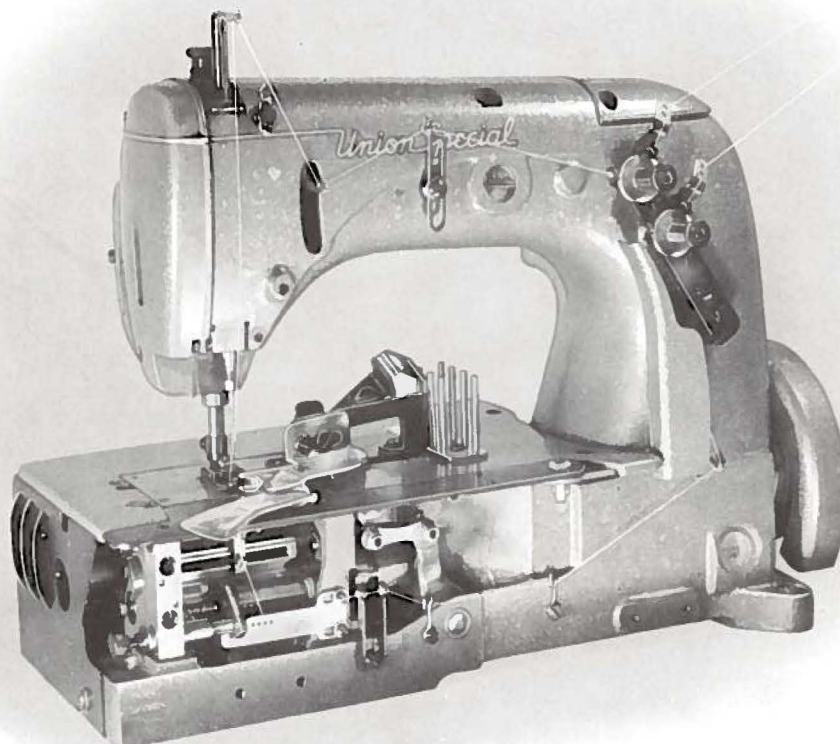


FINEST QUALITY

Union Special[®]
LEWIS • COLUMBIA

**INDUSTRIAL
SEWING
MACHINES**



STYLE

54600A

54600B

54600C

54600D

54600E

54600F

UNITY SEWING SUPPLY CO.
824 E. 8th St.

CLASS 54600

Los Angeles, CA 90021

**STREAMLINED
HIGH SPEED
NEEDLE FEED MACHINES**

CATALOG

No.

120M

Union Special **MACHINE COMPANY**
CHICAGO

From the library of: Superior Sewing Machine & Supply LLC

Catalog No. 120 M

LIST OF PARTS

CLASS 54600

Styles

54600 A	54600 D
54600 B	54600 E
54600 C	54600 F

The parts listed in this catalog are
furnished at list prices for repairs only.

First Edition

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Union Special
MACHINE COMPANY
INDUSTRIAL SEWING MACHINES
CHICAGO

Printed in U.S.A.

CATALOG NO. T120 N

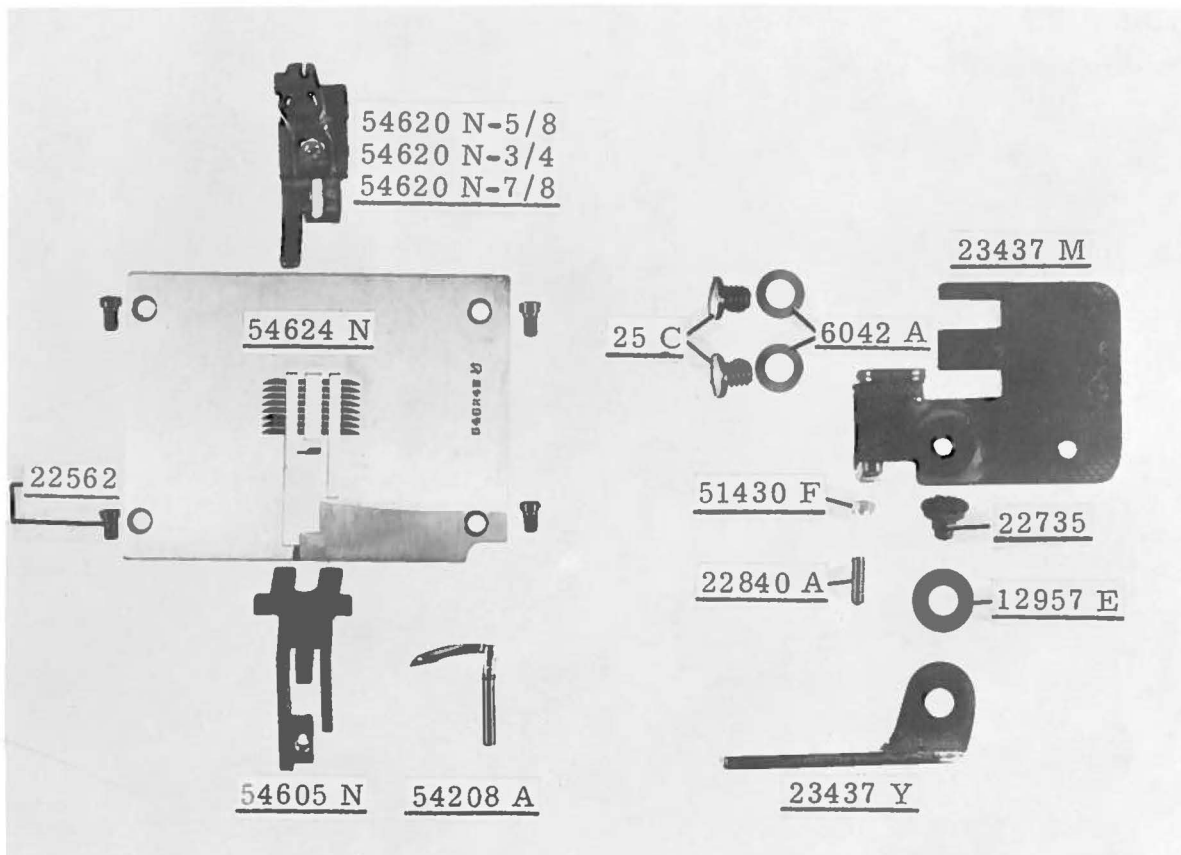
SUPPLEMENT TO CATALOG NO. 120 M

This supplement sheet covers the new parts that are now used on Style 54600 A.

Listed below are the new part numbers with their description followed by the page number, the reference number and the part number of the standard part which they replace in this machine. All the parts being replaced appear on Pages 13, 21, 25 or 27 in Catalog No. 120 M.

<u>Part No.</u>	<u>Description</u>	<u>Page No.</u>	<u>Ref. No.</u>	<u>Replaces Part No.</u>
54208 A	Looper, marked "CB"	21	2	54208
54605 N	Feed Dog, marked "CG", teeth cut 12 per inch	25	1	54605 A
54624 N	Throat Plate	25	2	54624 A
22562	Screw, for throat plate	13	7	22562 A
54620 N-5/8	Presser Foot, for Style 54600 A-5/8	25	3	54620 A-5/8
54620 N-3/4	Presser Foot, for Style 54600 A-3/4	25	3	54620 A-3/4
54620 N-7/8	Presser Foot, for Style 54600 A-7/8	25	3	54620 A-7/8
54630 S-5/8	Presser Foot Bottom, marked "AP-5/8", for No. 54620 N-5/8	25	7	54630 A-5/8
54630 S-3/4	Presser Foot Bottom, marked "AP-3/4", for No. 54620 N-3/4	25	7	54630 A-3/4
54630 S-7/8	Presser Foot Bottom, marked "AP-7/8", for No. 54620 N-7/8	25	7	54630 A-7/8
25 C	Screw, for folder mounting base	27	13	22585 A
6042 A	Washer, for folder mounting base	-	-	51225 W
12957 E	Washer, for binder bracket	27	17 A	*12957 E
22735	Screw, for binder bracket	27	17	*22735
22840 A	Stop Screw, for binder bracket	27	26	*22564 D
23437 M	Folder Mounting Base	27	21	*23437 M
23437 Y	Binder Bracket	27	18	*23437 C
51430 F	Lock Nut, for No. 22840 A	-	-	New

* Component part of No. 23437 L folder assembly which has been removed from machine, but still can be ordered as an extra send and charge item.

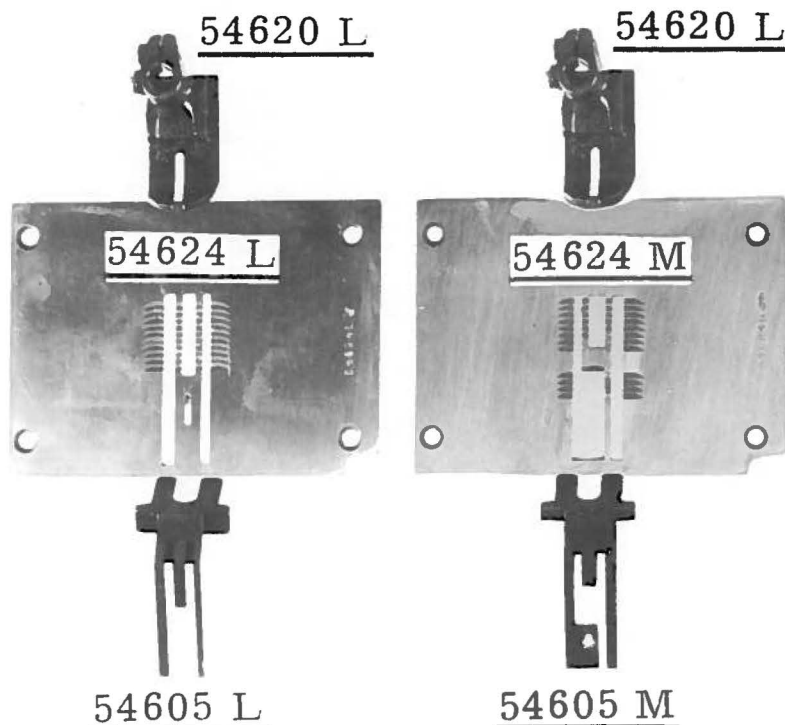


CATALOG NO. T 120 L
SUPPLEMENT TO CATALOG NO. 120 M

This supplement sheet covers the new presser feet, throat plates and feed dogs now used on Styles 54600 B and D.

Listed below are the new part numbers with their description, followed by the reference number and the part number of the standard part which they replace in these machines. All of the parts being replaced appear on page 25 in Catalog No. 120 M.

<u>Part No.</u>	<u>Description</u>	<u>Ref. No.</u>	<u>Replaces Part No.</u>
54605 L	Feed Dog, marked "CC", for Style 54600 B	10	54605 B
54624 L	Throat Plate, for Style 54600 B	11	54624 B
54620 L	Presser Foot, for Style 54600 B	12	54620 B
54620 L	Presser Foot, for Style 54600 D	22	54620 D
54630 N	Presser Foot Bottom, marked "AN"	14	54630 B
54630 N	Presser Foot Bottom, marked "AN"	25	54630 D
187 A	Screw, for No. 1741 B	-	New
1741 A	Pin, for No. 1741 B	-	New
1741 B	Knife	-	New
6530	Shank	-	New
22799 B	Hinge Screw	-	New
54605 M	Feed Dog, marked "CD", for Style 54600 D	15	54605 C
54624 M	Throat Plate, for Style 54600 D	16	54624 C



INSTRUCTIONS FOR MECHANICS
FOR
CATALOG NO. 120 M
TO REPLACE
INSTRUCTIONS ON PAGES 8, 9, 10, 11

INSTRUCTIONS FOR MECHANICS

NEEDLE LEVER STUD SETTING

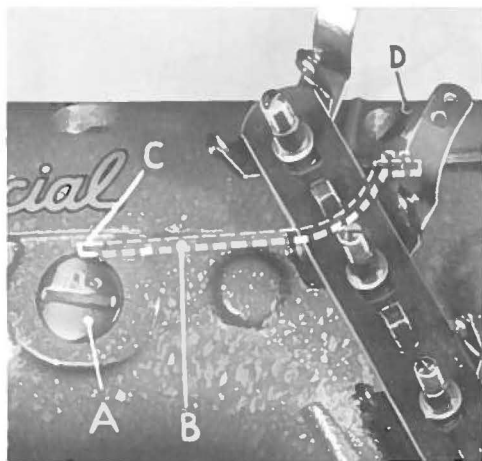


Fig. 1

the oil in the oiling system and run machine for five minutes at 4500 R.P.M. Inspect oiling system for leaks.

Observe location of needle lever stud (A, Fig. 1). The head of the needle lever stud is marked with an arrow and the word "UP". These studs are set correctly when arrow points vertically up. Also check the position of the needle lever bearing oiler (B) inside the arm casting, which lubricates the needle lever stud. Make sure it is tilted downwardly and that its delivery end (C) contacts the inside wall of the bed casting at the back, just above the notch of the needle lever shaft stop collar.

OILING SYSTEM

Clean machine thoroughly. Fill oiling system, and run machine slowly for a minute to allow oil wicks to carry oil to the bearings. Then re-check

SETTING THE NEEDLE LOCATION, HEIGHT AND TRAVEL

Before making any adjustment, remove top crank chamber cover (D, Fig. 1) and check to see that both ends of spacing washer (C, Fig. 2) are seated in the slot of rocker shaft lever (D). If the spacing washer is seated properly, this will locate the center line of the upper needle feed connecting rod ball joint (A, Fig. 2) $7/32$ to $1/4$ inch in back of the center line of the needle lever connecting rod assembly (B).

NOTE: When spacing washer (C, Fig. 2) is properly seated, this will prevent the upper needle feed connecting rod ball joint from moving and also set it properly.

To establish the correct location of the needle bar when the needle bar is at the bottom of its travel use gauge No. 21227 BT (A, Fig. 3). Loosen nut on needle feed

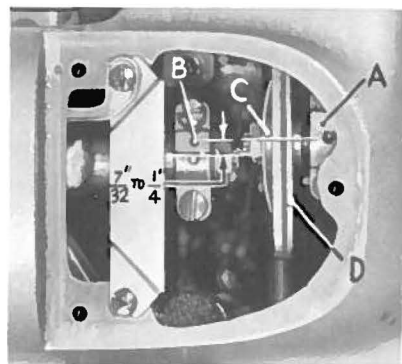


Fig. 2

drive lever (D, Fig. 4). Place gauge 21227 BT on presser bar (B, Fig. 3) with part number up. Rotate gauge in a counterclockwise direction so the shortest surface slips between the presser bar (B) and the needle bar (C) and the longest surface stops against the needle bar. With the needle bar at the bottom of its travel, hold needle bar firmly against the gauge and re-tighten nut (D, Fig. 4).

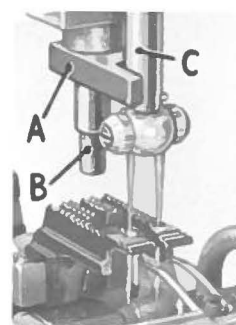


Fig. 3

Using Type 134 GS needles, set the height of the needle bar so that the points of the needles are approximately $1/2$ inch above the top surface of the throat plate when the needles are at the high point of travel using gauge No. 21227 BT (A, Fig. 5) on its side. Loosen screw (E, Fig. 4) and move needle bar up or down as required and then tighten screw.

SETTING THE NEEDLE LOCATION, HEIGHT AND TRAVEL (Continued)

Set the needle travel at $\frac{9}{64}$ inch, which is approximately 7.2 stitches per inch. To set the needle travel, loosen screw (A, Fig. 4) and slide link (B) up or down, so the center line of screw (A) is located $\frac{5}{8}$ inch above the bottom of slot in needle feed drive lever (C, Fig. 4). Retighten screw (A). Check the $\frac{1}{2}$ inch needle travel above the top of the throat plate and readjust, if necessary.

