

Spare Parts Catalogue

GAUMONT-KALEE

GK 40 PROJECTION & SOUND EQUIPMENT

Operating Data

THE
G K - 40
SOUND-FILM PROJECTION EQUIPMENT

Instructions for Installation and Operation

STARTING UP

Important: Before running the equipment, lubricate all oiling points of the projector mechanism and fill the oil bath of the intermittent unit to the level of the centre of the sight window, as detailed under "Cleaning and Lubrication—Weekly (3)" and check that the mechanism turns over freely by hand.

The Arc Lamp. Insert the mirror in its holder, retaining it in place by the clips on the holder rim. Fit up the lamp with carbons, setting the forward (positive) carbon so that its end is in line with the bright polished indicator in the back of the lamphouse. Adjust the position of the mirror holder along its guide rails so that the centre of the mirror is about $4\frac{1}{4}$ in. from the end of the positive carbon.

With the projector mechanism running without film, strike the arc as instructed under "Operation—Arc Lamp." Let the arc burn for a few moments to establish a proper crater, switching on the automatic feed motor and adjusting its speed to maintain the arc gap.

Check that the positive carbon crater is in alignment with the indicator already referred to in the back of the lamphouse. Focus the projection lens so that the film aperture is in sharp focus on the screen. Adjust the mirror bracket backwards or forwards on its slide rails to the position corresponding to brightest illumination in the centre of the screen. Note that this setting is very critical, quite small movement making considerable difference in screen brightness. Having found the best position for central brightness, tilt the mirror by means of the two levelling screws behind it to get the most even possible illumination across the screen. Having obtained this, re-check that the mirror is in the optimum longitudinal position. Tilt the periscope mirror to bring the arc image into coincidence with the latitude markings on the card.

Care should be taken not to disturb the above settings once they have been established, but they should be re-checked whenever the mirror is disturbed in its holder.

Check that the projector is tilted and positioned so that the illuminated area properly fills the screen when the lamp flue can be connected up to the booth vent and the damper adjusted to give just sufficient draught for adequate ventilation. Avoid excessive draught since this will cause flickering of the arc.

THE AMPLIFIERS

The 12 watt amplifier section has at its back a recessed 3-pin male socket for mains entry and a corresponding 3-pin plug is provided ready wired with a 5 ft. length of 3-core P.V.C. cable for connection to a 5 amp. with earth supply point. The green wire of this cable is the earth for the complete amplifier system and it is important that this be earthed. If the wiring in the operating box is not in earthed screwed steel conduit or sheathed cable a special earth line must be provided to, say, the nearest water pipe.

The 40 watt amplifier is not separately connected to the mains, but draws its power supply via its connection to the 12 watt amplifier.

Both amplifiers incorporate mains transformers with adjustable taps to suit the usual supply voltage ranges, i.e., 100/120, 200/220, 230/240, and unless labelled to the contrary are sent out set for 230/240 volts. Should the available supply be other than this, the bottom covers of the amplifiers should be removed and the lead to the mains transformer terminal marked 230 v. unsoldered and reconnected to 210 v. or 110 v. as appropriate. **Both amplifiers must be reset.**

The amplifiers are for operation off 50-60 cycle A.C. supply only and must not be connected to a D.C. supply.

Inter-connection between soundheads, amplifier, and speakers is by non-interchangeable plug and socket connections, thus simplifying installation and enabling rapid disconnection for testing without possibility of confusion.

The two leads (from photocell and Exciter Lamp) coming from the front end of the soundhead, are fitted with plugs which fit corresponding sockets in the end of the 12 watt amplifier. Corresponding sockets are provided in the two ends of this amplifier for connection of both soundheads, a switch being provided in the front panel of the amplifier, to switch from one soundhead to the other for sound change-over.

Inter-connection between 12 watt and 40 watt amplifiers is by a multi-core lead, from the rear of the 40 watt amplifier, fitted with a 10-pin plug which connects into a corresponding 10-pin socket in the rear of the 12 watt amplifier.

The 50-yard speaker run is furnished at one end with a 10-pin plug to fit a corresponding socket in the rear of the 40 watt amplifier. Its other end connects into the terminal block on the cross-over unit already described in connection with the fitting up of the speaker tower.

The Monitor speaker is housed in a case attached to the top shelf of the amplifier rack and has a lead terminating in a 2-pin socket, which fits a corresponding 2-pin male recessed socket in the rear of the 40 watt amplifier.

In case of failure of the 40 watt amplifier, it can be disconnected from the 12 watt stage by pulling out the connecting plug, and the stage speaker 10-pin connector plugged directly into the 12 watt amplifier instead. The Monitor speaker 2-pin socket can be similarly plugged into a corresponding 2-pin recessed male socket in the back of the 12 watt amplifier.

Note: It is essential that all connections be made before trying to test the amplifier, since, in order to avoid damage due to overloading of the output stage, such as might arise were the stage speakers disconnected, the amplifier circuit is so arranged that it is broken if the stage speaker plug is withdrawn.

NOTES ON AMPLIFIER SPARES

1. When components are replaced it is important to maintain the same mounting position and wiring arrangement, keeping all leads as short as possible and observing the same earthing points. This is necessary to avoid H.F. interference in the case of the oscillator circuit of the 12 watt amplifier feeding the Exciter Lamp.
2. Valves ref. V4 and V5 (6V6 or 6V6GT) in the 12 watt amplifier are output valves in Push-Pull and should be replaced in pairs to maintain balanced working.
3. Valves ref. V1 and V2 (6L6G or 6LG) in the 40 watt stage are also output valves in Push-Pull and should be replaced in pairs.
4. Should the 40 watt Mains Transformer, ref. T3, run hot or burn out, suspect failure of the 10,000 ohm Bleeder Resistance, ref. R32a, since failure of this resistance results in overloading the H.T. winding of the transformer.
5. Amplifiers from Serial No. 475 are fitted with a Stud Type Volume Control, ref. VRa, interchangeable with the graphite-track type it supersedes. This is withdrawable from its protective steel shroud for access to the contacts for cleaning after removing the 4 B.A. retaining screw visible when the amplifier base is detached.

The contacts should be cleaned with very fine emery cloth, or a spun-glass cleaning brush, and lightly smeared with vaseline.

THE SOUNDHEAD

The Exciter Lamp is fed with supersonic current from the amplifier, and accordingly the amplifier must be connected up and switched on, and the change-over switch appropriately set, before soundhead adjustments can be made. Note that the brightness of the Exciter Lamp is controlled by the sound balance potentiometer in the front end of the soundhead.

Pull out the bell-shaped cover fitted into the end of the sound drum and insert photo-electric cell. Note, this should not be exposed to bright light more than is necessary. A special hook-shaped tool is provided with the equipment to facilitate its removal. When replacing the bell cover watch that the extended skirt does not obscure the scanning aperture.

The Exciter Lamp is mounted in a detachable holder incorporating focusing adjustments. A spare lamp and holder is provided per pair of projectors which should be kept set up ready for immediate interchange, in case of a lamp failure during a show. Such failure should be very rare, since the lamp is deliberately under-run to ensure long life.

The special bayonet type holder is provided with a spring clip which holds the lamp lightly but firmly against vibration. Push the lamp well down against the thrust of the central spring contact and twist it a full quarter turn, allowing it to rise so that its pins are engaged in the retaining notches. Occasional difficulty in pushing a lamp fully home may be due to a blob of solder, on the lamp cap, which should be carefully filed off.

Check that the aperture in the sound drum is free from grease and dirt and that the lenses of the optical slit system are clean. Remove the bell-shaped cover enclosing the photo-electric cell and examine the patch of light formed on the cell cathode with the Exciter Lamp switched on. Position the Exciter Lamp by means of adjustments provided to obtain a bright patch of light. The correct setting is that corresponding to maximum *uniform* bright-

ness across and along the patch which should be without colour fringes. Having established this setting, lock the stops locating the lamp holder, thus enabling it to be withdrawn and replaced without disturbance of its adjustment.

The sound optical slit system is accurately pre-set in focus and azimuth, locked and sealed and its adjustment should not be disturbed.

Having adjusted the Exciter Lamp, thread up and run the equipment with any convenient representative film. Set the sound balance potentiometer on the front end of the soundhead to give maximum Exciter Lamp brightness, and with the volume control set between 3 and 4, adjust the cell polarisation potentiometer (knob at rear of 12 watt amplifier) to give an adequate volume of sound.

Having adjusted both machines to satisfactory sound, proceed to balance the sound levels as follows:—

1. Set treble control which is on the front panel of the 12 watt amplifier to "Max."
2. Set the volume control of Monitor speaker to "Max." and turn up Exciter Lamps to full brilliance.
3. Compare the cell "hiss" from the two soundheads by switching quickly from one to the other and dim the Exciter Lamp of the "high" machine to equalise the "hiss" level.

Speakers. The Cross-Over Unit is fitted with a "normal-emergency" switch which serves to cut out the HF speaker in case of breakdown, the full frequency range being handled by the LF speaker. With switch set at "normal", check phasing of speakers. If these are incorrectly connected into the Cross-Over Unit, it will be apparent that the sound is coming from two sources. Correct if necessary, by reversing the connections of one speaker.

Check the sound distribution in the hall, adjusting the angling of the HF horn and the setting of the tower to obtain the best results. Satisfactory upper frequency coverage requires very accurate location of the LF horn in the vertical plane.

Amplifiers. The bass and treble controls on the front panel of the 12 watt amplifier have each three positions to give the best combination to suit the effective acoustical characteristics of the hall. Both controls are at maximum when turned fully clockwise.

OPERATION

Lace up with film in accordance with the lacing chart exhibited on the projector. Take care to thread the film so that the gravity roller arm above the sound drum, which serves to tension the film, rides in its mid-position, as poor sound will result if this arm is working at either extreme of its movement.

The gate is hinged to open like a book for easy threading, the lens having been first swung up out of the way. Notice the gravity latch locking the pad rollers on the bottom hold-back sprocket of the soundhead. This must be lifted to open the rollers. See that it is fully re-engaged when the rollers are again closed.

The picture gate has a second aperture above the picture aperture proper to facilitate threading in the frame. Framing during operation is made by means of the racking knob situated below the light cone.

CLEANING AND LUBRICATION

Regular cleaning and lubrication are important, but do not over-oil, and always wipe off any excess. Use Kalee Super Oil only, since this has been specially selected as best suited to the operating requirements of the projector mechanism.

Never clean the equipment while it is running, as a rag caught in a moving part may result in personal injury or damage to the equipment.

Daily

1. Clean the projector gate and mask plate, carefully removing any film emulsion or dirt. The gate is readily detachable. Swing the lens up and out of the way, open the gate, then release it by means of the cam lever on the face of the machine, when it can be lifted out of its hinge.

The mask plate fits freely in slots in the gate bracket from which it can be simply lifted out.

An old toothbrush is a convenient cleaning tool. The end of its handle can be filed up square for use as a scraper to remove any hard deposit. Never use a steel scraper, as scratches are liable to cause emulsion build-up and consequent film damage.

2. Wipe the arc mirror with a soft, dry rag, taking care not to scratch its surface.
3. Apply one drop of oil to each of the following oiling points:
 - (a) The seven points grouped in a block on top of the projector frame.
 - (b) The three points grouped in a block on top of the soundhead behind the projector.
 - (c) The oil pipe from the adaptor gear which is brought out into the side of the shutter housing behind the projector.
 - (d) The oiling points at top and bottom spool box spindles.
 - (e) The feed screw bearings of the arc lamp.
 - (f) The bearings of the driving motor.

Weekly

1. Clean all sprockets, especially their teeth, also all pressure and guide rollers and top and bottom fire traps. Use a tooth brush as brush and scraper, as already mentioned, to remove any accumulated deposit, taking care not to damage the sprocket teeth. If necessary, a little paraffin or carbon tetrachloride can be used to facilitate removal of dirt. This should be used sparingly, carefully wiped off, and any rotating part so cleaned carefully re-lubricated.
2. Lubricate sparingly all guide and pressure rollers: be particularly careful to wipe off any excess oil which might get on to the film.
3. Remove the rear cover from the projector. This is secured by a single captive screw with a large knurled head. Check oil level in cross box oil bath. This should be visible in the sight glass when the box is

turned into the vertical position. Replenish as necessary using Kalee Super Oil only. It is most essential to use clean oil since any grit will ruin the precision mechanism.

4. Before replacing the rear cover, give two drops of oil to each bearing of the yoke which rides on the shutter shaft. Give also a drop of oil to the teeth of each gear train and wipe out any oil collected inside the base of the machine.
5. Thoroughly clean down the whole equipment including the inside of the lamp, wiping all bright parts with an oily rag, giving special attention to the guide bars and feed screws inside the lamp.
6. Clean the projection lens, taking care not to scratch or fingermark the glass surfaces. Do not take the lens out of its holder, since it would necessitate re-focusing and do not attempt to dismantle it. Carefully remove any dust with a clean camel-hair brush. Any grease can be removed with a pad of cotton wool moistened with alcohol, but a minimum of solvent should be used, lest this get inside the lens. The glass can be finally wiped with a damp chamois leather, finishing with a piece of clean, well-laundered linen or silk, but should not be cleaned more than necessary.
7. Clean out and dirt which may have collected in the aperture in the sound drum, and carefully wipe the front lens of the optical system with a piece of clean, well-laundered linen or silk.

INTERMITTENT SPROCKET AND UNIT

WARNING. Under no circumstances should the Intermittent Unit (ref. 001) be dismantled. In event of its requiring any adjustment or replacement it should be returned to the nearest service dépôt.

To Remove the Intermittent Sprocket

Open and detach the gate. Take out the mask plate. Remove the stripper which encircles the hub of the intermittent sprocket, and which is secured to the bottom of the gate bracket by a 2BA countersunk screw.

Remove the screw in the outer end of the intermittent spindle which clamps the intermittent sprocket. This should be done carefully, using only as much force as is necessary in order to avoid straining the intermittent unit or bending the spindle. Steady the sprocket with one hand against the twist of a screwdriver. Note the two washers interposed between the head of the screw and the boss of the sprocket, i.e., a spherical seated floating washer under the head of the screw, and under this a key washer having a projecting square gib, which engages a slot in the sprocket and in the spindle. Take care not to lose these. Remove the sprocket. This is a light push fit on the spindle and should be withdrawable by hand. Should it be necessary to prise it off, take great care not to bend or damage the spindle. Take care likewise not to drop the sprocket since the teeth being hard are also brittle. When

replacing the sprocket make sure that the spindle, sprocket hole and shoulders are quite clean. Smear the spindle lightly with oil before pushing on the sprocket. It should go on rather stiffly. Avoid the use of undue force which might damage the mechanism or bend the spindle, and watch that the key and seating washers are correctly assembled with the head of the screw bedding in its spherical seat in the corresponding washer.

To Remove the Intermittent Unit

Remove the sprocket as described above and detach the rear cover of the projector mechanism thus exposing the intermittent unit. Remove the nut at the side of the flywheel ($\frac{3}{8}$ " B.S.F. or $\frac{5}{16}$ " whit. spanner), the unit can then be withdrawn. Take care that the spanner does not slip and damage the flywheel or its shaft.

Replacing and Retiming the Intermittent Unit

The operation of the intermittent unit must be accurately co-ordinated with the shutter so that film movement takes place only when the screen illumination is cut off. Faulty timing shows itself in the appearance of "travel ghost" in the projected picture.

To facilitate replacement of the unit in correct timing its flywheel is marked with a radial line. A similar line is marked on the shutter clamping flange and should be in alignment with a dot on the shutter blade.

When replacing the intermittent unit the following procedure should be followed:

1. Set the masking knob central.
2. Turn the mechanism to bring the line marked on the shutter flange vertical.
3. Engage the intermittent unit in its mount but do not as yet mesh its gears with those of the projector.
4. Turn the flywheel of the intermittent unit so that the line engraved on it is to the top and parallel with the rear edge of the projector frame. Maintaining this position, push the unit home engaging the gears and secure it with the clamping nut.
5. Replace the intermittent sprocket and stripper as described above.

It will probably be necessary to turn the flywheel slightly anti-clockwise to get the gears to engage. Since the gear teeth are spiral the flywheel will turn slightly as the unit is pushed home and a few trials may be necessary to secure correct timing with the unit fully home.

