

CHANDLER

POWER
BUTTON
SEWER

Component Parts Catalog

FOREWORD

As an added service to its customers, the Chandler Machine Company has prepared this catalog for the convenience and benefit of the men who operate and service this machine.

The catalog consists of a series of exploded views of all component parts and assemblies with their complete part numbers for use in parts reordering. Included also are illustrations of important adjustments and timing information.

Any comment or suggestions favorable to the improvement of the contents of this booklet will be sincerely appreciated.

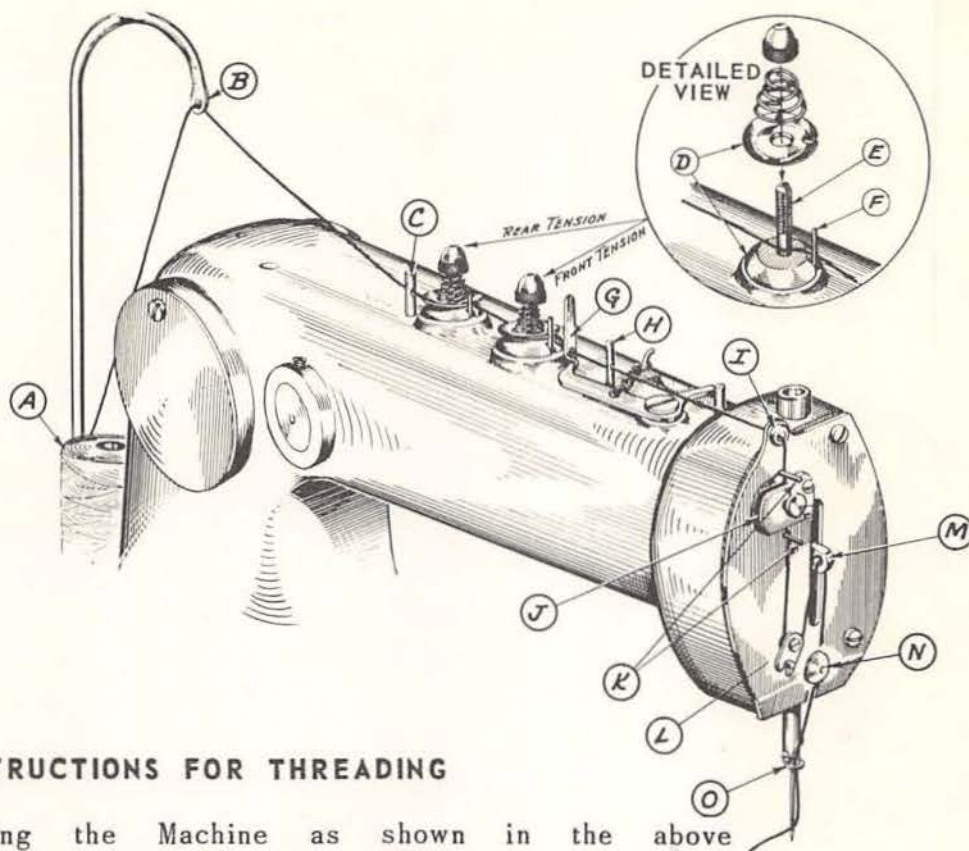
CHANDLER MACHINE CO.
Ayer, Mass.

CHANDLER

Illustrated and Compiled by
The PURNELL COMPANY
Boston, Mass.

Printed in U. S. A.

THREADING DIAGRAM



INSTRUCTIONS FOR THREADING

Facing the Machine as shown in the above illustration, proceed as follows:

- 1 From Spool A, pass thread thru Spool Stand Arm B.
- 2 Then forward thru Rear Guide Pin C.
- 3 Slide thread between Rear Tension Disc D on the left hand side of Tension Post E, then to the right hand side of Pin F as above in detailed view.
- 4 Repeat step number 3 for Front Tension.
- 5 Pass thread forward thru hole in Thread Slack Pull-off Lever G, Front Guide Pin H and Thread Guide I in top of Face Plate.
- 6 Slide thread into slot J and down to the right of Pin K.
- 7 Pass down and around Roller in Lower Guide Plate L.
- 8 Insert thru Needle Bar Take-up M (left to right).
- 9 Thread under Tension Disc Face Plate N.
- 10 Catch thread in Needle Bar Thread Guide O and pass it thru the eye of the Needle from front to back. (For all models having Needle Bar Thread Guide)

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TIMING LOOPER TO NEEDLE BAR

The usual procedure for timing the Looper and Needle Bar, is first to time the Looper and then set the height of the Needle to the point of the Looper. This is accomplished as follows:

- 1 Insert new Needle full length of the Needle Bar hole and tighten Screw A (Fig.1)
- 2 As a preliminary setting, make sure the point of the Needle is approximately in line with the center of the Looper Shaft when the Needle Bar is at the lowest depth of its stroke.

Adjustment is made by means of Screw B (Figure 1).

- 3 Turn the machine by hand, rotating the Looper counterclockwise, thus raising the Needle $\frac{5}{32}$ of an inch from the bottom of its stroke as shown in Figure 2.

At this time, the point of the Looper should be barely visible on the left side of the Needle as shown in Figure 2. To adjust, loosen Screws C (Figure 3) and rotate Knurled Looper Holder desired amount in either direction. Tighten Screws C securely.

- 4 There should be a space of light barely visible between the point of the Looper and the Needle as shown in Figure 2A. Adjust for proper clearance by loosening Screw D (Figure 3) and moving the Looper in or out the desired amount.
- 5 As a final setting, now that the Looper is properly timed in relation to the lift (or up stroke), the Needle Bar can be readjusted (as described in preceding item 2) so that the point of the looper when passing the Needle is approximately $\frac{1}{32}$ of an inch above the Needle Eye.

This final setting may have to be varied slightly depending upon the weight and softness of the thread or material being used.

The break of the loop (or loop formation) at the Needle Eye may vary according to the thread used. This will possibly require setting the point of the Looper closer or further from the eye of the Needle but within a range of approximately $\frac{1}{32}$ of an inch.

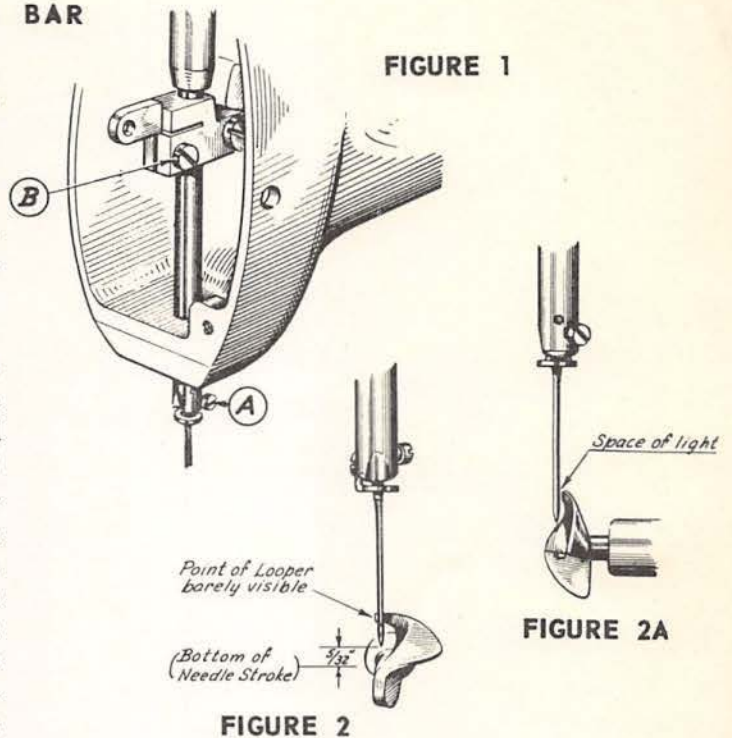


FIGURE 2

FIGURE 2A

TIMING THE FINGER

Lateral Setting - (Controlled by Barrel Cam I, Figure 3)

- 1 When the Finger has reached its most forward lateral position, the point of the Finger should extend approximately $1/32''$ beyond the front edge of the slot in the Throat Plate as shown below in Figure 3A.

To adjust, loosen Screw EA (Figure 3) and move Shaft F forward or backward the desired amount. (In moving Shaft F forward, make sure that Eccentric Finger G does not bind against shoulder of Eccentric J, otherwise Finger G will have to be moved back the same amount Shaft F is moved forward.)

Radial Setting - (Controlled by Eccentric J, Figure 3)

- 2 When the Needle is at the very bottom of its stroke there should be approximately $1/16''$ clearance between the Needle and the back edge of the Finger as shown in Figure 3B.

To adjust, loosen Clamp Screw GA (Figure 3) and move the Finger into correct position, and tighten Clamp Screw GA securely.

Turning the machine slowly in the direction of normal operation, observe carefully that at the instant the point of the Needle has cleared the Finger, the Finger must start its counterclockwise movement. The Finger should move backwards and sideways at the same time. Dotted line in Figure 3C shows approximate path of Finger point. Barrel Cam I must be adjusted to pull Finger sideways at the same time that Eccentric J moves Finger backward.

To adjust, loosen 3 Set Screws H (Figure 3) and retard or advance Finger Eccentric on Shaft the desired amount. Retighten Screws securely after making adjustment.

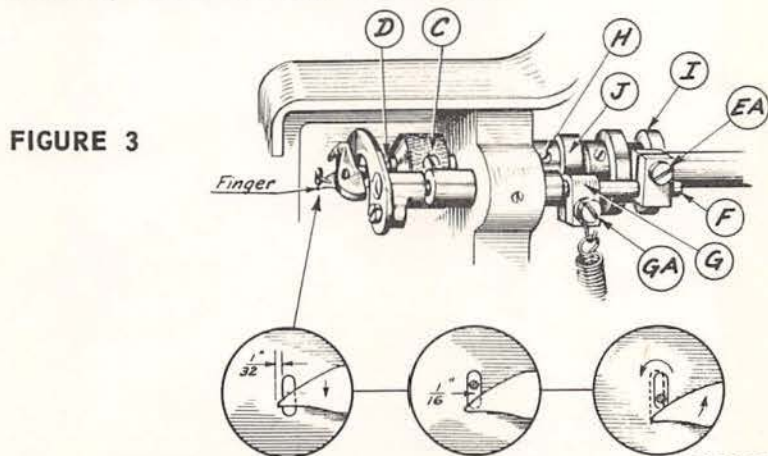


FIGURE 3

FIGURE 3A

Finger moving forward while Needle descending.

FIGURE 3B

Finger position from time Needle enters Throat Plate hole and returns.

FIGURE 3C

Dotted line shows path of Finger point. Finger starts moving backward and sideways as soon as Needle clears back of Finger.

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THREAD LOCK TIMING ADJUSTMENT

When the Needle Bar has ascended to within $\frac{1}{8}$ or $\frac{5}{32}$ inch from the highest point of of the Needle Bar stroke on completion of the last stroke of the sewing cycle, the thread should be locked by the forward pressure of Plunger A against Plate B (Figure 1A).

The Thread should be locked when the machine stops, otherwise the thread will not break when the Clamp is lifted.

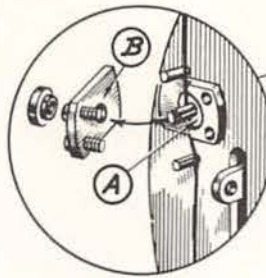


FIGURE 1A

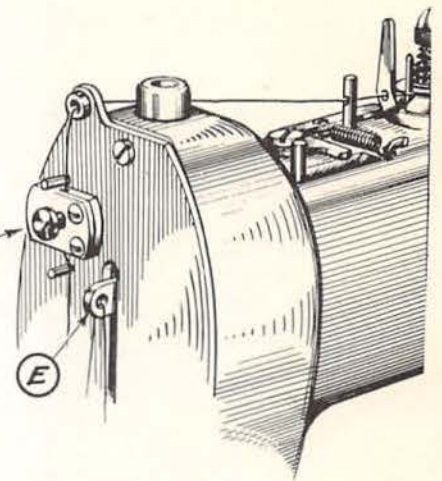


FIGURE 1

Caution: Excessive pressure of the Plunger on light or weak thread will have a tendency to fracture the thread causing excessive thread breakage.

