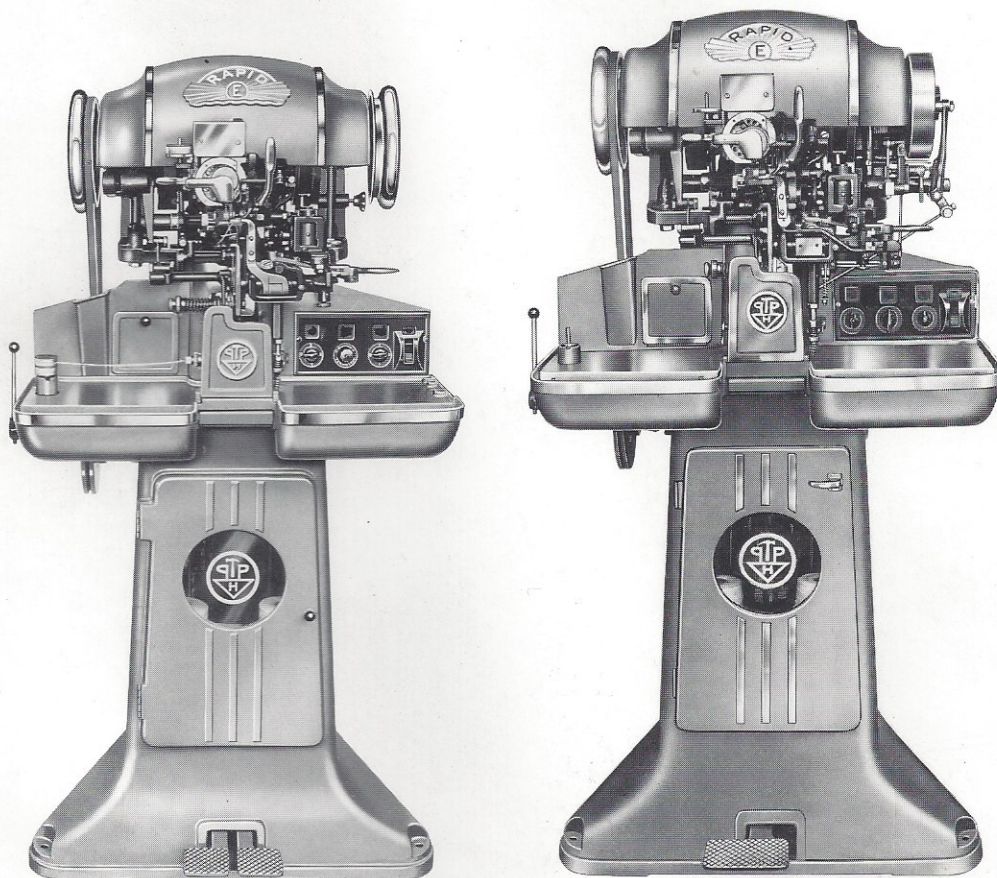


**VILH. PEDERSEN** MANUFACTURING LTD.

DK - 4270 HOENG DENMARK



**INSTRUCTION FOR USE AND LIST OF PARTS FOR  
THE OUTSOLE STITCHER RAPID-E**

**Models 317 EM and 317 EMB**

**INDEX:**

<i>Introduction and Instructions</i> .....	4
<i>Ordering Spare Parts</i> .....	4
<i>Directions for Use:</i>	
Installation of the Machine .....	6
Winding .....	6
Needle Thread .....	6
Shuttle Thread .....	8
Heating .....	8
Insertion of Needle .....	9
Exchange of Needle Guide .....	9
Insertion of Awl .....	10
Needle Thread Brake .....	11
Looper 38 .....	11
Thread Hook 154 .....	11
Thread Lifter 124 .....	12
Thread Tension .....	12
Thread Fraying or Breaking While Sewing .....	12
The Machine Drops Stitches .....	12
Adjustment of the Shuttle .....	12
Adjustment of Presser Foot Pressure .....	13
Hydraulic Presser Foot Locking .....	13
Shoe Guide .....	13
Stitching .....	14
Speed of Machine .....	14
Size of Thread, Needle, and Awl .....	14
Presser Feet .....	15
Needle Guides .....	15
Adjustment of Automatic Brake (317 EMB) .....	15
Sewing Tables .....	16
Wiring Diagrams .....	17
List of Parts .....	18

## INTRODUCTION and INSTRUCTIONS

These directions for the operation of the Outsole Stitcher RAPID-E, Model 317 EM and 317 EMB, and for the ordering of spare parts, should be given careful attention before the machine is taken into use.

It is recommended that the man who has to attend to and who is responsible for the machine studies this booklet and keeps it available, thereby avoiding loss of time and unnecessary stoppage of work.

The RAPID-E has been made with the greatest care and from the most suitable materials. It easily stitches soles up to a thickness of app. 5/8 of an inch without adjustment or replacing of parts. By the fixing of different sewing tables and presser feet the machine is quickly adjusted for stitchdown work, for the stitching of soles with or without channel, or for the stitching of soles up to app. 3/4 of an inch, etc.

In order to secure proper workmanship and a long life of the machine, it is essential that the following be strictly observed.

- 1) *Keep the machine clean.* A few minutes' attention every day will pay.
- 2) *Keep the machine well lubricated.* It is important to use a good and heat-resisting oil. Sewing machine oil must not be used; a thin motor car oil will do. (We can supply a special oil in 1 kilo tins). All movable parts to be oiled every day; and for a whole day capacity, the machine must be oiled twice a day. Special parts which are exposed to greater wear e.g. due to the heating of same must be lubricated even more frequently. This applies especially to the shuttle. Also the felt pad supplying oil to the needle needs frequent oiling.
- 3) *Keep the machine well heated* both at the starting and during the operation. With electric heating, the heating elements of the shuttle are arranged in three steps intended for quick heating (position 3), normal heating while sewing (2), and slow heating (1) i.e. when the machine is held ready for sewing.

When *ordering spare parts*, kindly state both the name of RAPID-E, and the model number, as well as the manufacturing number of the machine (stamped on the front side of the machine).

The parts required must be stated exactly with their numbers and designations, and in case of small parts such as screws etc. also particulars of the greater part to which the ordered ones belong should be given.

An order may for instance appear as follows,

Please, send by return for RAPID-E, model 317 EMB,  
manufacturing No. 718, 2 screws No. An 36 (for No. 118 R).

If the directions given in this booklet are carefully attended to, the machine will no doubt function to your full satisfaction. We cannot accept responsibility for any defects or damage which may arise owing to inattention or improper use.

**VILH. PEDERSEN Manufacturing LTD.**

4270 HOENG

## **INSTRUCTIONS for USE of the RAPID-E**

### **Models 317 EM and 317 EMB**

#### **Installation of the Machine**

The machine has been carefully tested and tried for sewing at the factory, and it is inadvisable to make any adjustments or changes. The machine should be placed in a light room. Clean off the grease, and carefully lubricate all nipples and all movable parts. Then test whether there is *oil on the hydraulic presser foot locking* (see fig. 13). If not, turn the main shaft of the machine until the take-up lever 57 is in its top position for descending. The oil cup is now to be filled (use SAE 10 or 20, or a similar oil). Attend the grip 20 a few times to move the presser foot up and down between its extreme positions.

Before the machine is taken into use, the lubricant pot should be filled with gum (bought as a powder to be mixed with water). The wax pot must be filled up with a light Good Year wax with an admixture of 10-15 per cent linseed oil. Occasionally, the wax pot must be cleaned out, and new wax added. Old or scorched wax might cause breaking of the thread.

#### **Winding**

When winding, the thread is to be led from the right-hand thread bobbin through the guide holes B and D to the right (see fig. 7), through the hole to the right at F, via the thread eyes K and G through the adjustable rubber stopper at the wax pot, and to the winding apparatus running clockwise.

#### **Needle Thread**

As the machine is threaded on delivery, it is recommended to examine the thread guide immediately on arrival of the machine. From the left thread bobbin the thread is led through two guiding holes B and D to the left (see fig. 7). Next via the opening of the lubricant pot through the porcelain ring E. From there through the tube QA 429 A, over the stripper roll QA 426, and through holes in the column to the tension wheel 161 A.

