

***FOR* SS0302/SS0302CX**

Sun Special

OPERATION INSTRUCTION

AND

PARTS MANUAL

19 Folhas

 - ORIGINAL

FOR SPECIAL ORDER

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OPERATION INSTRUCTION

AND

PARTS MANUAL

IVM - ORIGINAL

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1. Main technical specifications

Application: medium and heavy duty
(SS 0302CX heavy duty with thick thread)
Max sewing speed: 2000 spm (SS 0302CX 1800 spm)
Stitch length: 0~8mm
Presser foot lift: 6.5mm by hand 13mm by knee
Max sewing capacity: 8mm
Alternate presser foot lift volume: 3.3~5.5mm
Timing feed length: not less than 8mm
Needle: Model DP×1720#~24#(SS 0302CX DP×1725#)
Hook: Auto-lubricating big rotating hook
Lubrication: Auto lubrication
Motor power: 0.37kw

2. Preparation

(1) Cleaning machine

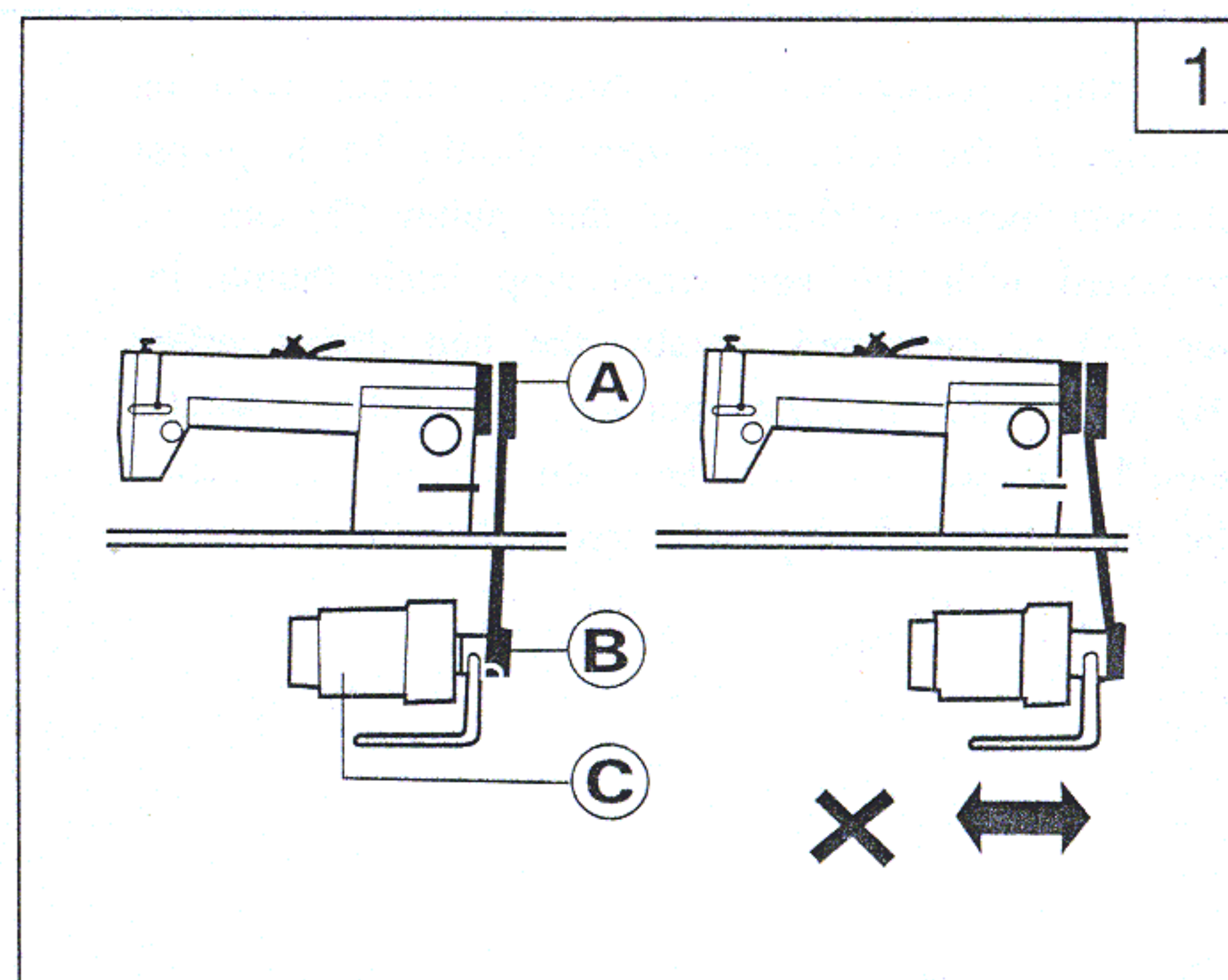
Clean off the grease and dusts on the surface of machine with gasoline and soft cloth.

(2) Inspection

Before use a thorough inspection should be done upon the machine. Turn balance wheel slowly to see if there is any obstacle, collision and uneven resistance between parts. If there is, adjustment should be done before operation.

3. Installing the motor(Fig.1)

Align machine balance wheel belt groove (A) with motor pulley belt groove (B) by moving the motor (C) leftward or rightward. Be sure the belt is not touch with table.



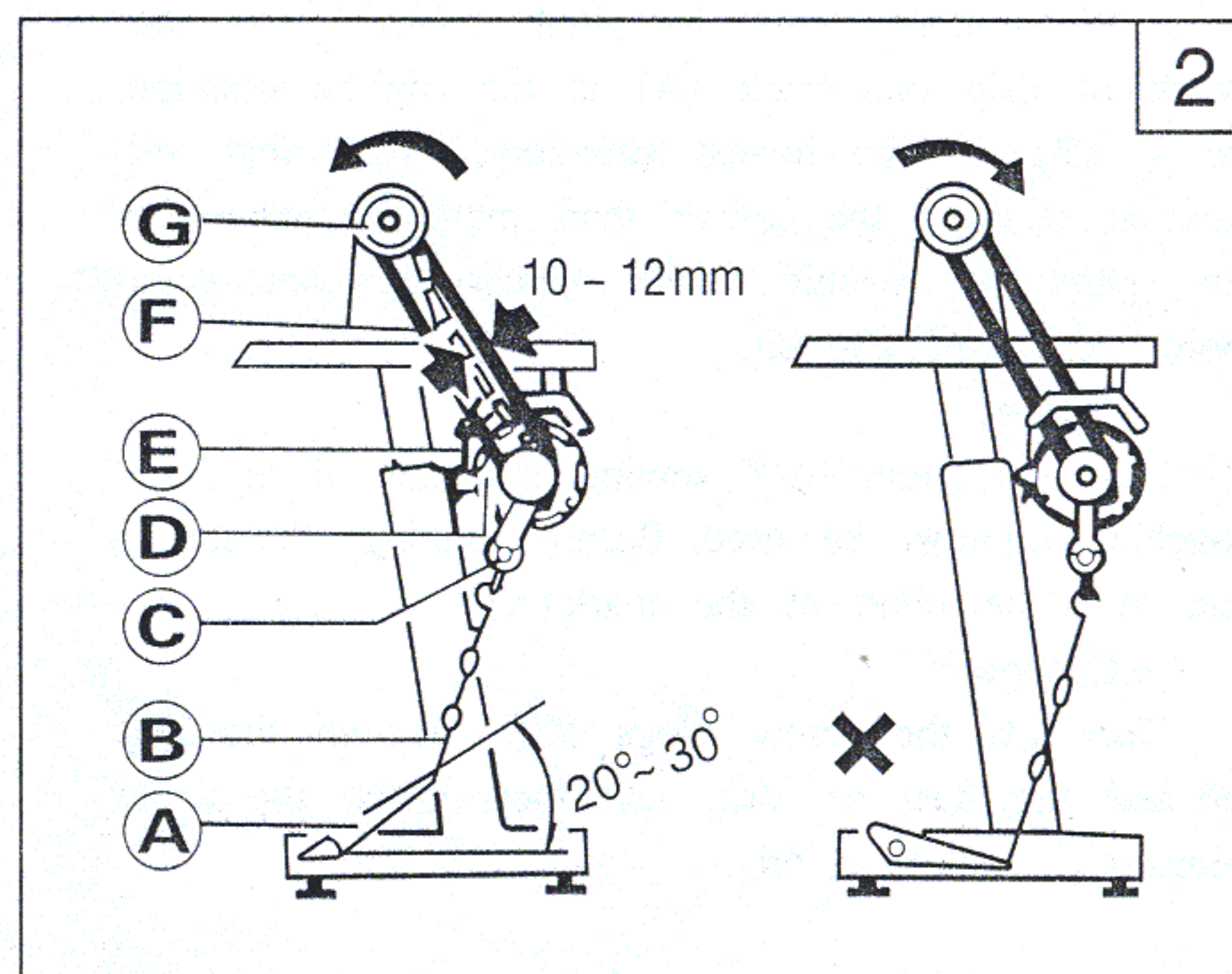
4. Connecting the clutch lever to the pedal(Fig.2)

a. The optimum tilt angle of pedal with floor is approx 15 degree.

b. Adjust the clutch of the motor so that clutch lever (C) and draw bar (B) run in line as Fig. 6, the machine would have stable motion and long using.

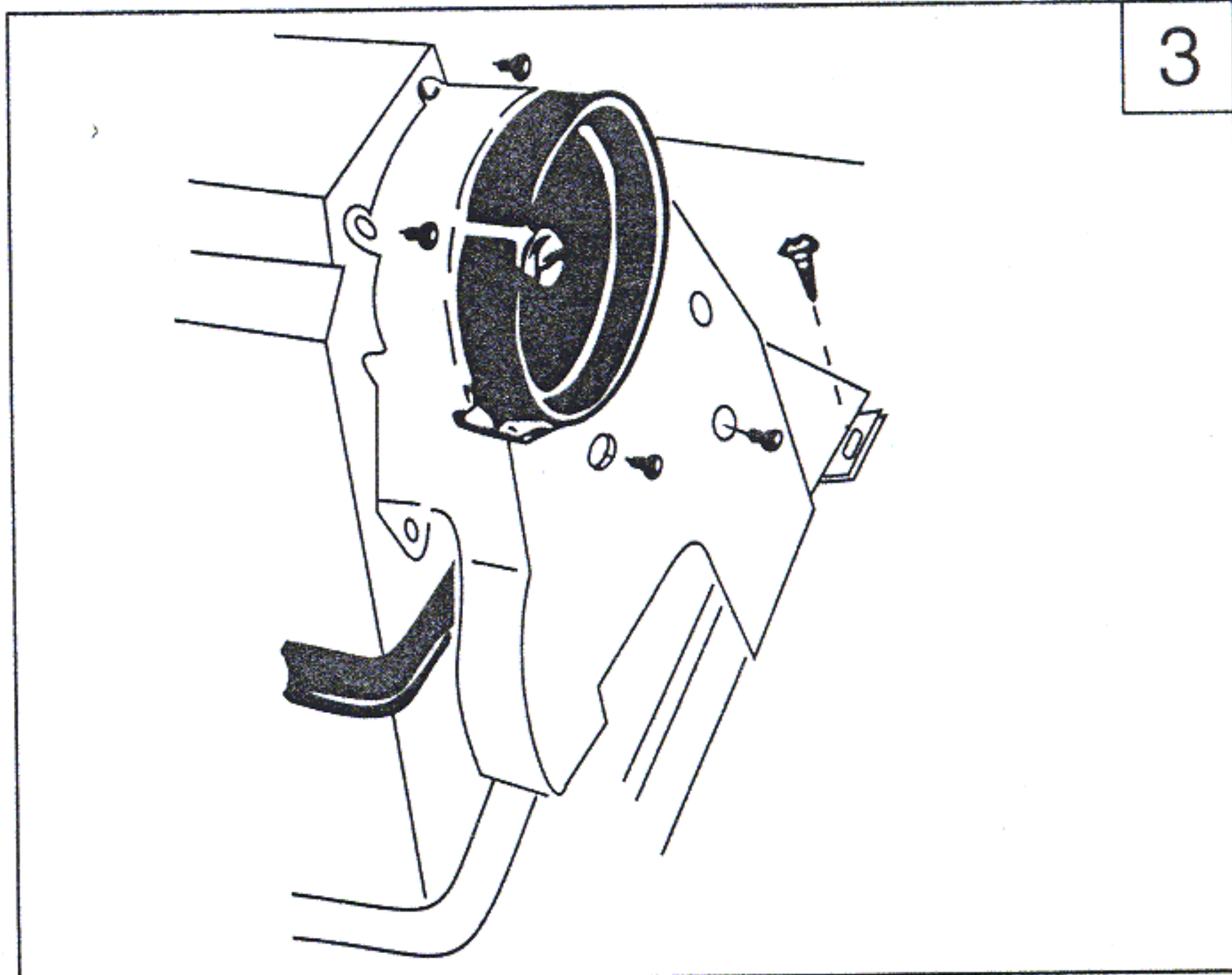
c. The machine balance wheel should rotate counter clockwise for normal sewing when view from opposite side of the balance wheel. The motor rotates in the same direction. The rotation can be reversed by reversing (turn over 180 deg.) the plug of the motor.

d. Adjust the tension of V-belt F by moving the motor vertically. The proper tension of V-belt is a slack of 10~12mm when the belt is depressed (at the belt pan) by finger.



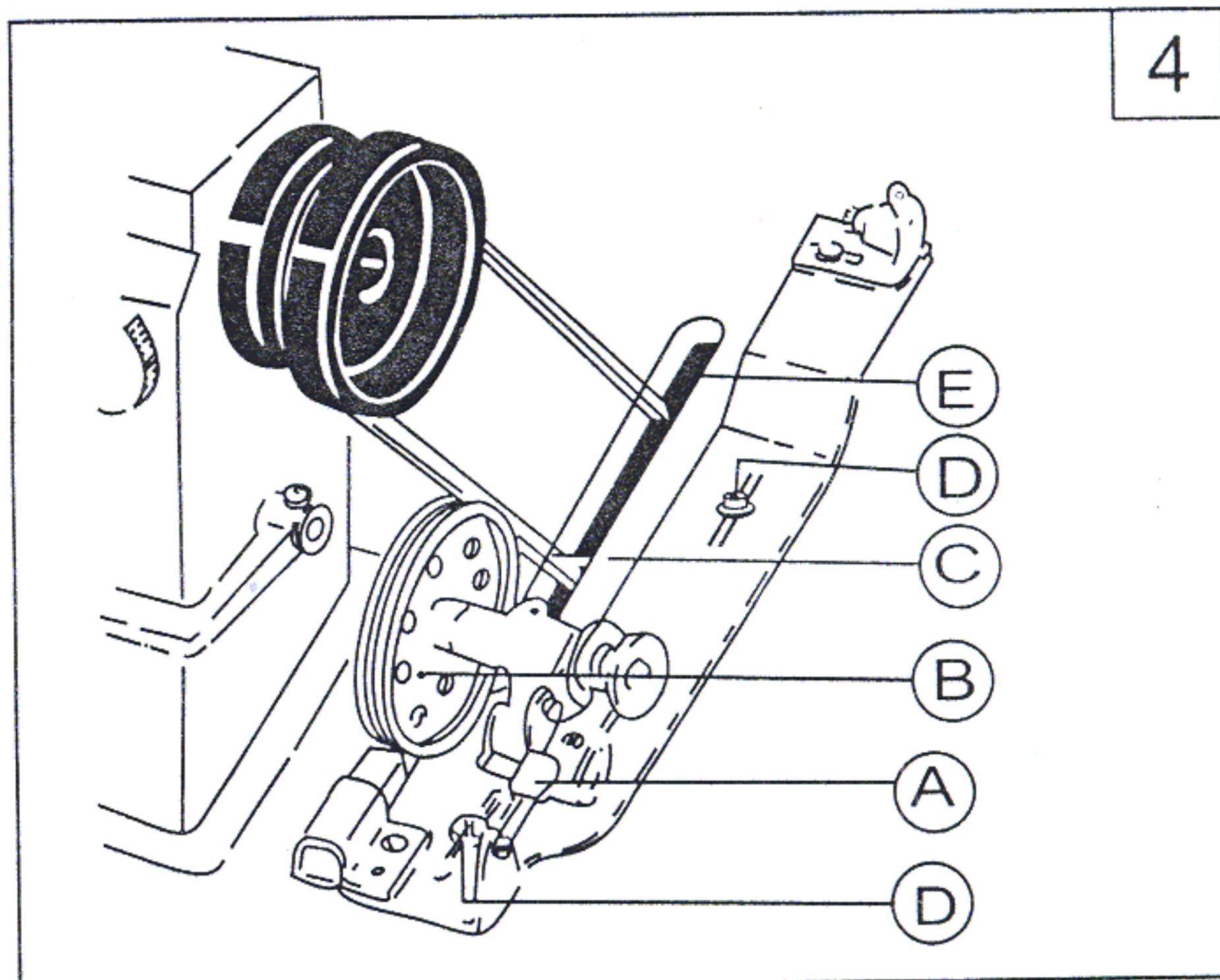
5. Installing belt guard (Fig 3)

The belt guard should be installed for safety.



6. Installing the bobbin winder (Fig 4)

Align pulley (B) of the bobbin winder with the outside of the belt, and there should be a proper clearness between them, so that pulley (B) can be contacted with the belt when stop latch thumb lever (A) is depressed, thereby the belt drives pulley (B) while the machine running, the bobbin winder should be parallel with belt slit (E) of the table, then fasten with two wood screws (D).



7. Lubrication (Fig 5)

A. Oil amount

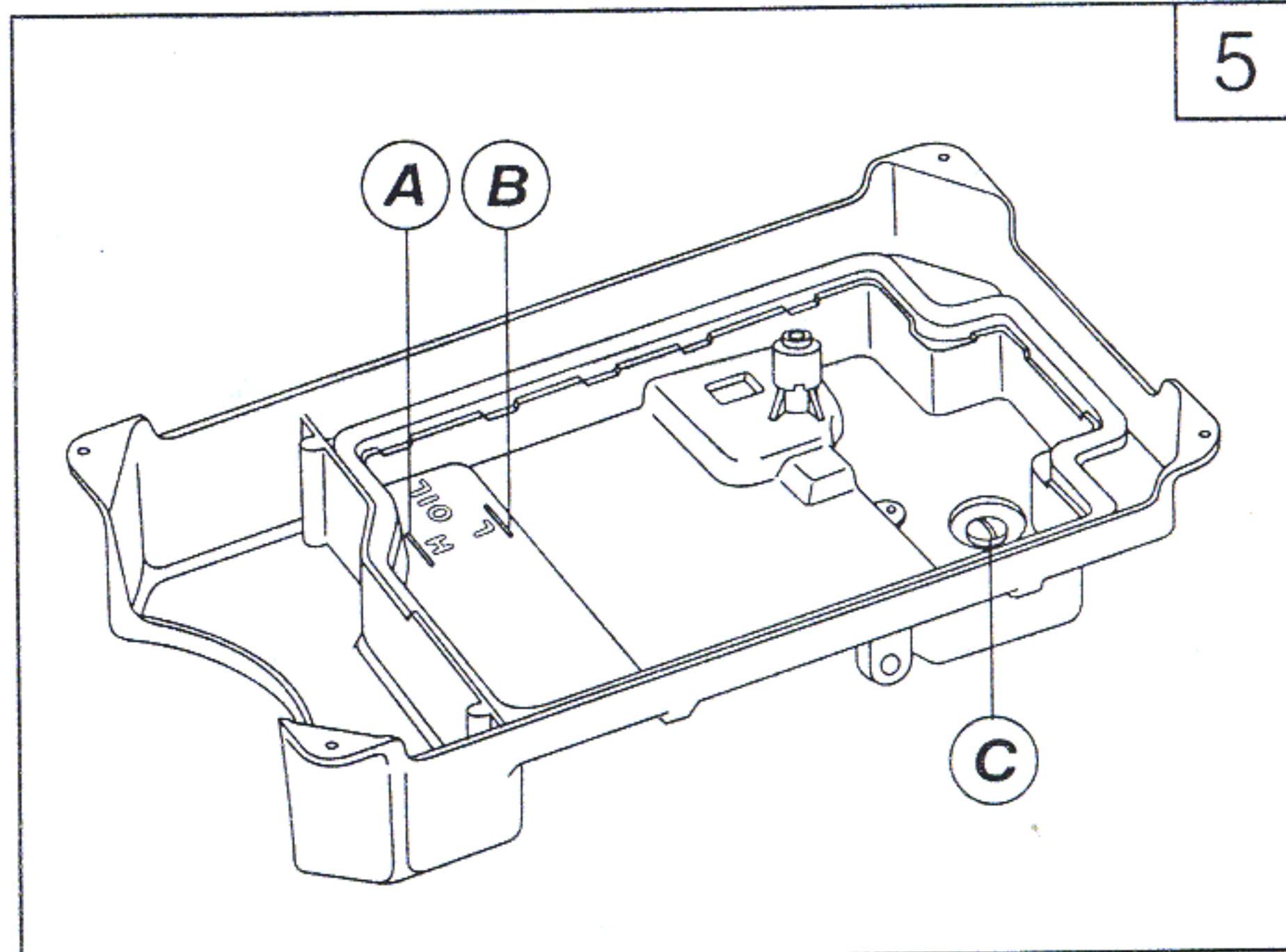
Oil amount must be oiled according to the mark of drip pan. Mark (A) is the highest situation, Mark (B) is the lowest situation, Note that oil amount couldn't be lower than mark (B), otherwise all parts of machine will appear heat and dead point for not gaining oil.

b. Oiling

In lubrication, HA-8 sewing machine oil or HJ-7 machine oil must be used. Before running, the machine must be oiled at the mark (A).

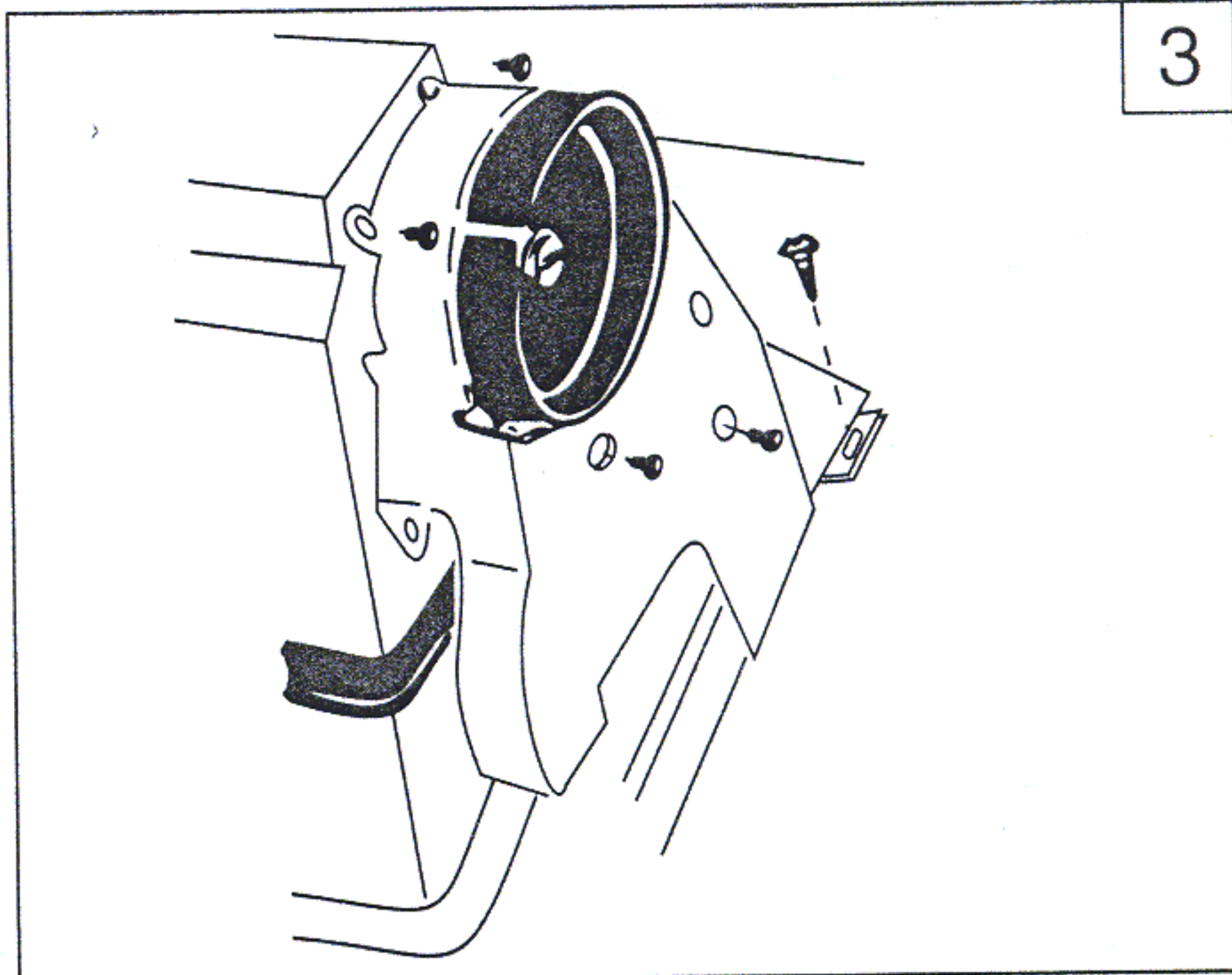
c. Changing

Turn off the screw plugs (C), clean up the dirty oil and the dust of drip pan, then fasten the screw plugs (C), add fresh oil