To adjust, loosen Lock Nut C (Figure 2) and turn Adjusting Screw D in or out the desired amount. Be sure to tighten Lock Nut C securely.

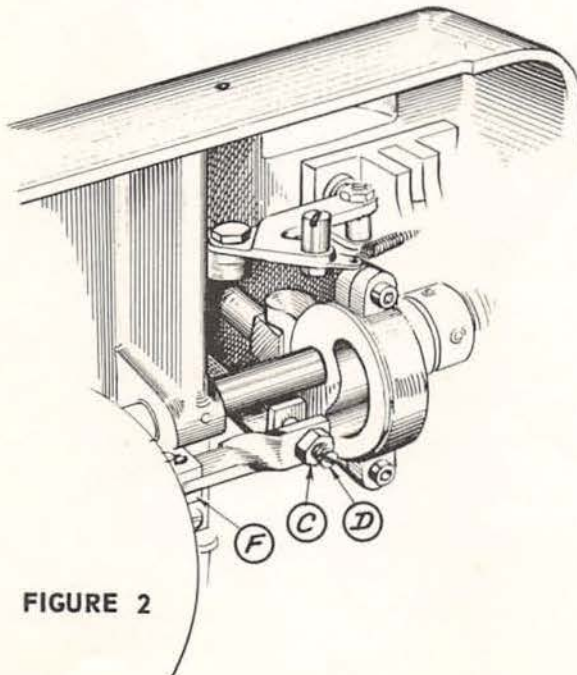


FIGURE 2

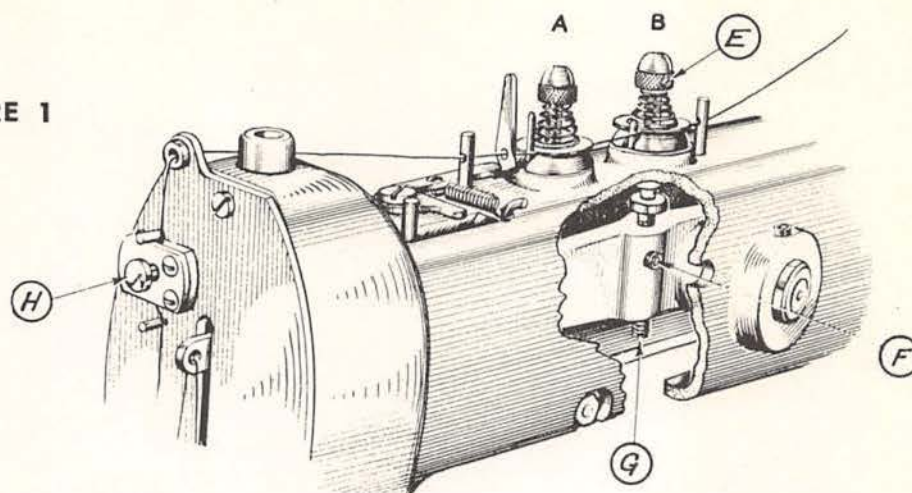
Note: Machines are usually equipped with light Lock Spring for use on light thread. For heavy threads use heavier Lock Spring (See Plate 1).

On resuming the first stroke of the new sewing cycle, the Thread Lock must release the thread some time before the Needle Bar reaches the lowest point of the stroke so that the thread is not held tight when the Take-up E (Figure 1) above starts its return upward stroke.

Bracket F (Figure 12) is provided with slots so that the Trip Lock Lever may be retarded or advanced for proper timing.

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FIGURE 1



TIMING OF TOP INTERMITTENT TENSION

On the top of the machine there are two thread tension adjustments...Rear Tension B and Front Tension A (See Figure 1). Rear Tension B is an intermittent thread locking tension which locks the thread prior to the end of each stitch. This prevents the Loper from stealing thread from Spool instead of pulling up the loop at the end of each stitch. The amount of tension for locking the thread is factory set reasonably tight by means of Set Screw E (Figure 1) therefore, do not disturb or attempt to utilize Rear Tension B for adjusting the normal tension explained below. However, the time at which the thread is locked by Tension B may be adjusted as follows:

Loosen Set Screw F (Figure 1) and turn Adjusting Screw G up or down until Tension B locks the thread when the Needle Bar has ascended to within $\frac{5}{32}$ of an inch from the top of the Needle Bar stroke on light thread but $\frac{1}{8}$ of an inch or less on heavy thread.

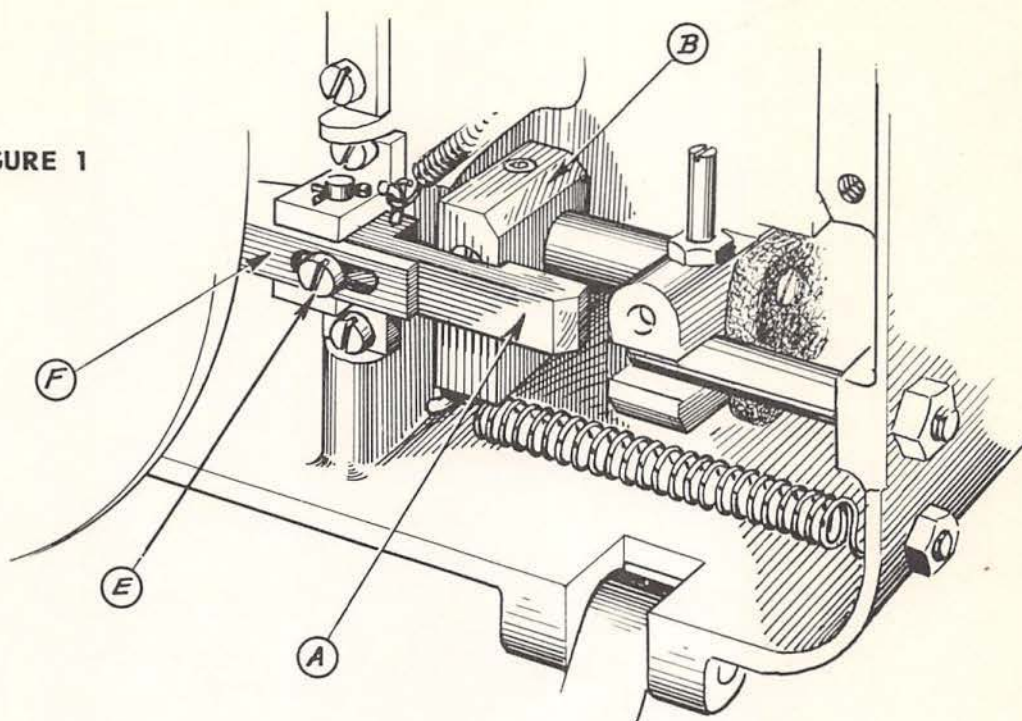
To prevent thread breakage or extremely light thread, the Intermittent Tension should release the thread when the Needle Bar is at least $\frac{5}{32}$ of an inch from the top of its stroke.

ADJUSTMENT OF NORMAL THREAD TENSION

Tightness of the stitch is regulated by Front Tension A. If the Tension Adjustment is too tight the Loper will snap the thread, if too loose the knots on the under side of the button will be loose. Adjustment is made as follows:

Turn handwheel at the end of the Mainshaft until Rear Tension B is in "UP" position. Lower the Button Clamp so the Thread Lock H on the Face Plate is open (center plunger is released). Pull the thread at the Needle to be sure it pulls thru with slight tension. If tension is too tight or too loose, turn Tension A up or down until proper tension is achieved.

FIGURE 1



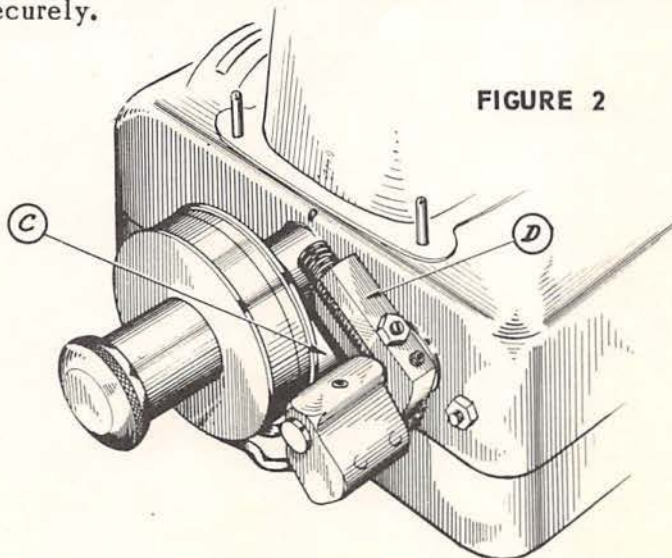
STOP KICK-OFF FINGER MECHANISM

On completion of the Button Sewing Cycle, Latch A should release Block B (Figure 1) just as Stop Finger C (Figure 2) has cleared Bumper Spring Holder D. The illustration shows an earlier model but the same instructions will apply to all models.

To advance moment of release, loosen Screw E (Figure 1) and move Kick-off Finger F to the left.

To retard moment of release, move Kick-off Finger F to the right. Tighten Screw E securely.

FIGURE 2



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AUTOMATIC CLAMP LIFTER MECHANISM

Automatic Operation

To set the automatic clamp lifter mechanism in the automatic operating position (or single pedal control) insert stud A in the forward hole of connecting strap B as illustrated in Fig. 1. With stud A in this position, the amount of clamp lift is controlled by loosening check nut C and turning adjusting nut D in or out as required.

Adjustment of the amount of clamp lift may necessitate a compensating adjustment of the thread slack kick pin H Fig. 2 in order to maintain the proper amount of thread take-off.

The automatic lifter actuating bracket E Fig. 1, controls the timing of the lowering of the clamp in relation to the first needle bar stroke, and the rising of the clamp on the final needle bar stroke. For proper timing, loosen two screws F Fig. 1 and swing bracket E so that its drop-off point is approximately on the centerline of the roller G as shown in Fig. 1A.