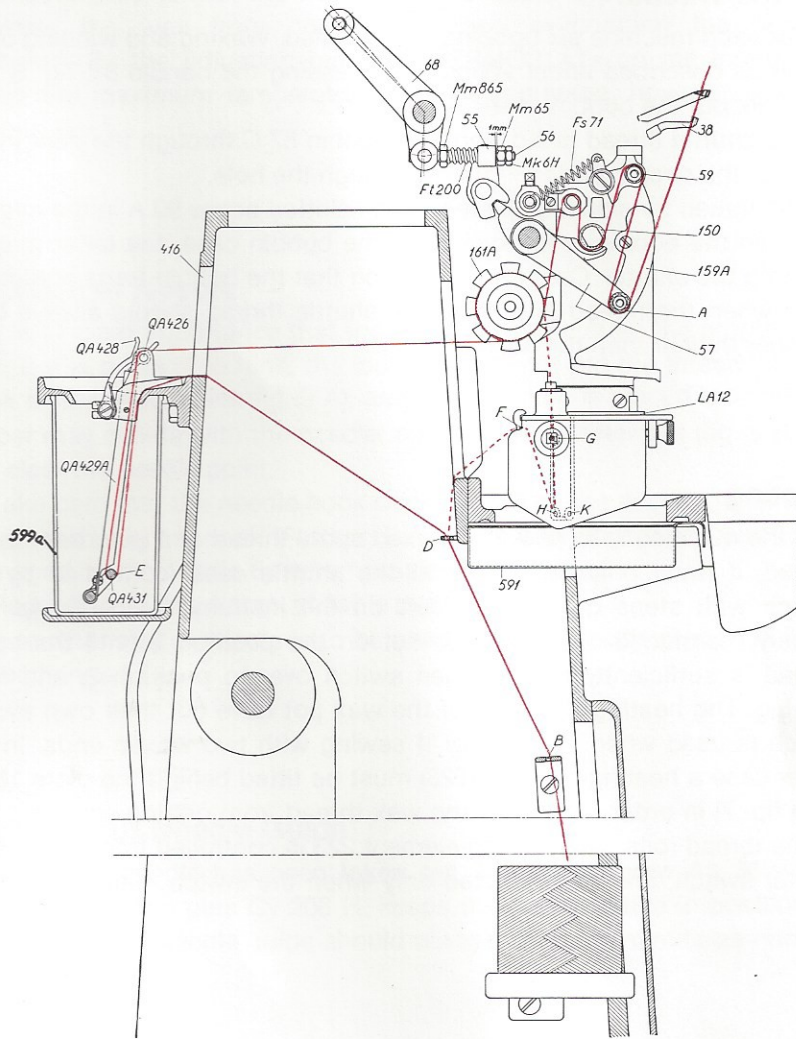


Fig. 7

After a turn on this roll, the thread passes the thread roll 153 on the thread measure lever, the thread brake roll 150, the auxiliary take-up lever roll 59, and under the take-up lever thread roll A; from here upwards through the looper 38, and finally through the opening in the sewing table. This threading is for sewing with gum, and is shown on fig. 7, indicated as a fully drawn red line.

If you want stitch by *two waxed ends*, the thread (the dotted line) should run from the thread bobbin through the holes B and D and into the wax pot at F (left-hole), through the eye H and the rubber stopper in the cover to the tension wheel 161 A, and then further as described above.

### Shuttle Thread

For each machine six bobbins are supplied. Waxing and winding to be made as described under »Winding«. Pressing the handle 84, fig. 8, you can take out the bobbin case.

The shuttle thread is led from the bobbin 87 C through the dent in the edge of the circuit, under 89 B and through the hole.

The thread tension is adjusted by the slotted screw 90 A in the middle.

When the bobbin is in position in the bobbin case, the latter may be put into the shuttle. Care must be taken that the bobbin turns anti-clockwise when the thread is pulled. The shuttle thread should always be a number thinner than the needle thread.

### Heating

If the machine is to sew with waxed spool thread and gummed needle thread, it must only be heated at the shuttle case (controlled by the switch with steps quite to the left on the instrument board). As previously mentioned, the switch is set on the position 3 until the spool thread is sufficiently heated, then switch over to position 2, and start sewing. The heating-elements of the wax pot have got their own switch which is used when winding, or if sewing with two waxed ends. In the latter case a heating-element (223) must be fitted behind the plate 159 A (see fig. 7) in order to prevent the wax thread from getting cold and stiff in the thread rolls. The heating-element 223 is controlled from the shuttle heater switch, and is connected only when the switch stands at 3 or 2.

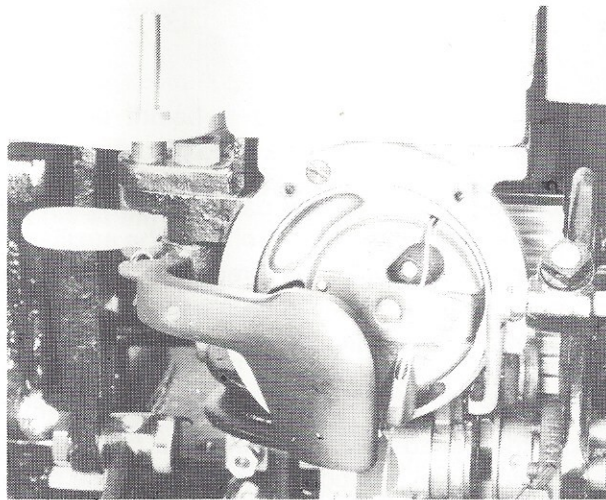


Fig. 8

The heating-element of the wax pot is thermostatically controlled which prevents the wax from boiling over and overloading the heating elements. By the adjusting button »THERMOSTAT« on the instrument board the maximum temperature may be regulated, however, *not* the heating time.

### Insertion of Needle

It is of great importance that the needle is set in quite the proper position. If it is placed too high, the looper 38 will not put the thread into the hook of the needle (see fig. 9 A), and if the needle is placed too low, the looper may collide with the needle, and the thread lifter 124 (fig. 9 B) will not clear the needle point.

Take care that the needle hook does not pierce the needle guide while the thread is in the hook. Further, it must be seen that the thread is not damaged by the needle tip when passing the shuttle.

Regarding needle clamp, cf. table page 14.

If another size of needle is to be used, also the needle guide 118 must be exchanged.

### Exchange of Needle Guide

When the needle has been taken out, the small screw An 36 which together with two pins Cy 208 H, keeps the needle guide in position, is unscrewed. The needle guide should always be of the same size number

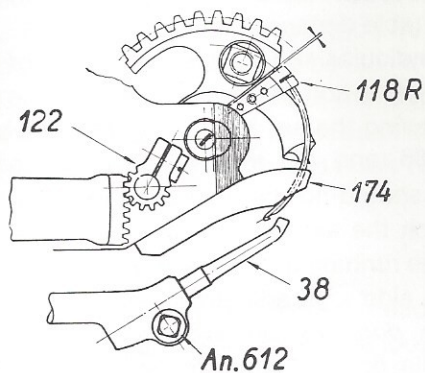


Fig. 9A

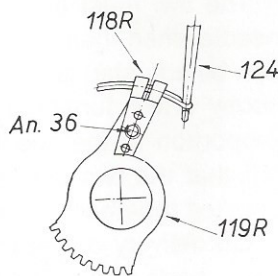


Fig. 9B



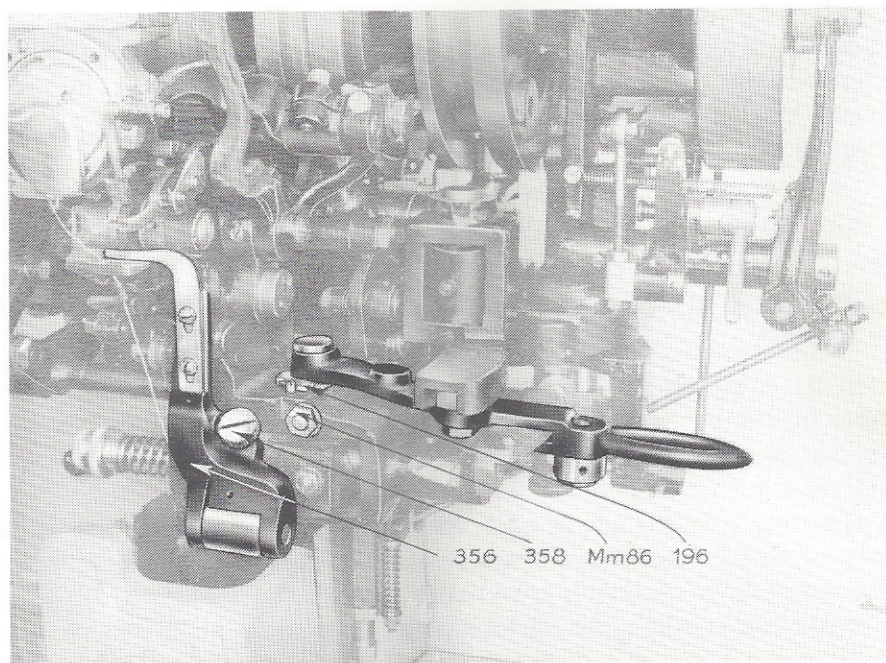


Fig. 10

as the needle. If the needle guide happened to come off position, it can be re-adjusted by loosening the screw in the needle guide gear wheel 122 (see fig. 9). Turn the machine until the needle is in its bottom position, then press the needle guide against the needle holder, and again tighten the screw on the needle guide gear wheel.

