



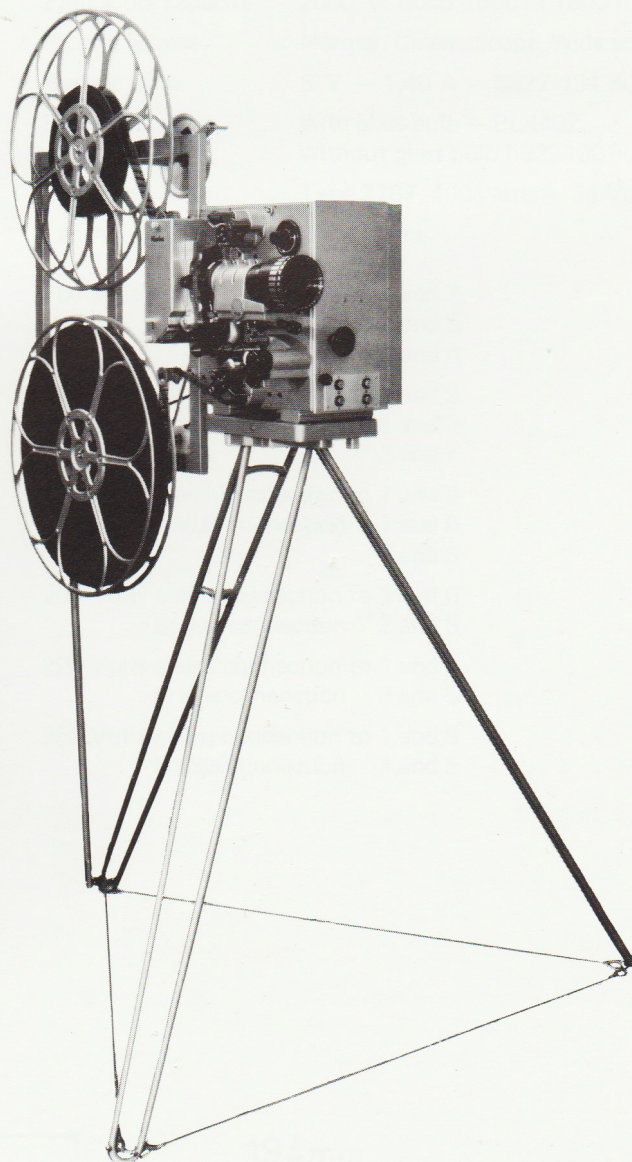
Kinson

FP 23

SERVICE

Kinoton

SERVICE



FP 23

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CHAPTER 1:

a. TECHNICAL DATA

Dimensions	: See drawing.
Weight	: 49 kg
Power consumption	: < 1000 W
Mains supply	: See below.
Mains frequency	: 50 and 60 Hz.
Projector motor	: 110 Volt.
Film speed	: 24 frames/sec. asyn. 25 frames/sec. syn.
Film spool capacity	: 2000' or 6000' (600 or 1800 m)
Picture format	: Normal, CinemaScope, Wide screen.
Exciter lamp	: 6 V — 1,48 A — 5322 134 80007.
Solar cell	: With glass bulb — EL4402, Without glass bulb 5322 130 90005.
Projection lamp	: Type 7787, 400 Watts — 36 Volt.
Lensholder	: Ø 70,6 mm.

100 Volts mains connection to 1 and 2
bridge connection 1 and 5
2 and 6

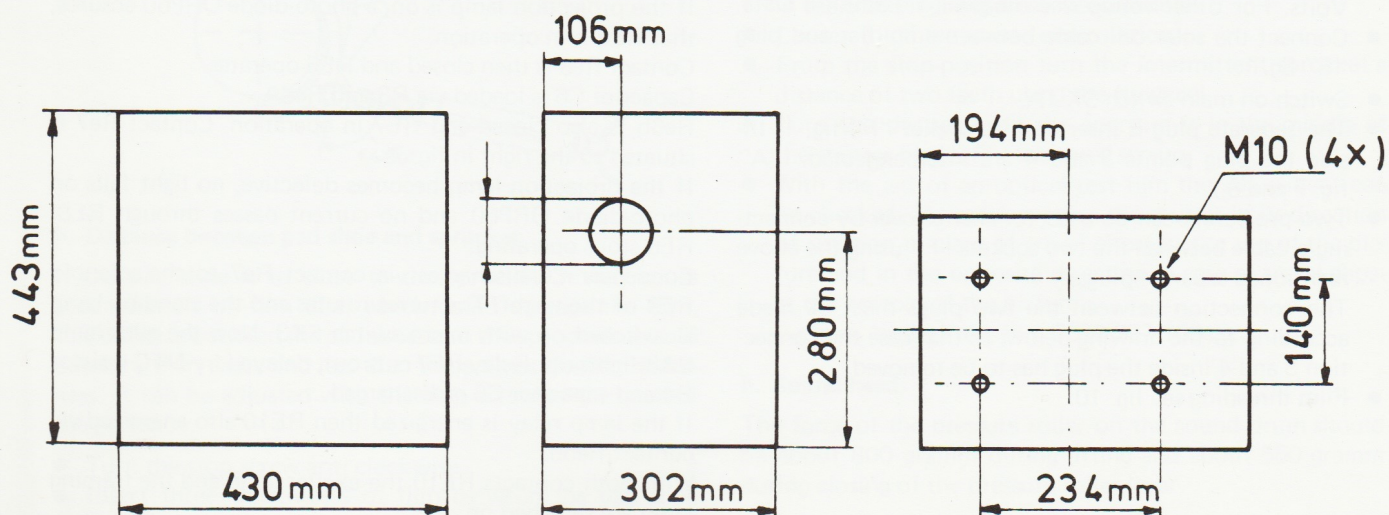
110 Volts mains connection to 1 and 3
bridge connection 1 and 5
3 and 7

125 Volts mains connection to 1 and 4
bridge connection 1 and 5
4 and 8

200 Volts mains connection to 1 and 6
bridge connection 2 and 5

220 Volts mains connection to 1 and 7
bridge connection 3 and 5

250 Volts mains connection to 1 and 8
bridge connection 4 and 5



CHAPTER 1: b. GENERAL

The light source consists of a lamp turret with two halogen lamps. If one lamp fails the second is automatically brought into operation. The optical system consists of a cold-light mirror, an aspherical condensor and aperture condensor.

The aperture condensor is available in the following focal lengths: 40, 50, 60, 70, 80, 100 and 120 mm.

When a projection lens $f = 100$ mm is to be used, a masking lens $f = 100$ mm is also to be used etc.

If two lenses are to be used, for example, $f = 60$ mm and $f = 100$ mm then a aperture condensor has to be used with an average value, in this case 80 mm.

The projector can be supplied with or without a built-in rewind system. The projector can also be supplied with a separate power supply (fig. 9).

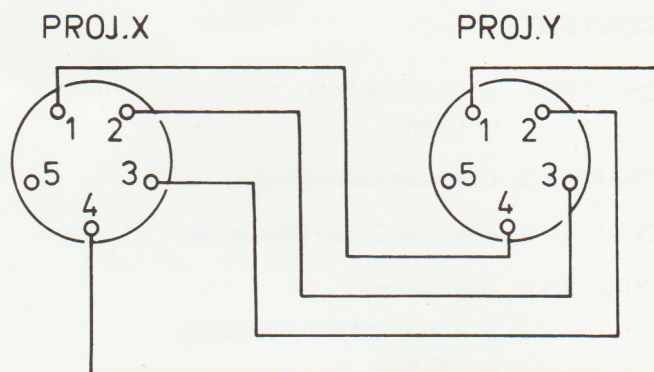
If the film breaks the projector stops automatically. This is caused by a magnet coupled to the lower guide roller shaft. At the correct speed the magnet reaches a position which switches a Reed contact on. This Reed contact works in series with the hold contact of the motor relay.

If the lower guide roller does not rotate anymore the motor relay switches off.

If the rewind belt is not fitted the lever with tension roller ensures, that the necessary friction for the upper spool is present. This friction can be adjusted by a knurled nut.

CHAPTER 2: OPERATING INSTRUCTIONS

- The projector head is mounted on the stand and fastened with two screws.
- The spool frame is fitted to the back of the projector head. This frame is so designed that it is always correctly centred when fitted.
- The spool frame rests on a support with which the projection angle can be set ("C" fig. 1.).
- The take-up belt should be fitted and if the projector is equipped with built-in rewind system the rewind belt as well.
- If the projector is to be used for the first time don't forget to fill the intermittent movement with oil (see lubrication instructions chapter 6).
- Connect mains cable "G" fig. 1.
- Check the mains supply and frequency. (For 60 Hz use other grooves on pulleys.)
- On delivery the projector is adjusted for use with 220 Volts. For other voltages see chapter 1 Technical Data.
- Connect the solar cell cable between amplifier and plug "E" fig. 1.
- Switch on main switch SK 1A.
- The separate plug is inserted into socket "F" fig. 1. Inside the plug points 3 and 4 are interconnected. ("A" fig. 7 and 8.)
- Two projectors can be used for change-over by connecting a cable between the two sockets "F" using the above mentioned separate plugs.
The connection between the two plugs must be made according to the drawing below. In that case the connection 3 and 4 inside the plug has to be removed.
- Film threading see fig. 10.