SETTING LOOPER AND LOOPER HOLDER

Insert a set of new needles, Type 134 GS, size as specified. Spot or scarf of needle must be to the left.

Assemble looper holder with stationary needle guard (A, Fig. 6) onto looper holder frame (B) and adjust the stationary needle guard so it is just brought up to the needle. Assemble the adjustable needle guard (C) and looper (D) onto looper holder and set so that the right edge of the looper is in line with the stationary needle guard. The distance between the stationary needle guard and the adjustable needle guard to be the same as the large shank section of a needle. Adjust proportionally smaller for smaller than size .049 or .054 needles.

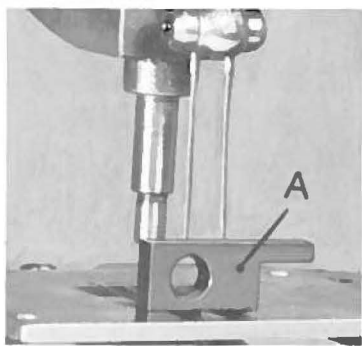


Fig. 5

Set looper holder frame (B, Fig. 6) so the distance between the centerline of the needle (A, Fig. 7) and point of looper (B) is $\frac{3}{32}$ inch when needle is at bottom of its travel. Accomplish this by loosening the hexagonal head clamp screw (G, Fig. 6) and moving the holder forward or backward as required and tighten screw. Looper gauge No. 21225- $\frac{3}{32}$ (C, Fig. 7) can be used advantageously in making this adjustment. When loopers move forward their points should pass the left sides of the needles as close as possible, without contacting.

With looper points toward the operator, the loopers should be seated in looper holder as far down as they will go. The loopers may be released to the threading position by pulling the looper holder frame locking pin (A, Fig. 8) to the left when the needles are at the high point of travel. They are returned to the operating position by merely pushing them back until they snap into the locking position. The right side of the looper (D, Fig. 6) should be at right angles to the centerline of the retainer holder shaft (E). Adjust looper thread eyelet (H, Fig. 6) by loosening two screws (J) and move stop from left to right to prevent loopers from being released to the threading position unless needle points are above the throat plate.

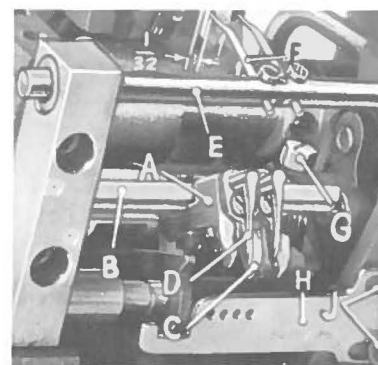


Fig. 6

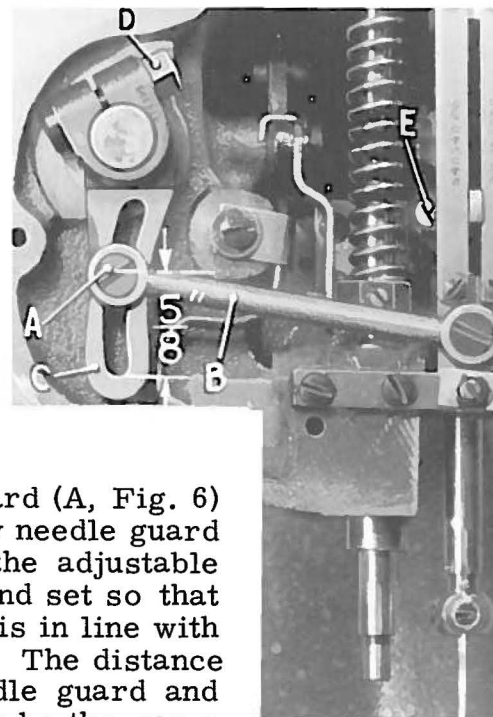


Fig. 4

THREAD TENSION RELEASE (Continued)

The thread for the right hand looper enters from the right side of the looper and the thread for the left hand looper enters from the left side of the looper. The needles are threaded from right to left.

SETTING LOOPER THREAD TAKE-UP EYELET

The take-up eyelet (A, Fig. 14) should be set high at the longest stitch to pull up a good stitch and should be lowered accordingly as the stitch is shortened. This eyelet, in general, controls the ability of the machine to pull up a good stitch. However, too high an eyelet setting gives an excess of looper thread and this is detrimental to chaining.

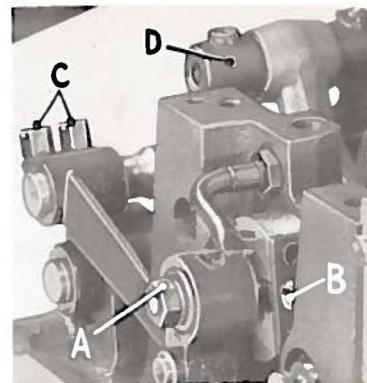


Fig. 13

SETTING FRAME NEEDLE THREAD EYELET

The frame needle thread eyelet should be set as low as possible. High settings pull thread through the tension on the down stroke of the needle bar, and this is not desirable.

THREAD TENSIONS

The tension on the needle thread should be as light as possible to pull up a good stitch and to avoid puckering the fabric. For pulling up a better stitch see paragraph on looper thread take-up eyelet.

CHAINING STITCH LENGTH

Start operating on a piece of fabric. Set stitch to required length. To alter stitch length, loosen nut (A, Fig. 13) (it has a left hand thread) and turn screw (B) in head of main shaft until desired stitch length has been attained and tighten nut. Turning screw in a clockwise direction shortens the stitch and turning screw in a counterclockwise direction lengthens the stitch. The travel of the needle bar should be changed to correspond to the travel of the feed dog and this is accomplished by loosening screw (A, Fig. 4) and sliding link (B) up or down until the movement of the feed dog and needle bar are synchronized. Sliding the link upward shortens the travel of the needle bar and sliding it downward lengthens the travel of the needle bar.

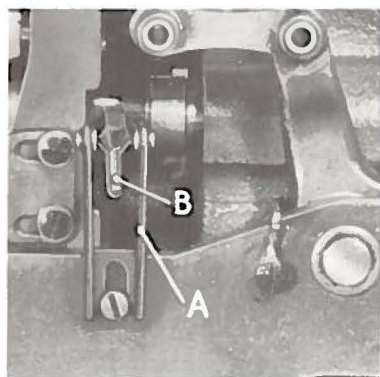


Fig. 14

PRESSER FOOT PRESSURE

Regulate the presser spring so that it exerts only enough pressure on the presser foot to feed the work uniformly.

CHECKING THE NEEDLE-LOOPER TIMING

The mechanical construction and the time flats, together with the adjustments under "Setting The Needle Location, Height and Travel" and "Setting Looper and Looper Holder", produces the needle-looper timing.

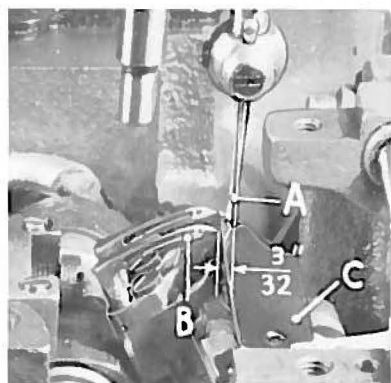


Fig. 7

The needle-looper timing may be checked only at $\frac{9}{64}$ inch needle travel. To check the timing, turn the handwheel in the operating direction until the center line of the needle is at the center line of the looper eye. On both the up-stroke and the down-stroke of the needle, the bottom of the needle eye should be equal distance above the top of the looper blade, as in Fig. 9.

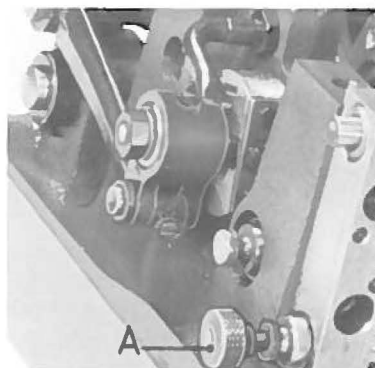


Fig. 8

If for any reason the machine has been disassembled, or retiming is necessary follow the instructions under, "Setting The Needle Location, Height and Travel" and "Setting Looper and Looper Holder".

SETTING THE RETAINER

Insert the retainer (F, Fig. 6) in the retainer holder bar (E) with the tip of the notched end $\frac{1}{32}$ inch from the needles when the needle bar is at the bottom of its stroke, the notch should be to the right and in a vertical position. Loosen screws in the retainer holder bar connection (B, Fig. 10) and rock the retainer bar so the underside of the retainer is as close as possible to the top of the looper, without contact. Turn the handwheel in the operating direction until the eye of the looper is directly below the point of the retainer. Then, move the retainer holder bar (E, Fig. 6) to the right or left so that the right side of the retainer is directly over the middle of the looper at the eye.

NOTE: When using needles larger than size .040 it may be necessary to set the retainer further to the right, but do not set the right side of the retainer beyond the right side of the looper.

SETTING THE FEED DOG

Set the feed dog (A, Fig. 11) with tips of teeth parallel with and project their full depth above the throat plate (B) at high point of travel. Adjust feed dog support screws (C) under back of feed dog to maintain this setting. These screws are also used to level the feed dog across the line of feed.

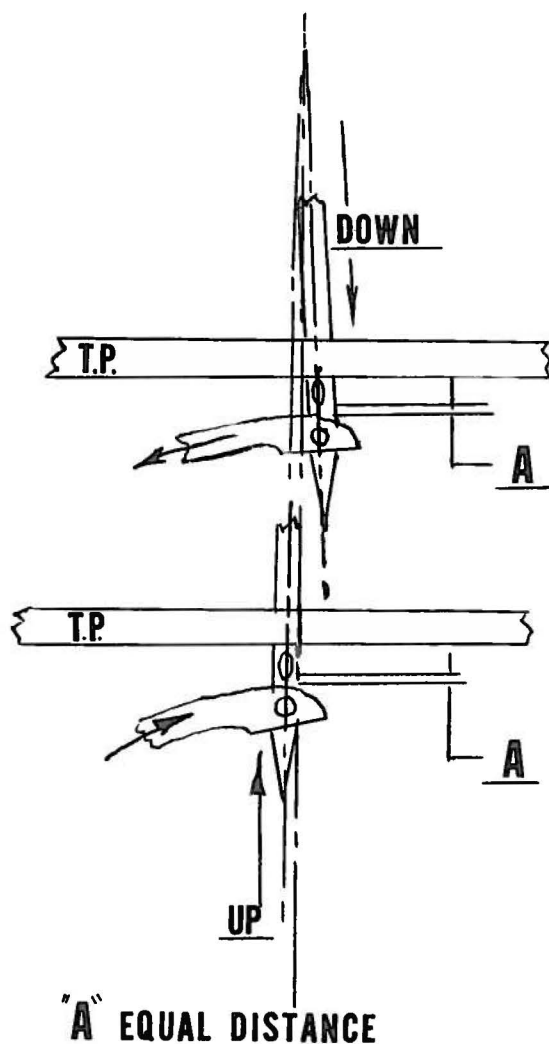


Fig. 9

SETTING THE FEED DOG (Continued)

To tilt feed dog in line of feed and move front tooth (D, Fig. 11) down, turn screw (A, Fig. 12) clockwise and screw (B) counterclockwise. Reverse direction of two screws to raise front tooth. Normal setting is all teeth level with throat plate when feed is at high point of lift.

Space the feed dog so there is a clearance of about $\frac{1}{64}$ inch on the sides and between front of needle hole and needle. This is accomplished by loosening the screws (C, Fig. 13) which clamp the feed rocker arm to the feed rocker (D) and moving the feed rocker forward or backward as needed. Tighten screws securely after proper setting has been attained. Should it be necessary to move the feed dog

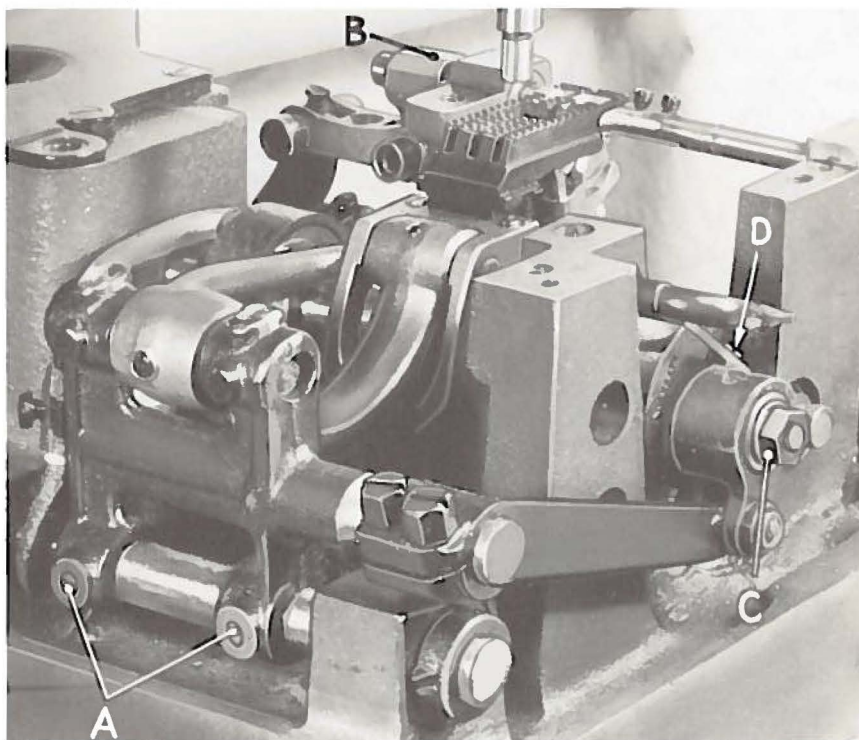


Fig. 10

to the left or right, loosen screws (A, Fig. 10) which hold the feed rocker to the feed rocker shaft and move feed rocker to desired position and retighten screws. Make sure that the feed rocker arm does not bind after making this adjustment.

To set feed dog travel to correspond with needle travel, loosen nut (A, Fig. 13) (it has a left hand thread) and adjust screw (B) until movement of needle and feed dog are synchronized. Turning screw in a clockwise direction shortens the travel of the feed dog, and turning screw counterclockwise will lengthen the travel. Re-tighten nut.

THREAD TENSION RELEASE

The thread tension release is set correctly when it begins to function as the presser foot is raised to within $\frac{1}{8}$ inch of the end of its travel and is entirely released when the presser foot reaches its highest position.

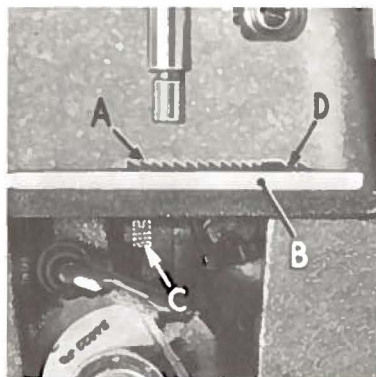


Fig. 11

Draw looper and needle threads into the machine. When there are no threads in the machine the loopers may be released into the threading position by turning the handwheel until the needle bar is at high position and pulling the looper holder frame locking pin (A, Fig. 8) to the left. With threads in the machine, proceed in the same manner except hold the needle threads taut to prevent stitch formation while turning handwheel. Return loopers to operating position by pushing against looper holder frame; the needle bar being at its highest position.