### Insertion of Awl

When inserting the awl, care must be taken that the thick part of the awl (the bulb) does not reach up through the sewing table. The awl tip and the needle tip must be at a suitable distance from each other.

The awl must be exactly perpendicular and a trifle to the left of the needle when the movement to the left is completed. If necessary, the awl can be adjusted sideways by loosening the nut Mm 86 (fig. 10), and by a screw driver turning the wheel 196, and the awl will be displaced in proportion to the needle. The awl should not be placed so much to the left that the two pivots about which the awl and needle holder turn are pressed together preventing the free running of the machine.

On delivery of the machine this sideways adjustment has been carefully made, and *should only be done as an exception*, e.g. when changing from thin to thick needle or vice versa. In case the awl be askew, it can easily be straightened so that it will stand perpendicular.

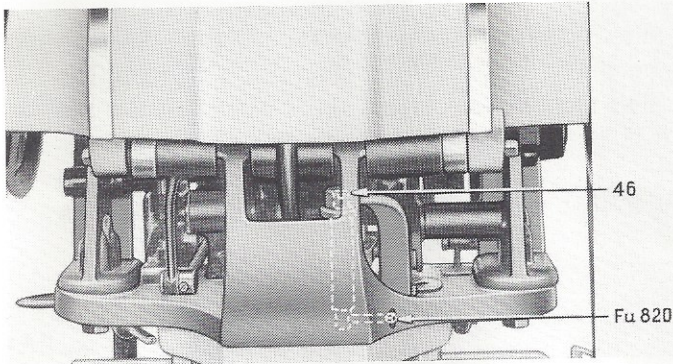


Fig. 11A

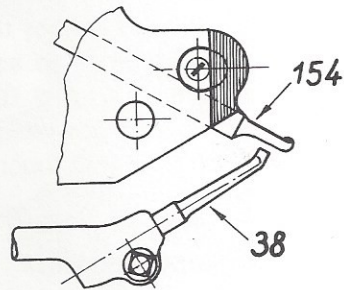


Fig. 11B

### Needle Thread Brake

The needle thread brake serves to hold the thread during the take-up.

*Adjustment of the Brake (see fig. 7).* Turn the machine until the take-up lever 57 is in its bottom position. By means of the hindmost adjusting nut Mm 865 on the tension rod 56 the brake can be made more or less tight. The brake must never be set so hard on the brake-roll that it spoils the thread; further, there must be a play of about .03 inch between the two front nuts and the shaft swivel as shown on fig. 7.

### Looper 38

The looper is such adjusted as to move at a distance of app. .08 inch round the needle putting the thread right in the needle hook (fig. 9 A).

The movement of the looper is determined by the cams 5 and 6, the lateral movement by cam 5, and backwards and forwards by cam 6. By moving these cams on the shaft, the position of the looper in proportion to the needle can be altered. However, it should be examined whether it be sufficient to turn the eccentric pivot 46 (fig. 11 A). Before adjusting the pivot, the screw Fu 820 is to be slackened.

The adjustment in height of the looper is made by the screw An 612 (fig. 9 A). The looper must not be set so high that it catches the thread hook 154 (see fig. 11 B) in its lateral movement.

### Thread Hook 154

The thread hook holds the thread while the looper places it in the needle hook. The looper must therefore move so far to the left that the hook grips the thread (fig. 11 C). The thread hook cannot be adjusted.

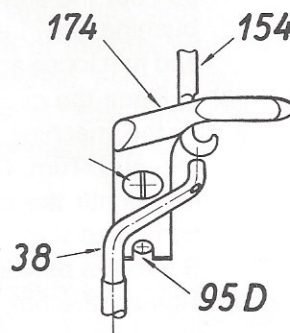


Fig. 11C

### Thread Lifter 124

The thread lifter is fitted for opening and further guiding the loop carried upwards by the needle so that the shuttle can catch the loop. The thread lifter is so adjusted that its keen-edged tip is exactly under the needle (see fig. 9 B). It is furthermore so adjusted that during the upwards and downwards movement it goes as close as possible to the shuttle without touching it. Also, it must not touch the needle guide in its bottom position.

### Thread Tension

The machine has automatic thread-giving, which is adjusted at the works. At a suitable heating of the shuttle, the shuttle thread and the needle thread should have nearly an equal tension in order that the threads may be flung in the middle of the sole at a normal length of stitch. Deviations can be adjusted by tightening the shuttle or the needle threads, respectively. The needle thread is set by the knurled nuts for the tension wheel 161 A (fig. 7). Setting of the shuttle thread is described under »Shuttle Thread«.

### Thread Fraying or Breaking While Stitching

if the shuttle has not been heated at a suitable temperature,  
if the shuttle thread is burnt - bobbin has to be replaced,  
if the looper 38, the thread lifter 124, or the thread hook 154 are damaged,  
if the needle does not fit the thread,

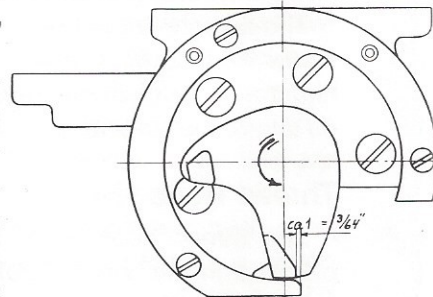
### The Machine Drops Stitches

if the thread hook does not catch the thread (the looper does not go far enough to the left),  
if the thread is not placed correctly in the needle hook,  
if the thread lifter is improperly adjusted.

### Adjustment of the Shuttle

If the shuttle may get off adjustment, remove ring No. 76 and the shuttle. Unscrew nut Mm 107 H at the end of the shuttle shaft 74 R, and pull out the shaft enough for removing the gear wheel No. 73. A conical bushing No. 71 is this gear wheel. Drive it out, and fit it loose again.

Place the gear wheel and the nut properly in the machine, but so far omit tightening the nut. Turn the main shaft carefully by hand until the arm 99 is in its bottom position. Then turn the shuttle drive shaft No. 74 R into the position shown on the illustration. Tighten the nut, and fit the shuttle and the ring.



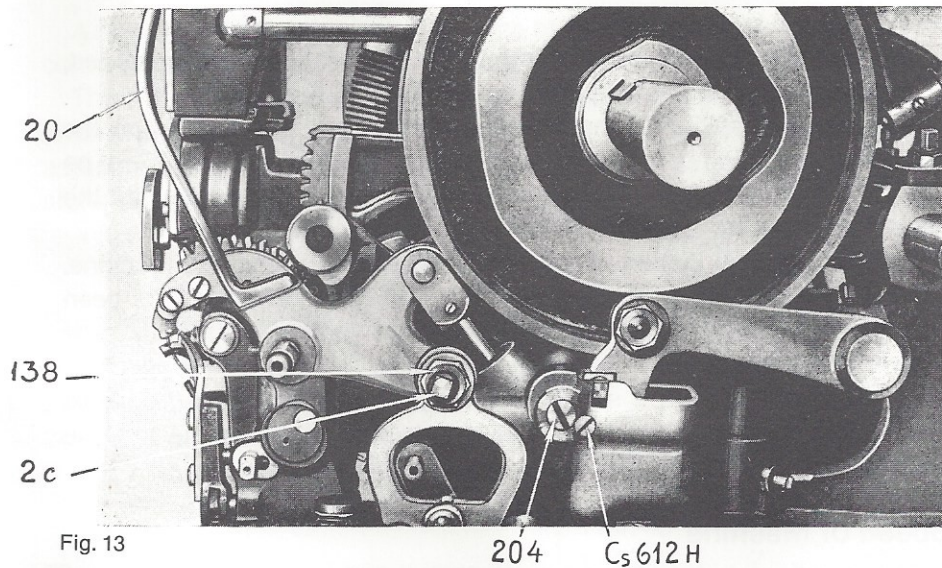


Fig. 13

### Adjustment of Presser Foot Pressure (see fig. 13)

If it is desired to increase the compression of the leather, this can easily be done by loosening the screw Cs 612 H, and by a screw driver turning the eccentric shaft 204 a little to the right. The compression is decreased when turning to the left. After adjustment, the screw Cs 612 H must again be tightened.

### Hydraulic Presser Foot Locking

When the oil container has once been filled, as described under »Installation of the Machine«, it should in fact be capable of working continuously without refilling. If, however, the presser foot happens to be incapable of getting locked, or it may sag a little, the reason would either be that air has come into the cylinder, or that the oil quantity has diminished. The air can be pumped out by strong movement of the presser foot handle 20 when the take-up lever 57 is in its top position. Filling of the oil should be made in the same position. As to model 317 EM: When the machine is stopped, the presser foot is raised automatically, and again lowered when the treadle is operated.

