



CHAMPION

OPERATING INSTRUCTIONS

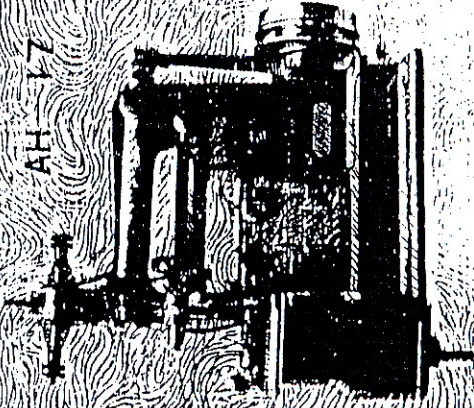
FOR

OVERLOCK-SHELL-STEICH-MACHINE

MODEL AH-38

AH-27

AH-17



A. HOSOI SEWING MACHINE CO., LTD.

IMPORTANT

1. Before starting the machine, oil bearings of all moving parts.

2. Threading Machine

See Fig. #1.

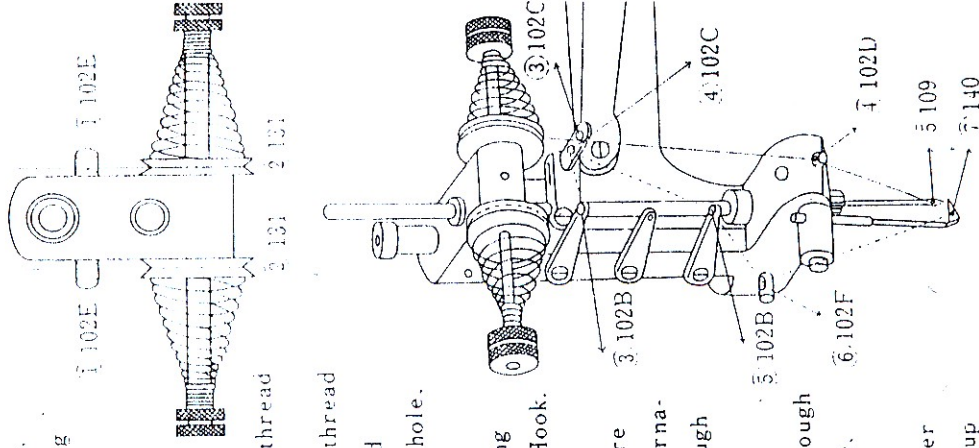
— indicates the sewing thread

— indicates ornamental thread

3. Hold the tale of the thread passed through the needle hole, and turn the hand pulley clockwise until the sewing thread is hooked by Latch Hook.

Repeat the same procedure mentioned above after the ornamental thread passes through the looper.

Pass ornamental thread through the thread guide (#102-A), instead of through guide (#102-B) for sewing the thinner material, or more take-up stroke is required.



(Fig. #1)

REPLACING NEEDLES

Turn the pulley away (clockwise) until the needle reaches in its highest point and loosen the needle clamp nut (#108) by the wrench supplied as accessory to remove the old or defective needle.

Insert the new needle and tighten the needle clamp nut (#108).

Always replace the old or defective needles.

They affect the satisfactory operation of the machine.

REPLACING LATCH NEEDLE

Turn the pulley until the Latch Needle comes underneath the looper

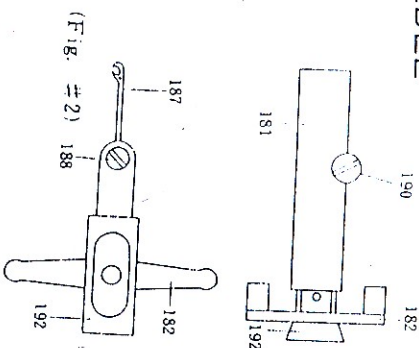
and loosen the set screw

(#188) by the driver through the

hole located in the Frame Cap

(#184). By this, the Latch Needle

can be removed by hand.



Insert the new Latch Needle until it reaches to the deepest point but make it sure that the Latch Needle is not inserted twisted.

Should you find any excess play on the Latch Needle, adjust the position of the Latch Needle Carrier Guide (L-shape) (#181) by loosening the Screws (#190), so that the L-shape Guide holds Latch Needle Carrier (#182) lightly.