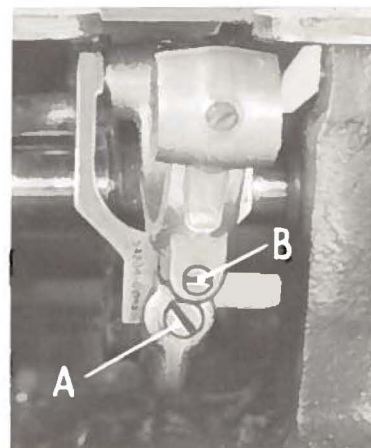


Fig. 12

FOREWORD

The 50000 series streamlined needle feed machines covered by this catalog represent the latest design of Union Special's flat bed line. Light weight presser bars and needle bar driving mechanisms make it possible to attain the utmost in speed and production. The new light weight parts and needle bearings make them lighter running and smoother operating. The light weight presser bar mechanism reduces pressure required to lift the presser foot. The needle feed feature of these machines provide uniform feeding and flatter seams on medium to heavy weight operations.

Automatic lubrication and a new filter type oil return pump, used in conjunction with isolated mounting oil pan base plate, for returning filtered oil to the main reservoir, has made maintenance simple.

It is our constant aim to furnish carefully prepared information which will enable our customers to secure all possible advantages from the use of Union Specials. The following pages illustrate and describe the parts used in all of the machines covered in this catalog.

Union Special representatives will be found in all manufacturing centers, ready to cooperate with you to plan and estimate requirements.

Union Special **MACHINE COMPANY**

Engineering Department

IDENTIFICATION OF MACHINES

Each Union Special machine is identified by a Style number which is stamped into the 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 54600 A". 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 54600 AZ".

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: "54600".

APPLICATION OF CATALOG

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 this class. Reference to direction, such as right, left, front, back, etc., are given from the operator's position while seated at the machine. Operating direction of handwheel is toward the operator.

STYLES OF MACHINES

Streamlined Flat Bed, One or Two Needle, Needles Abreast, Independent Row, Needle Feed, High Throw, Needle Bearing Crankshaft, Light Weight Presser Bar and Needle Bar Driving Mechanism, Single Reservoir Enclosed Automatic Lubricating System, Filter Type Oil Return Pump and Oil Siphon Assembly, Loopers in Line With Feed and Looper Throw-out for Simplified Threading, Maximum Work Space to Right of Needle Bar 7 3/4 Inches.

54600 A Single needle machine for binding, hemming and seaming on mattresses. Machine has throw-out binder, 1/4 inch hemmer and edge guide. Seam specification 401-BSa-1, EFb-1 (inverted) or SSa-1. Uses selvage edge binding, standard widths 5/8, 7/8 or 3/4 inch.

54600 B Single needle machine for miscellaneous seaming operations on light to medium weight materials. Hinged presser foot and edge guide. Seam specification 401-SSa-1.

54600 C Single needle machine for seaming couch covers with or without rope welt. Hinged presser foot with split turned up toe and a 5/32 inch cord groove in bottom to the left of needle for guiding cord. Seam specification 401-SSa-1 or SSk-1 (modified).

54600 D Single needle machine for miscellaneous seaming operations on medium to heavy weight materials. Hinged presser foot and edge guide. Seam specification 401-SSa-1.

54600 E Two needle machine for piecing sleeves, joining shoulders, and setting sleeves of light to medium weight shirts and similar garments. Seam specification 401-LSc-2. Standard gauges Nos. 16 and 18.

54600 F Two needle machine for seaming, binding and attaching a 1/8 inch diameter welt to auto seat covers. Machine has combination 3/4 inch binder and 1/8 inch welt guide attachment. Hinged presser foot with 1/8 inch cord groove to left of left hand needle. Seam specification 401-BSd-2.

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 the largest diameter of blade measured in thousandths of an inch, midway between the shank and the eye. Collectively, the type number and the size number is the complete symbol.

Standard needle for machines in Class 54600 is Type 133GS. It has a round shank, round point, short, double groove, ball eye, spotted, spiral groove, struck groove, chromium plated, in sizes 032, 036, 040, 044, 049, 054.

To have needle orders promptly and accurately filled, an empty package, a sample needle, or the type and size number should be forwarded. Use description on label. A complete order would read: "1000 Needles, Type 133GS, Size 054".

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

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 numbers, descriptions 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 the 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:

47	29105 AD	Retainer Drive Eccentric Assembly-----	1
48	22559 B	Bearing Screw, upper-----	2
49	22894 C	Set Screw-----	4
50	22894 D	Spot Screw-----	1
51	22559 A	Bearing Screw, lower-----	2

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 the complete sub-assembly should be ordered.

In those cases where a part is common to all of the machines covered by this catalog, no specific usage will be mentioned in the description, however, when the parts for the various machines are not the same, the specific usage will be mentioned in the description, and if necessary, the difference will be shown in the illustration.

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 the 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.

IMPORTANT! ON ALL ORDERS, PLEASE INCLUDE PART NAME AND STYLE OF MACHINE FOR WHICH PART IS ORDERED.

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 Union Special Machine Company, its subsidiaries and authorized distributors. They are designed according to the most approved scientific principles, and are made with the utmost precision. Maximum efficiency and durability are assured.

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

TERMS

Prices are strictly net cash and subject to change without notice. All shipments are forwarded at the buyer's risk f. o. b. shipping point. Parcel Post shipments are insured unless otherwise directed. A charge is made to cover the postage and insurance.

OILING AND THREADING

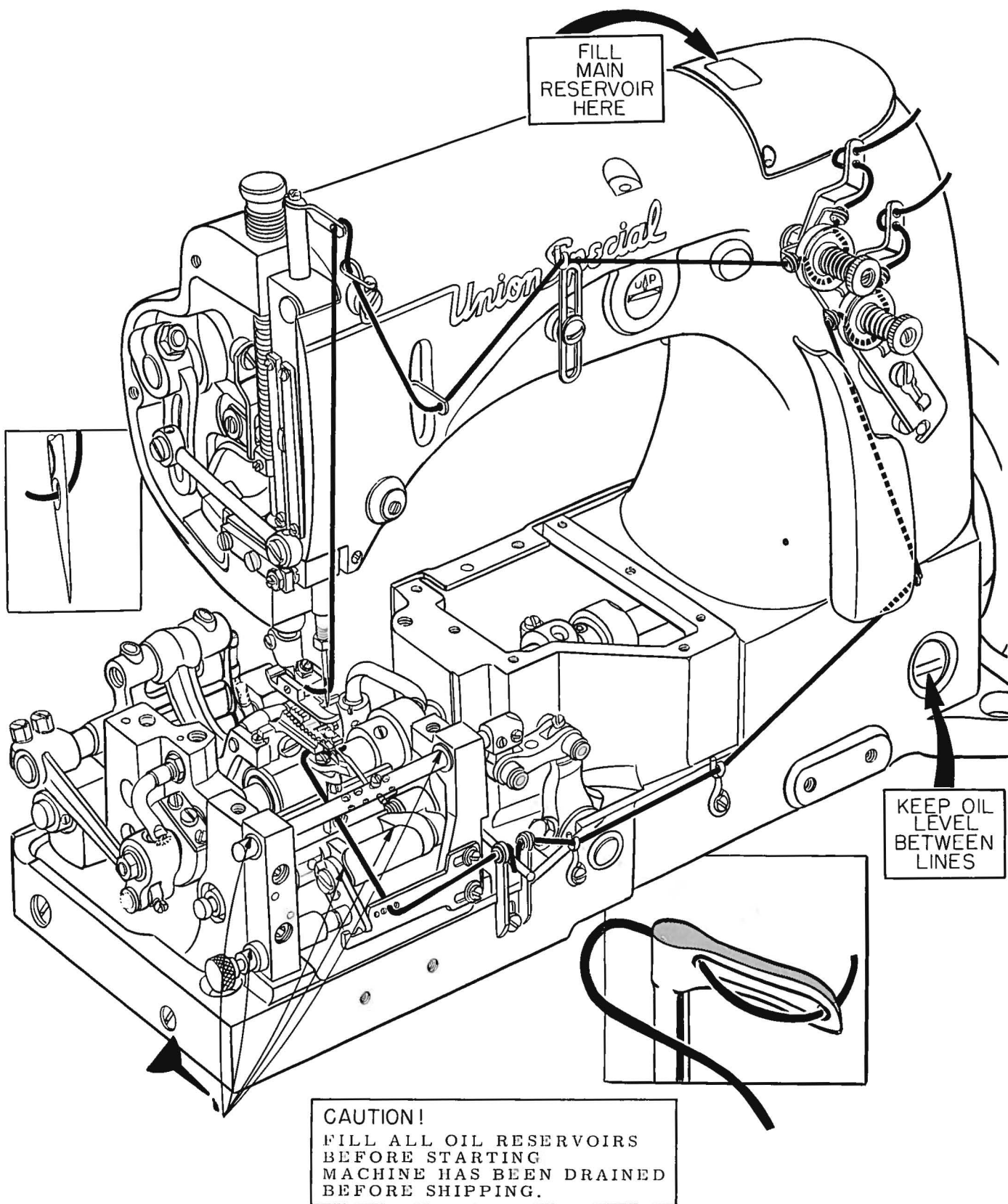
The oil has been drained from the machine before shipping, and the reservoir must be filled before beginning to operate. Use a straight mineral oil with a Saybolt viscosity of 200 to 250 seconds at 100° Fahrenheit.

Oil is filled at the spring cap in the top cover, and the oil level is checked at the sight gauge on the front of the machine. The oil level should be maintained between the red lines on the gauge. The capacity of the oil reservoir is 12 ounces.

The machine is almost entirely automatically lubricated, and no oiling, other than an occasional drop of oil at both bearings of the retainer holder, the looper throw-out pin, and looper holder frame locking pin, as indicated in oiling diagram, is required.

A daily check before the morning start should be made and oil added if required. Oil, which has gone through the machine, is filtered and pumped back into the main reservoir, making too frequent oilings unnecessary. Excessive oil in the main reservoir may be drained at the plug screw in the main frame directly under the handwheel.

The accompanying drawing also shows the manner in which a single needle machine is threaded. Two needle machines are threaded in substantially the same manner. Please note that the needle is inserted in the needle holder with the eye in a plane at right angles to the direction of line of feed, and is threaded from right to left.



INSTRUCTIONS FOR MECHANICS

NEEDLE LEVER STUD SETTING

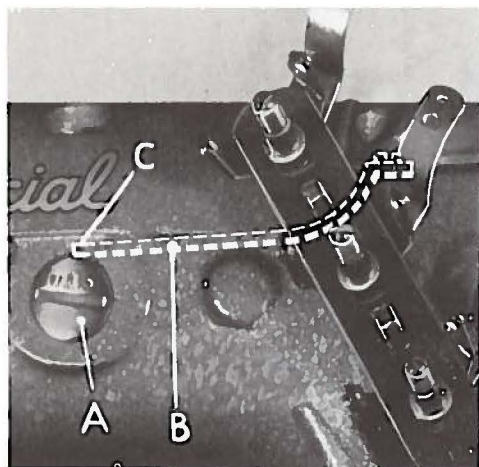


Fig. 1

at 4500 R. P. M. Inspect oiling system for leaks.

Observe location of needle lever stud (A, Fig. 1). The head of the needle lever stud is marked with an arrow and the word "UP". These studs are set correctly when arrow points vertically up. Also check the position of the needle lever bearing oiler (B) inside the arm casting, which lubricates the needle lever stud. Make sure it is tilted downwardly and that its delivery end (C) contacts the inside wall of the bed casting at the back, just above the notch of the needle lever shaft stop collar.

OILING SYSTEM

Clean machine thoroughly. Fill oiling system, run machine slowly for a minute to allow oil wicks to carry the oil to the bearings. Then re-check the oil in oiling system and run machine for five minutes

SYNCHRONIZING FEED DOG AND NEEDLE

Insert a new set of needles, Type 133GS, and with feed dog in machine, turn handwheel until needles correspond with needle holes in feed dog, without deflection, either at the front or back of needle hole. Synchronize travel of feed dog and needle at $13/64$ inch, approximately 5 stitches per inch. To set needle travel at approximately 5 S. P. I., loosen screw (A, Fig. 2) and slide link (B) to bottom of slot in needle feed drive lever (C) and re-tighten screw.

To set feed dog travel to correspond with needle travel, loosen nut (A, Fig. 3) (it has a left hand thread) and adjust screw (B) until movement of needle and feed dog are synchronized. Turning screw in a clockwise direction shortens the travel of the feed dog and turning screw counterclockwise will lengthen the travel. Re-tighten nut.

To establish the correct distance between needle bar and presser bar, use gauge 21227 BT (A, Fig. 4). Loosen nut on needle feed drive lever (D, Fig. 2). Place gauge 21227 BT on presser bar (B, Fig. 4) with part number up. Rotate gauge in a counterclockwise direction so the shortest surface slips between the presser bar (B) and the needle bar (C) and the longest surface stops against the needle bar. With the needle bar at the bottom of its travel, hold needle bar firmly against the gauge and re-tighten nut (D, Fig. 2).

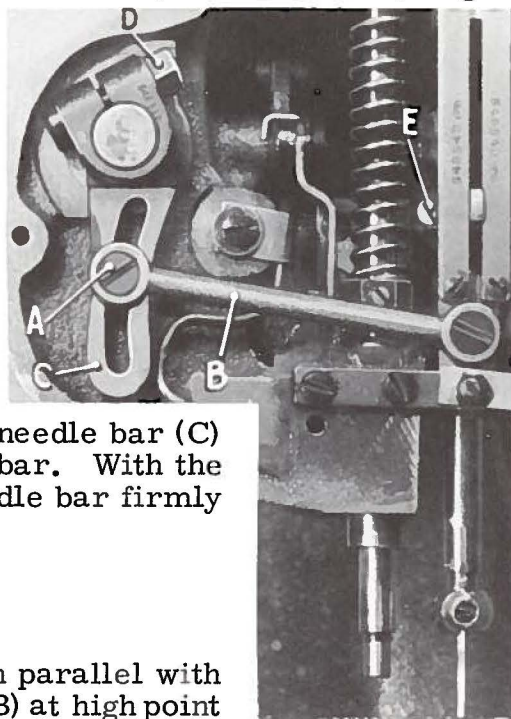


Fig. 2

SETTING THE FEED DOG

Set the feed dog (A, Fig. 5) with tips of teeth parallel with and project their full depth above the throat plate (B) at high point of travel. Adjust feed dog support screws (C) under back of feed dog to maintain this setting. These screws are also used to level the feed dog across the line of feed.

SETTING THE FEED DOG (Continued)

Space the feed dog in the throat plate so there is a clearance of at least $\frac{1}{64}$ inch at all points and so the rear teeth pass beyond the rear of the presser foot. This is accomplished by loosening the screws (C, Fig. 3) which clamp the feed rocker arm to the feed rocker (D, Fig. 3) and moving the feed rocker forward or backward as needed.

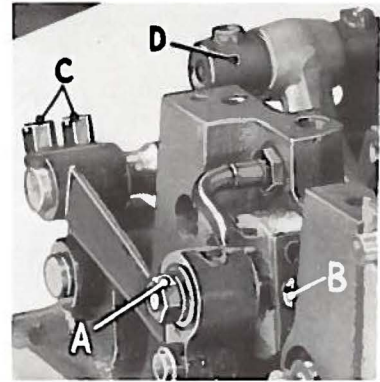
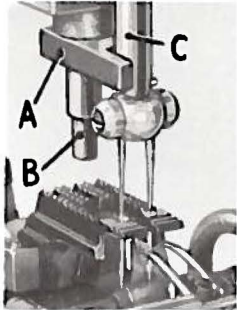


Fig. 3



Tighten screws securely after proper setting has been attained. Should it be necessary to move the feed dog to the left or right, loosen screws (A, Fig. 11) which hold the feed rocker onto the feed rocker shaft and move feed rocker to desired position and re-tighten screws. Make sure that the feed rocker arm does not bind after making this adjustment.

