39500 J & L----- | 1 |
| 58 | 12957 E | Swinging Arm Spring Washer, for Styles 39500 J & L----- | 1 |
| 59 | 39503 D | Edge Guide Swinging Arm, for Styles 39500 J & L----- | 1 |
| 60 | 604 | Screw - Adjustable Edge Guide, for Styles 35900 J & L----- | 2 |
| 61 | 39503 A | Edge Guide, adjustable, for Styles 39500 J & L----- | 1 |
| 62 | 22570 | Screw - Stationary Edge Guide, for Styles 39500 K & M----- | 2 |
| 63 | 39503 | Edge Guide, stationary, for Styles 39500 K & M----- | 1 |

STYLES 39500 J & K ONLY

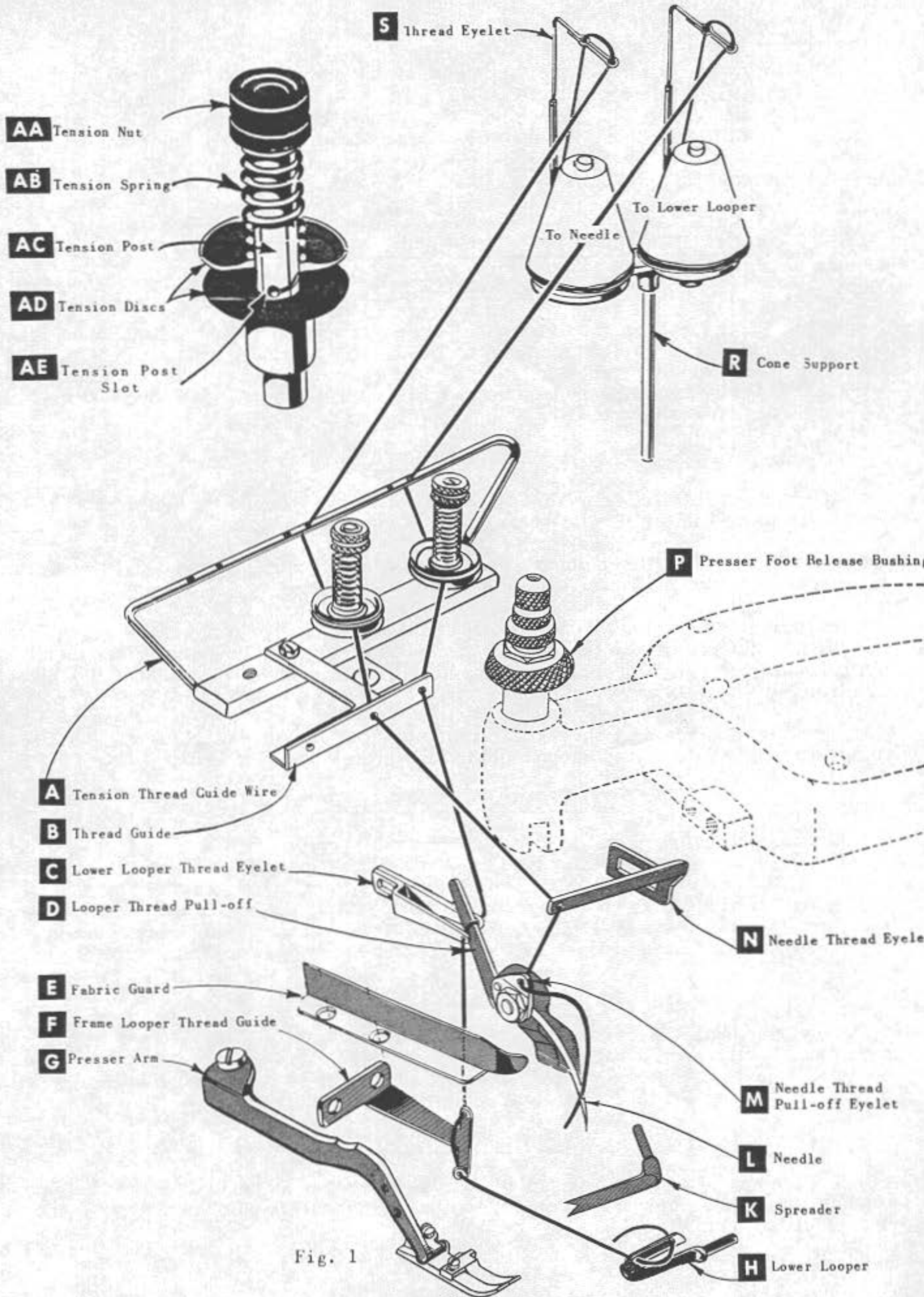
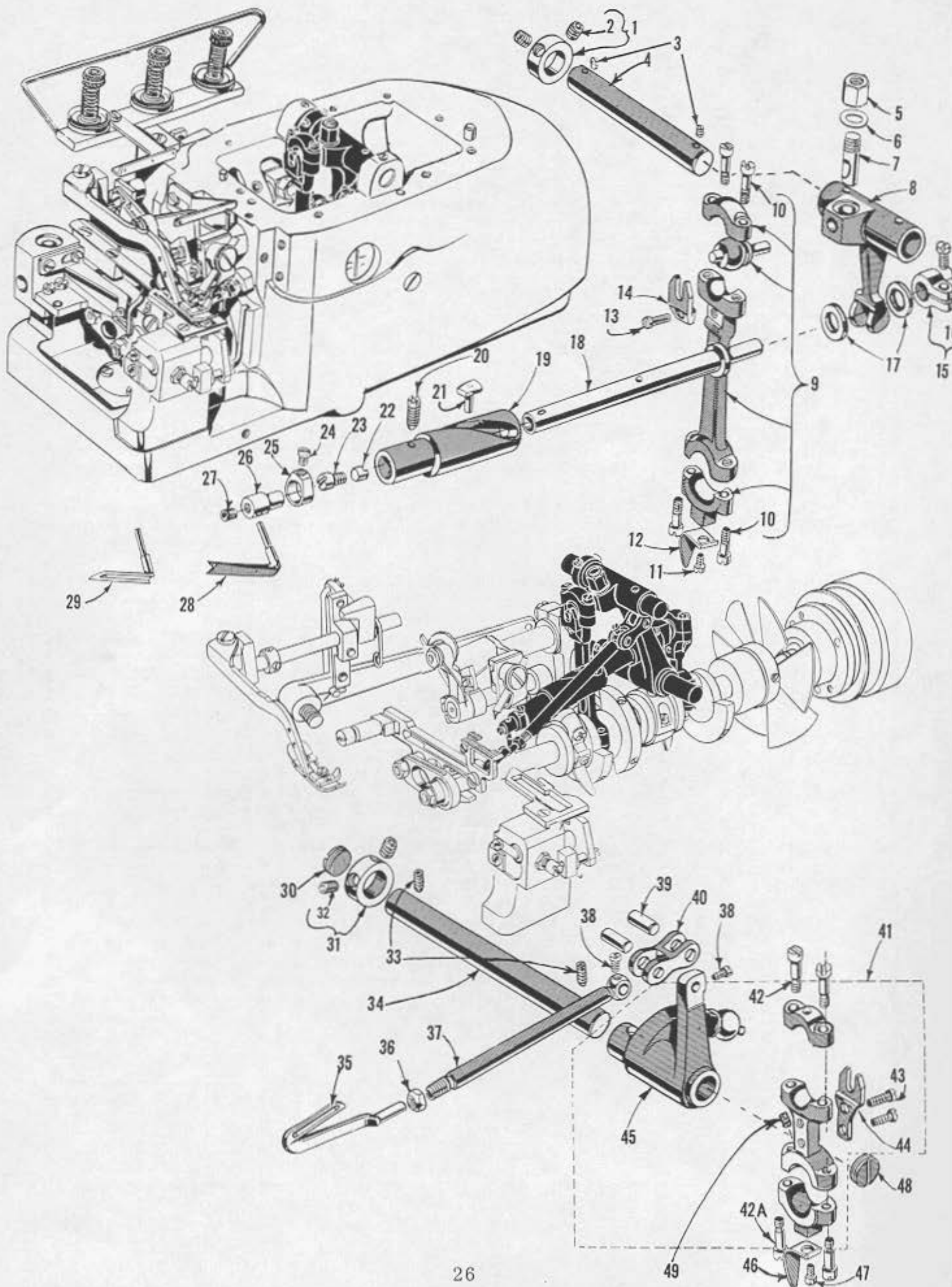
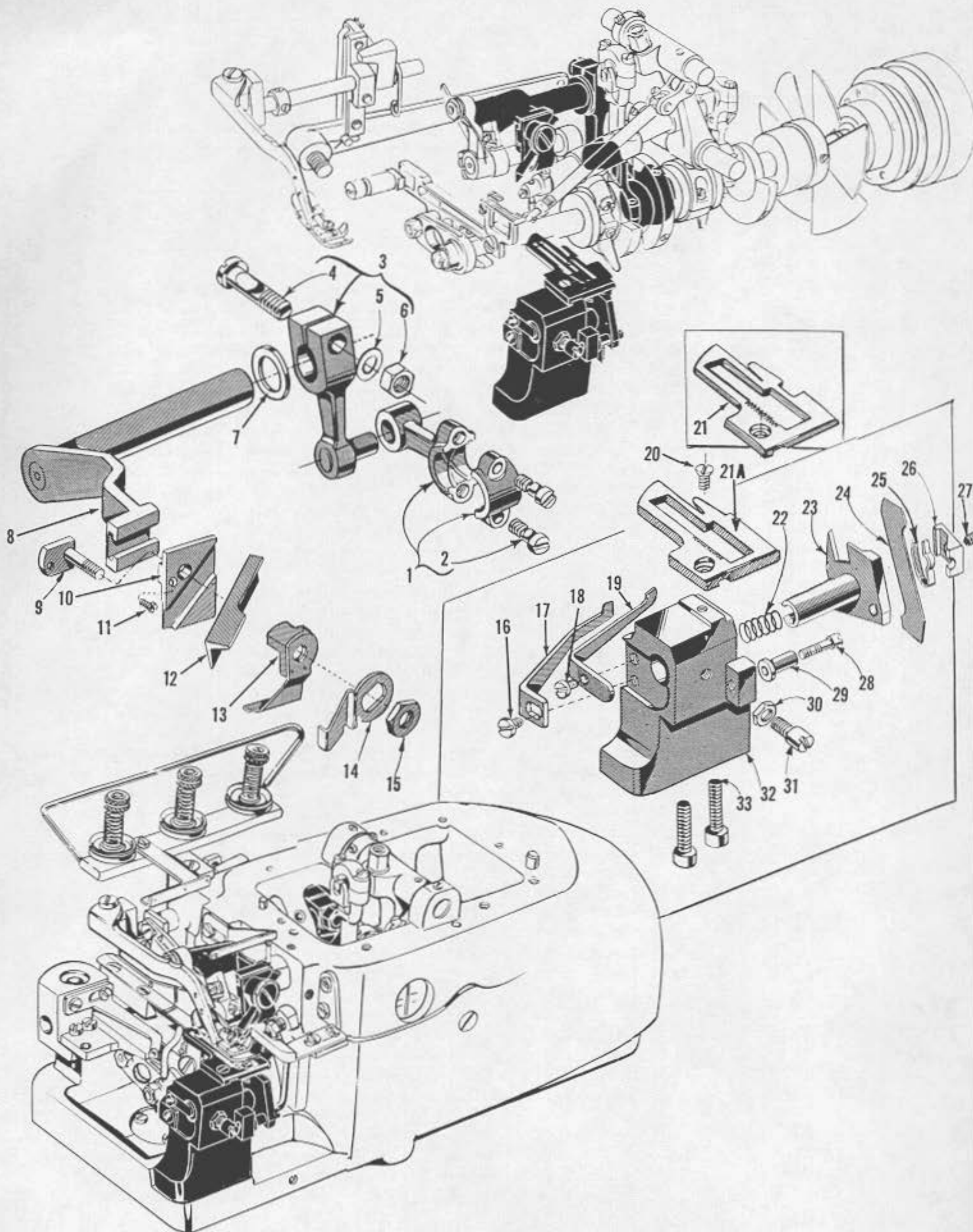