### Shoe Guide

As can be seen from fig. 10, the machine has an adjustable shoe guide which is stationary during the operation. If the shoe guide is not used, it may be swung aside, or the rule removed.

## Stitching

The machine is ready for stitching when the shuttle is suitably heated, and all bearings and movable parts are oiled.

The starting position of the machine is indicated by an arrow on the screening and a line on the right hand-wheel. The presser foot will not be raised until these two marks are opposite each other. Thereupon, put the shoe on the sewing table.

Pull out about 6 inches of the needle thread and start the machine. Hold the needle thread in your left hand until the first stitch has been made letting the thread run easily through the fingers. Let the machine carry out the feeding, do not press in order to make it take longer stitches than adjusted for. If so, the awl might bend, or the needle break. The shoe is held sloping a little upwards in the waist and the toe, the stitches thereby being placed longer from the edge.

## Speed of Machine

The coupling shaft is fitted for a speed of 660 revolutions per minute by which the machine makes 300 stitches per minute. By slackening the operation of the treadle, the speed may be decreased. Especially when starting or stopping the machine, and when sewing round the toe, the lower speed is essential.

## Size of Thread, Needle and Awl

Having gained a little practice you can easily determine the proper size of needle for the work in question. The following table can be used as a guide.

Stitch length: Number of stitches per inch	Thread	<sup>6021</sup> Needle No.	<sup>8036</sup> Awl No.	
2½ - 3	10 - 14 -cord	41	39	For needles Nos. 39-41-43 use the assembled Needle Clamp DA 106 R and DA 108 R. For needles Nos. 45-47-50 use the assembled Needle Clamp DA 115 R and DA 114 R. For needles Nos. 52-54 use the assembled Needle Clamp without groove, DA 115 RA and DA 114 R.
3 - 4	10-cord	43	41	
4 - 6	9-cord	45	43	
7 - 9	8-cord	47	45	
10	7-cord	50	47	
12	6-cord	52	50	
14	5-cord	54	52	

A needle gauge to determine the size of needle, and a radius gauge to control both the needle and the awl are supplied with the machine.

The awl must be sharp. If it is inclined to go aslant through the leather (even when standing perpendicularly), or if it goes inwards or outwards, adjustment can be made by a somewhat different sharpening. Use an oil stone for the sharpening.

### Presser Feet

No.	
23R	Standard (for open channel)
24R	Complete with channel knife No. 27, clamping iron Nr. 25R, and screw Cr 410H.
28	Special presser foot for rubber soles.
31	Shim for presser foot for sewing with short stitches.

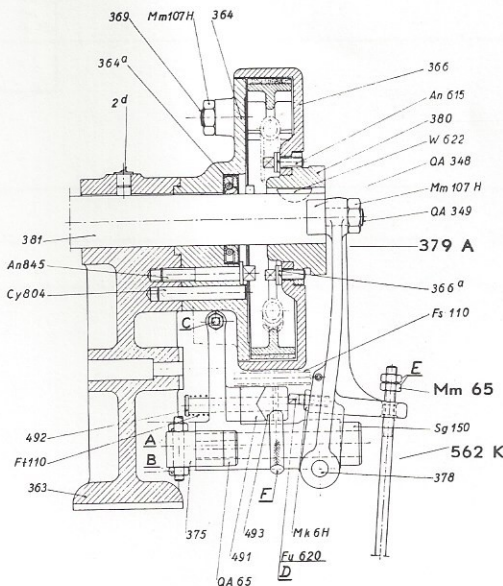
### Needle Guides

No.	stamped	For Needle No.
118R-39	9	39
118R-41	1	41
118R-43	3	43
118R-45	5	45
118R-47	7	47
118R-50	0	50
118R-52	2	52
118R-54	4	54

### Adjustment of Automatic Brake (317 EMB)

The automatic brake can be put out of action by turning the hand lever F. If after some time, the brake works too late, due to wear of the brake bands, the nut A has to be slackened, and the nut B retightened.

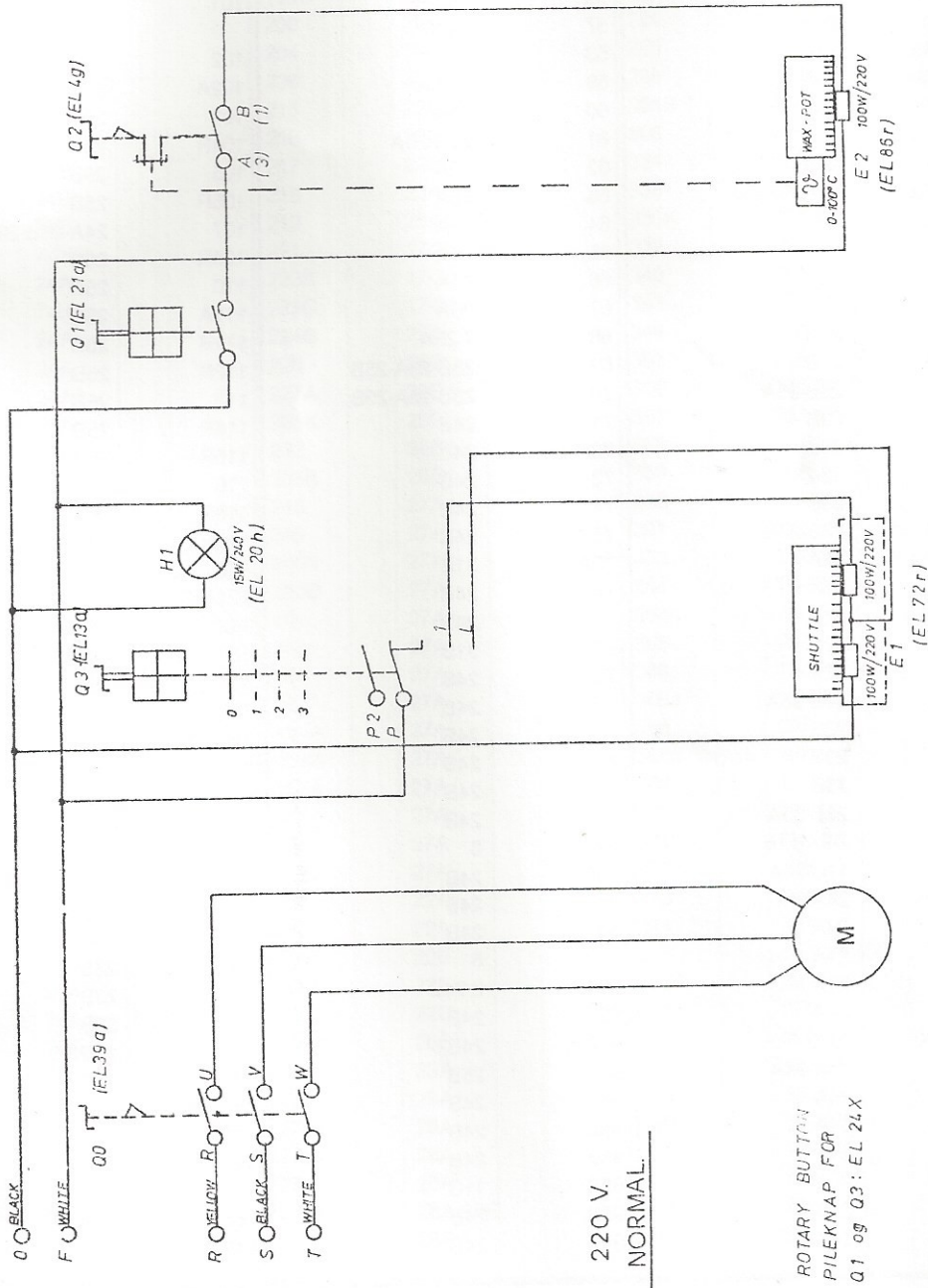
The machine which has automatic presser foot raise and one treadle only must be such adjusted as to treadle, friction clutch and automatic brake that the latter will be released as the treadle is operated. The cam lever 379 A is turned away from the cam 380 by which also the presser foot is released. Only then the friction clutch should come into action.