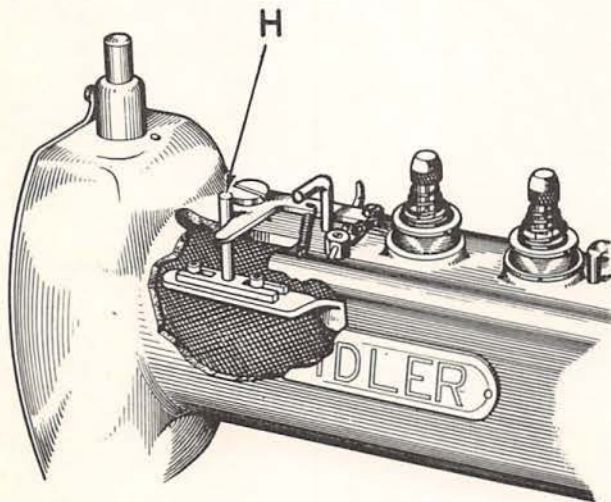


FIGURE 2

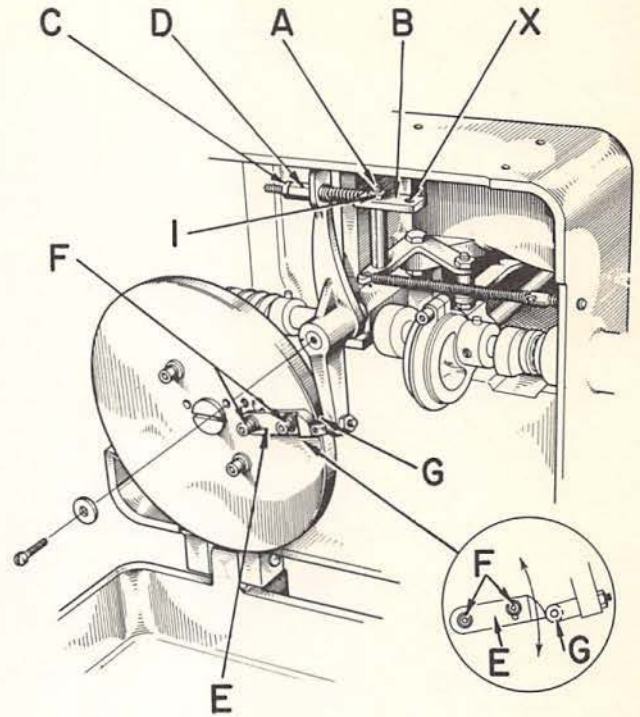


FIGURE 1

FIGURE 1A

Manual Operation

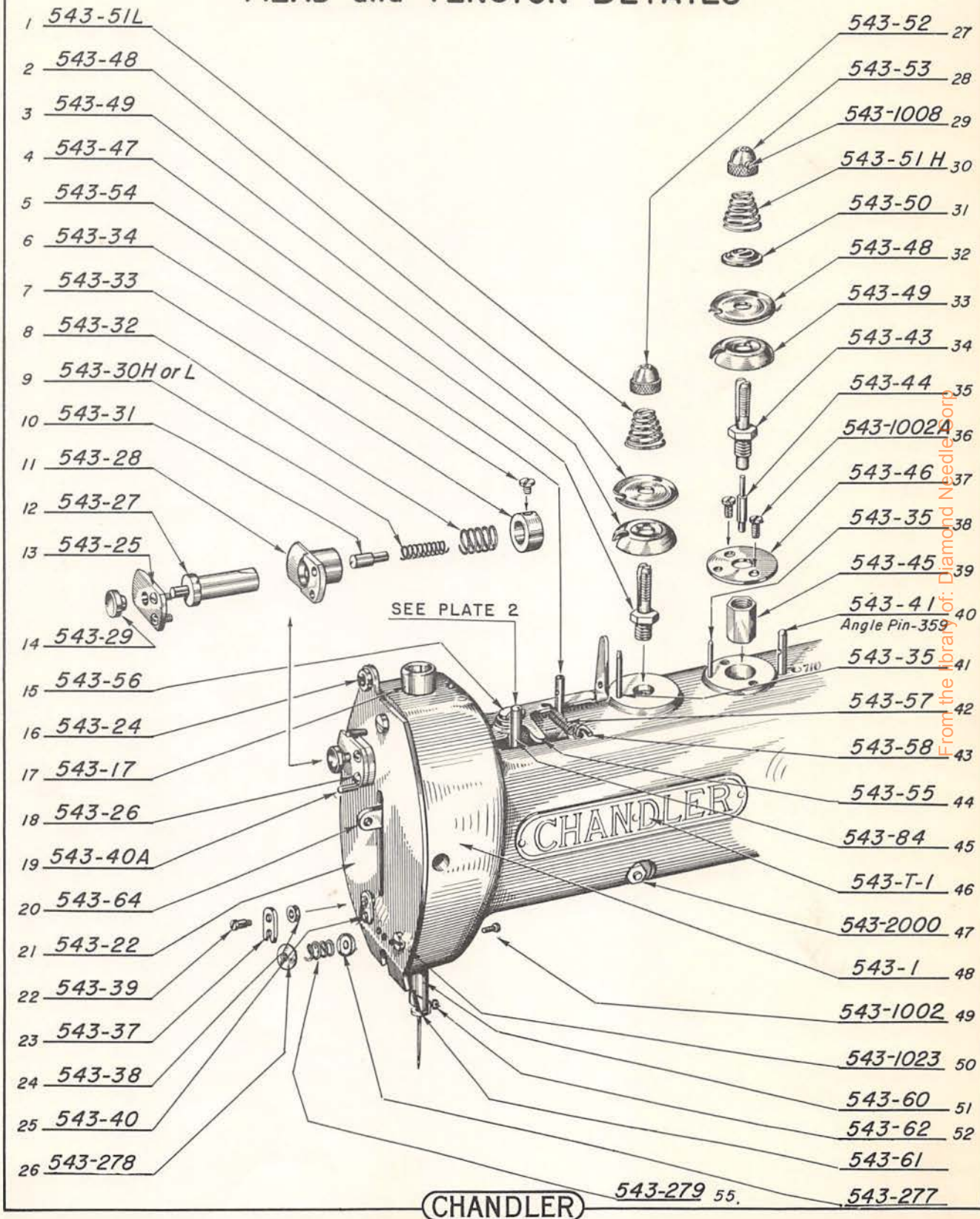
To convert the machine from automatic to manual clamp lift (or two pedal control) remove nut I Fig. 1, lift connecting strap B and insert stud A in hole X. Replace nut I and tighten securely. The automatic function is now inoperative, since roller G no longer contacts bracket E.

Adjustment for the amount of clamp lift is now made by means of the adjusting screw in the lifting bracket 543-213 located in the base of the machine (See parts plate 9).

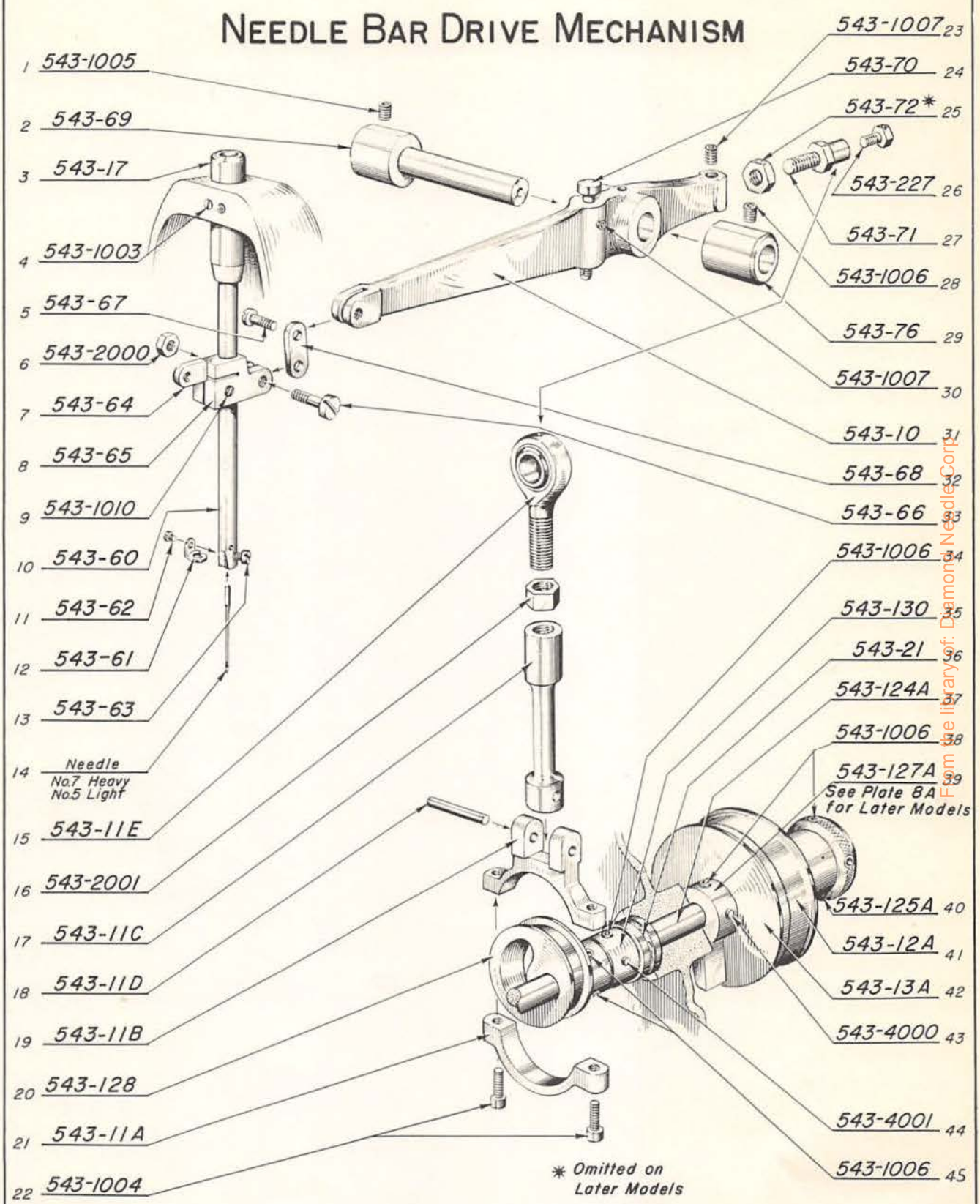
Either of the above adjustments may necessitate a compensating adjustment of the thread slack kick pin H Fig. 2 in order to maintain the proper amount of thread take-off.

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HEAD and TENSION DETAILS



NEEDLE BAR DRIVE MECHANISM



- 1 543-1005
- 2 543-69
- 3 543-17
- 4 543-1003
- 5 543-67
- 6 543-2000
- 7 543-64
- 8 543-65
- 9 543-1010
- 10 543-60
- 11 543-62
- 12 543-61
- 13 543-63
- 14 Needle
No.7 Heavy
No.5 Light
- 15 543-11E
- 16 543-2001
- 17 543-11C
- 18 543-11D
- 19 543-11B
- 20 543-128
- 21 543-11A
- 22 543-1004

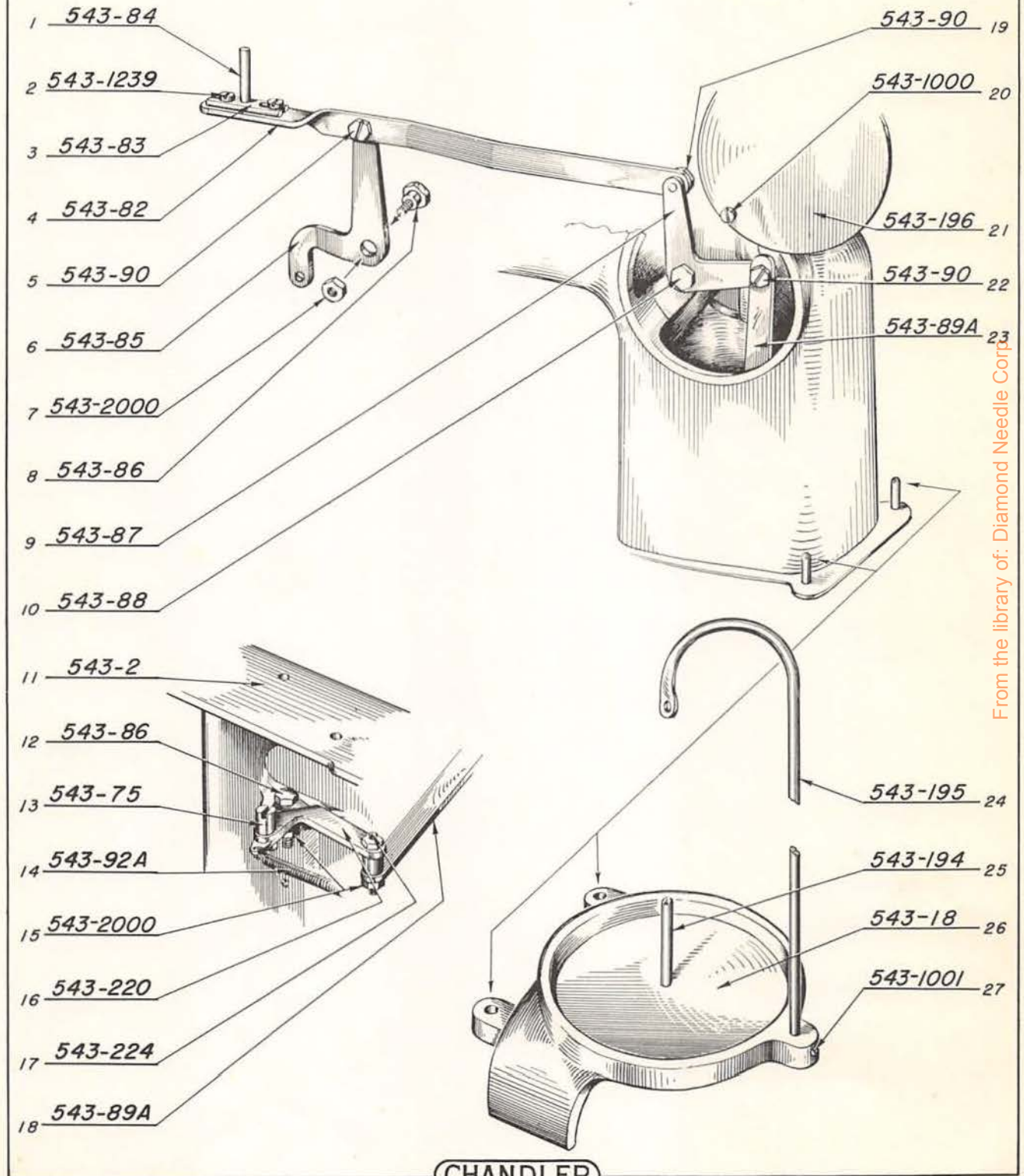
- 23 543-1007
- 24 543-70
- 25 543-72*
- 26 543-227
- 27 543-71
- 28 543-1006
- 29 543-76
- 30 543-1007
- 31 543-10
- 32 543-68
- 33 543-66
- 34 543-1006
- 35 543-130
- 36 543-21
- 37 543-124A
- 38 543-1006
- 39 543-127A
See Plate BA
for Later Models
- 40 543-125A
- 41 543-12A
- 42 543-13A
- 43 543-4000
- 44 543-4001
- 45 543-1006