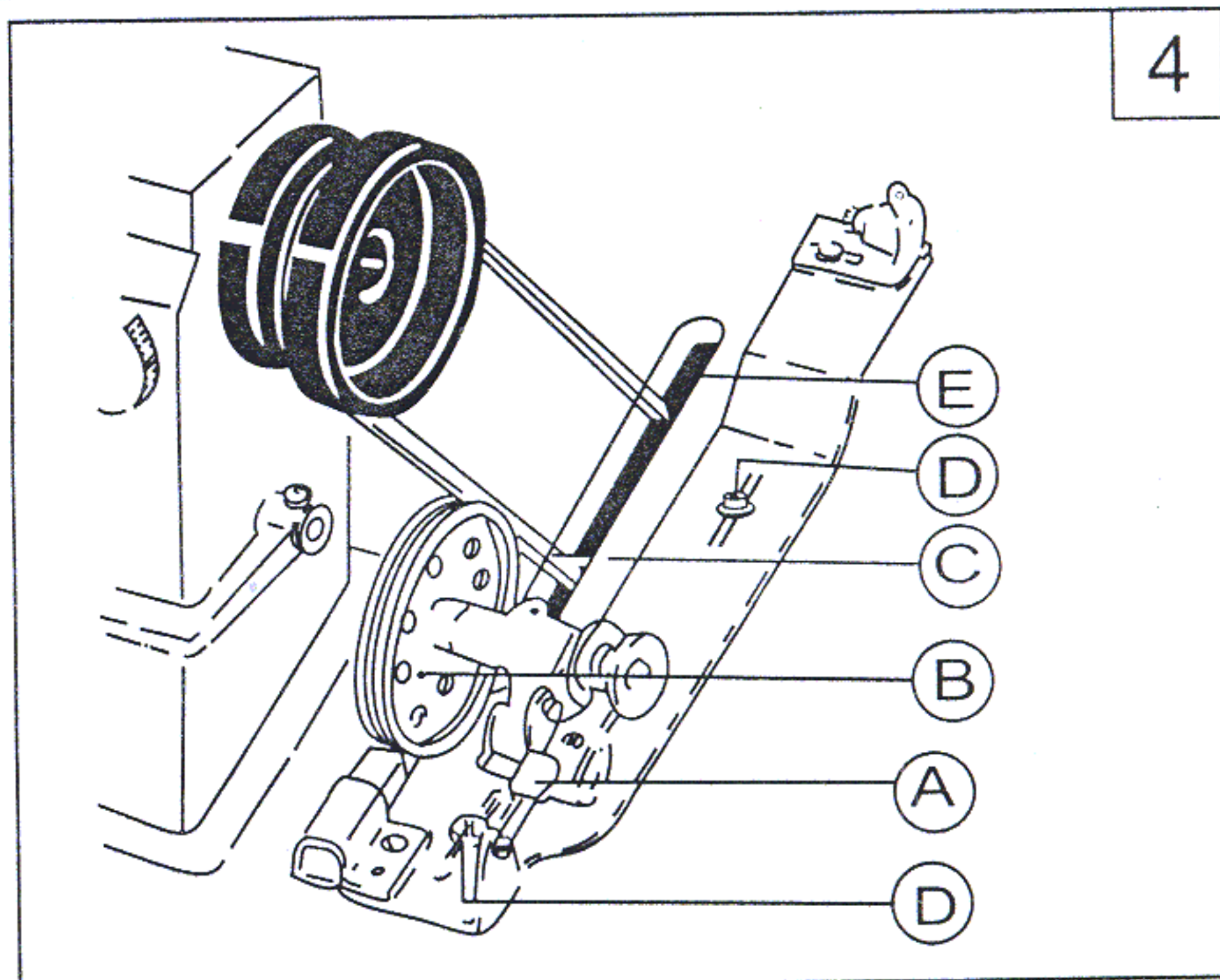
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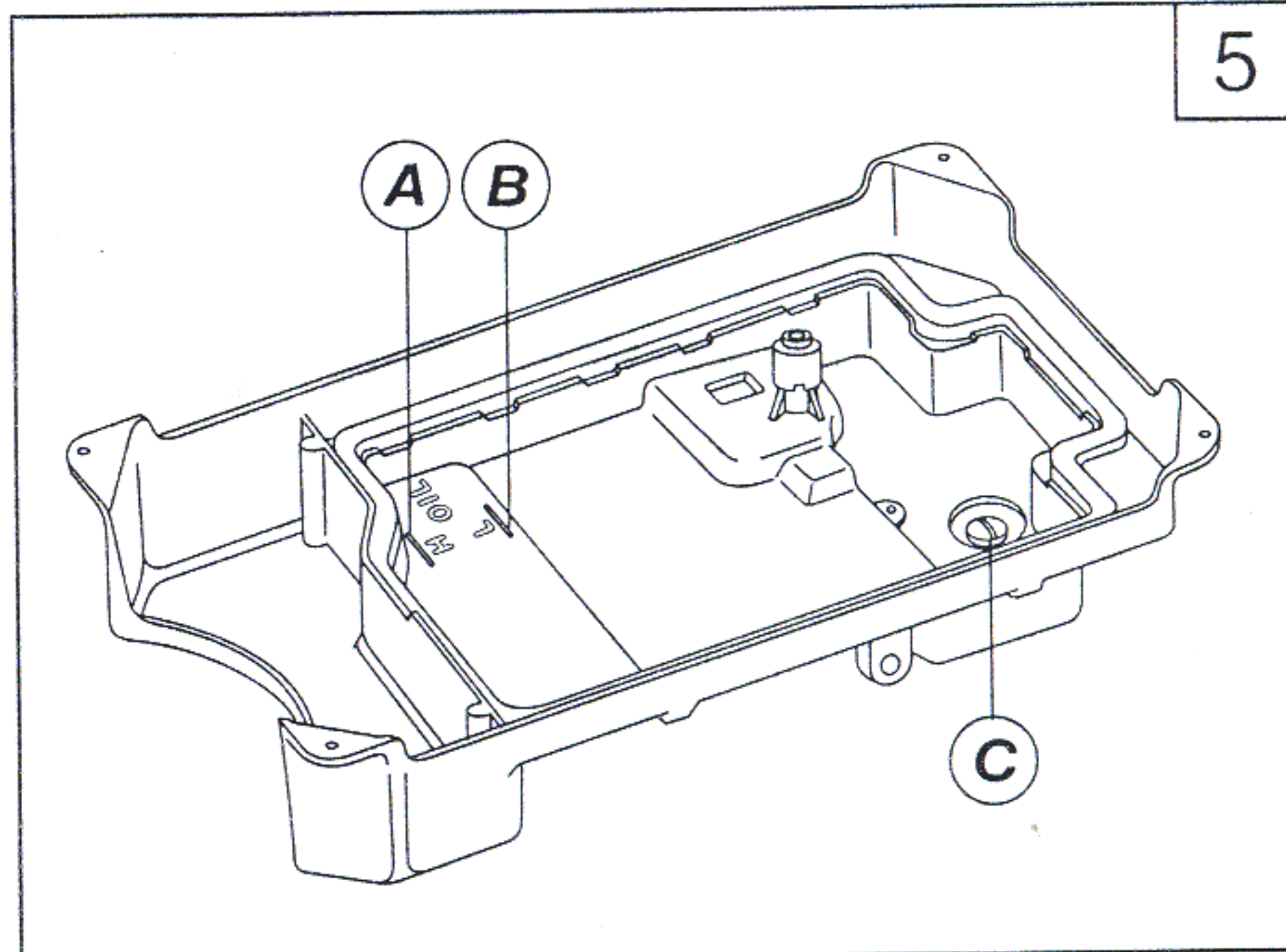
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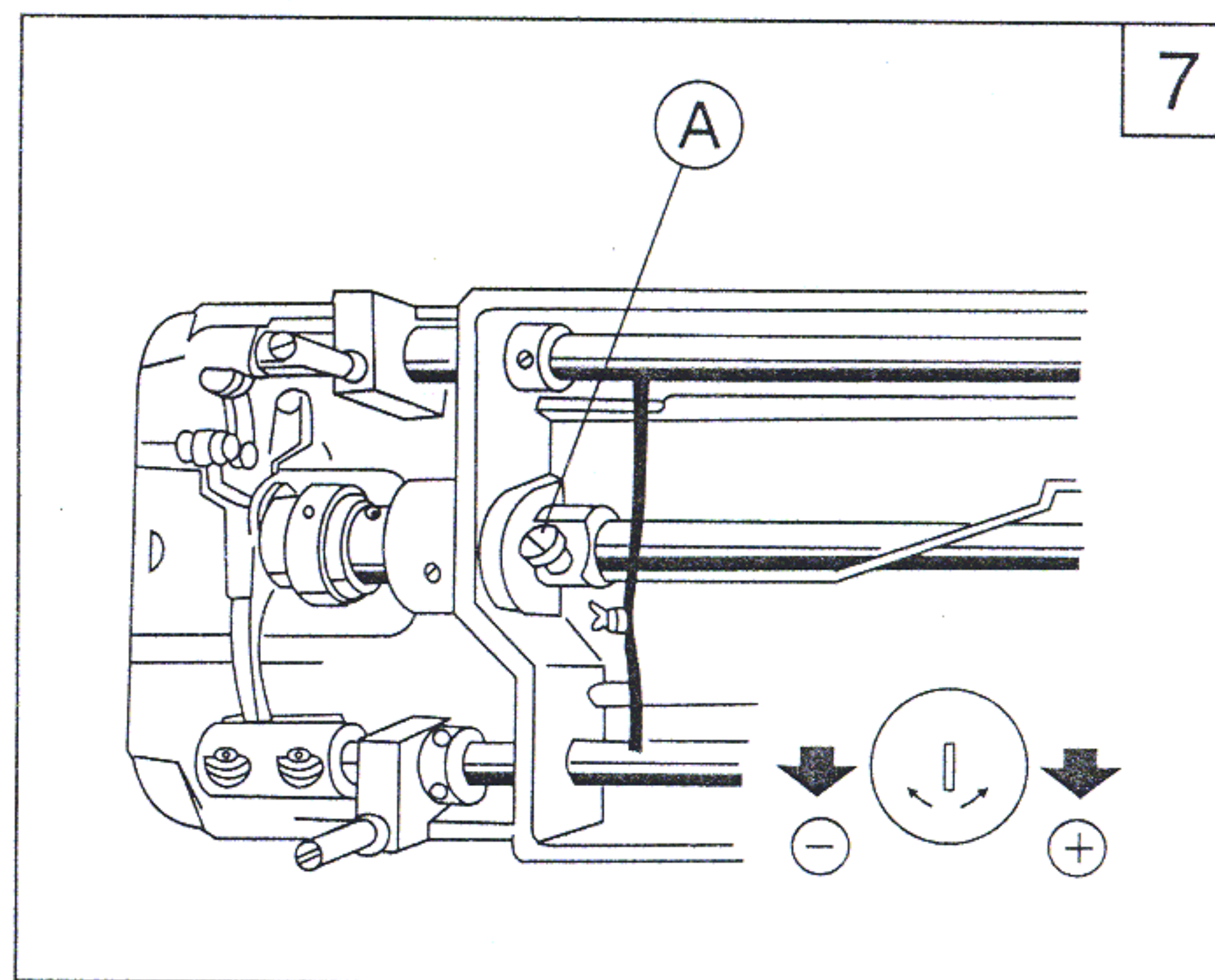
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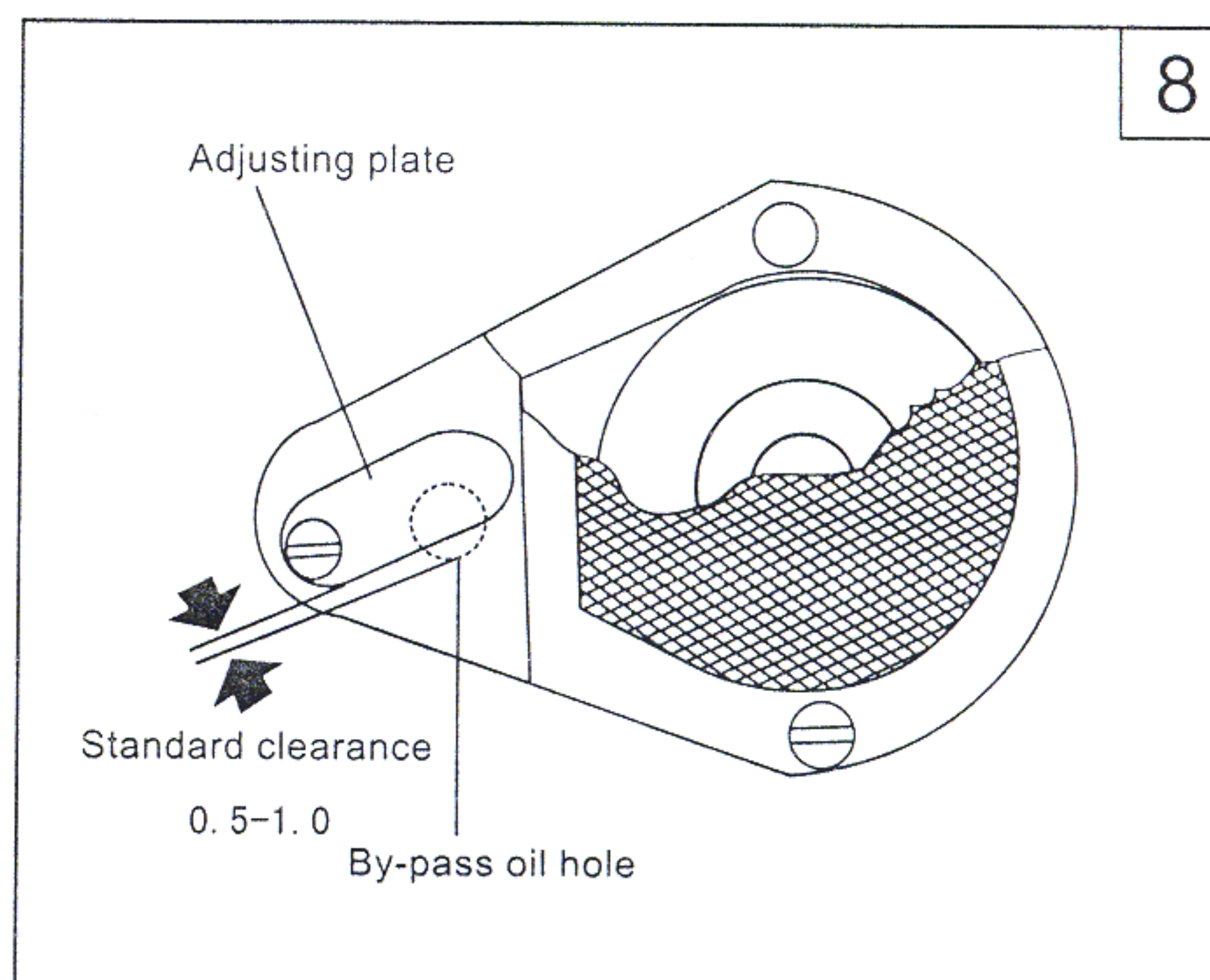
9. Rotating hook oil amount adjustment (Fig 7)

The hook oil amount can be adjusted by Screw (A). Turn it clockwise ("+") to increase amount; counter-clockwise ("-") to decrease. The oil amount is adjusted in the range of five turns of Screw(A): Tightning for more; Loosening for less.



10. Oil pump supply adjustment (Fig 8)

Generally no adjustment is for oil pump. When the machine is running at a low speed, observe the oil screen. If no oil splashing, close the clearance.

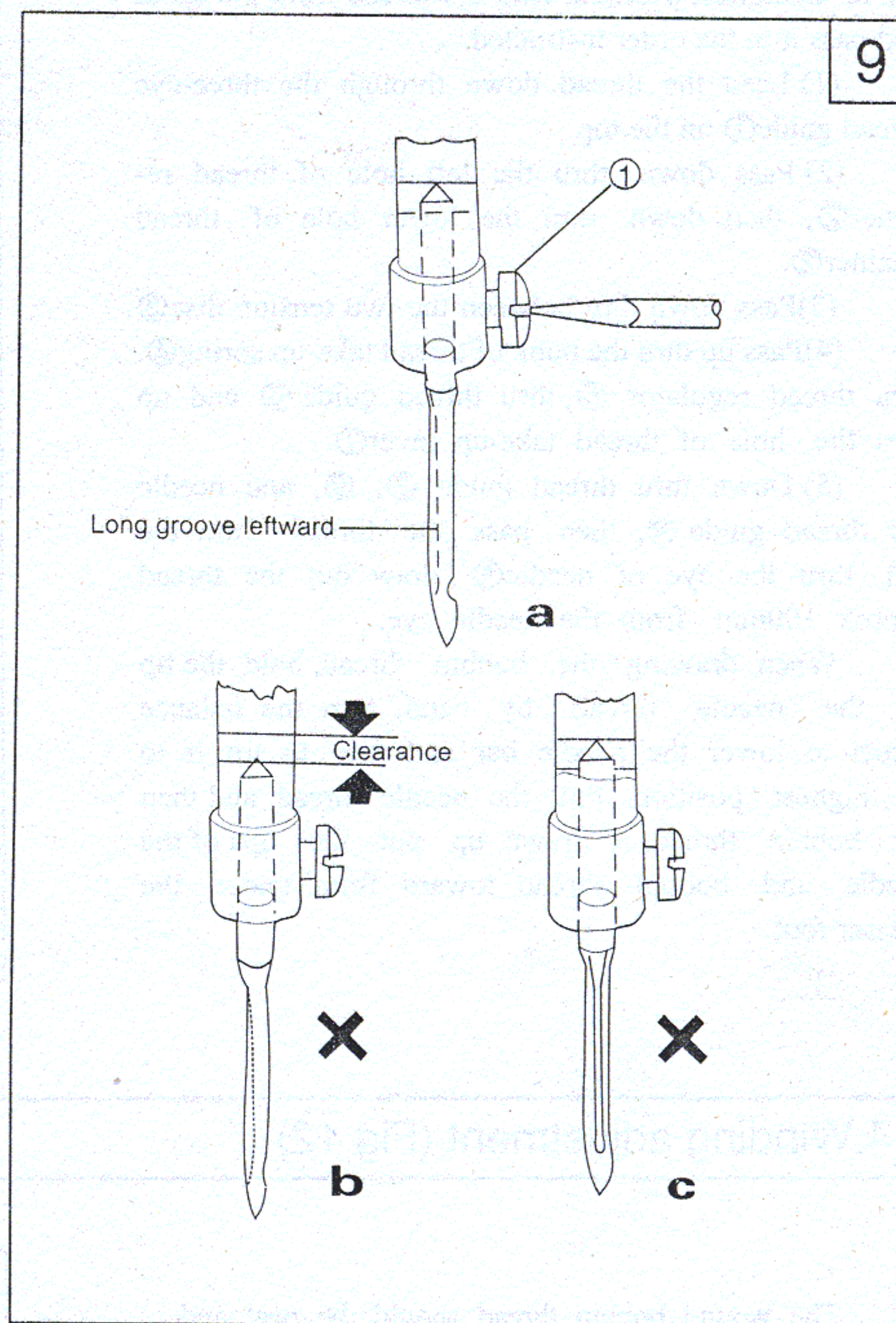


11. Installing the needle (Fig 9)

Turn the balance wheel to lift the needle bar to its highest point, loosen needle set screw 1, making the needle groove turn to the left side of an operator, fully insert the needle shank up to the bottom of needle socket, then tighten needle set screw 1.

Note: Fig.12(b) insufficient insertion

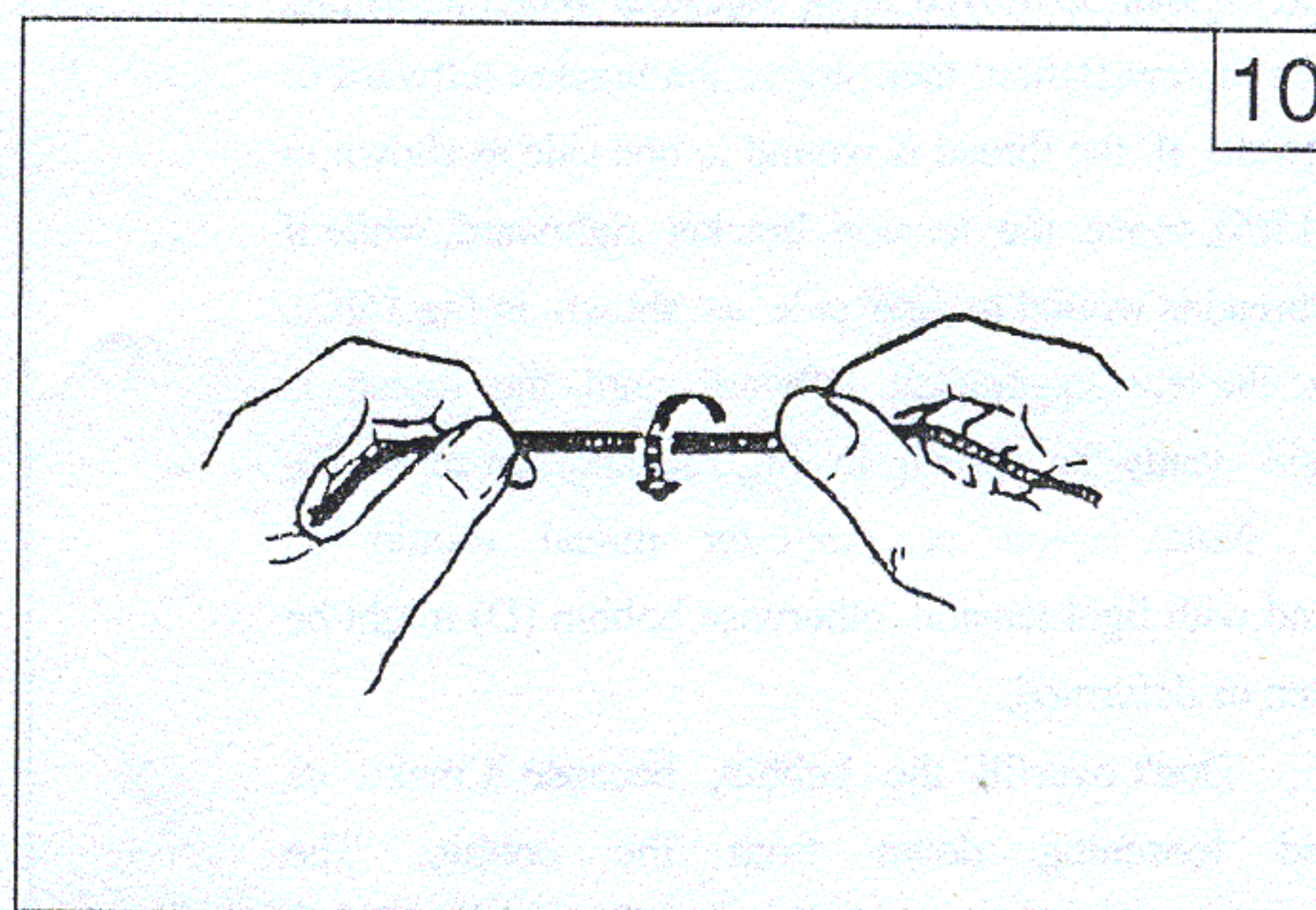
Fig.12(C) Wrong direction of groove



12. Coordination among the needle, the thread and the material (Fig 10)

The needle thread is left-twisted, the bobbin thread is left or right-twisted. Holding the thread, twist it with right hand in the direction of arrow shown in Fig 10, if it is tight, it is left-twisted, contrarily, it is right-twisted.

The Needle is DPX 17 20#~24# (SS0302CX DPX 17 25#), the needle number must be fitted for the materials. Sewing too heavy the weight of materials, the needle would be breaking and skipping stitch and thread breaking for its too thin, if the needle is too thick, it would damage the clothes for its large needle hole. Therefore, the selection of needle and thread must be fitted to the materials.



13. Threading the needle thread (Fig 11)

When threading the needle thread, raise the needle bar to its highest position, lead the thread from the spool and pass it in the order instructed.

(1) Lead the thread down through the three-eye thread guide① on the top.

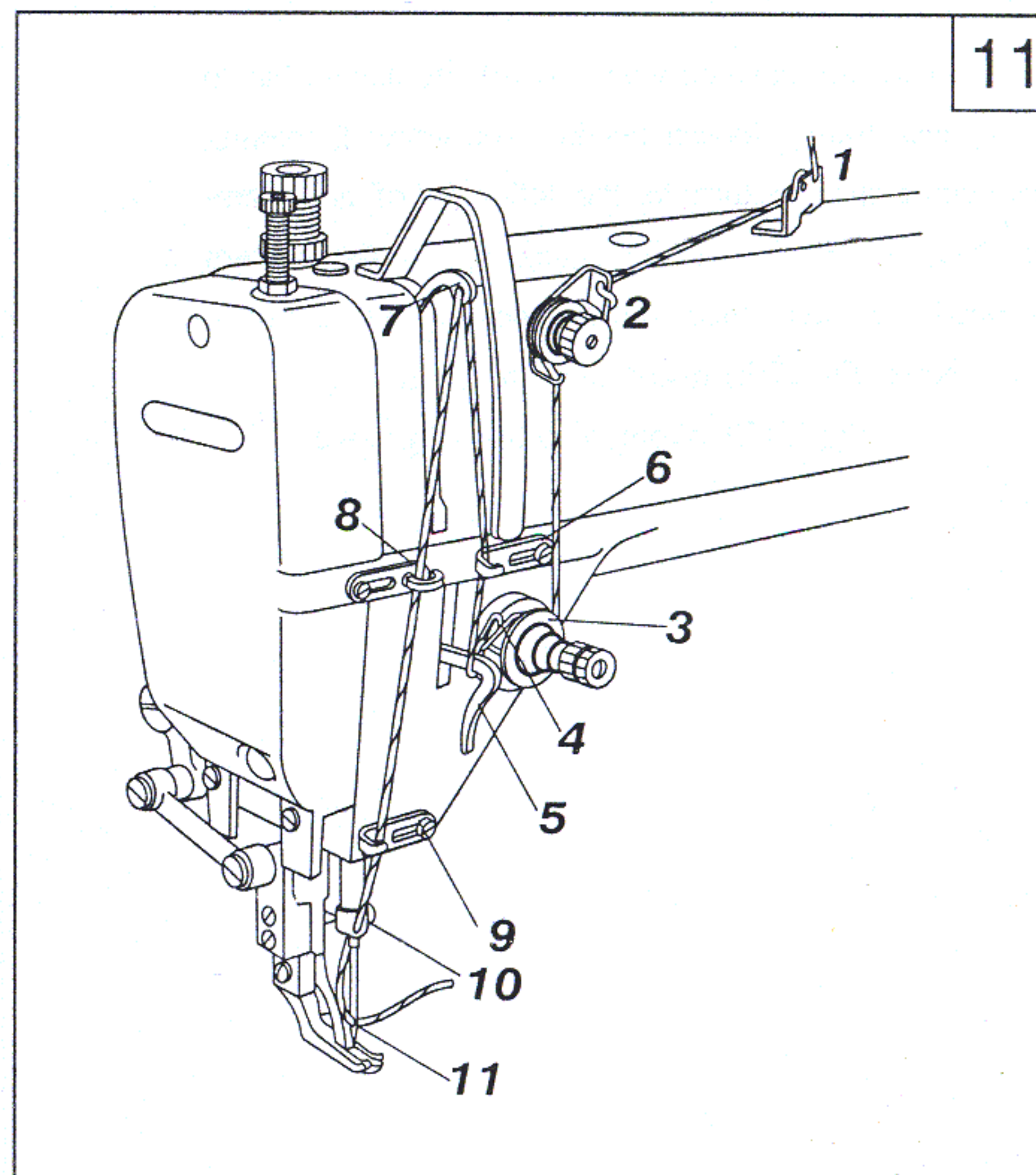
(2) Pass down thru the left hole of thread retainer②, then down thru the lower hole of thread retainer②.

(3) Pass down thru between the two tension disc③

(4) Pass up thru the hook of thread take-up spring④, thru thread regulator ⑤, thru thread guide ⑥ and up thru the hole of thread take-up lever⑦.

(5) Down thru thread guide ⑧, ⑨, and needle bar thread guide ⑩, then pass the thread from the left thru the eye of needle⑪, draw out the thread approx 100mm from the needle eye.

When drawing the bobbin thread, hold the tip of the needle thread by hand, turn the balance wheel to lower the needle bar and then to lift it to its highest position. Pull the needle thread and then the bobbin thread is drawn up. put the tips of the needle and bobbin thread toward front under the presser foot.

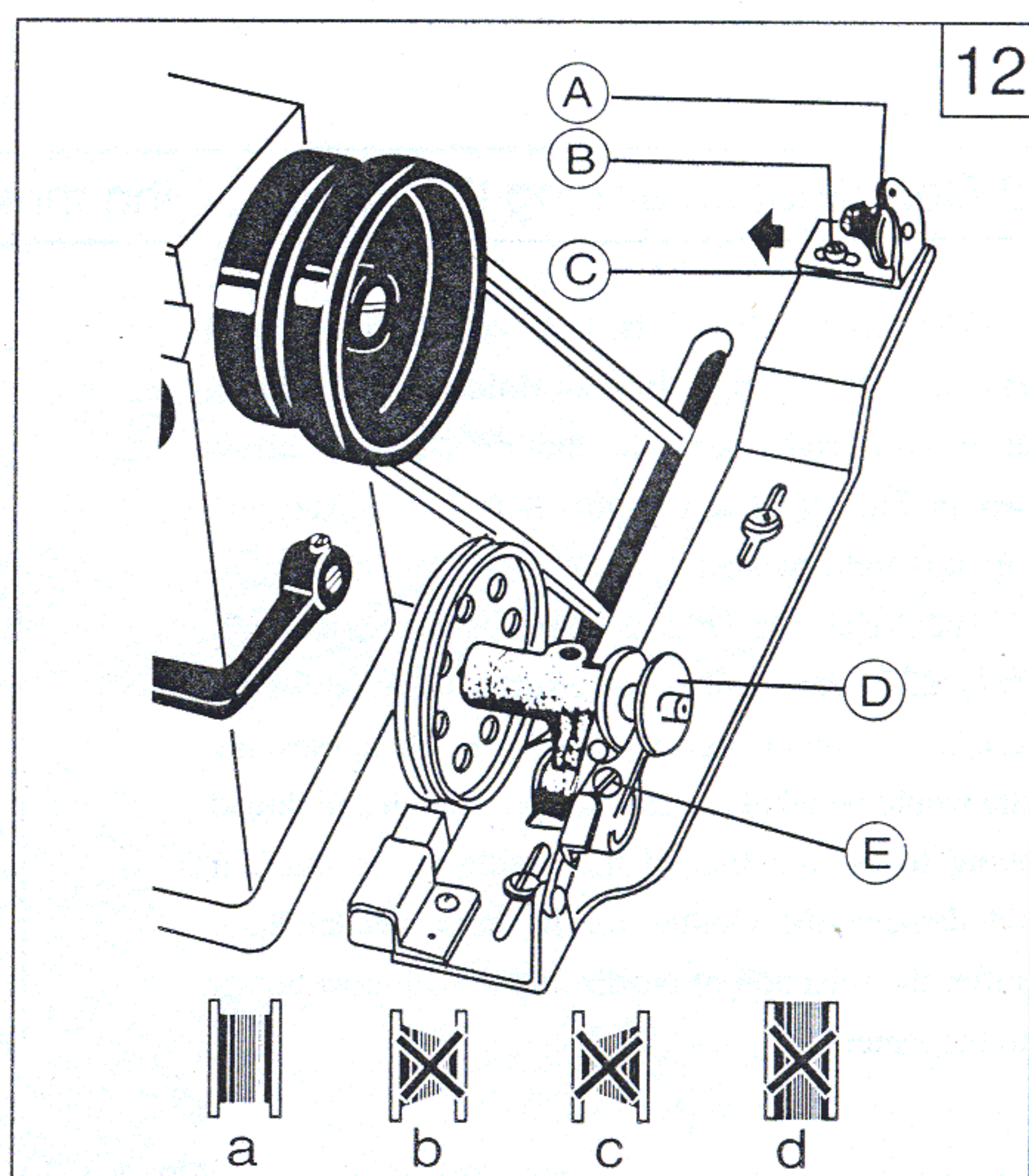


14. Winding adjustment (Fig 12)

The wound bobbin thread should be neat and tight. If not, adjust the thread tension by turning tension stud thumb nut of the bobbin winder tension bracket (A). If the wound bobbin is not neat, tension bracket (C) can be moved to be adjusted. When adjusting, loosen screw (B) first, then move the bracket leftward or rightward if the thread is wound to one side as shown in Fig.15(6), move the tension bracket rightward, while if the thread is wound to one side as shown in Fig.15(C), move the tension bracket leftward until the thread is wound neatly as shown in Fig.15(a), tighten screw (B).