See Fig. #2.

TIMING OF LOOPER

Looper serves the purpose to reinforce the seams made by sewing thread, always to ease the sewing thread to be hooked by the Latch Needle.

Accordingly, the looper timing is most important to obtain the satisfactory seams.

a. Adjustment of the Looper Heights

Set the looper so that it will be positioned with the following clearance between the Latch Needles:

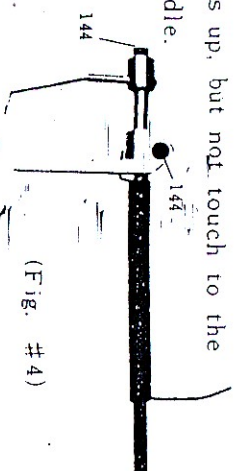
On Model AH-22, AH-38 and AH-27 0.5m/m
On Model AH-17 0.2m/m

The above adjustments can be made by the Looper Set Screw #144.

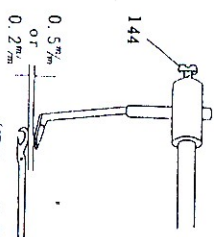
(b) Looper Toe is to be adjusted as shown by (Fig. #3-a)

(c) Adjustment of the Looper Movement
This can be made by the cam slide set screw #144.

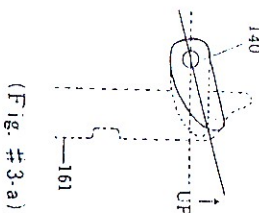
Set the looper, so that it comes to the closest position to the needle, when the needle goes up, but not touch to the needle.



(Fig. #4)

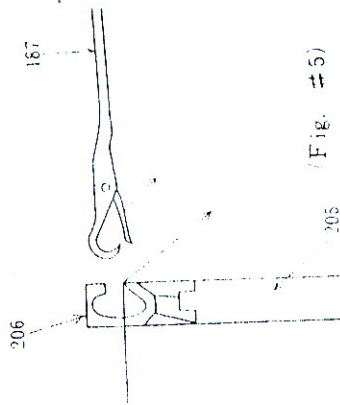


(Fig. #3)



(Fig. #3-a)

correct setting is the cause of the error. Be sure that this timing is properly set. See Fig. #4.



The Needle Guide (#206) serves the purpose not only to guard the needle in its correct position, but to open the Latch of Needle, occasionally.

Adjust the position of the thread guide by loosening the Needle Guard Bracket. Screw #212 so that the top point of the Latch Needle comes to as close as to the Needle Guide, as shown in the Fig. #5.

The machine is equipped with the Needle Guard, which accepts the Needle of sizes up to #22, in its standard model.

If the thicker needle will be used, replace the needle guard as well, which can be obtained at the special requirement.

PLACEMENT OF SEAM FORMING PLATE #161

Seam Forming Plate #161 serves a purpose of Chaining Fingers. It is important for the satisfactory seam. Replace the plate whenever it is damaged by the needle.

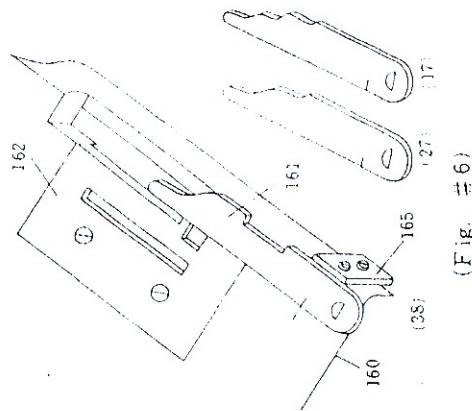
Setting the different plate can be made as follows:

(a) On Models AH-38 and AH-22

Seam Forming Plate is designed with the stopper in its right side edge and accordingly, set the plate by pulling the same to the fullest extent.

(b) On Models AH-27 and AH-17

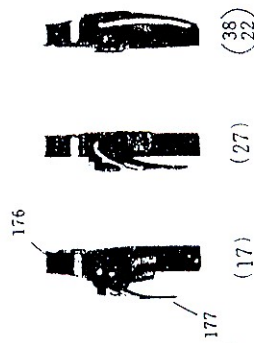
The timing point is marked on the seam forming plate and the base cover and accordingly, set by these points. See Fig. #6.