### Summary of Sewing Tables

No.	Front edge mm	Opening		Remarks	
		Width mm	Length mm		
664 NH	0,8	2,0	10	Specially for small work	
174 NB	1,5	2,5	14	Standard design for gentlemen's shoes	
174 MB	2,5	2,8	14	Specially for heavy work (gentlemen's shoes) Specially low	
174 NC		3,0	14		
174 MC	2,4	3,0	14		
174 NBR	1,5	2,8	14	Repair sewing tables with lip	
174 MBR	2,5	2,8	14		
513 D5	1,2	2,5	13	Stitchdown sewing tables for size of edge	
513 D-5,5	1,5	2,5	13		1,5 x 5
513 D-6	1,7	2,5	13		1,5 x 5,5
513 D-7	2,2	2,5	13,5		1,5 x 6
513 D-8	2,6	2,5	13,5		1,5 x 7
515 NB	1,5	2,5	17	Specially for big stitchlength and for fudge knife.	
515 MB	2,5	2,5	17		1,5 x 8

Wiring Diagram





## List of Parts

Part No.	Section No.	Price	Part No.	Section No.	Price	Part No.	Section No.	Price
1	22B		53	25A		97	25B	
2	22B		53a	25A		98A	25B	
2b	22B		54	25A		98B	25B	
2c	13-22B-23B		55	7-25A		99	24B	
2d	15-22B-29B		55A	31B		100	24B-26A	
3	22B		56	7-25A		101	24A-24B	
4	23A		57	7-25A			25B-26A	
4a	23A		58	25A		102	25B	
4b	23A		59	7-25A		102A	31B	
5	23A		60	25A		103	25B	
6	23A		61	22B-25A		104R	25B	
7	23A		62	25A		105	25B	
7a	23A		63	25A		106R	25B	
8	23A		64	25A		107	24A-25B-26A	
9	22B		65	25A		108R	25B	
10K	23B		66	25A		110	25B	
11K	23B		67	25A		111A	25B	
12	23B		68	7-25A		111R	25B	
13	23B		69	23B-25A-25B		112R	25B	
15	23B-25A		70	23B-25A-25B		113	25B	
17K	23B		71	24B		114R	25B	
19R	23B		72R	24B		115R	25B	
20	13-23B		73	24B		116	25B	
21	23B		74R	24B		118R	9A-9B-25B	
22	23B-25B		75	24B		119R	9B-25B	
23R	22A		75A	31B		120	25B	
24R	22A		76	24B		121	24B	
25R	22A		77	24B		122	9A-25B	
27	22A		77A	31B		123	24A	
31	22A		78	24B		124	9B-24A	
32	23B-25A		79	24B		125R	24A	
33	23B		80	24B		126	24A	
34	23B		81	24B		127	24A	
35	23B		82	24B		128	24A	
37	23B-25A		83	24B		129	24A	
38	7-9A-11B		84	8		130	24A	
	11C-24A		86D	24B		131A	24A	
39R	24A		87C	24B		133	23B	
40	24A		88D	24B		134	23B	
41	24A		89B	8		135	23B	
42	24A		90A	8-24B		136	23B	
43	24A		92	24B		137	23B	
44K	24A		92A	24B		138	13-23B	
46	11A-24A		93	25B		139	23B	
47	24A		94	24B		140	23B	
48	24A		95c	24B		141	23B	
49	24A		95d	24B		142	23B	
50	24A		95D	11C		143	23B	
51	24A		95R	24B		144	23B	
52	24A		96	24B		145	23B	

Part No.	Section No.	Price	Part No.	Section No.	Price	Part No.	Section No.	Price
146	22B		194	26A		280	28B	
147	25A		195	26A		281	28B	
148	25A		196	10-26A		282	28B	
149	25A		197	26A		282a	28B	
150	7-25A		198	26A		283	28A	
151	25A		199C	26A		283a	27B-28A	
152	25A		200	26A		284	28A	
153	23B		204	13-23B		285	28A	
154	11B-11C		206	31B		286	28B	
154R	24B		215	22B		304B	26B	
155	24B		216	22B		306	25A	
155A	24B		217	22B		324	27A	
156	24B		218	23A		335	25A	
157	24B		219	25A		336K	25A	
159A	7-26B		221	17-26B		339	25A	
160A	24A		223B	17-26B		340	29A	
161A	7-24A		223C	17-24B		345	22A	
162A	24A		224B	27A		346	22A	
163A	24A		226	26B		353	22A	
164A	24A		227A	26B		356	10-26A	
165	24A		228K	26B		357	26A	
167A	23B		232	26B		358	10-26A	
168	23B		233B	26B		359	26A	
169	23B		248	27A		360	26A	
170	23B		249	27A		361	26A	
174	9A-11C		249b	27A		363	15-29B	
174N	16		250B	27A		364	15-29B	
174NBR	16		251	27A		364a	15-29B	
174NC	16		253	27A		365	29B	
174MB	16		254	27A		366	15-29B	
174MC	16		255	27A		366a	15-29B	
174MBR	16		256A	27A		368	29B	
175-5	16		256B	27A		368a	29B	
175-5,5	16		257A	27A		369	15-29B	
175-6	16		258	27A		370	29B	
179K	26A		259	27A		371	29B	
180	25A-26A		259a	27A		372	29B	
181	26A		262	22A		373	30A	
182	26A		263	22A		374	30A	
183	26A		265A	22B		375	15-30A-30B	
184	26A		265B	22B		376A	30A	
185	26A		265C	22B		377	29B	
186A	26A		266A	26B		377a	29B	
187	26A		269	23A		378	15-30A	
188	26A		273	28A		379A	15-30A	
189	26A		273a	28A		380	15-29B	
190	26A		273b	28A		381	15-29B	
191	26A		274	28A		382	23A-29B	
192	26A		275a	28A-28B		382a	29B	
193	26A		278	28B		415	31B	

Part No.	Section No.	Price	Part No.	Section No.	Price	Part No.	Section No.	Price
416	7		588	26B		LA 57B	23A	
451	31B		589	31A		57C	23A	
535	31B		590	31A		57d	23A	
535A	31B		591	7-31A		82	27B	
536	31B		593	31A		82a	27B	
536B	31B		594	31A		MA 42	23B	
537	31B		597	31A		42A	23B	
550	31A		599	27A		47	23B	
551	28A		599a	27A		230	26A	
551a	28A		600	30A		313	27B	
551b	28A		601	23A		318	31A	
552	28A		601a	23A		QA 65	15-30A-30B	
553	27A		604	30A		287	27B	
554	28B		606	30A		349	30A	
554a	28B		607	30A				
555	28B		608	28A		426	7	
555a	28B		610	29A		426K	27A	
556	28B		611	31A		428	7-27A	
556a	28B		612	29A		429A	7-27A	
558	28B		613	27B-30-A		431	7-27A	
558a	28B		614	30B		446	27A	
558b	28B		615	30B		446A	27A	
559	28A		616	30B		448A	27A	
560	28A		617	30B		449	27A	
562B	28A		617a	30B		531	27A	
562K	15-30A		617b	30B		547	31B	
563	27B		619	30B-31B		RA 9	26B	
564	27B		621	30B		9a	26B	
565	27B		621c	30B		10	26B	
566	27B		623	30B		SP 60	27B	
568	27B		624	30A		Sp 60	28A	
569	27B		625	30A		SS 114	31B	
569a	27B		DA 626	15-30A		An 36	9N	
570	27B		651	31B		36H	25B	
573	27B		652	31B		612	9A-24A	
574	27B		653	31B		615	15-29B	
575	27B		654	31B		620	31B	
575a	27B		655	31B		820	22B-24A-31B	
576	28B		656	31B		825	24A	
576a	28B		657	31B		845	15-29B	
578	27B		658	31B		Cp 422	31B	
578a	27B		659	31B		320	30A	
578b	27B		660	31B		Cr 410H	22A	
579	27B		661	31B		3,56	31B	
580	31A		662	31B		3,58H	24B	
582	31A		662A	31B		410	27B-31B	
583	31A		664N	22A		4,56	23B-26A	
584A	26B		665	22A		4,512	24B-27A	
585	26B		686	29A		Cs 4,512H	22B-25B	
586	26B		GA199	29A		58H	25A-25B-26A	
586a	26B		HA22	27B		510	31B	
			LA12	7				