For the following operations see fig. 1.

Main switch	— SK 1a
Motor on	— SK 6
Lamp on	— SK 8
Motor off	— SK 5
Lamp off	— SK 7
Focussing	— Knob A
Framing	— Knob B
Skate pressure	— Knob D
Rewind running	— SK 4
Standby lamp manual	— SK 9

CHAPTER 3: CIRCUIT DESCRIPTION

This description refers to circuit diagram fig. 7 and includes the circuitry of p.c. board fig. 5A.

Transformer T, supplies:

- 6 V for the exciter lamp rectifier
- 24 V for the various relays
- 36 V for the projection lamps LA4, LA5
- 110 V for the motor.

The motor relay RE1 is switched on with push-button SK6. Contact Re1a together with Reed-contact SK2 keep RE1 in operation.

Contact Re1c switches the motor.

Contact Re1b makes it possible, that the lamp can be switched on with SK8.

The lamp relay RE5 switches either projectionlamp relay RE3 or RE4 with contact Re5c, depending on the position of the micro switch SK3.

RE3 switches the normal projection lamp.

RE4 switches the stand-by projection lamp.

If the projection lamp is on, a photo-diode ORP60 ensures, that RE8 is in operation.

Contact Re8 is then closed and RE6 operates.

Capacitor C6 is loaded via R3 and Re6A.

Re6b is also closed and RE7 in operation. Contact Re7 is situated to the right in fig. 7.

If the projection lamp becomes defective, no light falls on photo-diode ORP60 and no current passes through RE8. RE6 stops operating.

Condensor C6 discharges via contact Re7 to the solenoid RE9 of the turret. The turret rotates and the stand-by lamp is switched on with micro switch SK3. Now the pilot lamp LA3 lights up. Relay RE7 cuts out, delayed by NTC resistor R4 and capacitor C6 is discharged.

If the lamp relay is energized then RE10 also energized via contact Re5b.

With both contacts RE10 the exciter lamp and the framing lamp are switched on.

With rewind switch SK4 the motor is ready for rewind by means of RE2.

If the motor is running forward contact Re1d is interrupted and the motor cannot be put into the rewind position. If the projector is provided with P.C. board 5B circuit diagram fig. 8 has to be used.

Instead of photo-diode ORP60 a light dependent resistor LDR03 is used.

Relay RE6 and RE8 are not fitted and a transistor TS1 is mounted.

If the LDR is illuminated the base of the transistor is negative and there is therefore no current.

If no light falls on the LDR the base is positive resulting in a current passing through relay RE7.

Capacitor C6 can now discharge via contact 37 on solenoid of turret RE9.

Solenoid RE9 brings the turret in the standby position.

In this circuit a second micro switch SK3A is used, so that no lamp can light up during rotation of the turret (fig. 8). With SK9 the turret can be brought into the standby position manually.

CHAPTER 4: ADJUSTMENTS

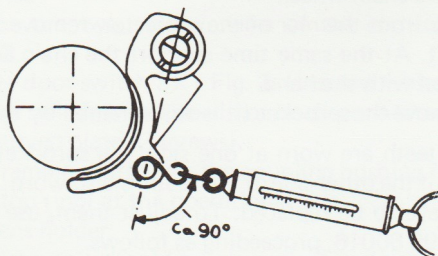
- After each adjustment check that the film runs through the projector without damage, proceeding as follows: Make a loop of 1.50 m (5 ft) of black film, and run this loop through the projector 50 times; after that the film should not show any scratches or other damage. Code no. of 2.20 m (approx. 7 ft) of black film: 5322 397 10018.
- The adjustments mentioned on the following pages have been effected in the factory; they need only be repeated, if necessary. for example after the replacement of components.

a. Torsion spring of the pad shoe.

Tension this spring so that it opens with a force $P = 400$ gram and closes with $P = 250$ gram (see drawing below).

Required tools:

- a special screwdriver supplied code 5322 395 50032.
- spring tension meter 0-1000 gram.



b. Distance between pad shoe and sprocket.

If the pad shoe is too close to the sprocket, it may cause accumulation of film dirt, which could damage the film. The distance between the pad shoes and the sprockets should be more than twice and less than three times the film thickness. It can be adjusted with the stop screw at the back of the pad shoe.

- Turn the stop screw anti clockwise.
- Insert three thicknesses of film between the pad shoe and the sprocket.

- Insert a piece of paper between the stop screw and the stop.
- Turn the stop screw clockwise until it touches the stop.
- Remove the piece of paper; the clearance between pad shoe and sprocket is then correct.

c. Belt-tension.

- The belt must be as slack as possible. If, however, while the projector is running, the flywheel of the intermittent sprocket is stopped by hand, the motor must also stop. Use a cloth for braking the flywheel.

d. Gear "50" Fig. 3.

This gear can be adjusted by loosening the 5 mm allen screw, which can be reached at the operational side "A" Fig. 2.

The clearance between this gear and the shutter shaft gear should be just perceptible.

After adjustment re-tighten.

e. Chains.

- It is recommended to check the chains regularly for links which impede smooth running. In most cases a light tap on the link is sufficient to remedy this fault.
- The chains must not be taut; slack chains run more smoothly. However, the lower chain should not be so slack that the take-up sprocket can slip a link.
- The chains have to be lubricated with Esso Universal oil.

f. Pressure skate.

- Thread a film.
- Close the pressure skate.
- Loosen fixing screw of skate support and move skate support up and downwards till the clearance is just perceptible.
- With two thicknesses of film there should be no clearance.
- Let the projector run with film.
- Turn the adjustment knob of the pressure skate anti-clockwise till the film starts jumping.
- Then turn the knob clockwise, till the picture is just steady.

g. Shutter.

- Remove the shutter housing, pushing the film stripper downwards.
- Remove the mirror holder and air channel. The 3 screws in the clamping ring are now accessible.
- Loosen the three screws one rotation.
- From the stop-position turn the intermittent sprocket a distance of two teeth using the flywheel.
- Turn the shutter until the aperture is in the middle of the shutter blade. Fix the three screws.
- With the aid of an optical test film the adjustment can be checked. If necessary, turn the shutter in its direction of rotation in case of travel ghost at the top of the picture and in the opposite direction in case of travel ghost at the bottom of the picture. Code nr. optical test film 5322 397 10015.

h. Sound head.

The force of the pressure roller on the sound drum should be about 800 gramm during lifting and about 550 gramm during closing of the pressure roller lever.

With the set-screw in the lever of the pressure roller the axial

adjustment should be made. Use buzz-track film code nr. 4322 397 10023.

After replacement of the sound optical system the adjustment should be done by means of frequency test films in the following way:

- Slightly loosen the fixing screw of the sound system.
- Turn the optical system so that the slit is as near to the perpendicular as possible to the sound track (Azimuth adjustment).
- Thread a 7000 Hz test film, code nr. 5322 397 10019.
- Loosen the screw of the focussing ring and focus the system provisionally.
- The slit should now be adjusted so that it is exactly perpendicular to the sound track (Maximum indicated output).
- Thread a 9000 Hz test film code nr. 5322 397 10021 and again focus the system (Maximum indicated output).

For this measurement procedure an A.C. meter should be connected to the loudspeaker terminals.

j. Light source.

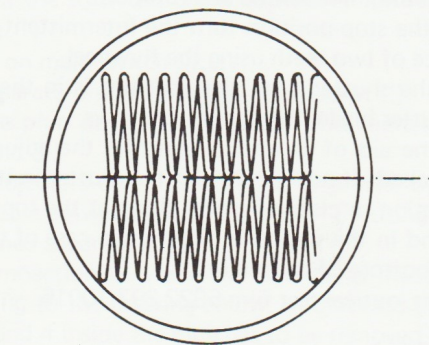
The lower half of the lens opening is illuminated by the filament of the projection lamp, the upper half by a reflected image of the filament. This is adjusted at the factory.

If by changing the projection lamp the projected picture is not at the optimum, it is possible to correct the vertical alignment by moving the lamp up and down.

This can be checked by looking through the lens with the shutter opened. The division of the split image should be horizontally in the middle (do not touch the lamp with the fingers).

If the filament and its reflected image do not appear symmetrical, it is possible to adjust the set screw of the normal lamp or that of the spare lamp, depending on which is in the projection position.

The distance between mirror and lamp can be adjusted with the fixing screws of the mirror holder. This adjustment is only necessary if the shutter has been adjusted, because for this operation the mirror holder has to be removed. The adjustment of the mirror is correct, if the picture of the filament and its reflection have the same form (see drawing).