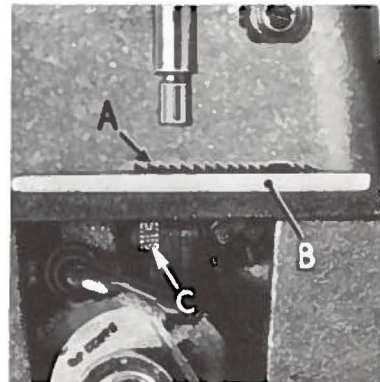
SETTING LOOPER AND LOOPER HOLDER

Fig. 4

Insert a set of new needles, Type 133GS, size as specified. Spot or scarf of needle must be to the left.

Assemble looper holder and stationary needle guard (A, Fig. 6) onto looper holder frame (B) and adjust the stationary needle guard so it is just brought up to the needle. Assemble the adjustable needle guard (C) and looper (D) onto looper holder and set so that the right edge of the looper is inline with the stationary needle guard. The distance between the stationary needle guard and the adjustable needle guard to be the same as the large shank section of a needle. Adjust proportionally smaller for smaller than size .049 or .054 needles.

Set looper holder frame (B, Fig. 6) so distance between centerline of needle (A, Fig. 7) and point of looper (B) is $\frac{3}{32}$ inch when needle is at the bottom point of travel. Accomplish this by loosening the hexagonal head clamp screw (G, Fig. 6) and moving the holder forward or backward as required and tighten screw. Looper gauge No. 21225- $\frac{3}{32}$ (C, Fig. 7) can be used advantageously in making this adjustment.



SETTING HEIGHT OF NEEDLE BAR

Set the height of the needle bar so that the points of the needles are approximately $\frac{1}{2}$ inch above the top surface of the throat plate when the needles are at the high point of travel using gauge No. 21227 BT (A, Fig. 8) on its side. Loosen screw (E, Fig. 2) and move needle bar up or down as required and then tighten screw.

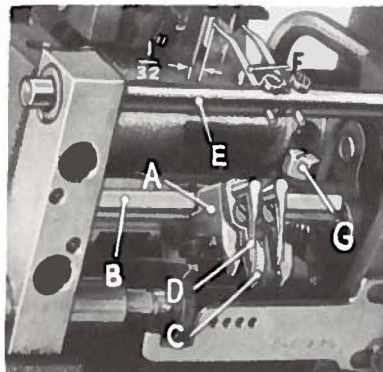


Fig. 6

LOOPER CLEARANCE

With looper points toward the operator, the loopers should be seated in looper holder as far down as they will go. Check to see that the loopers clear the underside of the retainer holder bar (E, Fig. 6) when released to the threading position. The loopers may be released to the threading position by pulling the looper holder frame locking pin (A, Fig. 9) to the left when the needles are at the high point of travel.

LOOPER CLEARANCE (Continued)

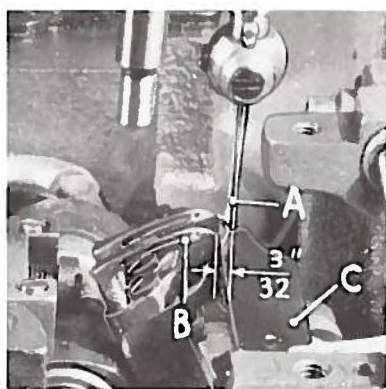


Fig. 7

They are returned to the operating position by merely pushing them back until they snap into the locking position. The right side of the looper blade should be at right angles to the center line of the retainer holder shaft. When the loopers move forward, their points should pass the left side of the needles as close as possible without contacting.

SETTING THE RETAINER

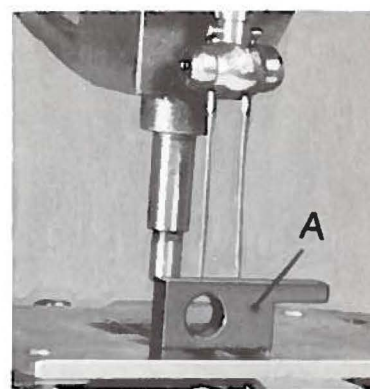


Fig. 8

Insert the retainer (F, Fig. 6) in the retainer holder bar (E) with the tip of the notched end approximately $1/32$ inch from the needles when the needle bar is at the bottom of its stroke, the notch should be to the right and in a vertical position. Loosen screws in the retainer holder bar connection (B, Fig. 11) and rock the retainer bar so the underside of the retainer is as close as possible to the top of the looper without contacting. Turn the handwheel in the operating direction until eye of looper is directly below the point of the retainer. Then, move the retainer holder bar (E, Fig. 6) to the right or left so that the right side of the retainer is directly over the middle of the looper at the eye. Where larger than size .040 needles are used, the retainer should be set so the right side of the retainer is even with the right side of looper at the eye.

THREADING

Draw looper and needle threads into the machine. When there are no threads in the machine, the loopers may be released into threading position by turning the handwheel until the needle bar is at high position and pulling the looper holder frame locking pin (A, Fig. 9) to the left. With threads in the machine, proceed in the same manner except hold the needle threads taut to prevent stitch formation while turning handwheel. Return loopers to operating position by pushing against looper holder frame, the needle bar being at its highest position.

The thread for the right hand looper enters from the left side of the looper and the thread for the left hand looper enters from the right side of the looper. The needles are threaded from right to left.

SETTING LOOPER THREAD TAKE-UP EYELET

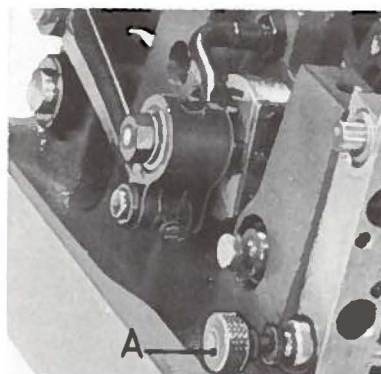


Fig. 9

The looper thread take-up eyelet (A, Fig. 10) should be set so that the take-up pin (B) begins to function when the loopers start their travel to the rear. The take-up eyelet should be set at the longest stitch to pull up a good stitch and should be lowered accordingly as the stitch is shortened.

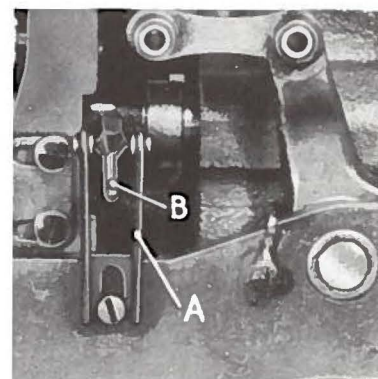


Fig. 10

SETTING FRAME NEEDLE THREAD EYELET

The frame needle thread eyelet should be set as high as possible without pulling thread through the tension on the down stroke of the needle bar.

THREAD TENSIONS

The tension on the needle thread should be as tight as necessary to pull up a good stitch and to avoid puckering the fabric.

CHANGING STITCH LENGTH

Start operating on a piece of fabric. Set stitch to required length. To alter stitch length, loosen nut (C, Fig. 11) (it has a left hand thread) and turn screw (D) in head of main shaft until desired stitch length has been attained and tighten nut. Turning screw in a clockwise direction shortens the stitch and turning screw in a counter-clockwise direction lengthens the stitch. The travel of the needle bar should be changed to correspond to the travel of the feed dog and this is accomplished by loosening screw (A, Fig. 2) and sliding link (B) up or down until the movement of the feed dog and the needle bar are synchronized. Sliding the link upward shortens the travel of the needle bar and sliding it downward lengthens the travel of the needle bar.

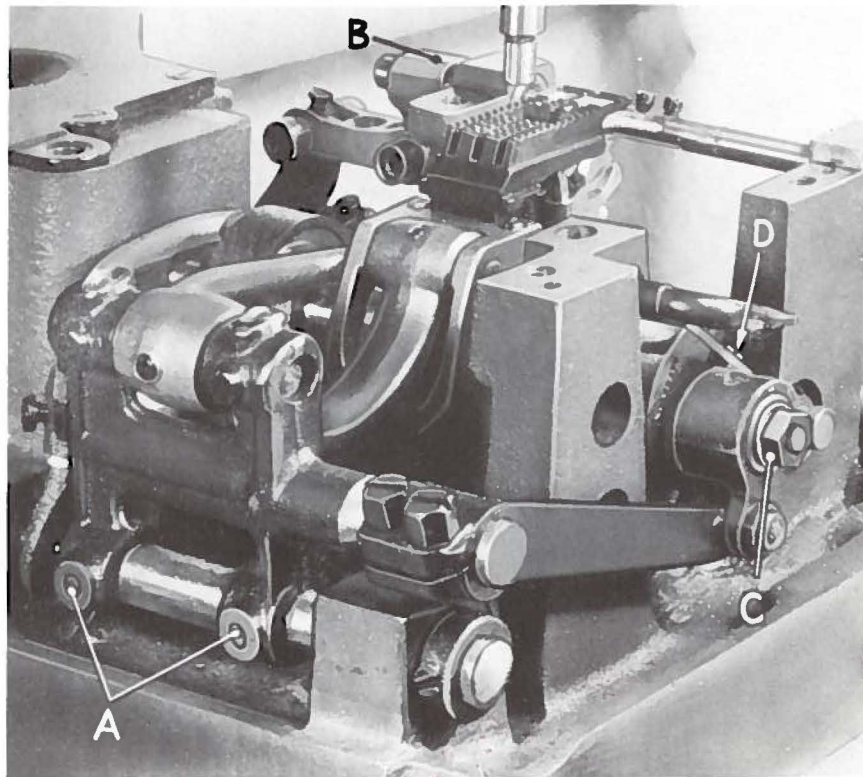


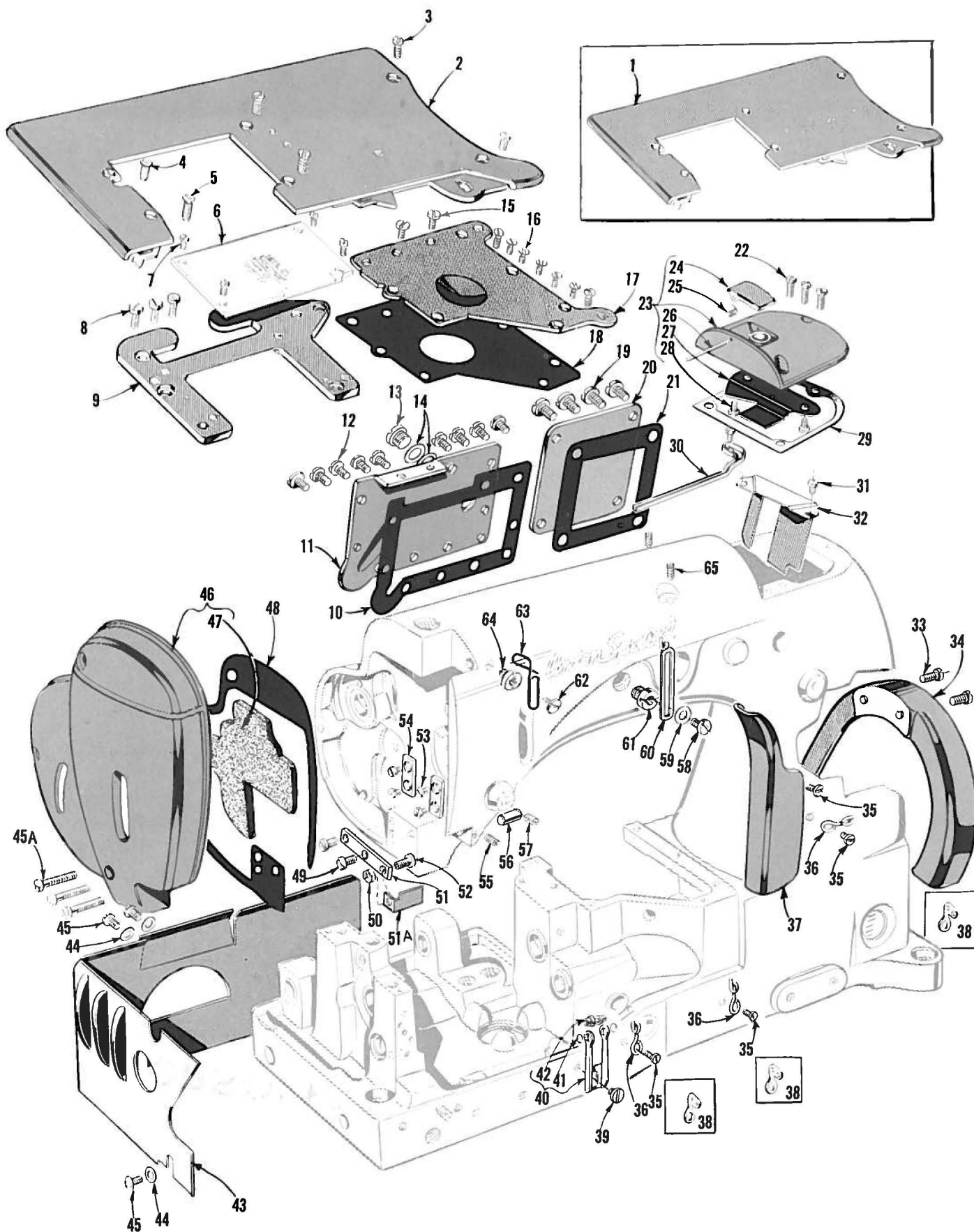
Fig. 11

PRESSER FOOT PRESSURE

Regulate the presser spring so that it exerts only enough pressure on the presser foot to feed the work uniformly.

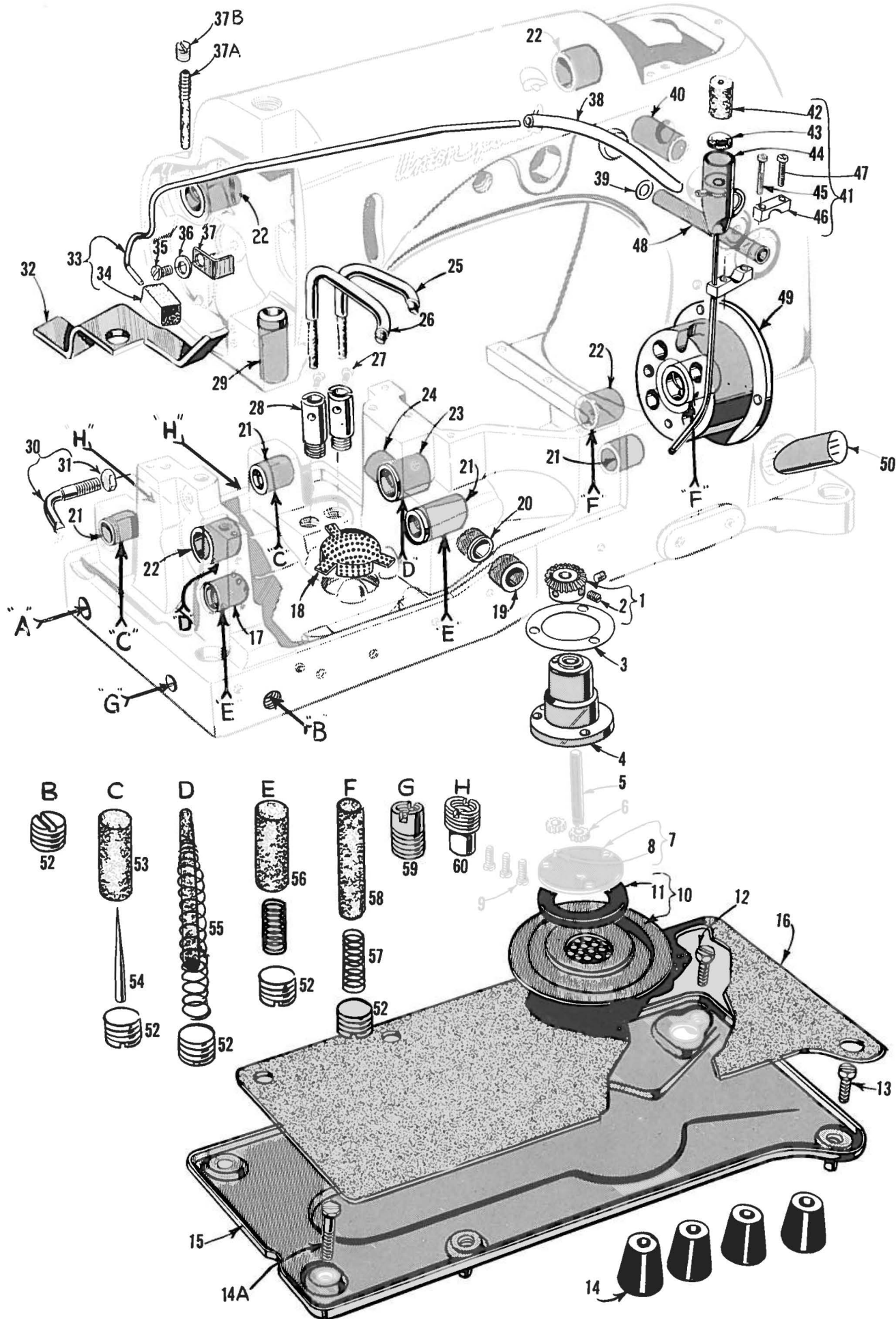
THREAD TENSION RELEASE

The thread tension release is set correctly when it begins to function as the presser foot is raised to within 1/8 inch of the end of its travel and is entirely released when the presser foot reaches its highest position.