THREAD CARRIER

Thread Carrier (#177) serves the purpose that the sewing thread passes over the Latch of the Needle, as well as to press down the ornamental thread through the looper.

Thread Carrier #177 should be set horizontally on Models AH-38 and AH-22, but a little slantly on Model AH-27 and quite slantly on Model AH-17. (See Fig. #7)



MOVING THE FRAME CAP #184

1. Remove the Latch Needle and remove the screws #190 on the
 the #271 and Guide #275.
 a loosen two screws #189 and #184 to remove the Frame Cap
 pulling out.

SETTING

When trying to put the cover plate in its position, turn the
 key in both ways (rear and forward) with manual slight adjustment.
 that the two rollers on the latch needle carrier will meet the
 groove, then push the cover forward.
 suggested that you remove the latch needle beforehand, whenever
 start this procedure.

ADJUSTING THE LEVER

Models AH-38 and AH-27, the different numbers of stitches per
 inch can be obtained by the  stitch number adjusting
 lever. Press the Ratchet #274 for the change to the different
 stitch number.

Model AH-22, this lever is not equipped and the change of the
 stitch number can be obtained by the cam (#203-22) attached to the
 gear (#200-22).

Location of two cams (as shown in the parts catalog) forms four
 stitch shells and by removing one side cam, the machine forms 8-
 stitch shells.

Model AH-17, the arrangement is similar to Model AH-22, but
 the different cam (#203-17) and gear (#200-17). Stitch number
 six per shell by two cams and 3 stitches by one cam.

ADJUSTING THE FEED VOLUME AND SEAM WIDTH

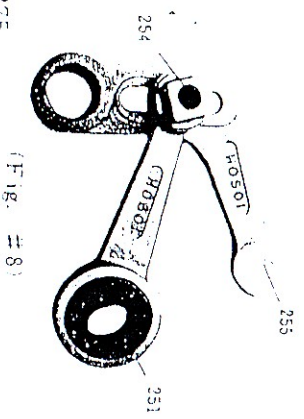
Feed Volume

Open the side cover and move the
 Feed Connecting Rod #251 for
 adjustment, by loosening the nut
 #254.

(Fig. #8)

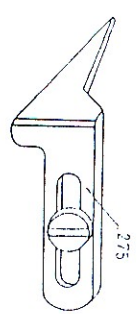
Seam width can be adjusted but
 very slightly by the seam guide #275.

(Fig. #8-a)



(Fig. #8)

- On Model AH-38 10m/m to 12m/m
- On Model AH-27 7m/m to 9m/m
- On Model AH-17 5m/m to 6m/m



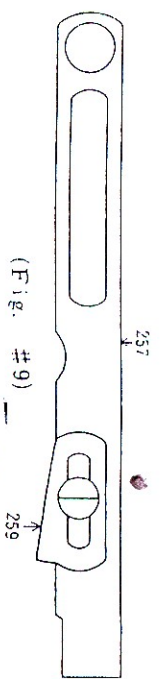
(Fig. #8-a)

Heights of the Feed Lever #261 can be adjusted by the adjustor
 #259, located on the Feed Bar Bracket #257.

By moving the adjuster #259 to the left side, higher position of
 the feed is obtained and is good for heavier material.

Movement to the right side, lower the heights of the feed dog and
 is good for thinner material.

(Fig. #9)



(Fig. #9)

- Higher Position for Heavier Material.
- Lower Position for Thinner Material.

SUGGESTIONS (I)

panion Shell Stitch Machine produces the different sizes and : shell stitches by the application of the different kinds of nes, thread and yarn.

order to obtain the better shell stitches, the followings are ested:

Make the tension of Looper Thread or Yarn always a little loose.

For using the synthetic stretchable thread, loosen the tension of the looper thread, and also make the tension of the sewing thread tighter.

For stretchable materials, make the tension of the looper thread tight to prevent the stretch of the material itself.

Model AH-27S is recommended for sewing extremely stretchable materials.