* Omitted on Later Models

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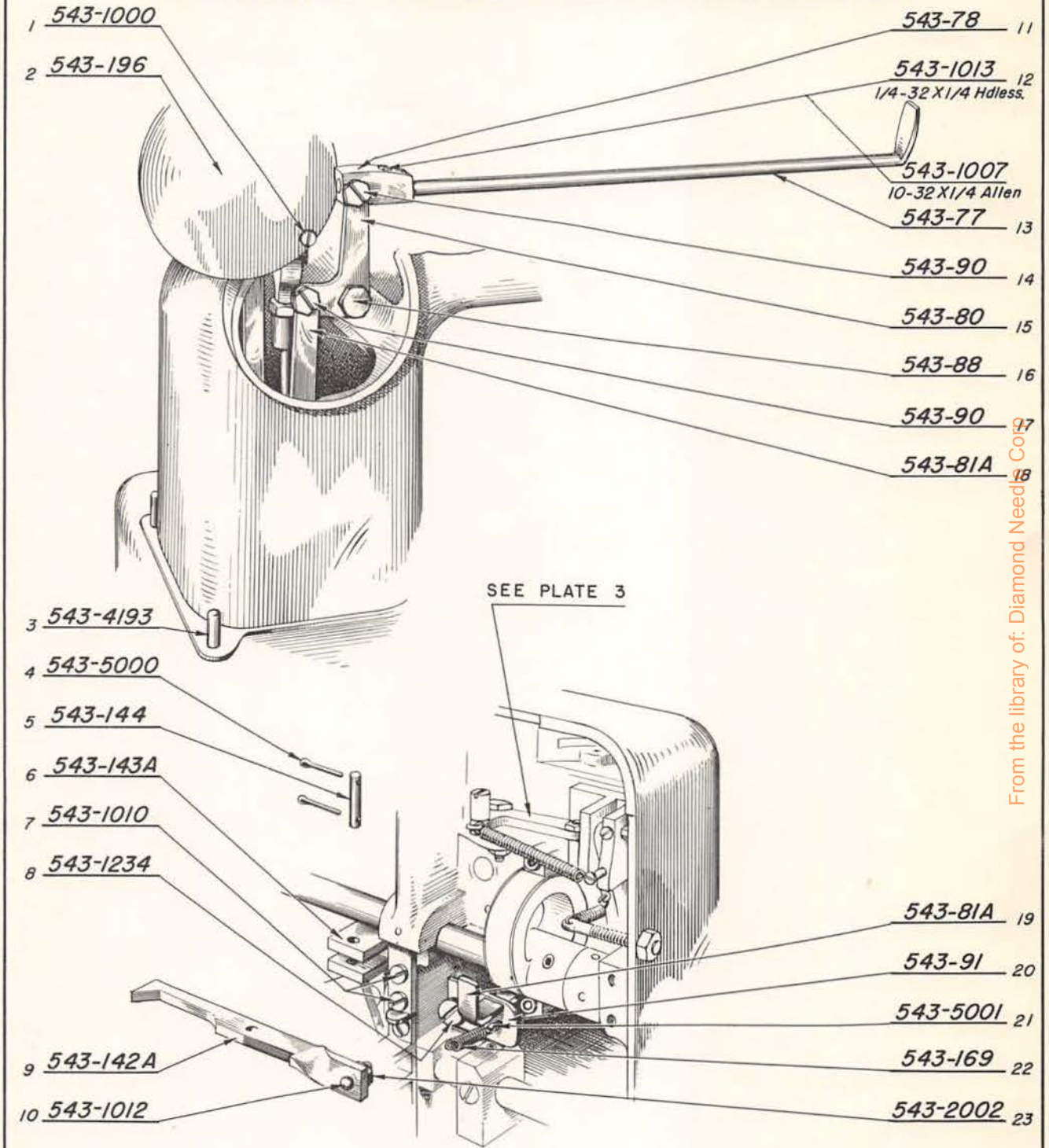
CLAMP LIFT and THREAD SLACK MECHANISM



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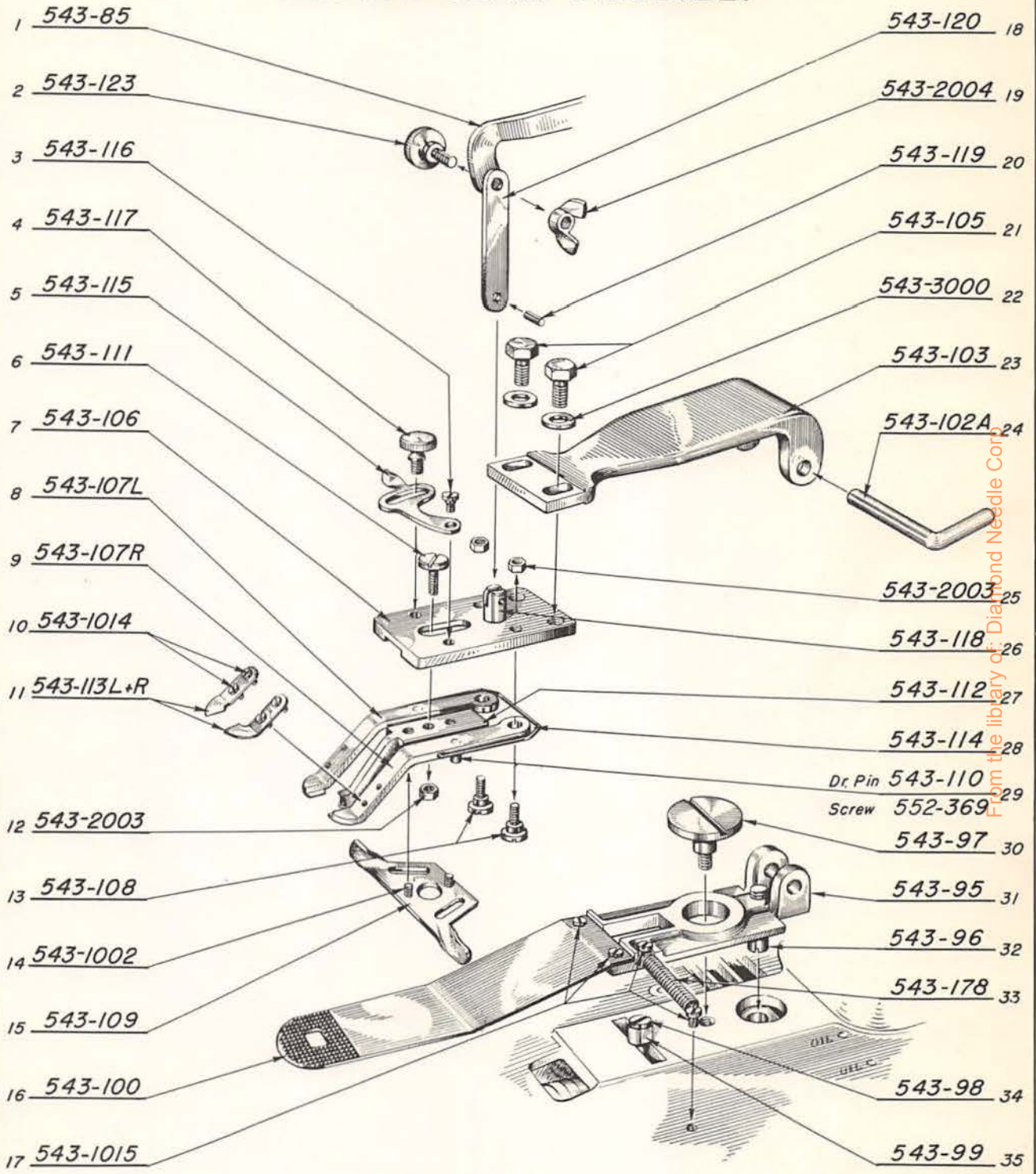
AUTOMATIC THREAD LOCKING MECHANISM



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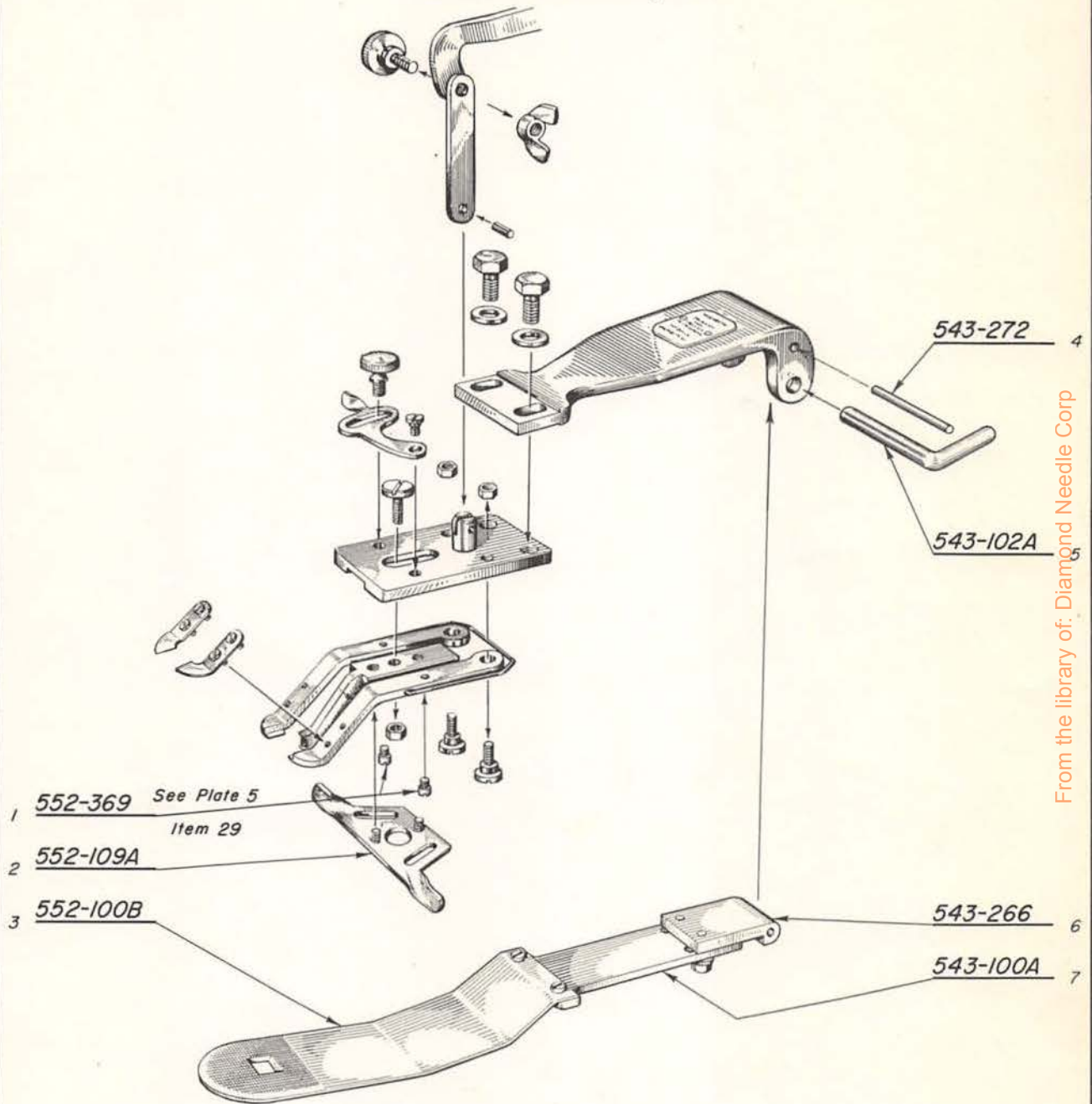
BUTTON CLAMP ASSEMBLY



