



CONSOLIDATED SEWING MACHINE CORP.

└ INDUSTRIAL SEWING & CUTTING EQUIPMENT

# Model

# CN3115RB-1

## Instructions & Parts

## Manual

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## 1. BRIEF INTRODUCTION

This sewing machine is a low speed, single needle 2 – thread lockstitch industrial sewing machine designed for sewing a wide variety of products including apparel, caps & shoes, luggage, leather articles and canvas products.

The machine adopts Lind thread take – up, shuttle for thread looping, lever type reverse feed and dial for stitch length adjustment; and is provided with knee lifter mechanism. So the stable running, beautiful and uniform and tidy stitch form and convenient operation can be guaranteed.

## 2. MAIN SPECIFICATIONS

1. Max. sewing speed	1600 spm	6. Working space:	260 × 130mm
2. Max. stitch length	5 mm	7. Needle	# 9 – # 21 (16 × 73)
3. Presser foot lift	6.5 mm	8. Size:	525 × 178 × 340mm
4. Max. thickness	6.5 mm	9. N. Weight:	28.5 kg
5. Needle bar stroke:	37.4 mm	10. Motor power	0.37 kw

## 3. INSTALLATION AND PREPARATION

### 3.1. Installation

#### 3.1.1. Location of sewing machine

To ensure a smooth running, the machine should be located on rigid and flat floor, seating machine stand on rubber mat could further reduce the running noise and vibration.

#### 3.1.2. Installing drip pan

Fix drip pan 10 into table cutout and drive wire nails 11 into both sides of the cutout (see Fig. 1) to secure the drip pan.

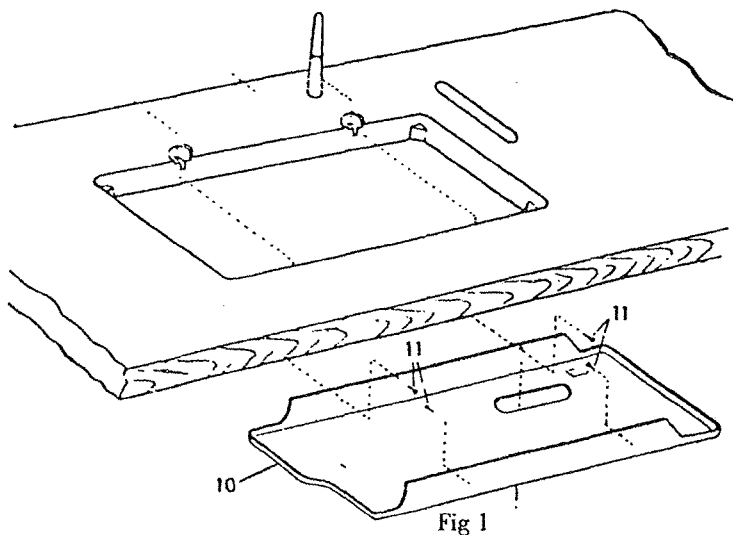


Fig 1

#### 3.1.3. Mounting machine head

Make hinge connections 1 of machine head (see Fig. 2.) engage with hinge plates 2 of the table, then turn the machine head to seat it on the frame of table cutout.

#### 3.1.4. Installing bobbin winder

After mounting the machine and belt, install the bobbin winder. Align bobbin winder pulley 1 with the outside of belt 2 (see Fig. 3), have a suitable clearance between pulley and belt, and keep the winder pulley in close contact with

the belt as the bobbin winder stop lever 9 is pressed down, then, secure the bobbin winder on the table with wood screw 4.

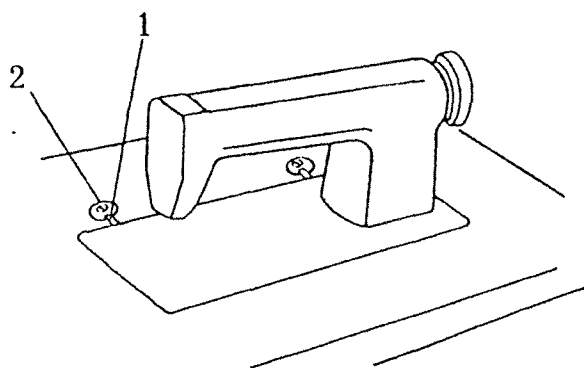


Fig. 2

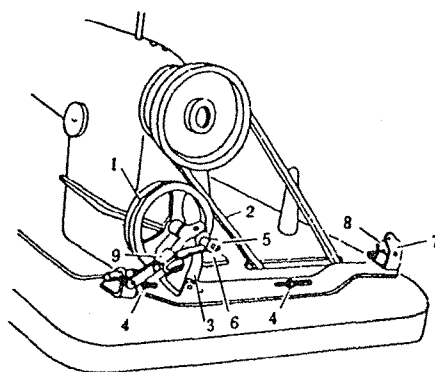


Fig. 3

### 3.1.5. Mounting knee lifter

Mounting the knee lifter (see Fig.4.) in the following order:

1) Keep the knee lifter lifting bracket hook 2 engage with knee lifter bell crank on the under side of bed. The length of the lifting bracket hook could be adjusted, but make sure that the lifting bracket hook may not slip off the bell crank as in sewing operation, then, secure rock shaft hanger 1 with wood screw 12.

2) The position of knee plate 3 could be adjusted according to operator's stature to insure convenient operating, labour - saving and a proper swing angle.

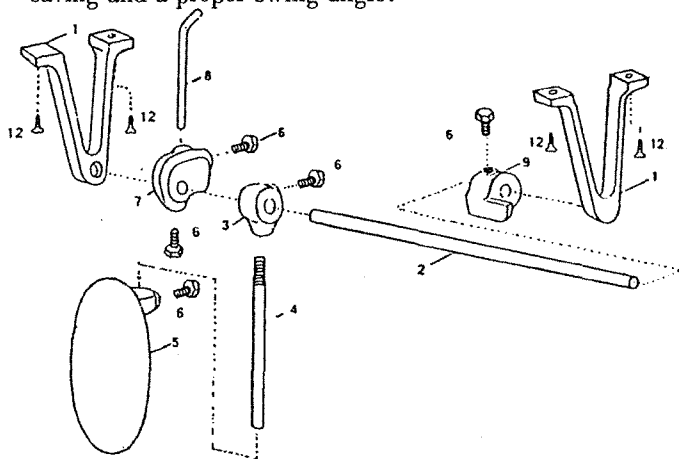
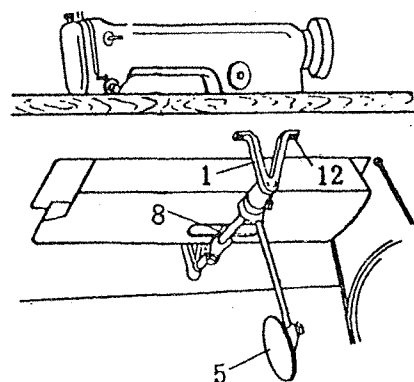


Fig. 4



## 3.2. Preparation

### 3.2.1. Cleaning machine

Before start the machine, wipe off rust preventive grease and dust carefully with clean and soft cloth soaked with gasoline.

### 3.2.2. Examination

Before leaving the factory, each machine is confirmed by strict inspection and test, but some parts may be loosened due to jerk during a long distance transportation. So, a thorough examination must be performed after cleaning the machine. Turn the balance wheel by hand to observe the motion of each mechanism. Make sure if there is any parts collision, uneven resistance or abnormal noise. Trial run can be started only after any trouble detected is resolved.

### 3.2.3. Oiling

The machine is lubricated by oil dropping. At least once per day, drop HA - 8 sewing machine oil or HJ - 7 machine oil (light spindle oil) into the points indicated by arrows in Fig.5.

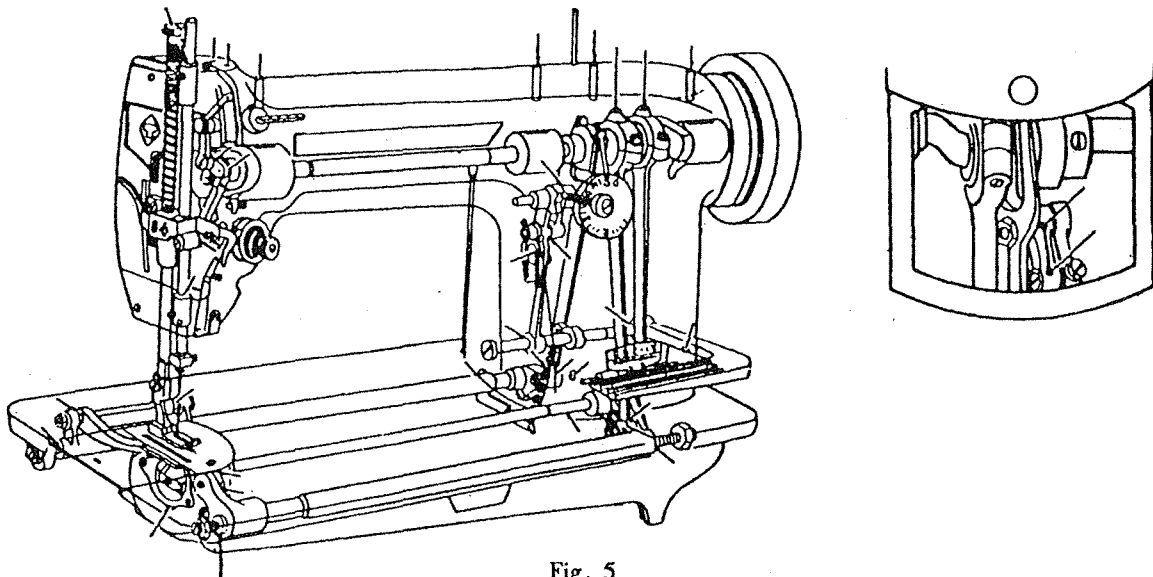


Fig. 5

#### 3.2.4. Trial - run

Trial - run is required before a new machine or a machine left out of work for a long time is put into service. Lift the presser foot and make the balance wheel rotate counterclockwise (view from right side of wheel). At first, run the machine at low speed, then, if the running is well, gradually raise the speed up to 1,600 rpm, several minutes later, stop the machine and check condition of each mechanism. The machine can be put into service only when every mechanism is under normal conditions.

### 4. OPERATION

#### 4.1. Selection of sewing thread

This sewing machine can perform sewing operation on various materials including coarse cloth canvas, sheepskin, light or medium - heavy leather and synthetic leather. It's sewing thickness comes up to 7 layers of synthetic leather 1 mm thick .

The best selection of sewing thread is cotton thread, if synthetic fiber thread such as nylon or polyester fibers thread is to be used, sewing speed should be reduced accordingly. In common practice, the thicker the material the coarser the sewing thread. The selection of sewing thread, taking cotton thread as example, should range from 42 count  $\times$  3 ply to 32 count  $\times$  6 ply.