Fig. 1



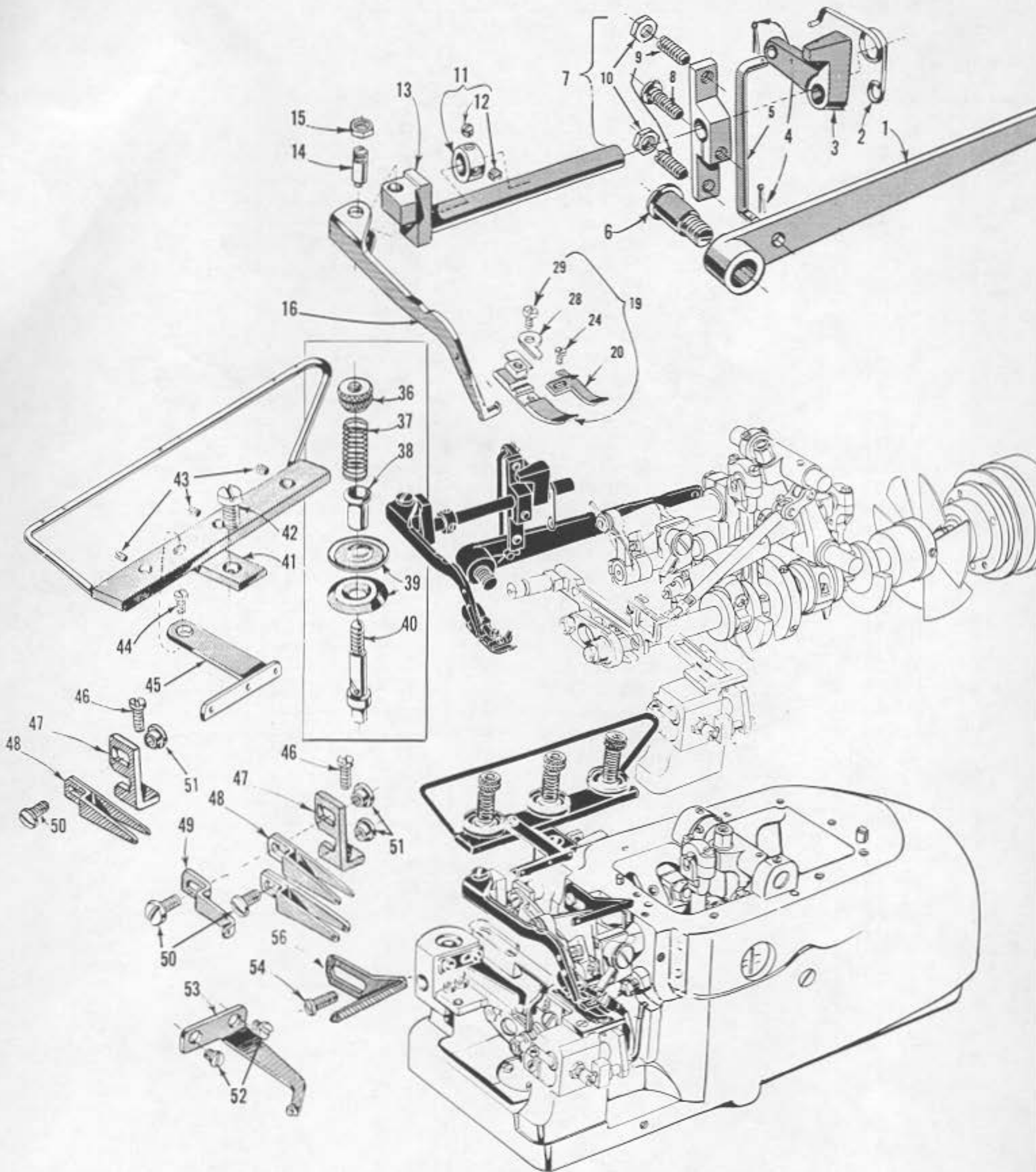
SPREADER/UPPER LOOPER AND LOWER LOOPER DRIVING PARTS

| <u>Ref. No.</u> | <u>Part No.</u> | <u>Description</u> | <u>Amt. Req.</u> |
|---------------------|---------------------|--|----------------------|
| 1 | 482 C | Spreader/Upper Looper Shaft Collar----- | 1 |
| 2 | 22894 C | Screw - Collar----- | 2 |
| 3 | 22565 | Screw - Spreader/Upper Looper Drive Lever Shaft----- | 2 |
| 4 | 7446 A | Spreader/Upper Looper Drive Lever Shaft----- | 1 |
| 5 | 1280 | Nut - Locking Stud----- | 1 |
| 6 | 39543 R | Locking Stud Washer----- | 1 |
| 7 | 43143 N | Locking Stud - Spreader/Upper Looper Drive Lever----- | 1 |
| 8 | 39543 H | Spreader/Upper Looper Drive Lever----- | 1 |
| 9 | 29126 CG | Spreader/Upper Looper Drive Lever Connecting Rod Assembly----- | 1 |
| 10 | 22559 A | Screw - Connecting Rod Assembly----- | 4 |
| 11 | 77 | Screw - Oil Splasher----- | 1 |
| 12 | 39594 N | Oil Splasher----- | 1 |
| 13 | 22747 | Screw - Guide Fork----- | 1 |
| 14 | 41255 B | Ball Joint Guide Fork - Spreader/Upper Looper Drive Assembly----- | 1 |
| 15 | 39543 M | Collar Clamp----- | 1 |
| 16 | 22562 A | Screw - Collar Clamp----- | 1 |
| 17 | 39543 P | Spreader/Upper Looper Shaft Thrust Washer----- | 2 |
| 18 | 39543 K | Spreader/Upper Looper Shaft----- | 1 |
| 19 | 39543 S | Bushing and Cam Guide----- | 1 |
| 20 | 22565 H | Screw - Cam Guide----- | 1 |
| 21 | 39543 T | Cam Follower----- | 1 |
| 22 | 39543 E | Cam Follower Locking Clamp----- | 1 |
| 23 | 22503 F | Screw - Locking Clamp----- | 1 |
| 24 | 22 KH | Screw - Spreader/Upper Looper Holder Collar----- | 1 |
| 25 | 39543 A | Spreader/Upper Looper Holder Collar----- | 1 |
| 26 | 39543 | Spreader/Upper Looper Holder----- | 1 |
| 27 | 22564 G | Screw - Spreader/Upper Looper Holder----- | 1 |
| 28 | 39560 A | Spreader - Styles 39500 J & K----- | 1 |
| 29 | 39508 A | Upper Looper - Styles 39500 L & M----- | 1 |
| 30 | 22539 K | Plug Screw - Lower Looper Shaft----- | 1 |
| 31 | 482 C | Lower Looper Shaft Collar----- | 1 |
| 32 | 22894 C | Screw - Collar----- | 2 |
| 33 | 22894 AD | Screw - Lower Looper Bar Driving Lever Shaft----- | 2 |
| 34 | 51235 B | Lower Looper Bar Driving Lever Shaft----- | 1 |
| 35 | 39508 B | Lower Looper----- | 1 |
| 36 | 39151 | Nut - Lower Looper Bar----- | 1 |
| 37 | 39544 | Lower Looper Bar----- | 1 |
| 38 | 77 | Screw - Connection Link Pin----- | 2 |
| 39 | 39544 D | Lower Looper Bar Connection Link Pin----- | 2 |
| 40 | 39544 B | Lower Looper Bar Connection Link----- | 1 |
| 41 | 29126 DF | Lower Looper Bar Driving Lever and Connecting Rod Assembly----- | 1 |
| 42 | 22729 D | Screw, upper----- | 2 |
| 42A | 22729 E | Screw, lower----- | 2 |
| 43 | 97 | Screw, for No. 39544 S----- | 2 |
| 44 | 39544 S | Ball Joint Guide Fork----- | 1 |
| 45 | 39544 U | Lower Looper Ball Driving Lever----- | 1 |
| 46 | 39594 N | Oil Splasher----- | 1 |
| 47 | 77 | Screw, for No. 39594 N----- | 1 |
| 48 | 22539 K | Plug Screw - Lower Looper Shaft----- | 1 |
| 49 | 666-255 | Felt, for No. 39544 N----- | 1 |
| - | 39594 P | Oil Collector Plate (Not Illustrated)----- | 1 |