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BUTTON CLAMP ASSEMBLY

All In One Style

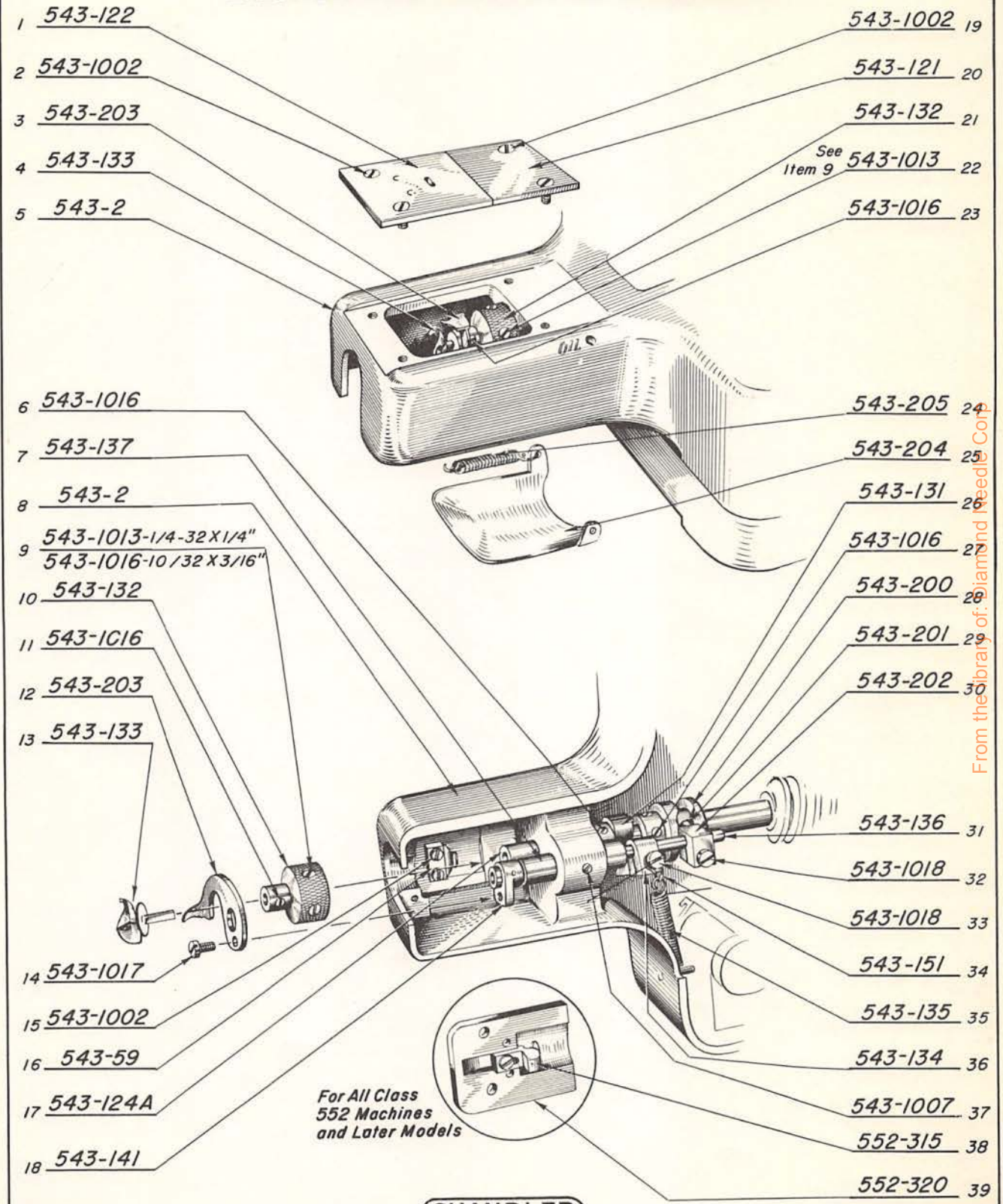


From the library of: Diamond Needle Corp

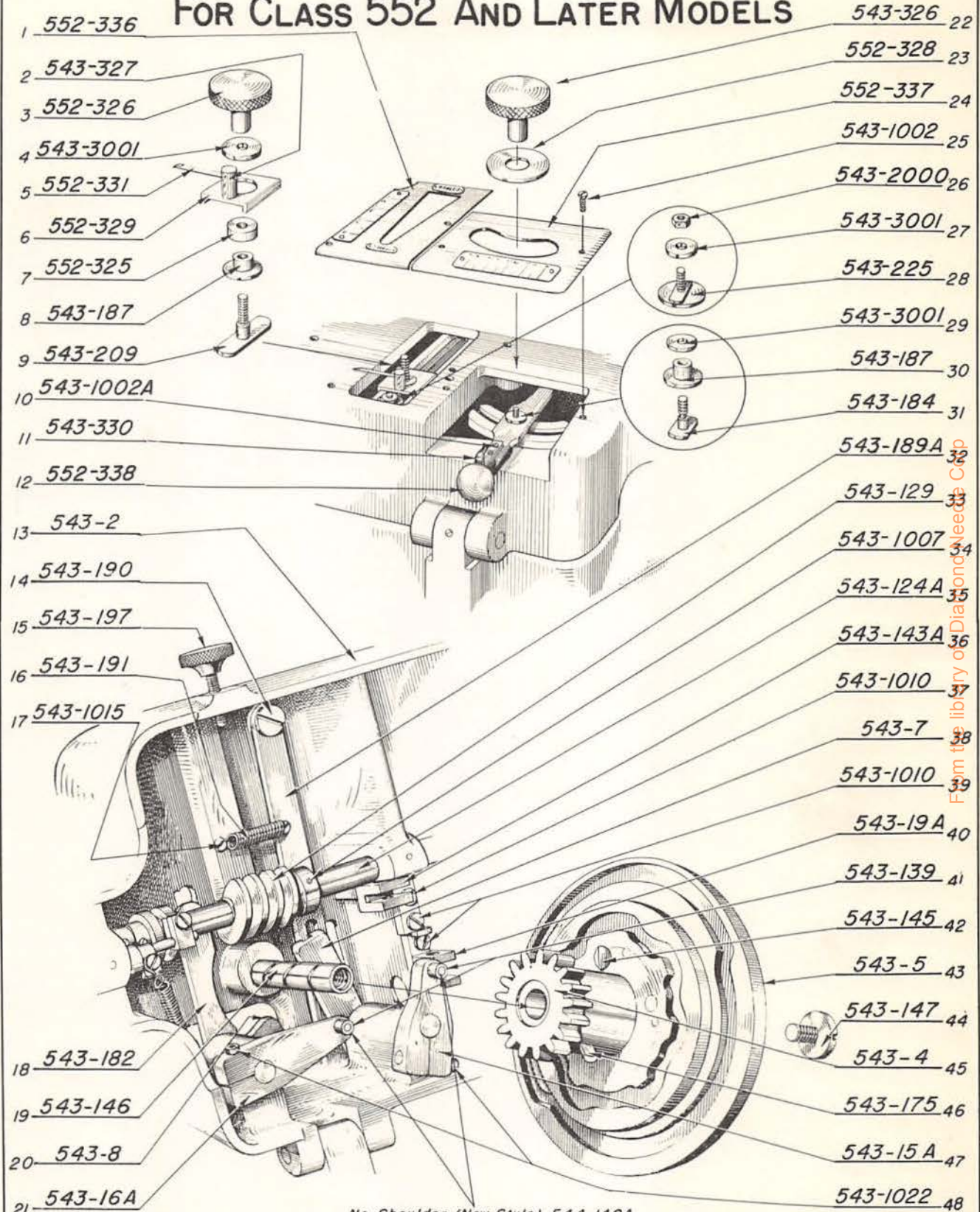
NOTE
Parts Not Bearing Numbers
Are Identified On Plate 5

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LOOPER and FINGER MECHANISM



FOR CLASS 552 AND LATER MODELS



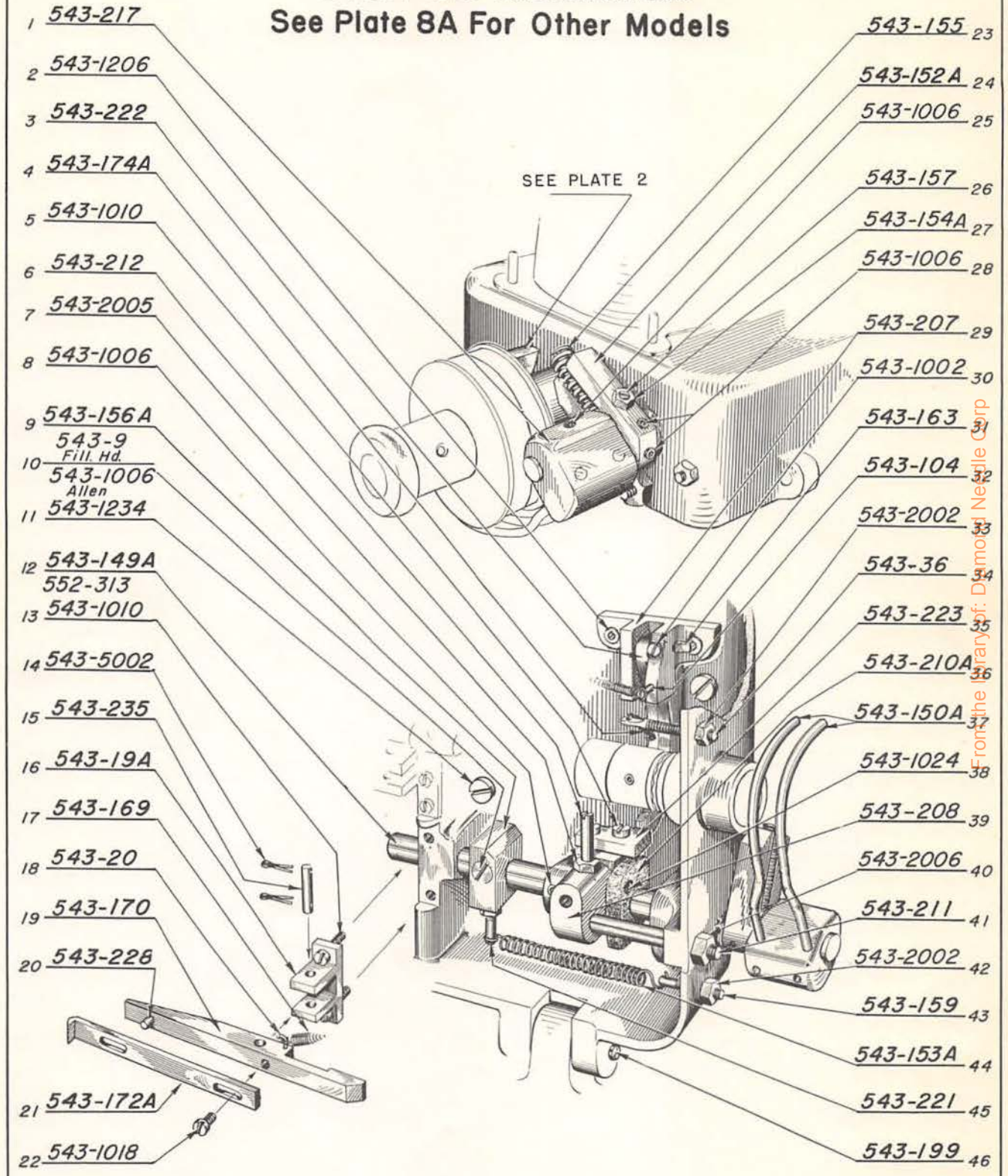
No Shoulder (New Style) 544-140A
 Shoulder Stud 543-140