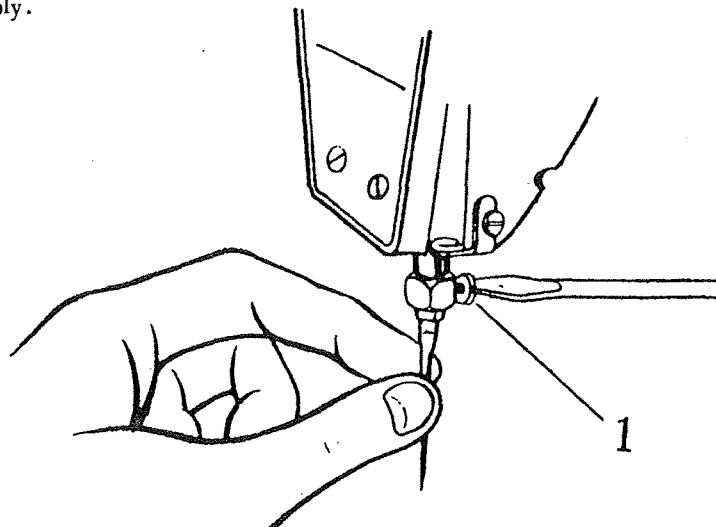


Fig. 6

#### 4.2. Installing needle

Turn the balance wheel until the needle bar reaches to its highest position, loosen needle clamp screw 1 (see Fig. 5), while keeping the long groove of needle facing the left, insert the needle shank into the hole of the needle bar bottom end as far as it will go, then tighten needle clamp screw 1.

#### 4.3. Threading needle thread and drawing bobbin thread

Threading should be done when needle bar 1 at its highest position (see Fig. 7.). Place the thread spool on spool pin 2, draw out the thread tip and pass it in the following order as shown in Fig. 7.

- 1) Through thread retainer 3 on the top;
- 2) downwards and around between tension discs 4;
- 3) upwards through the loop of thread take - up spring 5, from right to left under slack thread regulator 6, upwards through thread guard 7, upwards from right to left through eyelet on thread take - up lever 8;
- 4) downwards through thread guard 9 and 10, and needle clamp thread guard 11 on needle bar, from left to right through eye of needle 12, then, draw about 100 mm of thread through needle eye with which to start sewing.

To draw the bobbin thread, hold the tip of needle thread by hand, turn the balance wheel to lower the needle bar and then lift it to its highest position, pull the needle thread to that the bobbin thread is drawn up. At last, place the tips of needle and bobbin thread toward front under presser foot.

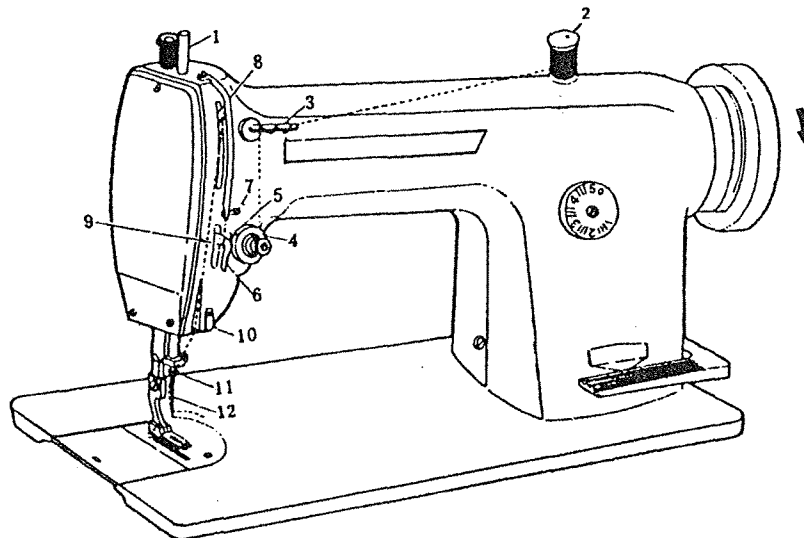


Fig. 7

#### 4.4. Winding bobbin thread (see Fig. 3)

Install bobbin 5 on bobbin winder spindle 6, make the pin on spindle set in the notch on bobbin. Pass the thread from spool through hole of bracket 7 and around between tension discs 8, then wind the end of the thread a few turns on bobbin 5. Push down the bobbin winder stop latch lever 9, the winder is thereby on driven position. Start the machine so that the winding motion begins. when the bobbin is fully wound, the bobbin winder stop latch automatically stop the winding motion.

#### 4.5. Replacing bobbin

Turn the balance wheel in the direction of arrow shown in Fig. 7 until needle bar 1 is at highest position, then;

- 1) With left hand beneath machine bed, open bobbin case latch lever 1 by forefinger and hold it together with thumb (see Fig. 8), pull out bobbin case 2. Release the latch lever and the empty bobbin will drop out of the bobbin case (see Fig. 9). Place wound bobbin 1 into bobbin case 2 (see Fig. 10), let the thread tip be out of the case. Then, set the thread tip into the slot on bobbin case 2 and under the tension spring 3, in the center of the spring notch (see Fig. 11). Draw about 100mm of thread out of the bobbin case with which to start sewing.

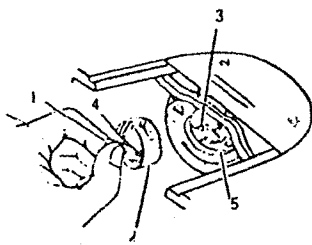


Fig. 8

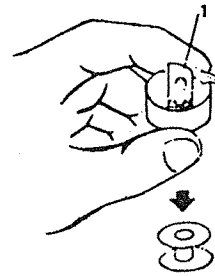


Fig. 9

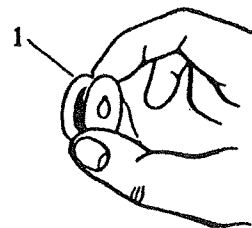
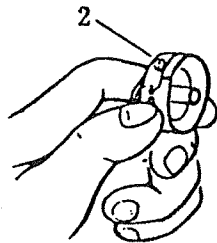


Fig. 10

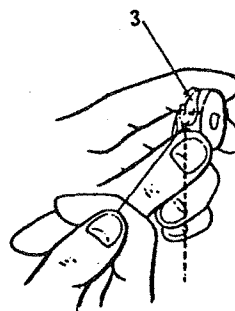
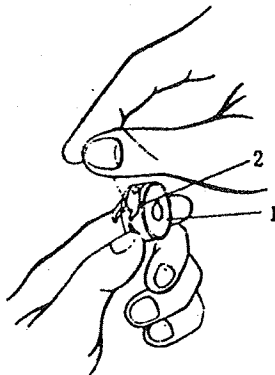


Fig. 11

2) While holding bobbin case latch lever 1 with forefinger and thumb (see Fig. 8) to make the latch catch the wound bobbin, fully press in bobbin case 2 onto center stud 3 of shuttle 5, turn the balance wheel to make sure that bobbin case latch 4 is locked on the groove of center stud 3.

#### 4.6. Adjusting thread tension

The tension of needle thread and bobbin thread is varied with factors such as the nature of material and the thickness of thread.

In practice, the thread tension is adjusted with reference to the stitches having been sewed, so as to obtain correct stitch,

The possible appearance of stitches is shown in Fig. 12.

- (a) Normal stitch, the twist of needle thread and bobbin thread lies at the midst of the material.
- (b) If needle thread is too tight and bobbin thread is too loose, the twist will lie on the upper surface of the material.
- (c) If needle thread is too loose and bobbin thread is too tight, the twist will lie at the back side of the material.
- (d) If both needle thread and bobbin thread are too loose, the thread will float on the surface of the material, though the twist is at the midst of the material.
- (e) If both needle thread and bobbin thread are too tight, the thread will embed tightly in the material, though the twist is at the midst of the material.



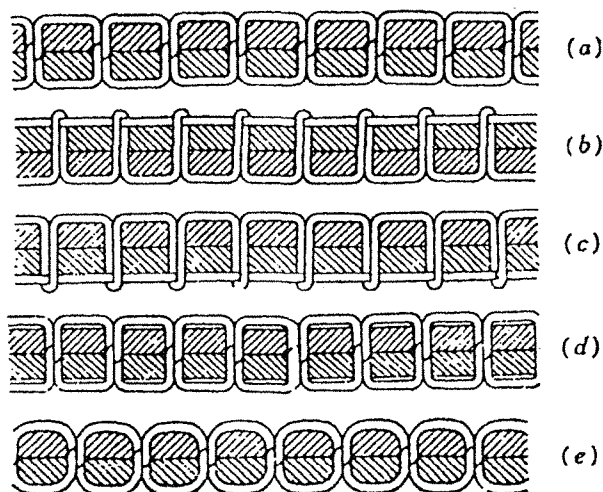


Fig. 12

#### 4.6.1. Adjusting thread take - up spring

The standard tension of thread take - up spring is 20g. The swing range of the spring is 7 - 10mm. For very light material (with short stitch), increase the swing range, while for very heavy material, decrease the swing range.

To adjust the swing range of thread take - up spring, first loosen set screw 1 (see Fig. 13), turn thread tension regulator 2 clockwise to increase the swing range, or counterclockwise to decrease the swing range. After adjustment, tighten the set screw.

Normally, the thread take - up spring is properly adjusted before leaving the factory. Re - adjustment is needed only in case of special materials or special threads.

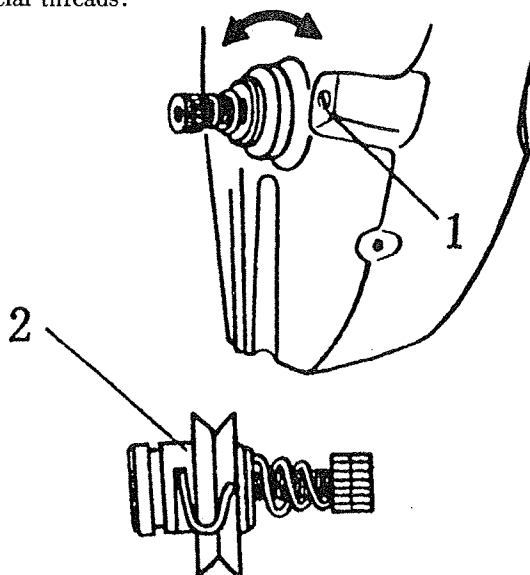


Fig. 13

#### 4.6.2. Adjusting the tension of needle thread and bobbin thread

The normal stitch is shown in Fig. 12 (a). When abnormal stitches occur, the tension of needle thread and bobbin thread must be adjusted accordingly.

If needle thread is too tight and bobbin thread is too loose, turn the tension regulating thumb nut counterclockwise to decrease the needle thread tension and tighten the regulating screw of bobbin case spring to increase the bobbin thread tension (see Fig. 14)



If needle thread is too loose and bobbin thread is too tight, turn the tension regulating thumb nut clockwise to increase the needle thread tension and loosen regulating screw of bobbin case spring to decrease the bobbin thread tension (see Fig. 15).

In case of stitches as shown in Fig. 12 (d), (e), adjustment could be made with reference to above means.