Check by running the machine with film and examining the picture on the screen paying special attention to the top and bottom of lettering in titles which is where "travel ghost" is most evident if timing is faulty.

If necessary, final adjustment can be made by loosening the shutter flange and advancing or retarding the shutter.

If slight "ghost" is evident at the bottom of the lettering, turn the shutter slightly clockwise. If at the top, anti-clockwise.

SOUND OPTICAL SLIT SYSTEM

To re-set System in Azimuth

The Slit System (ref. 240) is accurately pre-set in focus and azimuth, locked and sealed, and its adjustment should not be disturbed. It can be detached as a unit by removing the cap of its retaining saddle when care must be taken not to disturb the setting of its locating ring. On replacement, the azimuth setting must be checked. This requires the use of a loop of 6,000 cycle frequency film. Set the treble and volume control of the amplifier and the Monitor speaker to "Max." and run the equipment. Release the lock ring of the rear lens cell (i.e., next to Exciter Lamp), and carefully rotate the cell by means of tommy holes provided to obtain the maximum 6,000 cycle signal. This adjustment is extremely critical and only a very small rotation of the lens cell should be necessary.

To re-focus System

Having set in accurate azimuth check the Exciter Lamp adjustment. Release the lock ring of the front lens cell (i.e., next to film drum). Run the 6,000 cycle frequency film loop and screw the cell in or out to obtain the maximum signal output. Only a small adjustment, not exceeding one complete turn, should ever be necessary and only because of wear of the sound drum which may be detached and reversed to bring an unworn surface into use.

IMPORTANT

When ordering a spare part always quote both its Catalogue Number (which comprises the prefix 40 followed by the part number) and the Serial Number of the Unit for which it is required.

Serial Numbers will be found:

On the front face of the Projector main frame,
behind the lens arm.

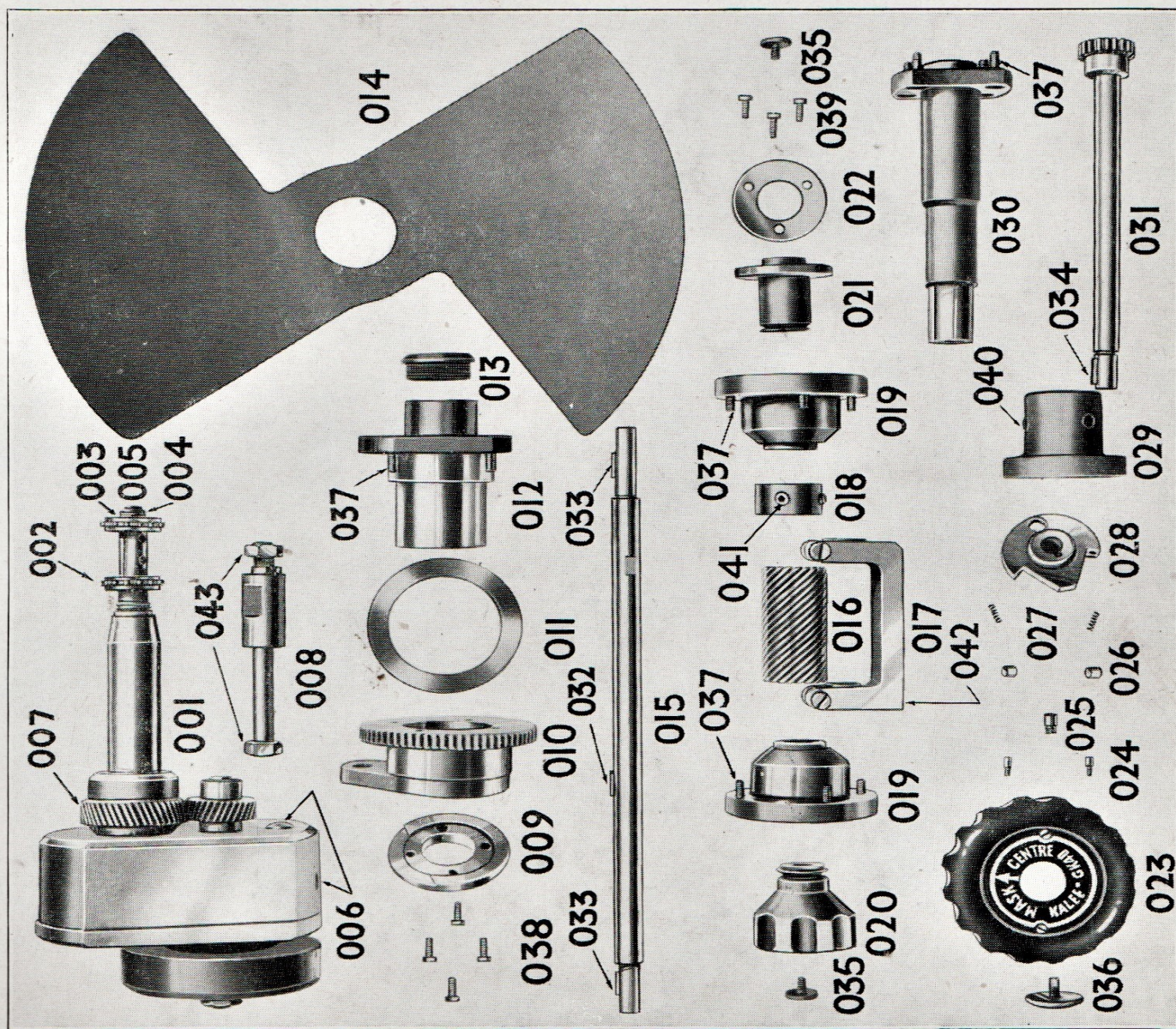
On the top face of the Soundhead, directly
above the potentiometer.

On the gear box cover of the Arc Lamp (for
the Motor Drive Unit) and on the rear
panel above the controls.

At the back of both Amplifier Stages.

NOTE:—Starred items are not illustrated.

SPARE PARTS — THE PROJECTOR



Intermittent Mechanism, Masking Gear, Shutter

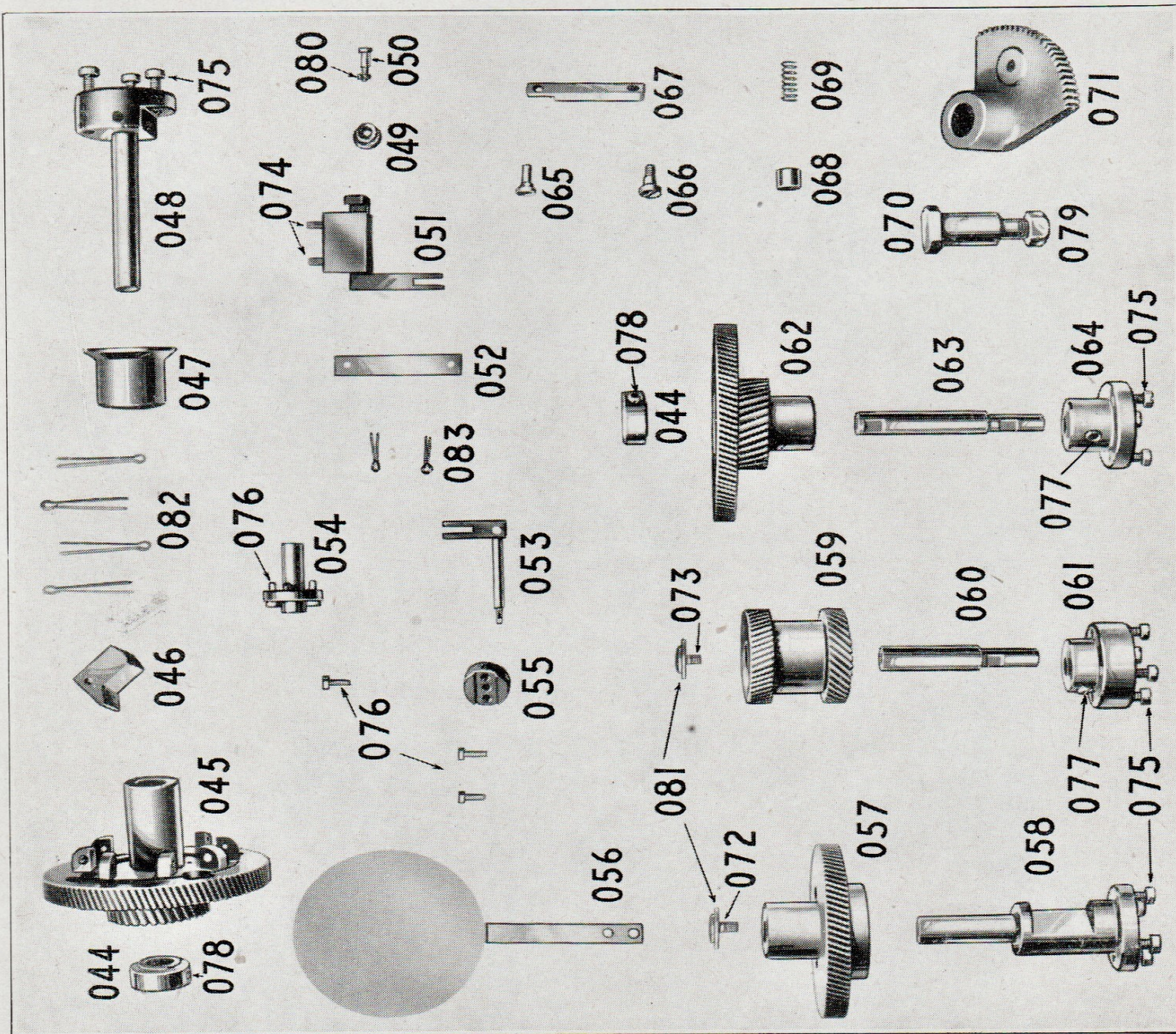
Shutter

40001	Intermittent Unit Complete (includes 006 but no other numbered parts)	40024	Masking Release Stud
40002	Intermittent Sprocket	40025	Masking Pin
40003	Intermittent Sprocket Key Washer	40026	Masking Clutch Roller
40004	Intermittent Sprocket Packing Ring	40027	Masking Clutch Spring
40005	Intermittent Sprocket Screw	40028	Masking Clutch Hob
40006	Intermittent Unit Oil Plug	40029	Masking Clutch Shell
40007	Cam Idler Gear	40030	Masking Sleeve
40008	Intermittent Post	40031	Masking Spindle
40009	Intermittent Bearing Cap	40032	Key, Shutter Gear
40010	Intermittent Sleeve	40033	Key, Shutter Gear Boss or Knob
40011	Intermittent Spring Washer	40034	Key, Masking Spindle
40012	Intermittent Hub	40035	Screw, Shutter Boss or Knob
40013	Intermittent Hub Cap	40036	Screw, Masking Knob
40014	Shutter Blade	40037	Screw, Intermittent Hub, Bearings
40015	Shutter Shaft	40038	Screw, Intermittent Cap
40016	Shutter Gear	40039	Screw, Shutter
40017	Shutter Gear Yoke	40040	Set Screw, Masking Clutch Shell
40018	Shutter Shaft Collar	40041	Set Screw, Shutter Shaft Collar
40019	Shutter Shaft Bearing	40042	Set Screw, Shutter Gear Yoke
40020	Shutter Knob	40043	Locknut, Intermittent Post
40021	Shutter Boss		
40022	Shutter Retaining Ring		
40023	Masking Knob		

SPARE PARTS—THE PROJECTOR

General Gearing, Safety Shutter

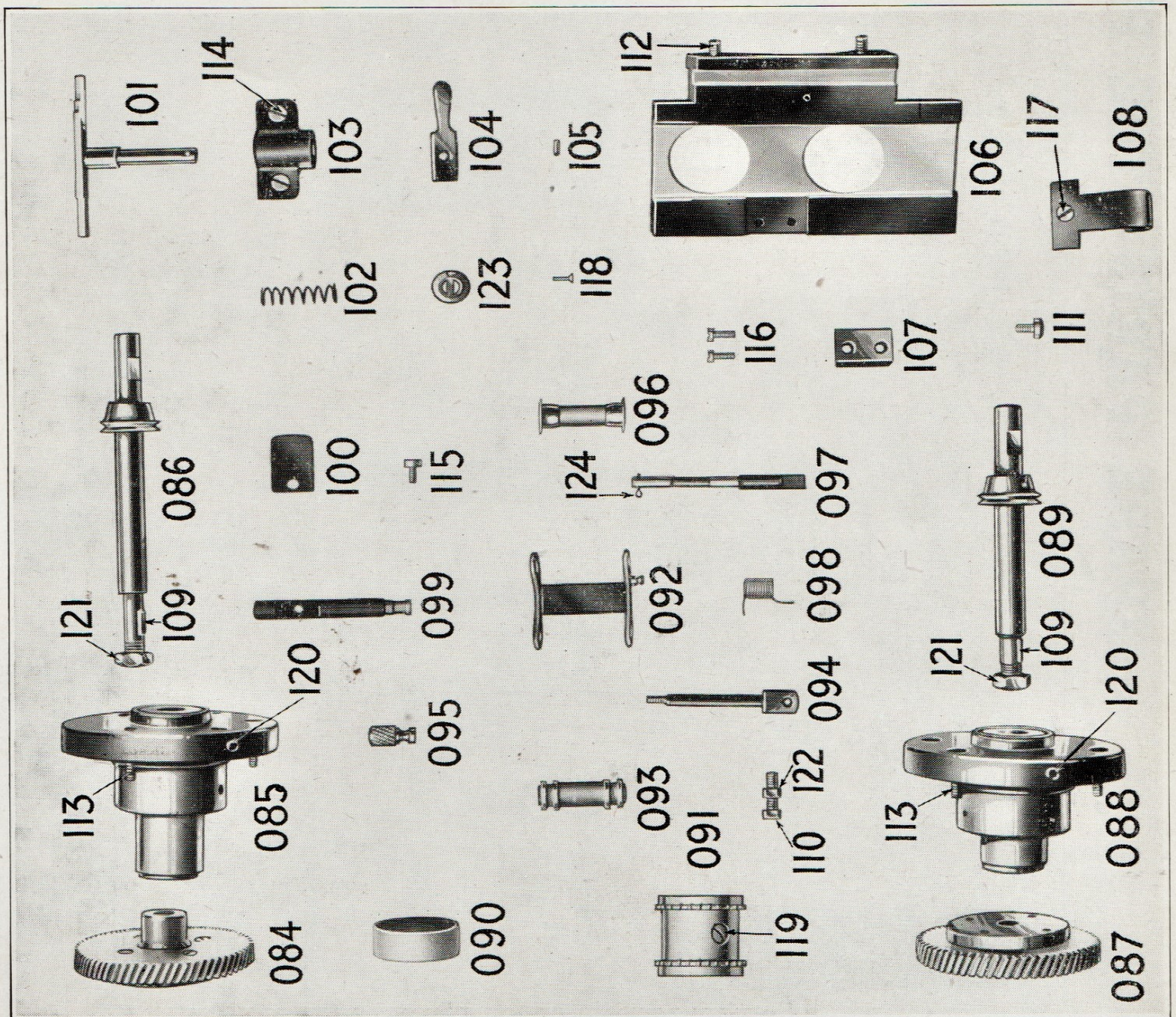
40044	Compound Gear Collar
40045	Top Compound Gear
40046	Governor Weight
40047	Governor Sleeve
40048	Top Compound Post
40049	Safety Shutter Roller
40050	Shutter Roller Pivot
40051	Shutter Crank Assembly
40052	Safety Shutter Link
40053	Safety Shutter Pivot
40054	Safety Shutter Bearing
40055	Safety Shutter Boss
40056	Safety Shutter
40057	Idle Gear
40058	Idle Gear Post and Flange
40059	Shutter Driving Gear
40060	Shutter Driving Post
40061	Shutter Driving Flange
40062	Bottom Compound Gear
40063	Bottom Compound Post
40064	Bottom Compound Flange
40065	Masking Link Pin
40066	Masking Link Screw
40067	Masking Link
40068	Quadrant Plunger
40069	Quadrant Spring
40070	Quadrant Pivot
40071	Quadrant
40072	R.H. Screw, Idle Gear
40073	L.H. Screw, Shutter Driving Gear
40074	Screw, Shutter Crank Assembly
40075	Screw, Gear Flanges
40076	Screw, Safety Shutter Bearing or Boss
40077	Set Screw, Gear Flanges
40078	Set Screw, Compound Gear Collar
40079	Nut, Quadrant Pivot
40080	Nut, Shutter Roller Pivot
40081	Washer, R.H. or L.H. Screw
40082	Split Pin, Bob Weight
40083	Split Pin, Shutter Link