CHAPTER 5: PARTS REPLACEMENT.

a. Plexiglass rod of the sound system.

- Remove the protecting cap of the solar cell.
- Loosen the now accessible screws of the fixing ring.
- Replace the rod, taking care that the front face of the new rod remains approx. 0.5 mm from the front rim of the sound drum.
- Check whether the light of the optical system falls on the rod. If not, loosen the fixing screws of the holder and slightly turn the assembly, holder + rod.
- Check that the rod still has the correct clearance (0.5 mm) with respect to the front edge of the sound drum.

In case a solar cell without bulb tube is used a plexiglass rod is not fitted.

b. Sound optical system.

- Loosen the fixing screws of the flywheel hub. Remove hub and flywheel.
- Take out the plexiglass rod.
- Remove the rear bearing and the sleeve on the shaft between the bearings.
- Remove the sound shaft.
- The sound lens can now be replaced.

Mounting:

In the reverse order; after having mounted the sound drum place the plexiglass rod in the correct position (see above section a).

c. Pad shoe.

- Loosen the Allen screw; the spring is then released.
- Take the pad shoe from its shaft.
- After mounting, adjust the tension of the spring (see chapter 4a).
- Lubricate with cardan oil, type 8657.

d. Upper and lower sprocket.

- Open the rear door of the projector.
- Remove P.C. board (fig. 5). Only for the upper sprocket.
- Loosen mountingplate with RE3 and RE4 with screws "B" Fig. 3. Pull it downwards.
- Loosen the fixing screw of the sprocket.
- From the rear of the projector, loosen the fixing screw of the chain wheel.
- Also from the rear of the projector, remove the sprocket shaft. At the same time support the chain and the chain wheel with the hand.
- Remove the sprocket (it is still retained by the pad shoe).

If the teeth are worn at one side, the sprocket may be reversed; if the other side of the teeth is also worn, the toothed discs have to be replaced. To adjust them, use jig code no. 5322 395 80016, proceeding as follows:

- Pass the pin of the jig through the components of the sprockets in the order in which they are to be mounted, and fix one toothed disc with three screws.
- Adjust the second disc with the aid of the jig, and fix it. Code no. of one pair of toothed discs: 5322 522 30466.

e. Intermittent sprocket.

- Remove the fixing screw of the intermittent sprocket.
- Remove the bearing from the sprocket shaft (4 screws).
- Slide the sprocket from its shaft.

Mounting:

- Slightly oil the shaft with Esso Universal oil.
- Slide the sprocket onto its shaft.
- Fix the bearing with the four screws.
- Turn the framing knob clockwise.
- Insert a piece of paper, 0.05 mm (or two cigarette papers) between the rear flange of the sprocket and the bearing and push the sprocket gently against the paper.
- Tighten the fixing screw of the sprocket, then remove the paper.

f. Intermittent sprocket shaft.

- Drain the oil.
- Remove the lens holder.
- Remove the runner plate (4 screws).
- Loosen the locking screw "59" and turn screw "21" anti-clockwise.
- Remove the fixing screw of the sprocket.
- Remove the sprocket shaft at the back of the runner plate unit.
- Fit tension ring of the old shaft to the new one.
- Insert a new shaft with sprocket; do not fix anything.
- Mount the runner plate carefully. Taking care not to damage the teeth of the coupling bushing.
- Mount the intermittent sprocket (see chapter 5e).
- After mounting, fill the intermittent mechanism with oil according to the instructions chapter 6.
- Turn screw "21" so far clockwise till it touches the sprocket shaft.
- Now turn screw "21" about 10 degrees anti-clockwise and lock it with screw "59".

g. Intermittent movement.

- Remove the drive-belt and chains.
- Remove the oil.
- Remove shutter housing.
- Remove P.C. board at the back.
- Loosen the bearing of the upper sprocket from the operational side (2 screws).
- Remove mounting plate with relays RE3 and RE4 (2 screws "B" fig. 3).
- Mounting plate with wiring should be pulled out and downwards.
- The wiring of the framing lamp now visible should be disconnected.
- Disconnect the two yellow wires of the control lamp "10" fig. 2.
- Disconnect door switch SK1 Fig. 3. Unscrew white cover and remove switch (wires need not be disconnected).
- Remove curved plate (2 screws).
- Pull out framing shaft from the coupling bushing (loosen screw in stop-ring) at the operational side.
- Remove lens holder.
- Runner plate unit should be unscrewed and removed (4 screws).
- Remove 4 screws of intermittent movement and take it out from the back.
Assembly: In reverse order.
- Check the adjustment of the intermittent sprocket (chapter 5e).
- After remounting the chains, check correct tension.

N.B.

It is necessary to mount the gear, the shutter, the shutter shaft and the framing bushing onto the new intermittent unit. See for adjustment of the gear chapter 4d.

h. Shutter.

See chapter 5g intermittent movement.
For adjustment see chapter 4g.

CHAPTER 6: MAINTENANCE

The intermittent movement should be filled with oil type 3672.

In case of newly installed projectors and after replacement of the intermittent unit, proceed as follows:

1. Oil change after 50 working hours
2. Oil change after 100 working hours
3. Oil change after 500 working hours

and further every 500 hours.

The best way to fill the unit is via the plastic tube with the plastic bottle supplied and the lid of the oil level pipe being removed. The required quantity is about 200 cc and the level should be between the red and green circle.

If the oil level is between the red and green circle with a lower quantity it means that there is still air in the unit, which may cause damage.

Draining the oil: Remove the lid from the oil level pipe.
Now the oil can be drained via the plastic pipe.

Lubrication of the other components.**Every day**

Front bearing of intermittent shaft.	Esso Universal oil
--------------------------------------	--------------------

Once a month

Novotext gear wheel with shutter shaft gear wheel.	EL4854
Guide roller spindles	Esso Universal oil

Once every three month

Lens holder slide	EL4854
Chains	Esso Universal oil

After overhaul

Ball bearing of capstan	Esso Universal oil
Ball bearing of pressure roller	EL4854

Clean the rollers, the sprockets and the sound drum daily.
Clean the pressure skate and the runner strips after each reel of film.

Filmstripper.

The filmstripper should return to its normal position after being lifted. If it sticks half way the film could be damaged.
Remedy: Clean and lubricate with Esso Universal oil.

CHAPTER 7: SERVICE PARTS

1	Photo diode *	5322 116 10009
		4822 116 10001
2	Frame lamp	4822 134 40113
3	Aperture lens 40 mm	0015 760 80100
	50 mm	0015 760 80101
	60 mm	0015 760 80102
	70 mm	0015 760 80103
	80 mm	0015 760 80104
	100 mm	0015 760 80105
	120 mm	0015 760 80106
4	Guide roller	0015 730 83000
5	Cap	5322 462 70374
6	Sprocket	5322 522 30104
	Set sprocket discs	5322 522 30466
7	Pad shoe	5322 525 30003
8	Tension nut	5322 462 50027
	Spring for pad shoe	5322 492 40001
9	Knob	5322 413 60036
10	Control lamp	0051 706 30107
11	Aperture plate (N)	5322 451 10011
	Aperture plate (C.S.)	5322 451 10009
	Aperture plate (W.S.)	5322 451 10012
12	Spring in objectiv guide	5322 492 40036
13	Pressure roller	5322 525 60022
	Ball-bearing for above	5322 520 20157
14	Sound shaft	5322 535 50014
15	Cap	5322 462 70374
16	Guide roller	5322 525 60096
17	Guide roller	5322 525 60095
18	Lever for skate	5322 404 50048
19	Guide roller	0015 740 21800
20	Front bearing	5322 520 10025
21	Adjusting screw	5322 502 10304
22	Lamp holder	0015 760 80200
23	Micro switch	5322 271 30111
24	Mirror	0015 731 11300
25	Spring with felt	0015 750 13000
		0015 740 13100
26	Nylon tension roller	0015 740 11200
27	Runner strip Novotext	5322 463 10023
	Runner strip Delrin	5322 463 10021
28	Skate	5322 463 10019
29	Lever	5322 535 80089
30	Knob	0015 760 81204
31	Knob	0015 760 81205
32	Knob	0015 760 81206
33	Exciter lamp housing	5322 255 20021
34	Sound optics	5322 381 20004
35	Plexiglas rod	5322 381 10162
36	Spring	0015 740 20300
37	Take-up belt 600 m	0015 740 21400
38	Spool shaft	0015 740 21200
39	Spring	0015 740 20600
40	Ceramic disc	5322 532 50362
41	Spool shaft	0015 740 21100
42	Clip	5322 404 50303
	Spring	5322 492 50693
43	Motor asynchronous	5322 361 50003
	Motor synchronous	5322 361 60057
44	Chain wheel	5322 522 30088
45	P.C. board Fig 5 A	0015 760 80400
	P.C. board Fig 5 B	0015 760 80401
46	Intermittent movement	5322 525 20017
47	Tension roller	0015 740 11300
48	Guide roller	0015 731 02500