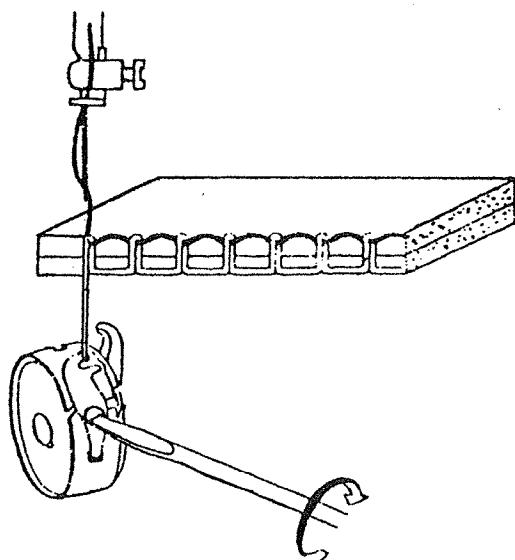
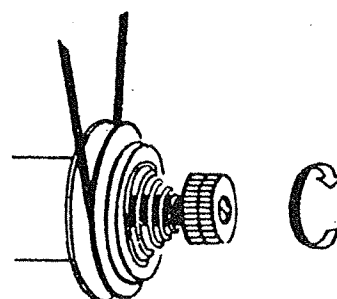
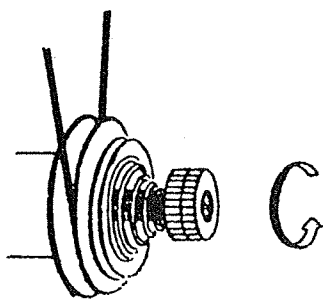


Fig. 14

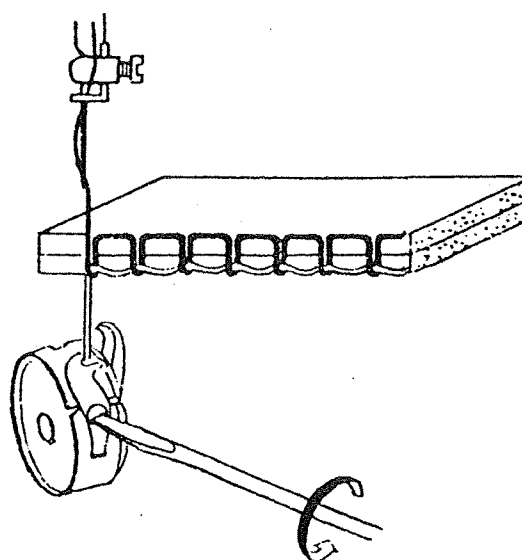


Fig. 15

#### 4.7. Adjusting stitch length

Stitch length should be selected according to the nature of the material. Generally, longer stitch is selected for sewing heavy materials and shorter stitch is selected for sewing light materials.

Stitch length can be set by turning feed regulating dial 1 of feed regulating screw (see Fig. 16). Turn the dial counterclockwise to increase the stitch length or turn the dial clockwise to decrease the stitch length. Backward feeding will start and continue as long as the feed reverse lever 2 is depressed. When releasing the hand, lever 2 will return to its original position automatically and forward feeding is restored.

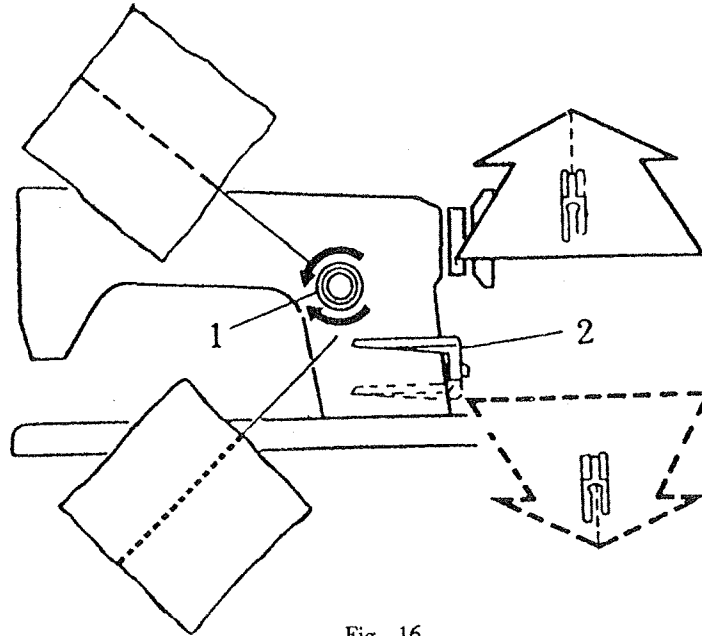


Fig. 16

#### 4.8. Adjusting pressure of presser foot

Pressure of presser foot should be adjusted in accordance with nature of materials. For heavy material, increase the pressure by turning pressure regulating thumb screw on the top of arm in the direction of arrow as shown in Fig. 17 (a), for light material, decrease the pressure by turning pressure regulating thumb screw in the direction of arrow as shown in Fig. 17(b).

Pressure should be as light as possible while still sufficient to insure correct feeding of material.

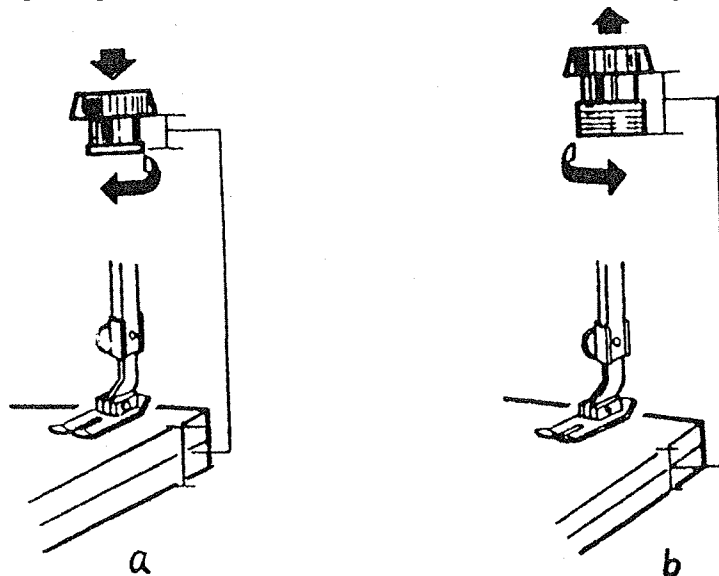
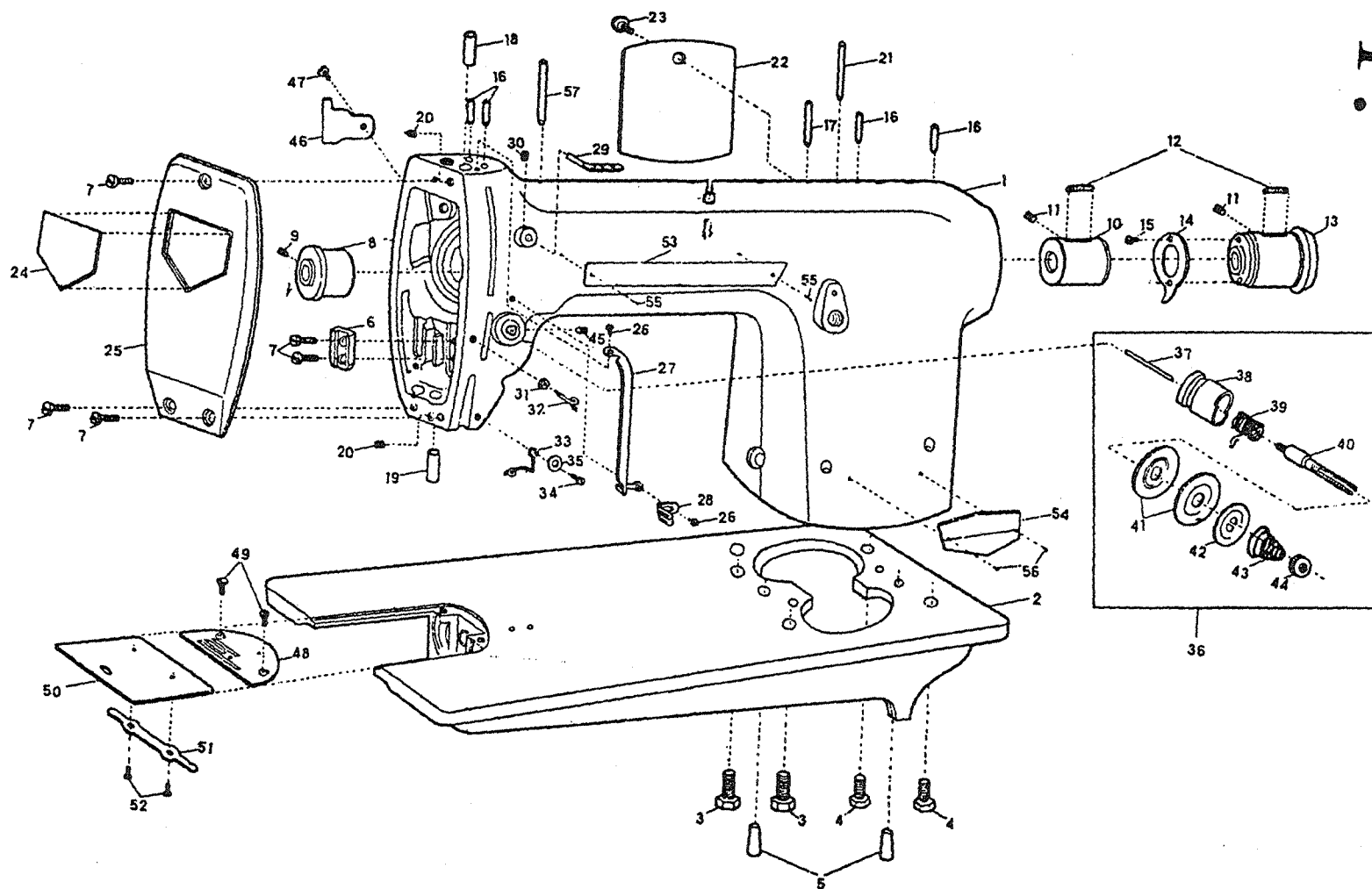