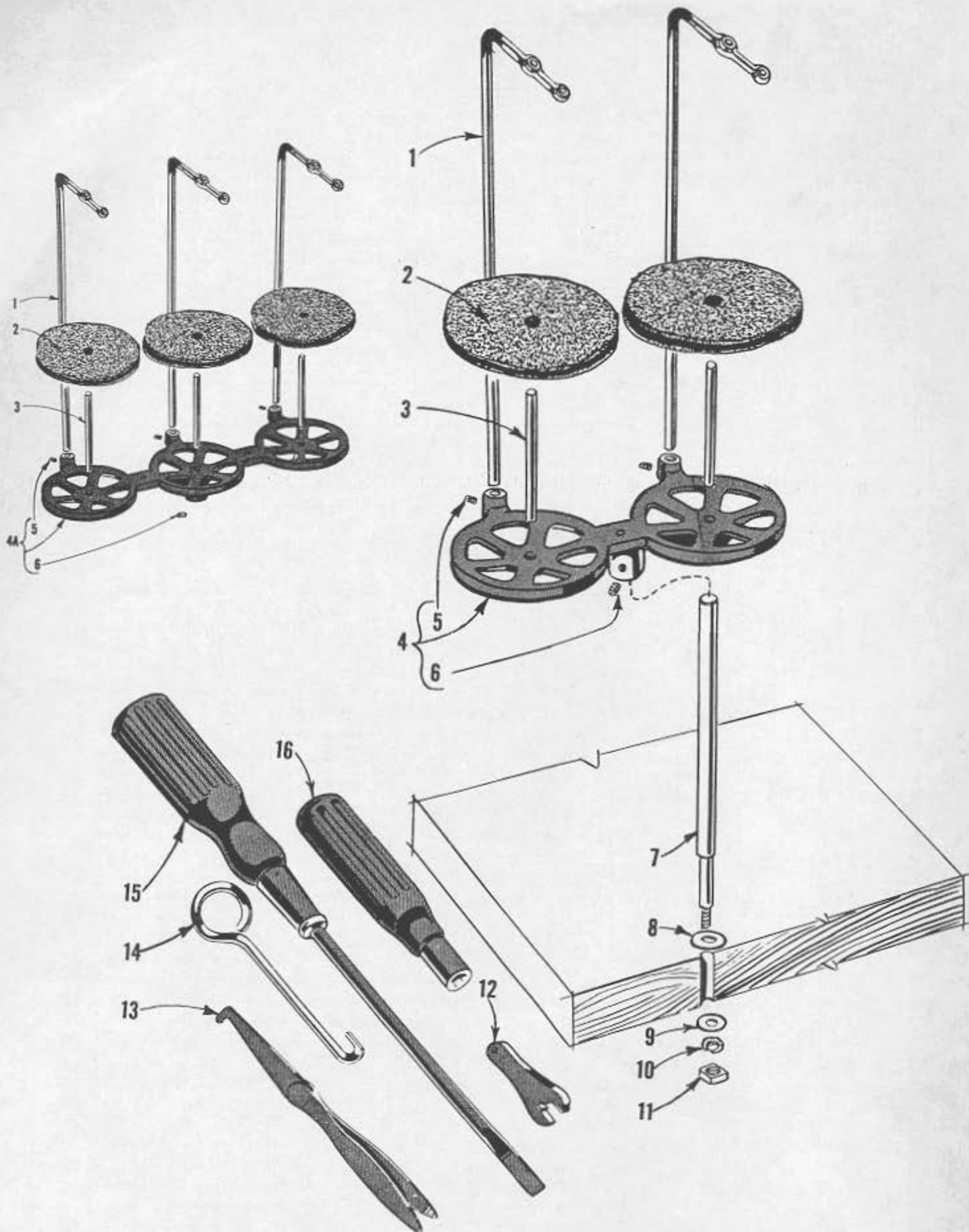
UPPER AND LOWER KNIFE MECHANISM

| <u>Ref. No.</u> | <u>Part No.</u> | <u>Description</u> | <u>Amt. Req.</u> |
|---------------------|---------------------|--|----------------------|
| 1 | 39573 J | Upper Knife Driving Connecting Rod ----- | 1 |
| 2 | 22587 J | Screw - Connecting Rod ----- | 2 |
| 3 | 39573 E | Upper Knife Driving Lever ----- | 1 |
| 4 | 55235 D | Locking Stud - Driving Lever ----- | 1 |
| 5 | 6042 A | Washer - Driving Lever ----- | 1 |
| 6 | 55235 E | Nut - Driving Lever ----- | 1 |
| 7 | 39573 A | Upper Knife Driving Arm Washer ----- | 1 |
| 8 | 39573 H | Upper Knife Driving Arm ----- | 1 |
| 9 | 39571 C | Upper Knife Clamp Stud ----- | 1 |
| 10 | 39572 A | Upper Knife Holder Block ----- | 1 |
| 11 | 22738 | Screw - Holder Block - Clamp Nut ----- | 1 |
| 12 | 39570 J | Upper Knife, for Styles 39500 J & L only ----- | 1 |
| 13 | 39571 F | Upper Knife Clamp ----- | 1 |
| 14 | 39571 B | Upper Knife Chain Guard ----- | 1 |
| 15 | 14077 | Nut - Upper Knife Assembly ----- | 1 |
| 16 | 22585 A | Screw - Needle Guard, front ----- | 1 |
| 17 | 39525 | Needle Guard, front ----- | 1 |
| 18 | 22585 A | Screw - Needle Guard, rear ----- | 1 |
| 19 | 39525 A | Needle Guard, rear ----- | 1 |
| 20 | 22524 | Screw - Throat Plate ----- | 1 |
| 21 | 39524 J | Throat Plate, 3/16 inch wide seam, for Styles 39500 J & L ----- | 1 |
| 21A | 39524 K | Throat Plate, 3/16 inch wide seam, for Styles 39500 K & M ----- | 1 |
| 22 | 39550 E | Lower Knife Spring ----- | 1 |
| 23 | 39550 B | Lower Knife Holder ----- | 1 |
| 24 | 39549 J | Lower Knife ----- | 1 |
| 25 | 39550 M | Knife Clamp Spring ----- | 1 |
| 26 | 39550 L | Lower Knife Clamp ----- | 1 |
| 27 | 22588 A | Screw - Lower Knife Holder ----- | 1 |
| 28 | 22729 B | Screw - Lower Knife Holder Locking Stud ----- | 1 |
| 29 | 39550 C | Lower Knife Holder Locating Stud ----- | 1 |
| 30 | 14077 | Nut - Locking Screw - Lower Knife Holder ----- | 1 |
| 31 | 22892 B | Locking Screw - Lower Knife Holder ----- | 1 |
| 32 | 39580 A | Throat Plate and Lower Knife Support Bracket ----- | 1 |
| 33 | 22653 B-12 | Screw - Support Bracket ----- | 2 |



FOOT LIFTER, THREAD TENSIONS AND MISCELLANEOUS EYELETS

| <u>Ref. No.</u> | <u>Part No.</u> | <u>Description</u> | <u>Amt. Req.</u> |
|---------------------|---------------------|--|----------------------|
| 1 | 39555 | Foot Lifter Lever ----- | 1 |
| 2 | 39555 B | Foot Lifter Lever Spring ----- | 1 |
| 3 | 39555 D | Foot Lifter Intermediate Lever ----- | 1 |
| 4 | 660-142 | Cotter Pin - Connecting Link ----- | 2 |
| 5 | 39555 F | Foot Lifter Lever Connecting Link ----- | 1 |
| 6 | 22566 B | Screw - Foot Lifter Lever ----- | 1 |
| 7 | 39555 C | Foot Lifter Lever Arm ----- | 1 |
| 8 | 627 | Screw - Lever Arm ----- | 1 |
| 9 | 22597 E | Screw - Lever Arm ----- | 2 |
| 10 | 12538 | Lock Nut - Lever Arm ----- | 2 |
| 11 | 12865 | Foot Lifter Lever Shaft Collar ----- | 1 |
| 12 | 88 | Screw - Collar ----- | 2 |
| 13 | 39555 A | Foot Lifter Lever Shaft ----- | 1 |
| 14 | 22791 H | Screw - Presser Arm ----- | 1 |
| 15 | 258 A | Nut - Presser Arm ----- | 1 |
| 16 | 39556 D | Presser Arm ----- | 1 |
| 19 | 39520 L | Presser Foot ----- | 1 |
| 20 | 39597 L | Presser Foot Stitch Tongue ----- | 1 |
| 24 | 22819 | Screw - Stitch Tongue ----- | 1 |
| 28 | 39530 | Presser Foot Hinge Spring ----- | 1 |
| 29 | 22768 B | Screw - Hinge Spring ----- | 1 |
| 36 | 108 | Tension Post Nut, for Styles 39500 J & K ----- | 2 |
| | 108 | Tension Post Nut, for Styles 39500 L & M ----- | 3 |
| 37 | 51292 F-2 | Lower Needle Thread Tension Spring, for Styles 39500 J & K ----- | 1 |
| | 51292 F-2 | Lower Looper Thread Tension Spring, for Style 39500 K ---- | 1 |
| | 51292 F-4 | Looper Thread Tension Spring, for Style 39500 J ----- | 1 |
| | 51292 F-4 | Needle and Upper Looper Thread Tension Spring, for Styles 39500 L & M ----- | 2 |
| | 51292 F-8 | Lower Looper Thread Tension Spring, for Styles 39500 L & M ----- | 1 |
| 38 | 107 | Tension Post Ferrule, for Styles 39500 J & K ----- | 2 |
| | 107 | Tension Post Ferrule, for Styles 39500 L & M ----- | 3 |
| 39 | 109 | Tension Disc, for Styles 39500 J & K ----- | 4 |
| | 109 | Tension Disc, for Styles 39500 L & M ----- | 6 |
| 40 | 35792 H | Tension Post, for Styles 39500 J & K ----- | 2 |
| | 35792 H | Tension Post, for Styles 39500 L & M ----- | 3 |
| 41 | 39592 F | Tension Post Mounting Bracket ----- | 1 |
| 42 | 22891 | Screw - Tension Post Mounting Bracket ----- | 1 |
| 43 | 22565 C | Screw - Tension Post, for Styles 39500 J & K ----- | 2 |
| | 22565 C | Screw - Tension Post, for Styles 39500 L & M ----- | 3 |
| 44 | 90 | Screw - Thread Guide ----- | 1 |
| 45 | 39563 S | Thread Guide ----- | 1 |
| 46 | 22569 B | Screw - Eyelet Mounting Bracket ----- | 1 |
| 47 | 39568 D | Looper Thread Eyelet Mounting Bracket ----- | 1 |
| 48 | 39568 L | Looper Thread Eyelet ----- | 1 |
| | 39568 B | Looper Thread Eyelet, for Styles 39500 L & M ----- | 1 |
| 49 | 39568 E | Auxiliary Looper Thread Eyelet, for Styles 39500 L & M --- | 1 |
| 50 | 376 A | Screw - Looper Thread Eyelet, for Styles 39500 J & K ----- | 1 |
| | 376 A | Screw - Looper Thread Eyelet, for Styles 39500 L & M ----- | 2 |
| 51 | 43139 A | Nut - Looper Thread Eyelet, for Styles 39500 J & K ----- | 1 |
| | 43139 A | Nut - Looper Thread Eyelet, for Styles 39500 L & M ----- | 2 |
| 52 | 73 X | Screw - Frame Thread Guide ----- | 2 |
| 53 | 39568 W | Frame Thread Guide - Lower Looper Thread ----- | 1 |
| 54 | 22569 D | Screw - Needle Thread Eyelet ----- | 1 |
| 56 | 39563 D | Needle Thread Eyelet ----- | 1 |