SPARE PARTS — THE PROJECTOR

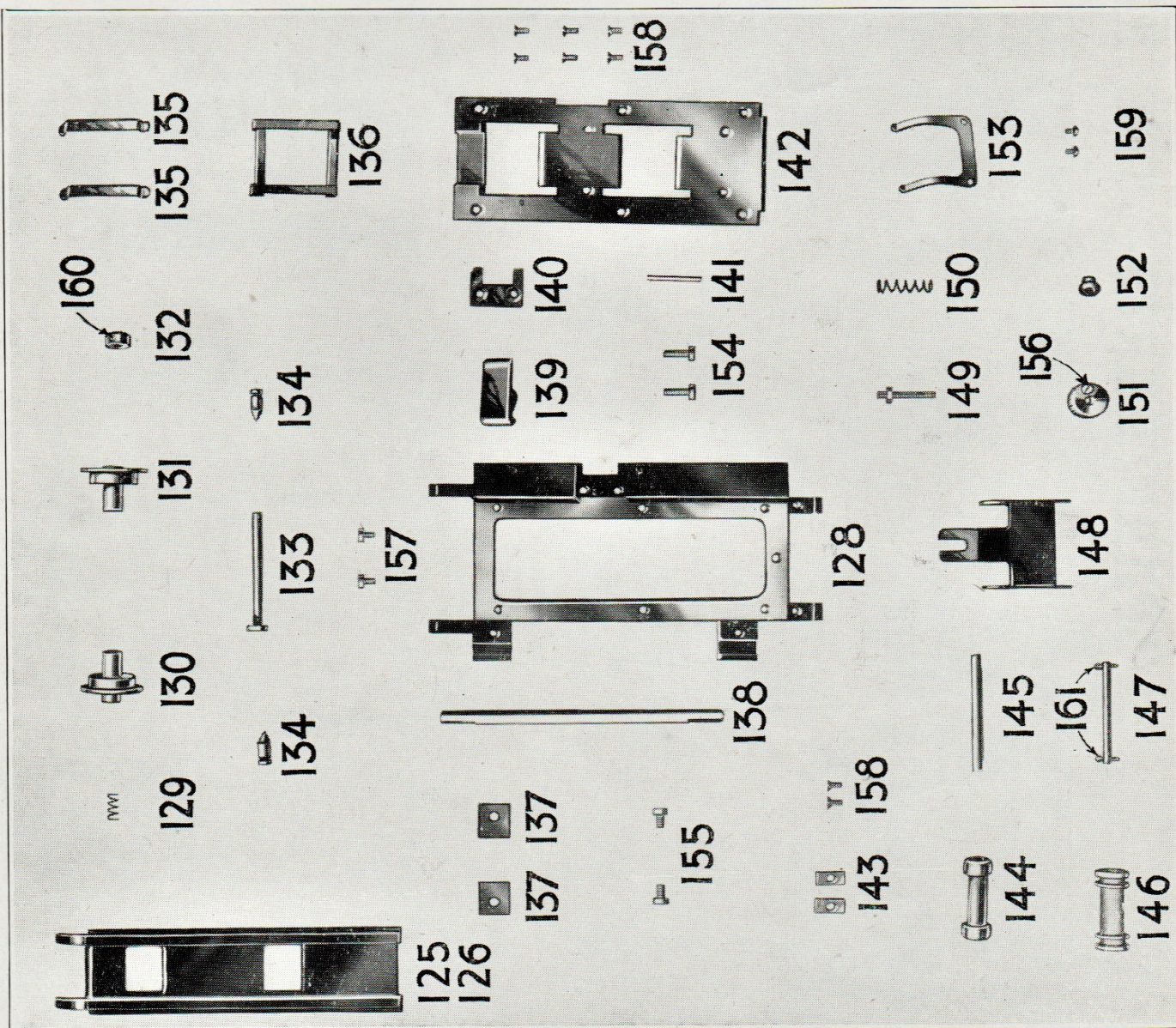
Top and Bottom Sprockets, Gate Bracket

40084	Top Sprocket Gear
40085	Top Sprocket Bearing
40086	Top Sprocket Spindle
40087	Bottom Sprocket Gear
40088	Bottom Sprocket Bearing
40089	Bottom Sprocket Spindle
40090	Sprocket Bearing Cover
40091	24 tooth Sprocket
40092	Roller Frame
40093	Grooved Roller
40094	Roller Spindle
40095	Roller Knob
40096	Guide Roller
40097	Roller Bracket Spindle
40098	Roller Torsion Spring
40099	Projector Stripper Spindle
40100	Projector Stripper Plate
40101	Gate Release Bar
40102	Release Bar Spring
40103	Gate Release Bracket
40104	Gate Release Lever
40105	Release Lever Pivot
40106	Gate Bracket
40107	Gate Catch Plate
40108	Intermittent Sprocket Stripper
40109	Key, Sprocket Spindles
40110	Screw, Roller Stop
40111	Screw, Mask Plate Stop
40112	Screw, Gate Bracket
40113	Screw, Sprocket Bearings
40114	Screw, Gate Release Bracket
40115	Screw, Projector Stripper
40116	Screw, Gate Catch Plate
40117	Screw, Intermittent Stripper
40118	Screw, Release Washer
40119	Set Screw, 24 tooth Sprocket
40120	Set Screw, Sprocket Bearings
40121	Nut, Sprocket Spindles
40122	Nut, Roller Stop
40123	Washer, Gate Release
40124	Split Pin, Roller Frame Post



SPARE PARTS—THE PROJECTOR

Mask Plate, Gate



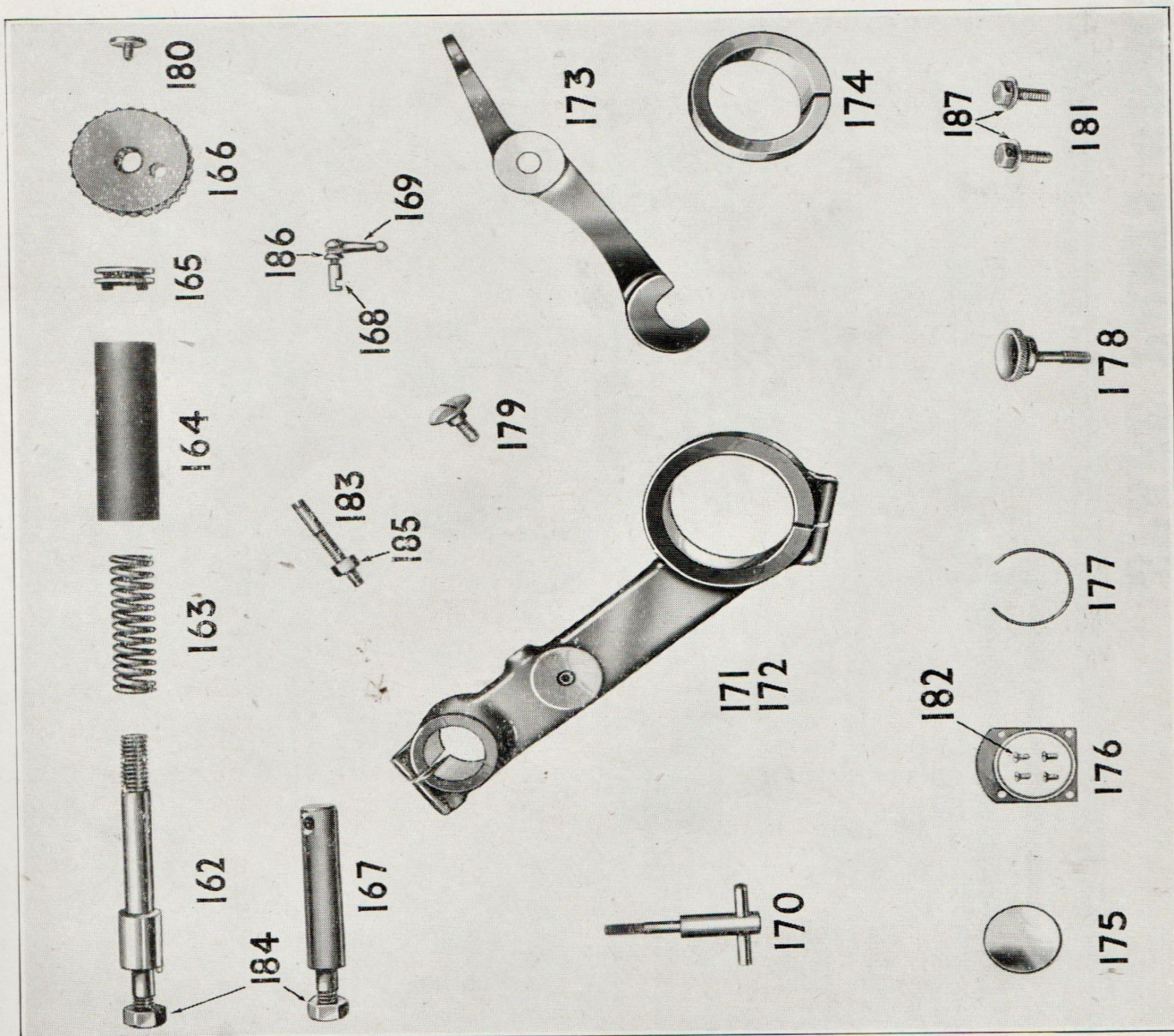
- 40125 Mask Plate; Standard
- 40126 Mask Plate; Rear Projection
- *40127 Complete Detachable Gate
- 40128 Gate Frame
- 40129 Pressure Roller Spring
- 40130 Pressure Roller
- 40131 Guide Roller
- 40132 Guide Roller Collar
- 40133 Guide Roller Spindle
- 40134 Guide Roller Pivot
- 40135 Upper Film Skate
- 40136 Lower Film Skate
- 40137 Gate Hinge Clip
- 40138 Gate Hinge Pin
- 40139 Gate Catch
- 40140 Gate Catch Pivot Plate
- 40141 Gate Catch Pivot
- 40142 Gate Plate
- 40143 Gate Roller Clip
- 40144 Gate Plain Roller
- 40145 Gate Shoe Pivot
- 40146 Gate Grooved Roller
- 40147 Gate Roller Spindle
- 40148 Gate Roller Shoe
- 40149 Gate Roller Stud
- 40150 Spring for Stud or Catch
- 40151 Gate Roller Nut
- 40152 Gate Roller Spring Collar
- 40153 Film Skate Spring
- 40154 Screw, Catch Pivot Plate
- 40155 Screw, Gate Hinge Clips
- 40156 Screw, Gate Roller Nut
- 40157 Screw, Guide Roller Pivot
- 40158 Screw, Gate Plate or Roller Clips
- 40159 Screw, Film Skate Springs
- 40160 Set Screw, Guide Roller Collar
- 40161 Split Pin, Gate Roller Spindle

SPARE PARTS—THE PROJECTOR

LENS ARM, MISCELLANEOUS

40162	Lens Focusing Stud
40163	Lens Focusing Spring
40164	Lens Focusing Sleeve
40165	Lens Focusing Washer
40166	Lens Focusing Nut
40167	Lens Stop Bar
40168	Focus Locking Stud
40169	Focus Locking Lever
40170	Lens Clamping Screw
40171	Lens Arm; Standard
40172	Lens Arm; Rear Projection
40173	Lens Latch
40174	Lens Adapter
40175	Supplementary Lens; Rear Projection
40176	Supplementary Lens Cell; Rear Projection
40177	Supplementary Lens Ring; Rear Projection
40178	Screw, Rear Cover
40179	Screw, Lens Latch
40180	Screw, Lens Focusing Stop
+40181	Screw, 'Easifit' Changeover Mechanism
40182	Screw, Supplementary Lens Cell
40183	Set Screw, Lens Stop
40184	Nut, Focusing Post or Stop Bar
40185	Nut, Lens Stop
40186	Washer, Focus Locking
+40187	Washer 'Easifit' Changeover Mechanism

+Applies only to machines after and including Serial No. 40522



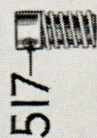
SPARE PARTS — ARC LAMP

Gearbox

*40501	A.C. Gearbox Complete
*40502	D.C. Gearbox Complete
(these assemblies do not include part 504)	
40503	Driving Chain
40504	Motor Worm
40505	Intermediate Worm
40506	Worm Bearing
40507	Motor Wormwheel Assembly
40508	Wormwheel Thrust Ring
40509	Intermediate Wormwheel
40510	16 tooth A.C. Driving Gear
40511	24 tooth D.C. Driving Gear
40512	Intermediate Spindle Assembly
40513	Driving Sprocket
40514	32 tooth A.C. Driven Gear Assembly
40515	24 tooth D.C. Driven Gear Assembly
40516	Screw, Worm Bearing
40517	Set Screw, Worm or Sprocket



503



504



506



507

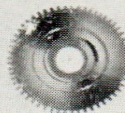


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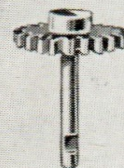
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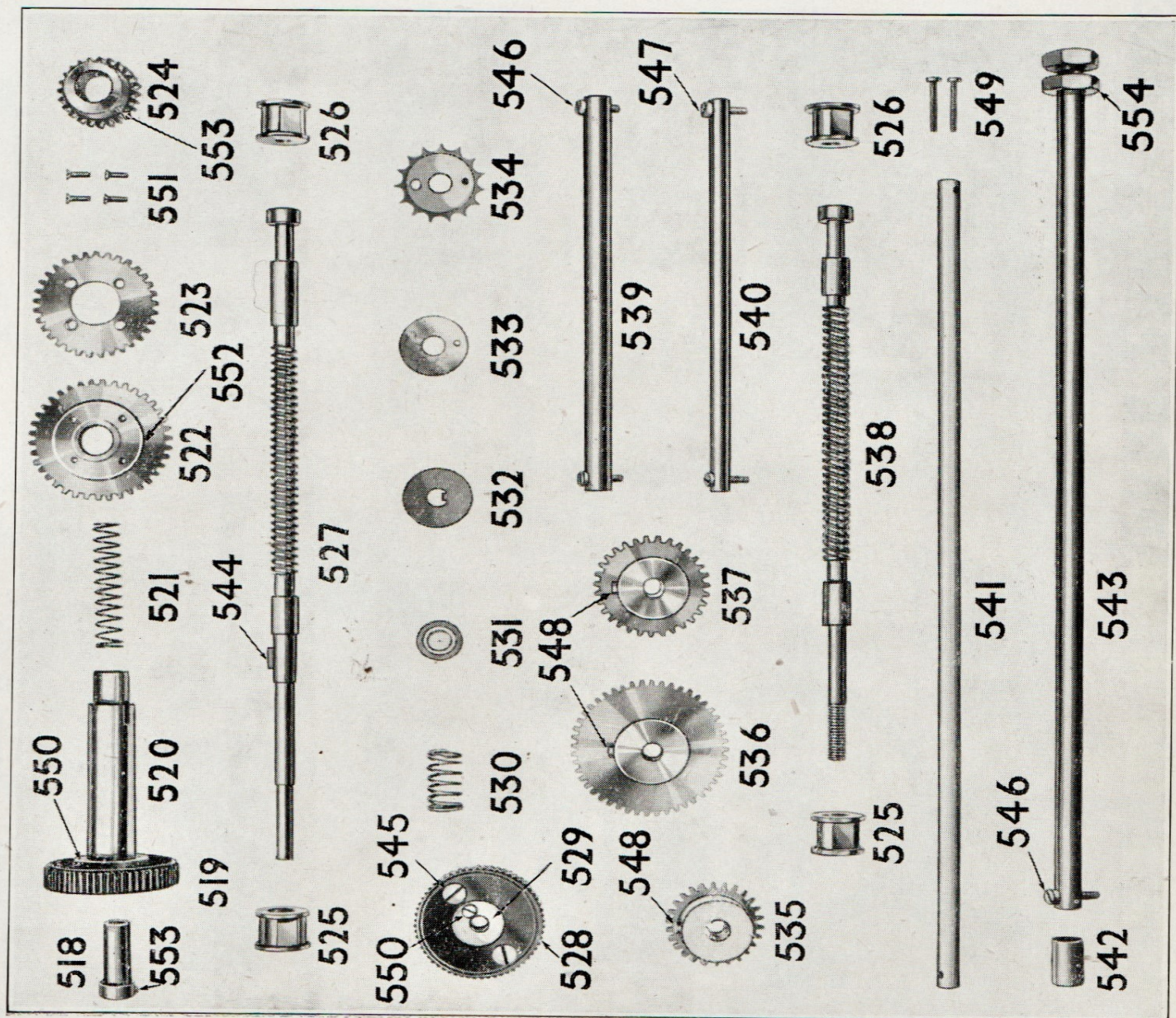