Fig. 17

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# Parts Catalog



## 1. Arm with Bed and Its Accessories

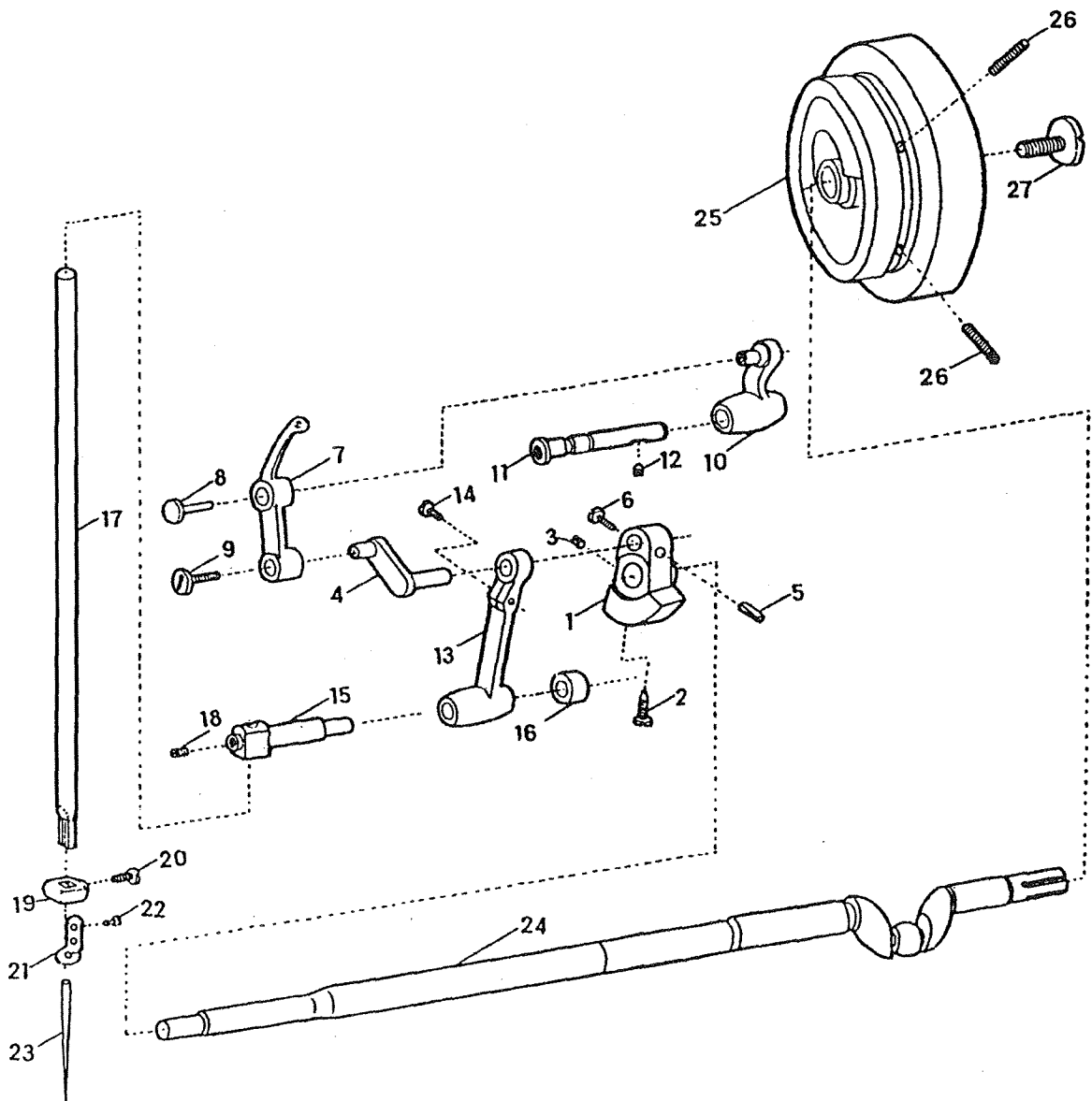
Item	Description	pcs.
1	Arm	1
2	Bed	1
3	Arm screw (front)	2
4	Arm screw (back)	2
5	Arm dowel pin	2
6	Needle bar connecting stud roller guide	1
7	Screw	5
8	Arm shaft flanged bushing (front)	1
9	Arm shaft flanged bushing (front) set screw	1
10	Arm shaft bushing (center)	1
11	Set screw	2
12	Oil pad	2
13	Arm shaft flanged bushing (back)	1
14	Arm shaft slanged bushing (back) oil drip plate	1
15	Arm shaft flanged bushing (back) oil drip plate screw	1
16	Thread take up mechanism oil tube assembly	2
	Feed forked connection oil tube assembly	1
	Arm shaft flanged bushing (back) oil tube assenbly	1
17	Arm shaft bushing (center) oil tube assembly	1
18	Needle bar bushing (upper)	1
19	Needle bar bushing (lower)	1
20	Needle bar bushing set screw	2
21	Arm spool pin	1
22	Arm side cover	1
23	Arm side cover thumb screw	1
24	Trade mark plate	1
25	Face plate	1
26	Thread take up lever guard screw	2
27	Thread take up lever guard	1

Item	Description	pcs.
28	Thread guide	1
29	Thread retainer	1
30	Thread retainer set screw	1
31	Thread guide nut	1
32	Thread guide	1
33	Thread guide (lower)	1
34	Thread guide (lower) screw	1
35	Thread guide (lower) screw washer	1
36	Tension, complete	1
37	Tension releasing pin	1
38	Thread take up spring regulator	1
39	Thread take up spring	1
40	Tension stud	1
41	Tension disc	1
42	Tension releasing disc	2
43	Tension spring	1
44	Tension regulating thumb nut	1
45	Tension set screw	1
46	Arm side cap	1
47	Arm side cap screw	1
48	Throat plate	1
49	Throat plate screw	2
50	Shuttle race slide	1
51	Shuttle race slide spring	1
52	Shuttle race slide spring screw	2
53	Trade mark plate	1
54	Name plate	1
55	Trade mark plate rivet	2
56	Name plate rivet	2
57	Arm shaft flanged bushing (front) oil tube assembly	1



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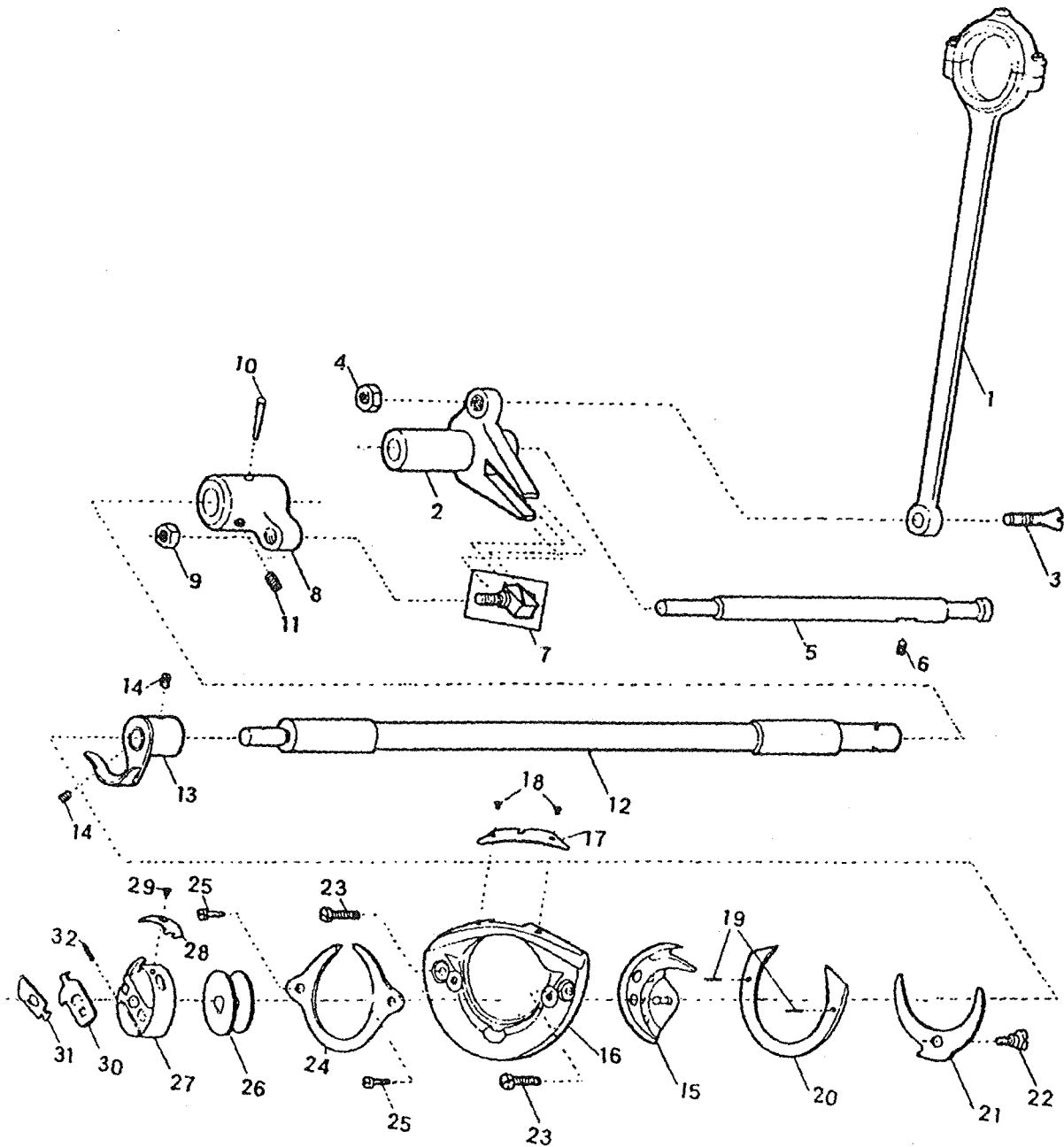
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## 2. Needle Bar and Thread Take – up Mechanism

Item	Description	pcs.
1	Needle bar crank	1
2	Needle bar crank position screw	1
3	Needle bar crank set screw	1
4	Thread take – up crank	1
5	Thread take – up crank wedge	1
6	Thread take – up crank wedge screw	1
7	Thread take – up lever	1
8	Thread take – up lever hinge pin	1
9	Thread take – up crank screw	1
10	Thread take – up lever link	1
11	Thread take – up lever link hinge pin	1
12	Set screw	1
13	Needle bar connecting link	1
14	Needle bar connecting link cap screw	1
15	Needle bar connecting stud	1
16	Needle bar connecting stud roller	1
17	Needle bar	1
18	Needle bar connecting stud set screw	1
19	Needle clamp	1
20	Needle clamp screw	1
21	Needle bar thread guard	1
22	Needle bar thread guard screw	1
23	Needle	1
24	Arm shaft	1
25	Balance wheel	1
26	Balance wheel set screw	2
27	Arm shaft screw	1