49	Lower chain	0015 731 00400
50	Novotext gear wheel	5322 522 30089
51	Driving belt	0015 731 21300
52	Upper chain	5322 358 50007
53	Spring	5322 492 50076
53 A	Piston	5322 360 40048
54	Sealing ring	5322 530 50097
55	Sealing ring	5322 530 50427
56	Screw-nut ring	0015 760 80500
57	Intermittent sprocket	5322 522 30119
58	Intermittent shaft	5322 522 30947
59	Screw	0015 760 81207
60	Aperture plate (N)	5322 451 10011
	Aperture plate (C.S.)	5322 451 10009
	Aperture plate (W.S.)	5322 451 10012
61	Coupling shaft	5322 522 30824
62	Sealing ring	5322 705 30172
63	Sealing ring	5322 532 40006
64	Leaf spring	5322 492 61368
65	Coupling bushing	5322 525 60074
66	Sealing ring	0015 760 81208
67	Sealing ring	5322 530 50147
68	Ball bearing	5322 520 20057
	Reverse running belt 600 m	0015 740 21500
	Reverse running belt 1800 m	0015 731 21400

* P.C. Board fig. 5A ORP 60	5322 116 10009
P.C. Board fig. 5B LDR 03	4822 116 10001

Gr 1	Rectifier bridge KS 326 Herrmann	0015 760 81000	Fig. 4
Gr 2	Rectifier bridge	0015 760 81000	4
Gr 3	Diode for RE 1	5322 130 30259	4
Gr 4	Diode for RE 2	5322 130 30259	4
Gr 5	Diode for RE 5	0015 760 81001	5
Gr 6	Diode for RE 6	0015 760 81001	5 A
Gr 7	Diode for RE 7	0015 760 81001	5
Gr 8	Diode	0015 760 81001	5 A
Gr 9	Diode	0015 760 81001	5
Gr 10	Diode for RE 9	5322 130 30259	2
R 1	Resistor for LA 6	4822 110 20092	3
R 2	Resistor	4822 110 60092	5
R 3	Resistor	4822 110 60092	5
R 4	NTC resistor	0051 706 30129	5
R 5	Resistor	4822 110 60109	5
R 6	Resistor	0015 760 81100	5 B
C 1	Capacitor	0015 760 81201	4
C 2	Capacitor	0015 760 81201	4
C 3	Capacitor	0015 760 81201	4
C 4	Capacitor	5322 124 20488	4
C 5	Capacitor	0015 760 81200	4
C 6	Capacitor	0015 760 81202	5
C 7	Capacitor	0015 760 81200	5
C 8	Capacitor	0015 760 81200	3
C 9	Capacitor	0015 760 81200	3
C 10 a	Capacitor	5322 121 10191	3
C 10 b	Capacitor	5322 124 50012	3
C 11	Capacitor	0015 760 81203	5

T 1	Transformer	0015 760 80600	Fig. 3
VL 1	Fuse	5322 253 30031	4
VL 2	Fuse	5322 253 30031	4
VL 3	Fuse	5322 705 30869	4
VL 4	Fuse	5322 705 30969	4
VL 5	Fuse	0040 180 00022	3
LA 1	Exciter lamp 6,5 V – 1,48 A	5322 134 80007	3
LA 2	Pilot lamp	4822 134 40113	2
LA 3	Control lamp	0015 706 30107	2
LA 4	Projection lamp	0040 120 00003	2
LA 5	Projection lamp	0040 120 00003	2
LA 6	Reverse running lamp	0015 760 80700	3
SK 1	Safety switch	0015 760 80301	3
SK 1A	Main switch	0015 760 80302	4
SK 2	Reed contact	0015 760 80800	3
SK 3	Micro switch	5322 271 30111	2
SK 3A	Micro switch	5322 271 30111	2
SK 4	Reverse running switch	0015 760 80303	3
SK 5	Push-button motor „off“	5322 276 10114	3
SK 6	Push-button motor „on“	5322 276 10134	3
SK 7	Push-button lamp „off“	5322 276 10114	3
SK 8	Push-button lamp „on“	5322 276 10134	3
SK 9	Push-button for stand-by lamp	5322 276 10134	1
RE 1	Motor relay	5322 280 74014	4
RE 2	Reverse running relay	5322 280 74014	4
RE 3	Lamp relay	0015 760 80900	3
RE 4	Lamp relay	0015 760 80900	3
RE 5	Relay for RE 3 – RE 4	5322 280 70084	5
RE 6	Relay	5322 280 70084	5 A
RE 7	Relay for magn. RE 9	5322 280 70084	5
RE 8	Reed relais for ORP 60	5322 281 60078	5 A
RE 9	Magnet for stand-by lamp	0015 760 80901	2
RE 10	Relay for exciter lamp	0051 706 30111	4

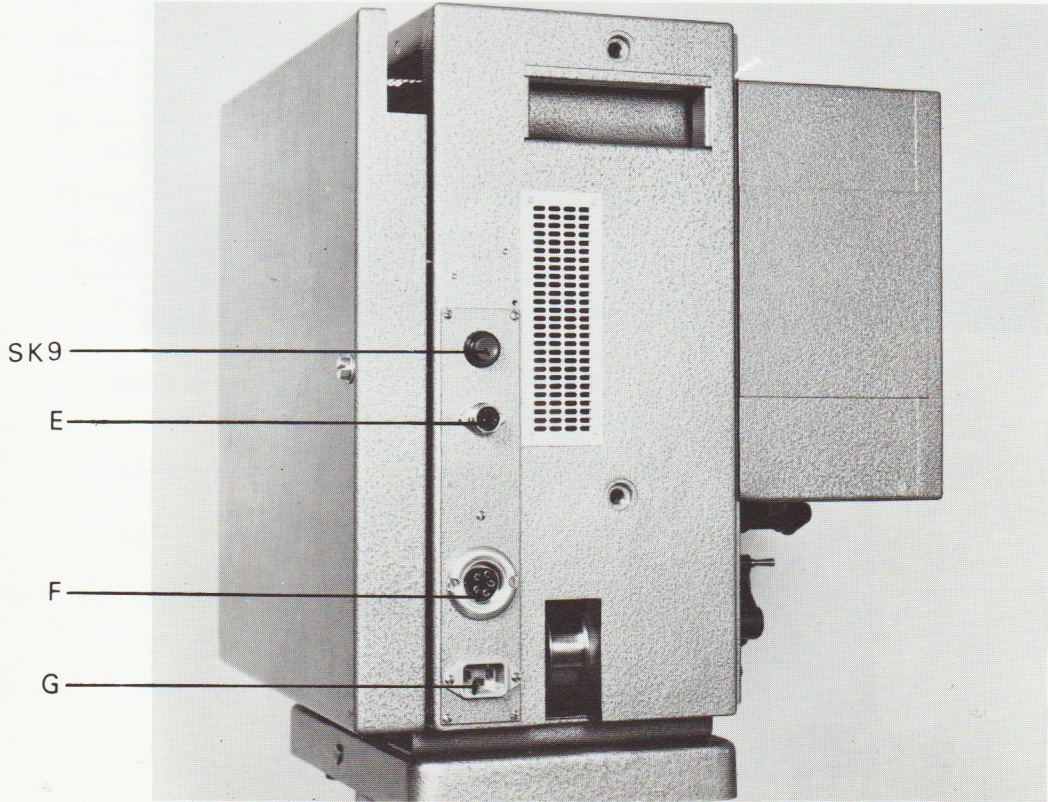
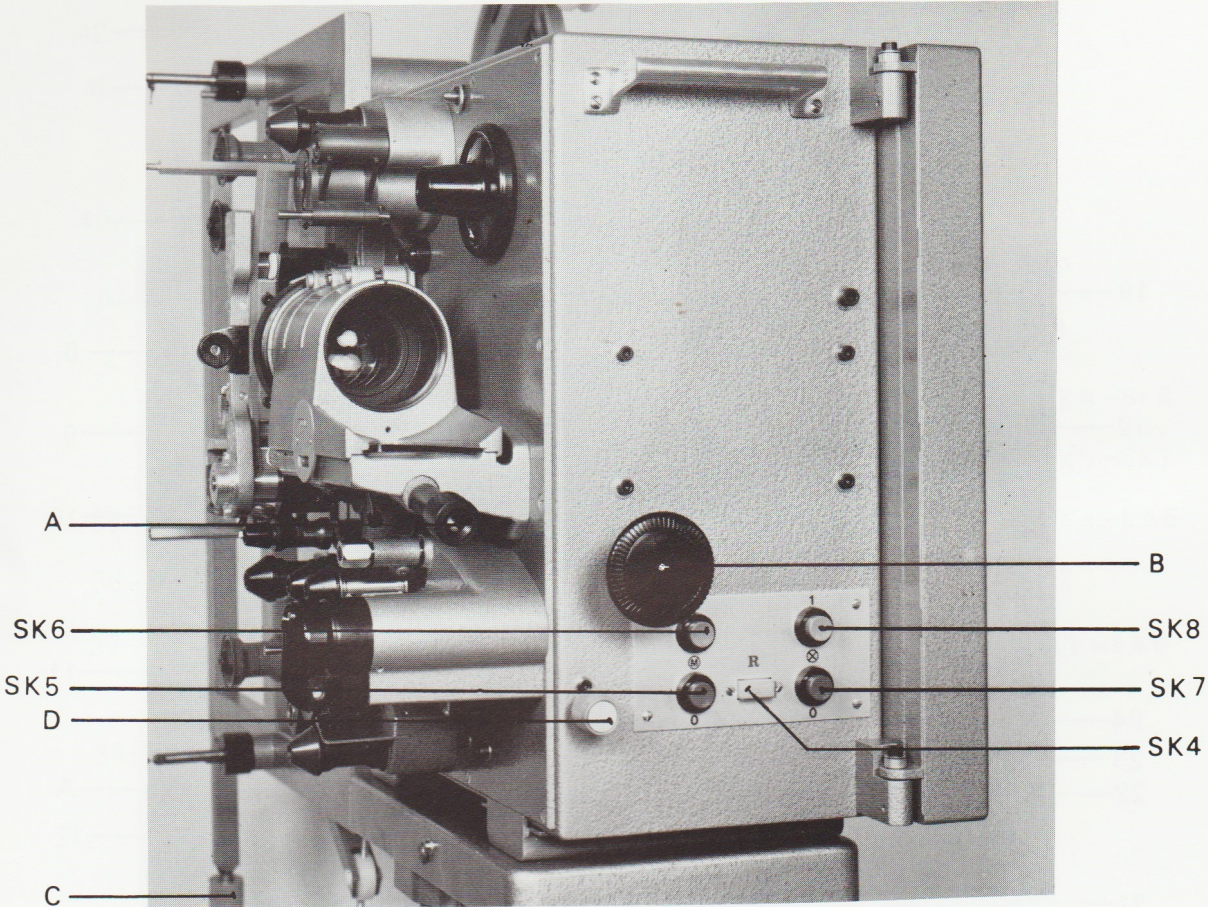