Is of Thread and Yarns to be used for the Large shell stitch:

For Model AH-38 and AH-22 — (Large size Shell stitch)

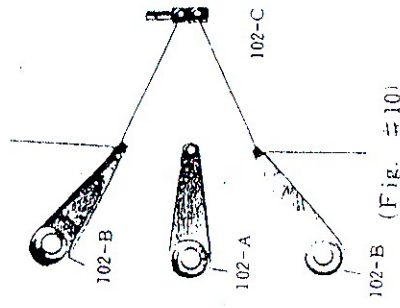
Wool and synthetic

For Model AH-27 (Medium size shell stitch) — wool and synthetic

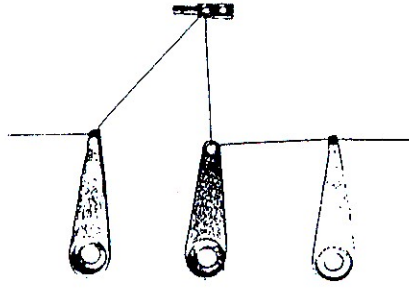
For Model AH-17 (small size shell stitch) — Cotton and tetlon.

SUGGESTIONS (II)

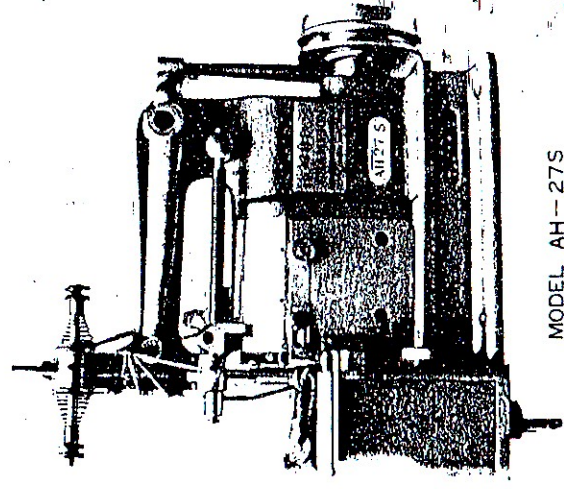
(d) In order to obtain more loose tension on the looper thread, adjust the angle of the thread guide, as illustrated. (Fig. # 10)



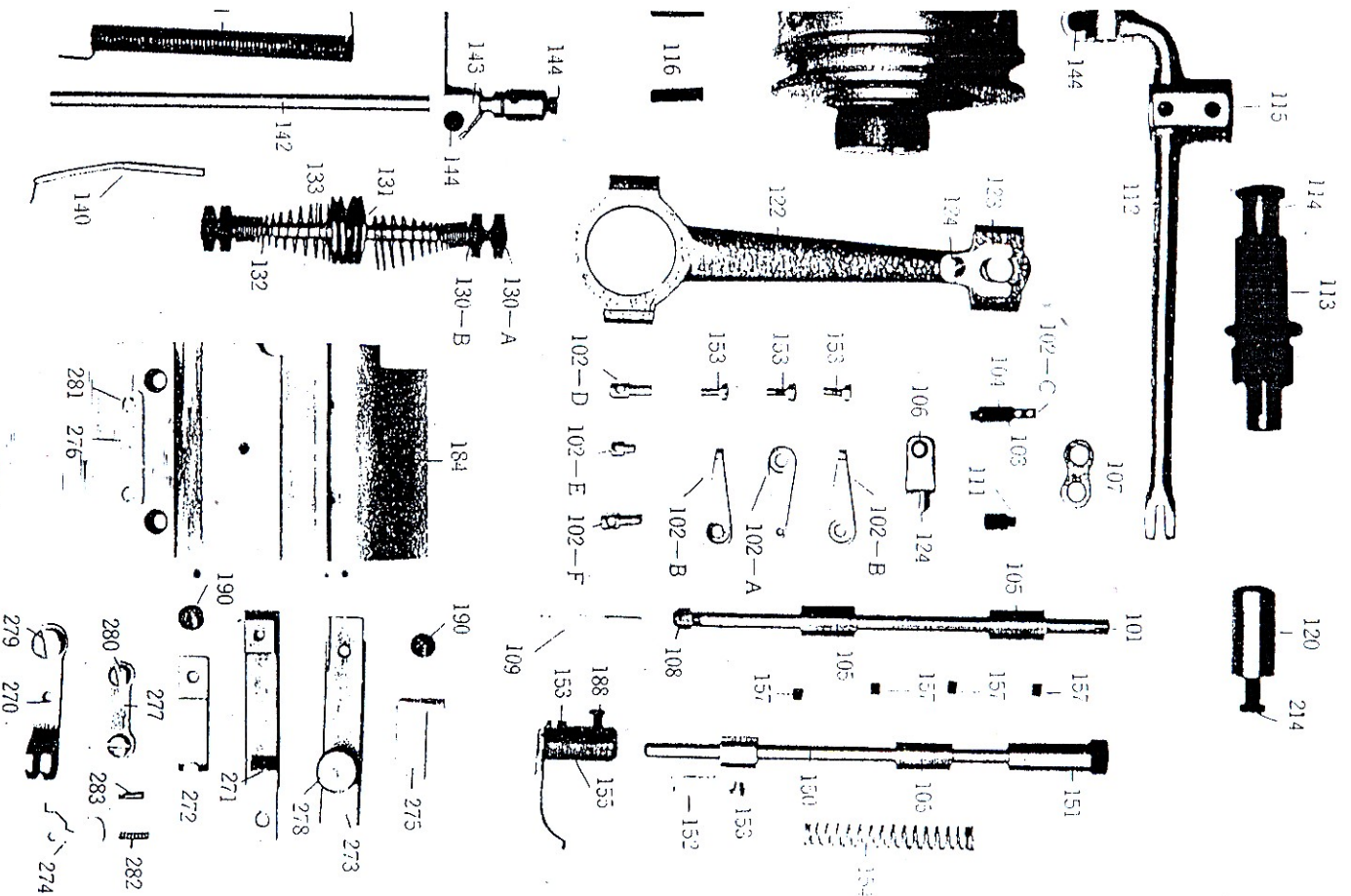
(e) If necessary, pass the looper thread through #102A after #102B before through to #102C. (Fig. #11)