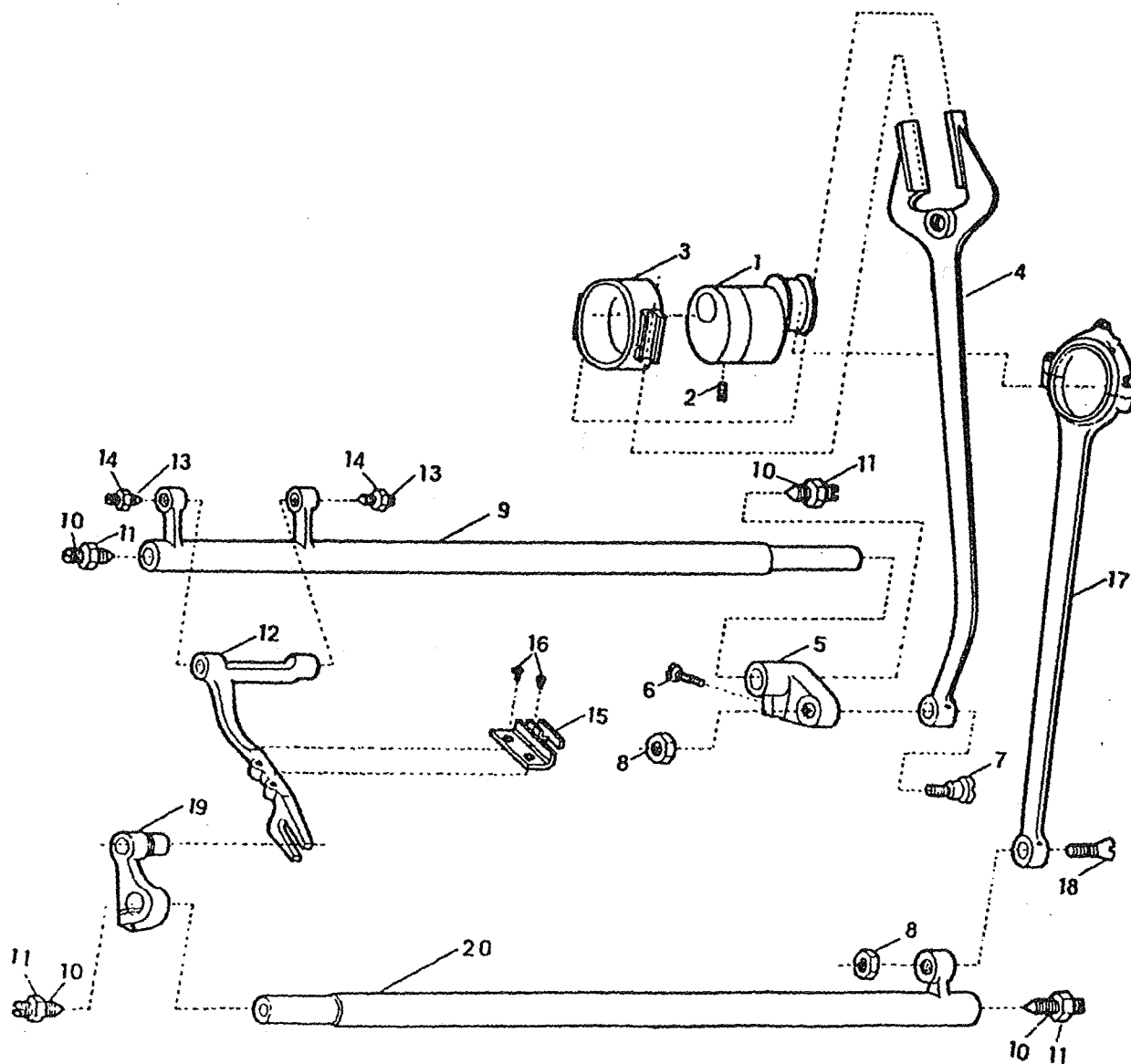
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### 3. Shuttle Mechanism

Item	Description	pcs.
1	Crank connecting rod	1
2	Oscillating rock shaft	1
3	Crank connecting rod hinge screw	1
4	Crank connecting rod hinge screw nut	1
5	Oscillating rock shaft hinge pin	1
6	Oscillating rock shaft hinge pin set screw	1
7	Oscillating shaft crank slide block screw stud	1
	Oscillating shaft crank slide block	1
	Oscillating shaft crank slide block cap screw wash	1
	Oscillating shaft crank slide block cap screw	1
8	Oscillating shaft crank	1
9	Oscillating shaft crank slide block screw stud nut	1
10	Oscillating shaft crank dowel pin	1
11	Oscillating shaft crank set screw	1
12	Oscillating shaft	1
13	Shuttle driver	1
14	Shuttle driver set screw	2
15	Shuttle body	1
16	Shuttle race	1
17	Shuttle race cap	1
18	Shuttle race cap screw	2
19	Shuttle race back position pin	2
20	Shuttle race back	1
21	Shuttle race back spring	1
22	Shuttle race back spring screw	1
23	Shuttle race screw	2
24	Shuttle bobbin case position plate	1
25	Shuttle bobbin case position plate screw	2
26	Shuttle bobbin	1
27	Shuttle bobbin cast	1
28	Shuttle bobbin case tension spring	1
29	Shuttle bobbin case tension spring screw	1
30	Shuttle bobbin case latch	1
31	Shuttle bobbin case latch lever	1
32	Shuttle bobbin case latch spring	1

4.

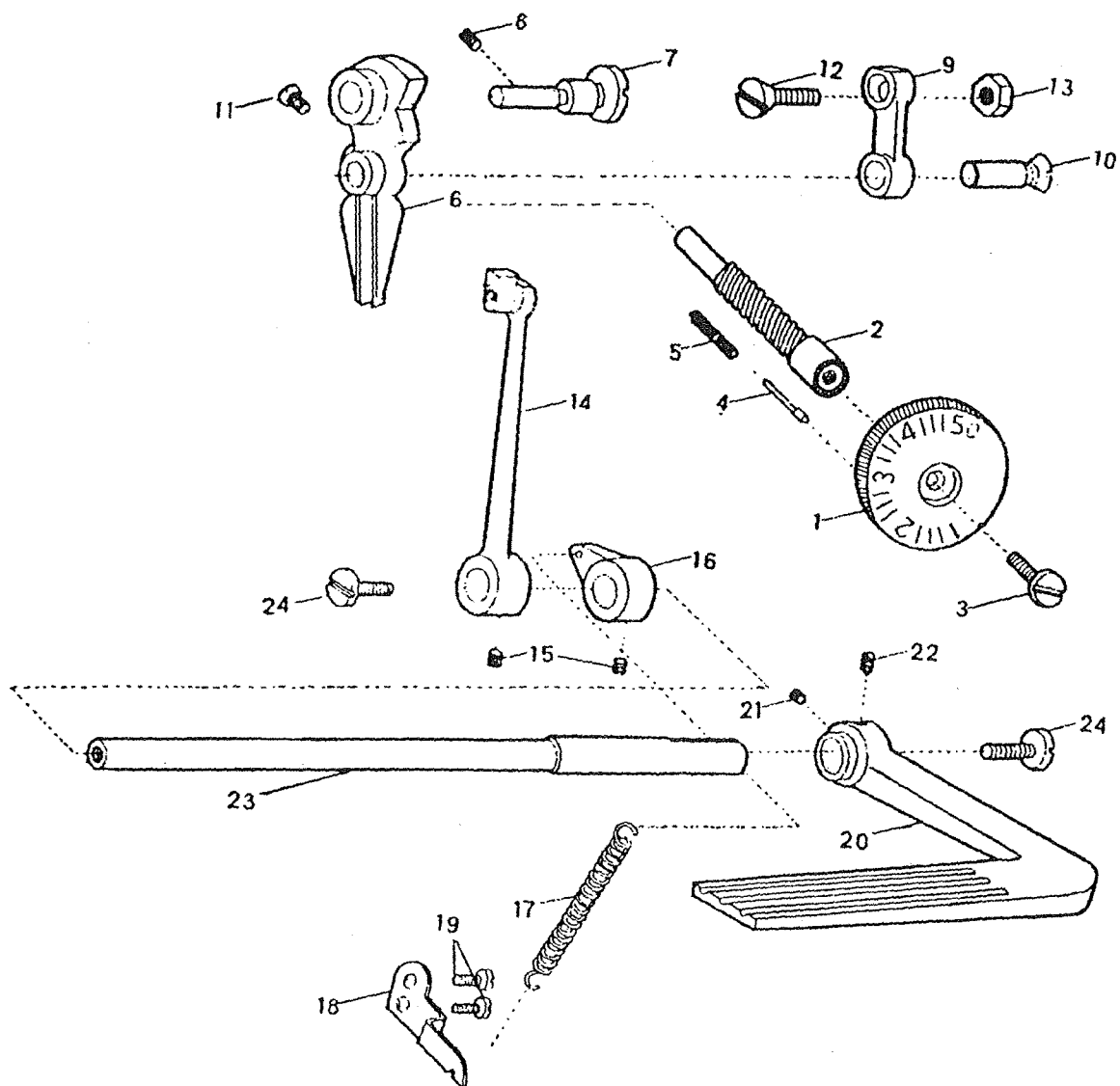


#### 4. Feed Mechanism

Item	Description	pcs.
1	Feed and feed lifting eccentric	1
2	Feed and feed lifting eccentric set screw	1
3	Feed and feed lifting eccentric sleeve	1
4	Feed forked connection	1
5	Feed rock shaft crank	1
6	Feed rock shaft crank clamping screw	1
7	Feed forked connection hinge screw	1
8	Feed forked connection hinge screw nut	1
9	Feed rock shaft	1
10	Feed rock shaft screw center	4
11	Feed rock shaft screw center nut	4
12	Feed bar	1
13	Feed bar screw center	2
14	Feed bar screw center nut	2
15	Feed dog	1
16	Feed dog screw	2
17	Crank connecting rod	1
18	Crank connecting rod hinge screw	1
19	Feed lifting rock shaft crank	1
20	Feed lifting rock shaft	1



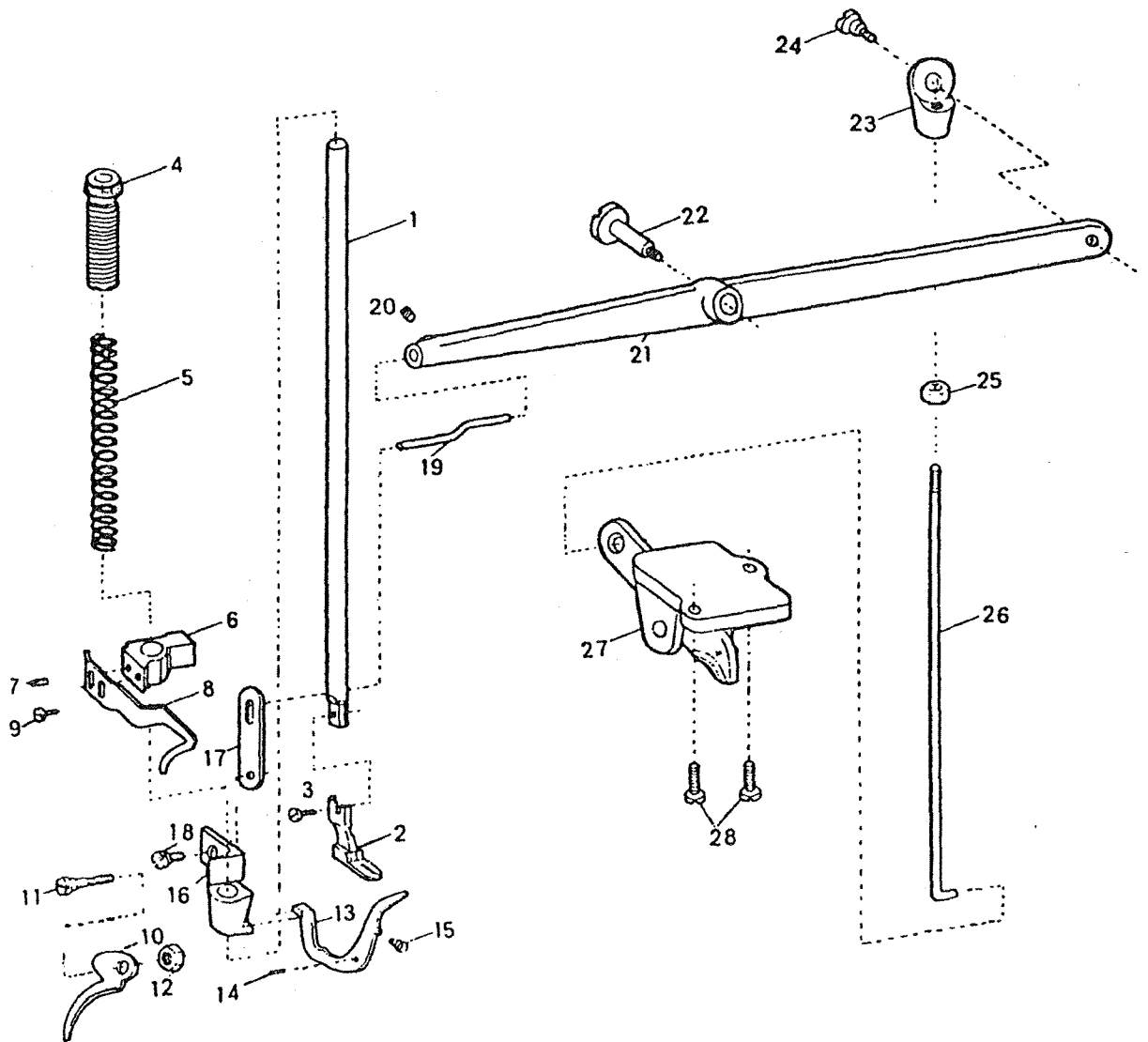
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## 5. Stitch Length Regulating Mechanism