Note: Nylon or polyester thread should be wound with light tension. otherwise bobbin (D) might be broken or deformed.

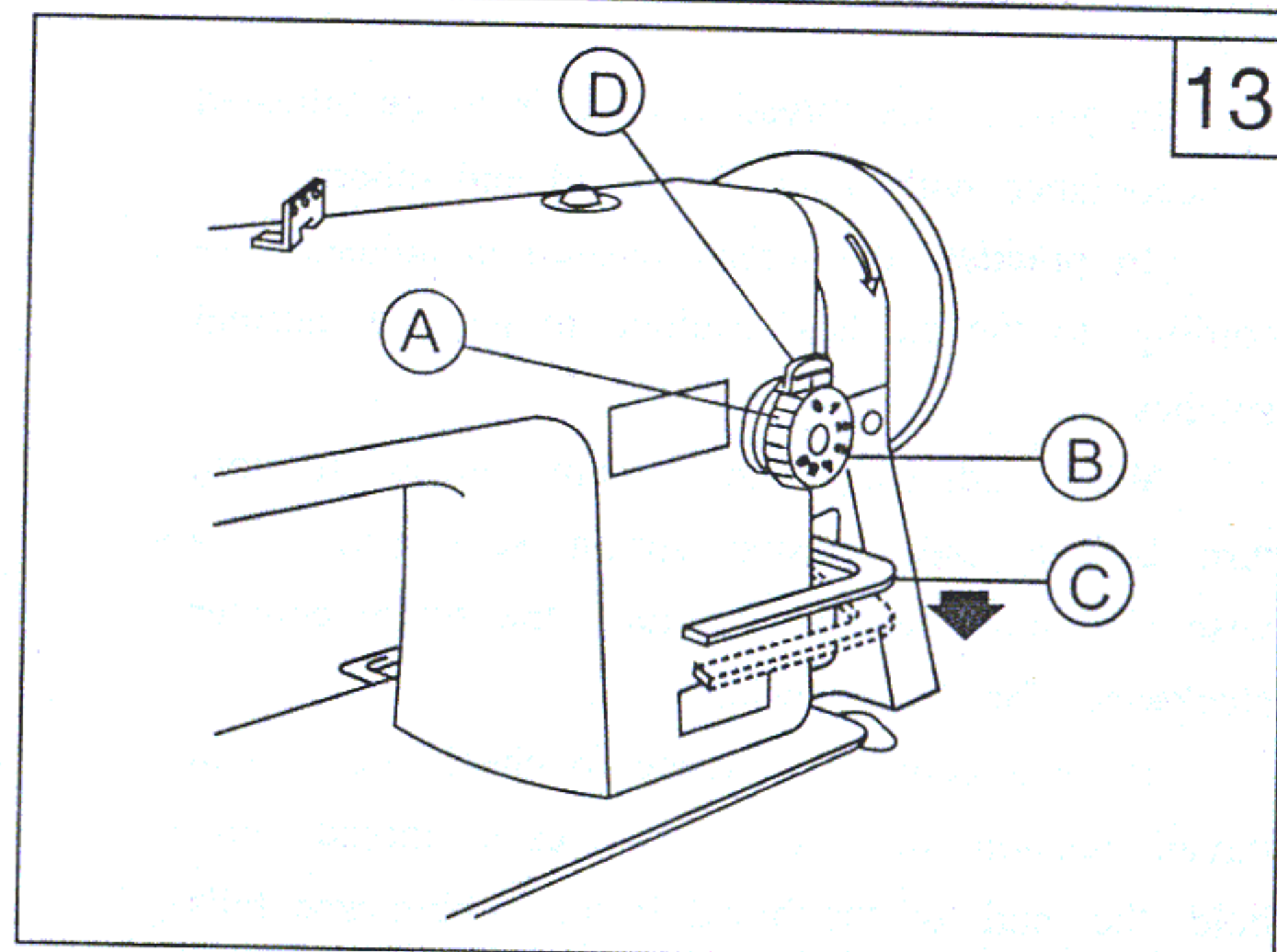
Don't overfill the bobbin, because it make its thread loosening down from the bobbin. The optimum capacity of thread will fill about 80% of bobbin outside diameter, and this can be adjusted by stop latch screw (E).



15. Setting the stitch length and controlling the reverse sewing (Fig 13)

Stitch length can be set by turning stitch length regulating dial(A). The figures on the stitch length regulation dial plate (B) indicate the stitch length.

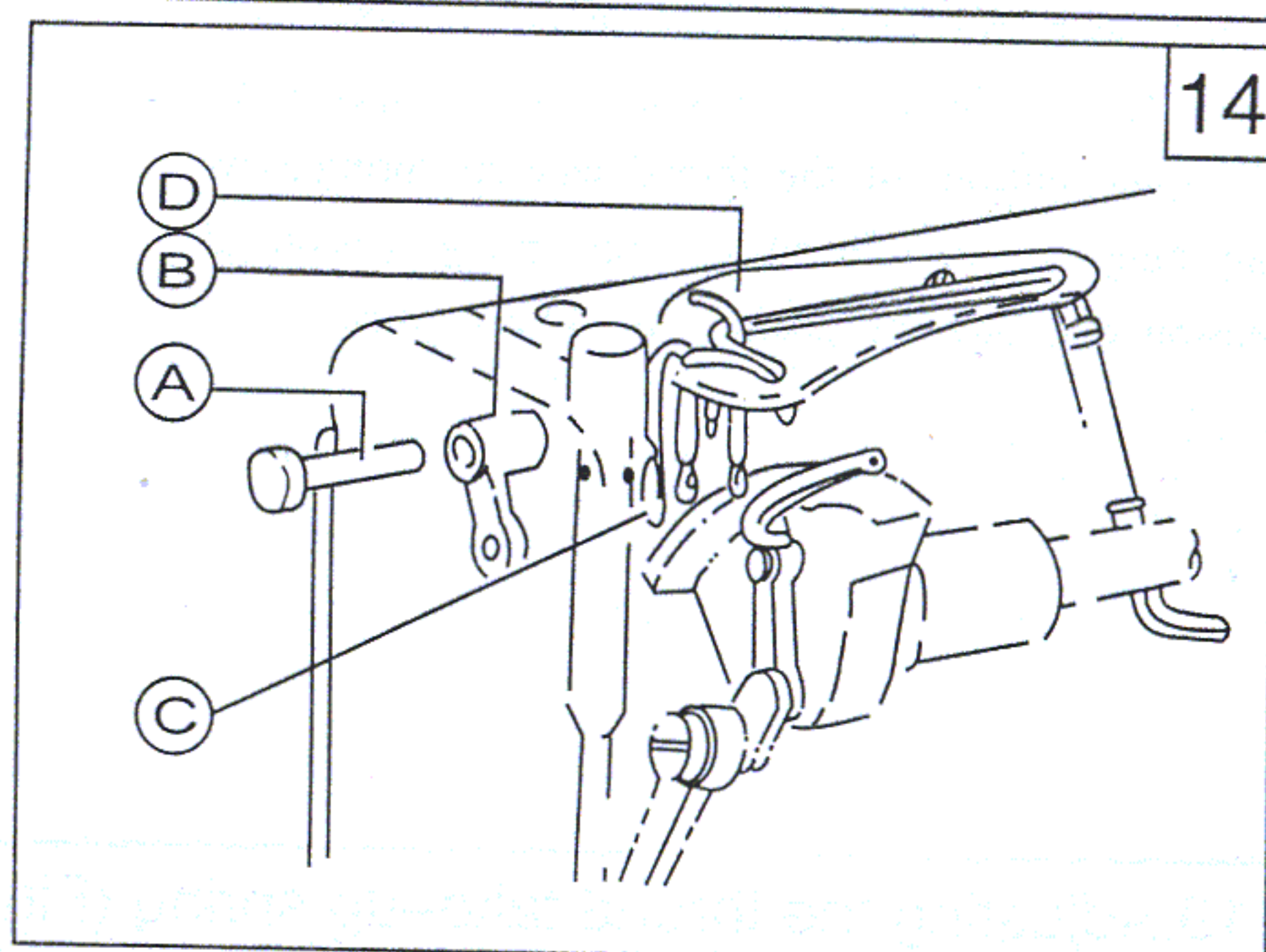
Reverse sewing can be obtained when feed reverse lever (C) is depressed and forward sewing can be restored automatically when feed reverse lever (C) is released.



16. Thread take-up oiling (Fig 14)

Thread take-up section adopts woolen thread oiling. after long time of use, its function lost, so replace with a new one.

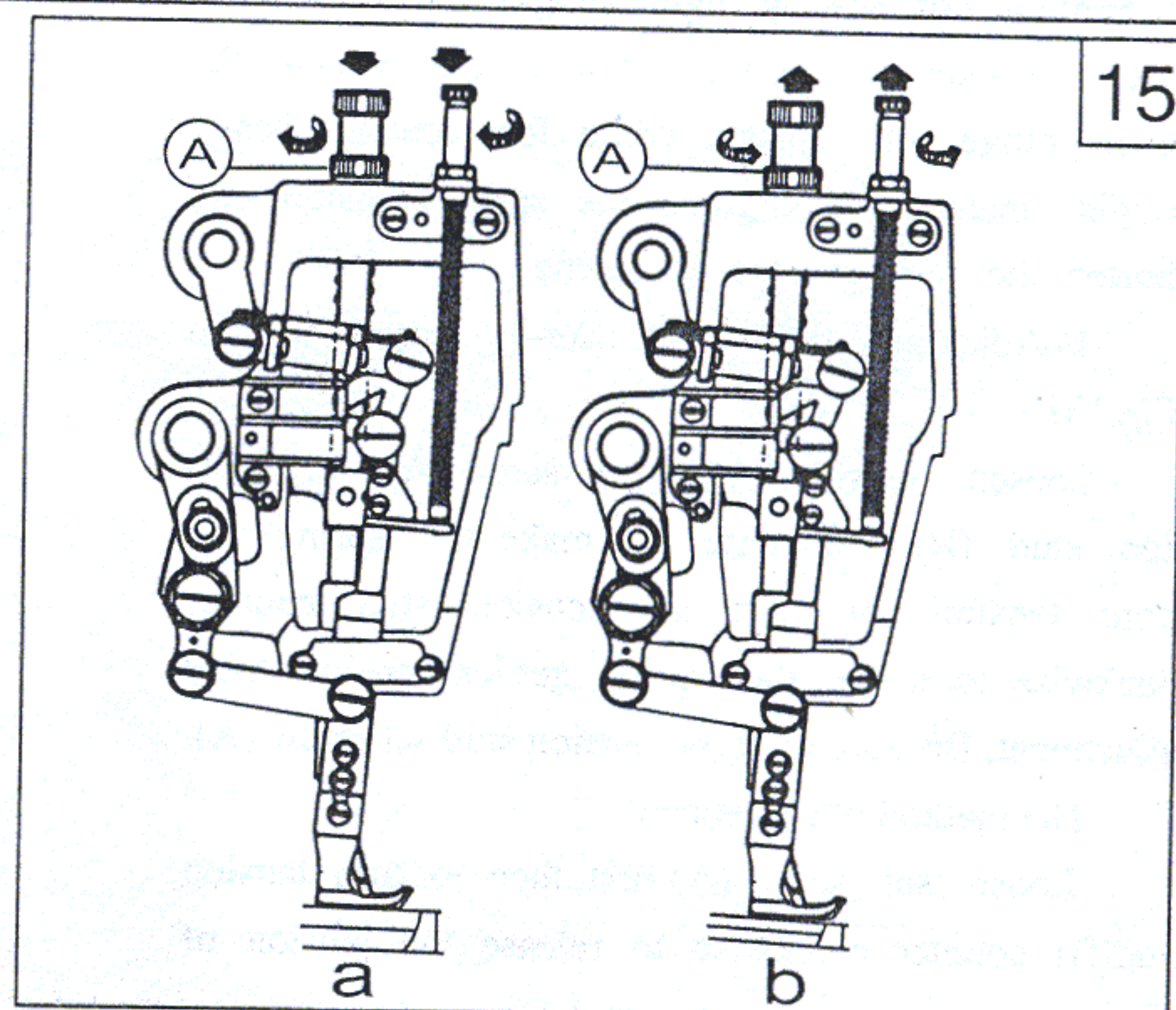
- ① Open the face plate, remove the pressure screw, lock nut and presser bar.
- ② Remove Hinge(A) and Lever(B)
- ③ Draw out Oil Wick(C).
- ④ Loosen the wick fix screw on the arm top, and take out Set Plate(D).
- ⑤ Replace with a new one.
- ⑥ Installing is a reverse sequence.



17. Adjusting the pressure of presser foot (Fig 15.)

Pressure on presser foot is to be adjusted in accordance with materials to be sewn. Loosen lock nut (A). If heavy materials to be sewn, turn pressure regulating thumb screw clockwise as shown Fig.20 (a) to increase the pressure. While light materials to be sewn, turn the pressure regulating thumb screw counter clockwise as shown in Fig. 20 (b) to decrease the pressure on presser foot, then tighten lock nut (A).

The pressure of presser foot is proper as the sewing materials can be fed normally.



18. Adjusting the thread tension (Fig 16, 17)

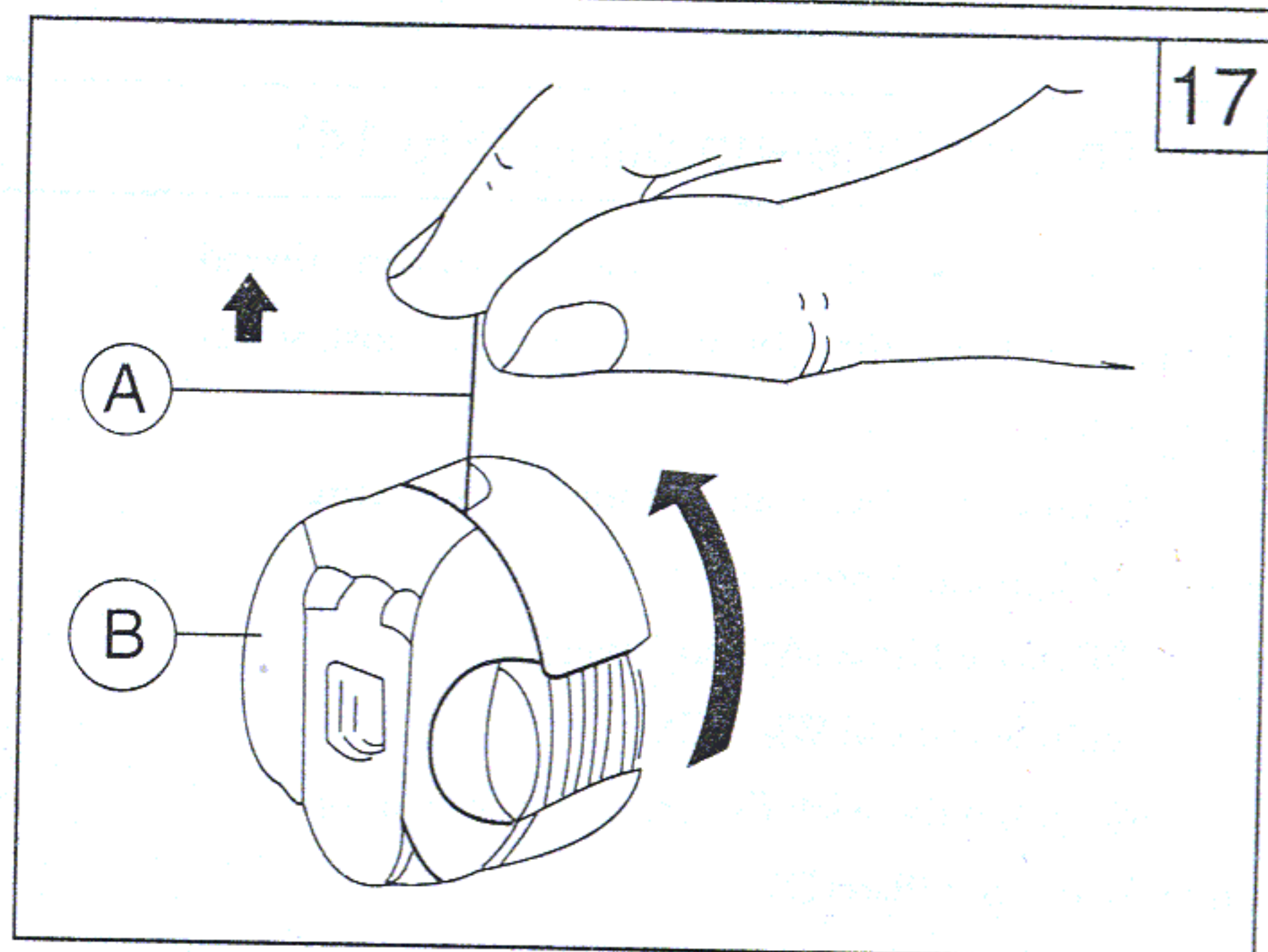
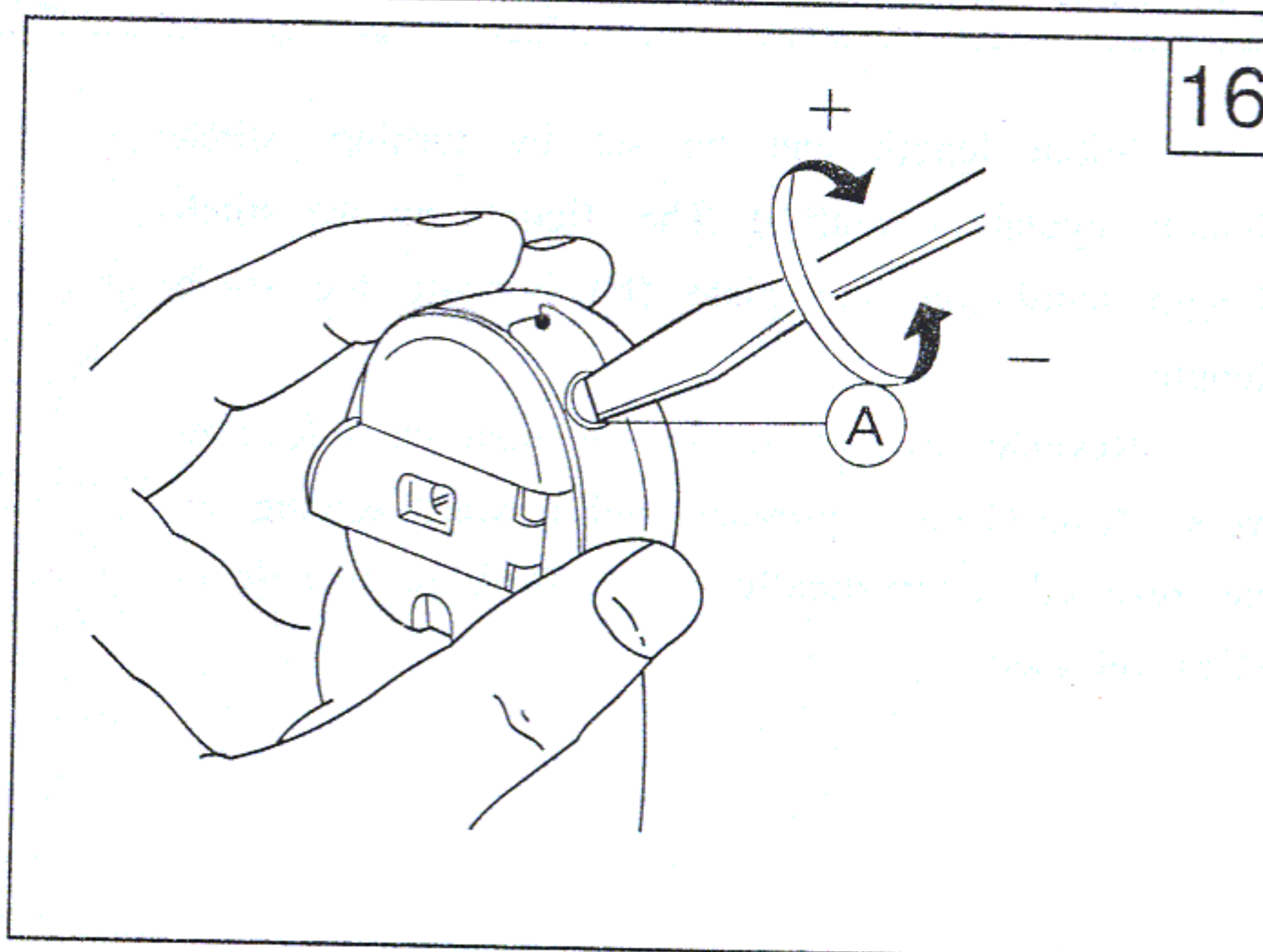
In general, the thread tension is to be adjusted in accordance with materials thread and others.

In practice, the thread tension is adjusted according to the stitches resulted to get the normal stitches.

When adjusting the bobbin thread tension, turn bobbin case tension spring screw (A) clockwise for more tension or turn the screw counter clockwise for less tension.

It is a common practice to check the bobbin thread tension. In case of polyester thread 50=, hold the end of the thread. If the bobbin case falls down slowly, the proper tension is obtained.

The needle thread tension should be adjusted with reference to the bobbin thread tension. The needle thread tension can be adjusted by changing tension of the thread take-up spring, sewing range of the thread take-up spring, tension of tension disc, and the position of thread guide.



19. Adjusting the thread take-up spring (Fig 18, 19)

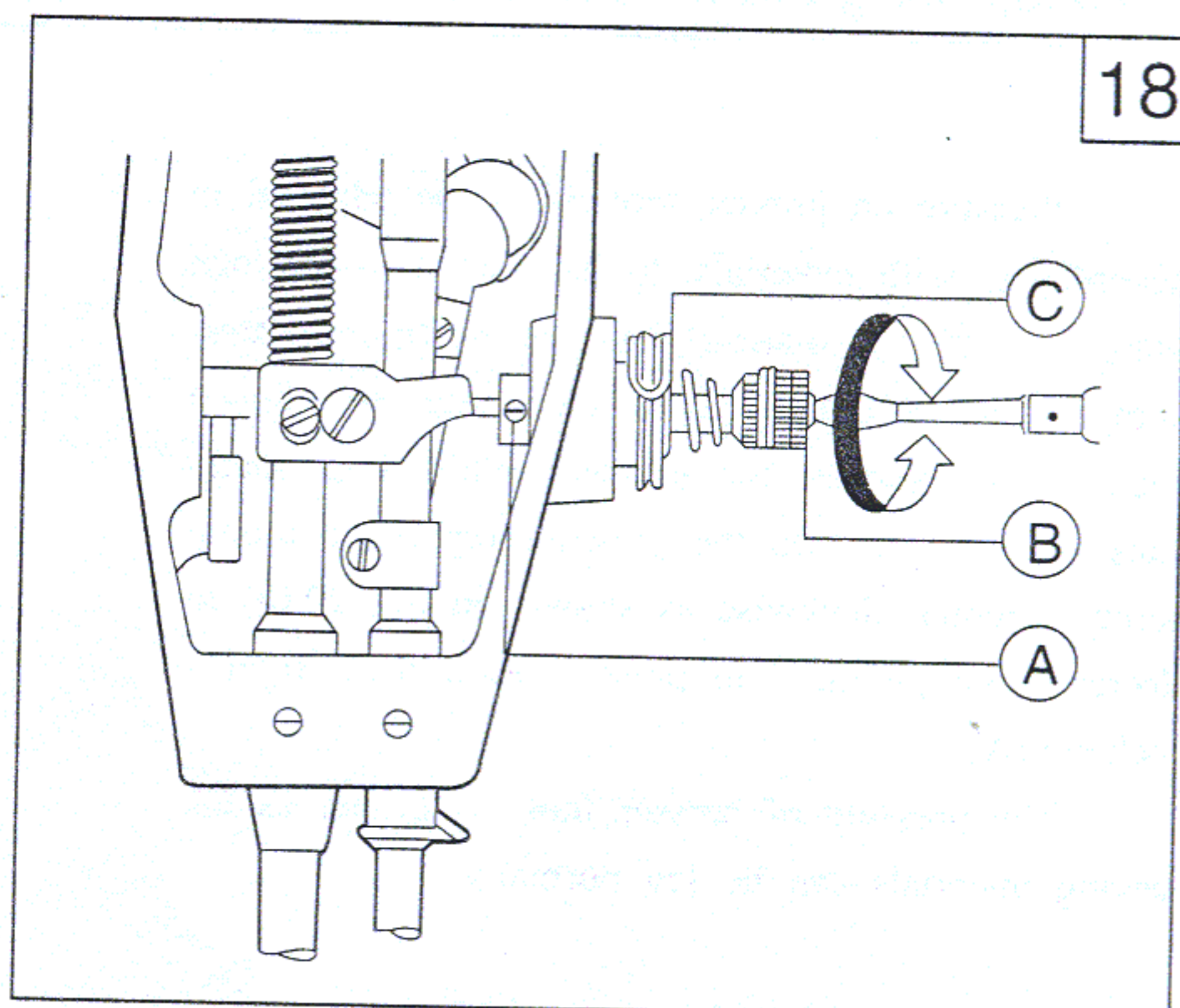
The normal sewing range of thread take-up spring is 5~8mm. For sewing light weight materials (short stitch), weaken the spring tension and widen the sewing range of spring, while for sewing heavy weight materials, strengthen the spring tension and shorten the sewing range of spring.

1) Adjusting the thread take-up spring tension (Fig.18).

Loosen tension stud set screw (A), turn tension stud (B) clockwise to make the spring get more tension, or turn the tension stud counter clockwise to make the spring get less tension, After adjustment, Be sure to tight tension stud set screw (A).

The method of adjustment:

Loose set screw (A) first, then to turn tension stud (B) counter clockwise to release the tension of

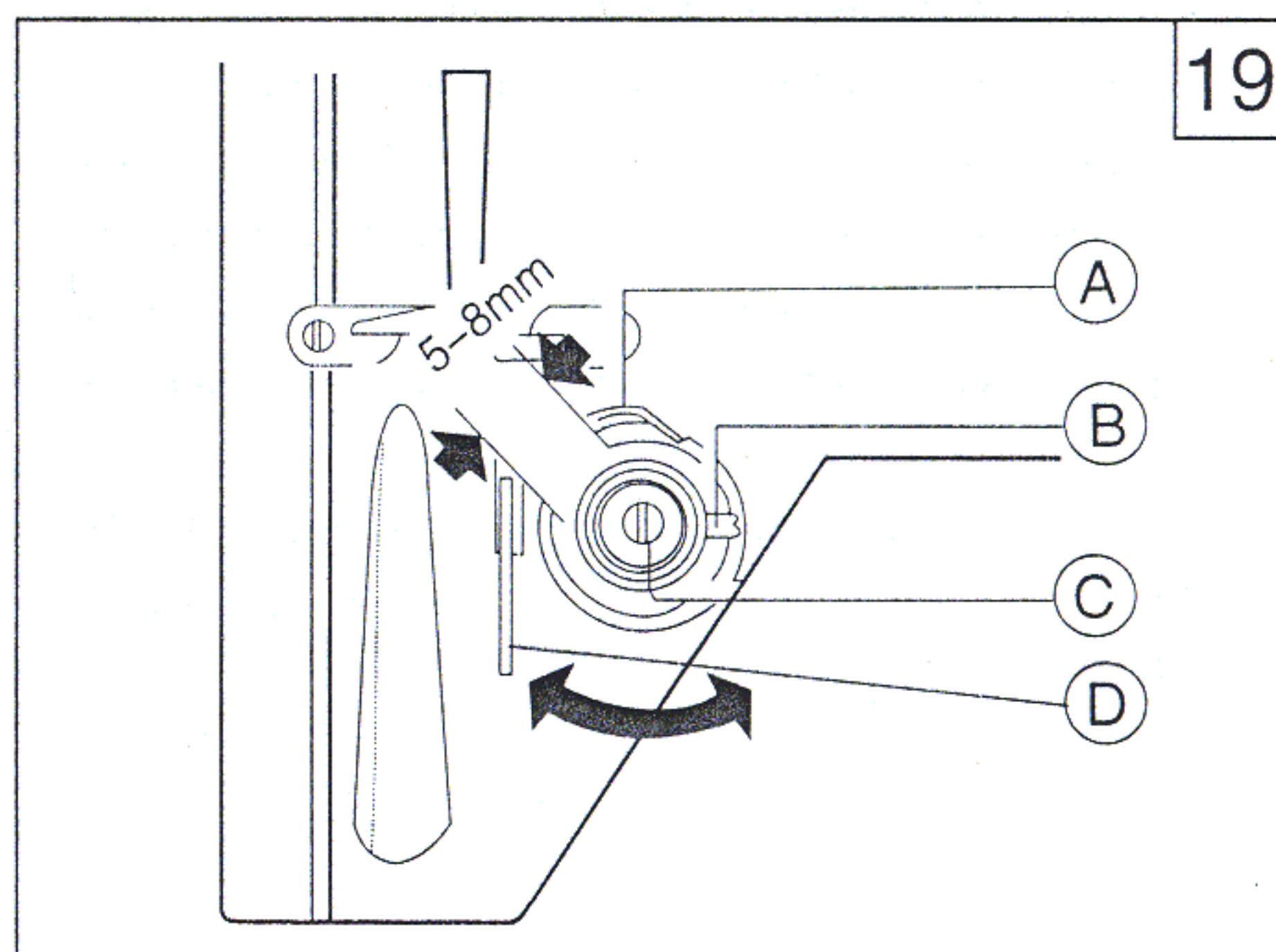


thread take-up spring(C) to zero, and to turn tension stud (B) clockwise until spring (C) just comes into contact with the stop slot on the thread take-up spring regulator, then to further turn tension stud (B) counter-clockwise by 1/2 turn. After adjustment, tighten tension stud set screw (A).