THREAD STAND AND MISCELLANEOUS TOOLS

| Ref. No. | Part No. | Description | Amt. Req. |
|-------------|-------------|--|--------------|
| 1 | 21113 F | Thread Eyelet and Support Rod, for Styles 39500 J & K----- | 2 |
| | 21113 F | Thread Eyelet and Support Rod, for Styles 39500 L & M----- | 3 |
| 2 | 21104 V | Pad, for Styles 39500 J & K----- | 2 |
| | 21104 V | Pad, for Styles 39500 L & M----- | 3 |
| 3 | 69 S | Spool Pin, for Styles 39500 J & K----- | 2 |
| | 69 S | Spool Pin, for Styles 39500 L & M----- | 3 |
| 4 | 21130 W-2 | Cone Support, for Styles 39500 J & K----- | 1 |
| 4A | 21130 W-3 | Cone Support, for Styles 39500 L & M----- | 1 |
| 5 | 22650 CB-4 | Screw - Cone Support, for Styles 39500 J & K----- | 2 |
| | 22650 CB-4 | Screw - Cone Support, for Styles 39500 L & M----- | 3 |
| 6 | 22650 CE-6 | Screw - Cone Support, for all Styles----- | 1 |
| 7 | 21104 AA | Thread Stand Rod----- | 1 |
| 8 | 652 J-24 | Washer - Thread Stand Rod----- | 1 |
| 9 | 652 J-16 | Washer - Thread Stand Rod----- | 1 |
| 10 | WA9 A | Lock Washer----- | 1 |
| 11 | 651 A-16 | Nut - Thread Stand Rod----- | 1 |
| 12 | 116 | Wrench, for 9/32 inch nut----- | 1 |
| 13 | 660-240 | Thread Tweezers----- | 1 |
| 14 | 21227 BF | Feed Eccentric Extractor Hook----- | 1 |
| *15 | 21202 | Screw Driver, 3/16 inch diameter, 10 3/4 inches long----- | 1 |
| 16 | 21388 AU | Socket Wrench, for 3/8 inch nut holding feed eccentrics----- | 1 |

* Not furnished with machine.

ACCESSORIES AVAILABLE AS EXTRAS (Not Illustrated)

| | | | |
|-----------------|---|--|--|
| 21227 BG | Needle Curvature Gauge | | |
| 21233 DR | Light Fixture Assembly, including blue lens, machine mounting for machines driven by "Electro Drive" which supplies the current | | |
| 21261 M-360 | No. 1 "V" Belt, 36 inches long, for fully submerged individual power table installation | | |
| 21261 M-380 | No. 1 "V" Belt, 38 inches long, for semisubmerged individual power table installation | | |
| 21261 M-400 | No. 1 "V" Belt, 40 inches long, for nonsubmerged individual power table installation | | |
| 21377 BA | Tray, 1 3/4 inches high, for semisubmerged installation | | |
| 21377 BF | Tray, 1 3/4 inches high, for semisubmerged installations with front section extended to right | | |
| 21695 U | Finger Protector | | |
| 39556 B | Presser Arm Chain Cutting Knife, lower | | |
| 39556 C | Presser Arm Chain Cutting Knife, upper | | |
| 605 | Presser Arm Chain Cutting Knife Screws (two needed) | | |
| 39595 | Isolator, rubber | | |
| 39598 | Knife Grinder, complete | | |
| 52978 J | Chip Disposal Chute | | |
| | | Belt Slot to Right Edge of Board | Cloth Plate to Front Edge of Board |
| 21371 UH | Individual Power Table | | |
| 21371 PJ-48 | Table Top, 48 x 20 x 1 3/4 inches, for individual power table installation: Nonsubmerged - no chip chute | 14 inch | 3/8 inch |
| 21371 RD-48 | Table Top, same except Nonsubmerged | 7 1/2 inch | 3 inch |
| 21371 RF-48 | Table Top, same except Nonsubmerged - no chip chute | 7 1/2 inch | 3/8 inch |
| 21371 RJ-48 | Table Top, same except Semisubmerged | 10 1/2 inch | 2 1/4 inch |
| 21371 RG-48 | Table Top, same except Fully submerged | 7 1/2 inch | 2 1/4 inch |
| 21371 RK-48 | Table Top, same except Fully submerged | 10 1/2 inch | 2 1/4 inch |
| 21371 RC-47 3/4 | Table Top, 47 3/4 x 16 x 1 3/4 inches, for line shaft installations Nonsubmerged - no chip chute | 7 1/2 inch | 3/8 inch |
| 21371 RE-47 3/4 | Table Top, same except Nonsubmerged | 7 1/2 inch | 3 inch |
| 21371 RH-47 3/4 | Table Top, same except Semisubmerged | 7 1/2 inch | 2 1/4 inch |

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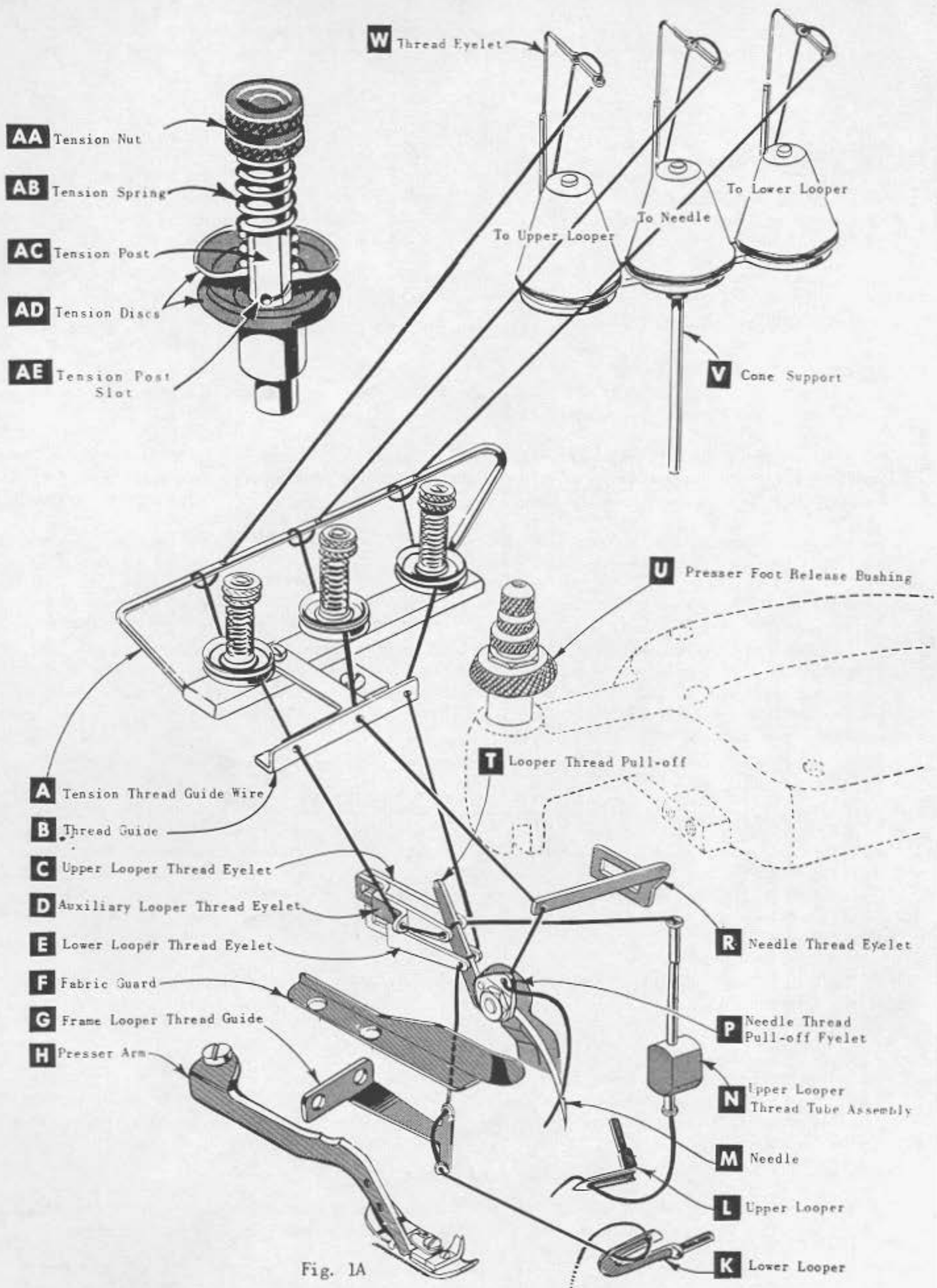