Item	Description	pcs.
1	Feed regulating dial	1
2	Feed regulating screw stud	1
3	Feed regulating dial cap screw	1
4	Feed regulating screw stud lock pin	1
5	Feed regulating screw stud lock pin spring	1
6	Feed regulator	1
7	Feed regulator hinge pin	1
8	Feed regulator hinge pin set screw	1
9	Feed connecting link	1
10	Feed connecting link hinge stud	1
11	Feed connecting link hinge stud set screw	1
12	Feed connecting link hinge screw	1
13	Feed connecting link hinge screw	1
14	Feed reverse crank with slide block	1
15	Feed reverse crank set screw	1
	Feed reverse return crank set screw	1
16	Feed reverse return crank	1
17	Feed reverse return crank tension spring	1
18	Feed reverse return crank tension spring plate	1
19	Feed reverse return crank tension spring plate screw	2
20	Feed reverse lever	1
21	Feed reverse lever set screw	1
22	Feed reverse lever position screw	1
23	Feed reverse lever shaft	1
24	Feed reverse lever shaft cap screw	1

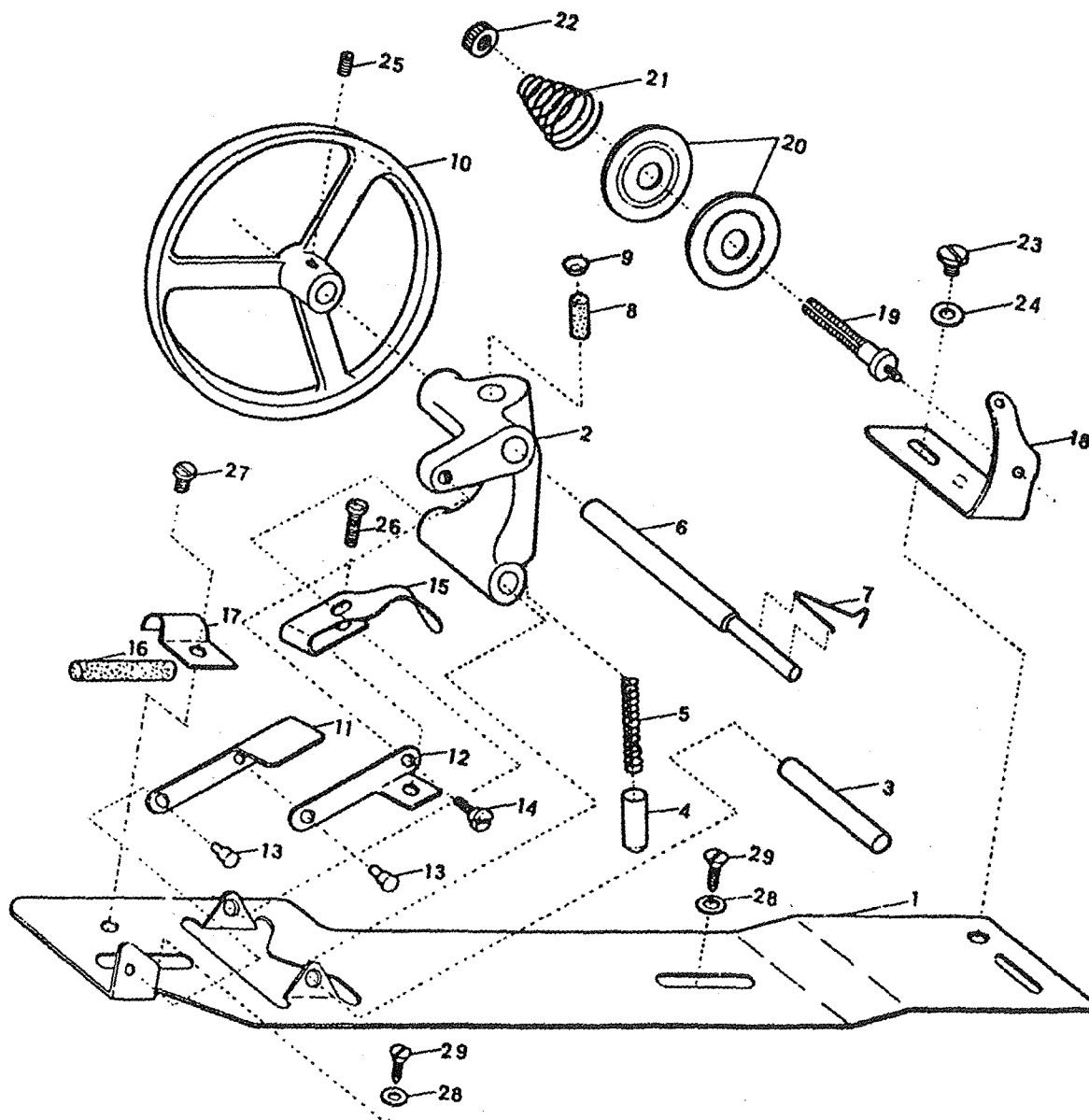
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## 6. Presser Foot Mechanism

Item	Description	pcs.
1	presser bar	1
2	Presser foot(spring hinged), complete	1
3	Presser foot screw	1
4	Pressure regulating thumb screw	1
5	Presser bar spring	1
6	Presser bar guide bracket	1
7	Presser bar guide bracket set screw	1
8	Slack threack regulator	1
9	Slack thread regulator screw	1
10	Presser bar lifter	1
11	Presser bar lifter screw	1
12	Presser bar lifter screw nut	1
13	Tension releasing lever	1
14	Tension releasing lever hinge pin	1
15	Tension releasing lever spring	1
16	Presser bar lifting and releasing lever bracket	1
17	Knee lifter lifting lever link	1
18	Knee lifter lifting lever link hinge screw	1
19	Knee lifter lifting lever pin	1
20	Knee lifter lifting lever pin set screw	1
21	Knee lifter lifting lever	1
22	Knee lifter lifting lever hinge screw	1
23	Knee lifter lifting lever connecting rod joint	1
24	Knee lifter lifting lever connecting rod joint hinge screw	1
25	Knee lifter lifting lever connecting rod locs nut	1
26	Knee lifter lifting lever connecting rod	1
27	Knee lifter bell crank, complete	1
28	Knee lifter bell crank screw	2

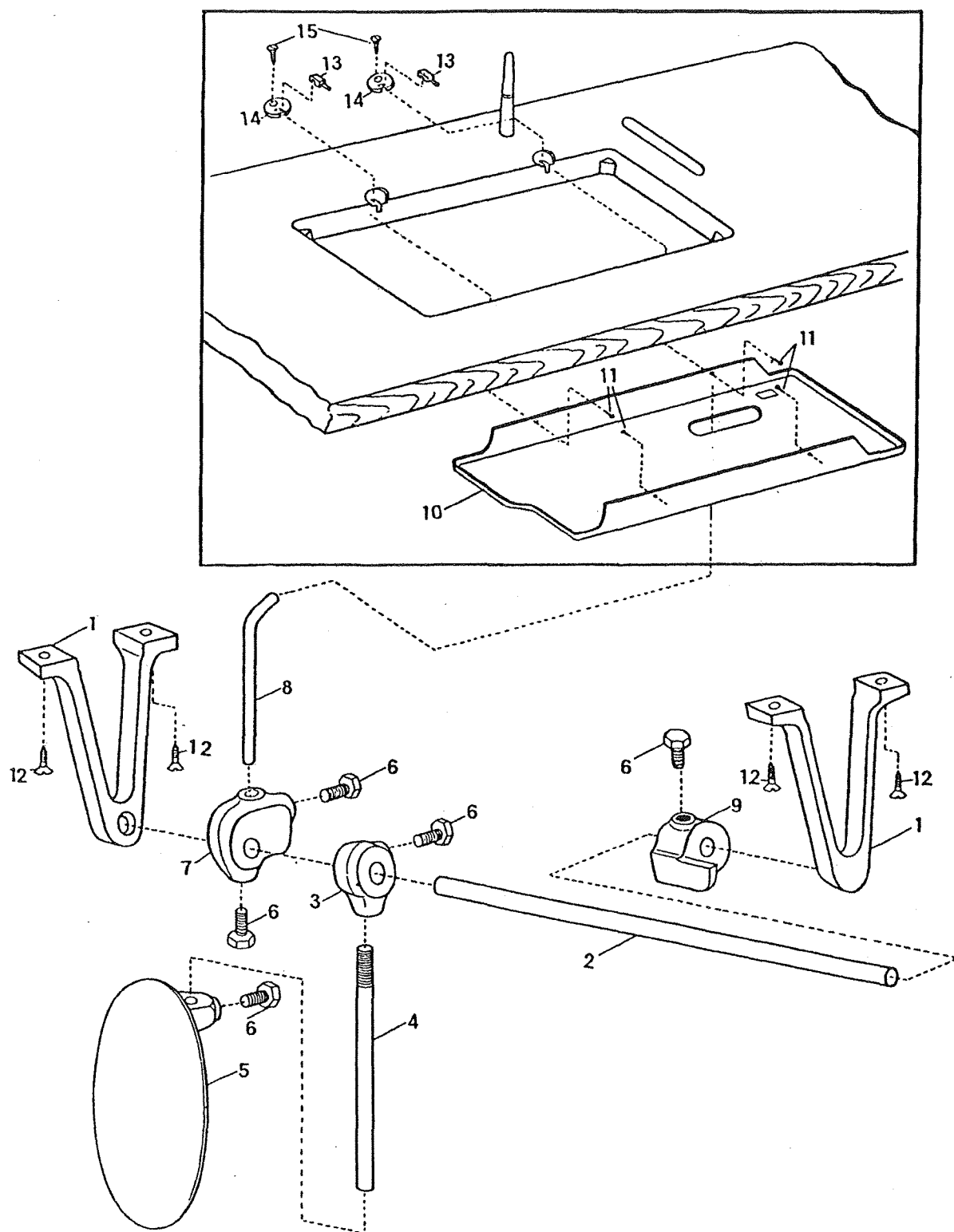
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## 7. Bobbin Winder