2) Adjusting the sewing range of thread take-up spring (Fig 19)

Loosen set screw (B), turn tension complete (C) clockwise to increase the sewing range or turn tension complete (C) counter clockwise to decrease the sewing range.

Before delivery, the thread take-up spring is properly adjusted. Readjustment is needle only in the case of sewing special materials or with special thread.



20. Adjusting the tension of needle thread & bobbin thread (Fig20、21、22)

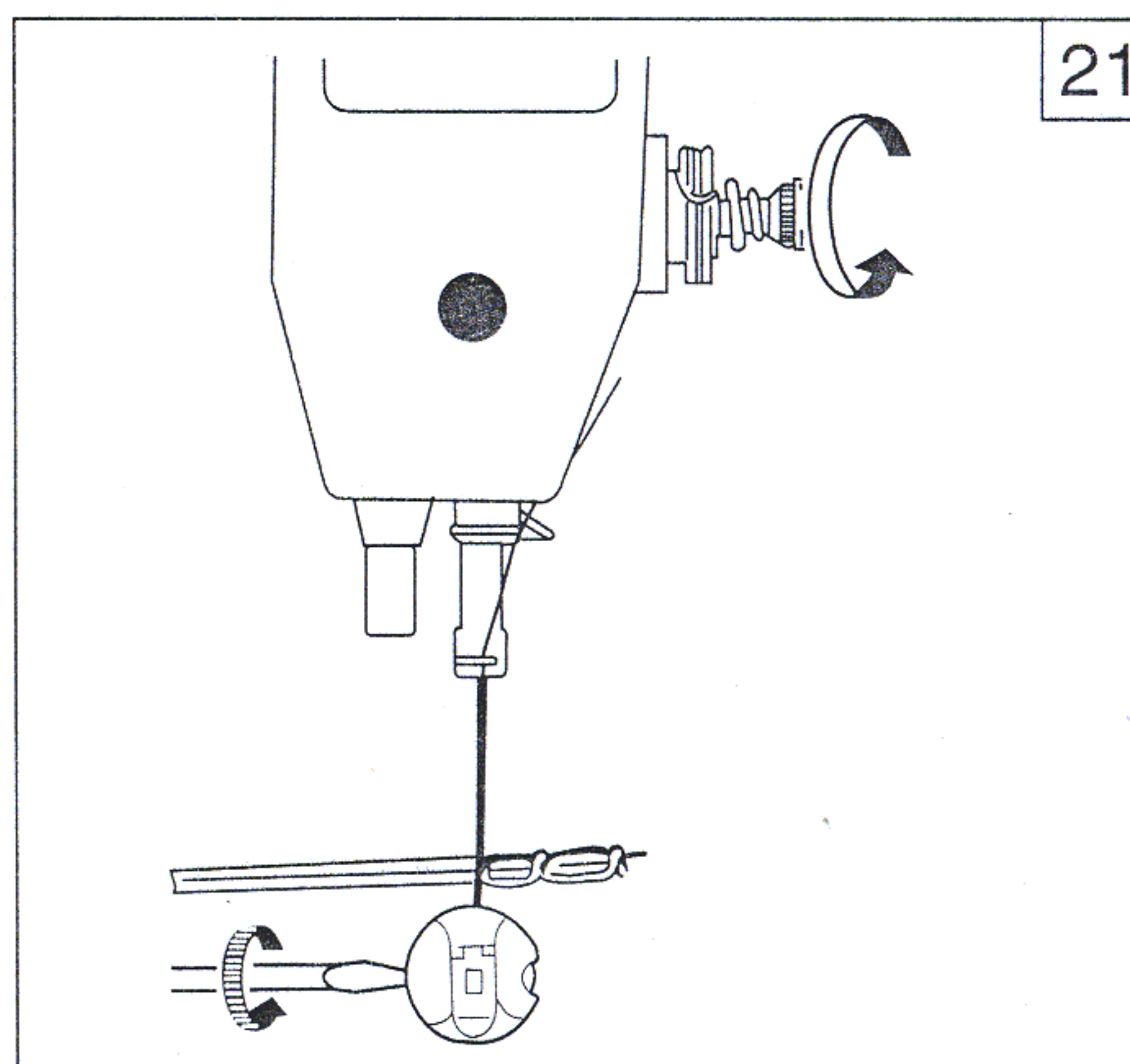
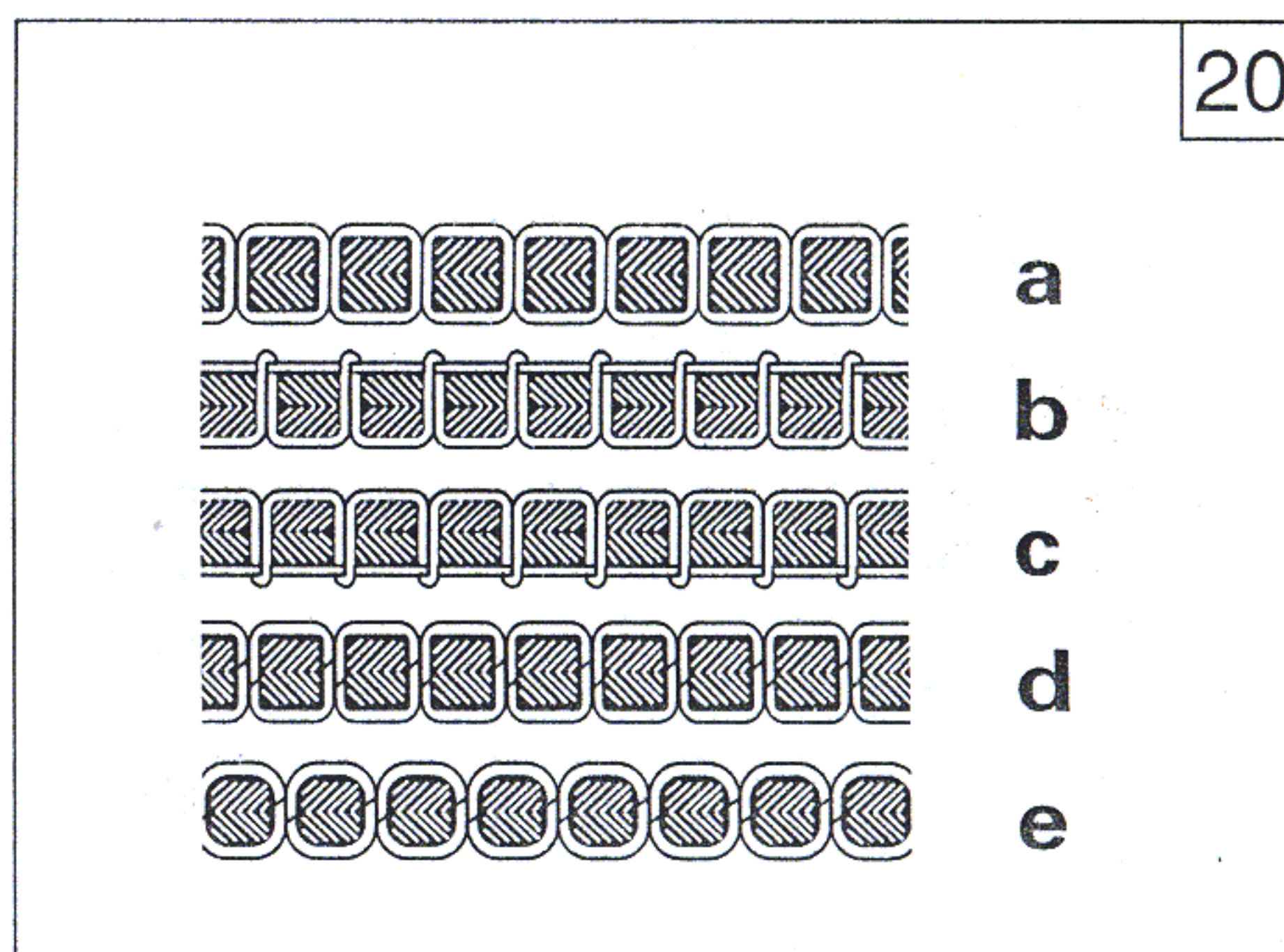
The position of the thread guide affects sewing quality, so it must be adjusted according to the materials to be sewn.

	Leftward	Center	Rightward
Thread guide position			
Material	Heavy	Medium	Light

Fig.20 shows the various type of stitch forms.

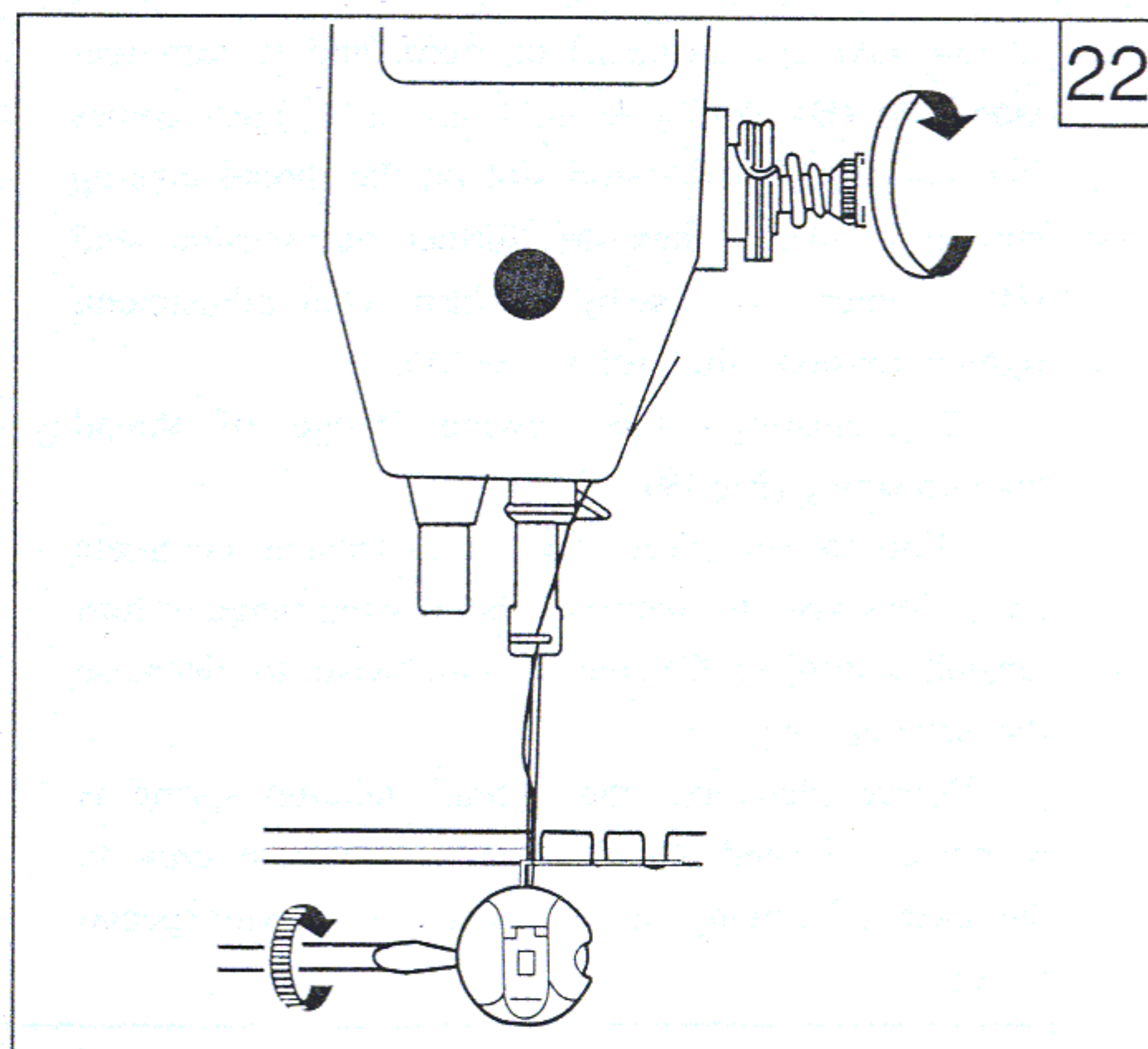
Normal stitch form should be as shown in Fig.20(a). When abnormal stitches occur with pucker or thread breakage, the tension of needle thread and bobbin thread must be adjusted accordingly.

(a) The needle thread tension is too strong or the bobbin thread tension is too weak. turn the tension regulating thumb nut counter clockwise to make the needle thread get less tension or tighten the bobbin case tension regulating screw with small plastic screw driver to make the bobbin thread get more tension (Fig.21).



(B) The needle thread tension is too weak or the bobbin thread is too strong, turn the tension regulating thumb nut clockwise to make the needle thread get more tension or turn the bobbin case tension regulating screw counter clockwise with small plastic screw driver to make the bobbin thread get less tension (Fig.22)

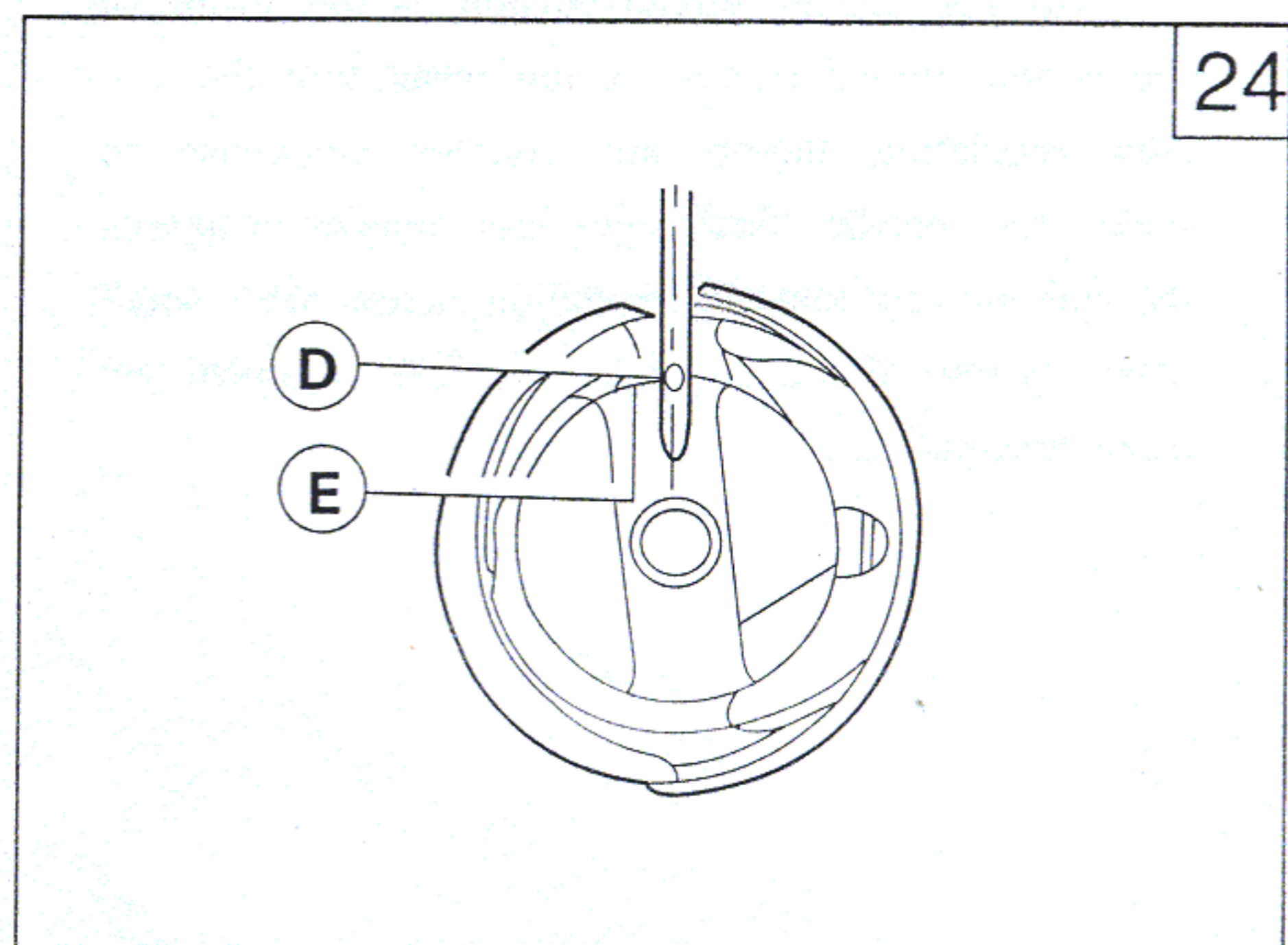
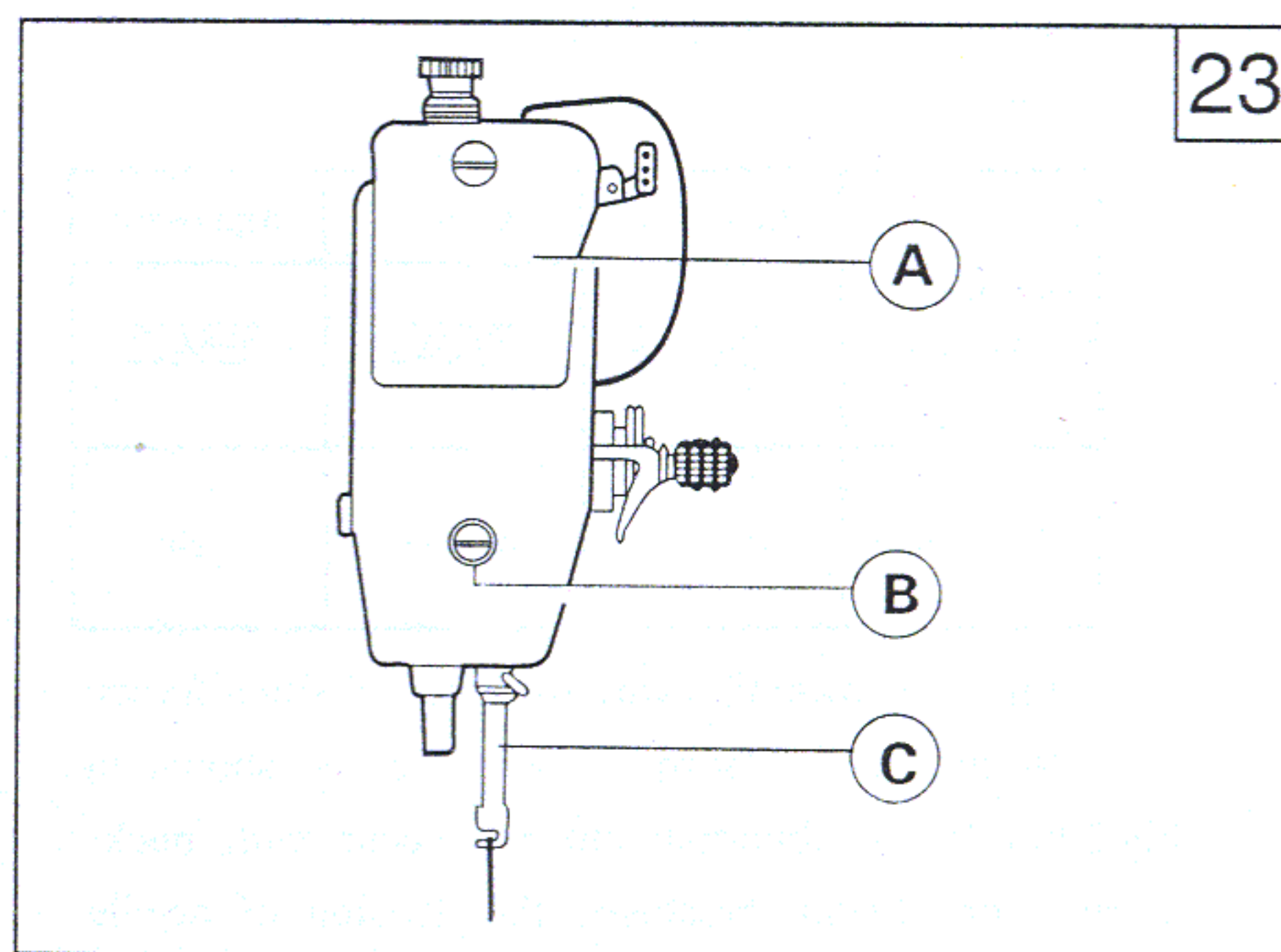
(c) Other abnormal stitches as shown in Fig.20 (d) .(e) ,adjustment can be made which reference to the above methods.



21. Timing between the needle and the rotating hook (Fig.23, 24, 25, 26)

1 Adjusting the position of needle bar

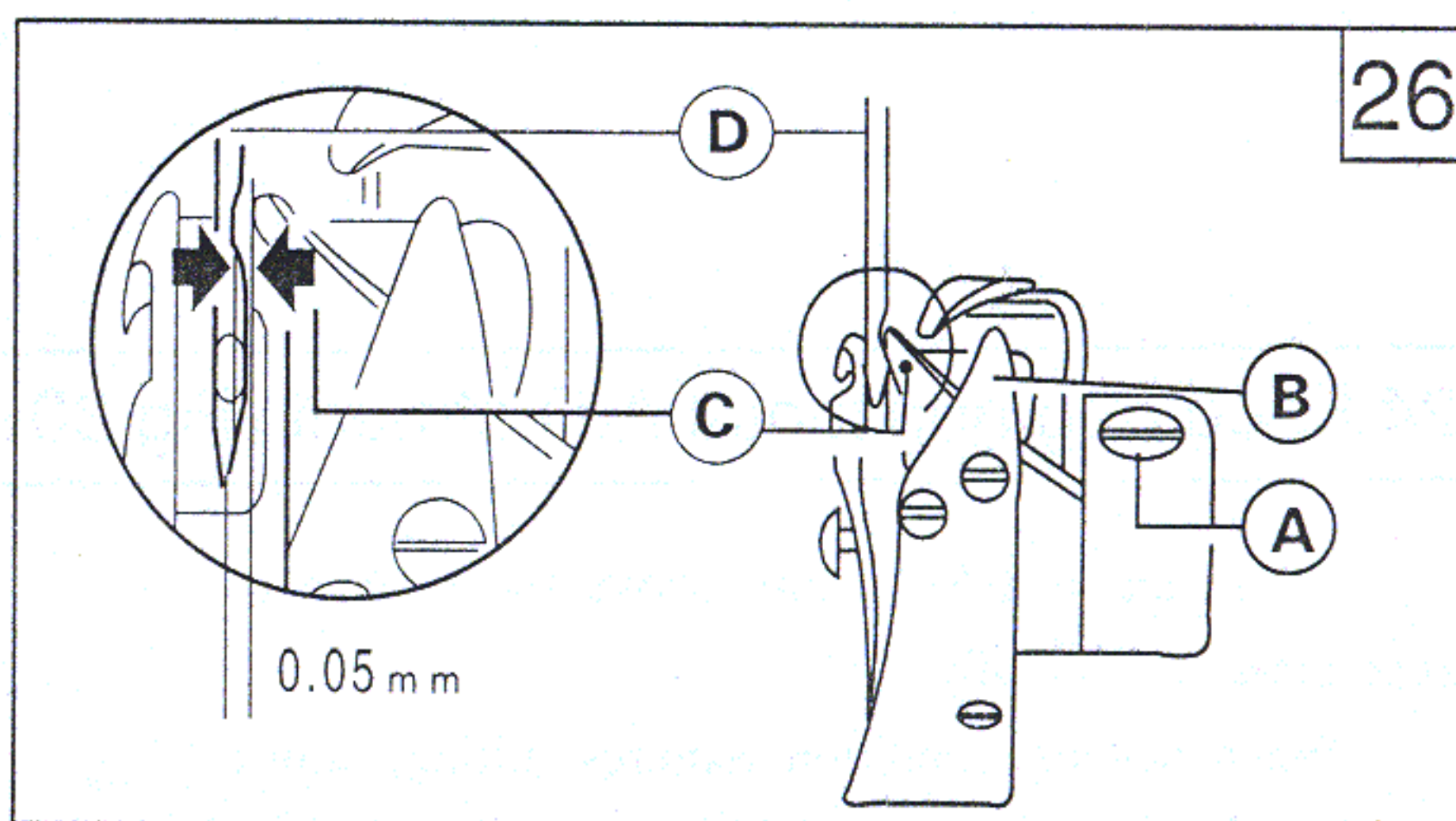
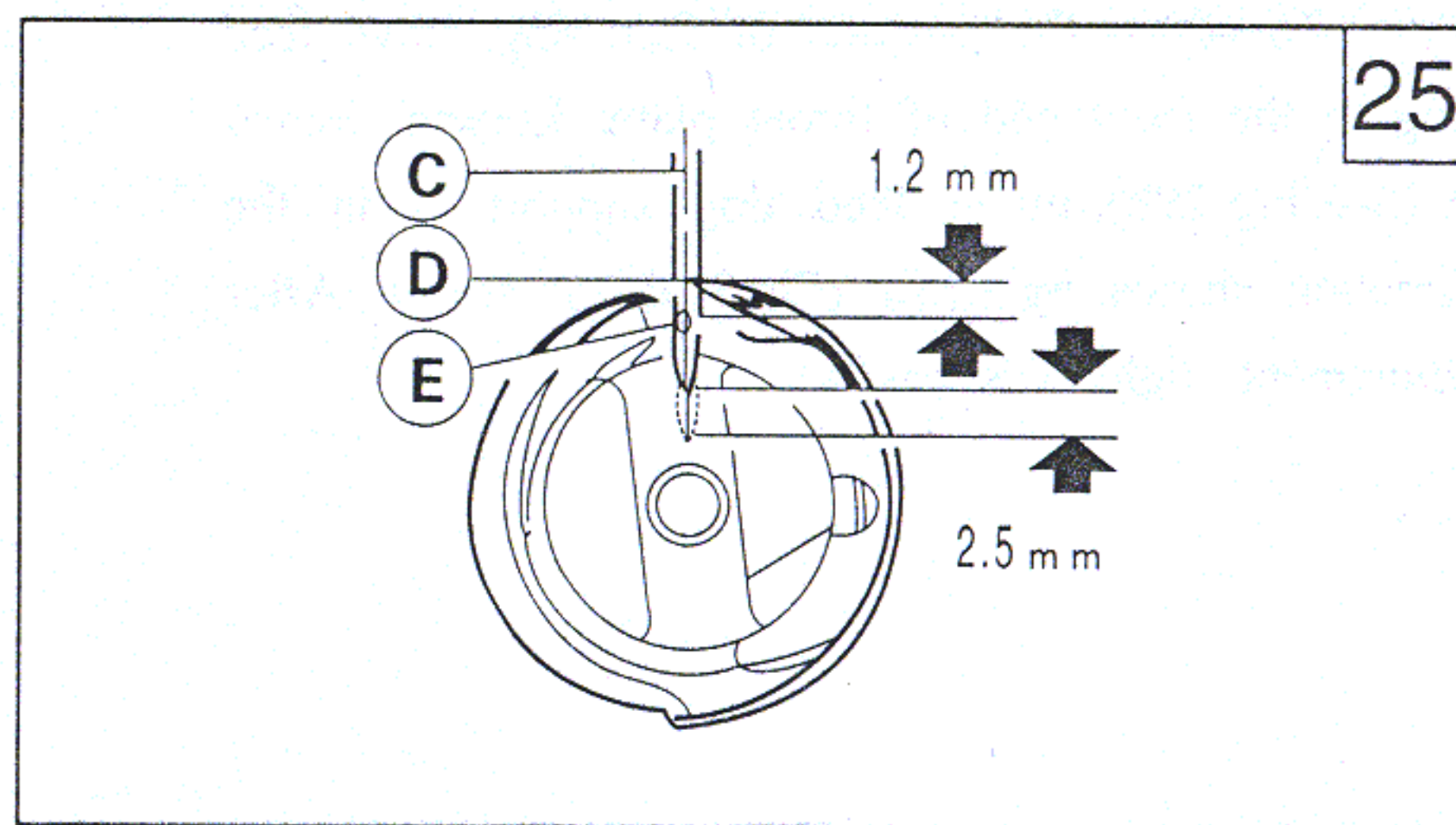
Turn the balance wheel to locate the needle bar (C) at its lowest position, remove the rubber plug in the face plate (A), then loosen the needle bar (C) connecting stud clamping screw (B) and move the needle bar (C) vertically to locate the timing position (The timing position of the needle bar is: when the needle bar at its lowest position, the center of needle eye (D) coincide with inside surface (E) of bobbin case holder as shown in Fig.24). Tighten clamping screw (B), plug the rubber plug.