Fig. 1A

THREAD STAND

After thread comes from cone on thread stand (V, Fig. 1A), it is brought up through back thread eyelet, then down through front thread eyelet (W). Next it is threaded down through right hand hole of each pair of holes in tension thread guide wire (A), and up through left hand hole. Then thread continues between tension discs (AD), through slot (AE), and on through thread guide (B).

THREADING

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

It will simplify threading this machine to follow recommended sequence of threading lower looper first, upper looper second, and needle third.

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

Be sure threads, as they come from the tension thread guide, are between tension discs (AD) and in diagonal slots (AE) in tension posts (AC).

TO THREAD LOWER LOOPER

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

TO THREAD UPPER LOOPER

Turn handwheel so that needle (M, Fig. 1A) is again at high position. Lead thread through auxiliary looper thread eyelet (D) from back to front, and then through both eyes of upper looper thread eyelet (C) from left to right. Note that thread must pass in front of looper thread pull-off (T). After pulling up upper looper thread tube assembly (N), lead thread under neck of top cover casting and down through thread tube assembly. Pull thread out bottom of tube; push tube down. Turn handwheel until point of upper looper (L) is all the way to the left; then insert thread through eye from front to back.

CAUTION: Be sure upper looper thread is under lower looper thread when passing from tube assembly to upper looper eye.

TO THREAD THE NEEDLE

Turn handwheel in operating direction until needle (M, Fig. 1A) is at its highest position. Insert needle thread from back to front, through eye of needle thread eyelet (R), under neck of top cover casting; then right to left through hole in needle thread pull-off eyelet (P). Thread needle from front.

THREAD TENSION

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

ASSEMBLING AND ADJUSTING SEWING PARTS

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

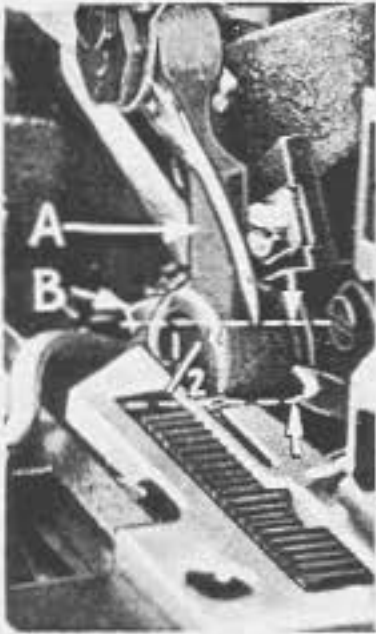


Fig. 3

SETTING THE NEEDLE

With throat plate in position, needle should center in the front end of needle slot. When needle is at high position, needle point should be set 1/2 inch above throat plate (Fig. 3). Move needle driving arm (A, Fig. 3) by loosening clamp screw (B). Remove throat plate.

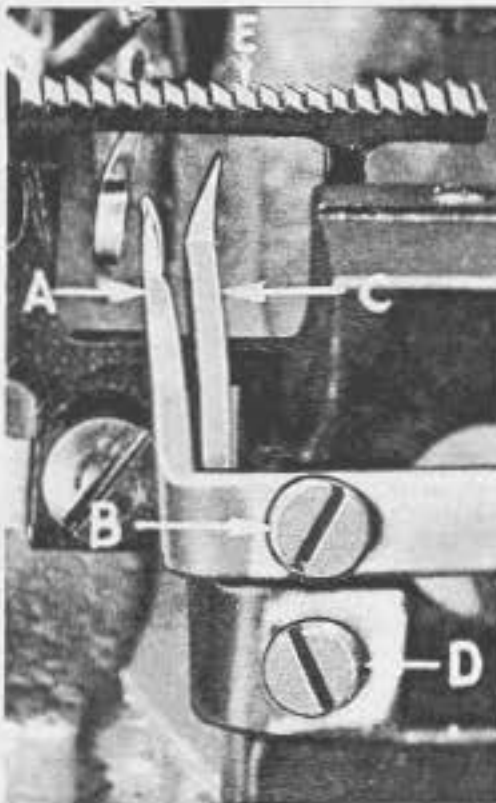


Fig. 4

At this point, insert lower looper (A, Fig. 5) into bar (E). With lower looper at left end of its stroke, set looper point 1/8 inch from center of needle (Fig. 5), using looper gauge No. 21225-1/8. Do not have lower looper deflecting needle. Tighten nut (C).

Now assemble main (front) feed dog (E, Fig. 4)

SETTING THE REAR NEEDLE GUARD

Set rear needle guard (A, Fig. 4) as high as possible, without interfering with either lower looper 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.

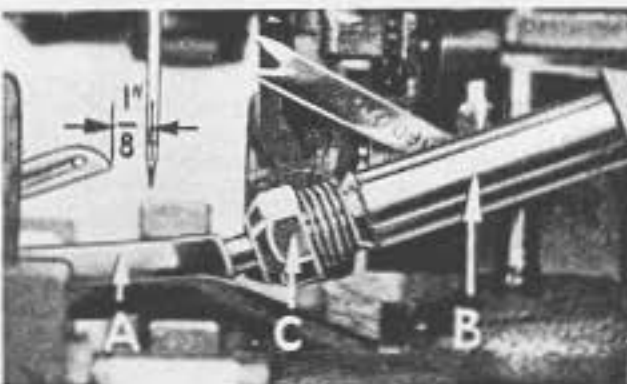


Fig. 5

SETTING THE LOWER LOOPER

Now finish lower looper adjustment. As lower looper 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.

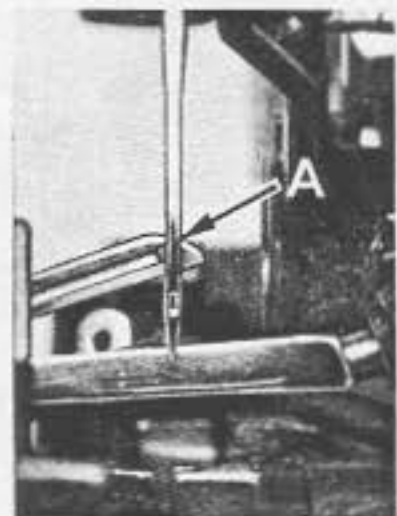


Fig. 6

SETTING THE FRONT NEEDLE GUARD

Assemble front needle guard (C, Fig. 4). 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 main feed dog.

SETTING THE SPREADER - STYLES 39500 J AND K ONLY

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 the spreader is at the right end of its stroke, spreader holder should be set to position spreader shank back of vertical (Fig. 7). The top end of spreader shank should extend about $\frac{3}{64}$ inch above holder (Fig. 7).