Fig.1

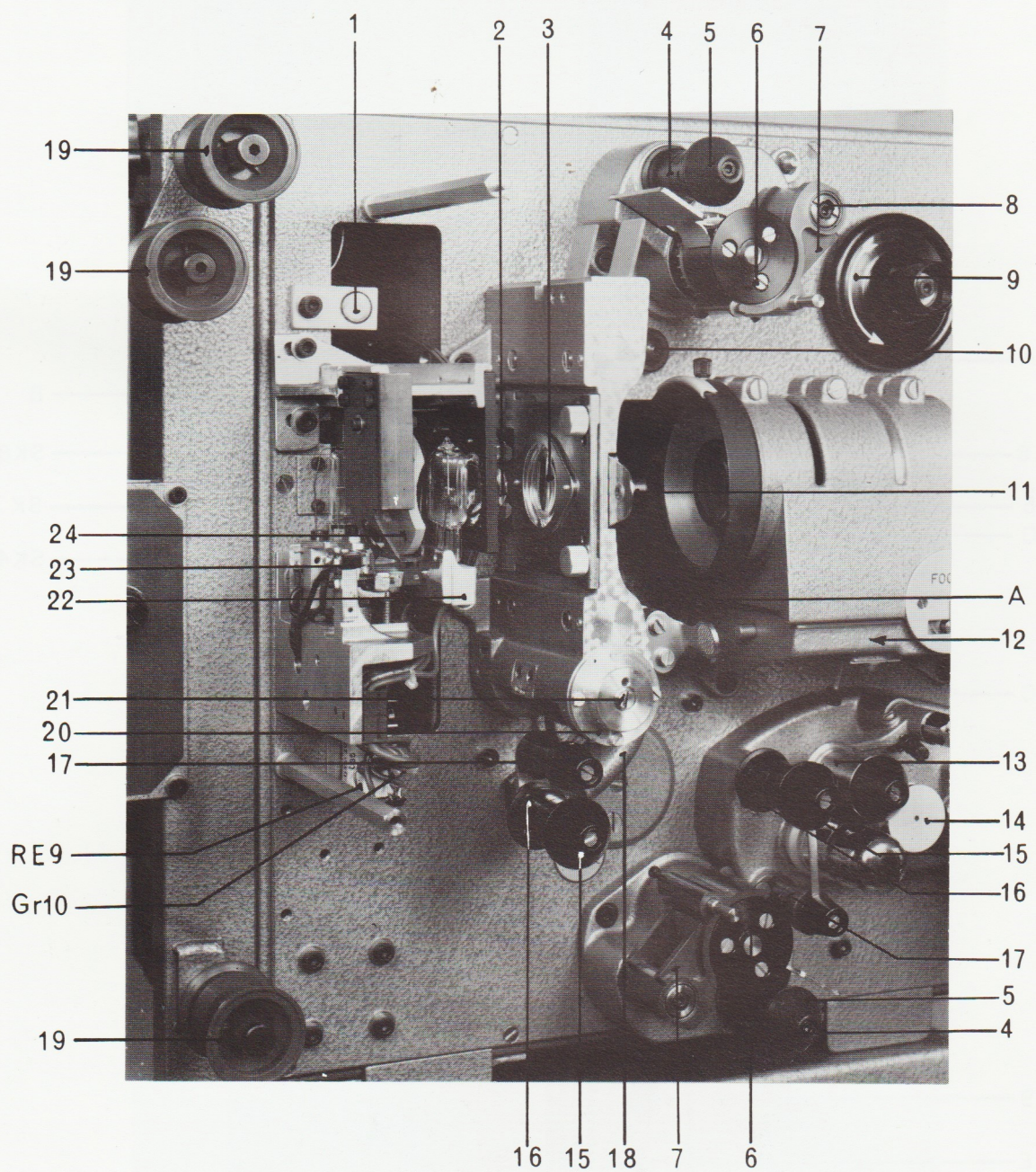


Fig.2

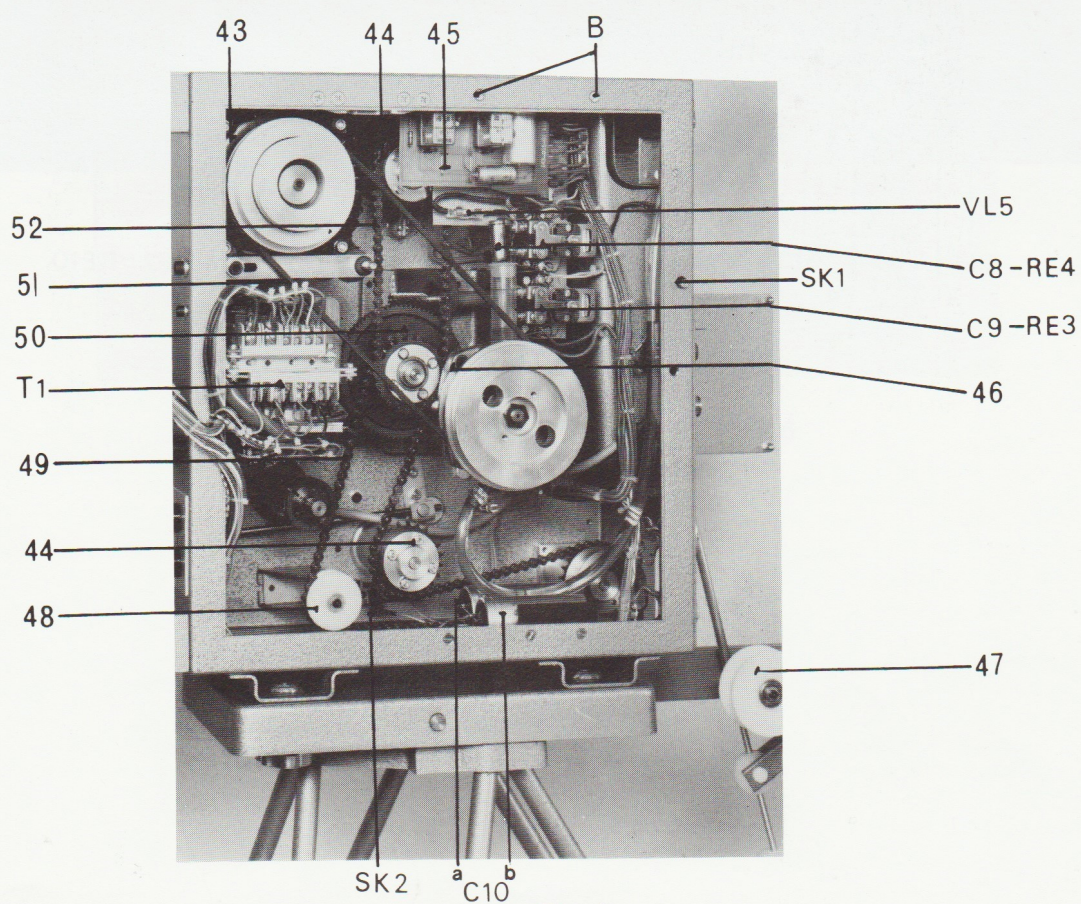
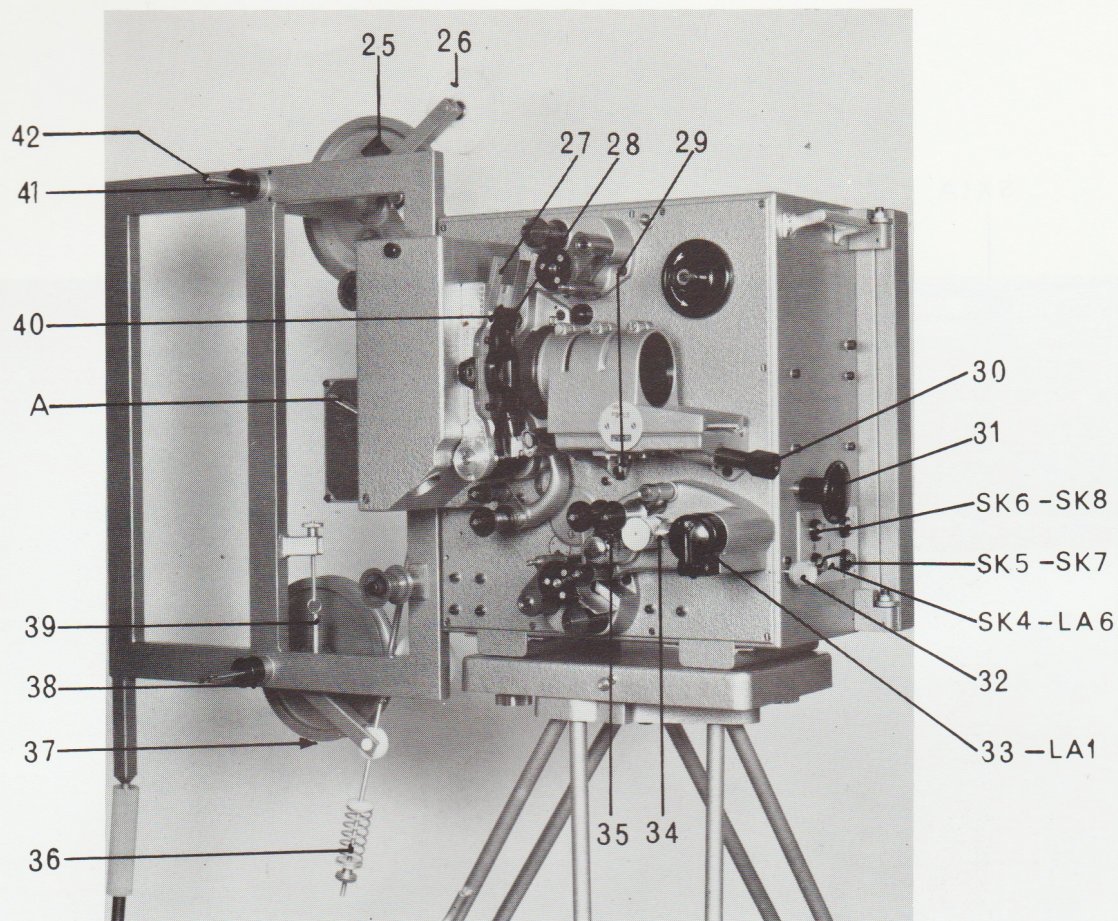