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SPARE PARTS—ARC LAMP

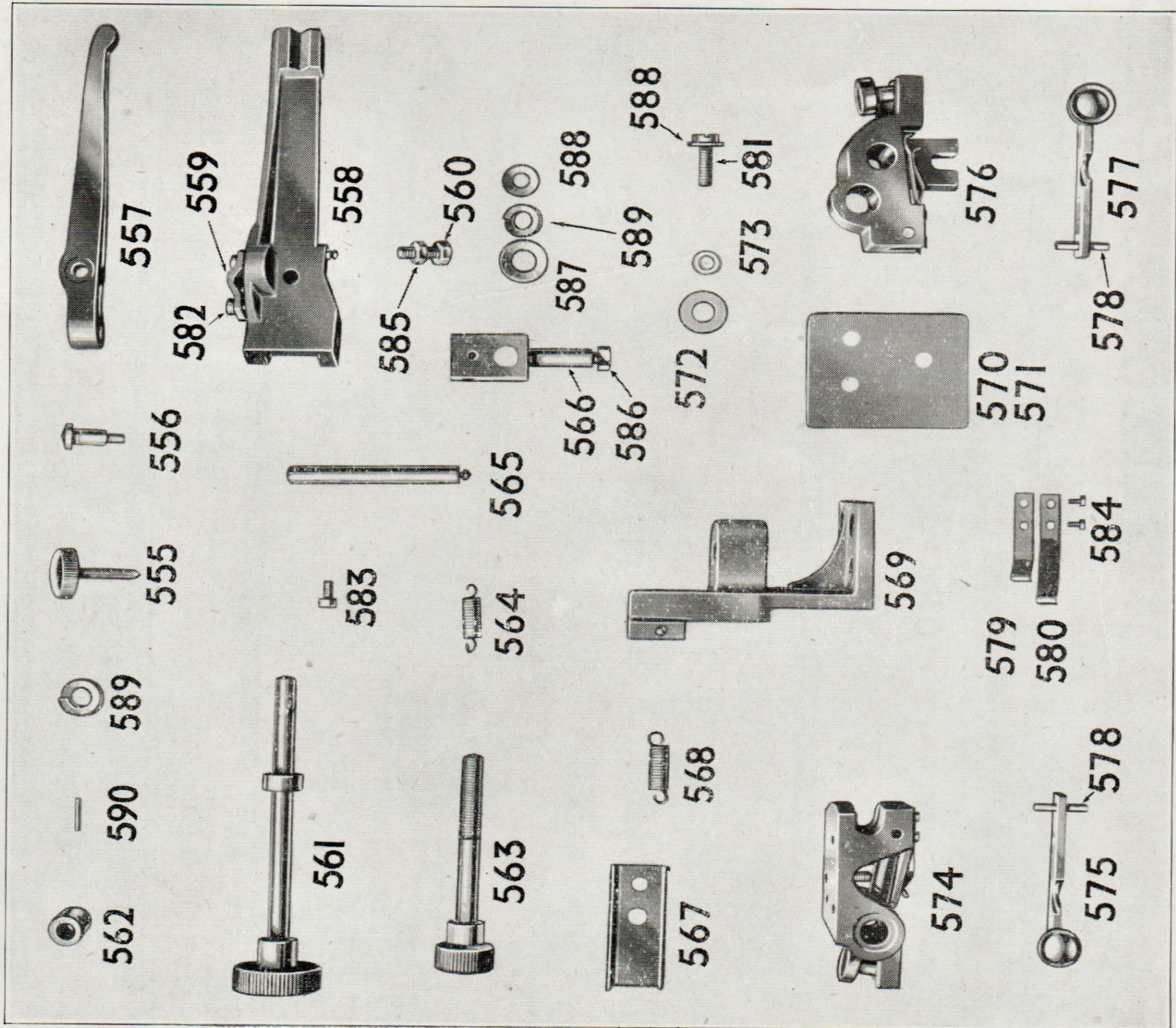
Burner Gear, Lead Screws, Guides

40518	Negative Feed Knob Stop
40519	Negative Feed Knob
40520	Negative Feed Knob Sleeve
40521	Negative Feed Spring
40522	38 tooth 'Suprex' Gear
40523	33 tooth 'Hilo' Gear
40524	24 tooth A.C. Gear
40525	Lead Screw Rear Bearing
40526	Lead Screw Front Bearing
40527	Negative Lead Screw
40528	Positive Feed Knob
40529	Positive Feed Knob Boss
40530	Positive Clutch Spring
40531	Positive Spring Collar
40532	Positive Clutch Key Washer
40533	Positive Clutch Disc
40534	15 tooth Clutch Sprocket
40535	26 tooth 'Suprex' Gear
40536	48 tooth A.C. Gear
40537	31 tooth 'Hilo' Gear
40538	Positive Lead Screw
40539	Negative Carriage Guide
40540	Positive Carriage Guide
40541	Positive Draw Bar
40542	Mirror Bracket Stop
40543	Positive Carbon Guide
40544	Key, Negative Lead Screw
40545	Screw, Positive Feed Knob
40546	Screw, Negative Carriage or Positive Carbon, Guide
40547	Screw, Positive Carriage Guide
40548	Screw, 26, 31 or 48 tooth Gears
40549	Screw, Positive Draw Bar
40550	Screw, Negative Feed Knob or Positive Feed Knob Boss
40551	Screw, 33 tooth Gear
40552	Set Screw, 38 tooth Gear
40553	Set Screw, 24 tooth Gear or Negative Feed Stop
40554	Nut, Positive Carbon Guide



SPARE PARTS — ARC LAMP

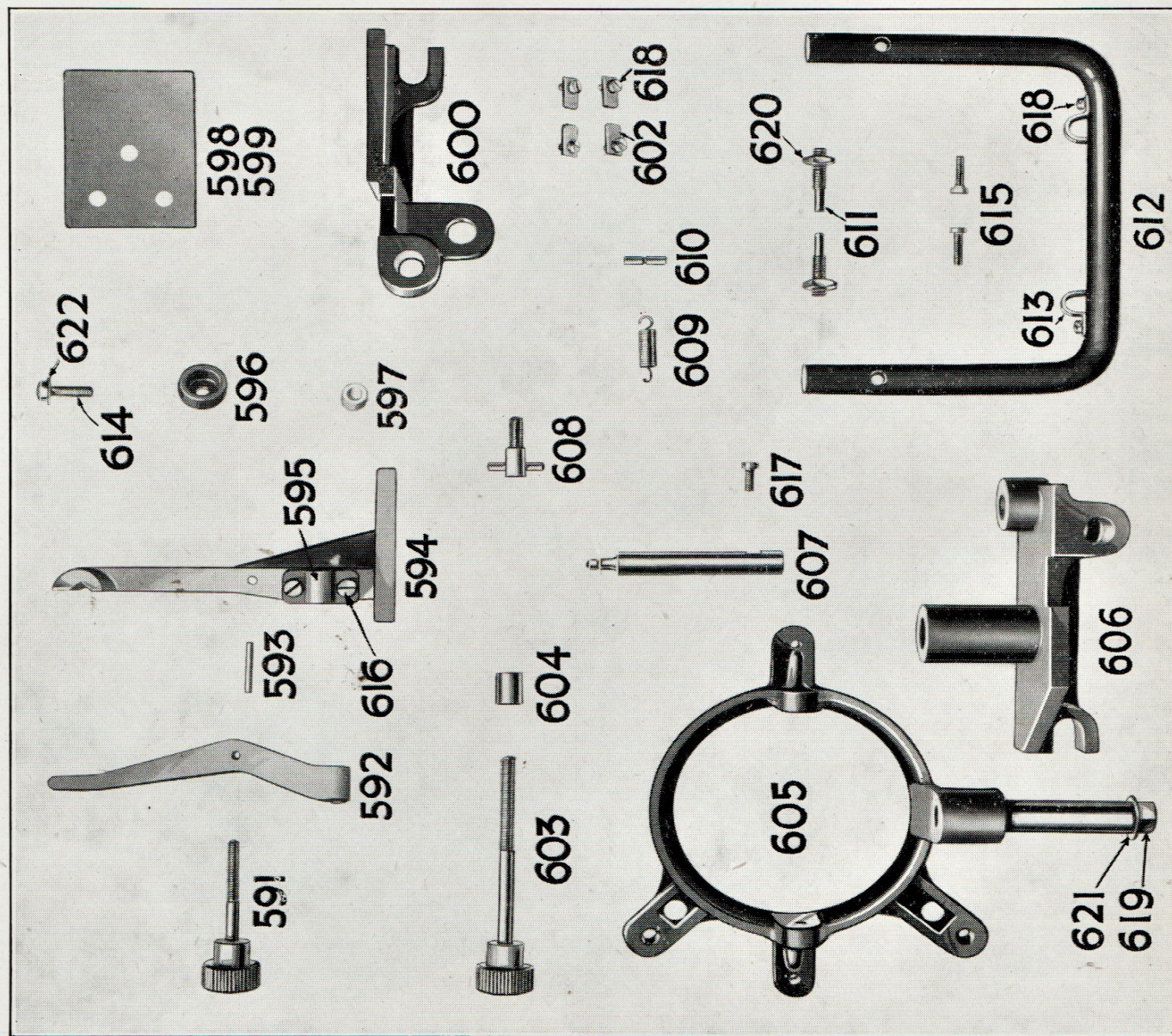
Positive and Negative Carriages, Negative Carbon Holder



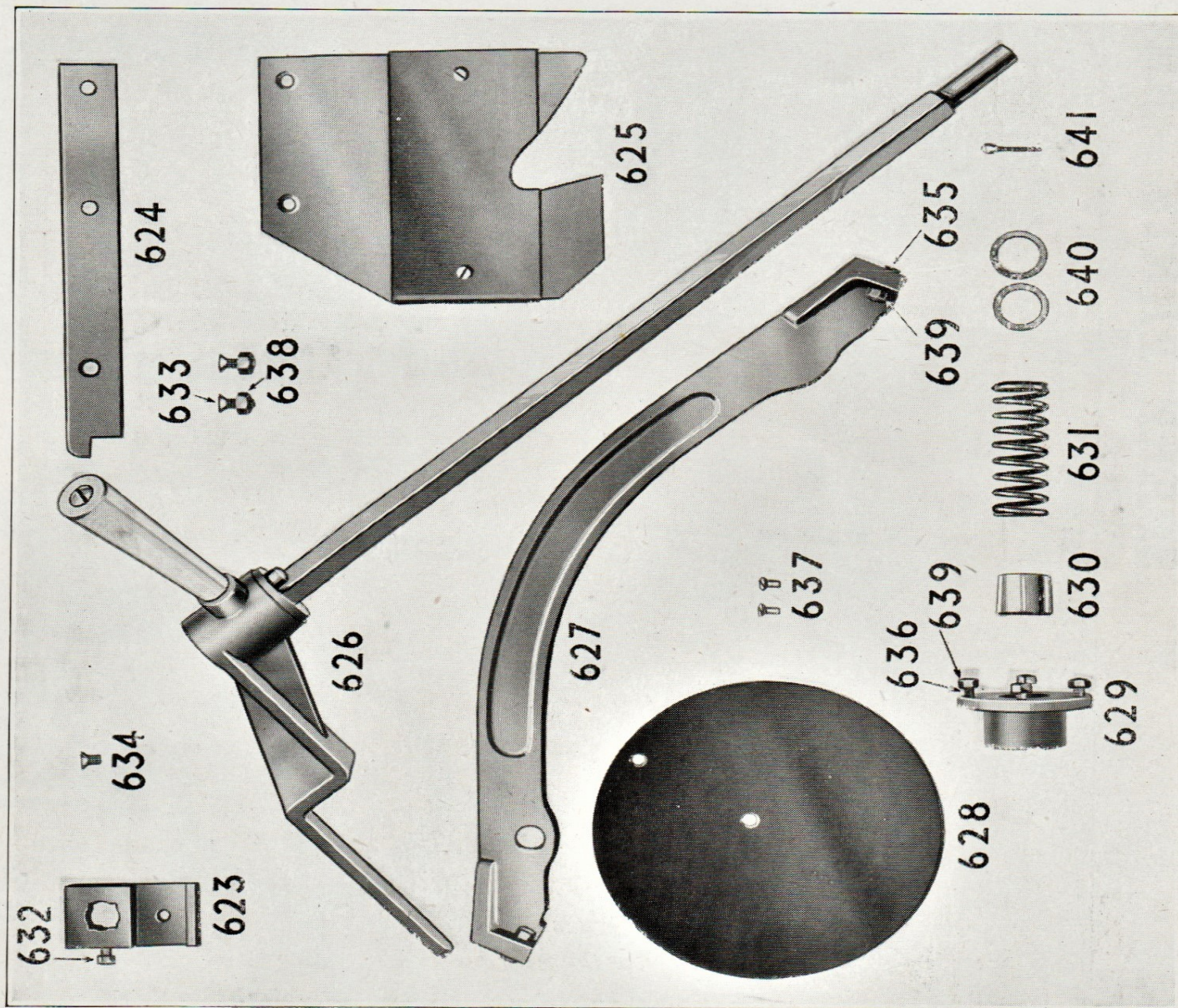
- | | |
|-------|--|
| 40555 | Negative Carbon Clamp Screw |
| 40556 | Negative Carbon Clamp Pivot |
| 40557 | Negative Carbon Clamp |
| 40558 | Negative Carbon Support |
| 40559 | Negative Cable Clamp |
| 40560 | Negative Tilt Stud |
| 40561 | Negative Tilt Control |
| 40562 | Negative Tilt Cam |
| 40563 | Negative Lateral Control |
| 40564 | Negative Lateral Spring |
| 40565 | Negative Tilt Pivot |
| 40566 | Negative Pillar |
| 40567 | Negative Stop Plate |
| 40568 | Negative Tilt Spring |
| 40569 | Negative Bracket |
| 40570 | Negative Insulation, 0.03 in. thick |
| 40571 | Negative Insulation, 0.02 in. thick |
| 40572 | Negative Insulating Washer |
| 40573 | Negative Insulating Bush |
| 40574 | Negative Carriage Complete |
| 40575 | Negative Feed Lever |
| 40576 | Positive Carriage Complete |
| 40577 | Positive Feed Lever |
| 40578 | Feed Lever Pivot |
| 40579 | Feed Lever Short Spring |
| 40580 | Feed Lever Long Spring |
| 40581 | Screw, Negative Bracket |
| 40582 | Screw, Cable Clamp |
| 40583 | Screw, Negative Tilt Pivot |
| 40584 | Screw, Feed Lever Springs |
| 40585 | Nut, Tilt Stud |
| 40586 | Nut, Negative Pillar |
| 40587 | Washer, Negative Pillar |
| 40588 | Washer, Negative Bracket or Pillar |
| 40589 | Spring Washer, Neg. Tilt Control or Pillar |
| 40590 | Pin, Negative Tilt Cam. |