2. Adjusting rotating hook point timing with needle.

The motive relation between rotating rotating and needle affects the sewing quality. Standard timing relation is: turn the balance wheel to locate needle bar to its lowest position, and lift back 2.5 mm the rotating hook point(D) should be coincides with needle center line (C), and hook point (D) is 1.2mm above the upper edge(E) of needle eye.

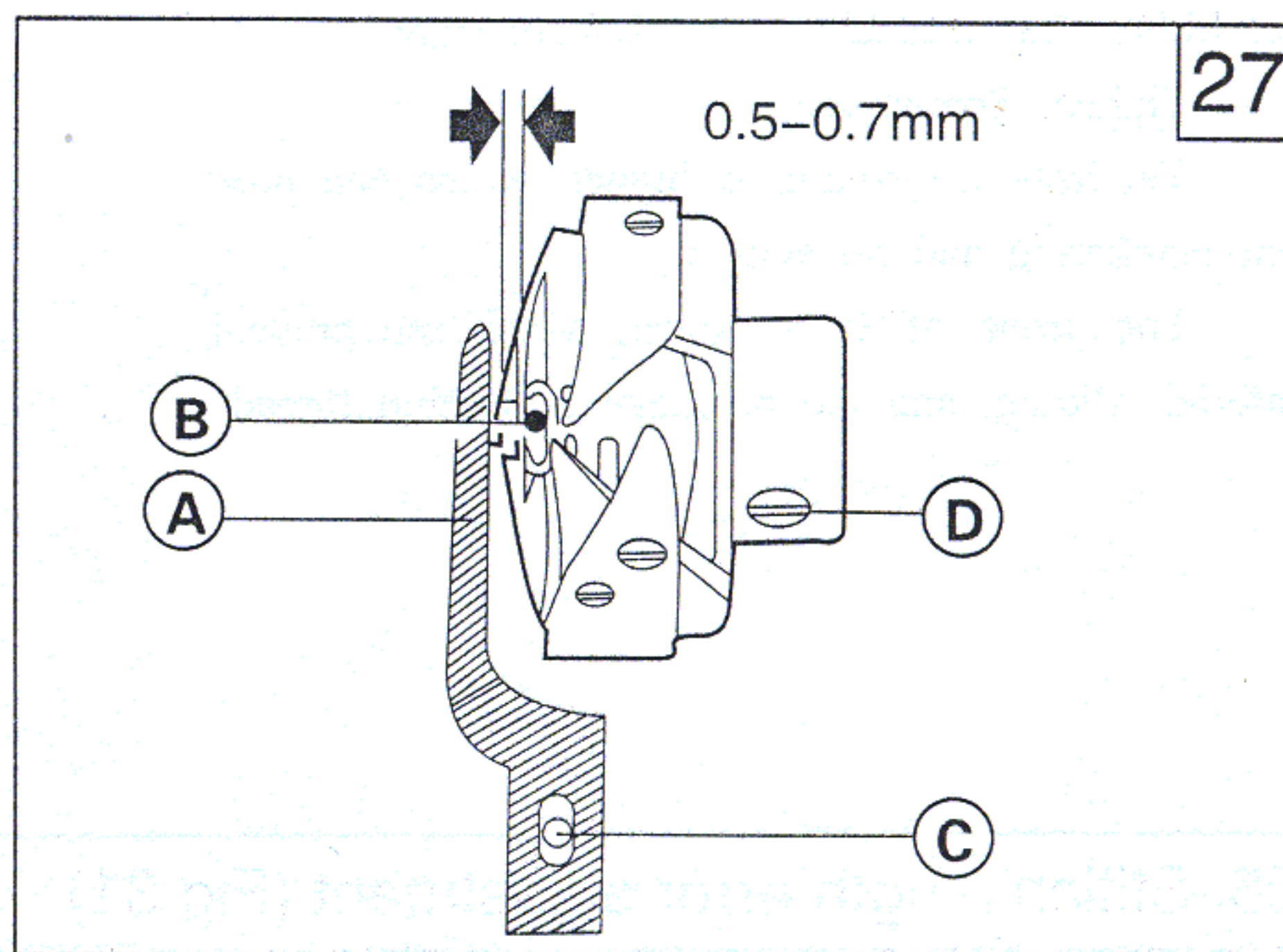
When adjusting the rotating hook point timing also to note the clearance between notch bottom of needle (D) and hook point (C) of approx 0.05mm must be maintained. (Fig 26)



22. Removing and installing the rotating hook (Fig 27)

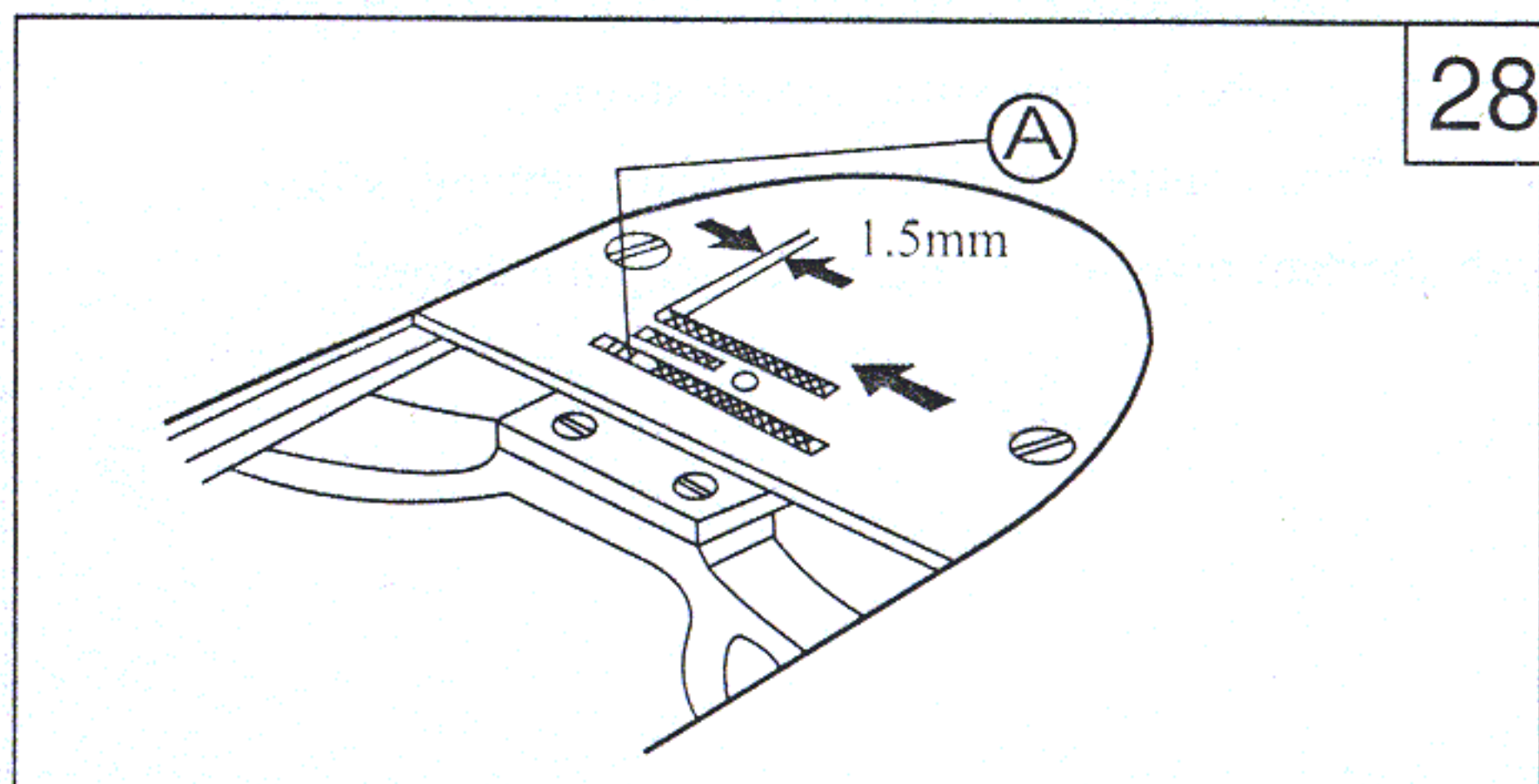
Lift the needle bar to its highest position, remove the throat plate, take down the needle and the bobbin case. loosen rotating hook bobbin case holder position bracket screw (C) and take down position bracket (A), then loosen set screw (D) of rotating hook to keep hook freely, turning around its axis, turn the balance wheel first to raise the feed bar to its highest position, at this time, take down the rotating hook slowly while turning it to keep away from the feed dog support. Installing the rotating hook can be done in reverse sequence.

The projecting flange of the position bracket (A) should be engaged in the notch (B) of the bobbin case holder, and maintain a clearance of 0.5~0.7mm between projecting flange top and the bottom of notch while installing.

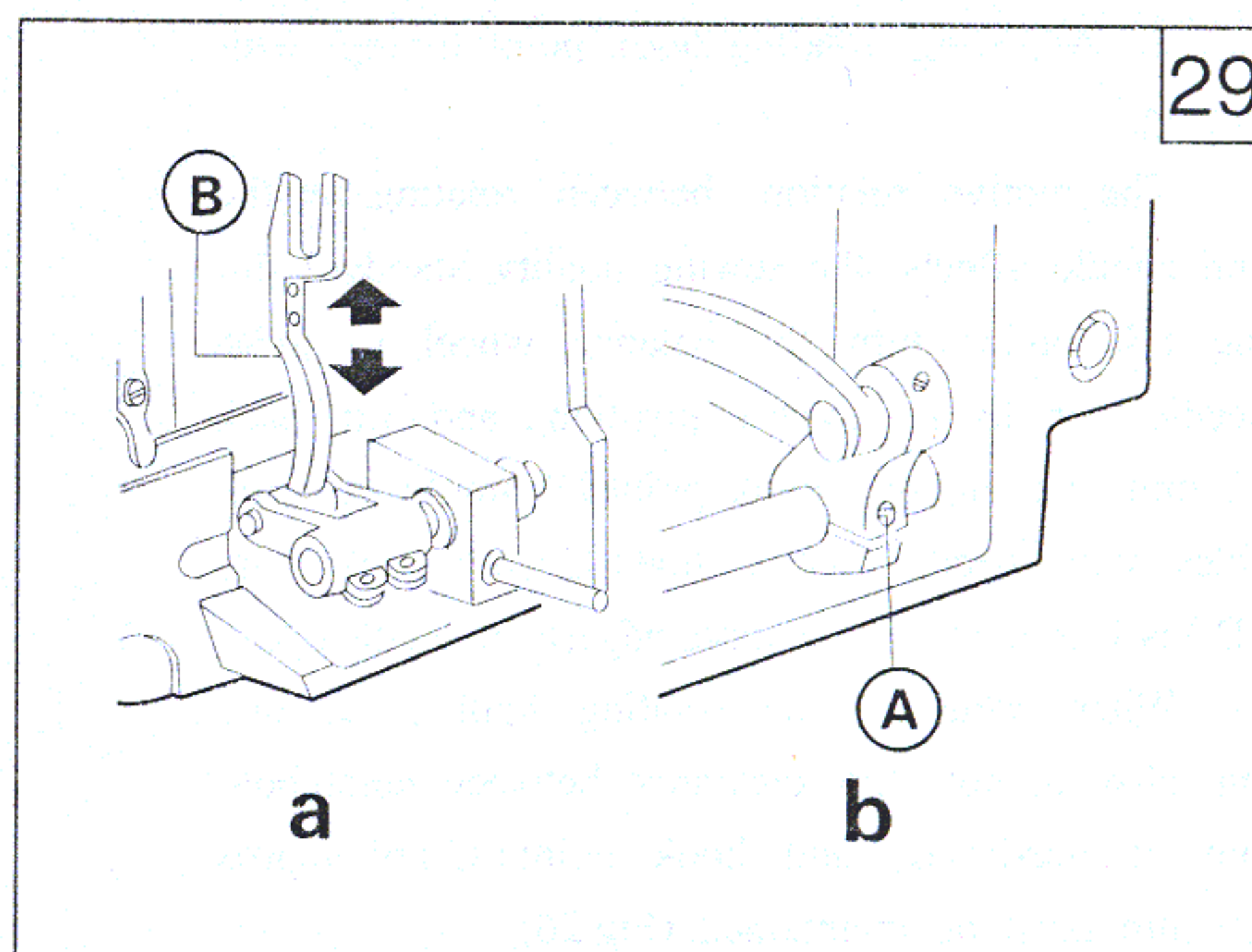


23. Installing feed dog (Fig 28, 29)

When feed amount is at the max. The front end of feed dog (A) is near the front of throat plate slot, the gauge between the two is 1.5mm. This is the standard position of feed dog.



To adjust the position of feed dog, move feed dog to the front end of throat plate, Loosen Screw A (See Fig 29b), move feed dog support B in the direction shown by arrow (Fig.29a) to adjust. After adjustment tighten Screw(A).



24. Feed dog horizontal Adjustment (Fig 30)

Feed dog is 0.8~1.2mm above the surface of throat plate horizontally.

When sewing condition requires tilting, adjust like this:

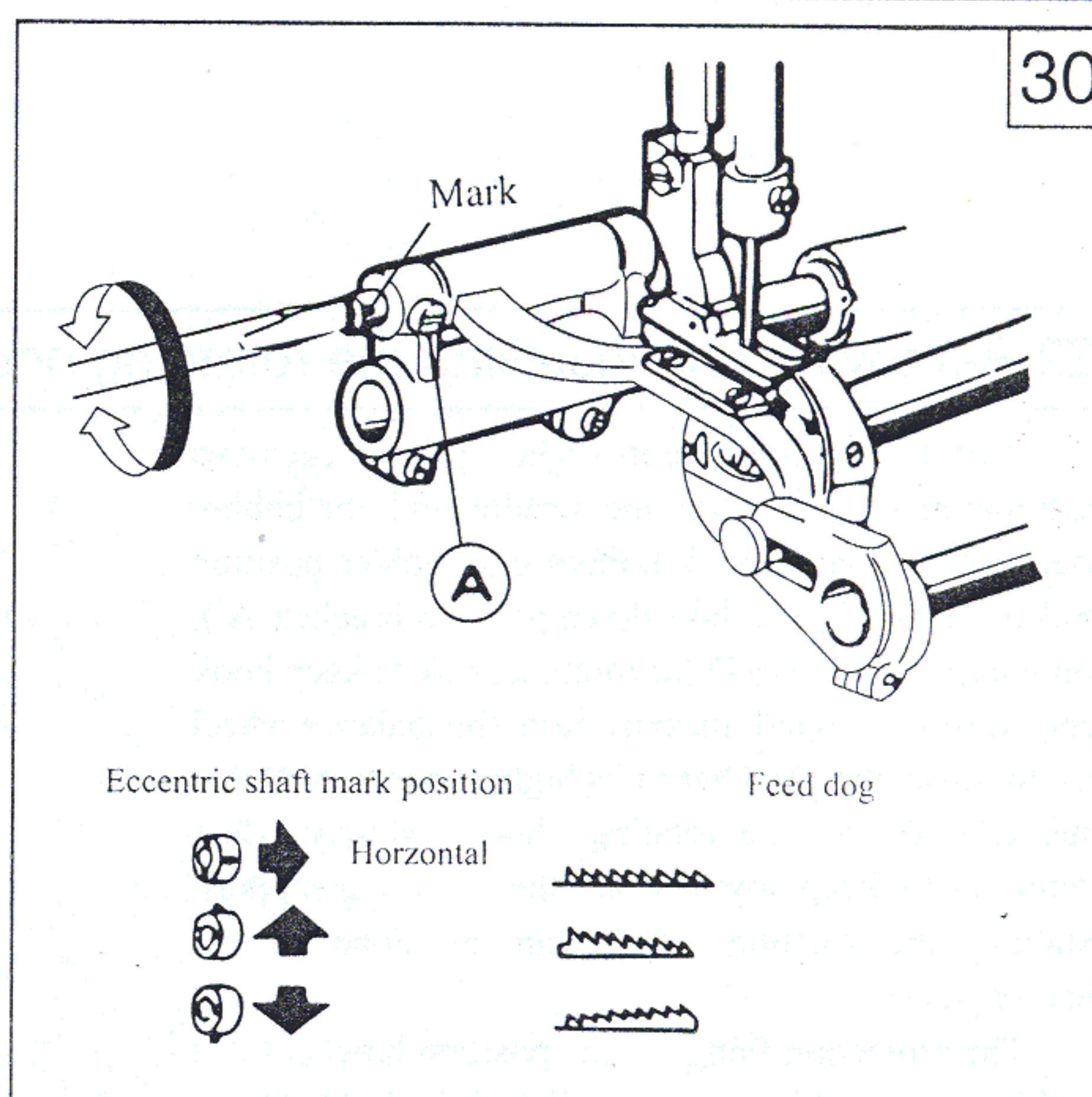
loosen Screw(A)

Press against the slot of eccentric shaft with a screwdriver to turn eccentric shaft left and right.

Tighten Screw(A).

The front of feed dog is higher, which can prevent perckering and no skipping.

The front of it is lower, which can prevent maferial sliding and no breakage of bobbin thread.

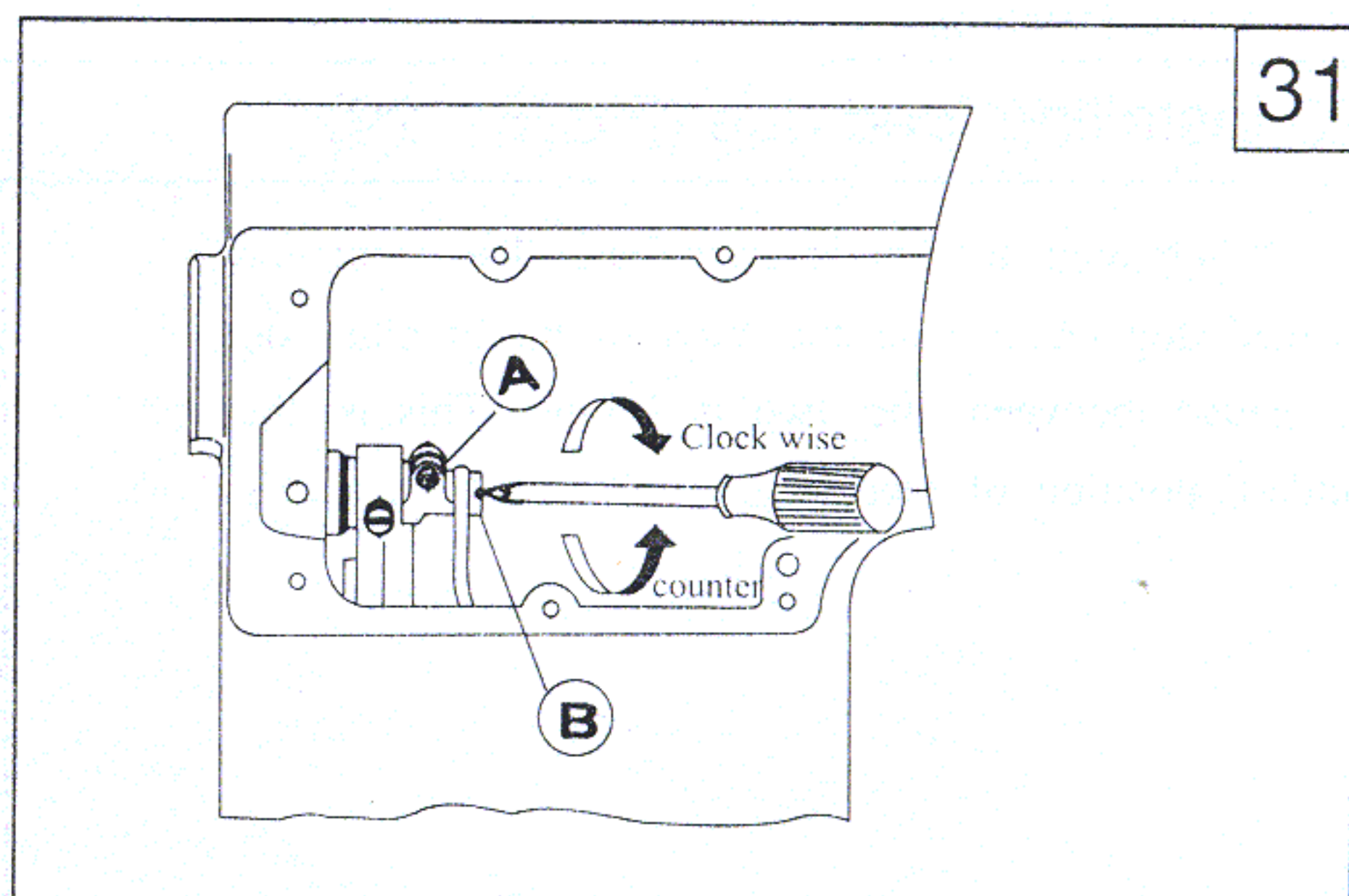


25. Stitich length error adjustment (Fig 31)

Loosen Screw (A), and turn stitch length adjusting cam (B).

Turn clockwise: forward sewing, stitch length enlarged; reverse sewing, stitch length shorten.

Turn counter-clockwise: forward sewing, stitch length shorten; reverse sewing, stitch length enlarged.

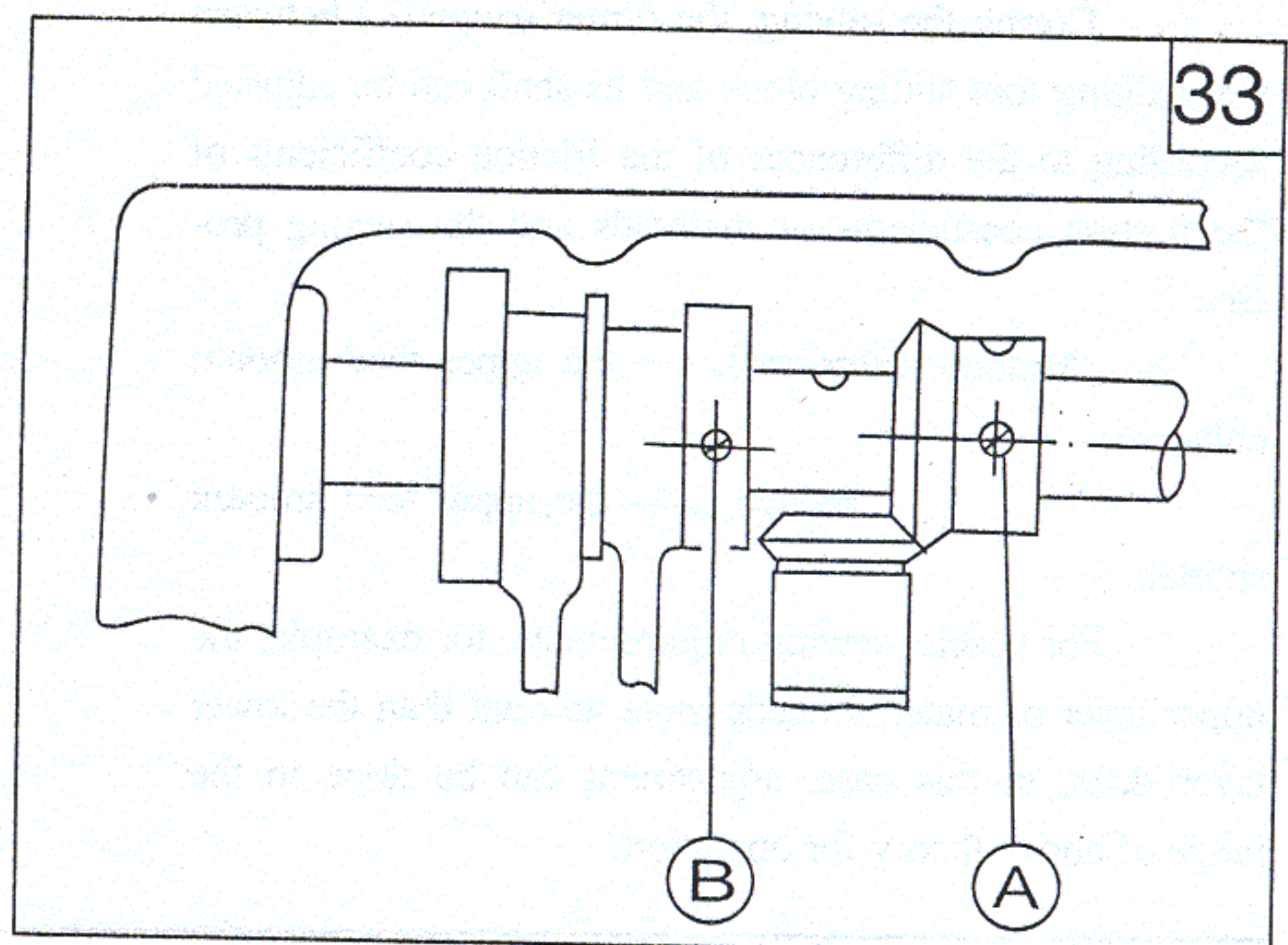
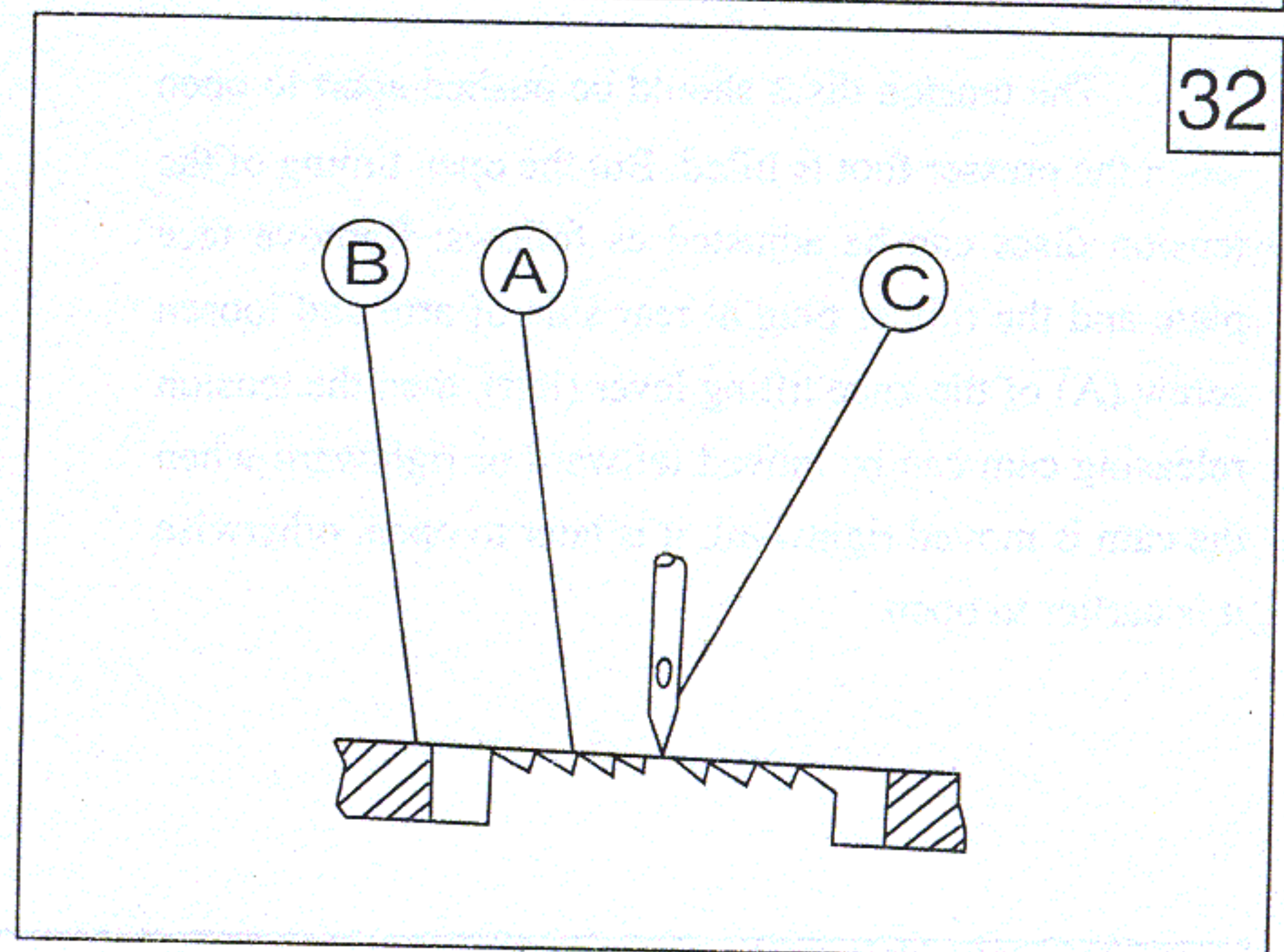