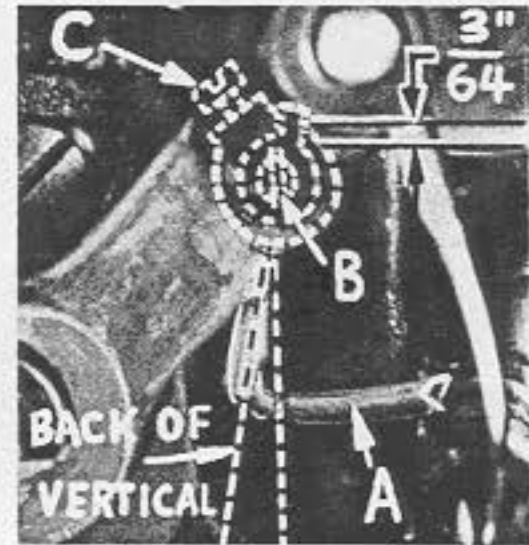


Fig. 7

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).



Fig. 8

Continue turning the handwheel until spreader is at left end of its travel. At this position, the lower point of the spreader should extend about $\frac{1}{8}$ inch to the left of the centerline of the needle and should be approximately $\frac{3}{8}$ inch above the top of the throat plate (Fig. 9).

This setting will give a good close relationship to the needle and spreader. If needle rubs the back of the spreader, refer to the paragraph that follows.

The spreader holder should be brought out far enough to satisfy the above dimensions and so as to avoid hitting the fabric guard with the spreader holding screw.

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).

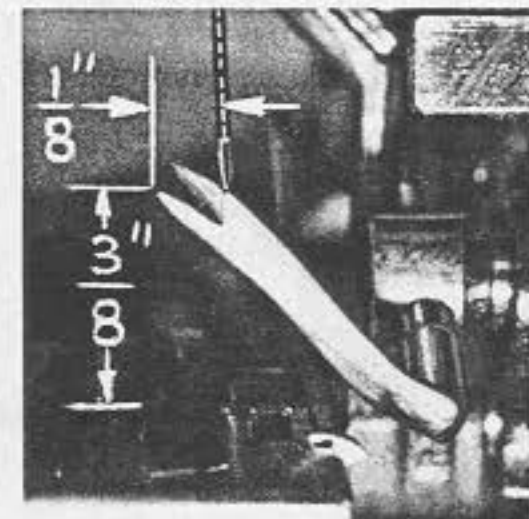


Fig. 9

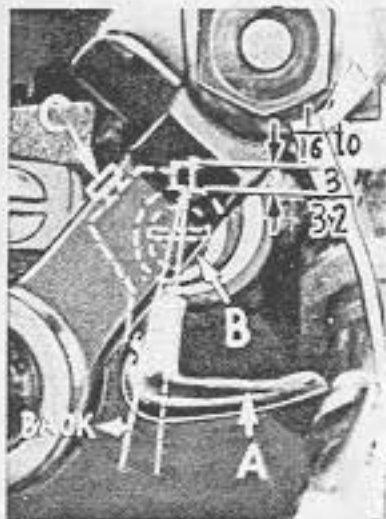


Fig. 7A



Fig. 8A

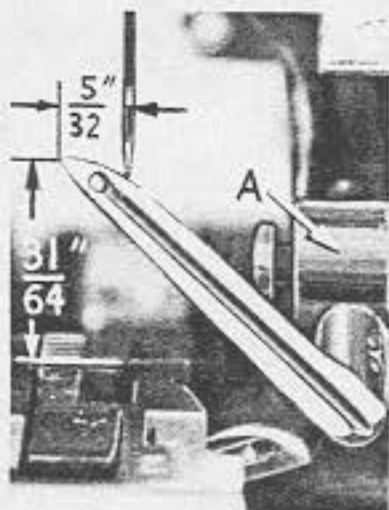


Fig. 9A

SETTING THE UPPER LOOPER - STYLES 39500 L & M ONLY

Insert upper looper (A, Fig. 7A) in its holder. Screw (B, Fig. 7A) holds upper looper in its holder, and permits it to be pushed in or out or turned around its shank. Insert upper looper holder into upper looper shaft, if it is not already in place. Screw (C, Fig. 7A) on clamp holds upper looper holder in shaft. Locate upper looper in its holder so that shank extends $\frac{1}{16}$ to $\frac{3}{32}$ inch beyond holder (Fig. 7A).

When upper looper is at right end of its stroke, upper looper holder should be set to position upper looper shank back of vertical (Fig. 7A), but be sure there is clearance between heel of looper and casting. Now, by adjusting looper holder in or out of upper looper shaft and by turning looper around its shank, set upper looper point to cross lower looper to the left of lower looper eye with .002 to .004 clearance (Fig. 8A).

Next turn handwheel until upper looper is at left end of its travel; check the $\frac{5}{32}$ inch dimension of upper looper point from center line of needle (Fig. 9A). If the $\frac{5}{32}$ inch dimension is too small: pull upper looper holder out of upper looper shaft to correct the condition. Turn upper looper holder forward (counterclockwise looking from left end of machine) so that upper looper point crosses lower looper, without interference, as close as possible to the left of lower looper eye. It may be necessary to rotate upper looper around its shank slightly to maintain conditions shown (Fig. 8A).

If the $\frac{5}{32}$ inch dimension is too large: push upper looper holder into upper looper shaft to correct the condition. Turn upper looper holder backward, if necessary, so that upper looper point crosses lower looper, without interference, as close as possible to the left of lower looper eye. It may be necessary to rotate upper looper around its shank slightly to maintain conditions shown (Fig. 8A).

If needle now rubs the back of upper looper, pull upper looper out of its holder to reduce the $\frac{1}{16}$ to $\frac{3}{32}$ inch dimension (Fig. 7A); reset upper looper as previously described.

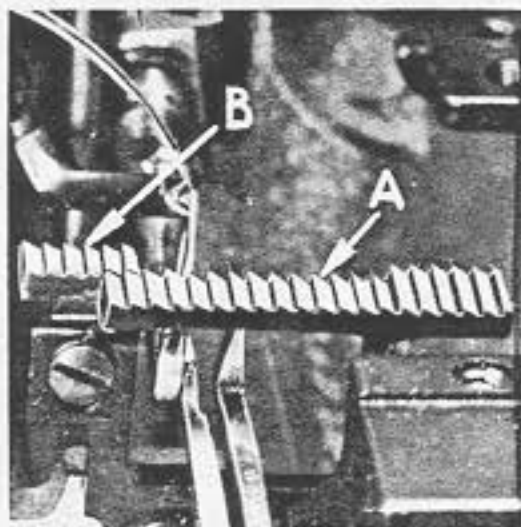


Fig. 10

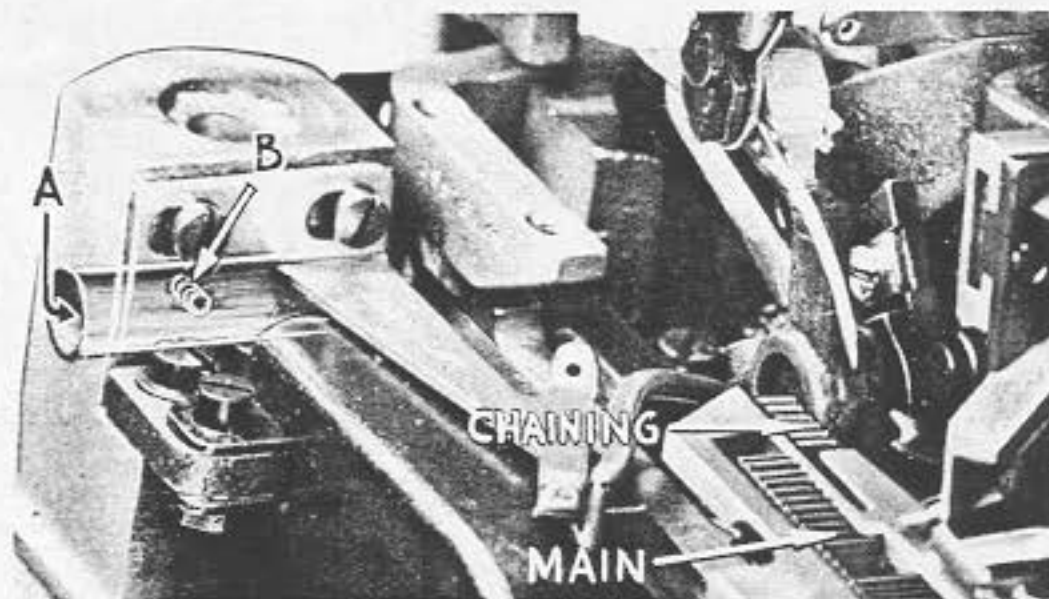


Fig. 11

SETTING THE FEED DOGS

Assemble chaining feed dog (B, Fig. 10) to main feed dog (A).