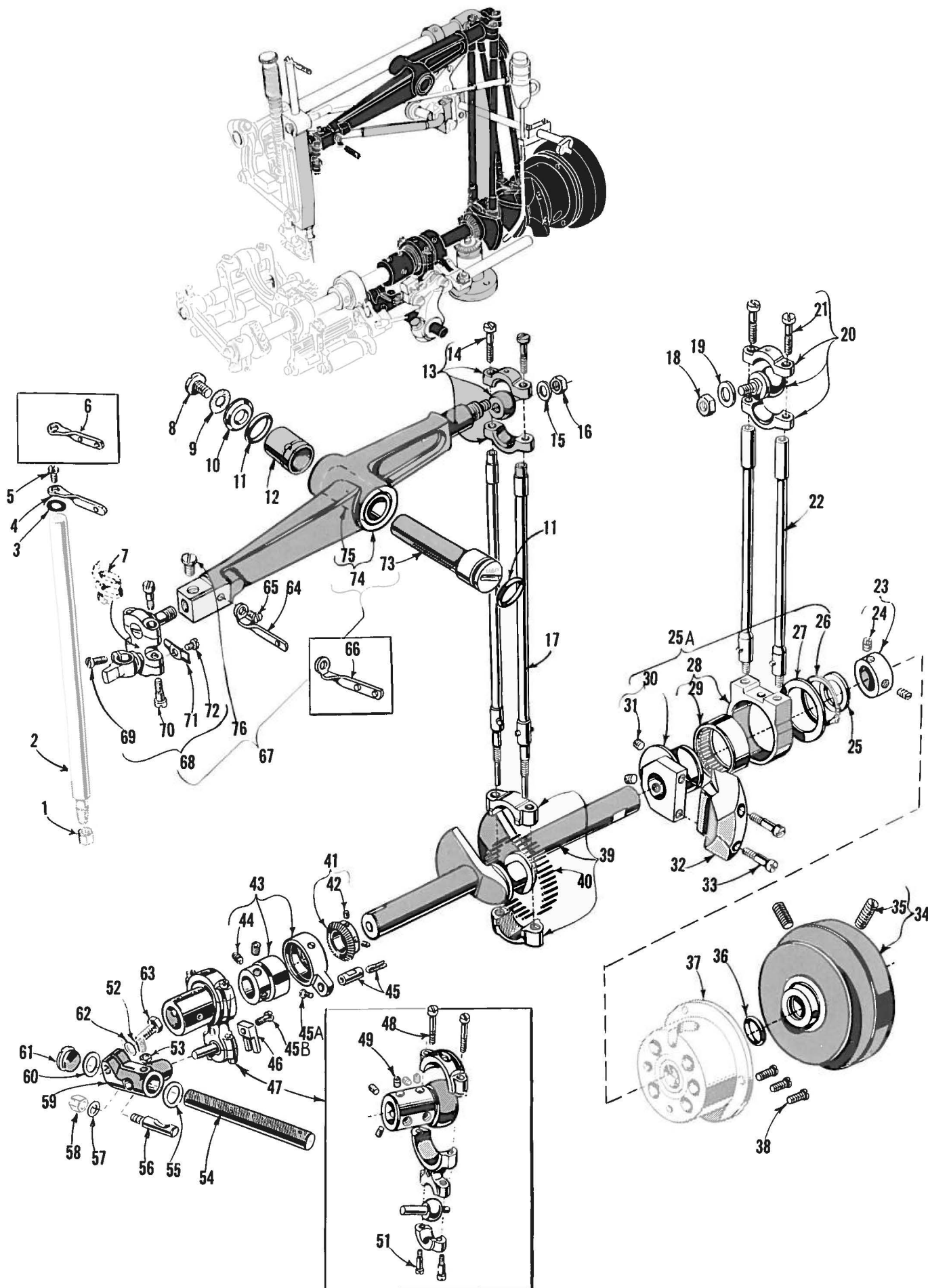
MAIN FRAME, MISCELLANEOUS COVERS AND PLATES

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	54401	Cloth Plate, for Styles 54600 B, C, D, E, F-----	1
2	54601	Cloth Plate, for Style 54600 A-----	1
3	22839 C	Screw -----	2
4	80	Screw -----	3
5	22574	Screw -----	1
6		Throat Plate (See Page 21)-----	1
7	22562 A	Screw -----	4
8	22839	Screw -----	3
9	54280	Throat Plate Support-----	1
10	52882 M	Gasket-----	1
11	52882 L	Oil Reservoir Back Cover -----	1
12	22848	Screw -----	9
13	22733 B	Plug Screw-----	1
14	41394 A	Gasket, for plug screw-----	2
15	22585 A	Screw -----	2
16	22524	Screw -----	7
17	53782 B	Oil Reservoir Top Cover -----	1
18	52882 K	Gasket-----	1
19	22548	Screw -----	4
20	52882 AE	Crank Chamber Cover, lower -----	1
21	52882 U	Gasket-----	1
22	22541 B	Screw -----	3
23	52882 AD	Crank Chamber Cover, upper -----	1
24	39582 L	Oil Cap-----	1
25	52882 AC	Oil Cap Torsion Spring-----	1
26	50-789 Blk.	Oil Cap Hinge Pin -----	1
27	52882 AA	Oil Drip Plate-----	1
28	90	Screw -----	2
29	52882 P	Gasket-----	1
30	51282 AE	Needle Lever Bearing Oilier-----	1
31	90	Screw -----	2
32	52882 Y	Baffle Plate -----	1
33	93	Screw -----	2
34	B21375 AH	Belt Guard- - -----	1
35	98 A	Screw -----	4
36	52 A	Thread Eyelet, for Styles 54600 A, B, C, D-----	3
37	51291 A	Looper Thread Guard -----	1
38	158 B	Thread Eyelet, for Styles 54600 E, F-----	3
39	22585 C	Screw -----	1
40	39267	Looper Thread Pull-off Eyelet -----	1
41	668-28	Eyelet Locking Ring -----	2
42	668-29	Eyelet-----	2
43	54282	Oil Shield -----	1
44	20	Washer -----	3
45	22848	Screw -----	3
45A	294	Screw -----	3
46	54682	Head Cover -----	1
47	54682 B	Felt Liner -----	1
48	54682 A	Head Cover Gasket-----	1
49	22569 C	Screw -----	2
50	12934 A	Nut-----	1
51	54637 B	Guide Stud Support -----	1
51A	54682 C	Needle Bar Frame Guard -----	1
52	22528 C	Needle Bar Frame Guide Stud -----	1
53	22513	Screw -----	4
54	35731 A	Presser Bar Connection Guide Plate -----	2
55	22517 F	Screw -----	1
56	53137 A	Pin, for needle bar frame -----	1
57	95	Plug Screw-----	1
58	22848	Screw -----	1
59	20	Washer -----	1
60	539	Frame Eyelet -----	1
61	22889 A	Adaptor Screw-----	1
62	22784 F	Screw -----	1
63	54670	Needle Thread Take-up Wire-----	1
64	22891 A	Screw, for 61985 A -----	1
65	719	Screw -----	2



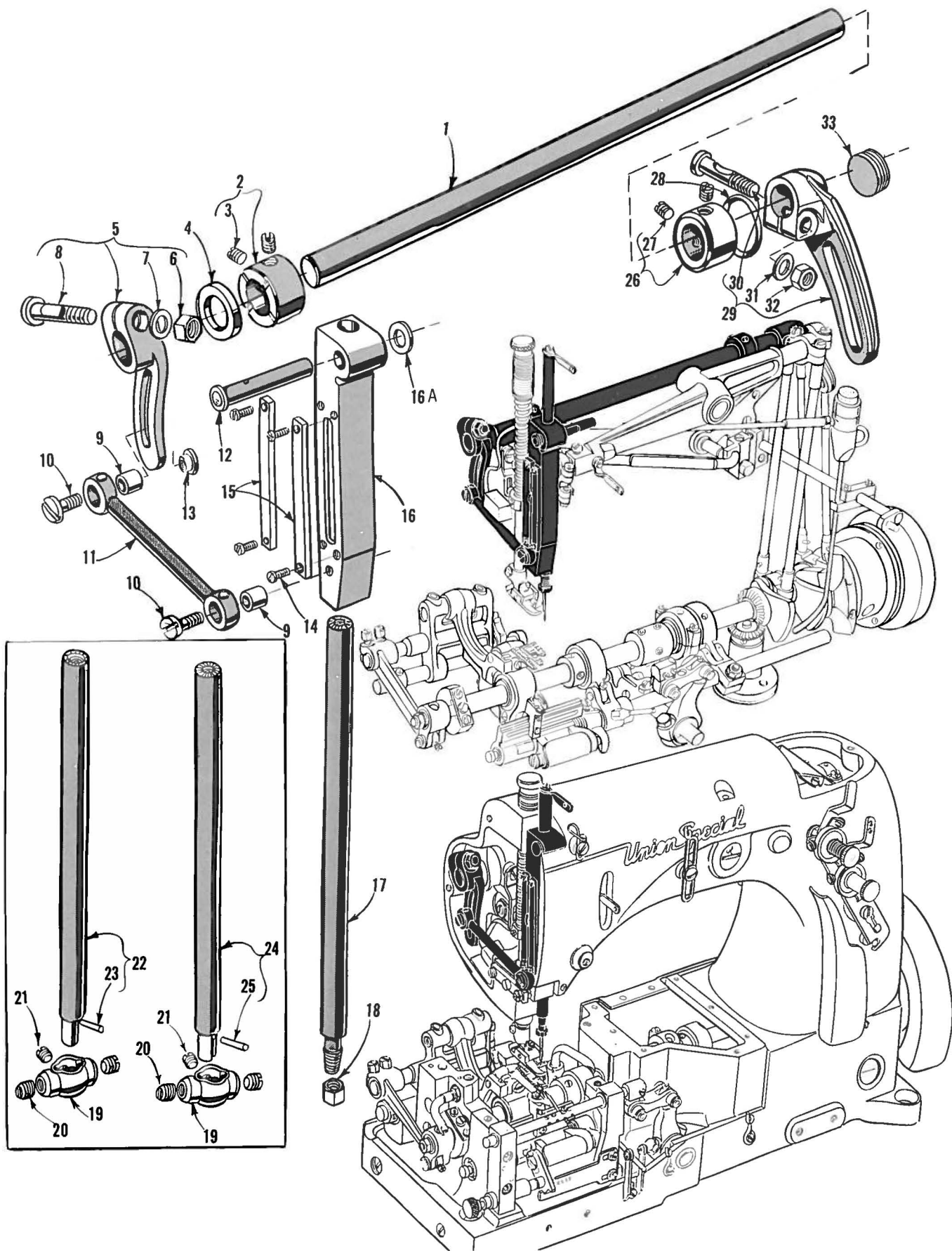
MAIN FRAME, BUSHINGS AND MISCELLANEOUS OILING PARTS

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	51493 K	Pump Driven Gear -----	1
2	531	Screw -----	2
3	643-127 Blk.	Gasket -----	1
4	51493 AG	Pump Housing -----	1
5	51493 D	Oil Pump Driving Shaft -----	1
6	51493 E	Driving Shaft Gear -----	2
7	51493 AH	Oil Pump Housing Cover -----	1
8	50-294 Blk.	Pin -----	1
9	22569 B	Screw -----	3
10	51493 BE	Filter Cap Assembly -----	1
11	51493 AN	Washer, rubber -----	1
12	22645 H-64	Screw -----	1
13	22823 A	Screw -----	1
14	51295 A	Mounting Isolator -----	4
14A	22823 B	Screw -----	1
15	51493 AY	Oil Pan Assembly -----	1
16	51493 BG	Base Plate Felt -----	1
17	52836 R	Looper Rocker Shaft Bushing, left -----	1
18	51493 BK	Lint Filter Screen -----	1
19	51242 Z	Looper Drive Lever Shaft Bushing, front -----	1
20	51242 R	Looper Drive Lever Shaft Bushing, middle -----	1
21	52836 P	Feed Rocker Shaft Bushing and Looper Rocker Shaft Bushing, middle, right -----	4
22	52890 C	Main Shaft Bushing, left, inner right and Rocker Shaft Bushings, upper left, right -----	4
23	51290 T	Main Shaft Bushing, middle -----	1
24	51242 S	Looper Drive Lever Shaft Bushing, rear -----	1
25	54293	Feed Lift Eccentric Oil Tube -----	1
26	54293 A	Take-up Drive Eccentric Oil Tube -----	1
27	90	Screw -----	2
28	52894 AB	Oil Tube Holder -----	2
29	51257 AA	Presser Bar Bushing, lower -----	1
30	660-136	Oil Tube, for feed crank link -----	1
31	258 A	Nut -----	1
32	666-217	Oil Attraction Felt -----	1
33	54694	Horizontal Siphon Oil Tube -----	1
34	666-218	Siphon Priming Block, felt -----	1
35	22569 C	Screw -----	1
36	20	Washer -----	1
37	54694 A	Oil Tube Clamp -----	1
37A	666-99	Oil Wick, for upper rocker shaft -----	1
37B	22706 A	Plug Screw -----	1
38	51294 N	Oil Tube Connection -----	1
39	21212	Locking Ring, for oil siphon connection -----	1
40	52883 R	Presser Foot Lifter Lever Bushing -----	1
41	51294 U	Oil Siphon Assembly -----	1
42	666-201	Felt Plug -----	1
43	666-209	Felt Plug -----	1
44	643-263 Blk.	Siphon -----	1
45	22729 B	Screw -----	1
46	51294 K	Clamp, upper -----	1
47	22729 A	Screw -----	1
48	21657 X	Release Lever Bushing -----	1
49	52891 B	Crankshaft Bushing Housing, including bushing -----	1
50	50-648 Blk.	Lucite Oil Gauge -----	1
51	22539 H	Plug Screw -----	1
52	22571 A	Plug Screw -----	13
53	666-111	Oil Wick, for feed rocker shaft bearing -----	2
54	666-179	Wedge Pin -----	2
55	666-118	Oil Wick, for left main shaft bearing -----	2
56	666-65	Oil Wick, for looper rocker shaft bearing -----	2
57	35178 D	Spring, for oil wick -----	4
58	666-114	Oil Wick, for right main shaft bearing -----	2
59	22889 D	Adaptor Plug Screw -----	1
60	22889 C	Adaptor Plug Screw -----	2