26. Feed timing adjusting (Fig 32、33、34)

1、Standard position

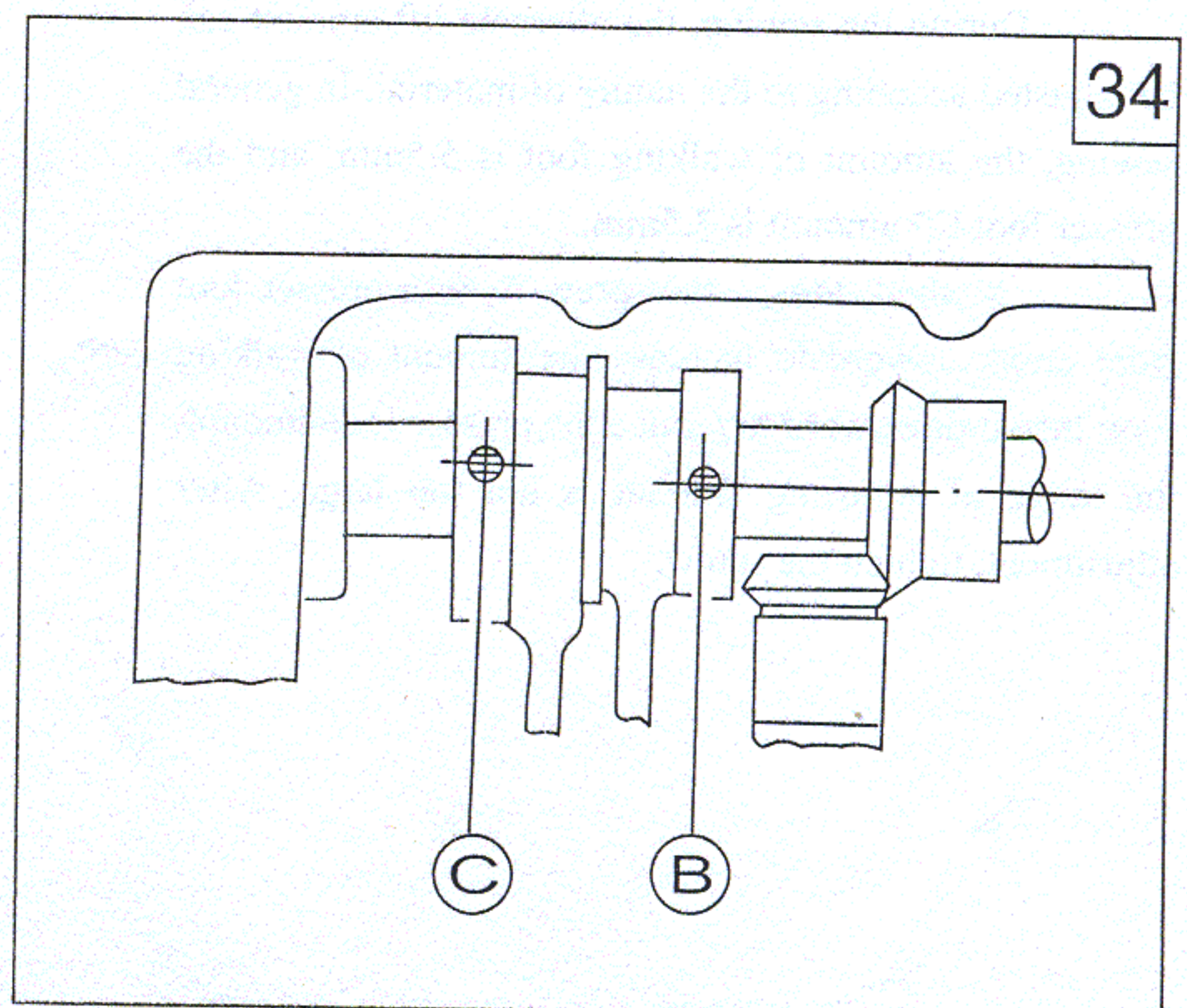
Turn balance wheel to lower Feed dog (A) till it is horizontal with the surface (B) of throat plate, at the moment, the tip of needle (C) should be horizontal with the surfaces of throat plate and feed dog.

Adjustment can be done by adjusting the position of feed cam and feed dog lift cam.



2、Installing feed dog lift cam (See Fig 33)

Open the back side cover, turn balance wheel by left hand counter-clockwise, take Screw A as for the standard, the center of Screw B is slightly a little lower than the center of Screw A.

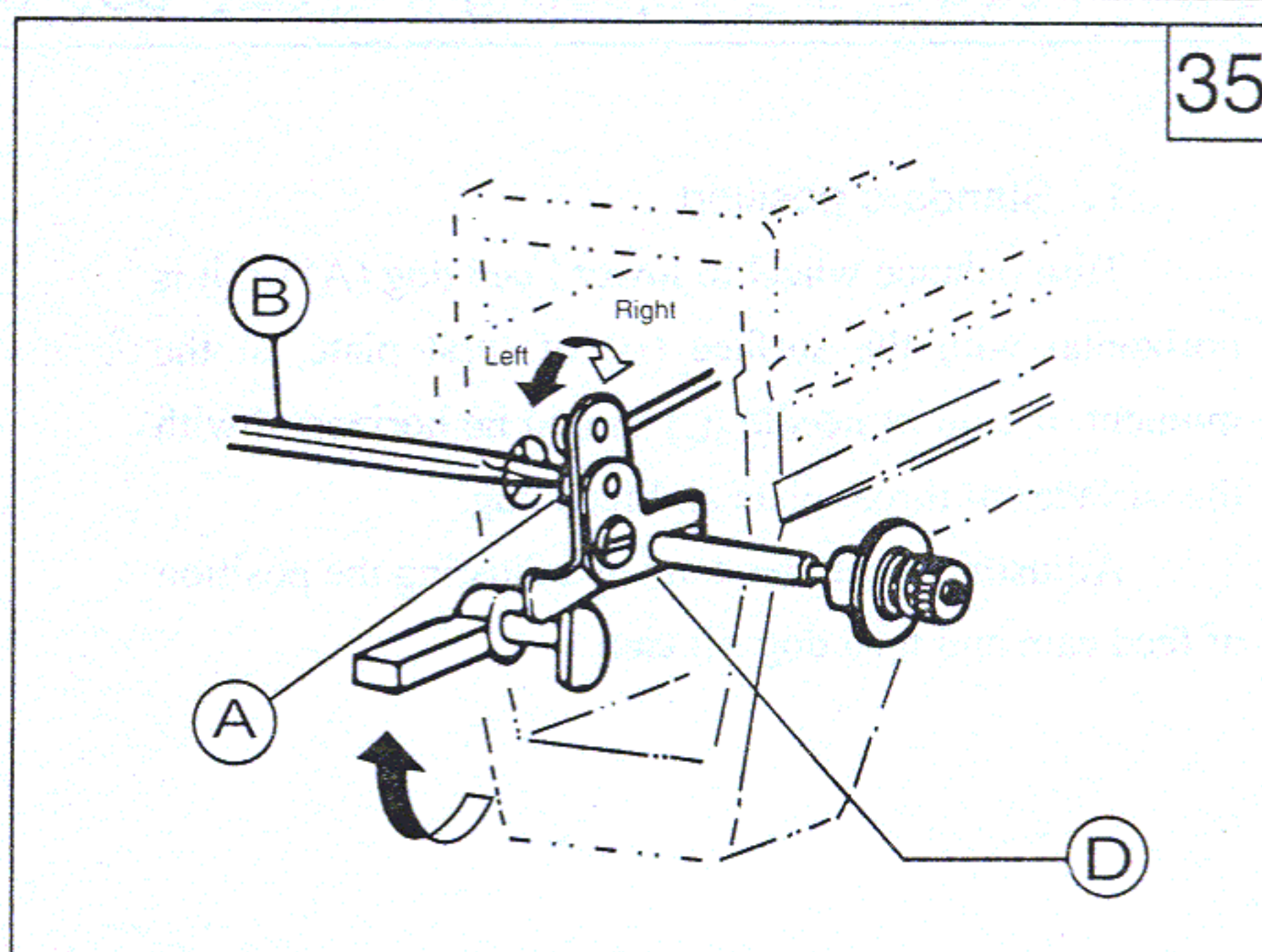


3、Installing feed cam (See Fig 34)

Continuously turn balance wheel, take Screw (B) as for standard, the center of Screw (C) is slightly a little higher than the center of Screw (B).

27. Adjusting the tension releasing mechanism (Fig 35)

The tension discs should be pushed apart to open when the presser foot is lifted. But the open timing of the tension discs can be adjusted as follows: Remove face plate and the rubber plug at rear side of arm and loosen screw (A) of the knee lifting lever (left), then the tension releasing cam can be moved leftward or rightward when the cam is moved rightward, it is later to open, otherwise it is earlier to open.



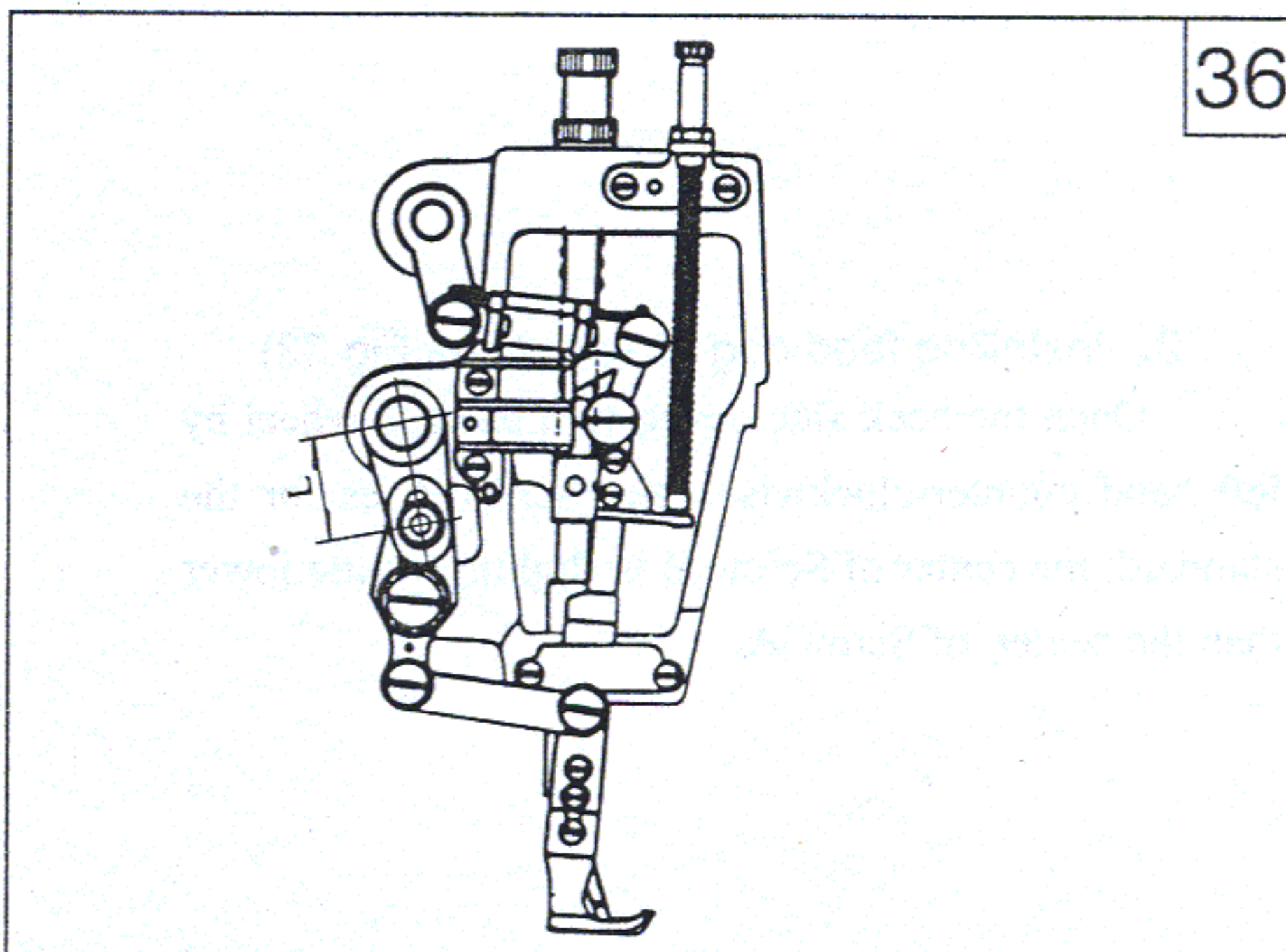
28. Upper feed adjustment (Fig 36)

During the sewing, the center gauge (L) between the walking foot sliding block and its shaft can be adjusted according to the differences of the friction coefficients of the friction coefficients of materials and the sewing process.

Method: Increase L — the upper feed amount enlarged

reduce L — the upper feed amount shorten

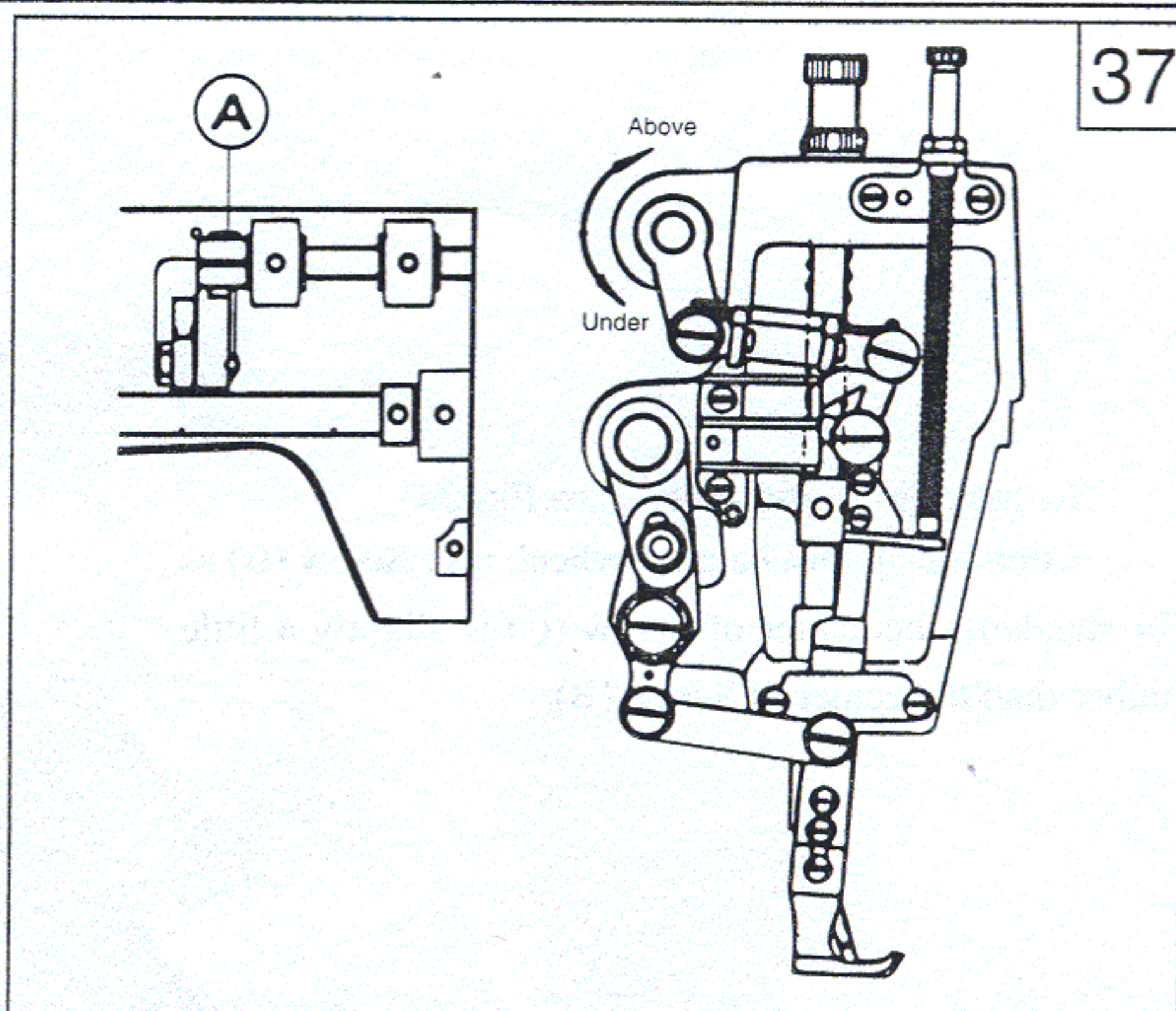
For special sewing requirements, for example, the upper layer of material needs more amount than the lower layer does, in this case, adjustment can be done in the range of above theory for operation.



29. Adjusting presser foot alternate lift mechanism (Fig 37)

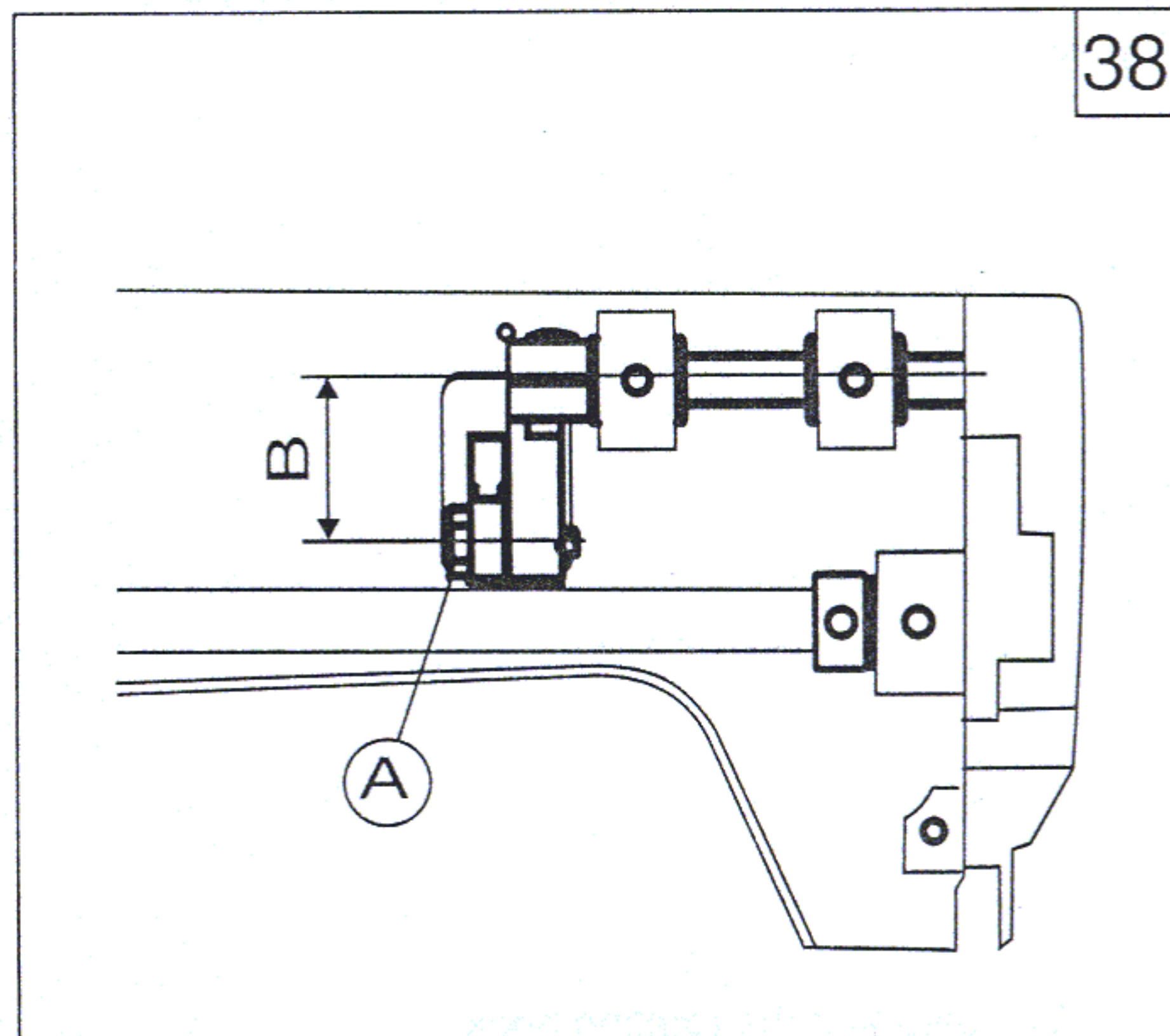
During the sewing, the alternate lift amount can be adjusted according to the nature of material. In general sewing, the amount of walking foot is 5.5mm, and the presser foot lift amount is 3.5mm.

Method: loosen the screw A. turn presser foot front crank upward to increase the amount of walking foot; turn it downward to reduce the presser foot amount, the range of adjusting amount is not too large. After adjustment, tighten the screw.



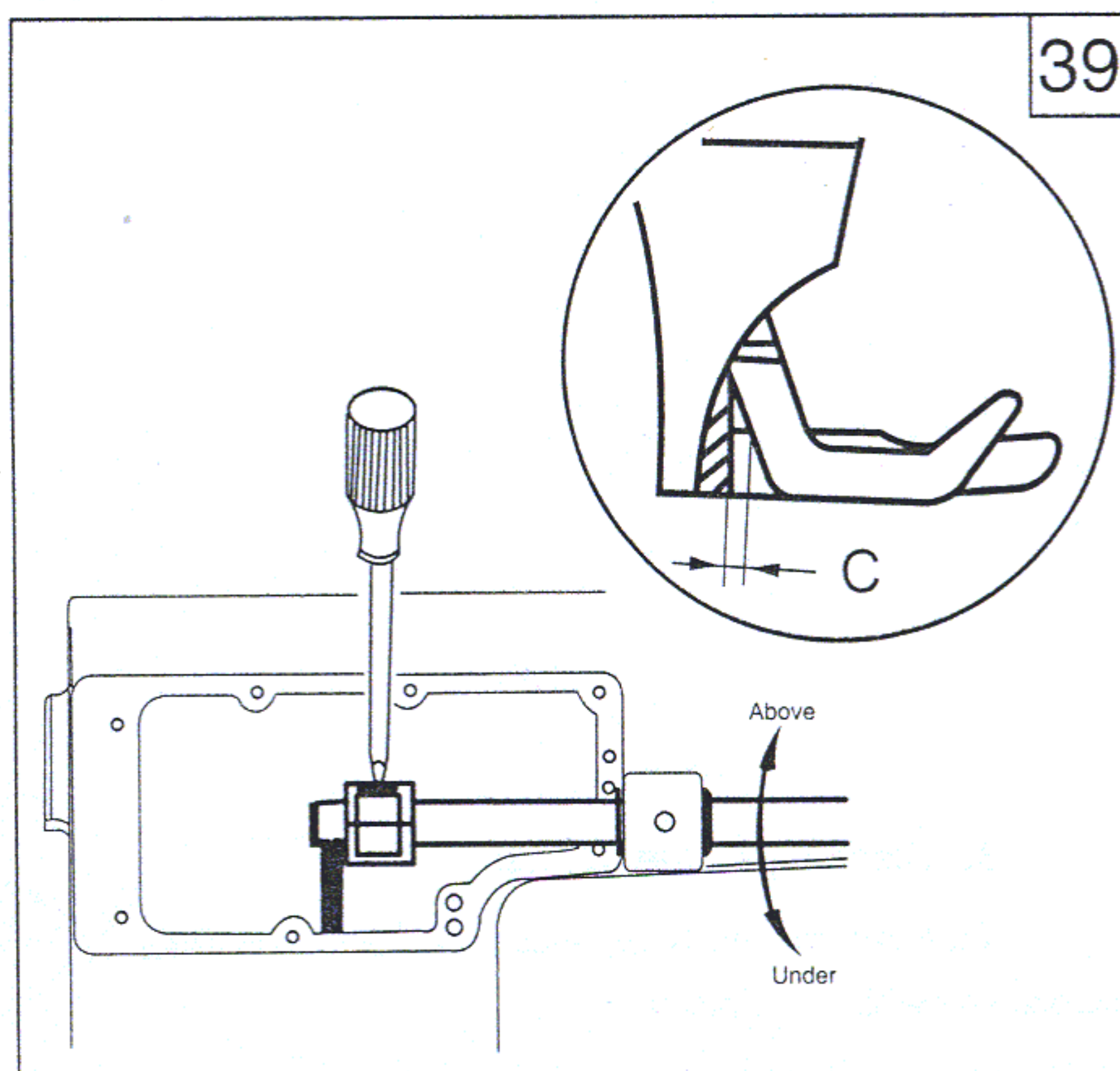
30. Adjusting the lift amount of presser foot together with walking foot (Fig 38)

The lift amount of walking presser foot together with presser foot can also be adjusted slightly. When adjusting, loosen screw (A) adjust its center distance B between the screw (A) and the presser foot lift shaft. The lift amount is increased as to shorten the center distance B, and the lift amount is decreased as to widen the center distance B. After adjustment, tighten the nut again.



31. Adjusting the clearance between presser foot and walking foot (Fig 39)

In sewing operation, for preventing the walking foot from striking on presser foot a proper clearance C of approx. 1.5mm should be maintained between them. When the clearance is too small or too big, necessary to adjust, loosen rear crank screw and turn the rock shaft, then the walking foot moves near the needle bar. When adjust, be sure to note the fixed number of the clearance C.

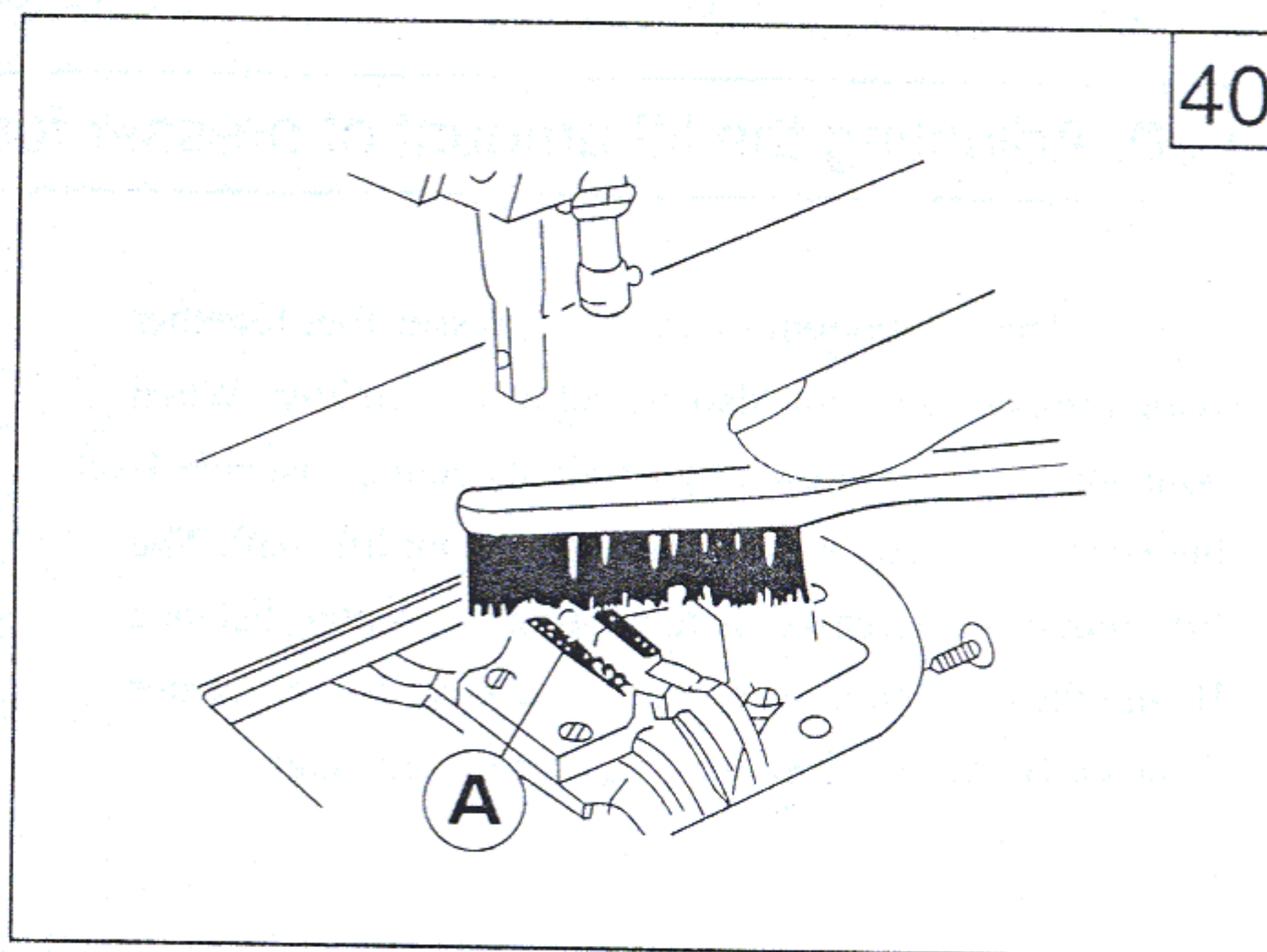


32. Periodical cleaning (Fig 40, 41, 42)

Clean the feed dog, the rotating hook, the bobbin case, the oil pump, filter screen and the like periodically according to customer's usage.