Fig.3

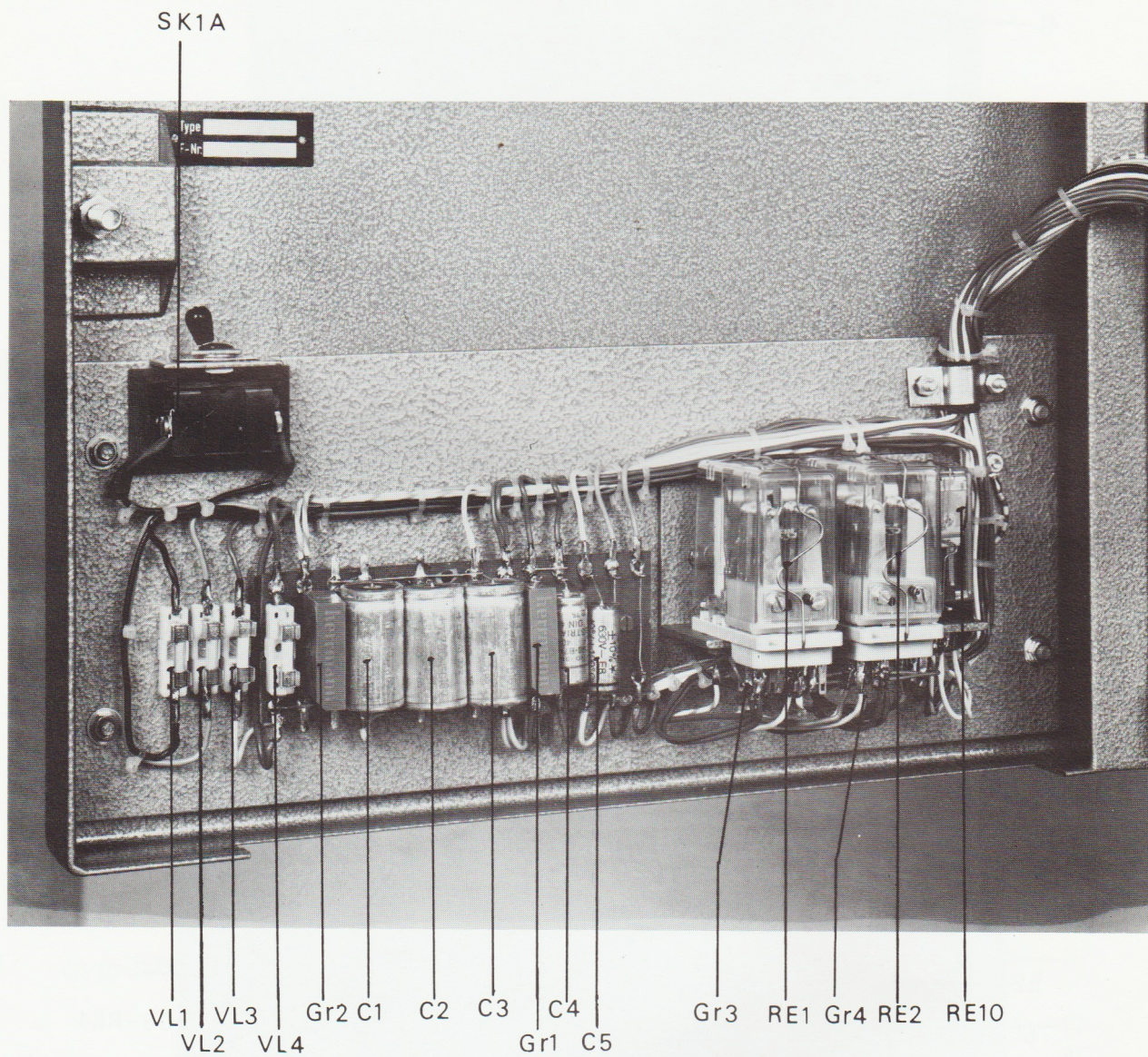


Fig.4

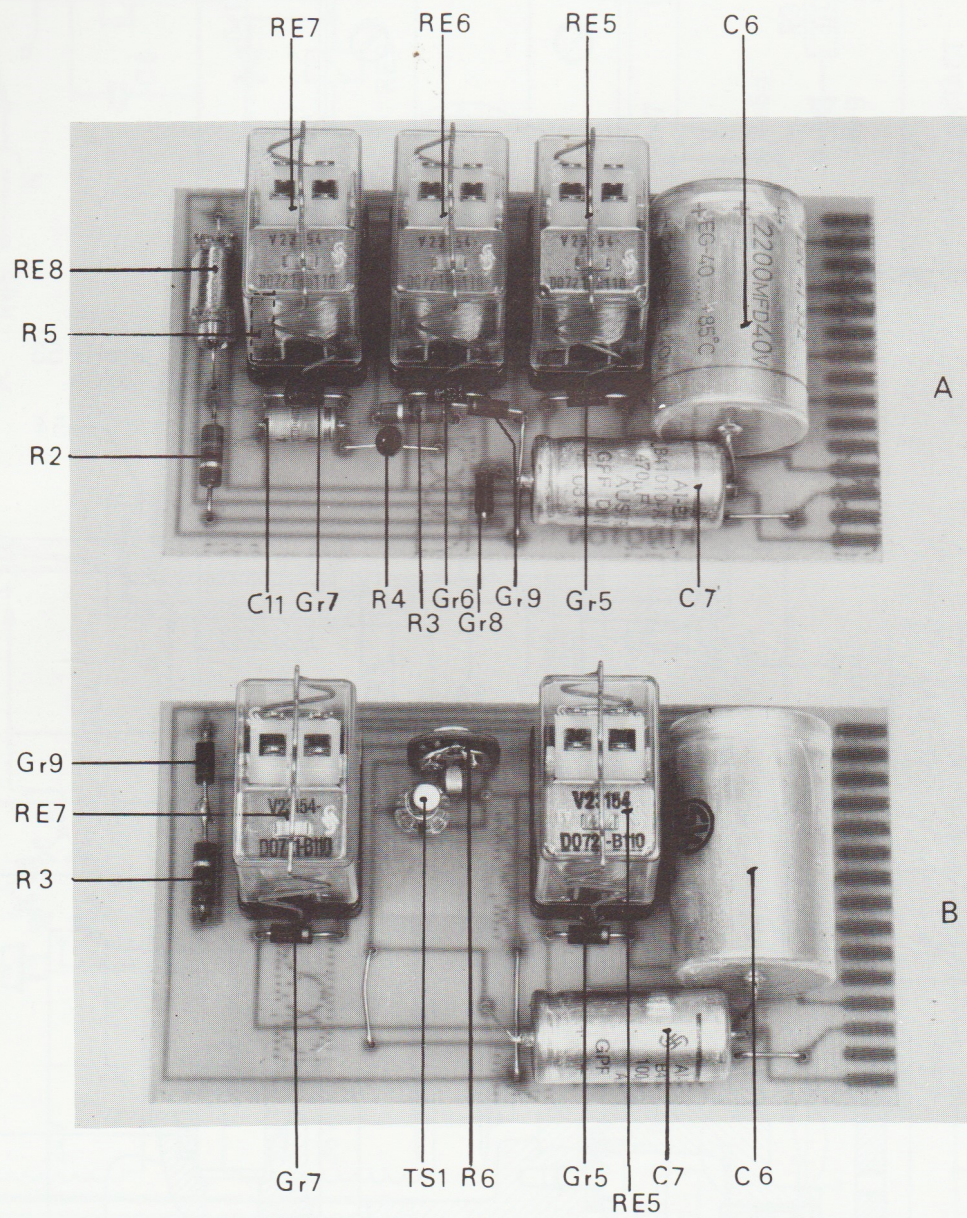