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STOPPING MECHANISM

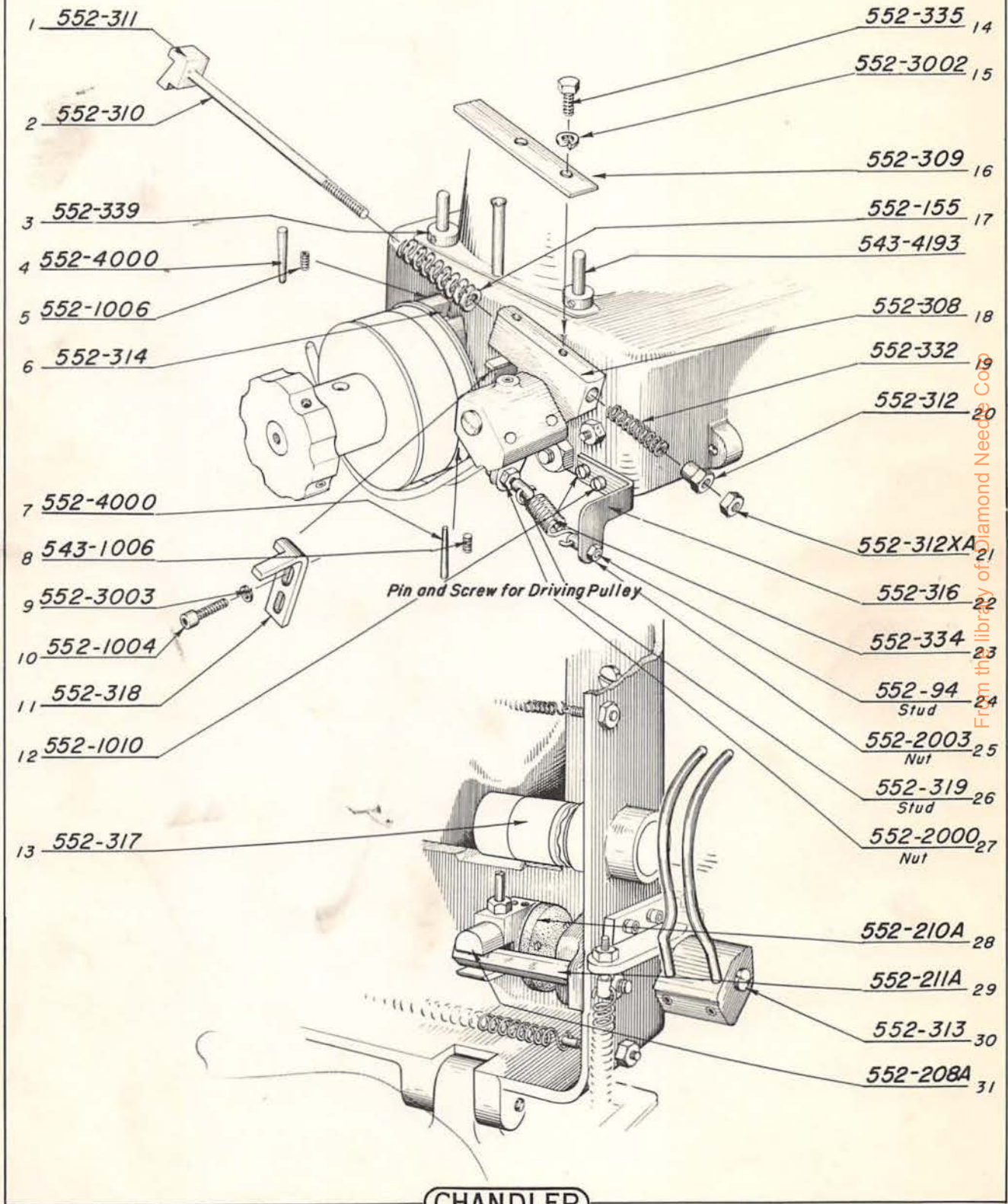
See Plate 8A For Other Models



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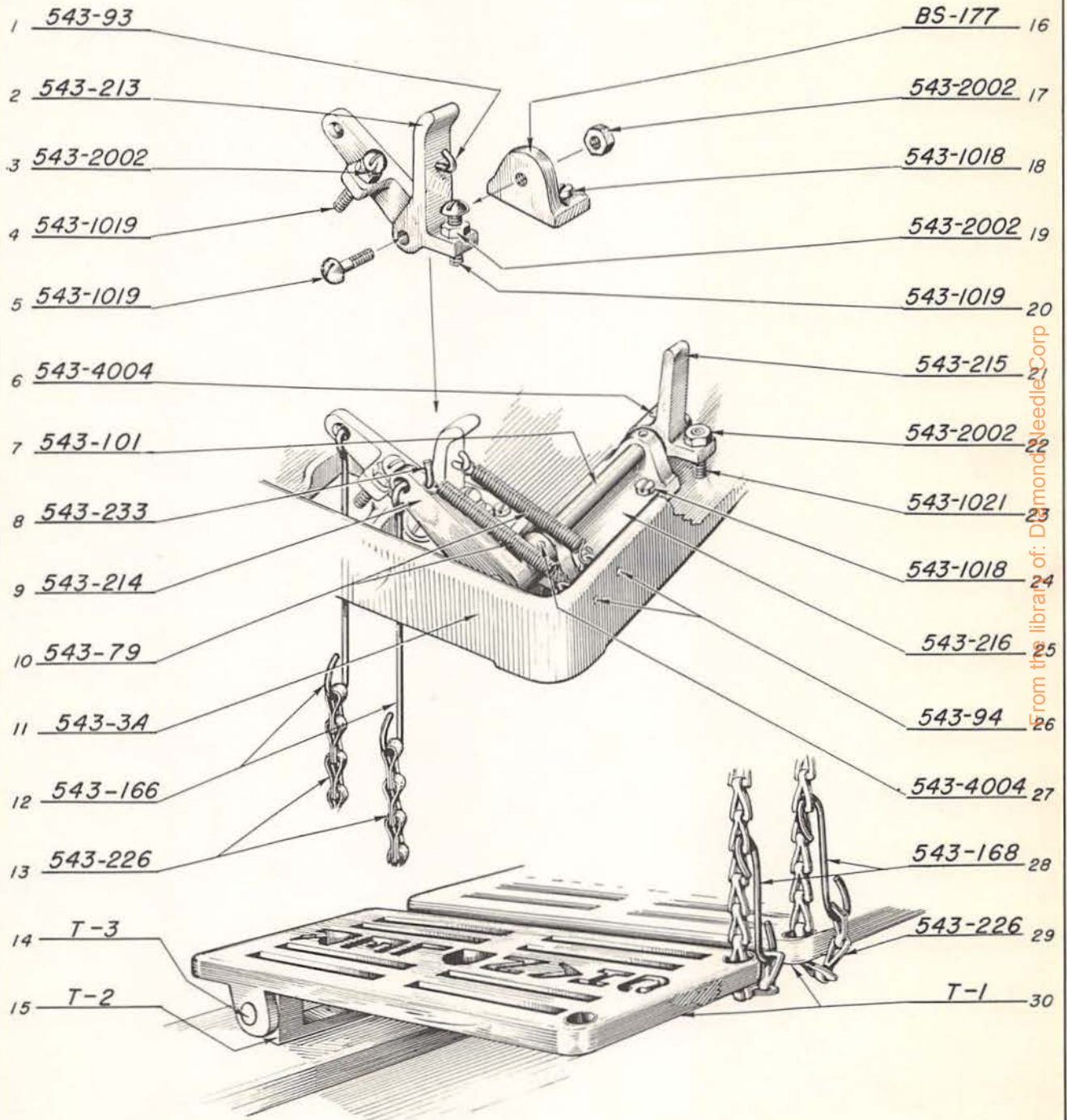
STOPPING MECHANISM FOR CLASS 552 MACH.