Part No.	Section No.	Price	Part No.	Section No.	Price	Part No.	Section No.	Price
515H	23B-24B		6H	7-15-23B		Si 1,510	25A-30B	
520	26B			25A-26A-30A		Sk 50	26A-31B	
612	26A		MK 6	27A-31B		53	30B	
612H	13		6H	25A		61	25A-30B	
615H	22B-24A-24B		Mm 43,2	23B		65	26B	
	25B-27A		54	30B-31B		81	31B	
620	26A		54H	27A		98	27B	
625	31B		65	7-15-24B		112	28A	
825	24B			26A-27A-27B		SK 40	23B	
Ci 308	31B			30A-30B		45	23B-27A	
Cy 151	25B		65H	24A-25A		64	27A	
202	25B			28A		106	24B	
300	29B		77H	23B		225	27B	
303	30A		86	10		SKF 6201	27A	
404	26B		865H	22B-23B-24A		11506	28A	
500	29B			24B-25A-31B		51106	28B	
502	26B		107H	15-23B-24A		51108	28A	
804	15-29B			24B-25A-25B		St 13	22A	
1000	22B			26A-29B-30A		31	22A	
F 125	27A		865	7		40	22A	
Fs 71	7-25A		Ni 5	22A		Sæ 610	31B	
102	27B		NØ 10	22A		615	26B-28A	
110	15-30A		11	22A		820	27A	
150	27B-30A		12	22A		830	24B-25A	
151	28A		27	22A		1045	26A	
202	29B		17/14	22A		TP 35	22A	
Ft 52	26A		22/19	22A		80	22A	
76	26A		Oe 4	22A		100	22A	
110	15-30A		Om 415	8		Us 2,66	31B	
154	27B		56	23B		3,58	23B	
165	27A		56H	25A-30A-30B		3,512	27A	
167	23B		520	26B		48	29B-31B	
200	7-25A		68	26A		410	31B	
213	23B		610	22B-26A		412	26B	
219	31B		610H	29B		4,58	23B-24B	
2005	30B		612	26A		4,512	27A	
2251	24A		615	24B		615	26B	
Fu 58	23B-25A-28A		Pi 46	30A		620	27A	
	30A-30B		46H	24B		W 2,510	24A-27A	
410H	27B		4,58H	27A		413	24B-30B	
515	30A		56	27A		416	25A	
610	22B		512	27A		622	15-29B	
612	22B-25B-26A		68	26A		EI 4g	17/29A	
	27A-27B-29B		Rs 2,65	31B		13a	17/29A	
615	22B		3,58	25B		19h	29A	
620	15-27A-30A		510	26A-28B-29B		20h	17/29A	
810	23B		512H	22A		21a	17/29A	
820	11A-22B		Sg 61	27B		39a	17/29A	
840	22B		81	25A-28A-30A		73u	29A	
In 615	22A		150	15-29B		24x	17	
Ko 401	29B		240	22B		72r	17	
Mk 5H	30A		254	27B		86r	17	
6	30A							

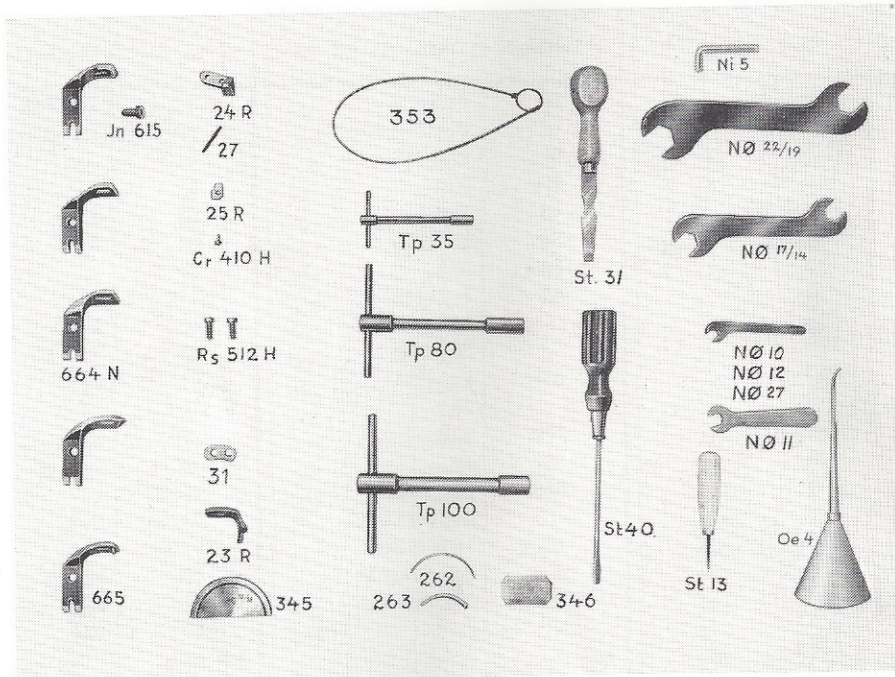
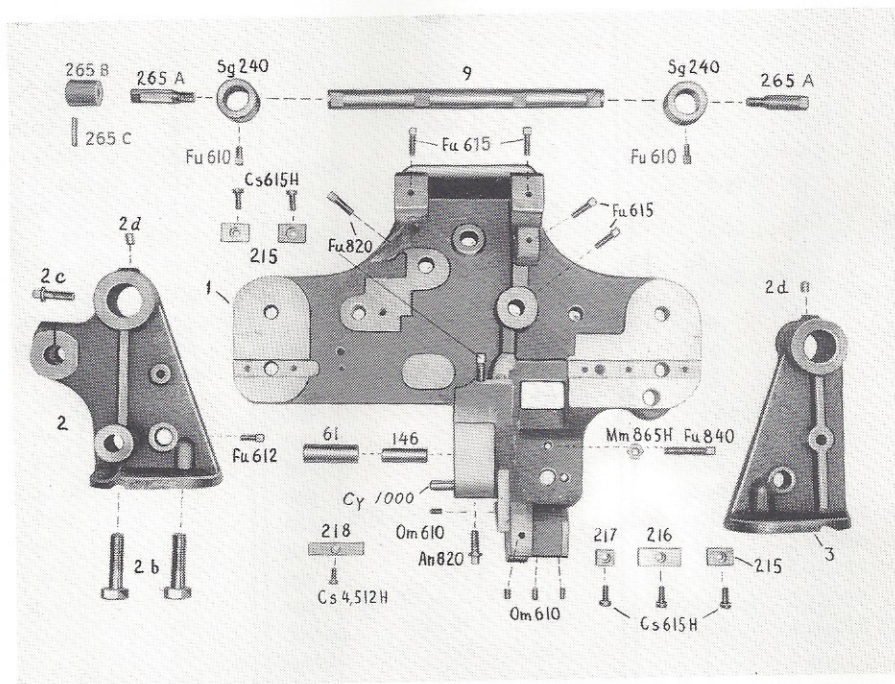
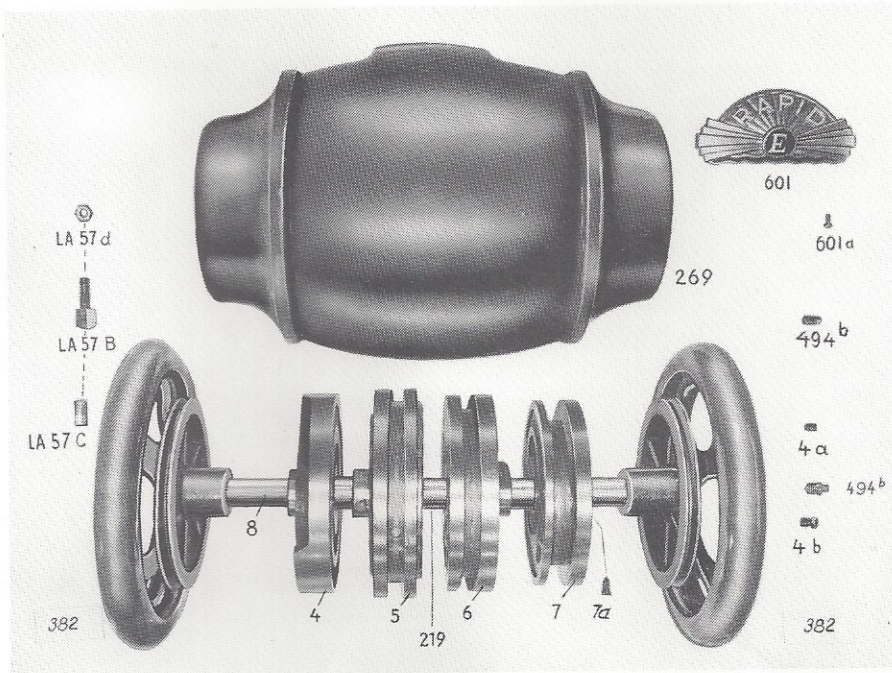