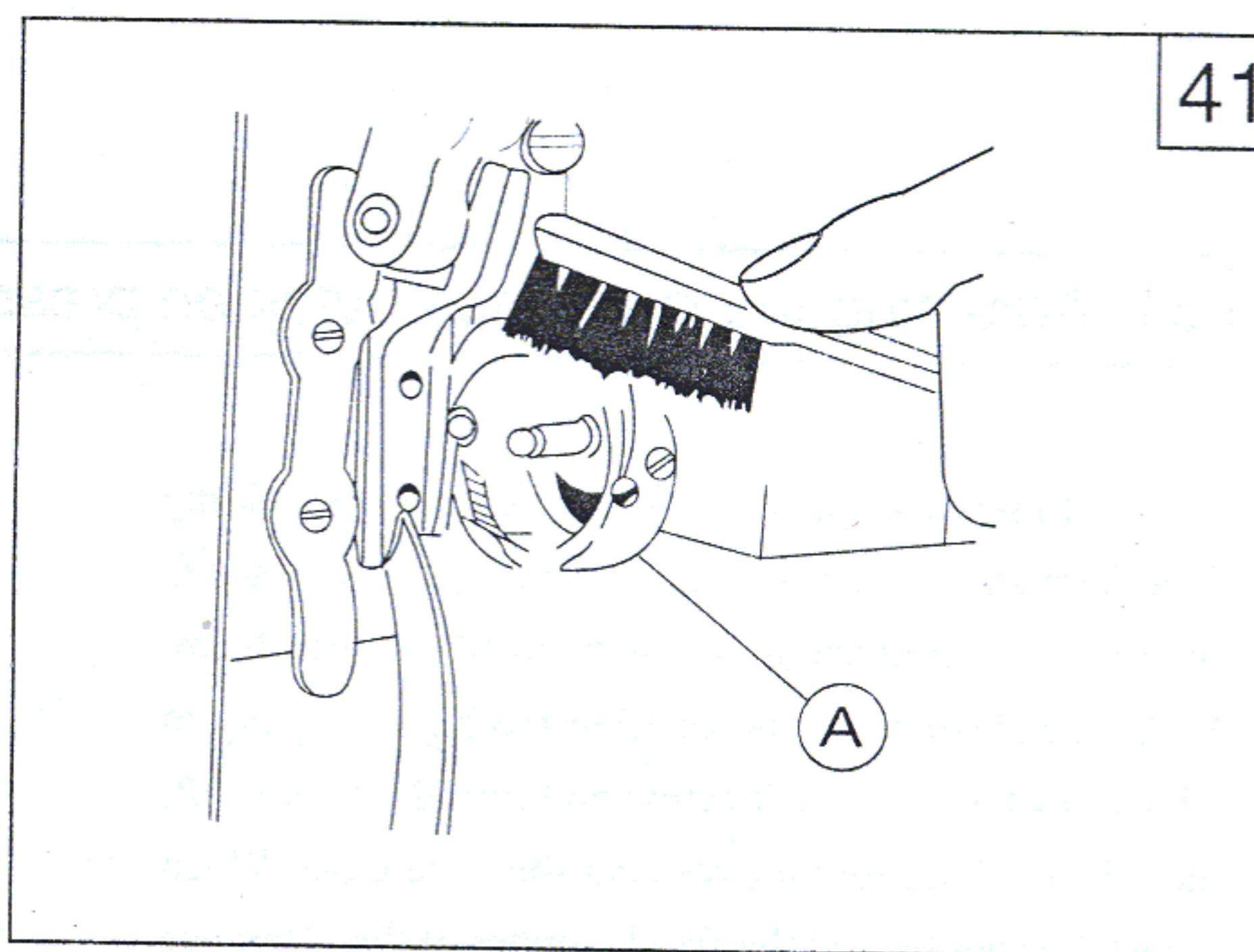
1、Cleaning the feed dog

Remove the throat plate, clean off all the dust and lint on the slit of the feed dog (A), then installing the throat plate.



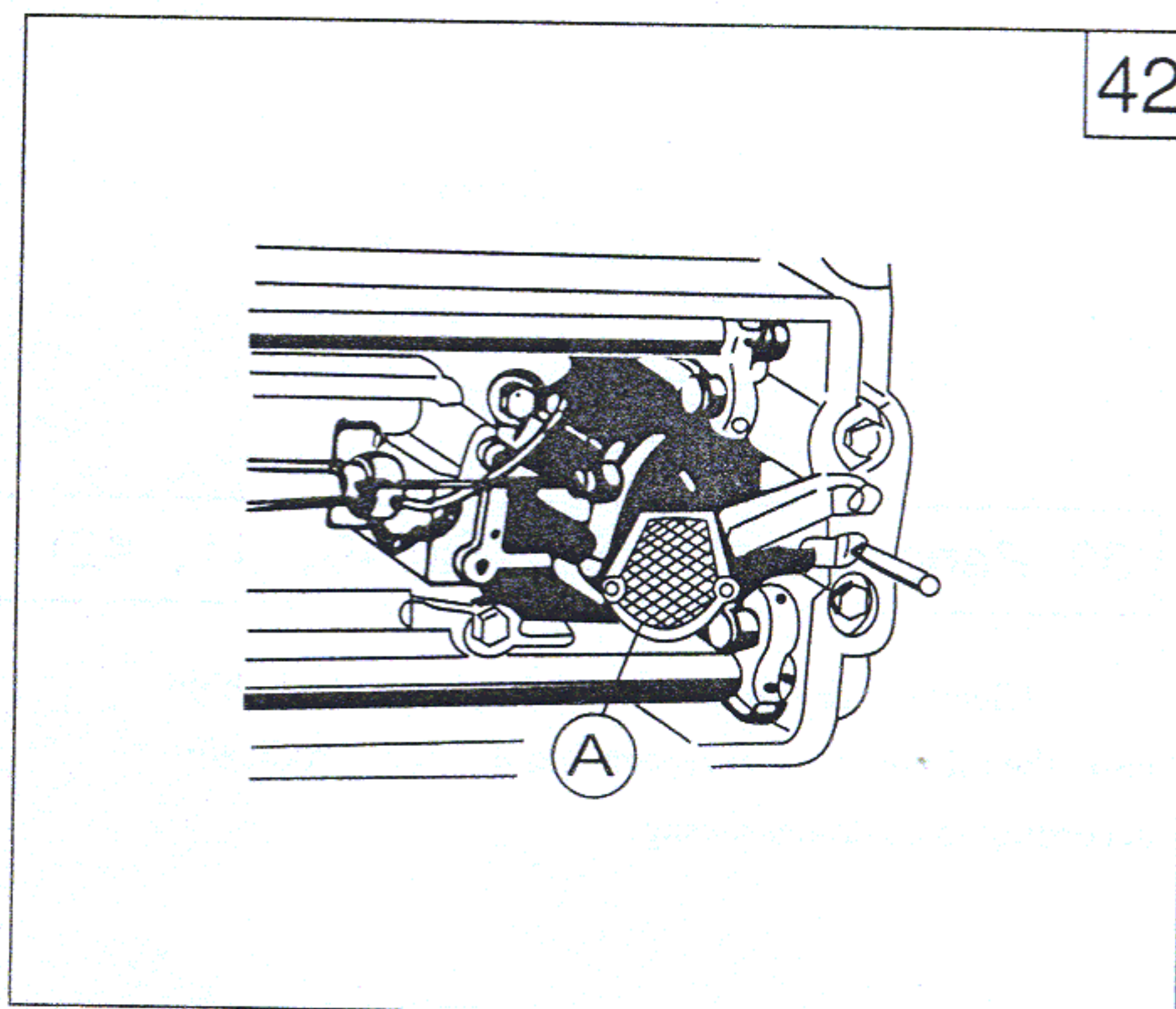
2、Cleaning the rotating hook

Clean off all the dust around the rotating hook (A), and clean the bobbin case with soft cloth.



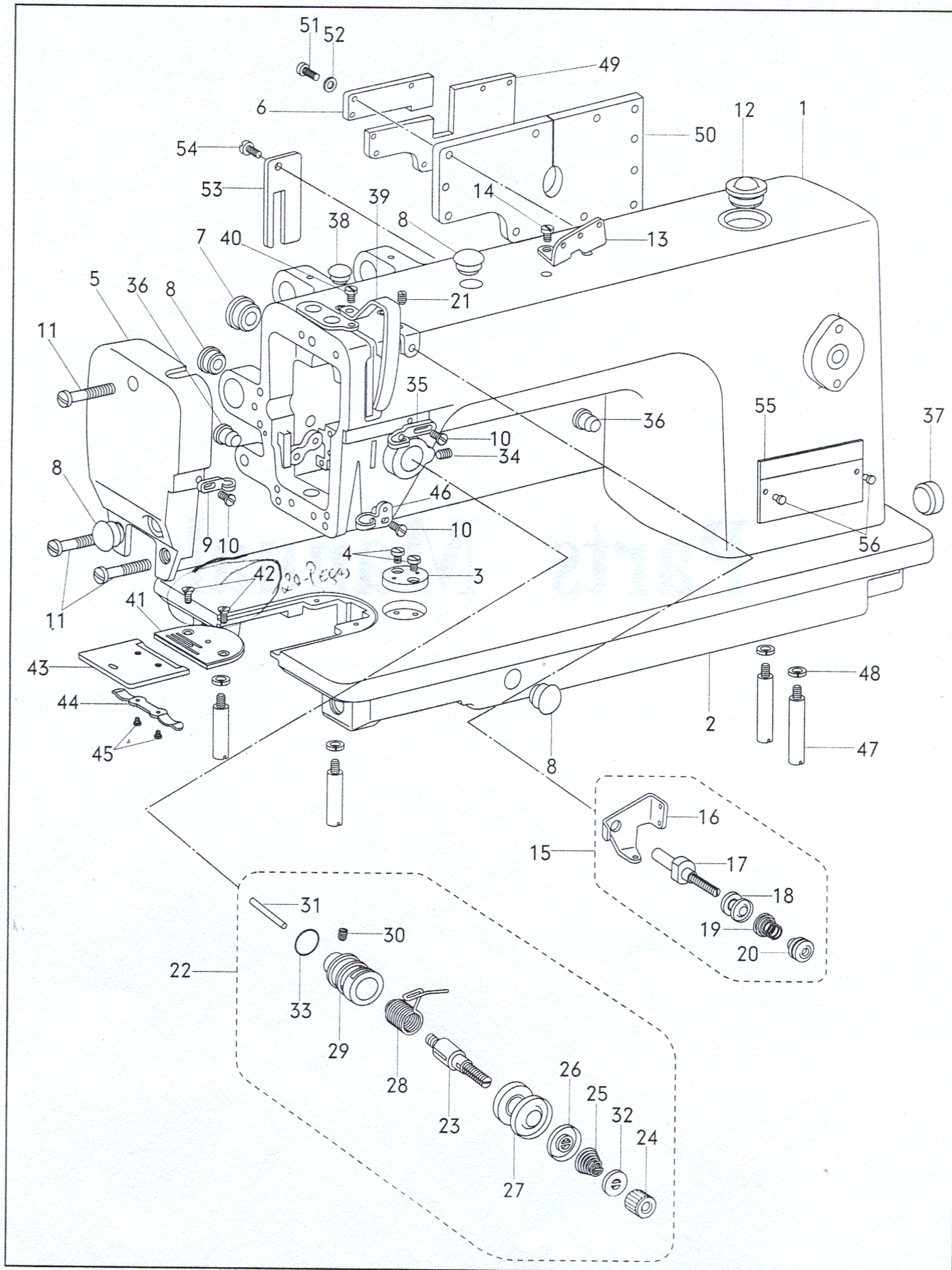
3、Cleaning off the oil filter

Take off the oil filter, clean off the dust of filter screen (A) with gasoline.



Parts Manual

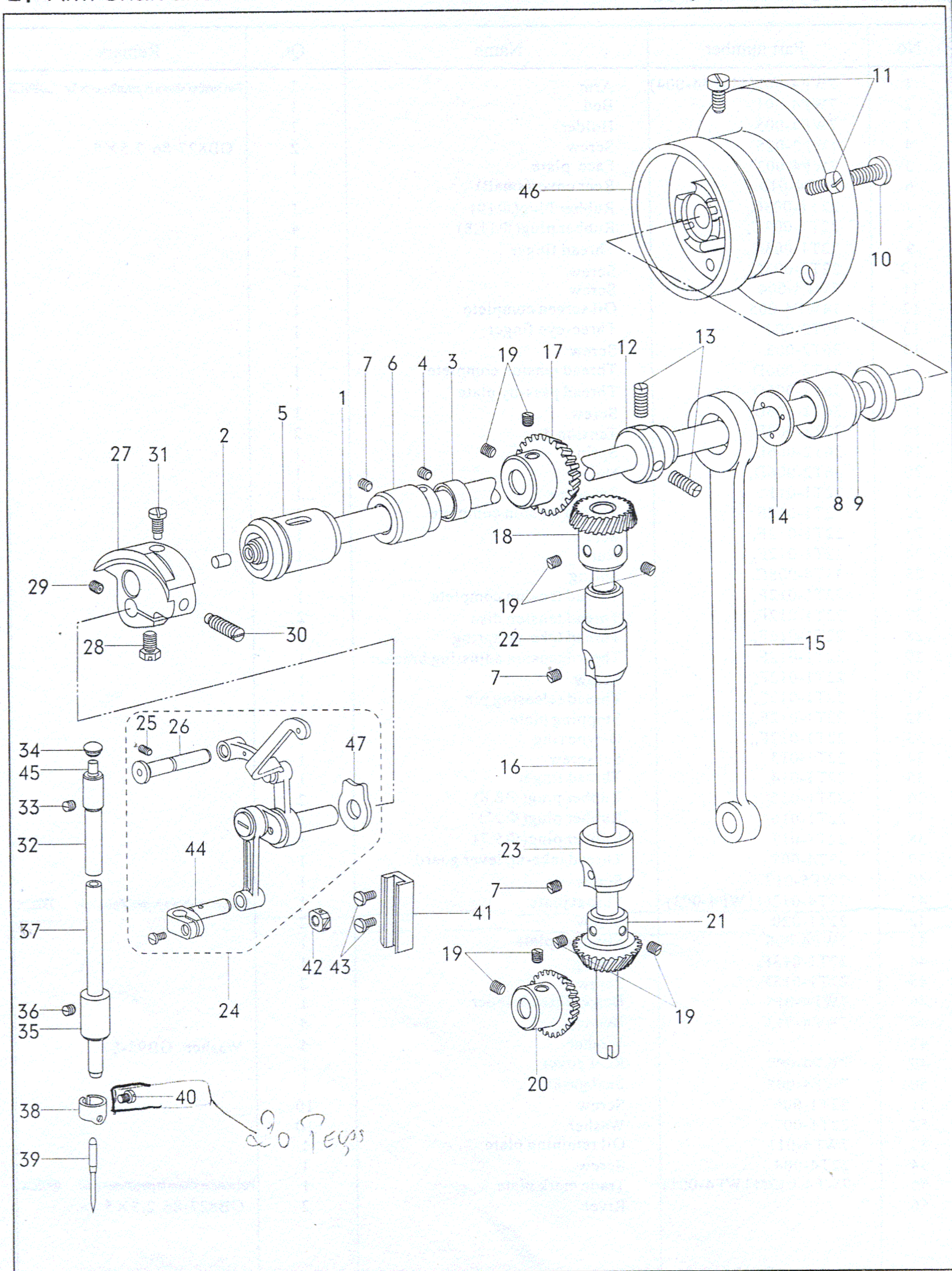
1: Machine Arm and Bed



1: Machine Arm and Bed

No.	Part number	Name	Qt.	Remark
1	7WF4-002(11WF4-004)	Arm	1	Part number shown in parentheses is for .0302CX
2	7WF4-001	Bed	1	
3	7WF4-005	Holder	1	GB827-86 2.5×5
4	1WF3-025	Screw	2	
5	7WF4-003	Face plate	1	
6	7KT4-010	Rear cover(small)	1	
7	22T1-003C ₃	Rubber Plug(Φ19)	1	
8	22T1-003C ₄	Rubber plug(Φ11.8)	4	
9	22T1-003C ₅	Thread finger	1	
10	22T1-003C ₆	Screw	3	
11	7WF4-004	Screw	3	
12	14WF4-005	Oil screen complete	1	
13	36T2-004	Three-eye finger	1	
14	36T2-005	Screw	1	
15	36T2-006D	Thread tension complete	1	
16	36T2-006D ₁	Thread pass-by plate	1	
17	36T2-006D ₂	Screw	1	
18	22T1-009E ₃	Tension disc	2	
19	36T2-006D ₃	Spring	1	
20	36T2-006D ₄	Nut	1	
21	22T1-011	Set screw	1	
22	22T1-012F	Thread tension complete	1	
23	22T1-012F ₁	Screw	1	
24	22T1-012F ₂	Nut	1	
25	33T4-008C ₁	Spring	1	
26	22T1-012F ₄	Thread tension complete	1	
27	22T1-012F ₅	Thread tension disc	2	
28	22T1-012F ₆	Thread take-up spring	1	
29	22T1-012F ₇	Thread tension adjusting bracket	1	
30	22T1-012F ₈	Screw	1	
31	22T1-012F ₉	Thread releasing pin	1	
32	22T1-012F ₁₀	Stopping plate	1	
33	22T1-012F ₁₁	O-type ring	1	
34	22T1-013	Set screw	1	
35	22T1-014	Thread finger	1	
36	22T1-015	Rubber plug(Φ8.8)	2	
37	22T1-016	Rubber plug(Φ27)	1	
38	22T1-017	Rubber plug(Φ5.7)	1	
39	33T4-007	Thread take-up lever guard.	1	
40	7WF5-017	Screw	1	
41	33T4-012(11WF4-003)	Throat plate	1	Part number shown in parentheses is for .0302CX
42	22T1-020	Screw	2	Washer GB93-87
43	7WF4-006	Sliding plate	1	
44	22T1-013F ₂	Spring	1	
45	22T1-013F ₃	Screw	2	
46	7WF4-015	Lower thread finger	1	
47	7WF4-013	Bed leg	4	
48		Washer	4	
49	7WF4-007	Rear cover	1	
50	7WF4-008	Seal gasket	1	
51	22T1-006	Screw	10	
52	22T1-007	Washer	10	Part number shown in parentheses is for .0302CX
53	7WF4-011	Oil retaining plate	1	
54	22T4-004	Screw	1	
55	7WF4-012(11WF4-001)	Trade mark plate	1	
56		Rivet	2	GB827-86 2.5×5

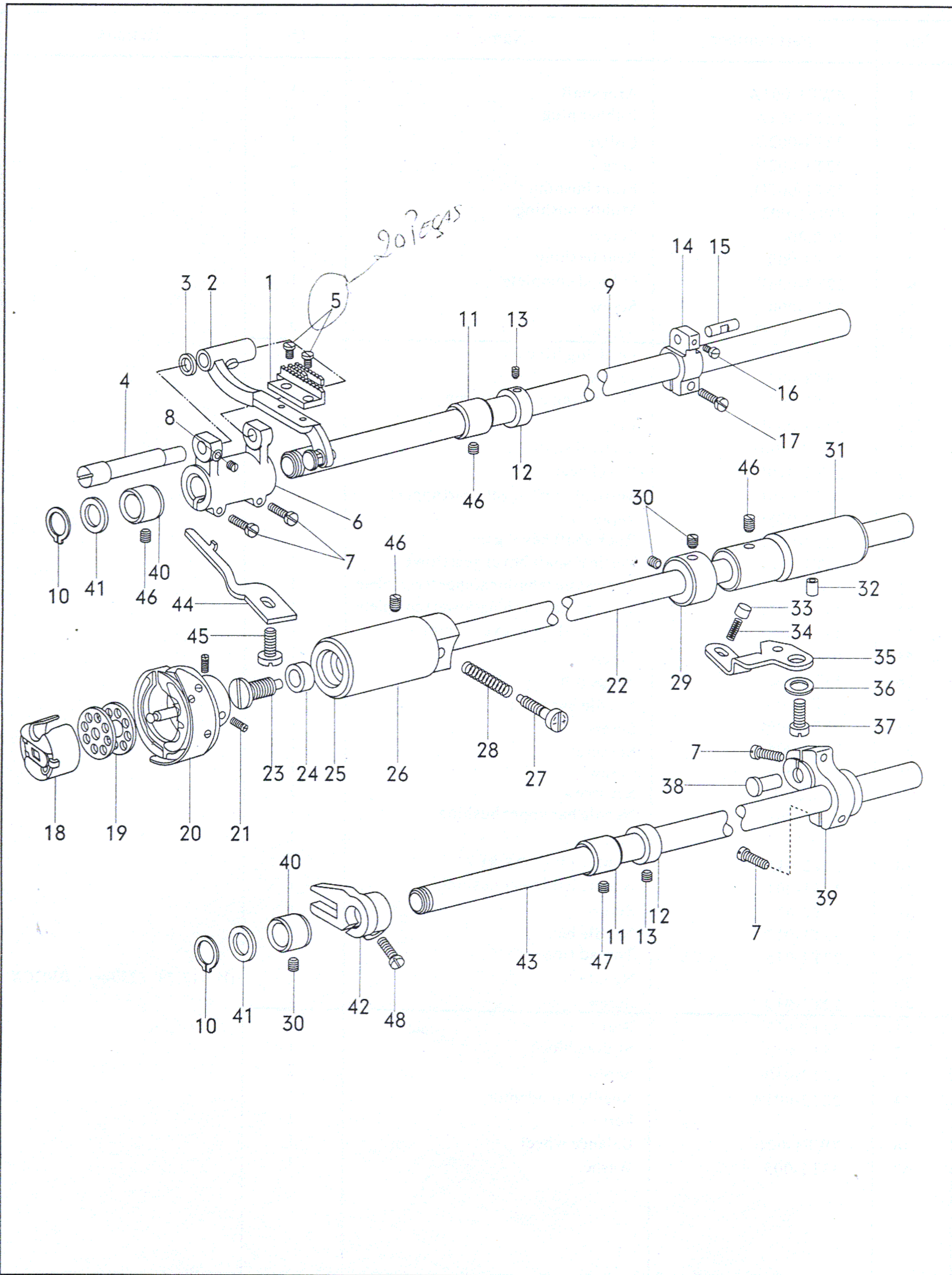
2: Arm Shaft and Vertical Shaft Needle bar Thread Take-up



2: Arm Shaft and Vertical Shaft Needle bar Thread Take-up

No.	Part number	Name	Qt.	Remark
1	4WF1-001A	Arm shaft	1	DP×17 23" (25" for 0302CX)
2	22T3-001A	Rubber plug	2	
3	22T3-002B ₁	Collar	1	
4	22T3-002B ₂	Screw	2	
5	33T1-007D ₁	Front bushing	1	
6	4WF1-002	Middle bushing	1	
7	J0.0.40	Screw	3	
8	22T3-005	Rear bushing	1	
9	22T3-006F	Oil seal complete	1	
10	22T3-008	Screw	1	
11	22T3-007C ₂	Screw	2	
12	36T3-003D ₁	Feed dog lift cam	1	
13	36T3-003D ₂	Screw	3	
14	36T3-004	Seperating piece for cam	1	
15	22T3-009D ₁ C	Link	1	
16	15WF1-001	Vertical shaft	1	
17	22T3-010E _{2a1-2}	Bevel gear	1	
18	22T3-010E _{2a2-2}	Vertical shaft bevel gear(upper)	1	
19	22T2-005B ₁	Screw	8	
20	22T3-010E _{2b2-2}	Rock shaft bevel gear	1	
21	22T3-010E _{2b2-2}	Vertical shaft bevel gear(lower)	1	
22	4WF1-003A	Vertical shaft bushing(upper) complete	1	
23	33T1-023P	Vertical shaft bushing(lower) complete	1	
24	33T1-023A	Thread take-up lever complete	1	
25	J0.0.40	Screw	1	
26	33T1-002	Hinge pin	1	
27	33T1-006C ₁	Needle bar crank	1	
28	33T1-006C ₃	Screw	1	
29	22T2-005B ₃	Set screw	1	
30	33T1-006C ₂	Screw	1	
31	61-04-01/B ₂	Set screw	1	
32	22T2-008	Needle bar upper bushing	1	
33	J0.0.35	Screw	1	
34	22T2-011	Rubble plug (Φ8.8)	1	
35	34T1-001	Needle bar lower bushing	1	
36	22T2-013	Screw	1	
37	33T1-017	Needle bar	1	
38	22T2-015	Thread finger	1	
39		Needle	1	
40	22T2-017	Screw	1	
41	33T1-012	Rail	1	
42	33T1-013	Sliding block	1	
43	22T2-019	Screw	2	
44	22T2-001A ₃	Needle bar adaptor	1	
45		Felt	1	
46	7WF1-001	Balance wheel	1	
47	33T1-005	Washer	1	

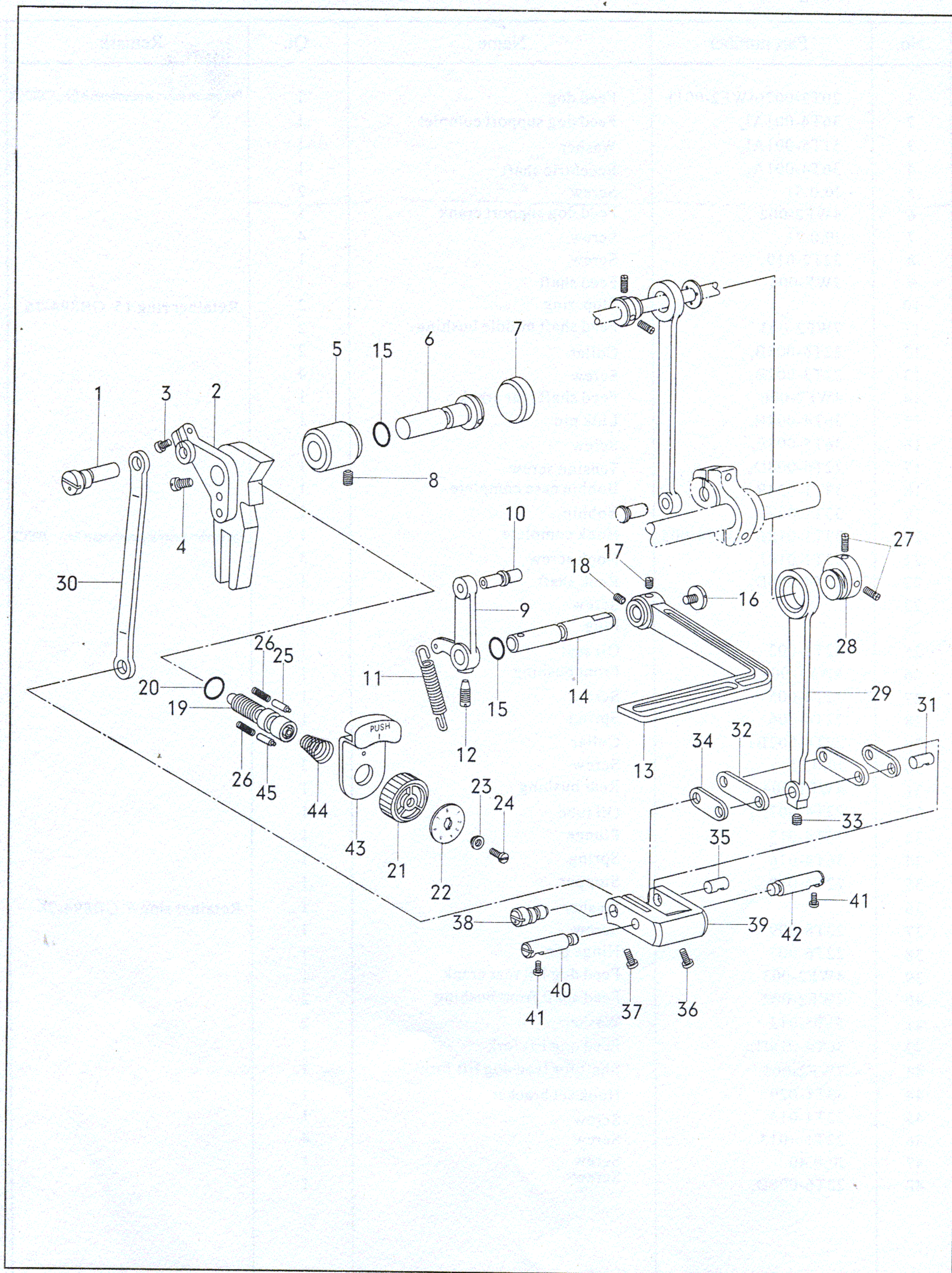
3: Feed Dog Lift And Feed And Thread Looping