CHANDLER

From the library of Diamond Need Co

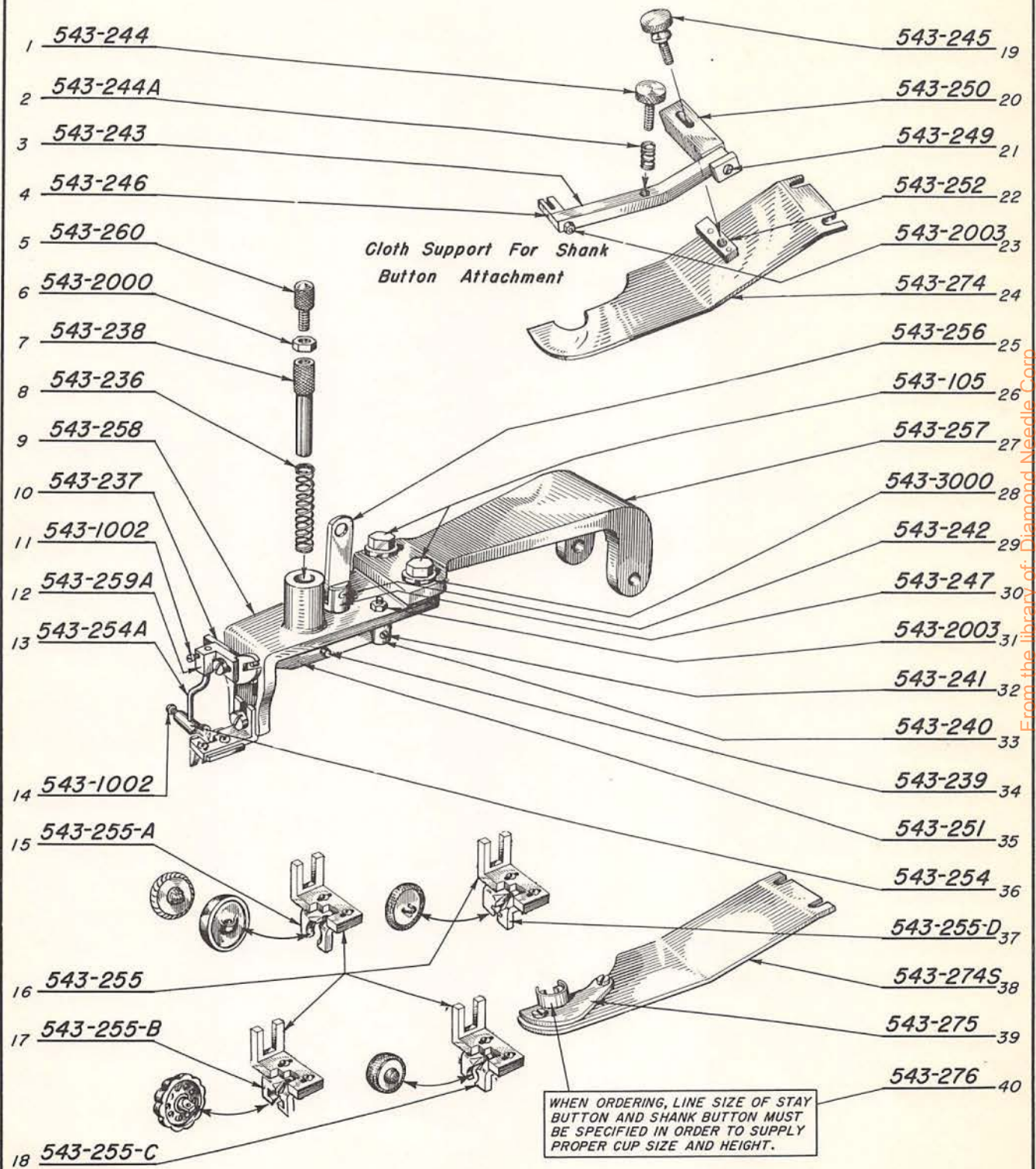
TREADLES and TRIP LEVERS



From the library of: Daimonneedle Corp

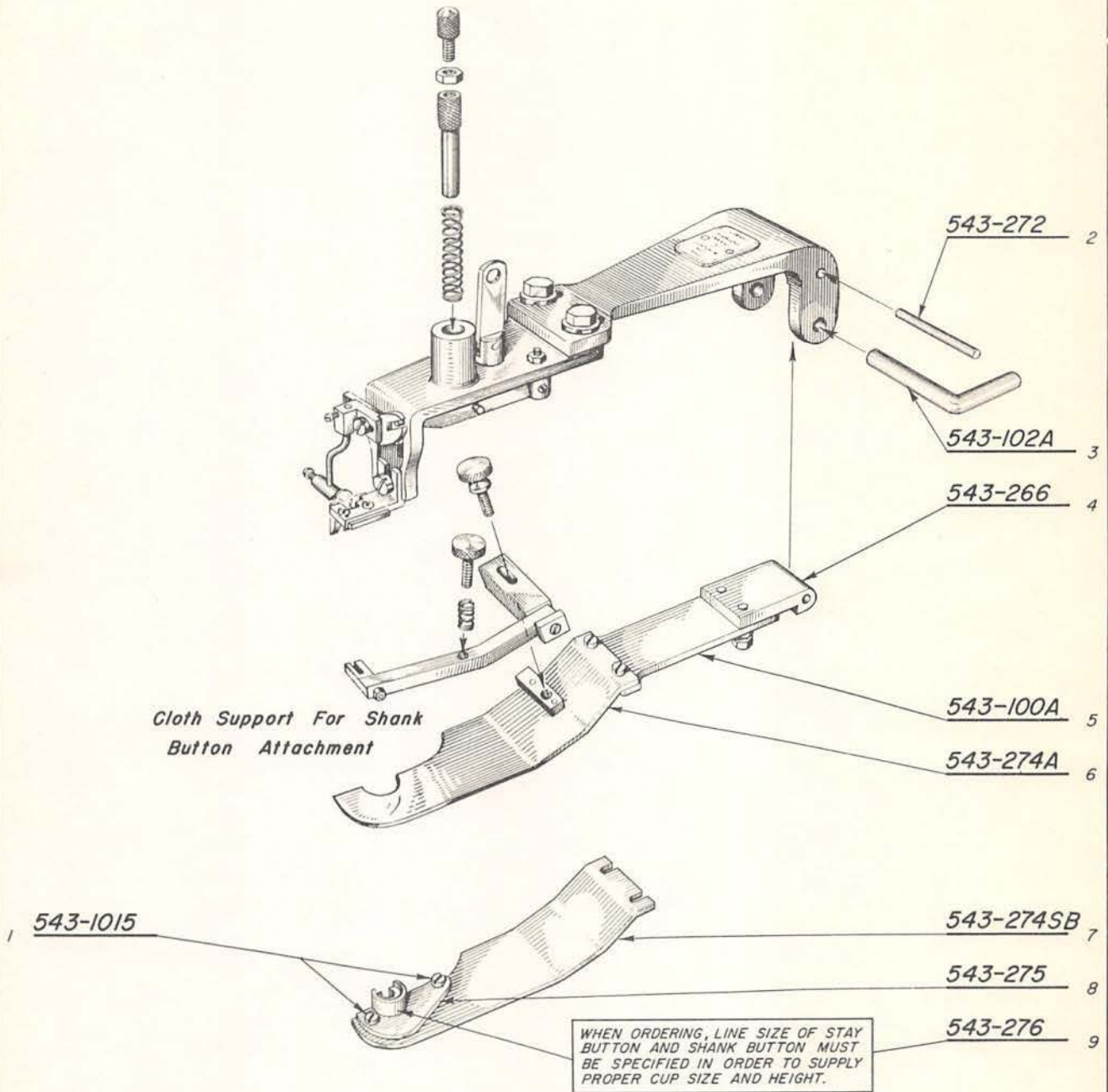
CHANDLER

SHANK BUTTON ATTACHMENT



From the library of Diamond Needle Corp

SHANK BUTTON ATTACHMENT All In One Style

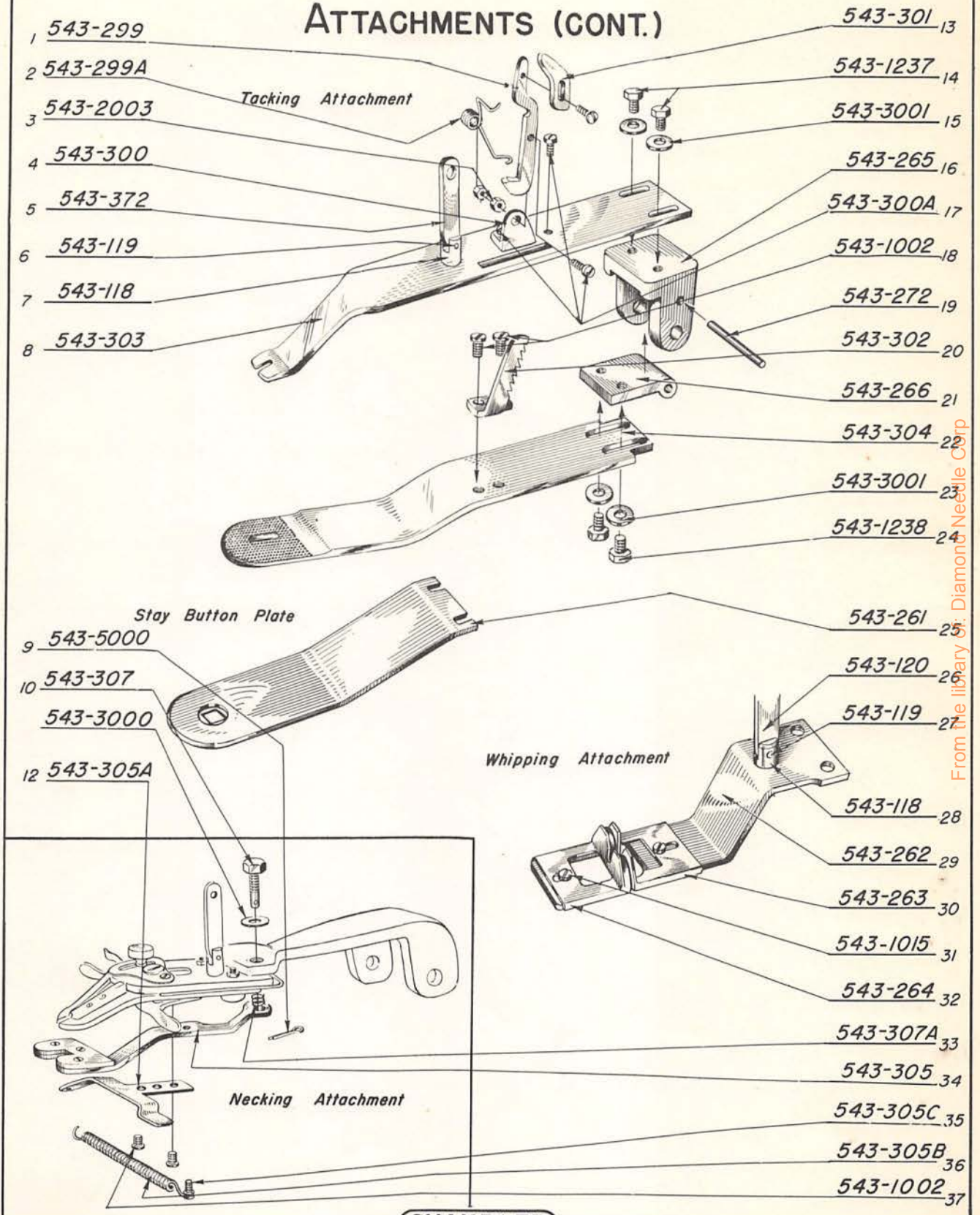


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NOTE
Parts Not Bearing Numbers
Are Identified On Plate 10

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ATTACHMENTS (CONT.)



- 1 543-299
- 2 543-299A
- 3 543-2003
- 4 543-300
- 5 543-372
- 6 543-119
- 7 543-118
- 8 543-303

- 543-301 13
- 543-1237 14
- 543-3001 15
- 543-265 16
- 543-300A 17
- 543-1002 18
- 543-272 19
- 543-302 20
- 543-266 21
- 543-304 22
- 543-3001 23
- 543-1238 24

- 9 543-5000
- 10 543-307
- 543-3000
- 12 543-305A

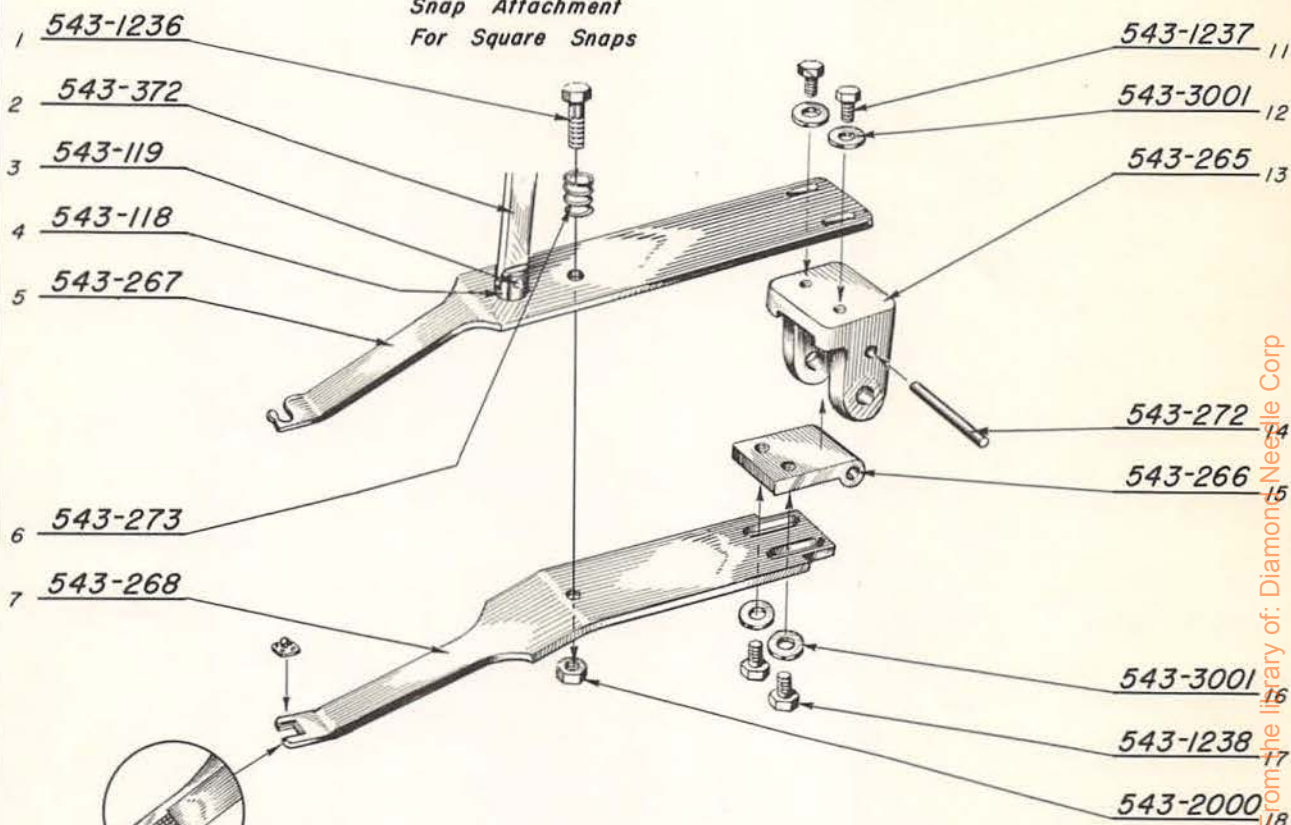
- 543-261 25
- 543-120 26
- 543-119 27
- 543-118 28
- 543-262 29
- 543-263 30
- 543-1015 31
- 543-264 32
- 543-307A 33
- 543-305 34
- 543-305C 35
- 543-305B 36
- 543-1002 37

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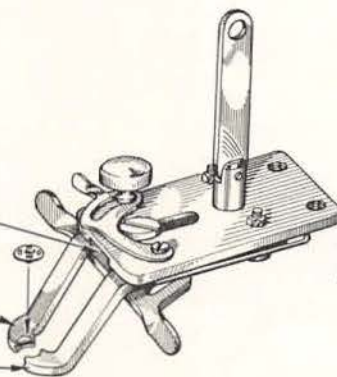
ATTACHMENTS (Cont.)