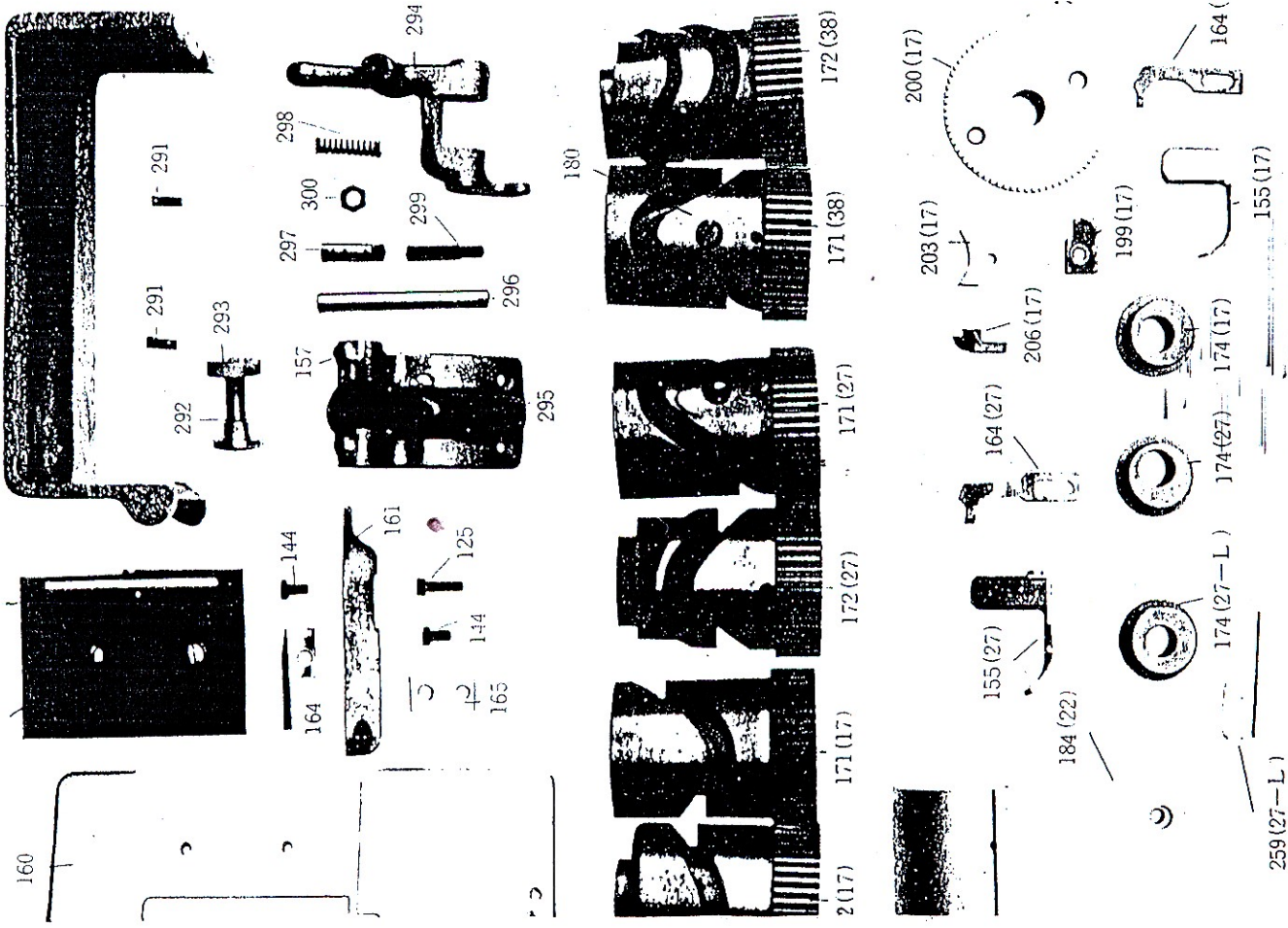
(Fig. #11)