3: Feed Dog Lift And Feed And Thread Looping

No.	Part number	Name	Qt.	Remark
1	20T3-007(4WF2-001)	Feed dog	1	Part number shown in parentheses is for J302CX
2	36T4-001A ₁	Feed dog support complet	1	
3	51T5-001A ₁	Washer	1	
4	36T4-001A ₂	Eccentric shaft	1	
5	J0.0.51	Screw	2	
6	4WF2-002	Feed dog support crank	1	Retainer ring 15 GB894-76
7	J0.0.71	Screw	4	
8	22T2-019	Screw	1	
9	7WF-004	Feed shaft	1	
10		Stop ring	2	
11	7WF2-003	Feed shaft middle bushing	2	
12	22T6-005B ₁	Collar	2	
13	22T3-002B ₂	Screw	4	
14	4WF2-006	Feed shaft rear crank	1	
15	36T4-004H ₀₁	Link pin	1	
16	36T5-008E ₅	Screw	1	
17	22T6-008D ₃	Tension screw	1	
18	33T1-028R	Bobbin case complete	1	
19	33T1-027	Bobbin	1	
20	33T1-018J(11WF4-005)	Hook complete	1	Part number shown in parentheses is for J302CX
21	33T1-018J ₃	Hook screw	3	
22	36T4-008D ₁	Rock shaft	1	
23		Screw	1	
24		Plug	1	
25	22T4-003	Oil seal	1	Retainer ring 6 GB894-76
26	4WF1-005	Front bushing	1	
27	22T4-005	Screw	1	
28	22T4-006	Spring	1	
29	22T4-002B1	Collar	1	
30	J0.0.35	Screw	3	
31	4WF1-004	Rear bushing	1	
32	22T4-007C ₂	Oil tube	1	
33	36T4-015	Plunge	1	
34	36T4-016	Spring	1	
35	22T4-010	Stopper	1	
36		Washer	1	
37	22T8-009	Screw	1	
38	22T6-007	Hinge pin	1	
39	4WF2-003	Feed dog lift rear crank	1	
40	7WF2-002	Feed shaft front bushing	2	
41	51T5-013	Washer	2	
42	36T4-018H ₁₀₁	Feed dog lift fork	1	
43	7WF2-001	Shaft for feed dog lift fork	1	
44	33T1-029	Hook set bracket	1	
45	22T4-015	Screw	1	
46	22T1-013	Screw	4	
47	J0.0.40	Screw	1	
48	22T6-008D ₄	Screw	1	

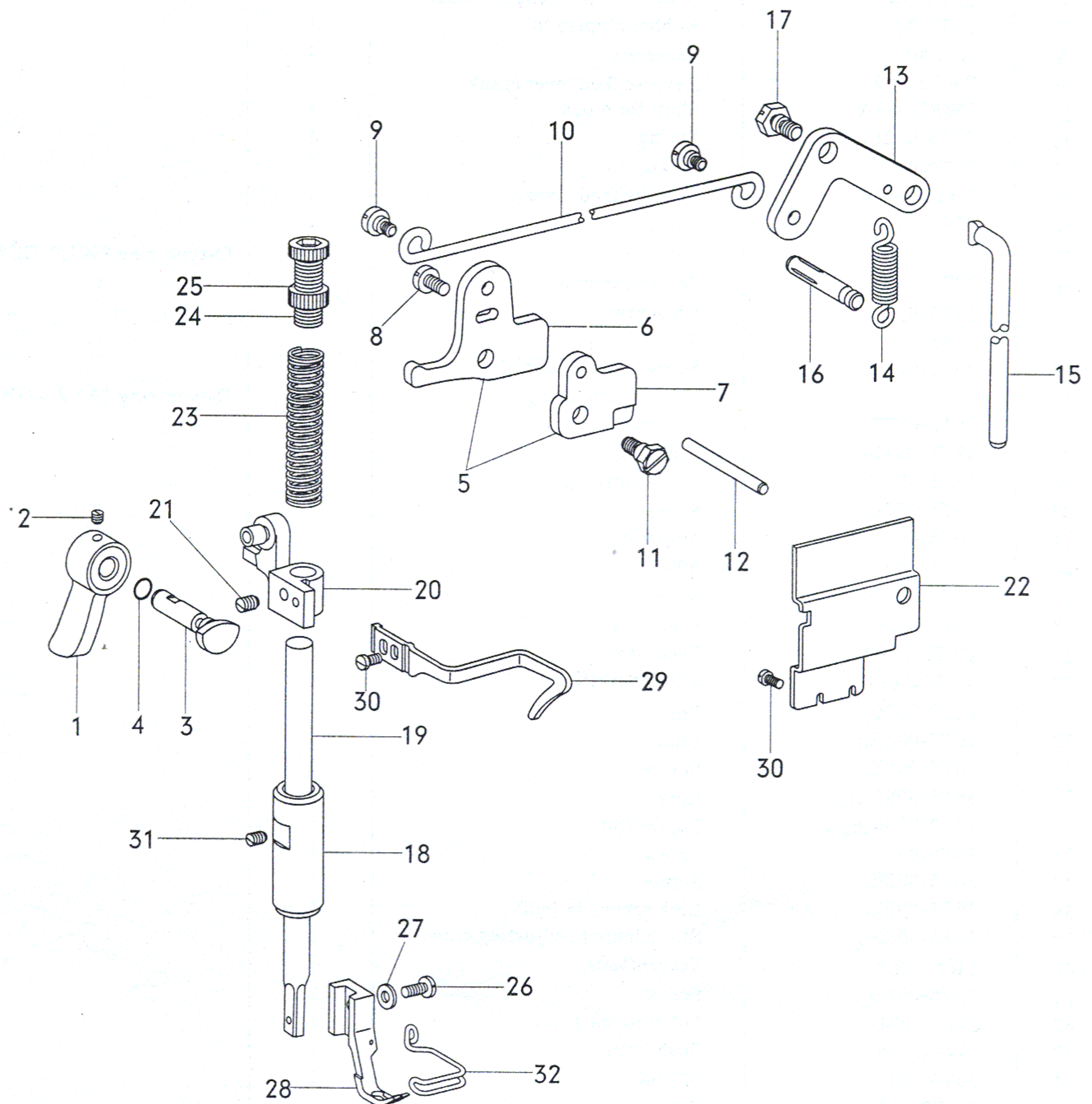
4: Feed Mechanism



4: Feed Mechanism

No.	Part number	Name	Qt.	Remark
1	36T5-001	Link pin	1	
2	4WF5-005	Stitch length bracket	1	
3	22T6-008D ₃	Screw	1	
4	22T5-010D ₄	Screw	1	
5	4WF2-008	Bushing	1	
6	22T5-004	Shaft for stitch length bracket	1	
7	36T5-003	Rubber plug(Φ20)	1	
8	J0.0.40	Set screw	1	
9	7WF2-009	Reverse feed lever crank	1	
10	7WF2-008A	Shaft for block	1	
11	22T5-012E ₂	Spring	1	
12	22T5-013	Screw	1	
13	7WF2-007A	Reverse feed lever	1	
14	22T5-010D _{2a}	Pin shaft	1	
15		O-type ring	2	O-type ring 8×1.9 GB1235
16	22T5-010D ₃	Tension screew	1	
17	17T5-016	Set screw	1	
18	17T5-017	Screw	1	
19	36T5-007D ₁	Screw bolt for stitch length	1	
20		O-type rubber ring	1	O-type ring 14×2.4 GB1235
21	36T5-007D ₂	Dial cup	1	
22	4WF2-004A	Dial face	1	
23	36T5-007D ₄	Screw bushing	1	
24	36T5-007D ₅	Screw	1	
25	36T5-012	Stop pin	1	
26	22T5-009	Spring	1	
27	36T3-003D ₂	Screw	2	
28	36T5-008E ₁	Feed cam	1	
29	4WF2-009A	Feed link	1	
30	4WF2-009B	Stitch adjusting link	1	
31	82T2-003C _{1a10-1}	Pin	1	
32	36T5-008E _{4H02}	Link	2	
33	36T5-008E ₅	Screw	1	
34	36T5-008E _{4H01}	Link	2	
35	82T2-003C _{1a10-2}	Pin for link	1	
36	36T5-008E ₇	Screw	1	
37	36T5-008E ₈	Screw	1	
38	36T5-008E ₉	Link eccentric shaft	1	
39	36T5-008E ₁₀	Stitch lenbgth adjusting crank	1	
40	5WF1-002	Set pin(left)	1	
41	22T6-008D ₃	Screw	2	
42	5WF1-001	Set pin(right)	1	
43	7WF2-005	Push lever	1	
44	36T5-011	Spring	1	
45	7WF2-006	Pin	1	

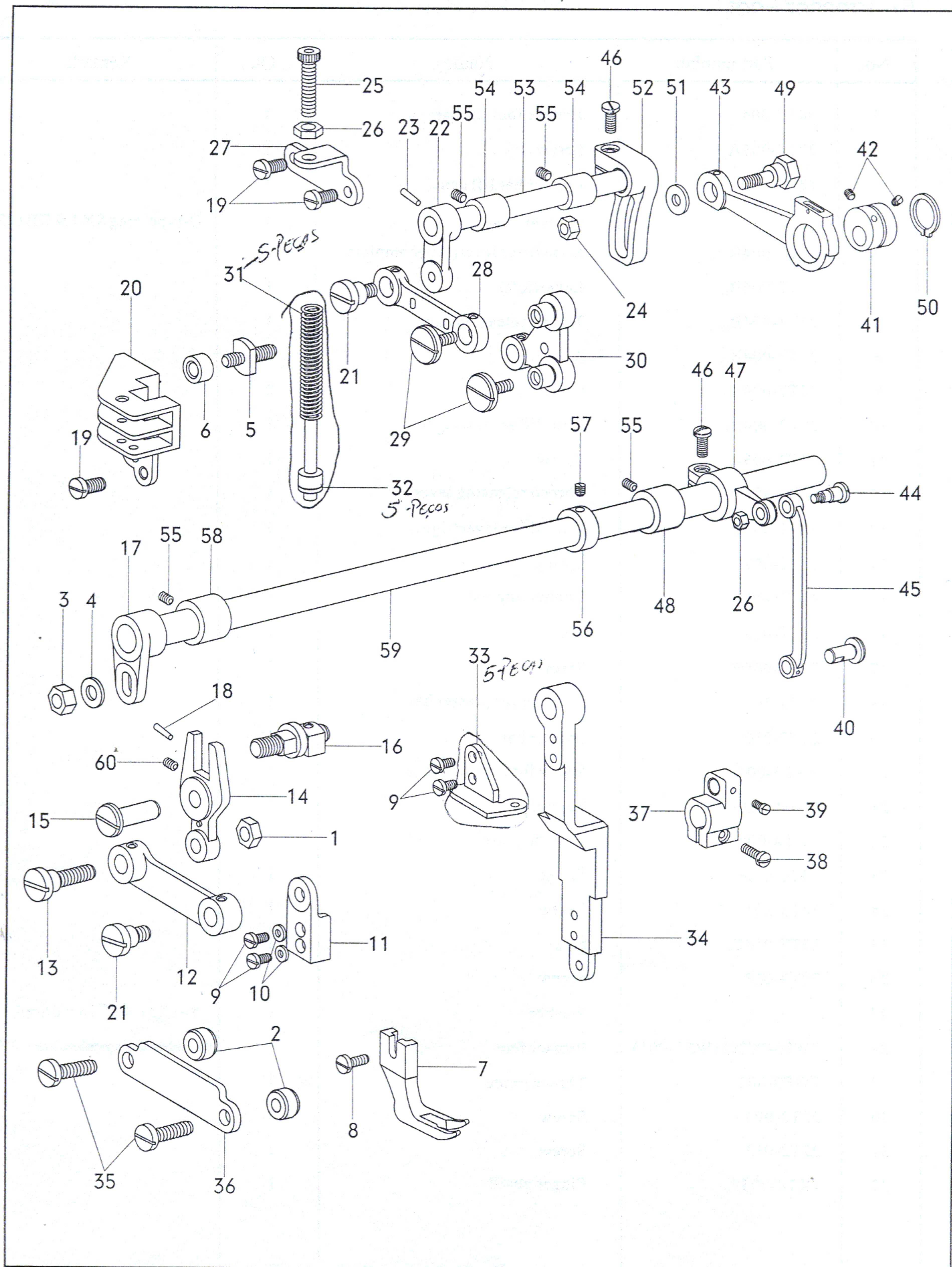
5: Presser Foot



5: Presser Foot

No.	Part number	Name	Qt.	Remark
1	34T3-304	Presser foot lift bar	1	O-type ring 8×1.9 GB1235
2	22T7-001A ₂	Screw	1	
3	1KT4-005	Presser bar lift cam	1	
4		Oil seal	1	
5	22T7-004B ₁	Knee lifter lever(left)complete	1	
6	22T7-004B _{1a}	Lever(left)	1	
7	22T7-004B _{1b}	Thread releasing cam	1	
8	22T7-004B _{1c}	Screw	1	
9	22T7-004B ₂	Screw	2	
10	22T7-004B ₃	Knee lifter drawing bar	1	
11	22T7-005A	Screw	1	
12	35T3-305	Thread releasing lever	1	
13	22T7-007C ₁	Knee lifter lever(right)	1	
14	22T7-007C ₂	Spring	1	
15	4WF3-001	Connecting rod	1	
16	22T7-008	Pin	1	
17	22T7-005B	Screw	1	
18	34T3-305	Bushing for presser bar	1	
19	22T7-010	Presser bar	1	
20	7WF3-001	Guide for presser bar	1	
21	61-04-01/B308	Screw	1	
22	7WF4-009	Oil stop plate	1	
23	20T4-002	Spring	1	
24	34T3-301	Screw	1	
25	22T7-014E ₂	Nut	1	
26	22T7-015	Screw	1	
27		Washer	1	Washer GB848—85—4
28	7WF3-003(11WF3-001)	Presser foot	1	Part number shown in parentheses is for 0302CX
29	7WF3-002	Thread guide	1	
30	22T2-004	Screw	3	
31	22T2-013	Screw	1	
32	1KT4-003	Finger guard	1	

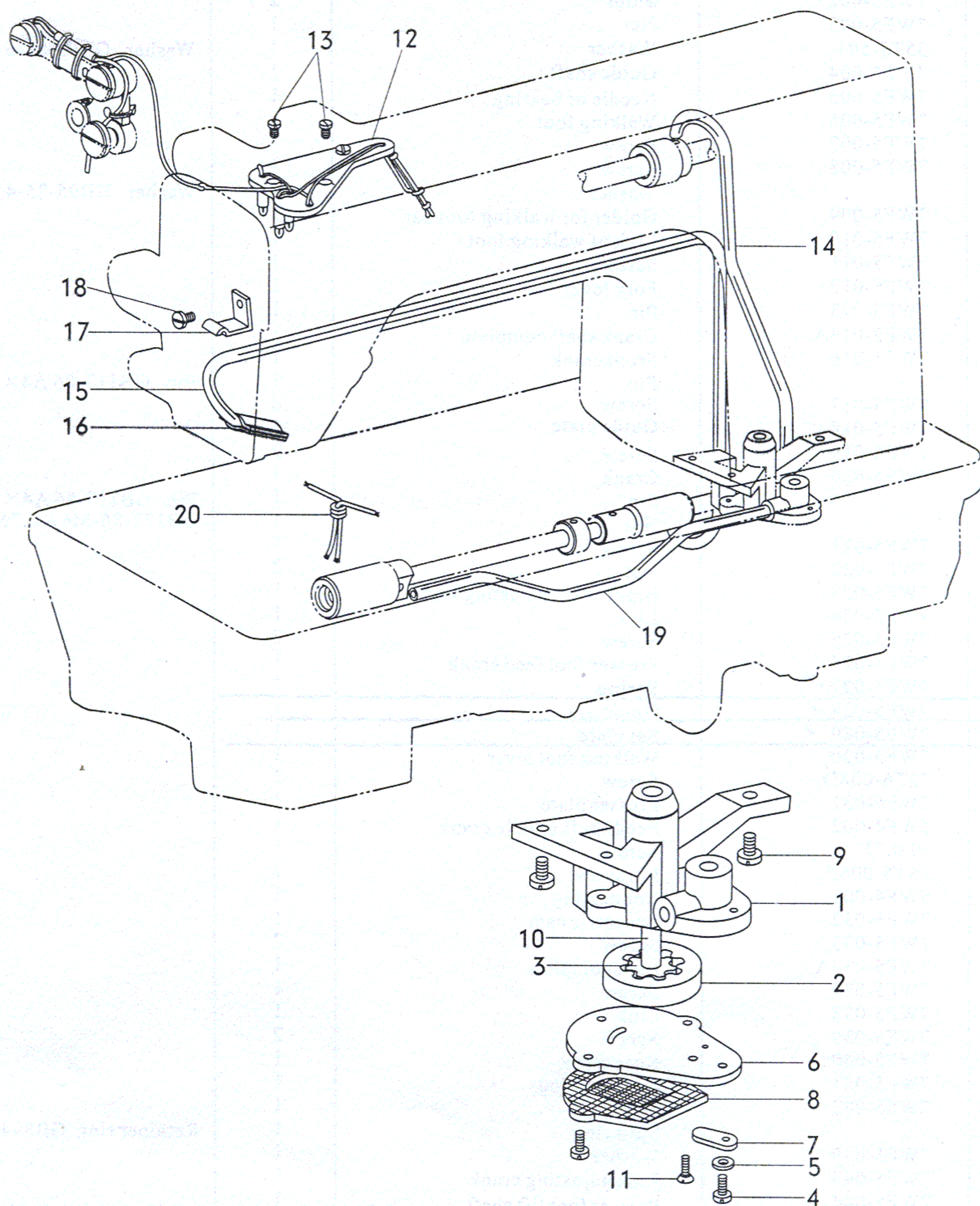
6: Upper Feed Parts



6: Upper Feed Parts

No.	Part number	Name	Qt.	Remark
1	7WF5-001	Nut	1	
2	7WF5-002	Shim	2	
3	7WF5-003	Nut	1	
4	35T5-504	Washer	1	Washer GB95-85-6
5	7WF5-004	Guide shaft	1	
6	7WF5-005	Needle of bearing	1	
7	7WF5-006	Walking foot	1	
8	7WF5-007	Screw	1	
9	7WF5-008	Screw	4	
10		Washer	2	Washer GB95-85-4
11	7WF5-009	Holder for walking foot bar	1	
12	7WF5-010	Link of walking foot	1	
13	7WF5-011	Screw	1	
14	7WF5-012	Fork lever	1	
15	7WF5-013	Pin	1	
16	7WF5-014A	Crank shaft complete	1	
17	7WF5-016	Front crank	1	
18		Pin	1	Pin GB117-86 A4×24
19	7WF5-017	Screw	4	
20	7WF5-018	Guide plate	1	
21	7WF5-019	Screw	2	
22	7WF5-020	Crank	1	
23		Pin	1	Pin GB117-86 A4×20
24		Nut	1	GB173-86-M6×0.75
25	7WF5-021	Screw	1	
26	7WF5-022	Nut	2	
27	7WF5-023	Bracket for adjusting screw	1	
28	7WF5-024	Link	1	
29	7WF5-025	Screw	2	
30	7WF5-026	Presser foot feed crank	1	
31	7WF5-027	Spring	1	
32	7WF5-028	Guide pin	1	
33	7WF5-029	Set plate	1	
34	7WF5-030	Walking foot lever	1	
35	22T6-008D ₃	Screw	2	
36	7WF5-031	Presser plate	1	
37	5WF4-002	Feed sheft middle crank	1	
38	J0.0.71	Screw	1	
39	36T5-008E ₅	Pin screw	1	
40	5WF4-001	Connecting pin	1	
41	7WF5-032	Eccentric cam	1	
42	7WF5-033	Screw	2	
43	7WF5-034A	Link complete	1	
44	7WF5-037	Screw	1	
45	7WF5-038	Link	1	
46	7WF5-039	Screw	2	
47	7WF5-040	Rear crank	1	
48	7WF5-041	Rear bushing	1	
49	7WF5-042	Screw	1	
50		Split ring	1	Retainer ring GB894-86-25
51	7WF5-049	Washer	1	
52	7WF5-043	Link adjusting crank	1	
53	7WF5-044	Presser foot lift shaft	1	
54	7WF5-045	Bushing	2	
55	J0.0.35	Screw	4	
56	22T3-002B ₁	Collar	1	
57	22T3-002B ₂	Screw	2	
58	7WF5-046	Front bushing	1	
59	7WF5-047	Presser foot swing shaft	1	
60	7WF5-048	Screw	1	

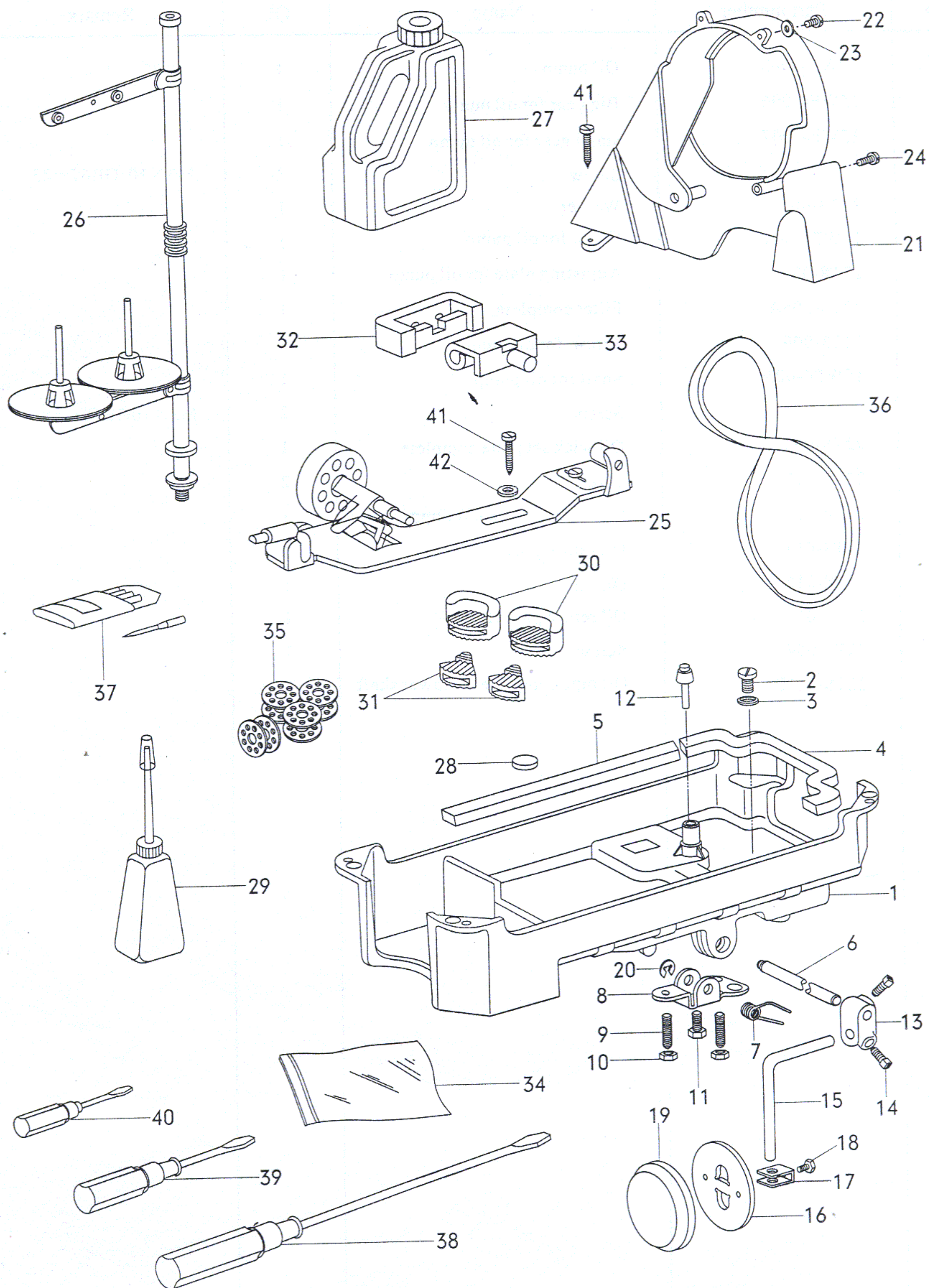
7: Oil Pump



7: Oil Pump

No.	Part number	Name	Qt.	Remark
1	15WF4-003	Oil pump	1	
2	15WF4-006	Big gear for oil pump	1	
3	15WF4-007	small gear for oil pump	1	
4		Screw	3	M3×10 GB67—85
5	22T8-005	Washer	1	
6	15WF4-004	Cover for oil pump	1	
7	22T8-007	Adjusting plate for oil pump	1	
8	22T8-008A	Filter complete	1	
9	22T8-009	Screw for oil pump	3	
10	15WF4-005	Shaft for oil pump	1	
11		Screw	2	M3×10GB68—85
12	22T8-001	Oil wick set plate complete	1	
13	22T8-012	Screw	2	
14	22T8-013	Oil pipe complete for upper shaft	1	
15	22T8-014	Oil return pipe	1	
16	22T8-015	Oil felt	1	
17	22T8-016	Oil return pipe clamp	1	
18	22T8-004	Screw	1	
19	22T8-011B	Oil pipe complete for lower shaft	1	

8: Oil Reservoir and Accessories



8: Oil Reservoir and Accessories

No.	Part number	Name	Qt.	Remark
1	4WF5-001	Oil reservoir	1	
2	22T9-001A ₂	Screw	1	
3	22T9-001A ₃	Washer	1	
4	22T9-001A ₄	Gasket(small)	1	
5	22T9-001A ₅	Gasket(big)	1	
6	22T9-001A ₆	Hinge pin	1	
7	22T9-001A ₇	Spring	1	
8	22T9-001A ₈	Knee lifter stop bracket	1	
9	22T9-001A ₉	Screw	2	
10	22T9-001A ₁₀	Nut	2	
11	22T3-007C ₂	Screw	1	
12	22T9-003B ₁	Knee lifter prop bar	1	
13	22T9-003B ₃	Connector	1	
14	22T9-003B ₄	Screw	2	
15	22T9-003B ₂	Bent rod	1	
16	22T9-003B ₅	Bell	1	
17	22T9-003B ₆	Bell bracket	1	
18	22T9-003B ₇	Screw	1	
19	22T9-003B ₈	Pat	1	
20		Split stop ring	1	Stop ring 9 GB896-76
21		Belt guard complete	1	
22	1KT6-001	Screw(small)	2	M4×8 GB67—85
23		Washer	2	GB848—85—4
24		Screw(big)	2	M5×12GB67—85
25	S14420020	Thread winder complete	1	
26	GJX-2	Spool stand complete	1	
27	22T9-017	Oil tank	1	
28	22T9-013	Magnet	1	
29	33TF-011	Oil pot	1	
30	22T9-009	Cushion(big)	2	
31	22T9-010	Cushion(small)	2	
32	33T1-004	Rubber coat	2	
33	22T9-007F ₂	Hinge	2	
34	33TF-010	Parts bag	1	
35	33T1-027	Bobbin	5	
36		V-type belt	1	O-type 1041
37	33TF-015	Needle	1big	DP×17 23#(0302CX 25#)
38	33TF-012	Screwdriver(big)	1	
39	33TF-013	Screwdriver(middle)	1	
40	33TF-014	Screwdriver(small)	1	
41	33TF-017	Wood screw	4	GB5282-85 ST4.8×19
42	33TF-018	Washer	2	GB848-85-6