Item	Description	pcs.
1	Bobbin winder and tension bracket base	1
2	Bobbin winder frame	1
3	Bobbin winder frame hinge pin	1
4	Bobbin winder frame spring plunger	1
5	Bobbin winder frame spring	1
6	Bobbin winder spindle	1
7	Bobbin winder spindle oil pad	1
8	Bobbin winder spindle oil pad	1
9	Bobbin winder spindle oil pad cap	1
10	Bobbin winder pulley	1
11	Bobbin winder stop latch	1
12	Bobbin winder stop latch trip lever	1
13	Bobbin winder stop latch rivet	2
14	Bobbin winder stop latch trip lever hinge screw	1
15	Bobbin winder stop latch	1
16	Bobbin winder clutch strip	1
17	Bobbin winder clutch strip clamp	1
18	Bobbin winder tension bracket	1
19	Bobbin winder tension bracket	1
20	Bobbin winder tension disc	2
21	Bobbin winder tension spring	1
22	Bobbin winder tension stud thumb nut	1
23	Bobbin winder tension bracket screw	1
24	Bobbin winder tension bracket screw washet	1
25	Bobbin winder pulley set screw	1
26	Bobbin winder stop latch screw	1
27	Bobbin winder clutch strip clamp screw	1
28	Bobbin winder base wood screw washer	2
29	Bobbin winder base wood screw	2

8.

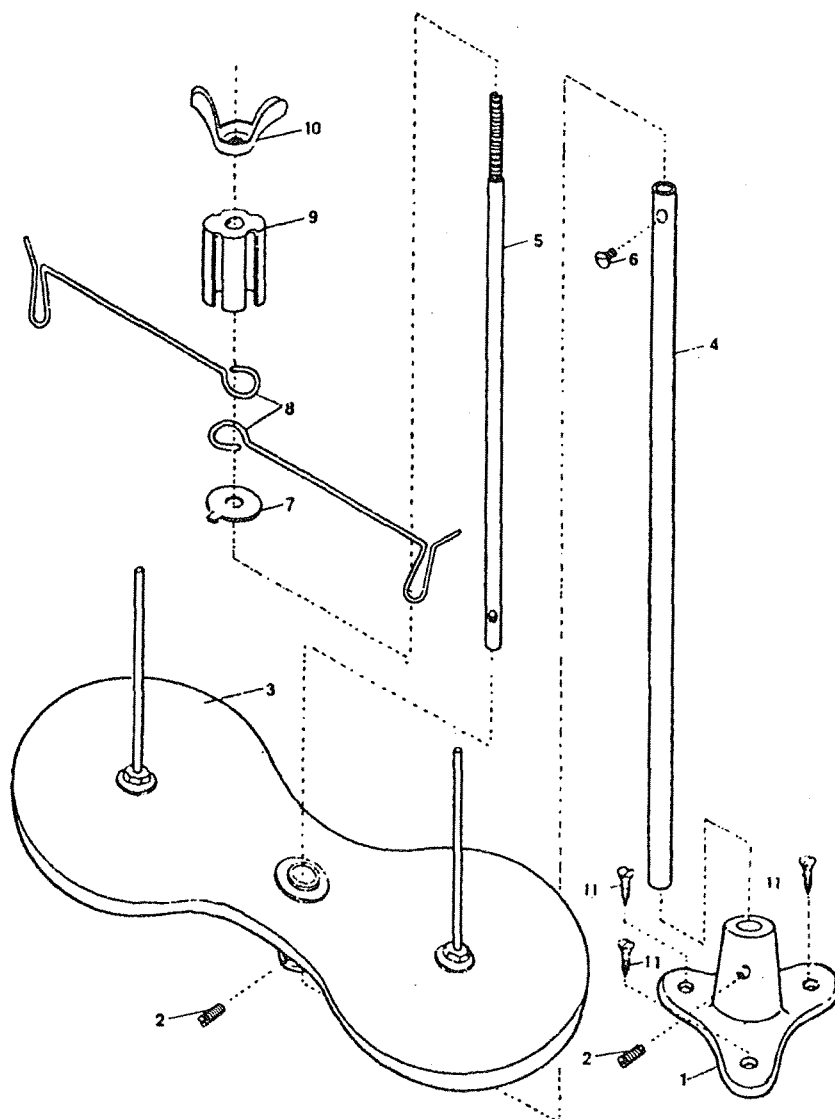




## 8. Knee Lifter

Item	Description	pcs.
1	Knee lifter rock shaft bracket	2
2	Knee lifter rock shaft	1
3	Knee lifter rock shaft knee arm hub	1
4	Knee lifter rock shaft knee arm	1
5	Knee lifter rock shaft knee plate	1
6	Knee lifter rock shaft knee plate set screw	5
7	Knee lifter rock shaft lifting bracket	1
8	Knee lifter rock shaft lifting bracket hook	1
9	Knee lifter rock shaft stop dog	1
10	Drip pan	1
11	Drip pan wire nail	4
12	Knee lifter rock shaft bracket wood screw	4
13	Machine hinge connection	2
14	Machine hinge plate	2
15	Machine hinge plate wood screw	2

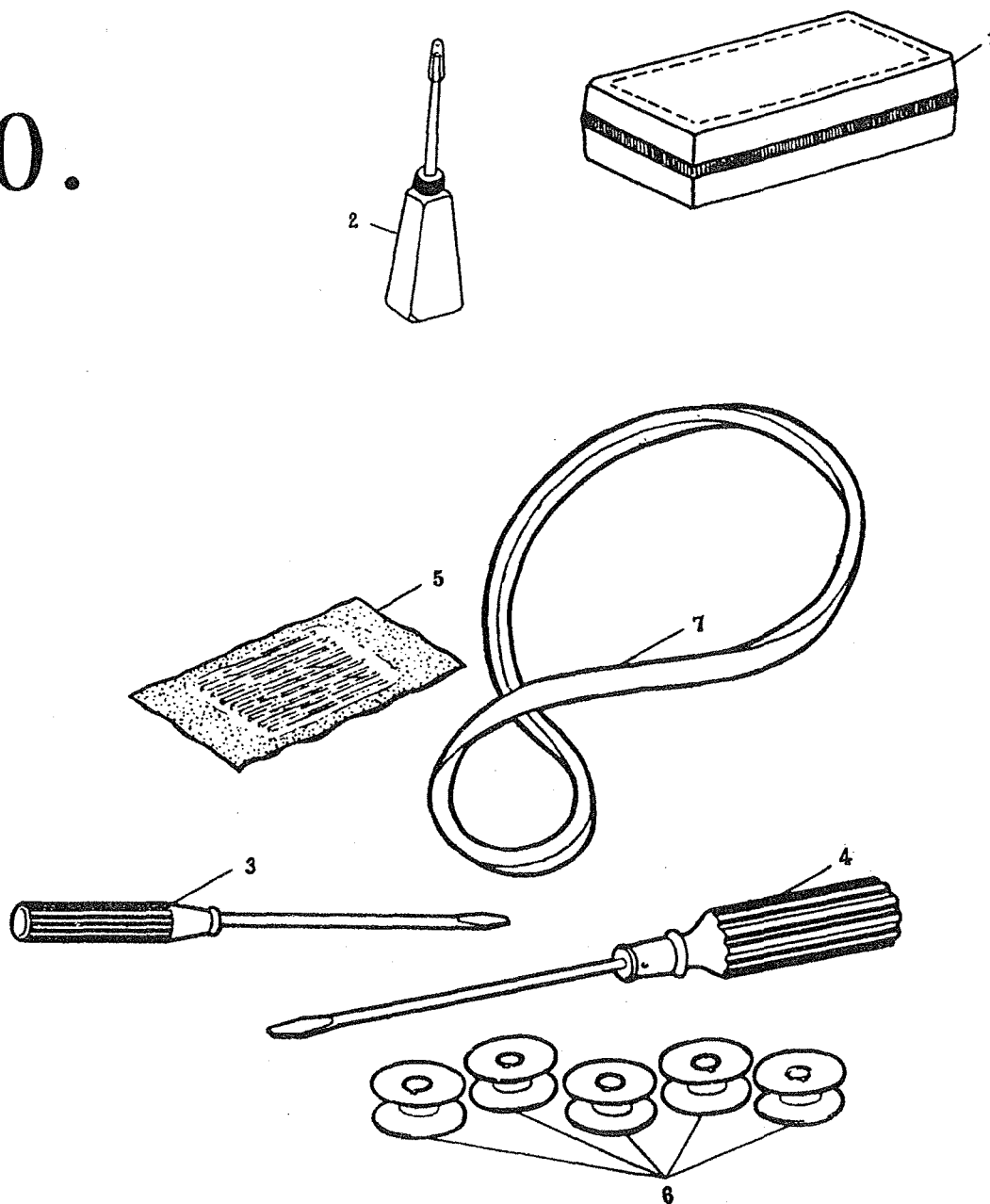
# 9.