MODEL AH-27S



101	Needle Bar	132	Tension Stud
102 A-F	Thread Guides	133	Tension Spring
103	Set Screw for Thread Guide 102-C	140	Looper
153	Set Screw for Thread Guide 102-A and B	141	Looper Set Screw
104	Connecting Rod Stud (Large)	142	Looper Shaft Spring
105	Needle Bar Bushing (also serve as Presser Bar Bushing Lower)	143	Cam Slide
157	Needle Bar Bushing Screw	144	Cam Slide Set Screw
106	Needle Bar Guide	150	Presser Bar
124	Needle Bar Guide Screw	151	Presser Bar Bushing Upper
107	Connecting Rod for 112	157	Presser Bar Bushing Screw
108	Needle Clamp Nut	152	Presser Foot Bracket
109-36	Needle for AH-36	153	Presser Foot Braket Screw
109-17	Needle for AH-17	154	Presser Foot Spring
110	Driving Wheel	155	Presser Foot
116	Driving Wheel Set Screw	186	Presser Foot Screw (Upper)
111	Connecting Rod Stud (Small)	153	Presser Foot Screw (Lower)
112	Needle Bar Actuating Lever	184	Frame Cap for AH-36 and 27
113	Needle Bar Actuating Lever Bushing	270	Stitch Number Adjusting Lever
114	Needle Bar Actuating Lever Rod	279	Screw
115	Needle Bar Actuating Lever Rod Screw	271	Stitch Number Adjusting Lever Slide
120	Bracket for Looper Shaft	272	Connecting Slide for Feed
214	Screw for 120	190	Lifting Lever
121	Bail Stud for Needle Bar	273	Set Screw for 271 and 272
144	Connecting Rod	278	Guide Adjusting Slide
122	Screw for 121	274	Guide Adjusting Slide Screw
125	Needle Bar Connecting Rod	275	Ratchet for 270
123	Needle Bar Connecting Rod Screw	190	Guide (Seam Width)
124	Needle Bar Connecting Rod Spring	276	Guide Screw
130-A	Needle Bar Connecting Rod Spring	281	Stitch Number Indicator
130-B	Tension Nut A	277	Stitch Number Indicator Screw
131	Tension Nut B	280	Connecting Bar for 270 to 271
	Tension Plate	282	Screw for 277
		283	Ratchet Spring
			Stud for 274