Fig.5

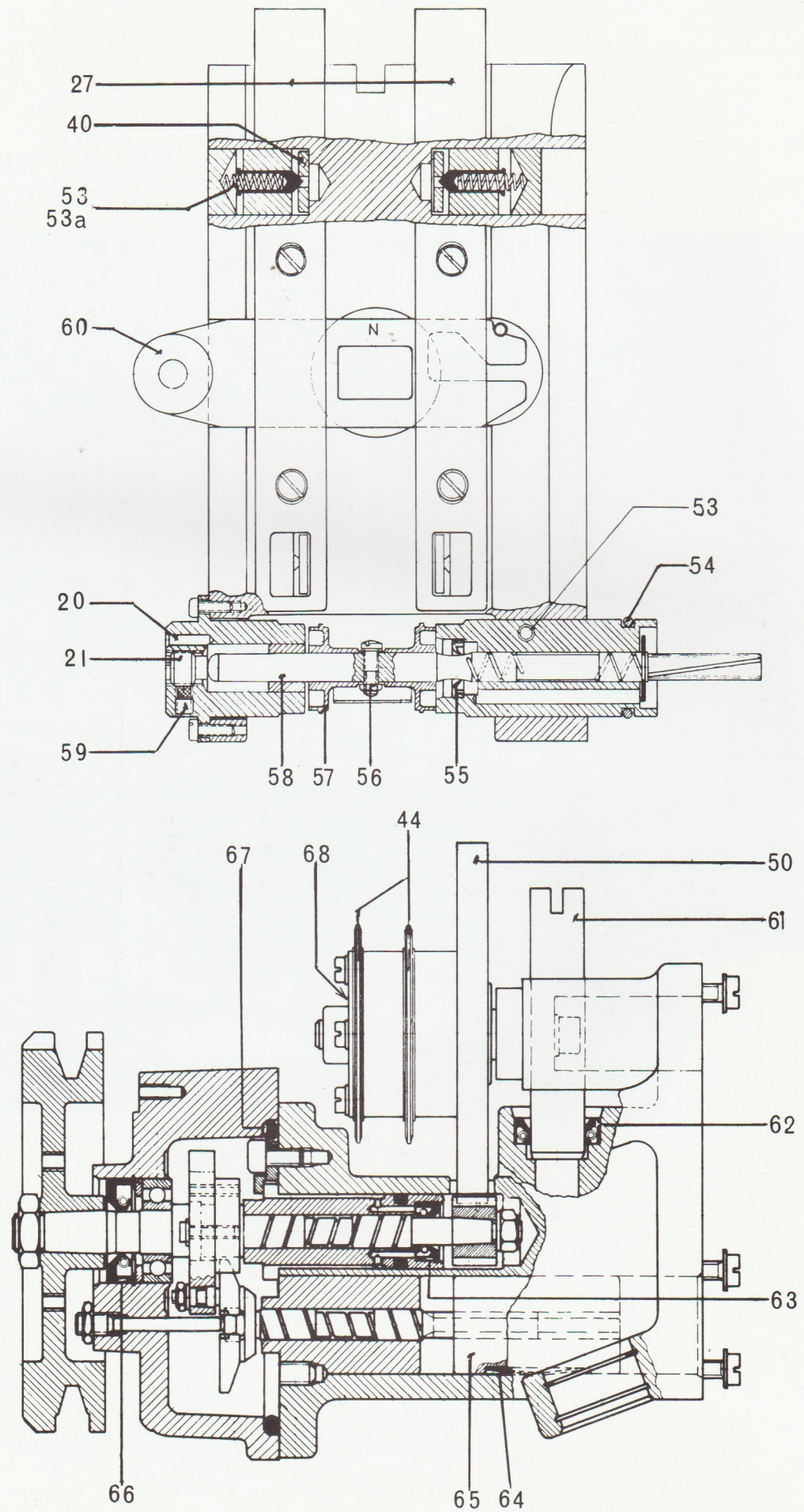


Fig.6

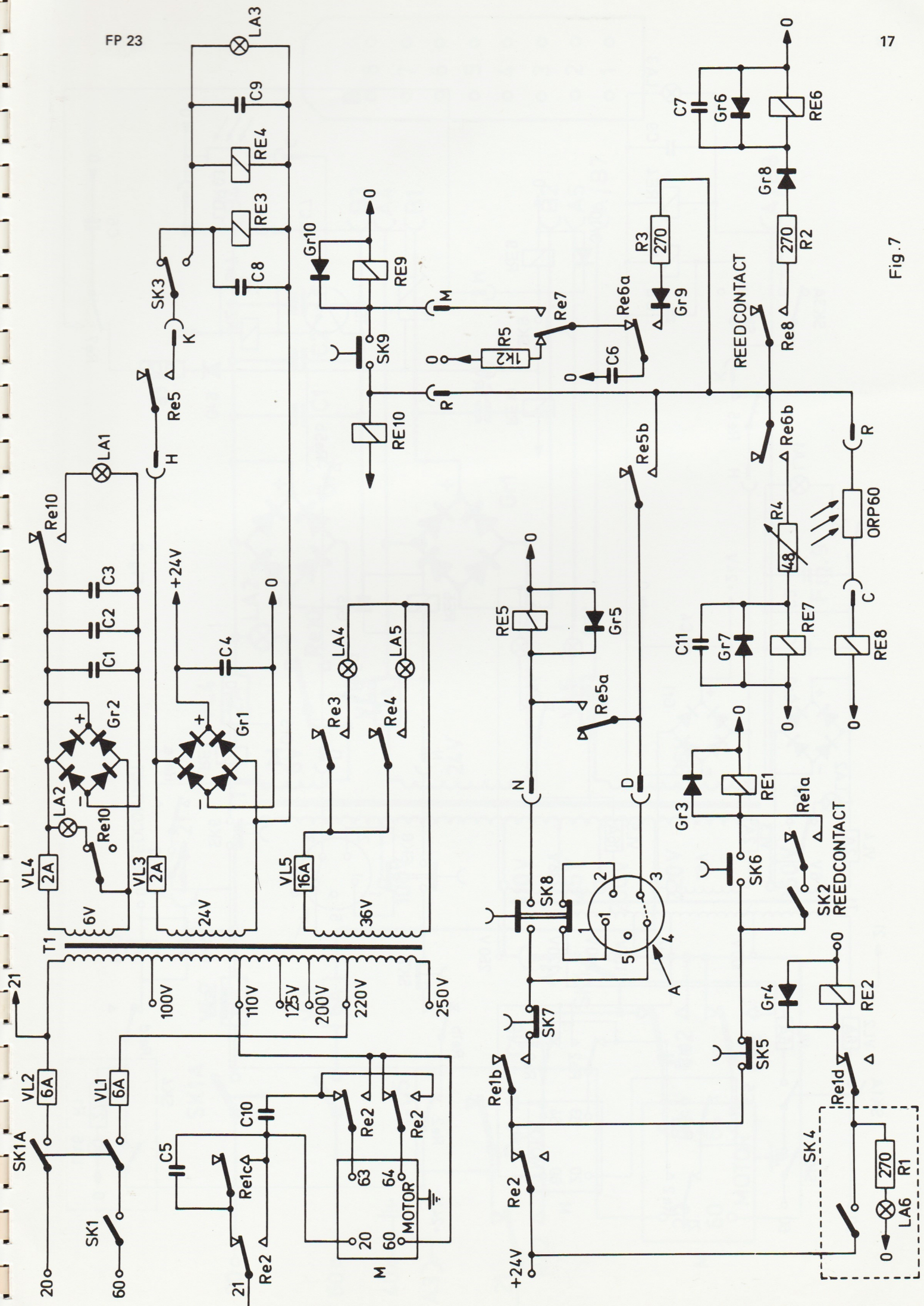


Fig. 7