Feed Dogs should be leveled with throat plate surface by rotating feed tilting adjusting pin (A, Fig. 11). This pin raises or lowers the back end of feed bar. Feed dogs should be set level at the time teeth first appear above throat plate. Screw (B) locks feed tilting adjusting pin in place. Now set feed dogs at highest point of travel: main feed dog teeth set $\frac{3}{64}$ inch above throat plate; and chaining feed dog teeth set about flush with surface of throat plate.

SETTING THE LOWER KNIFE

Replace lower knife holder assembly. Lower knife (A, Fig. 12) 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.

NOTE: On Style 39500 K & M, lower knife is set up to, but not touching, underside of throat plate.

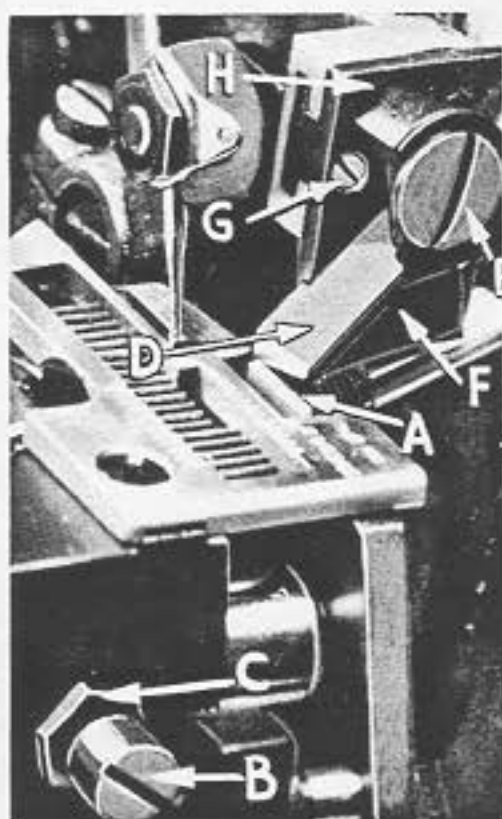


Fig. 12

Lower knife may be secured in any position by tightening screw (B) and locking nut (C) against support bracket. Because screw (B) also serves as latch pin for the cloth plate latch spring, it should always be locked with nut (C) even when screw is not tightened against lower knife holder.

SETTING THE UPPER KNIFE

Replace upper knife assembly. Clamp upper knife (D, Fig. 12) in position, setting screw (E) to hold clamp (F) in its most clockwise position against upper knife. At bottom of its stroke, front cutting edge of upper knife should extend not less than $\frac{1}{64}$ inch below cutting edge of lower knife.

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

NOTE: On Style 39500 K & M, upper knife is removed from machine.

SETTING THE STITCH LENGTH

Stitch length is determined by feed eccentric used. Note that part number of feed eccentric in machine is No. 39540 B-5.

In assembling feed eccentric (A, Fig. 13) be sure hub side of eccentric is placed on the right. Hub side of feed eccentric spacer and oil slinger (B) should be to the left. Be careful not to damage shaft or key. Tighten nut (C) securely. Be sure wool yarn in oil tube (D) touches feed eccentric spacer and oil slinger (B).

To change feed eccentric, remove nut (C) and oil slinger (B) from end of shaft. Turn handwheel in operating direction until key slot in eccentric is toward front. Using hooked eccentric extractor (E), supplied with machine, reach behind eccentric as shown, and withdraw eccentric. It may be necessary to rock handwheel slightly during extraction. Use care in passing under oil tube (D) to avoid loosening from its position.

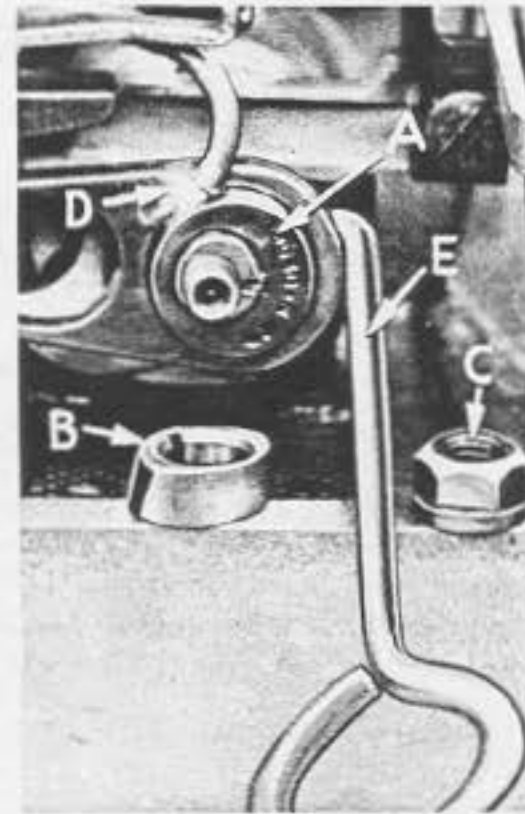


Fig. 13

SETTING THE PRESSER FOOT

Assemble presser foot to presser arm. With needle in high position, swing presser arm into sewing position and lock in place. If necessary, presser foot can be realigned with throat plate slots by shifting foot lifter lever shaft.

Foot lifter lever arm (A, Fig. 14) and collar (B) secure the shaft. Be sure presser arm does not bind and rise when presser foot release bushing is unlocked. To center presser foot and stitch tongue with respect to throat plate needle hole, loosen presser foot hinge screw.

Adjust lifter lever stop screw (C) so that presser foot can be raised no higher than upper looper will permit; then lock nut (D). There should be from 1/16 to 1/8 inch free motion of foot lifter lever before presser foot begins to rise. This adjustment should be made with screw (E) and locked with nut (F).

Finally, reassemble chip guard, fabric guard and cloth plate.

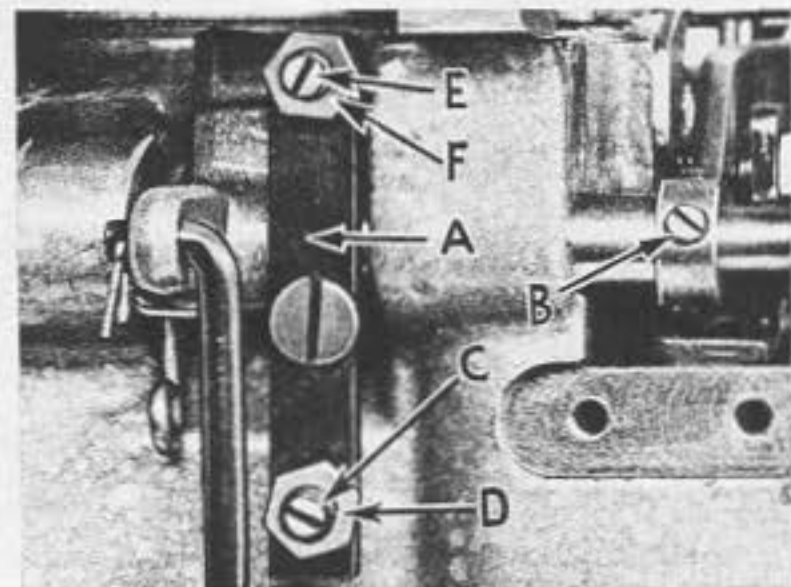


Fig. 14