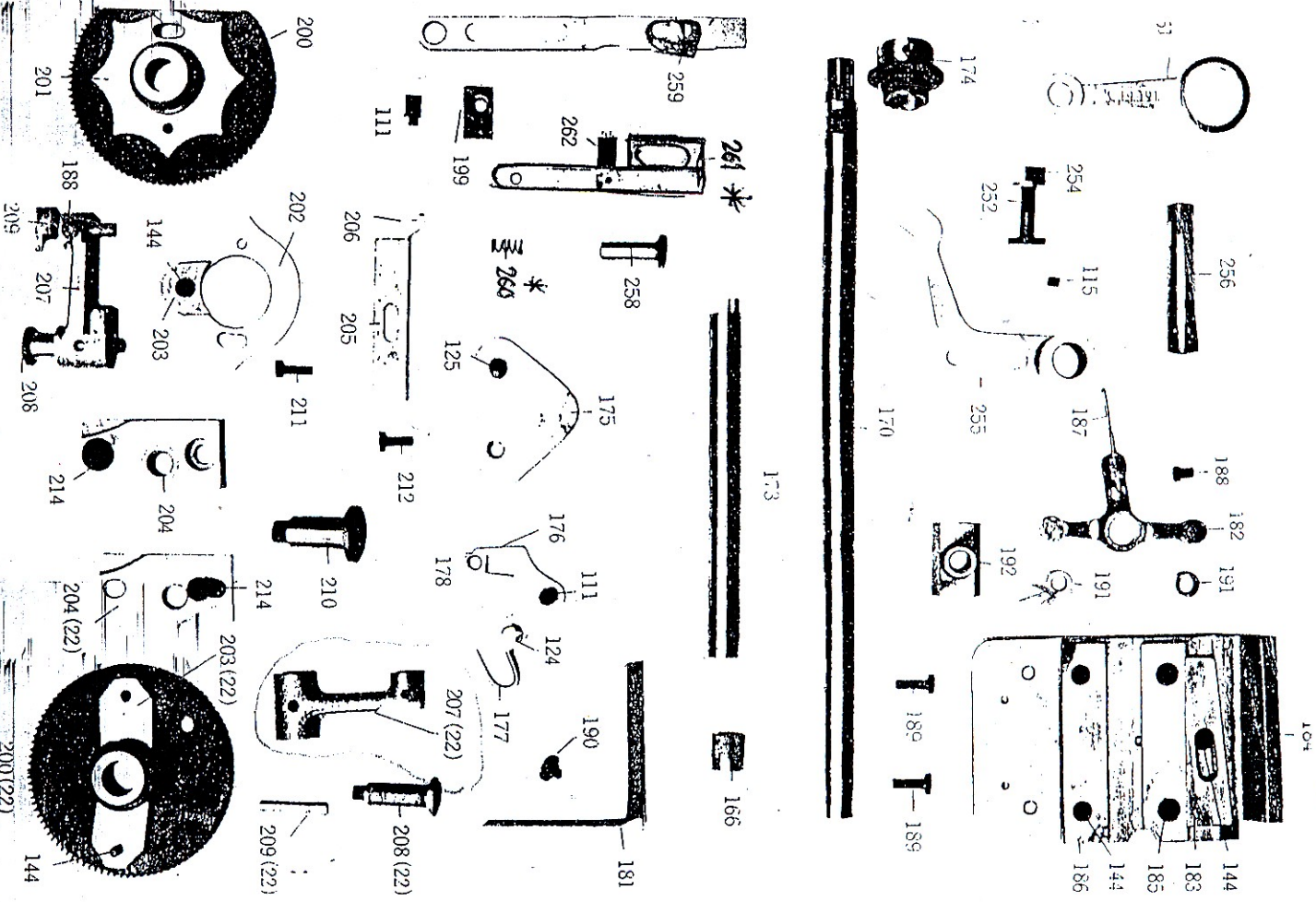


160 Base Cover
 125 Base Cover Screw
 161 Seam Forming Plate
 162 Needle Plate
 163 Needle Plate Screw
 164 Thread Guide Shim for AH-38 and 22
 144 Thread Guide Shim Screw
 165 Pressure Plate for 161
 144 Screw for 165
 290 Side Cover
 291 Side Cover Screw
 292 Side Cover Stopper
 293 Stopper Knob
 294 Presser Foot Lift Assembly
 295 Presser Foot Lift Assembly
 153 Presser Foot Lift Assembly
 296 Presser Foot Lift Assembly
 157 Presser Foot Lift Assembly
 297 Presser Foot Lift Assembly
 298 Presser Foot Lift Assembly
 299 Presser Foot Lift Assembly
 300 Presser Foot Lift Assembly
 171-38 Lower Cam for AH-38
 172-38 Upper Cam for AH-38
 171-27 Lower Cam for AH-27
 172-27 Upper Cam for AH-27
 171-17 Lower Cam for AH-17
 172-17 Upper Cam for AH-17
 180 Cam Set Screw
 184-22 Frame Cap for AH-22
 155-27 Presser Foot for AH-27
 164-27 Thread Guide Shim for AH-27
 174-27 Feed Eccentric for AH-27

170-27-L Main Shaft for AH-27L
 174-27-L Feed Eccentric for AH-27L
 155-17 Presser Foot for AH-17
 164-17 Thread Guide Shim for AH-17
 174-17 Feed Eccentric for AH-17
 199-17 Feed Bar Stopper for AH-17 and 22
 200-17 Feed Lifting Gear for AH-17
 203-17 Feed Lifting Cam for AH-17
 206-17 Needle Guard for AH-17

259(27-L)

170(27-L)



- | | | | |
|--------|---|--------|-------------------------------------|
| 166 | Plug Pin on Body | 204 | Feed Lifting Gear Bracket |
| 170 | Main Shaft | 214 | Feed Lifting Gear Bracket Set Screw |
| 173 | Upper Shaft | 205 | Needle Guard Bracket |
| 174 | Feed Eccentric for AH-38 and AH-22 | 212 | Needle Guard Bracket Screw |
| 175 | Feed Eccentric Screw | 206 | Needle Guard |
| 179 | Cover Plate for Thread Carrier Assembly | 213 | Needle Guard Screw |