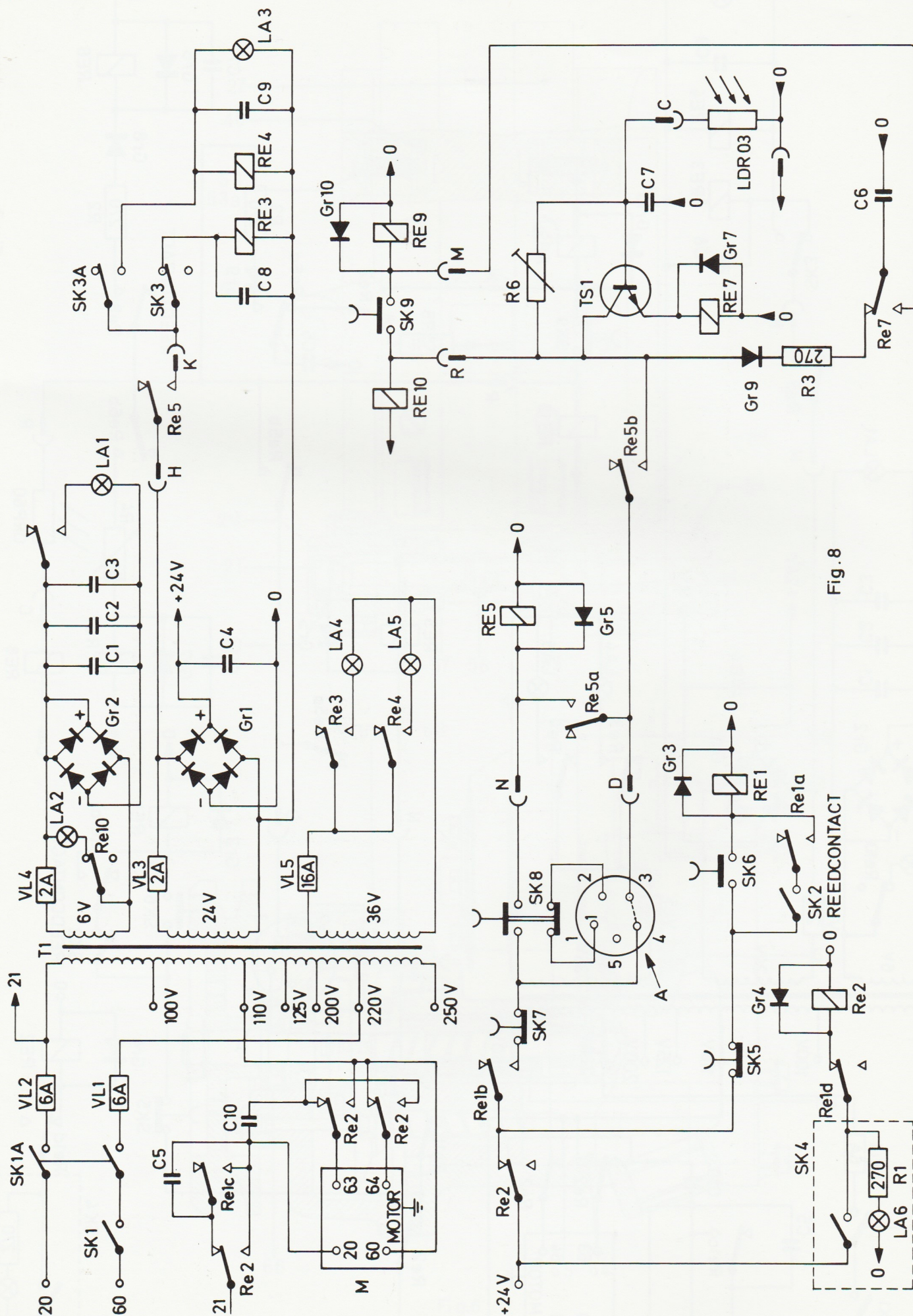


Fig. 8

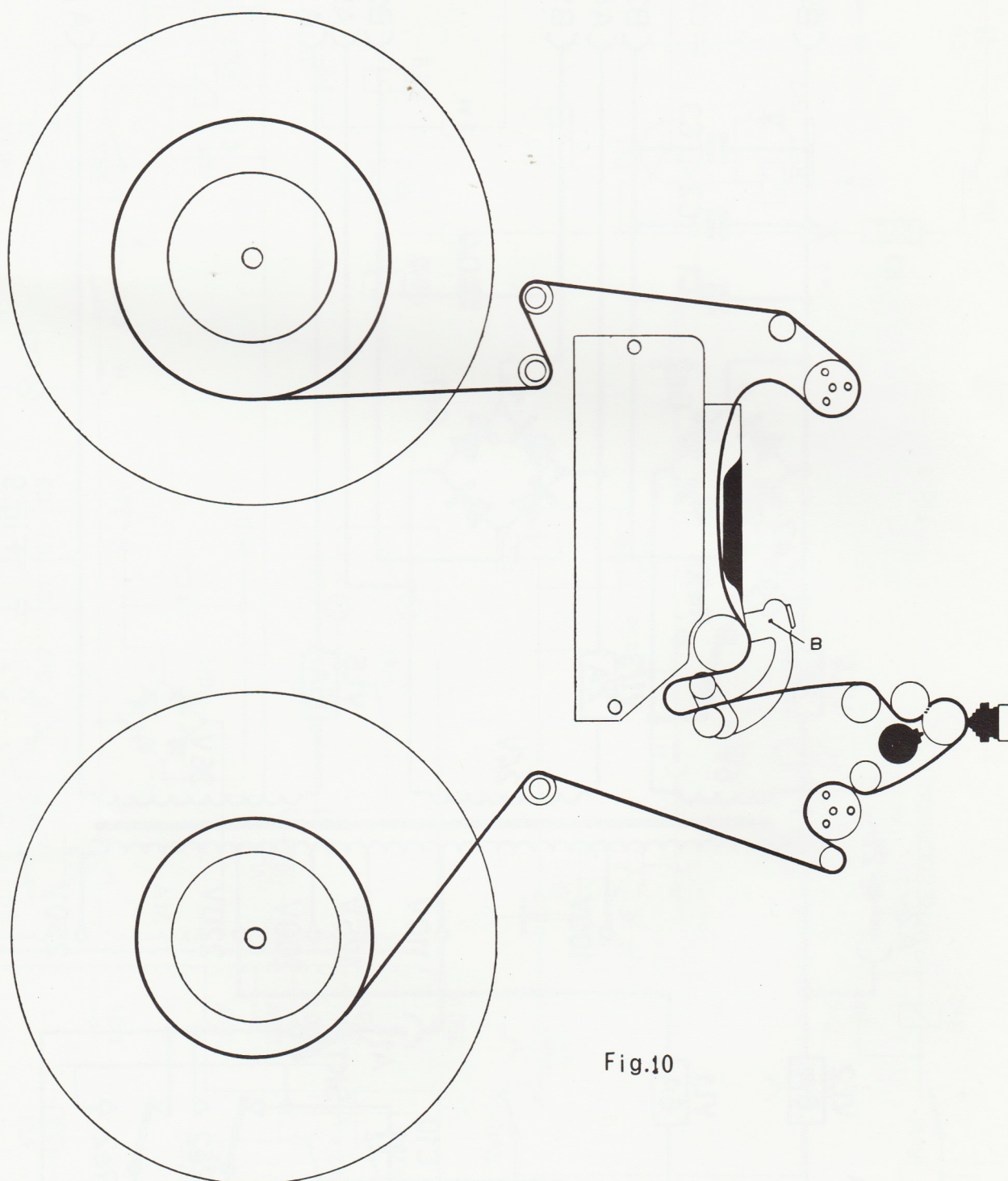


Fig.10