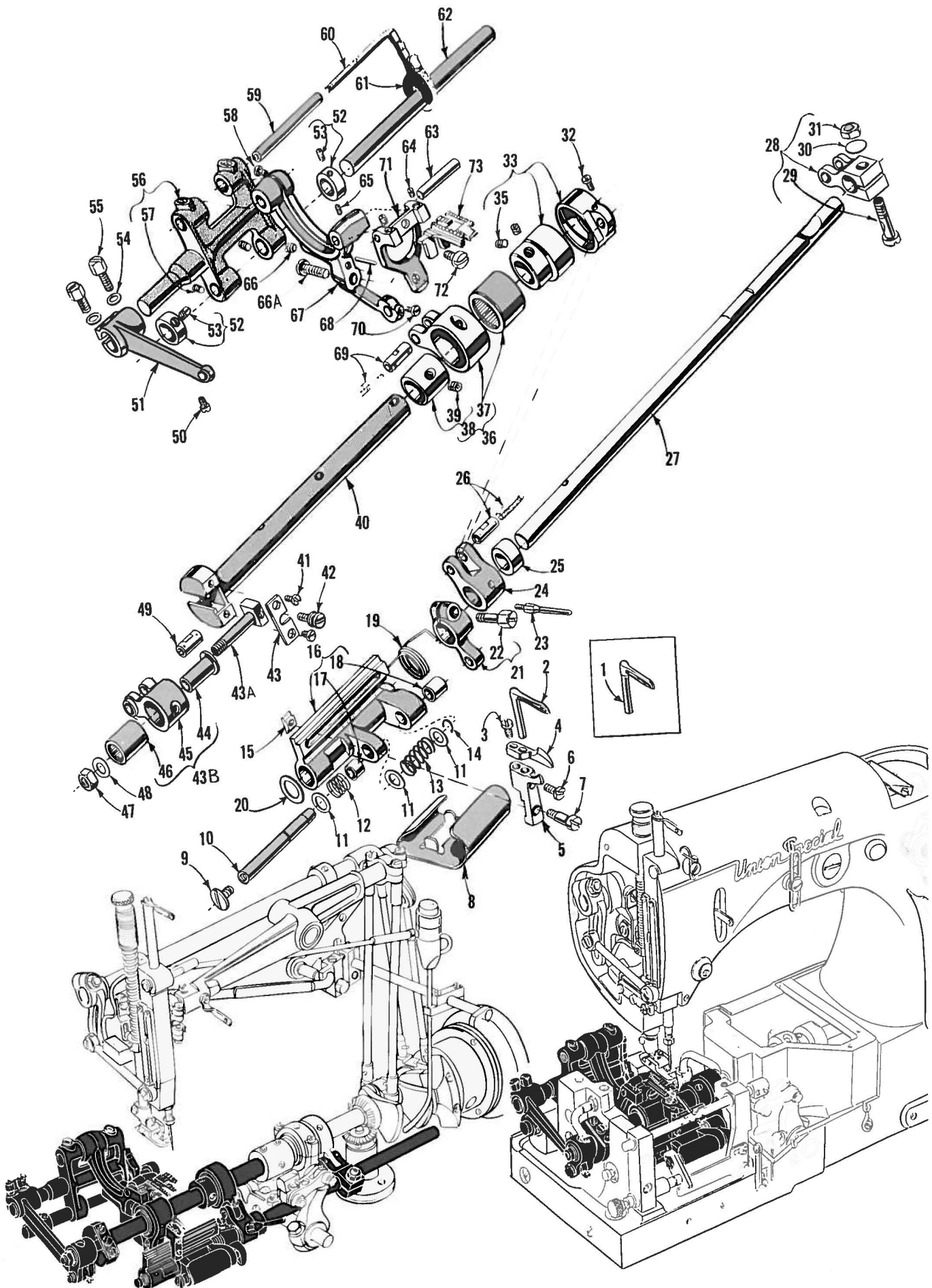
CRANKSHAFT, NEEDLE LEVER AND LOOPER DRIVING PARTS

Ref. No.	Part No.	Description	Amt. Req.
1		Needle Clamp Nut (See Page 15) -----	1
2		Needle Bar (See Page 15) -----	1
3	27-435 Blk.	Washer -----	1
4	51258 A	Needle Bar Eyelet, for Styles 54600 A, B, C, D -----	1
5	22768	Screw -----	1
6	51458 A	Needle Bar Eyelet, for Styles 54600 E, F -----	1
7	CL21	Oil Wick -----	1
8	22586 R	Plug Screw, for needle lever stud -----	1
9	51250 F	Gasket -----	1
10	51250 D	Washer -----	1
11	660-212	Oil Seal Ring -----	2
12	51150	Needle Lever Stop Collar -----	1
13	29066 R	Needle Lever Connecting Rod Assembly -----	1
14	22559 G	Screw -----	2
15	51216 N	Washer -----	1
16	51216 P	Nut -----	1
17	51216 G	Needle Lever Connecting Rod -----	2
18	18	Nut -----	1
19	39543 P	Washer -----	1
20	52952 B	Needle Feed Connecting Rod Ball Joint, upper -----	1
21	22559 G	Screw -----	2
22	52916	Needle Feed Drive Connecting Rod -----	2
23	9660 B	Thrust Collar -----	1
24	98	Screw -----	2
25	52951 C	Washer -----	1
25A	29126 DH	Needle Lever Drive Eccentric Assembly -----	1
26	660-246	Tru-Arc Ring -----	1
27	52951 B	Retaining Washer -----	1
28	52951 A	Connecting Rod Bearing -----	1
29	660-244	Needle Bearing -----	1
30	54638	Needle Feed Driving Eccentric, .100 inch throw -----	1
31	95	Screw -----	2
32	54647	Counterweight -----	1
33	88 F	Screw -----	2
34	52921 B	Pulley -----	1
35	22894 G	Screw -----	2
36	660-202	Oil Seal Ring -----	1
37	52891 B	Crankshaft Bushing Housing, including bushing -----	1
38	22569 B	Screw -----	3
39	29476 KK	Crankshaft Assembly, .990 inch throw -----	1
40	51216 M	Needle Bearing -----	28
41	51493 J	Pump Driving Gear -----	1
42	531	Screw -----	2
43	29133 K	Looper Drive Eccentric Assembly, .312 inch throw -----	1
44	22894 C	Screw -----	2
45	51236 A	Link Pin -----	1
45A	22768	Screw -----	1
45B	22729	Screw -----	1
46	51243 C	Ball Stud Guide Fork -----	1
47	29105 AD	Retainer Drive Eccentric Assembly, .090 inch throw -----	1
48	22559 B	Bearing Screw, upper -----	2
49	22894 C	Screw, set -----	5
51	22559 A	Bearing Screw, lower -----	2
52	81	Spot Screw -----	1
53	12982	Lock Nut -----	1
54	51242 P	Looper Drive Lever Shaft -----	1
55	51242 L	Thrust Washer -----	1
56	52841 G	Locking Stud -----	1
57	51242 M	Washer -----	1
58	52841 J	Nut -----	1
59	51242 Y	Looper Drive Lever Rocker -----	1
60	51242 L	Thrust Washer -----	1
61	22883 A	Plug Screw -----	1
62	51242 M	Washer -----	1
63	22852 A	Clamp Screw -----	1
64	51258	Needle Lever Eyelet, for Styles 54600 A, B, C, D -----	1
65	22768	Screw -----	1
66	51458	Needle Lever Eyelet, for Styles 54600 E, F -----	1
67	29348 X	Needle Lever Assembly -----	1
68	54654	Ball Joint Assembly -----	1
69	22562 A	Screw -----	1
70	97 A	Screw -----	4
71	54654 C	Guide Washer -----	1
72	28	Screw -----	1
73	51250 E	Needle Lever Stud -----	1
74	54615	Needle Lever -----	1
75	51250 A	Bushing -----	1
76	22839 A	Screw -----	1



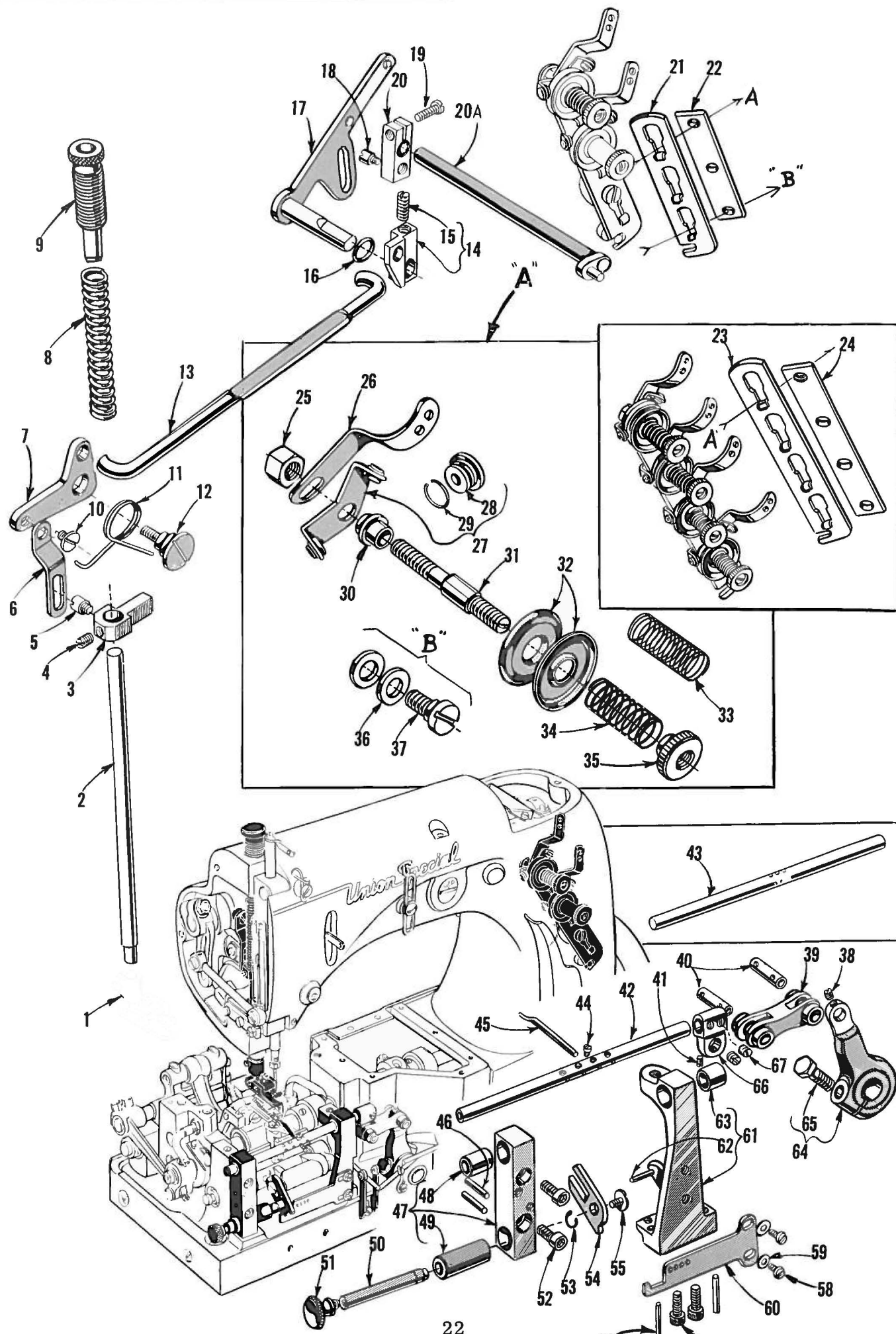
NEEDLE FEED PARTS, NEEDLE BARS AND HEADS

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	52849	Needle Feed Rocker Shaft -----	1
2	51147	Rocker Shaft Collar-----	1
3	95	Screw-----	2
4	52951 C	Washer-----	1
5	54637 D	Needle Feed Drive Lever-----	1
6	55235 E	Nut-----	1
7	6042 A	Washer-- -----	1
8	55235 D	Locking Stud-----	1
9	51771	Ferrule -----	2
10	22758 H	Screw -----	2
11	54637 C	Link -----	1
12	61985 A	Needle Bar Frame Pivot Pin-----	1
13	43139 A	Nut -- - -----	1
14	22593	Screw -----	4
15	54654 D	Ball Stud Guide-----	2
16	54637	Needle Bar Frame-----	1
16A	61341 F	Washer-----	1
17	54617	Needle Bar for Styles 54600 A, B, C, D -----	1
18	56	Needle Clamp Nut for Styles 54600 A, B, C, D -----	1
19	51418-16	Needle Holder for Styles 54600 E, F-----	1
20	98	Screw for Styles 54600 A, B, C, D -----	2
21	89	Screw for Styles 54600 A, B, C, D -----	1
22	54617 E-3-9	Needle Bar for No. 18 gauge Style 54600 E -----	1
23	50 J-26	Needle Stop Pin-----	1
24	54617 E-2-16	Needle Bar for No. 16 gauge Styles 54600 E, F -----	1
25	50 J-16	Needle Stop Pin-----	1
26	52849 C	Rocker Shaft Oil Seal Collar -----	1
27	95	Screw-----	2
28	660-202	Oil Seal Ring-----	1
29	52952 C	Rocker Shaft Lever, right -----	1
30	55235 D	Screw-----	1
31	6042 A	Washer -----	1
32	55235 E	Nut -----	1
33	22539 D	Plug Screw -----	1