Fig. 22 A



No. 3 for model 317 EM only

Fig. 22 B



219 for model 317 EM only

Fig. 23 A

Cam 7 B for 3/8 inches long stitches

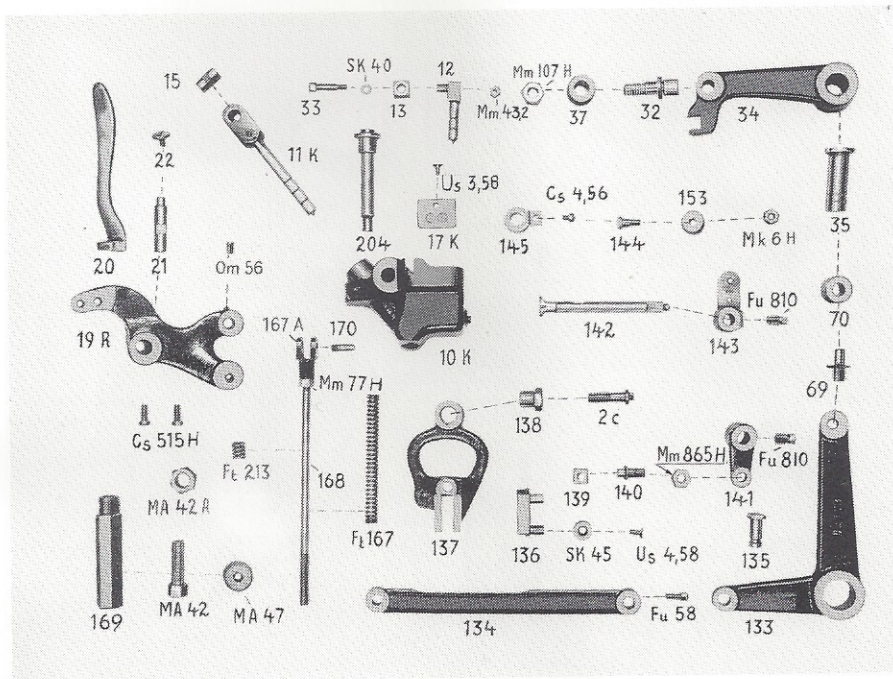


Fig. 23 B









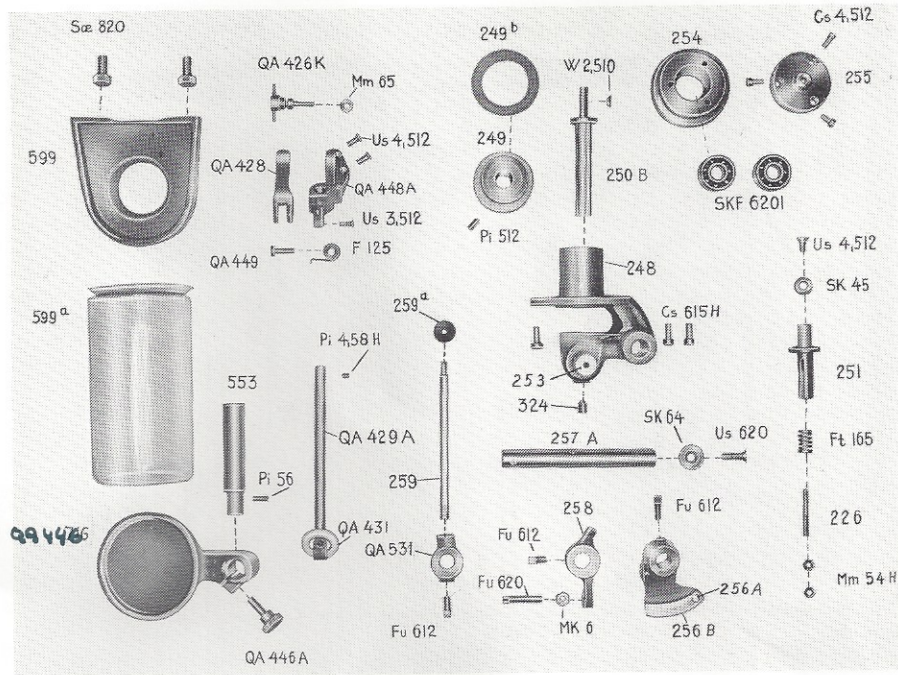


Fig. 27 A

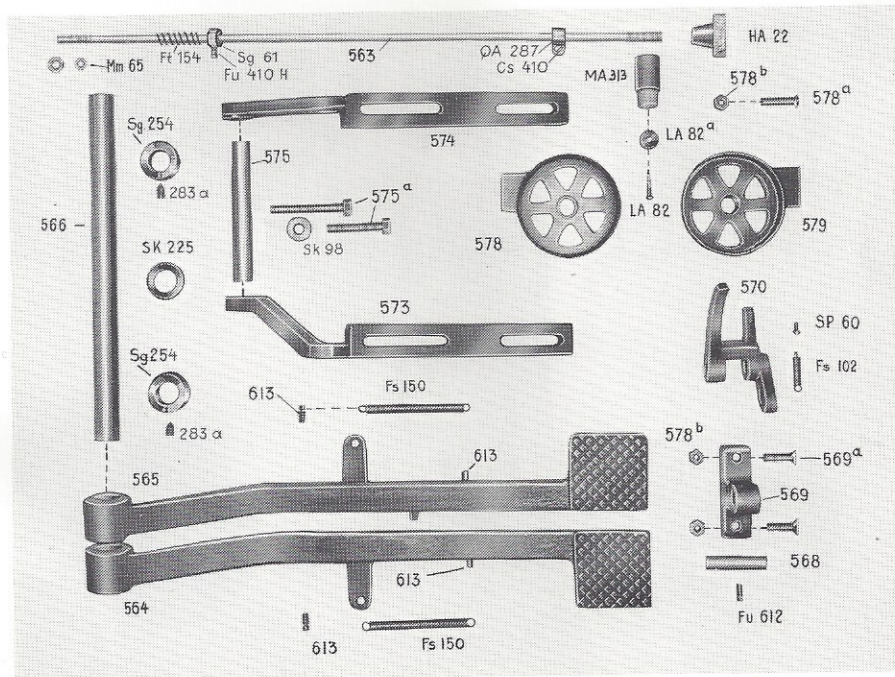
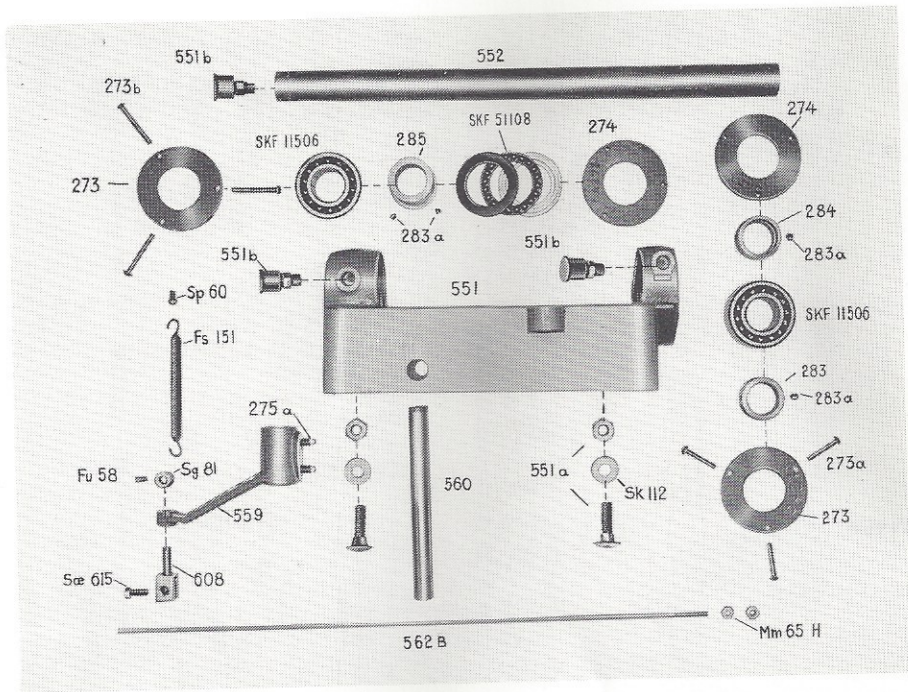