## 9. Thread Unwinder

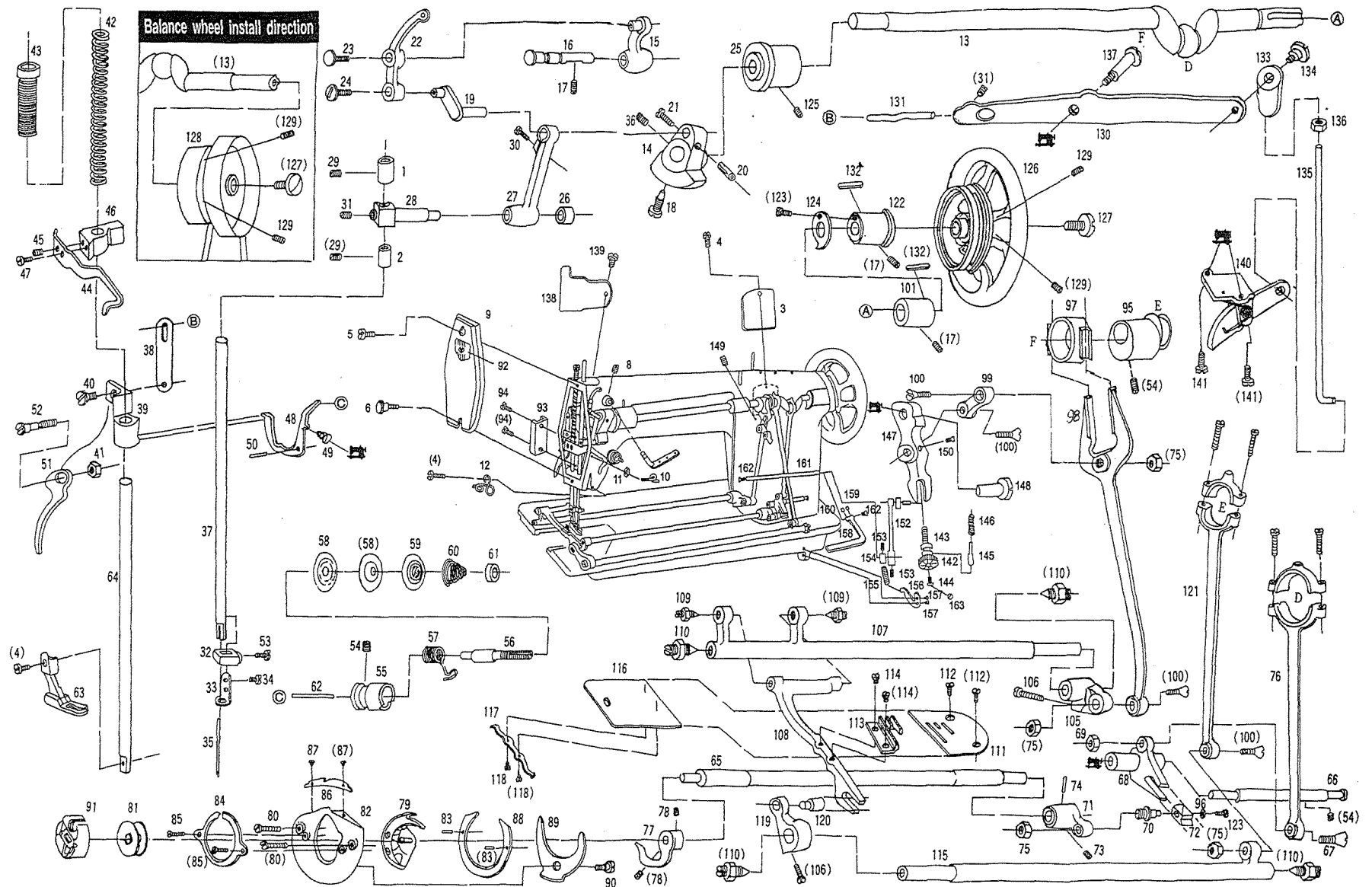
Item	Description	pcs.
1	Spool stand	1
2	Spool rest set screw	2
3	Spool rest	1
4	Thread guard rod (lower)	1
5	Thread guard rod (upper)	1
6	Thread guard rod (upper) set screw	1
7	Thread guide position plate	1
8	Thread guide	2
9	Thread guide position cup	1
10	Thread guide lock nut	1
11	Wood screw	3

# 10.




## 10. Accessories

Item	Description	pcs.
1	Accessories box	1
2	Plastic oil - can	1
3	Screw driver	1
4	Screw driver	1
5	Needle	1
6	Bobbin	5
7	V - belt	1



# Model GB8 - 2 Lockstitch Parts Catalog

No.	Description	Qunt.	No. of Art	Sales No.	No.	Description	Qunt.	No. of Art	Sales No.	No.	Description	Qunt.	No. of Art	Sales No.	No.	Description	Qunt.	No. of Art	Sales No.
1	Needle bar bushing(upper)	1	1-19		47	Slack thread regulator screw	1	6-13	225	94	Screw	2	1-46		140	Knee lifter bell crank complete	1	6-29	5598
2	Needle bar bushing(lower)	1	1-20		48	Tension releasing lever	1	6-16	43944	95	Feed and feed lifting eccentric	1	4-2	20283	141	Screw	2	6-31	178
3	Arm side cover	1	1-22		49	Spring	1	6-18	12329	96	Gasket	1	3-32		142	Feed regulating knob	1		
4	Bobbin winder tension bracket screw	3	J0.0.72	190	50	Tension releasing lever hinge pin	1	6-17	12398	97	Feed and feed lifting eccentric sleeve	1	4-3	24031	143	Feed regulating screw	1		
5	Screw	1	1-26		51	Presser bar lifter	1	6-14	2062	98	Feed forked connection	1	4-4	20284	144	Feed regulating stud head cap screw	1		
6	Screw	1	J0.0.36	286	52	Presser bar lifter screw	1	6-15	689	99	Feed regulator	1	5-5		145	Stopper bar	1		
7	Thread retainer	1	1-27	52454	53	Needle clamp screw	1	2-23		100	Screw	4	J0.0.62	375	146	Feed regulating stud lock pin spring	1		
8	Thread retainer set screw	1	1-28	50429	54	Screw	3	J0.0.81	448	101	Arm shaft bushing(center)	1	1-7		147	Feed regulator (Forked)	1		
9	Face plate	1	1-24		55	Thread take up spring regulator	1	1-33	7336	105	Feed rock shaft crank	1	4-5	29633	148	Feed regulator pin	1		
10	Thread guide	1	1-29		56	Tension screw	1	1-34	50327	106	Screw	2	J0.0.45	157	149	Screw	1		
11	Thread guide nut	1	1-30		57	Thread take up spring	1	1-35	43946	107	Feed rock shaft	1	4-6		150	Screw	1		
12	Thread guide(lower)	1	1-31		58	Tension disc	2	J2.2.4	2102	108	Feed bar	1	4-7	12368	152	Reverse feeding arm	1		
13	Upper shaft	1	2-2		59	Tension releasing disc	1	J2.2.5	32572	109	Screw	2	4-8	313	153	Screw	2		
14	Needle bar crank	1	2-6	20188	60	Tension spring	1	1-37	2923		Nut	2	J0.0.48	1519	154	Return lever	1		
15	Thread take-up lever Link	1	2-15	12409	61	Tension regulating thumb nut	1	J2.2.7	1560	110	Screw	4	J0.0.65	307	155	Return spring	1		
16	Thread take-up lever Link hinge pin	1	2-16		62	Tension releasing pin	1	1-36	32574		Nut	4	J0.0.66	1513	156	Return spring retaining plate	1		
17	Screw	3	J0.0.5	435	63	Presser foot complete	1	6-3	24983	111	Needle plate	1	1-40	12482	157	Screw	2		
18	Needle bar crank position screw	1	2-7	1065	64	Presser bar	1	6-2	12391	112	Screw	2	J0.0.27	69	158	Reverse stitch lever	1		
19	Thread take-up crank	1	2-9	12404	65	Oscillating shaft	1	3-13		113	Feed dog	1	4-9	12481	159	Reverse feed shaft	1		
20	Thread take-up crank wedge	1	2-10	3094	66	Oscillating rock shaft hinge pin	1	3-8	12388	114	Screw	2	J0.0.50	203	160	Screw	1		
21	Thread take-up crank wedge screw	1	2-11	690	67	Crank connecting rod hinge screw	1	3-6	908	115	Feed lifting rock shaft	1	4-15		161	Reverse feed shaft	1		
22	Thread take-up lever	1	2-12	12408	68	Oscillating rock shaft	1	3-5	24104	116	Side plate	1	1-42	12432	162	Reverse feed shaft screw	2		
23	Thread take-up lever hinge pin	1	2-13	12166	69	Crank connecting rod hinge screw nut	1	3-7	1619	117	Spring	1	1-43	4307	163	Rubber plug	1		
24	Thread take-up crank screw	1	2-14	775	70	Oscillating shaft crank slide block screw stud	1	3-11		118	Screw	2	1-44	725					
25	Arm shaft flanged bushing(front)	1	1-6		71	Oscillating shaft crank	1	3-10	19447	119	Crank	1	4-13	12376					
26	Stud roller	1	2-20		72	Oscillating shaft crank slide block	1	3-12		120	Feed lifting rolling stud shaft	1	4-14						
27	Needle bar connecting link	1	2-17	12382	73	Oscillating shaft crank set screw	1	3-15	457		Stud	1	2-20						
28	Needle bar connecting stud	1	2-19	12384	74	Oscillating shaft crank pin	1	3-14	3093	121	Crank connecting rod	1	4-10	43976					
29	Screw	2	1-21		75	Crank connecting rod hinge screw nut	4	J0.0.63	1518	122	Arm shaft flanged bushing(back)	1	1-9						
30	Needle bar connecting link cap screw	1	2-18	794	76	Crank connecting rod	1	3-2	20197	123	Screw	2	1-11						
31	Presser bar guide bracket set screw	2	J0.0.35	453	77	Shuttle driver	1	3-16	19406	124	Arm shaft flanged bushing(back)	1	1-10						
32	Needle clamp	1	2-22		78	Shuttle driver set screw	2	3-17	1266		oil drip plate								
33	Needle bar thread guard	1	2-24	4302	79	Shuttle body	1	3-18	20757	125	Screw	1	J0.0.40	1285					
34	Needle bar thread guard screw	1	2-25	233	80	Screw	2	J0.0.71	145	126	Balance wheel(pedal)	1	2-3						
35	Needle	1	2-26		81	Shuttle bobbin	1	3-31	19131-1	127	Screw	1	2-27						
36	Needle bar crank set screw	1	2-8	858	82	Shuttle race	1	3-20	24325	128	Balance wheel(electronic)	1	2-4						
37	Needle bar	1	2-21	12381	83	Shuttle race back position pin	2	J13.0.7		129	Screw	2	2-5						
38	Knee lifter lifting lever link	1	6-20	12241	84	Shuttle bobbin case position plate	1	3-23	24323	130	Foot lift lever	1	6-23						
39	Presser bar lifting and releasing lever bracket	1	6-19	12327	85	Screw	2	3-24	391	131	Knee lifter lifting lever hinge pin	1	6-22	12240					
40	Screw	1	6-21	766	86	Shuttle race cap	1	3-21	24009	132	Gasket	2	1-8						
41	Feed forked connection hinge screw nut	1	J0.0.16	1520	87	Screw	2	3-22	1053	133	Knee lifter lifting lever connecting rod joint	1	6-25	12416					
42	Spring	1	6-9	11167	88	Shuttle race back	1	J13.0.4	2533	134	Screw	1	6-26	76					
43	Screw	1	6-8	688	89	Spring	1	J13.0.5	648	135	Knee lifter lifting lever	1	6-28	12415					
44	Thread guide	1	6-12	20060	90	Screw	1	J13.0.6		136	Nut	1	6-27	1512					
45	Presser bar guide bracket set screw	1	6-11	453	91	Shuttle bobbin case complete	1	3-25		137	Screw	1	6-24	802					
46	Presser bar guide bracket	1	6-10	20059	92	Plate	1	1-25		138	Cover plate	1	1-38	12480					
					93	Needle bar connecting stud roller guide	1	1-45		139	Screw	1	1-39	219					

Remark: 1. The parts with character  are installed on the cover of the machine. 2. The parts with same number should be assembled together.