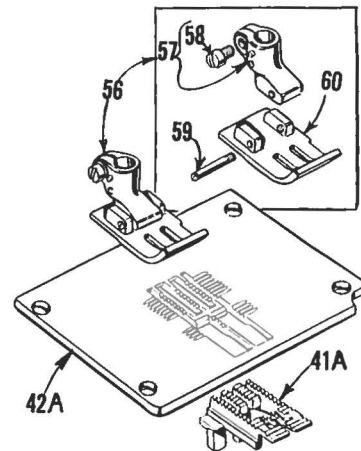
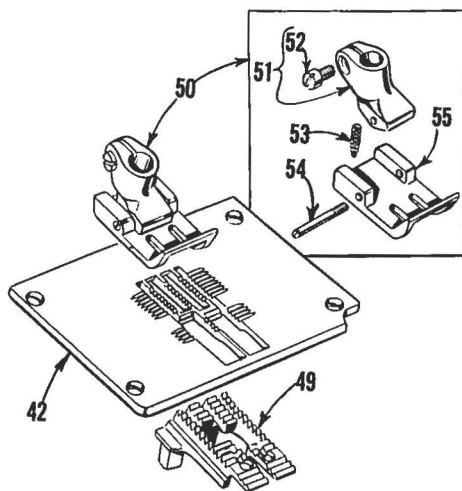
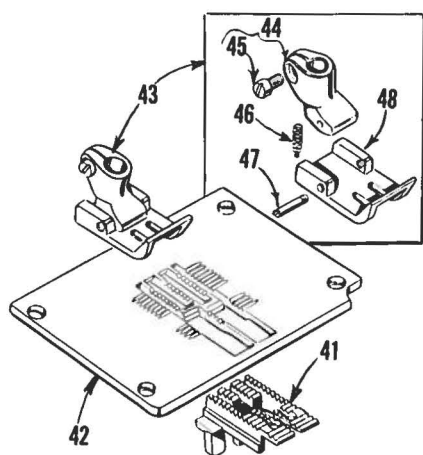
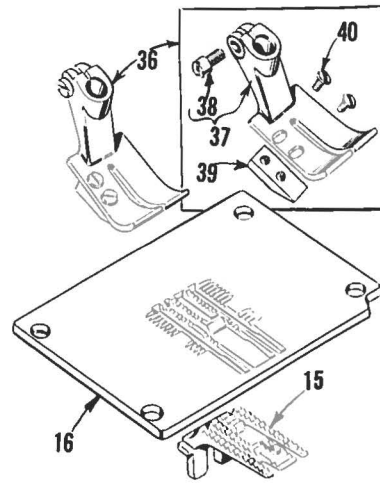
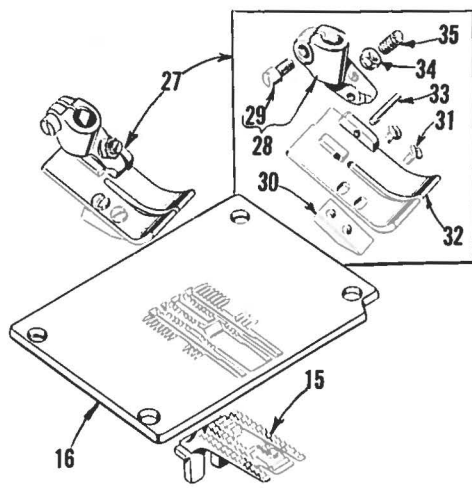
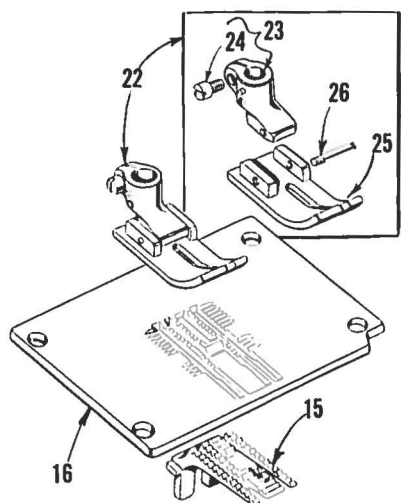
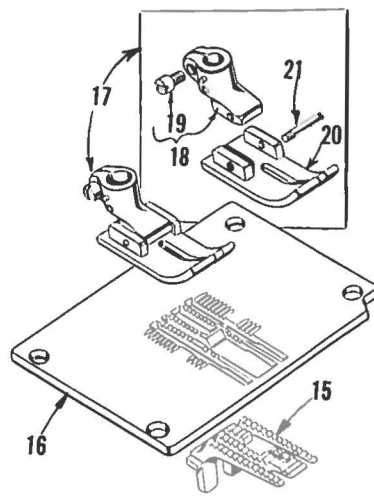
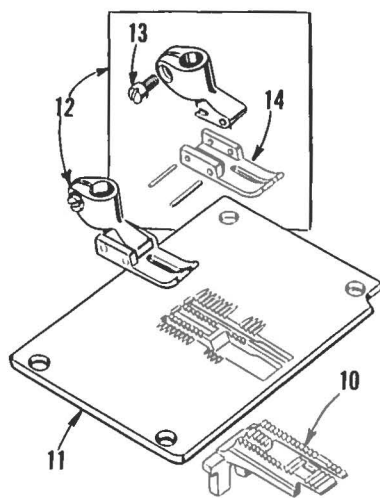
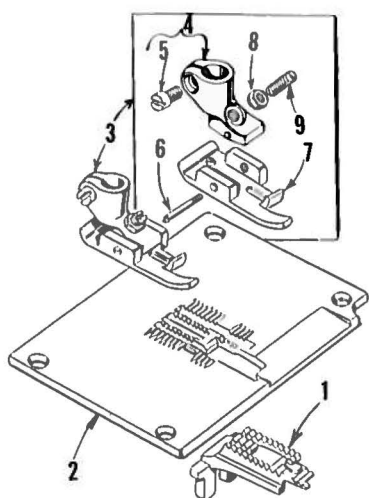
MAIN SHAFT, FEED DRIVING AND LOOPER DRIVING PARTS

Ref. No.	Part No.	Description	Amt. Req.
1	54208 A	Looper, for Style 54600 B-----	1
2	54208	Looper, for Styles 54600 A, C, D-----	1
	54208	Looper, for Styles 54600 E, F-----	2
3	22768	Screw, for Styles 54600 A, B, C, D-----	1
	22768	Screw, for Styles 54600 E, F-----	2
4	54625	Looper Holder Needle Guard, for Styles 54600 A, B, C, D-----	1
	54625	Looper Holder Needle Guard, for Styles 54600 E, F-----	2
5	54685	Looper Holder, for Styles 54600 A, B, C, D-----	1
	54685	Looper Holder, for Styles 54600 E, F-----	2
6	J87 J	Screw, for Styles 54600 A, B, C, D-----	1
	J87 J	Screw, for Styles 54600 E, F-----	2
7	22559 D	Screw, for Styles 54600 A, B, C, D-----	1
	22559 D	Screw, for Styles 54600 E, F-----	2
8	54244 M	Looper Holder Frame Thread Shield-----	1
9	22542	Screw-----	1
10	54244 D	Looper Holder Frame Locking Pin-----	1
11	6042 A	Washer-----	3
12	54244 H	Throw-out Fork Pressure Spring-----	1
13	39173 A	Looper Frame Locking Pin Spring-----	1
14	660-215	Retaining Ring-----	1
15	54285 C	Nut, for Styles 54600 A, B, C, D-----	1
	54285 C	Nut, for Styles 54600 E, F-----	2
16	54244 P	Looper Holder Frame-----	1
17	54244 E	Bushing, left-----	1
18	54244 F	Bushing, right-----	1
19	54244 C	Looper Throw-out Spring-----	1
20	51242 L	Thrust Washer-----	1
21	54244 B	Looper Holder Frame Driving Arm-----	1
22	22519 C	Screw-----	1
23	54223 A	Looper Thread Take-up-----	1
24	54245 A	Looper Thread Take-up Driving Link-----	1
25	54244 K	Spacing Collar-----	1
26	51236 A	Link Pin-----	1
27	51244 K	Looper Rocker Shaft-----	1
28	54244 A	Looper Travel Drive Link-----	1
29	55244 G	Locking Stud-----	1
30	20	Washer-----	1
31	18	Nut, for locking stud-----	1
32	22768	Screw-----	1
33	29133 J	Take-up Drive Eccentric Assembly, .312 inch throw-----	1
35	22894 C	Screw, set-----	2
36	29476 KR	Feed Lift Eccentric Assembly-----	1
37	54245 C	Eccentric Bearing-----	1
38	51406	Eccentric, .062 inch throw-----	1
39	22894 D	Screw-----	1
40	54622	Main Shaft-----	1
41	22768	Screw-----	2
42	22795	Stitch Regulating Stud-----	1
43	51236 B	Feed Crank Stud Cap-----	1
43A	51236 G	Feed Crank Stud-----	1
43B	51236 E	Feed Crank Link Assembly-----	1
44	51236 F	Feed Crank Link Ferrule-----	1
45	51236 D	Feed Crank Link-----	1
46	660-169	Needle Bearing-----	1
47	269	Nut, left thread-----	1
48	20	Washer-----	1
49	51054	Feed Crank Link Pin-----	1
50	77	Screw-----	1
51	51235 A	Feed Rocker Arm-----	1
52	482	Feed Rocker Shaft Collar-----	2
53	98	Screw-----	1
54	51235 G	Washer-----	2
55	22519 C	Screw-----	2
56	51235	Feed Rocker-----	1
57	98	Screw-----	2
58	22560 B	Screw-----	1
59	51134 C	Feed Bar Shaft-----	1
60	51134 P	Lubricating Felt-----	1
61	51134 R	Lubricating Felt Guard-----	1
62	8	Feed Rocker Shaft-----	1
63	54134 N	Pin-----	1
64	22560 B	Screw-----	2
65	22733	Screw-----	1
66	531	Screw-----	1
66A	88 F	Screw, for feed bar-----	1
67	54234 B	Feed Bar-----	1
68	667 B-20	Dowel Pin, for feed bar-----	1
69	51236 A	Link Pin-----	1
70	77	Screw-----	1
71	54234 C	Feed Bar Tilting Extension-----	1
72	HA61 D	Screw-----	1
73		Feed Dog (See Page 21)-----	1



FOOT LIFTER, THREAD TENSION AND RETAINER DRIVING PARTS

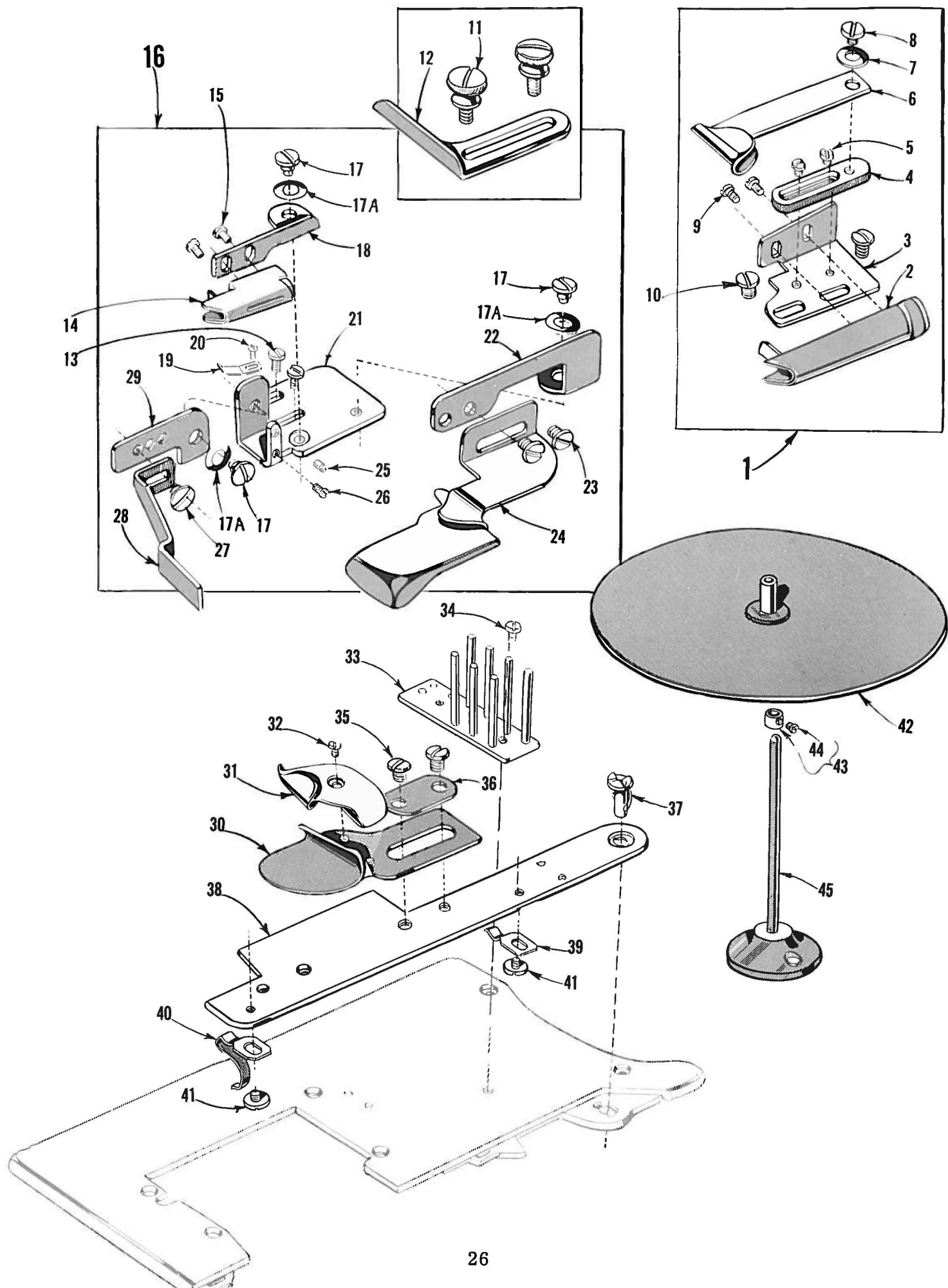
Ref. No.	Part No.	Description	Amt. Req.
1		Presser Foot (See Page 21)-----	1
2	51257 K	Presser Bar-----	1
3	51257 M	Presser Bar Connection and Guide-----	1
4	531	Screw-----	1
5	402	Screw-----	1
6	53783 A	Lifter Lever Link-----	1
7	53783 L	Presser Foot Lifter Lever Bell Crank-----	1
8	53787	Presser Bar Spring-----	1
9	51256 N	Presser Spring Regulator-----	1
10	22758 C	Screw-----	1
11	52883 S	Presser Foot Lifter Lever Bell Crank Spring-----	1
12	22557 B	Screw-----	1
13	53783 M	Presser Foot Lifter Lever Connecting Rod-----	1
14	53783 N	Presser Foot Lifter Lever, internal-----	1
15	22537	Screw-----	1
16	660-207	Oil Seal Ring-----	1
17	51283 H	Presser Foot Lifter Lever-----	1
18	402	Screw-----	1
19	22596	Screw-----	1
20	21657 Y	Tension Release and Foot Lifter Lever Connection-----	1
20A	21657 W	Tension Release Lever Shaft-----	1
21	21657-3	Tension Disc Separator, for Styles 54600 A, B, C, D-----	1
22	52892	Tension Post Support, for Styles 54600 A, B, C, D-----	1
23	21657-4	Tension Disc Separator, for Styles 54600 E, F-----	1
24	53592	Tension Post Support, for Styles 54600 E, F-----	1
25	43266	Tension Post Nut, for Styles 54600 A, B, C, D-----	1
	43266	Tension Post Nut, for Styles 54600 E, F-----	2
26	51491 C	Thread Lead-in Guide, for Styles 54600 A, B, C, D-----	2
	51491 C	Thread Lead-in Guide, for Styles 54600 E, F-----	4
27	51292 D	Tension Thread Eyelet, for Styles 54600 A, B, C, D-----	2
	51292 D	Tension Thread Eyelet, for Styles 54600 E, F-----	4
28	668-25	Eyelet, for Styles 54600 A, B, C, D-----	4
	668-25	Eyelet, for Styles 54600 E, F-----	8
29	668-28	Eyelet Locking Ring, for Styles 54600 A, B, C, D-----	4
	668-28	Eyelet Locking Ring, for Styles 54600 E, F-----	8
30	51292 A	Tension Post Ferrule, for Styles 54600 A, B, C, D-----	2
	51292 A	Tension Post Ferrule, for Styles 54600 E, F-----	4
31	51292 G	Tension Post, for Styles 54600 A, B, C, D-----	2
	51292 G	Tension Post, for Styles 54600 E, F-----	4
32	109	Tension Disc, for Styles 54600 A, B, C, D-----	4
	109	Tension Disc, for Styles 54600 E, F-----	8
33	51292 F-2	Tension Spring, loop, for Styles 54600 A, B, C, D-----	1
	51292 F-2	Tension Spring, loop, for Styles 54600 E, F-----	2
34	51292 F-5	Tension Spring, needle, for Styles 54600 A, B, C, D-----	1
	51292 F-8	Tension Spring, needle, for Style 54600 E-----	2
	51292 F-14	Tension Spring, needle, for Style 54600 F-----	2
35	51292 C	Tension Nut, for Styles 54600 A, B, C, D-----	2
	51292 C	Tension Nut, for Styles 54600 E, F-----	4
36	80557	Washer, for Styles 54600 A, B, C, D-----	2
37	22598 C	Screw, for Styles 54600 A, B, C, D-----	1
38	22564	Screw-----	1
39	HA54 A	Retainer Drive Lever Link-----	1
40	51134 V	Link Pin-----	2
41	78	Screw-----	1
42	54242 B-4-16	Retainer Holder, for all Styles except 18 gauge Style 54600 E-----	1
43	54642 E-3-9	Retainer Holder, for 18 gauge Style 54600 E-----	1
44	22845 B	Screw, for Styles 54600 A, B, C, D-----	1
	22845 B	Screw, for Styles 54600 E, F-----	2
45	54611	Retainer, for Styles 54600 A, B, C, D-----	1
	54611	Retainer, for Styles 54600 E, F-----	2
46	667 B-12	Dowel Pin-----	2
47	54242 C	Retainer Holder Bearing, left-----	1
48	61354 A	Bushing, upper-----	1
49	51254 A	Bushing, lower-----	1
50	54244 J	Looper Throw-out Actuating Pin-----	1
51	15489 B	Screw-----	1
52	22652 B-8	Screw-----	2
53	660-215	Retaining Ring-----	1
54	54244 G	Looper Throw-out Fork-----	1
55	22542	Screw-----	1
56	667 B-12	Dowel Pin-----	2
57	22652 B-8	Screw-----	2
58	J87 J	Screw-----	2
59	41358	Washer-----	2
60	54259	Looper Thread Eyelet-----	1
61	54242 D	Retainer Holder Bearing, right-----	1
62	667 B-12	Dowel Pin-----	1
63	61354 A	Bushing-----	1
64	54242 E	Retainer Drive Lever-----	1
65	22811 B	Screw-----	1
66	9650	Connection-----	1
67	88	Screw-----	2