*Snap Attachment
For Square Snaps*



Under Side

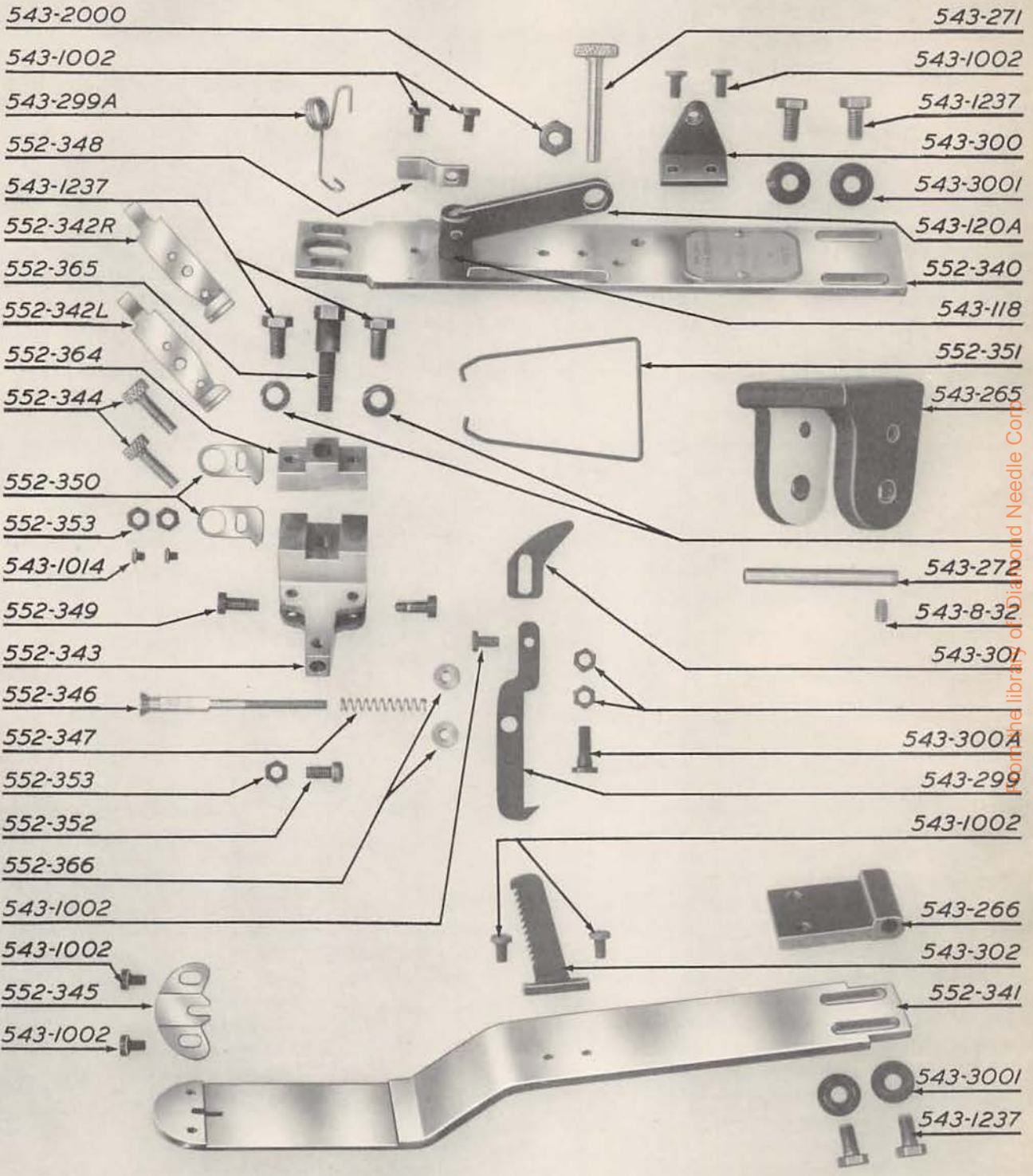
*Snap Attachment
For Round Snaps*



NOTE: All Other Parts
Same As Plate 5

From the library of: Diamond Needle Corp

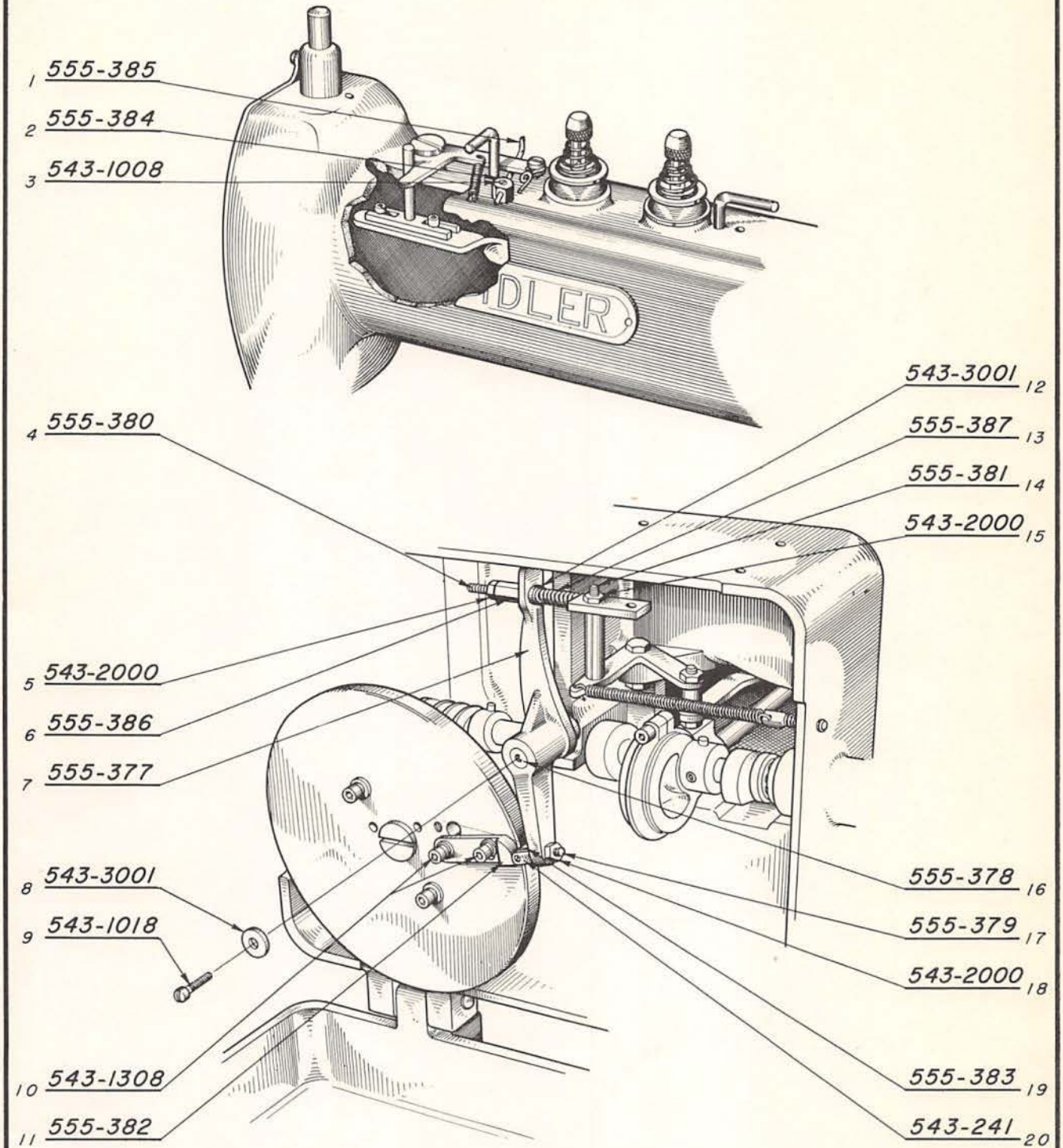
SHANK-MASTER ATTACHMENT



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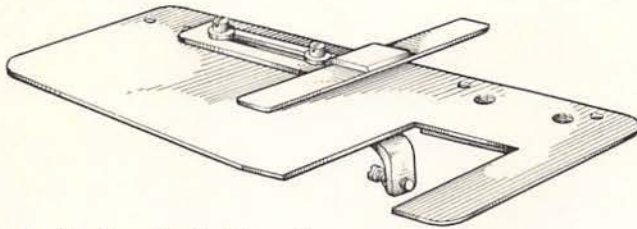
From the library of: Dial-a-Word Needle Corp.

AUTOMATIC CLAMP LIFTER

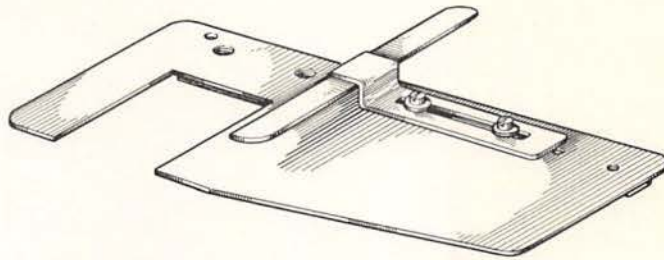


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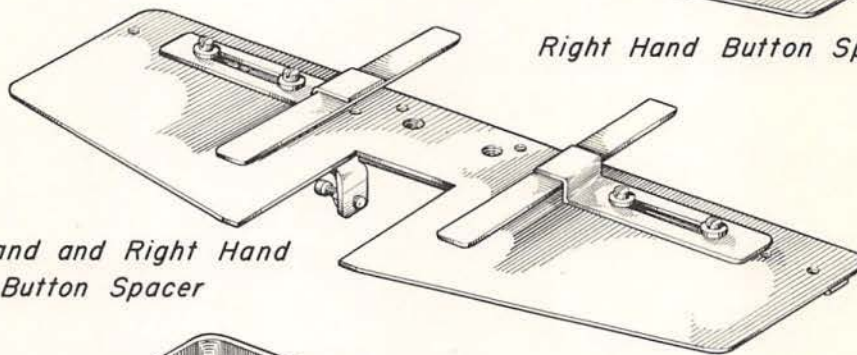
BUTTON ACCESSORIES



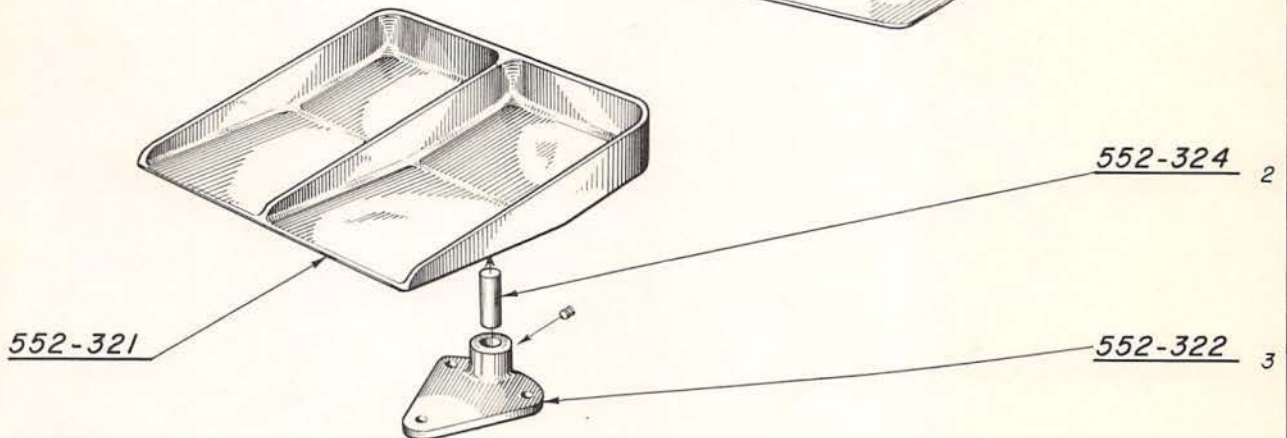
Left Hand Button Spacer



Right Hand Button Spacer



*Left Hand and Right Hand
Button Spacer*



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RECOMMENDED NEEDLES

CLASS NUMBER	SIZE	APPLICATION
175 x 3	#4	Very Light Work
175 x 3	#5	Light Work
175 x 3	#7	Medium Heavy
175 x 3	#8	Heavy
—LONG SHANK (For Shank Buttons)—		
175 x 7	#5	Medium
175 x 7	#7	Heavy

RECOMMENDED SPEEDS

Machine classes 543, 546 and 548 are not to be operated in excess of 1000 R.P.M. Model 552 and later models can be operated at speeds up to 1500 R.P.M.

LUBRICATION

Use a light textile oil for all moving parts.

Gears and cam races are lubricated with "Lubriplate" a special non-drying grease, which we can supply. This is the white grease that you see on all new machines.

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