SPARE PARTS — ARC LAMP

Positive Carbon Holder, Mirror Holder



SPARE PARTS—ARC LAMP



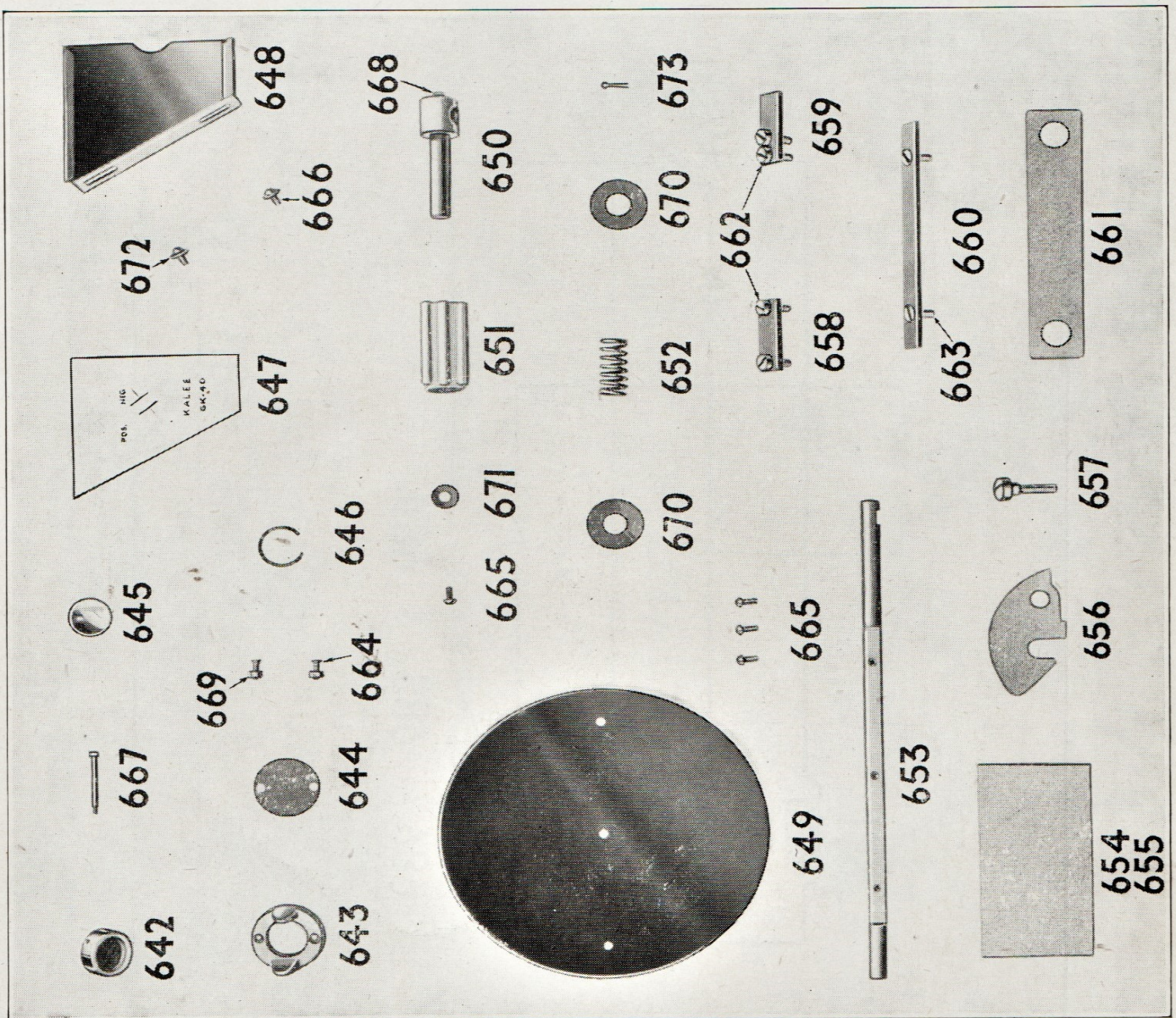
Dowser

40623	Dowser Bracket
40624	Dowser Arm
40625	Dowser Assembly
40626	Dowser Shaft and Handle
40627	Dowser Bridge
40628	Cut-off Disc
40629	Dowser Bearing
40630	Dowser Spindle Bush
40631	Dowser Spring
40632	Screw, Dowser Bracket
40633	Screw, Dowser
40634	Screw, Dowser Arm
40635	Screw, Dowser Bridge
40636	Screw, Dowser Bearing
40637	Screw, Cut-off Disc
40638	Nut, Dowser
40639	Nut, Dowser Bridge or Bearing
40640	Washer, Dowser Shaft
40641	Split Pin, Dowser Shaft

SPARE PARTS — ARC LAMP

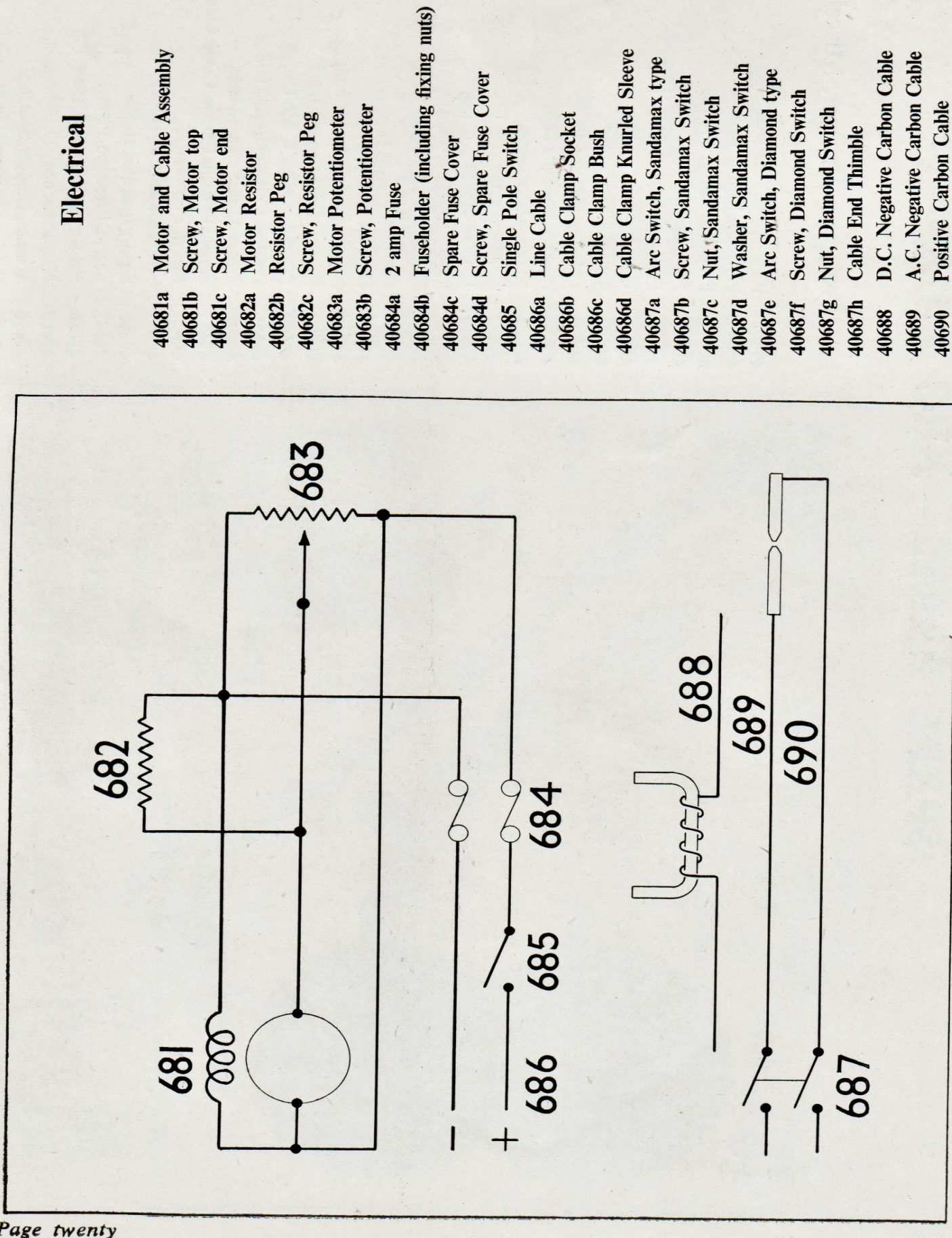
Periscope, Damper, Miscellaneous

40642	Periscope Mirror Holder
40643	Periscope Mirror Base
40644	Periscope Mirror Packing
40645	Periscope Mirror
40646	Periscope Mirror Ring
40647	Indicator Card
40648	Indicator Holder
40649	Chimney Damper
40650	Damper Handle Pin
40651	Damper Handle
40652	Damper Spring
40653	Damper Spindle
40654	Ruby Inspection Glass
40655	Blue Inspection Glass
40656	Door Catch
40657	Door Catch Pivot
40658	Negative Lead Screw Clamp
40659	Positive Lead Screw Clamp
40660	Positive Carbon Guide Clamp
40661	Positive Carbon Guide Tie-Bar
40662	Screw, Lead Screw Clamps
40663	Screw, Positive Carbon Guide Clamp
40664	Screw, Periscope
40665	Screw, Damper or Handle
40666	Screw, Indicator Holder
40667	Screw, Periscope Pivot
40668	Set Screw, Damper Handle Pin
40669	Nut, Periscope
40670	Washer, Damper Spindle
40671	Washer, Damper Handle
40672	Washer, Indicator Holder
40673	Split Pin, Damper Spindle



SPARE PARTS—ARC LAMP

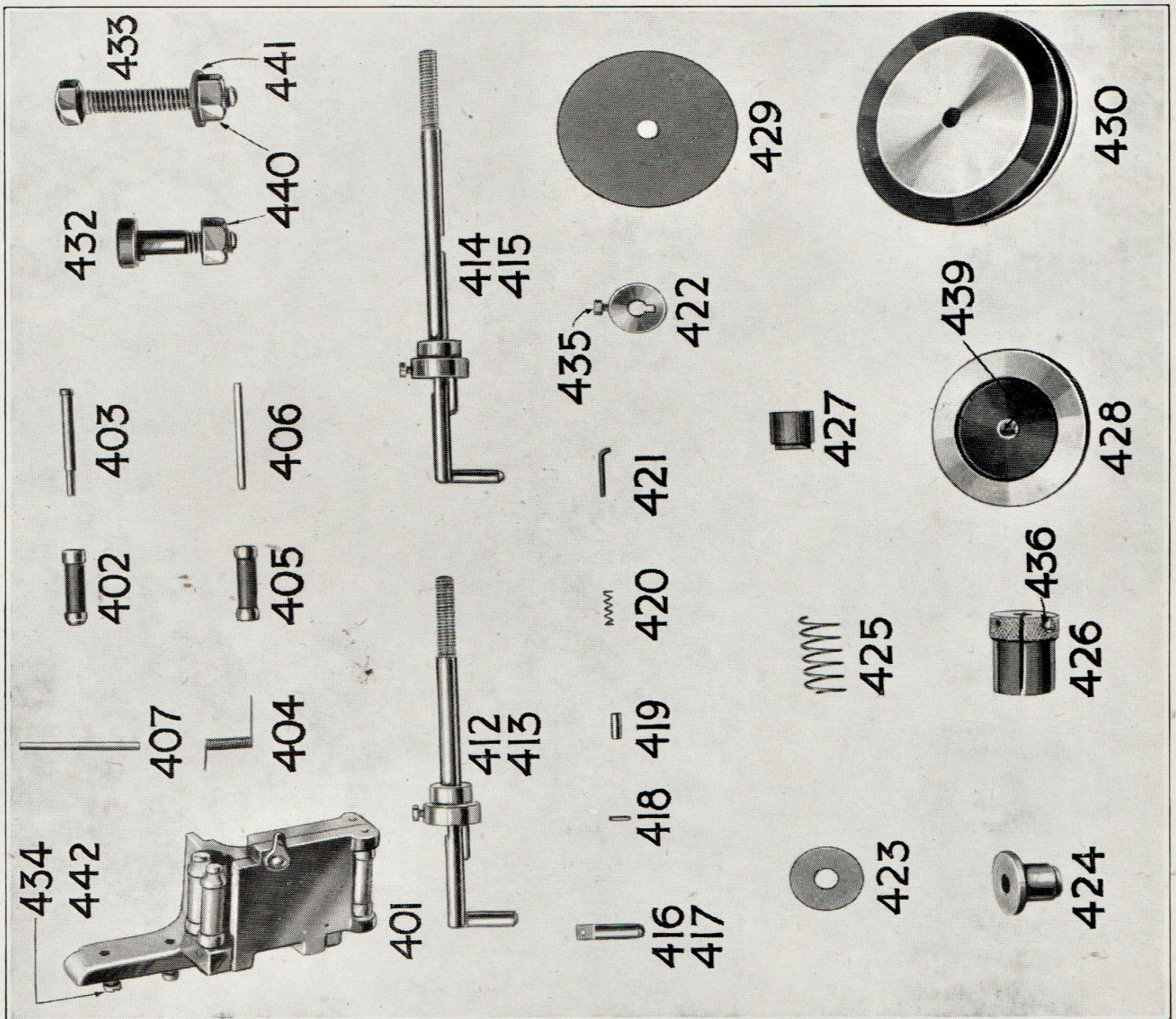
Electrical



SPARE PARTS—SPOOL BOXES

SPOOL BOXES

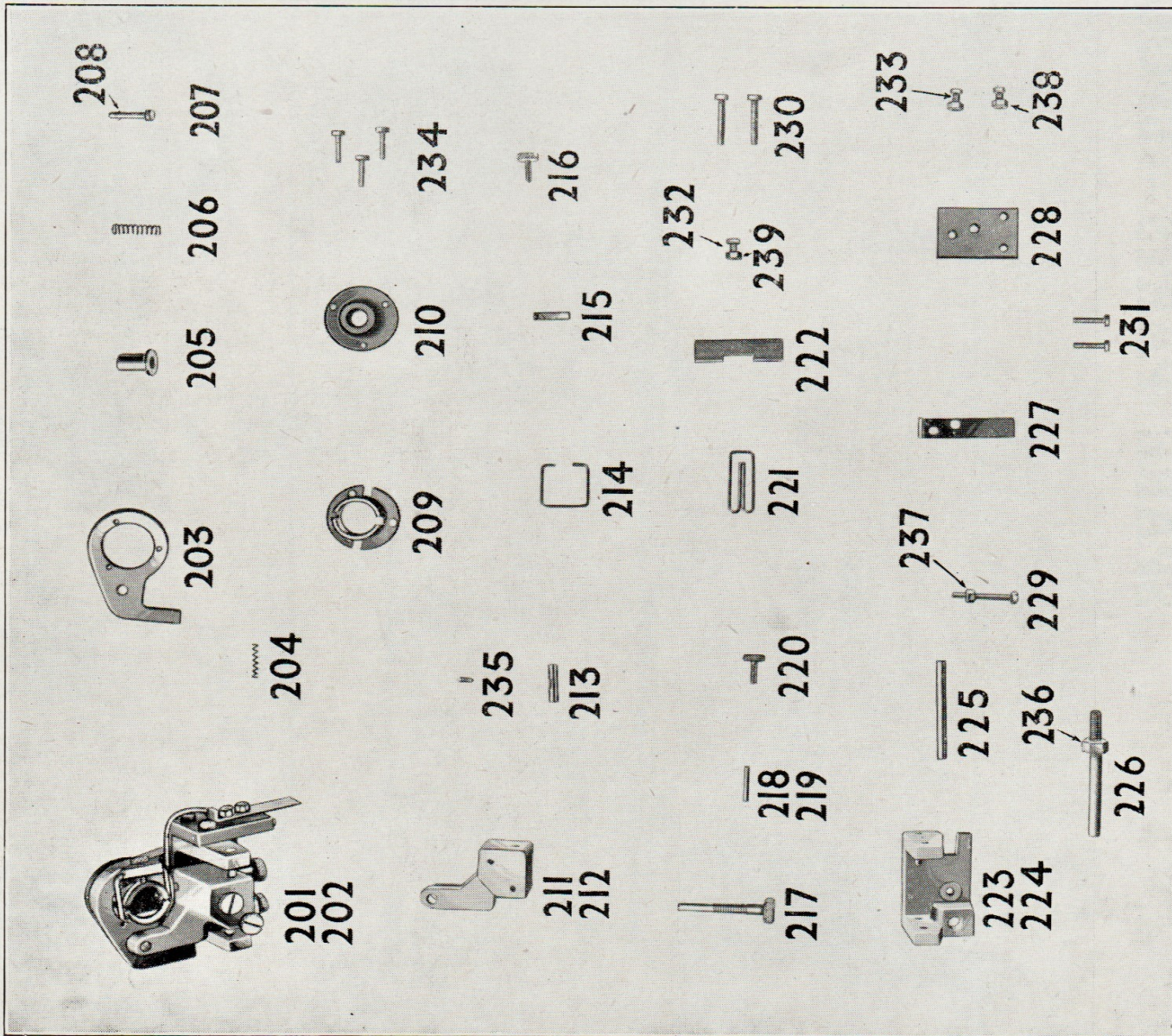
40401	Firetrap Complete	40424	Top Spring Collar
40402	Trap Inner Roller	40425	Spool Clutch Spring
40403	Trap Inner Spindle	40426	Spool Split Nut
40404	Trap Spring	40427	Bottom Spring Collar
40405	Trap Outer Roller	40428	Bottom Clutch Plate
40406	Trap Outer Spindle	40429	Bottom Clutch Disc
40407	Trap Hinge Pin	40430	Take-up Pulley
*40408	16 in. Top Spool Arm	*40431	Take-up Belt
*40409	19 in. Top Spool Arm	40432	Bolt, Bottom Spool Arm
*40410	16 in. Bottom Spool Arm	40433	Bolt, Top Spool Arm
*40411	19 in. Bottom Spool Arm	40434	Screw, Fire Trap
40412	$\frac{5}{16}$ in. Top Spool Spindle Complete	40435	Screw, Driving Collar
40413	$\frac{3}{8}$ in. Top Spool Spindle Complete	40436	Screw, Split Nut
40414	$\frac{5}{16}$ in. Bottom Spool Spindle Complete	*40437	Screw, Spool Boxes
40415	$\frac{3}{8}$ in. Bottom Spool Spindle Complete	*40438	Screw, Spool Box Window
40416	$\frac{1}{8}$ in. Click End	40439	Set Screw, Bottom Clutch Plate
40417	$\frac{3}{32}$ in. Click End	40440	Nut, Spool Arm Bolts
40418	Click End Pivot	40441	Washer, Top Spool Arm Bolt
40419	Click End Plunger	40442	Washer, Fire Trap
40420	Click End Spring	*40443	Washer, Spool Boxes
40421	Spool Driving Key	*40444	Washer, Spool Box Window
40422	Spool Stop Collar	*40445	Oil Cup
40423	Top Clutch Disc		