Fig. 27 B



562 B for model 317 EM only

Fig. 28 A

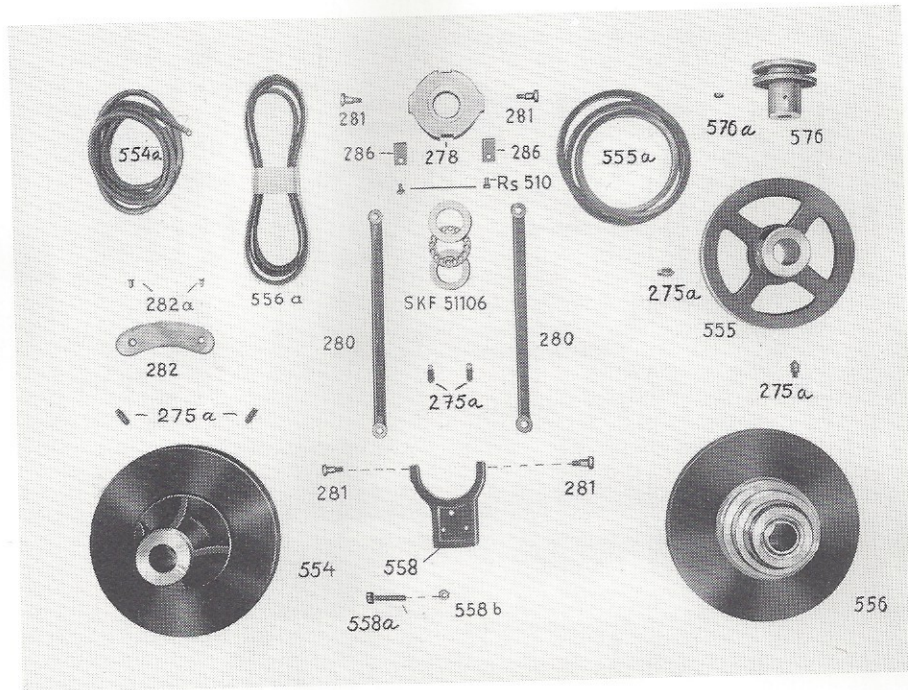


Fig. 28 B

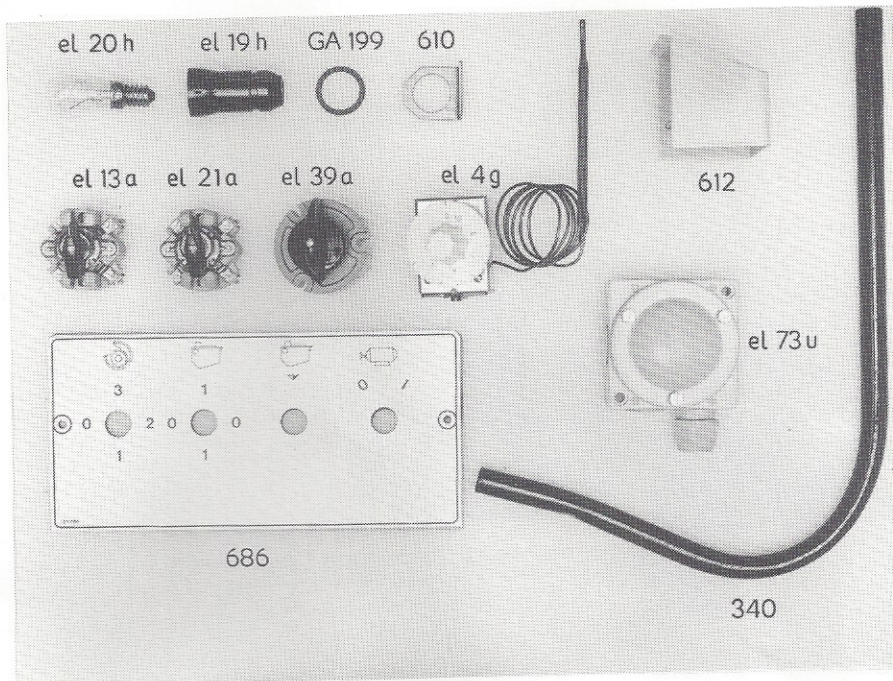


Fig. 29 A

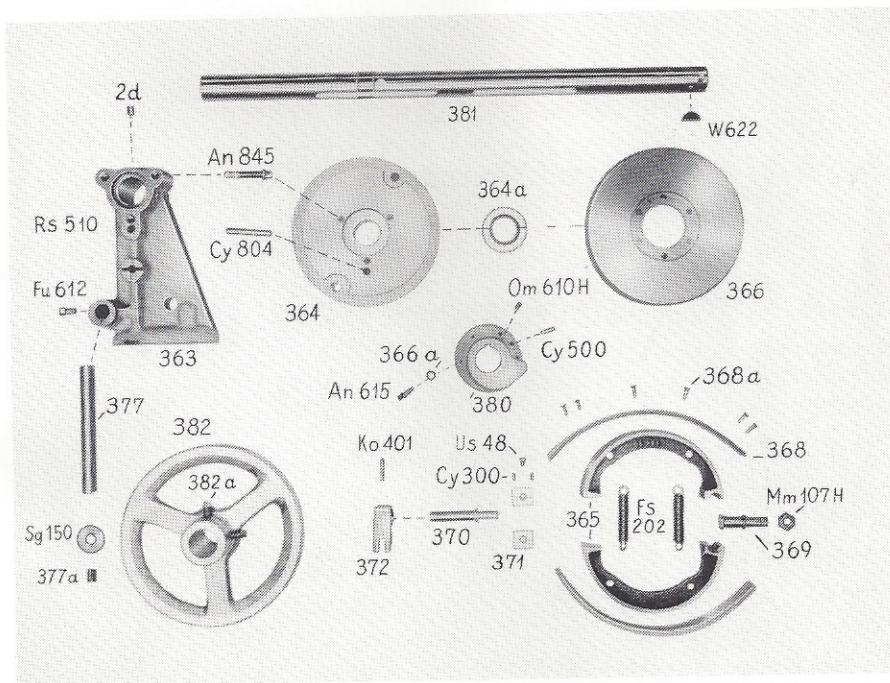


Fig. 29 B

For model 317 EMB only



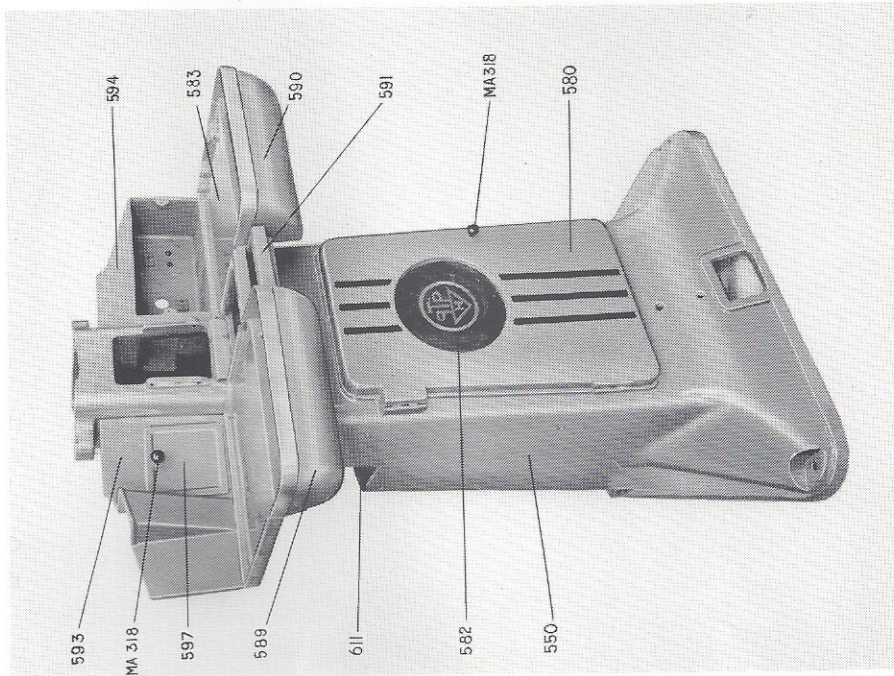


Fig. 31 A

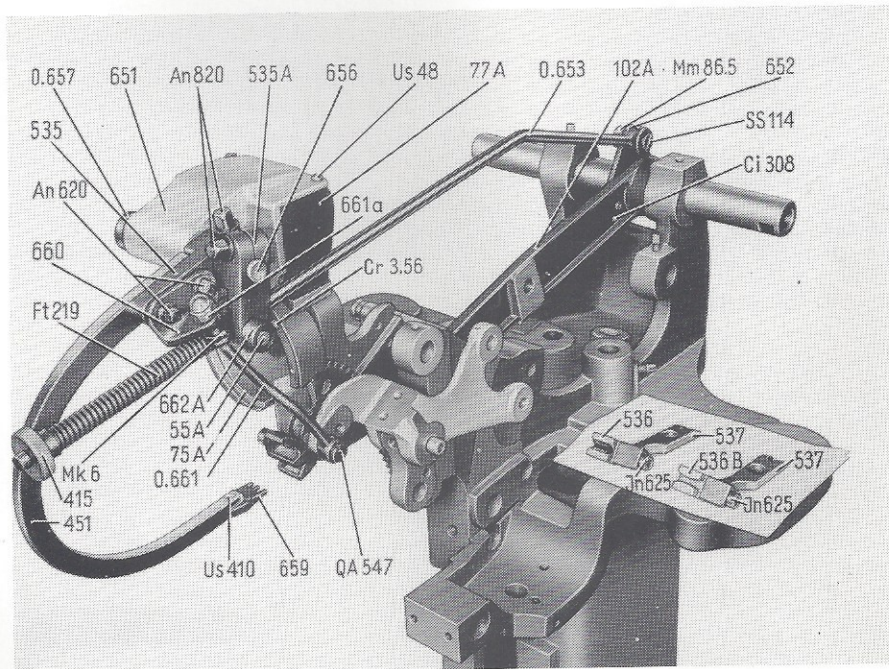


Fig. 31 B