FEED DOGS, THROAT PLATES, PRESSER FEET

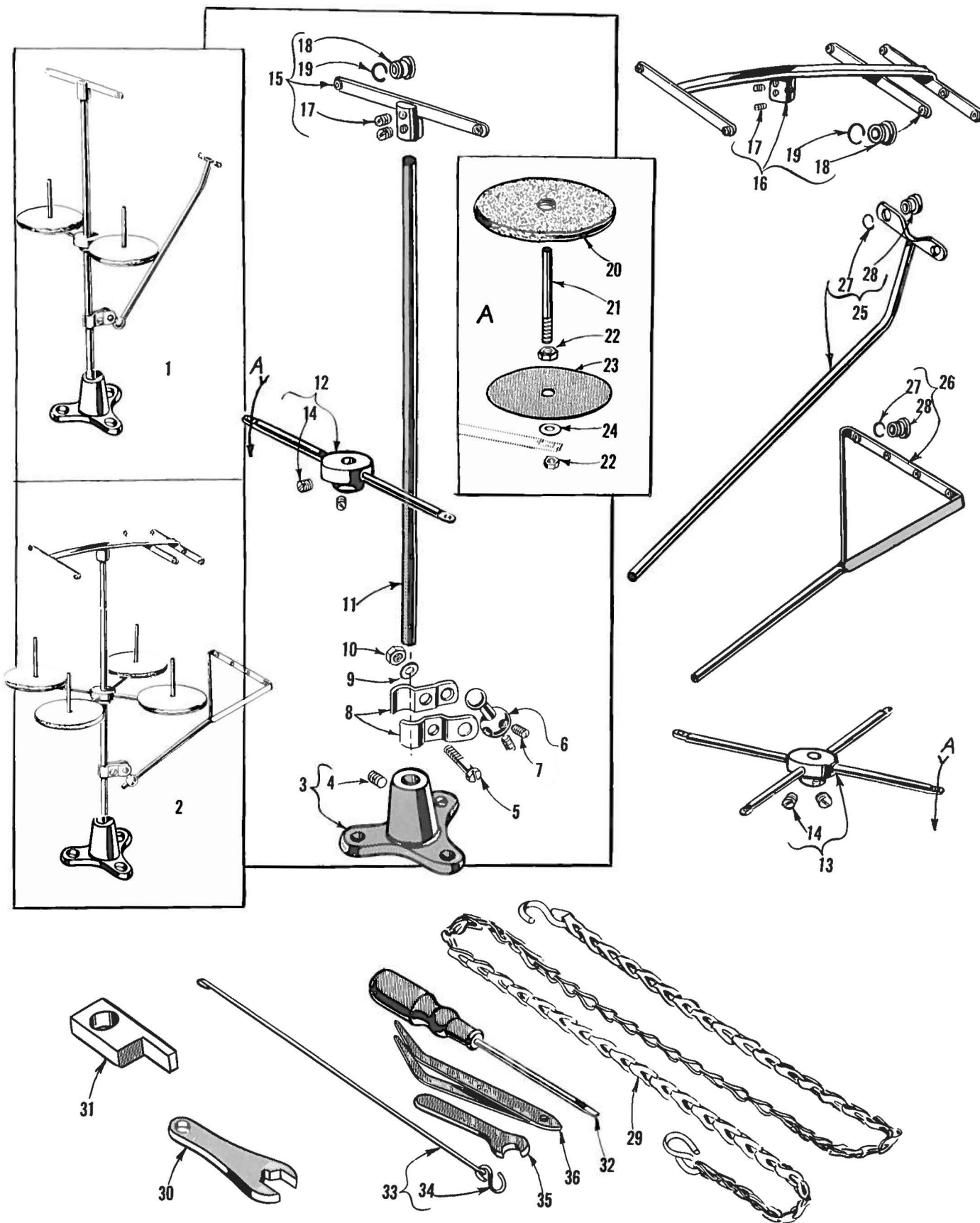
Ref. No.	Part No.	Description	Amt. Req.
1	54605 A	Feed Dog, for Style 54600 A-----	1
2	54624 A	Throat Plate, for Style 54600 A-----	1
3	54620 A-5/8	Presser Foot, for Style 54600 A-5/8-----	1
	54620 A-3/4	Presser Foot, for Style 54600 A-3/4-----	1
	54620 A-7/8	Presser Foot, for Style 54600 A-7/8-----	1
4	6430	Shank-----	1
5	91	Screw-----	1
6	22799 E	Hinge Screw-----	1
7	54630 A-5/8	Presser Foot Bottom, for No. 54620 A-5/8-----	1
	54630 A-3/4	Presser Foot Bottom, for No. 54620 A-3/4-----	1
	54630 A-7/8	Presser Foot Bottom, for No. 54620 A-7/8-----	1
8	51430 F	Adjusting Nut-----	1
9	22840 A	Adjusting Screw-----	1
10	54605 B	Feed Dog, for Style 54600 B-----	1
11	54624 B	Throat Plate, for Style 54600 B-----	1
12	54620 B	Presser Foot, for Style 54600 B-----	1
13	91	Screw-----	1
14	54630 B	Presser Foot Bottom-----	1
15	54605 C	Feed Dog, for Styles 54600 C, D-----	1
16	54624 C	Throat Plate, for Styles 54600 C, D-----	1
17	54620 C-5/32	Presser Foot, for Style 54600 C-----	1
18	43230 G	Shank-----	1
19	91	Screw-----	1
20	54630 C-5/32	Presser Foot Bottom-----	1
21	22799 B	Hinge Screw-----	1
22	54620 D	Presser Foot, for Style 54600 D-----	1
23	43230 G	Shank-----	1
24	91	Screw-----	1
25	54630 D	Presser Foot Bottom-----	1
26	22799 B	Hinge Screw-----	1
*27	54620 H	Presser Foot, hinged, adjustable for welts ranging in size from 5/32 to 3/8 inch-----	1
28	54630 H	Shank-----	1
29	91	Screw-----	1
30	54630 K	Welt Guide-----	1
31	73 A	Screw-----	2
32	54630 J	Presser Foot Bottom-----	1
33	22799 P	Hinge Screw-----	1
34	51430 F	Adjusting Nut-----	1
35	22840 A	Adjusting Screw-----	1
*36	54620 J	Presser Foot, solid, adjustable for welts ranging in size from 5/32 to 3/8 inch-----	1
37	54630 L	Presser Foot, main section-----	1
38	91	Screw-----	1
39	54630 K	Welt Guide-----	1
40	73 A	Screw-----	2
41	54605 E-2-16	Feed Dog, for No. 16 gauge, Style 54600 E-----	1
41A	54605 F-2-16	Feed Dog, for No. 16 gauge, Style 54600 F-----	1
42	54624 E-2-18	Throat Plate, for Nos. 16 and 18 gauge, Style 54600 E-----	1
42A	54624 F-2-16	Throat Plate, for No. 16 gauge, Style 54600 F-----	1
43	54620 E-2-16	Presser Foot, for No. 16 gauge, Style 54600 E-----	1
44	54630	Shank-----	1
45	91	Screw-----	1
46	51930	Spring-----	1
47	22799 C	Hinge Screw-----	1
48	54630 E-2-16	Presser Foot Bottom-----	1
49	54605 E-2-18	Feed Dog, for No. 18 gauge, Style 54600 E-----	1
50	54620 E-2-18	Presser Foot, for No. 18 gauge, Style 54600 E-----	1
51	54630	Shank-----	1
52	91	Screw-----	1
53	51930	Spring-----	1
54	22799 C	Hinge Screw-----	1
55	54630 E-2-18	Presser Foot Bottom-----	1
56	54620 F-2-16	Presser Foot, for No. 16 gauge, Style 54600 F-----	1
57	43230 G	Shank-----	1
58	91	Screw-----	1
59	22799 E	Hinge Screw-----	1
60	54630 F-2-16	Presser Foot Bottom-----	1

*Not furnished with machine, but available as an extra send and charge item.



ATTACHMENTS AND TAPE REEL

Ref. No.	Part No.	Description	Amt. Req.
1	23322 AK	Binder and Welt Guide Assembly, for Style 54600 F-----	1
2	23322 AJ	Binder, uses 3/4 inch strip and finishes 3/8 inch wide--	1
3	23437 S	Base Block -----	1
4	23437 T	Adaptor Block-----	1
5	357	Screw-----	2
6	54603 A	Welt Guide-----	1
7	12957 E	Washer-----	1
8	22726	Screw-----	1
9	90	Screw, for No. 23322 AJ -----	2
10	25 C	Screw, for No. 23322 AK -----	2
11	25	Screw, for No. 24 -----	2
12	24	Edge Guide, for Styles 54600 B, D-----	1
13	22585 A	Screw, for No. 23437 L -----	2
14	23215 BJ-5/8	Binder, uses 5/8 inch selvage edge binding and finishes 5/16 inch wide, for Style 54600 A -----	1
	23215 BJ-3/4	Binder, uses 3/4 inch selvage edge binding and finishes 3/8 inch wide, for Style 54600 A -----	1
	23215 BJ-7/8	Binder, uses 7/8 inch selvage edge binding and finishes 7/16 inch wide, for Style 54600 A -----	1
15	90	Screw, for No. 23215 BJ -----	2
16	23437 L	Folder Assembly, for Style 54600 A -----	1
17	22735	Screw-----	3
17A	12957 E	Washer-----	3
18	23437 C	Binder Bracket-----	1
19	23437 R	Edge Guide Spring -----	1
20	22798	Screw-----	1
21	23437 M	Folder Mounting Base-----	1
22	23437 N	Hemmer Swing-out Lever -----	1
23	25 C	Screw-----	2
24	23405 S	Folder, for turning material downward, 1/16 inch capacity, 1/4 inch fold-----	1
25	22565 C	Stop Screw-----	1
26	22564 D	Stop Screw-----	1
27	22711	Screw-----	1
28	54603	Edge Guide -----	1
29	23437 P	Edge Guide Swing-out Lever -----	1
30	23422 V-1/32	Lower Scroll and Base, 1/32 inch capacity, for No. 16 gauge on Style 54600 E -----	1
	23422 U-1/16	Lower Scroll and Base, 1/16 inch capacity, for Nos. 16 and 18 gauge on Style 54600 E -----	1
	23422 U-3/32	Lower Scroll and Base, 3/32 inch capacity, for Nos. 16 and 18 gauge on Style 54600 E -----	1
31	23421 V-16-1/32	Upper Scroll, 1/32 inch capacity, for No. 16 gauge on Style 54600 E -----	1
	23421 U-16-1/16	Upper Scroll, 1/16 inch capacity, for No. 16 gauge on Style 54600 E -----	1
	23421 U-16-3/32	Upper Scroll, 3/32 inch capacity, for No. 16 gauge on Style 54600 E -----	1
	23421 U-18-1/16	Upper Scroll, 1/16 inch capacity, for No. 18 gauge on Style 54600 E -----	1
	23421 U-18-3/32	Upper Scroll, 3/32 inch capacity, for No. 18 gauge on Style 54600 E -----	1
32	28	Screw -----	1
33	23439 A	Tape Guide, for Style 54600 A-----	1
34	22585 C	Screw -----	1
35	25 C	Screw -----	2
36	23425 V	Washer Plate-----	1
37	660-237	Spring Lock Fastener -----	1
38	54464	Folder Mounting Swinging Bracket -----	1
39	54264 B	Spring-----	1
40	54264 C	Spring, with finger projection-----	1
41	12986 B	Screw -----	2
42	21169 E	Binding Holder Disc, for Style 54600 A-----	1
43	161	Binding Holder Stop Collar, for Style 54600 A-----	1
44	88	Screw -----	1
45	21169 F	Binding Holder Base, for Style 54600 A -----	1



THREAD STAND AND ACCESSORIES

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	21101 H-2	Thread Stand, complete, for Styles 54600 A, B, C, D---	1
2	21101 H-4	Thread Stand, complete, for Styles 54600 E, F-----	1
3	21114 A	Thread Stand Base -----	1
4	22651 CD-3	Screw -----	1
5	22810	Screw -----	1
6	21114 T	Lead Eyelet Socket Ball -----	1
7	22651 CD-4	Screw -----	2
8	21114 U	Lead Eyelet Ball Split Socket-----	2
9	652-16	Washer -----	1
10	21104 H	Nut-----	1
11	21104 B-24	Thread Stand Rod -----	1
12	21114 D-2	Spool Seat Support, for No. 21101 H-2 -----	1
13	21114 D-4	Spool Seat Support, for No. 21101 H-4 -----	1
14	22651 CD-5	Screw -----	2
15	21114 H-2	Eyelet Support, for No. 21101 H-2-----	1
16	21114 H-4	Eyelet Support, for No. 21101 H-4-----	1
17	22651 CD-4	Screw -----	2
18	21114 L	Eyelet, for No. 21114 H-2-----	2
	21114 L	Eyelet, for No. 21114 H-4-----	4
19	21114 M	Eyelet Locking Ring, for No. 21114 H-2 -----	2
	21114 M	Eyelet Locking Ring, for No. 21114 H-4 -----	4
20	21104 V	Felt Pad, for No. 21101 H-2 -----	2
	21104 V	Felt Pad, for No. 21101 H-4 -----	4
21	21114 W	Spool Pin, for No. 21101 H-2 -----	2
	21114 W	Spool Pin, for No. 21101 H-4 -----	4
22	258 A	Nut, for No. 21101 H-2-----	4
	258 A	Nut, for No. 21101 H-4-----	8
23	21114	Spool Seat Disc, for No. 21101 H-2 -----	2
	21114	Spool Seat Disc, for No. 21101 H-4 -----	4
24	652-16	Washer, for No. 21101 H-2 -----	2
	652-16	Washer, for No. 21101 H-4 -----	4
25	21114 S-2	Lead Eyelet, for No. 21101 H-2 -----	1
26	21114 S-4	Lead Eyelet, for No. 21101 H-4 -----	1
27	21114 M	Eyelet Locking Ring, for No. 21114 S-2-----	2
	21114 M	Eyelet Locking Ring, for No. 21114 S-4-----	4
28	21114 L	Eyelet, for 21114 S-2 -----	2
	21114 L	Eyelet, for 21114 S-4 -----	4
29	421 D-28	Treadle Chain, 28 inches long -----	1
30	116	Wrench, for Styles 54600 A, B, C, D -----	1
31	21227 BT	Needle Gauge -----	1
32	21201	Screw Driver, 9/64 inch round blade, length over-all 7 5/8 inches, for Styles 54600 E, F-----	1
33	51493 BC	Lifter Link -----	1
34	660-264	Hook -----	1
35	21388	Wrench, single end, 3/8 inch opening -----	1
36	118 B	Thread Tweezers -----	1

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118 B	29	21114 W	29	22799 E	25	51147	19
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402	23	21388	29	22839 A	17	51235 A	21
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