SPARE PARTS — SOUNDHEAD

Exciter Lamp Mount

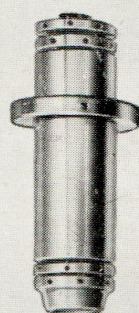
40201	Exciter Lamp Mount Complete; Standard	40219	Exciter Lockscrew Pad; Rear Projection
40202	Exciter Lamp Mount Complete; Rear Projection	40220	Exciter Lockscrew
40203	Exciter Lamp Arm	40221	Exciter Contact Socket
40204	Exciter Arm Spring	40222	Exciter Contact Socket Insulation
40205	Exciter Plunger Housing	40223	Exciter Platform; Standard
40206	Exciter Plunger Spring	40224	Exciter Platform; Rear Projection
40207	Exciter Plunger	40225	Exciter Slide Pin
40208	Exciter Plunger Pin	40226	Exciter Support Rod
40209	Exciter Lampholder	40227	Exciter Contact Strip
40210	Exciter Insulating Bush	40228	Exciter Contact Strip Insulation
40211	Exciter Slide; Standard	40229	Screw, Platform Stop
40212	Exciter Slide; Rear Projection	40230	Screw, Contact Socket Mounting
40213	Exciter Arm Fulcrum Pin	40231	Screw, Contact Strip Mounting
40214	Exciter Lamp Locking Spring	40232	Screw, Contact Socket
40215	Exciter Lamp Locking Strap	40233	Screw, Contact Strip
40216	Exciter Lamp Locking Screw	40234	Screw, Lampholder
40217	Exciter Adjusting Screw	40235	Set Screw, Fulcrum Pin
40218	Exciter Lockscrew Pad; Standard	40236	Nut, Support Rod
		40237	Nut, Platform Stop
		40238	Nut, Contact Strip
		40239	Nut, Contact Socket



SPARE PARTS — SOUNDHEAD

Slit System, P.E.C. Mounting

40240	Slit Projection System; Standard
40241	Slit Projection System; Rear Projection
40242	Jockey Roller Spindle
40243	Jockey Roller
40244	Jockey Bracket
40245	Jockey Guide Roller
40246	Jockey Bracket Spindle
40247	Jockey Bush
40248	Jockey Adjusting Nut
40249	P.E.C. Bracket; Standard
40250	P.E.C. Bracket; Rear Projection
40251	Jockey Stop Stud
40252	P.E.C. Sleeve; Standard
40253	P.E.C. Sleeve; Rear Projection
40254	P.E.C. Cover
40255	Adapter Collar
40256	Adapter Gear
40257	Adapter Spindle
40258	Adapter Arm
40259	Bolt, Adapter Arm
40260	Screw, P.E.C. Bracket Cap
40261	Screw, P.E.C. Bracket
40262	Screw, P.E.C. Sleeve
40263	Screw, Jockey Adjusting Nut
40264	Set Screw, P.E.C. Bracket
40265	Set Screw, Adapter Collar or Arm
40266	Washer, Jockey Post
40267	Washer, Adapter Arm Bolt
40268	Spring Washer, Jockey Post
40269	Split Pin, Jockey Roller Spindle



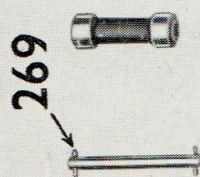
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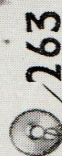
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242 243



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266 268



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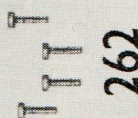
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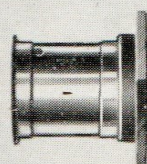
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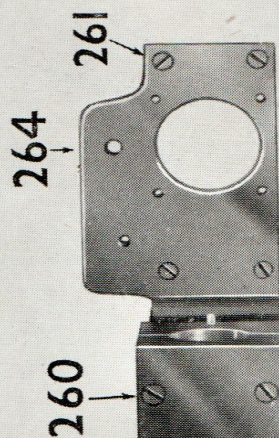


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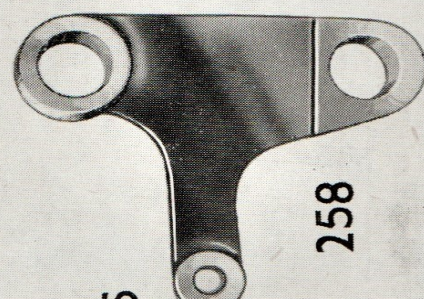
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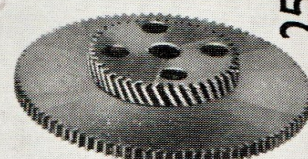


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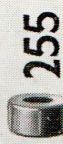
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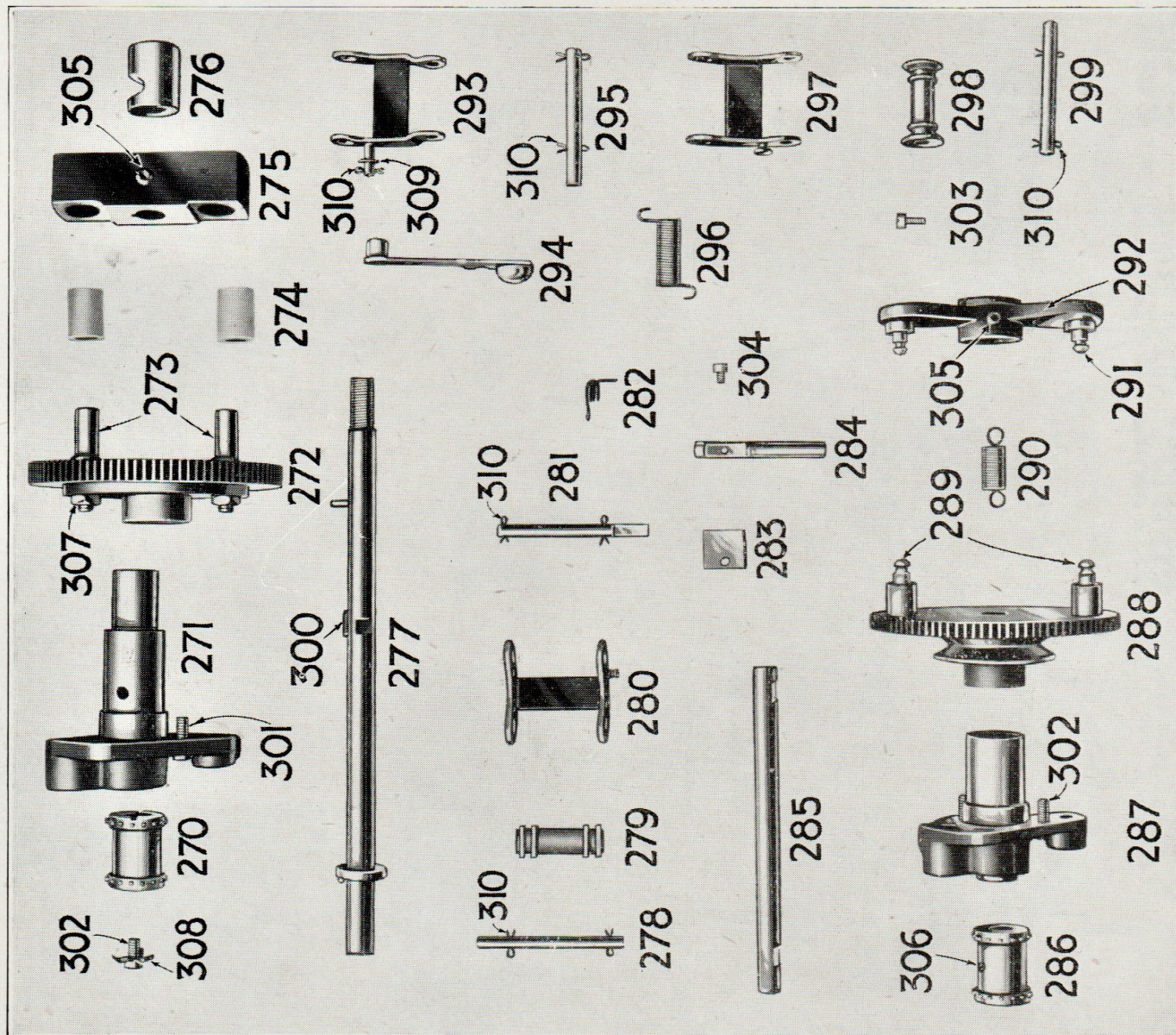


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SPARE PARTS — SOUNDHEAD



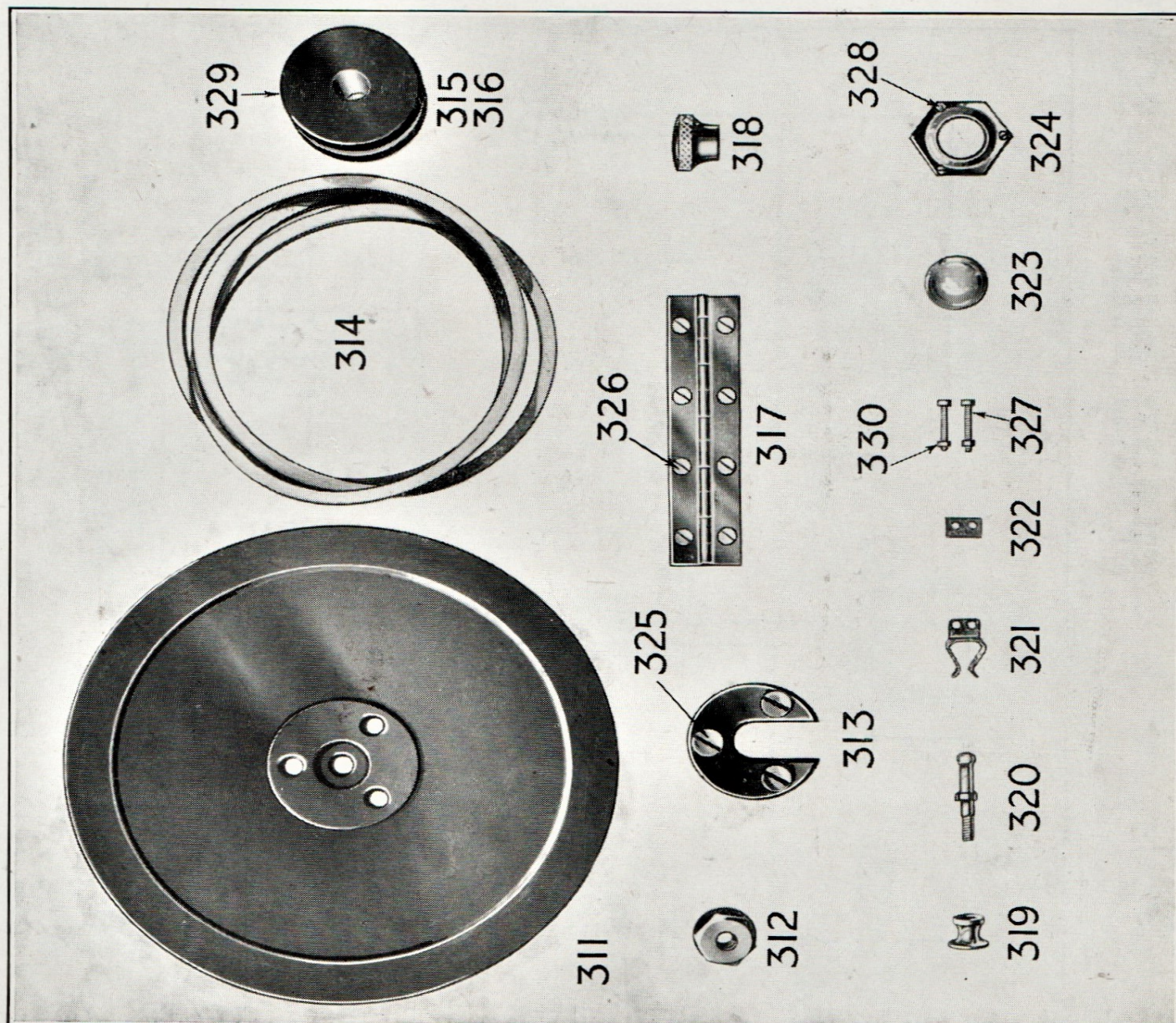
Sprocket Gearing

40270	Constant Speed Sprocket	40292	Take-up Driving Arm
40271	Flywheel Main Bearing	40293	L.H. Roller Frame
40272	Flywheel Gear	40294	Roller Bracket Latch
40273	Flywheel Driving Peg	40295	Roller Bracket Spindle
40274	Flywheel Driving Bush	40296	Roller Bracket Spring
40275	Flywheel Driving Arm	40297	R.H. Roller Frame
40276	Flywheel Rear Bearing	40298	Grooved Roller
40277	Flywheel Spindle	40299	Grooved Roller Spindle
40278	Grooved Roller Spindle	40300	Key, Flywheel Spindle
40279	Grooved Roller	40301	Screw, Flywheel Main Bearing
40280	Roller Frame	40302	Screw, Take-up Bearing or C.S. Sprocket
40281	Roller Bracket Spindle	40303	Screw, Stripper or Roller Bracket Mounting
40282	Roller Bracket Spring	40304	Screw, Soundhead Stripper
40283	Soundhead Stripper Plate	40305	Set Screw, Driving Arms
40284	Soundhead Stripper Spindle	40306	Set Screw, Take-up Sprocket
40285	Bottom Spindle	40307	Nut, Flywheel Driving Peg
40286	Take-up Sprocket	40308	Spring Washer, C.S. Sprocket
40287	Take-up Bearing	40309	Washer, Latch
40288	Take-up Gear	40310	Split Pin, Roller Brackets
40289	Take-up Gear Peg		
40290	Take-up Driving Spring		
40291	Take-up Driving Peg		