| 125 | Set Screw for 175 | 207 | Feed Lifting Lever |
| 176 | Thread Carrier Bracket | 208 | Feed Lifting Lever Rocker Screw |
| 111 | Pivot Screw | 209 | Feed Lifting Cam Guide |
| 177 | Thread Carrier | 188 | Feed Lifting Cam Guide Screw |
| 124 | Thread Carrier Screw | 210 | Feed Lifting Gear Rocker Screw |
| 178 | Slide Guide | 251 | Feed Connecting Rod |
| 181 | Latch Needle Carrier Guide (L-Shape) | 252 | Slitch Adjusting Stud |
| 190 | Screw for 181 | 253 | Feed Roller |
| 182 | Latch Needle Carrier | 254 | Nut for 252 |
| 183 | Gib Key | 255 | Feed Lever |
| 144 | Screw for 183 | 157 | Feed Lever Screw |
| 184 | Frame Cap | 256 | Feed Lever Stud |
| 189 | Upper Gib | 257 | Feed Bar Bracket |
| 185 | Lower Gib | 258 | Feed Bar Bracket Rocker Screw |
| 144 | Gib Screw | 124 | Feed Lifting Adjuster |
| 187-38 | Latch Needle for AH-38 | 260 | Feed Bar Bracket Pressing Spring |
| 187-17 | Latch Needle for AH-17 | 261 | Feed and Feed Bar |
| 188 | Latch Needle for Set Screw | 111 | Feed and Feed Bar Screw |
| 191 | Cam Roll | 262 | Subsidiary Feed |
| 192 | Latch Needle-Carrier Block | 200-22 | Feed Lifting Gear for AH-22 |
| 199 | Feed Bar Stopper for AH-38 and 27 | 203-22 | Feed Lifting Cam for AH-22 |
| 200 | Feed Lifting Gear for AH-38 and 27 | 204-22 | Feed Lifting Gear Bracket for AH-22 |
| 201 | Feed Lifting Cam (1 stitch) | 207-22 | Feed Lifting Level for AH-22 |
| 144 | Feed Lifting Cam Screw | 208-22 | Feed Lifting Lever Rocker for AH-22 |
| 202 | Feed Lifting Cam (4 stitch) | 209-22 | Feed Lifting Cam Guide for AH-22 |
| 211 | Feed Lifting Cam Screw | | |
| 203 | Feed Lifting Cam (8 stitch) | | |
| 144 | Feed Lifting Cam Screw | | |