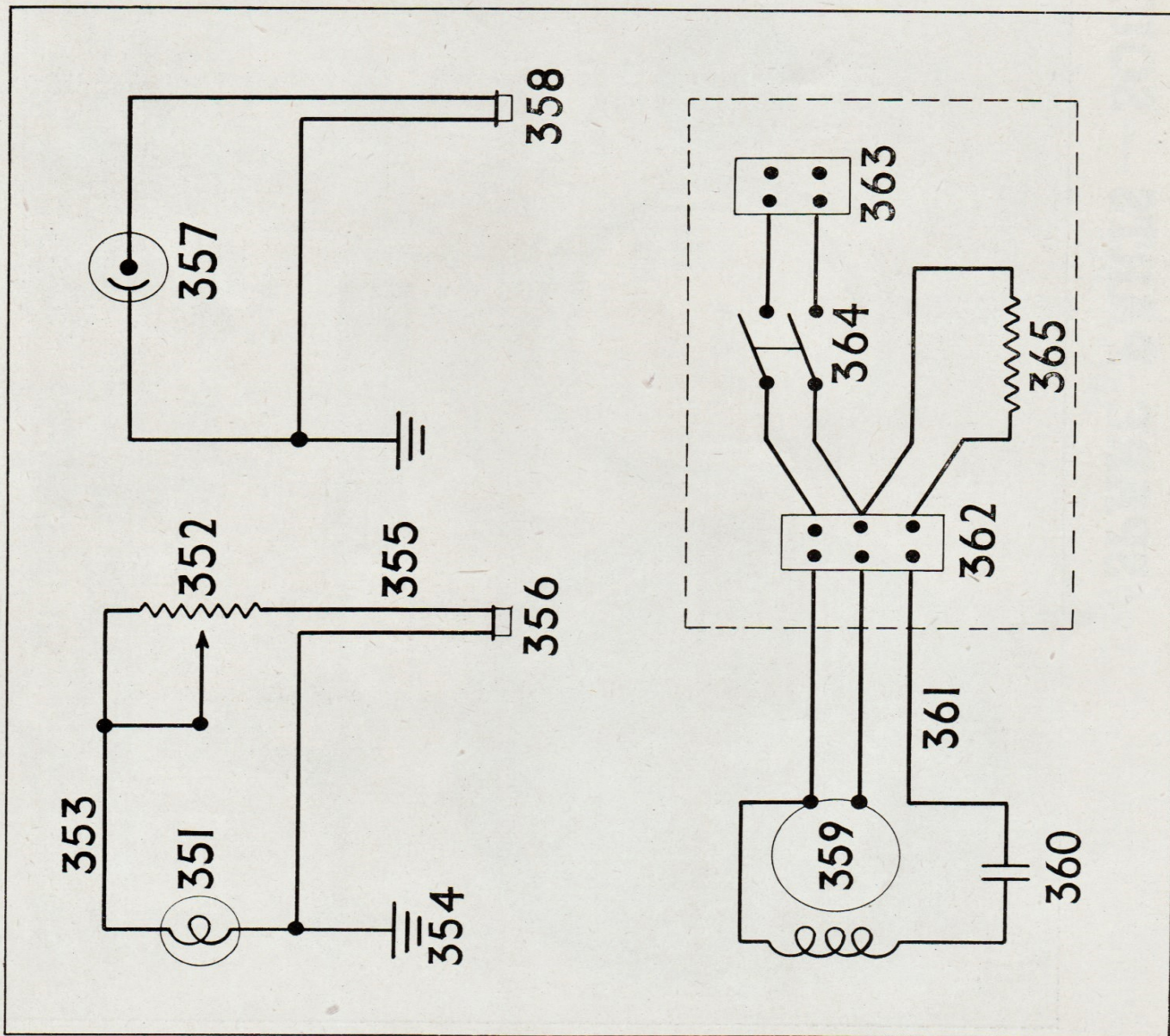
SPARE PARTS — SOUNDHEAD

Flywheel—Miscellaneous

40311	Flywheel
40312	Flywheel Nut
40313	Flywheel Withdrawal Plate
40314	Pair of Driving Belts
40315	Motor Pulley, 50 cycle supply
40316	Motor Pulley, 60 cycle supply
40317	Door Hinge
40318	Belt Guard Nut
40319	Door Knob
40320	Door Latch
40321	Door Catch
40322	Door Catch Packing
40323	Exciter Window
40324	Exciter Window Frame
40325	Screw, Flywheel
40326	Screw, Door Hinge
40327	Screw, Door Catch
40328	Screw, Exciter Window
40329	Set Screw, Motor Pulley
40330	Nut, Door Catch



SPARE PARTS — SOUNDHEAD



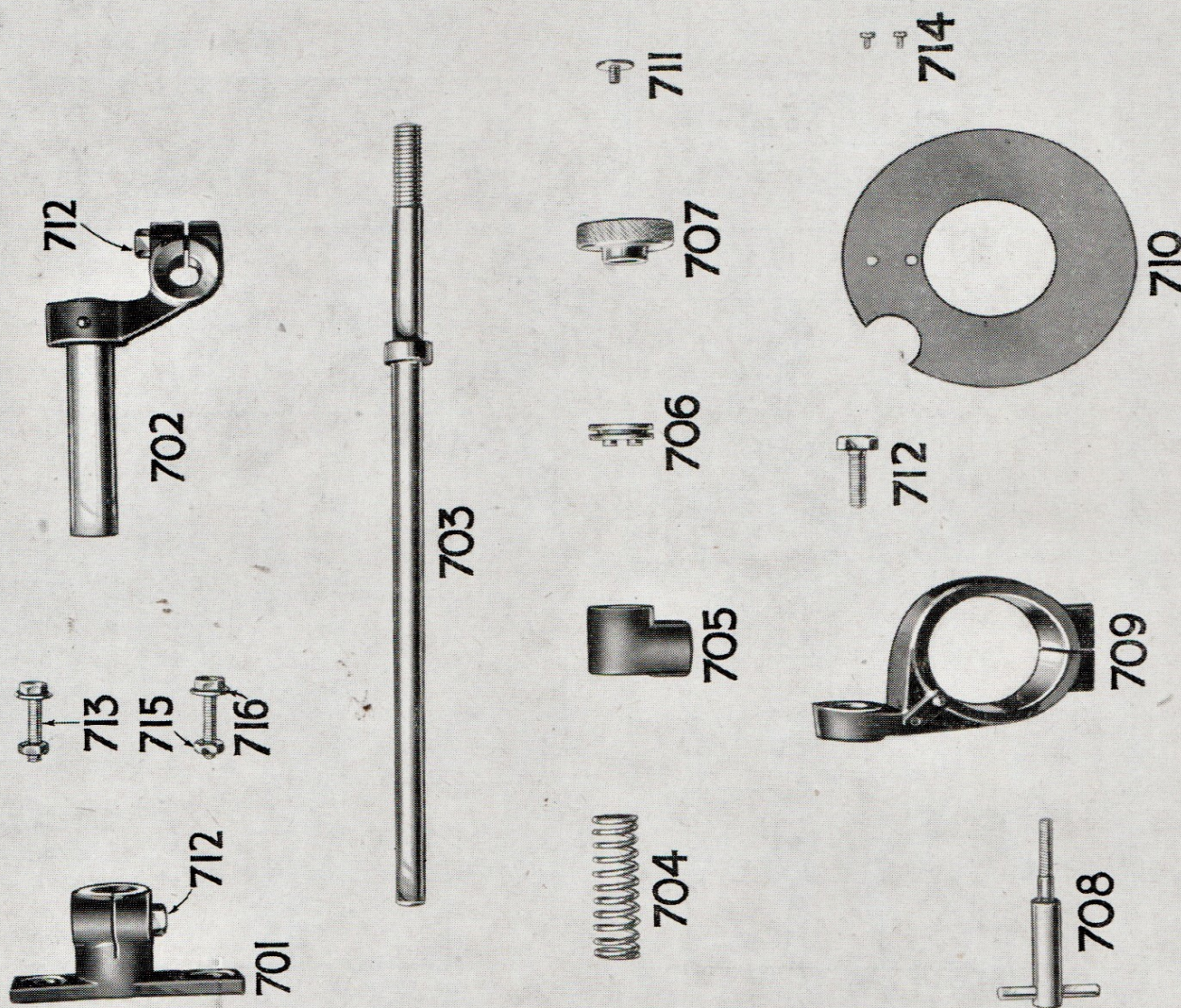
Electrical

40351	1 amp. 6 volts Pre-focus S.C.C. Class G. Lamp	40360a	Capacitor for B.T.H. 220-230 volts Motor
40352a	5 ohms. Potentiometer	40360b	Capacitor for B.T.H. 110-115 volts Motor
40352b	Screw, Potentiometer	40360c	Screw, Capacitor
40352c	Equaliser Plate	40360d	Washer, Capacitor
40352d	Screw, Equaliser Plate	40360e	Lock Washer Capacitor
40353	Exciter — Potentiometer Lead	40361a	Cable Cover for E.E.C. Motor
40354a	Earthing Screw	40361b	Cable Cover for B.T.H. Motor
40354b	Earthing Washer	40361c	Lock Nut, Cable Cover
40355a	Exciter Lamp Lead	40362	3-Way Terminal Block
40355b	Exciter Cable Cover	40363a	2-Way Terminal Block
40356	5-pin Plug	40363b	Screw, Terminal Blocks
40357a	Photo-Electric Cell Type E	40363c	Nut, Terminal Blocks
40357b	P.E.C. Extractor	40364a	Switch (Top Mounting only)
40357c	P.E.C. Holder	40364b	Screw, Switch (4 B.A. for Top Mounting)
40357d	Screw, P.E.C. Holder	40364c	Nut, Switch (4 B.A. for Top Mounting)
40358a	P.E.C. Plug and Cable	40365a	Resistor for E.E.C. 220-230 volts or B.T.H. 110-115 volts
40358b	P.E.C. Cable Cover	40365b	Resistor for B.T.H. 220-230 volts
40358c	Cable Clamp Socket	40365c	Resistor Support
40358d	Cable Clamp Split Bush	40365d	Screw, Resistor
40359a	Driving Motor; E.E.C. 220-230 volts		
40359b	Driving Motor; B.T.H. 220-230 volts		
40359c	Driving Motor; B.T.H. 110-115 volts		

SPARE PARTS

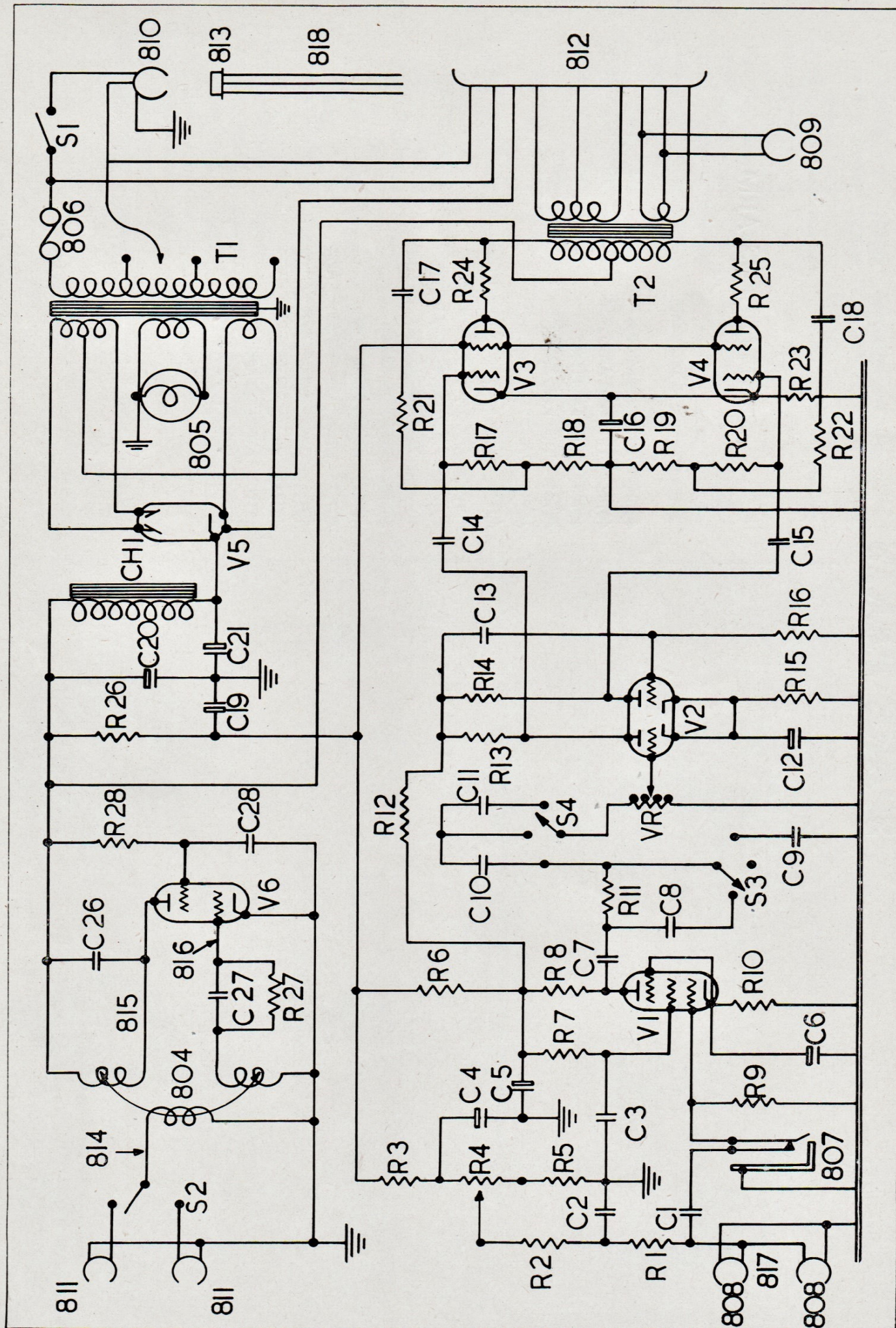
TITLE LENS ARM

40701	Title Lens Mount
40702	Title Lens Arm
40703	Title Lens Rod
40704	Title Lens Spring
40705	Title Lens Boss
40706	Title Lens Key Washer
40707	Title Lens Focusing Nut
40708	Title Lens Tommy Screw
40709	Title Lens Holder
40710	Title Lens Shield
40711	Screw, Focus Stop
40712	Screw, Lens Holder or Arm
40713	Screw, Lens Mount
40714	Screw, Shield
40715	Nut, Lens Mount
40716	Washer, Lens Mount

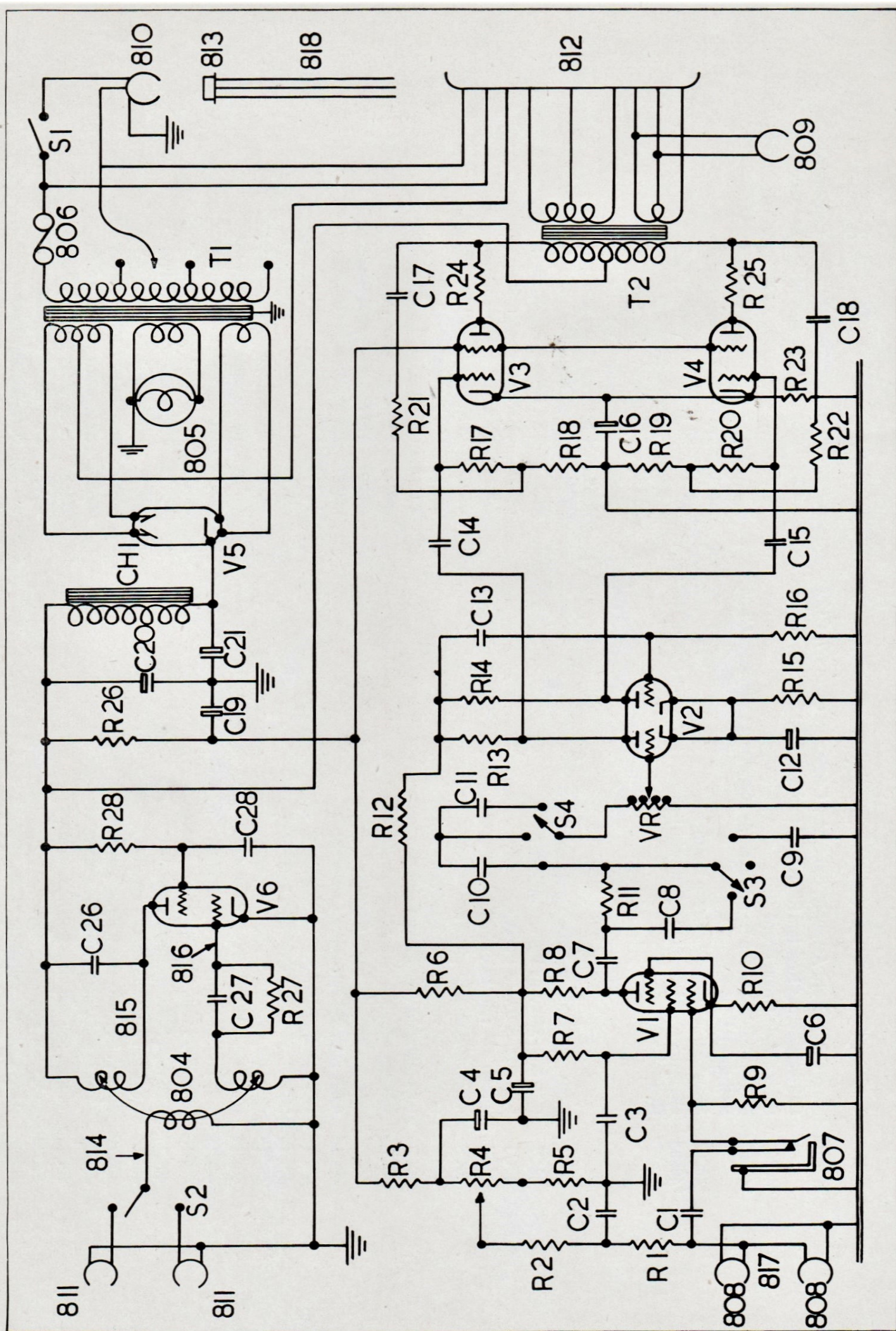


SPARE PARTS

12 Watt Amplifier Stage Condensers, Resistors

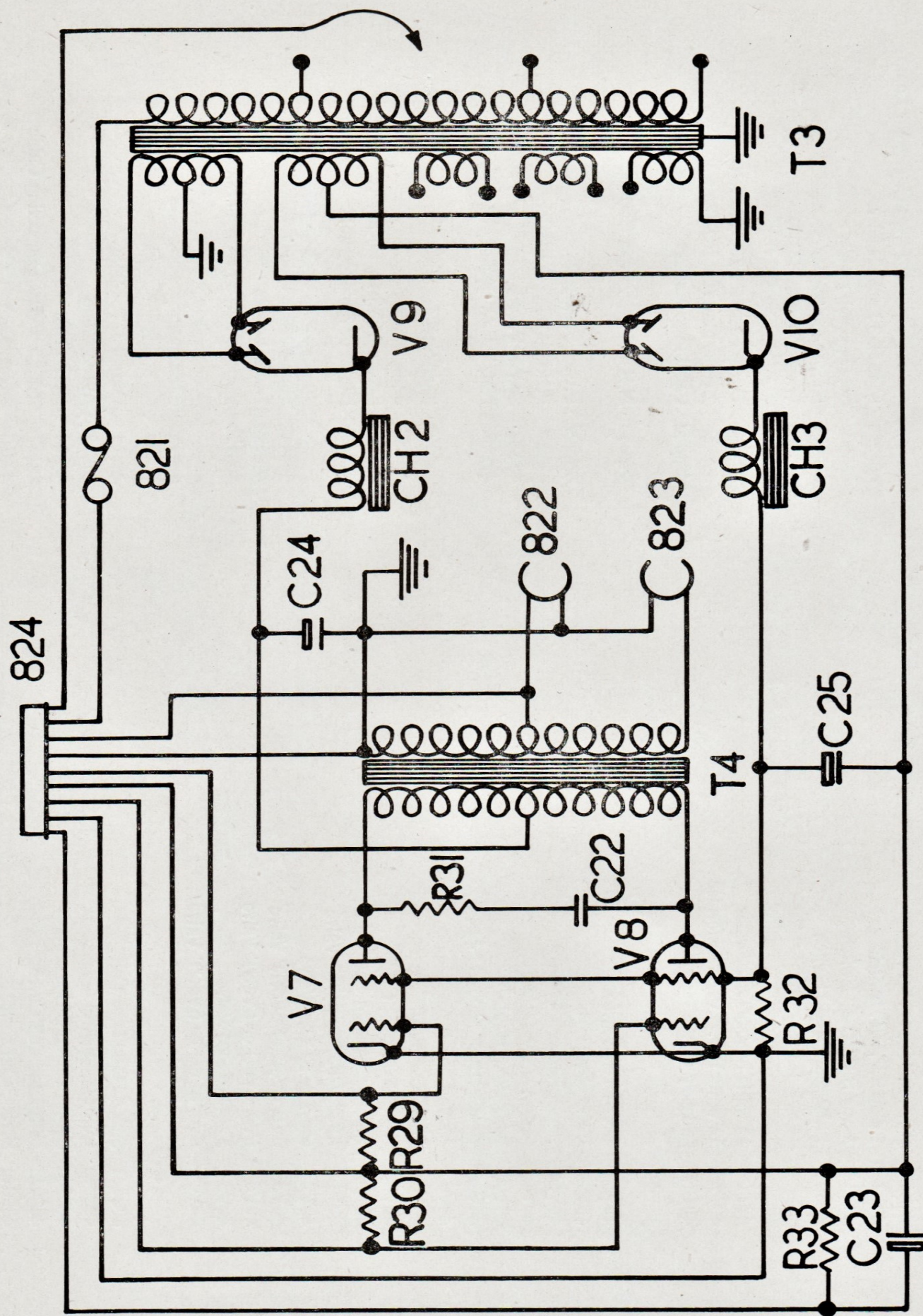


*40801a	Main Group Board Assembly, comprising Condensers C2 to C7, C12 to C18 and C28, and Resistors R2, R3, R5 to R8, R10, R12 to R23, and R28	40C27	0.002 mfd. 350 volts Mica Condenser
*40801b	Screw, Main Group Board	40C28	0.01 mfd. 350 volts Mica Condenser
*40802a	P.E.C. Coupling Group Board Assembly comprising Condensers C1 and Resistors R1 and R9	40R1	220 K. ohms $\frac{1}{2}$ watt Resistor
*40802b	Screw, P.E.C. Coupling Group Board	40R2	1 M. ohm $\frac{1}{2}$ watt Resistor
*40803	Oscillator Coil Assembly complete with harness, Condensers C26 and C27 Resistor R27	40R3	220 K. ohms $\frac{1}{2}$ watt Resistor
		40R4a	50 K. ohms Potentiometer
		40R4b	Potentiometer Knob
		40R5	47 K. ohms $\frac{1}{2}$ watt Resistor
		40R6	22 K. ohms $\frac{1}{2}$ watt Resistor
		40R7	1 M. ohm $\frac{1}{2}$ watt Resistor
		40R8	330 K. ohms $\frac{1}{2}$ watt Resistor
		40R9	2 M. ohms $\frac{1}{2}$ watt Resistor
		40R10	1.5 K. ohms $\frac{1}{2}$ watt Resistor
		40R11	1 M. ohm $\frac{1}{2}$ watt Resistor
		40R12	15 K. ohms $\frac{1}{2}$ watt Resistor
		40R13	100 K. ohms $\frac{1}{2}$ watt Resistor
		40R14	100 K. ohms $\frac{1}{2}$ watt Resistor
		40R15	1 K. ohm $\frac{1}{2}$ watt Resistor
		40R16	470 K. ohms $\frac{1}{2}$ watt Resistor
		40R17	220 K. ohms $\frac{1}{2}$ watt Resistor
		40R18	10 K. ohms $\frac{1}{2}$ watt Resistor
		40R19	10 K. ohms $\frac{1}{2}$ watt Resistor
		40R20	220 K. ohms $\frac{1}{2}$ watt Resistor
		40R21	100 K. ohms $\frac{1}{2}$ watt Resistor
		40R22	100 K. ohms $\frac{1}{2}$ watt Resistor
		40R23	220 ohms 2 watts Resistor
		40R24	100 ohms $\frac{1}{2}$ watt Resistor
		40R25	100 ohms $\frac{1}{2}$ watt Resistor
		40R26	5600 ohms 1 watt Resistor
		40R27	47 K. ohms $\frac{1}{2}$ watt Resistor
		40R28	15 K. ohms 1 watt Resistor
		40VRa	1 M. ohm Potentiometer: 20 Stud Track
		40VRb	Potentiometer Knob
40C1	0.005 mfd. 350 volts Mica Condenser		
40C2	0.25 mfd. 350 volts Paper Condenser		
40C3	0.25 mfd. 350 volts Paper Condenser		
40C4	4 mfd. 425 volts Electrolytic Condenser		
40C5	4 mfd. 425 volts Electrolytic Condenser		
40C6	50 mfd. 12 volts Electrolytic Condenser		
40C7	0.05 mfd. 500 volts Paper Condenser		
40C8	0.00025 mfd. 350 volts Mica Condenser		
40C9	50 mfd. 350 volts Mica Condenser		
40C10	0.001 mfd. 350 volts Mica Condenser		
40C11	0.001 mfd. 350 volts Mica Condenser		
40C12	50 mfd. 12 volts Electrolytic Condenser		
40C13	0.05 mfd. 500 volts Paper Condenser		
40C14	0.05 mfd. 500 volts Paper Condenser		
40C15	0.05 mfd. 500 volts Paper Condenser		
40C16	25 mfd. 25 volts Electrolytic Condenser		
40C17	0.05 mfd. 500 volts Paper Condenser		
40C18	0.05 mfd. 500 volts Paper Condenser		
40C19	32 mfd. 500 volts Electrolytic Condenser		
40C20	16 mfd. 500 volts Electrolytic Condenser		
40C21a	16 mfd. 500 volts Electrolytic Condenser		
40C21b	Condenser Contact Washer		
40C26	0.005 mfd. 350 volts Mica Condenser		



40S1	3 amps. 'On-Off' Switch	40805a	0.3 amps 6-8 volts M.B.C. Tubular Lamp
40S2	1 amp S.P.D.T. Switch	40805b	M.B.C. 3 Lamp Holder
40S3	3-way S.P. 'Oak' Switch	40805c	Screw, Lamp Holder
40S4	3-way S.P. 'Oak' Switch	40805d	Nut, Lamp Holder
		40805e	Washer, Lamp Holder
40T1	12 watts Mains Transformer	40806a	1 amp Fuse (for 200-250 volts)
40T2	12 watts P.P.O.P. Transformer	40806b	2 amps Fuse (for 100-120 volts)
40CH1	20 henry Choke	40806c	Panel Fuse Holder
40V0a	Set of Ten Valves	40807	N/S and Mic. Input Socket
40V0b	Valve Holder	40808a	P.E.C. Socket
40V0c	$\frac{1}{4}$ inch Rubber Grommet	40808b	P.E.C. Coupling Platform
40V0d	Screw, Valve Holder	40808c	Screw, P.E.C. Socket or Platform
40V0e	Nut, Valve Holder	40808d	Nut, P.E.C. Socket or Platform
40V0f	Eyelet Rivet, Valve Holders		
40V0g	Valve Cap	40809	2-pin Socket
40V0h	Valve Cap Lead	40810a	3-pin Socket
40V0j	Valve Screening Can	40810b	Screw, 2 or 3-pin Socket
40V0k	Screw, Screening Can	40810c	Nut, 2 or 3-pin Socket
40V1	EF36, EF37 or 6J7M Valve		
40V2	6SL7 or ECC35 Valve	40811	5-pin Socket
40V3	6V6, 6V6G or 6V6GT Valve	40812a	10-pin Socket
40V4	6V6, 6V6G or 6V6GT Valve	40812b	Eyelet Rivet, 5 or 10-pin Socket
40V5	5V4G or 5Z4 Valve		
40V6	6V6, 6V6G or 6V6GT Valve	40813	3-pin Plug
40804a	50 K/C Oscillator Coil	40814	Output L.T. Cable
40804b	Coil Fixing Strip	40815	Anode Cable
40804c	Screw, Fixing Strip	40816	Grid Cable
40804d	Oscillator Coil Cover	40817	P.E.C. Socket, Connecting Cable
40804e	Screw, Coil Cover	40818	Mains Lead

40 WATT AMPLIFIER STAGE

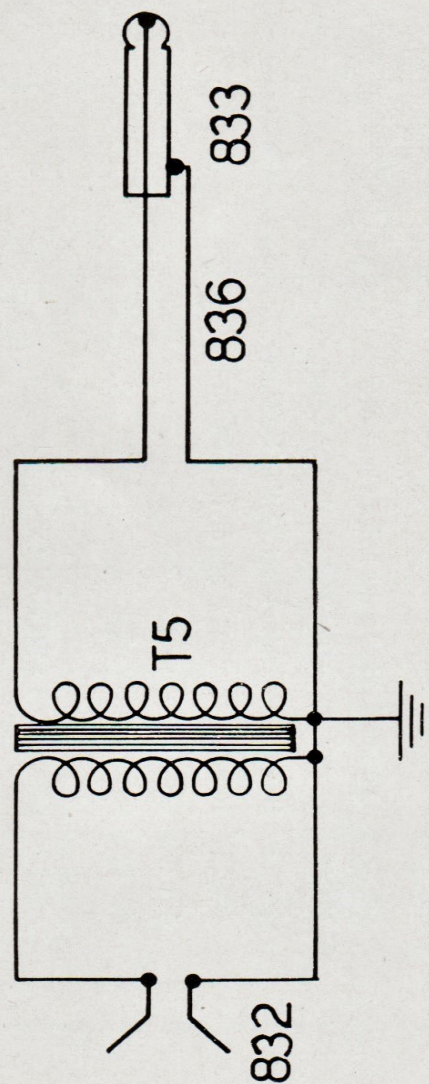
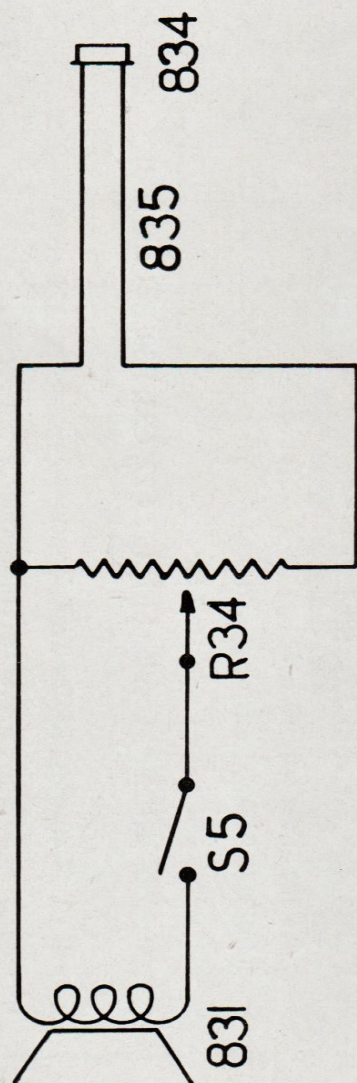


40C22	0.005 mfd. 1500 volts Mica Condenser	40CH2	20 henry Choke
40C23	25 mfd. 25 volts Electrolytic Condenser	40CH3	20 henry Choke
40C24	16 mfd. 500 volts Electrolytic Condenser	40V7	6L6 or 6L6G Valve
40C25a	16 mfd. 500 volts Electrolytic Condenser	40V8	6L6 or 6L6G Valve
40C25b	Contact Washer	40V9	5V4G, 5T4 or 5U4G Valve
40C25c	Insulating Washer	40V10	5V4G or 5Z4 Valve
40R29	680 ohms 1 watt Resistor	See 12 watt Stage for Valve Holder etc.	
40R30	680 ohms 1 watt Resistor	40821a	2 amps Fuse (for 200-250 volts)
40R31	5600 ohms 4 watts Resistor	40821b	3 amps Fuse (for 100-120 volts)
40R32a	10 K. ohms 20 watts Wire-Wound Resistor	40821c	Panel Fuse Holder
40R32b	Resistor Stud	40822a	2-pin Socket
40R32c	Nut, Resistor Stud	40822b	Screw, Socket
40R32d	Washer, Resistor Stud	40822c	Nut, Socket
40R32e	Resistor Bracket	40823a	10-pin Socket
40R32f	Screw, Resistor Bracket	40823b	Eyelet Rivet, Socket
40R33a	680 ohms 1 watt Resistor	40824a	10-pin Plug
40R33b	Resistor Mounting Strip (for C22, C23, R30, R31 and R33)	40824b	Inter-Stage Lead
40T3	40 watts Mains Transformer		
40T4	40 watts P.P.O.P. Transformer		

SPARE PARTS

MONITOR SPEAKER AND MICROPHONE

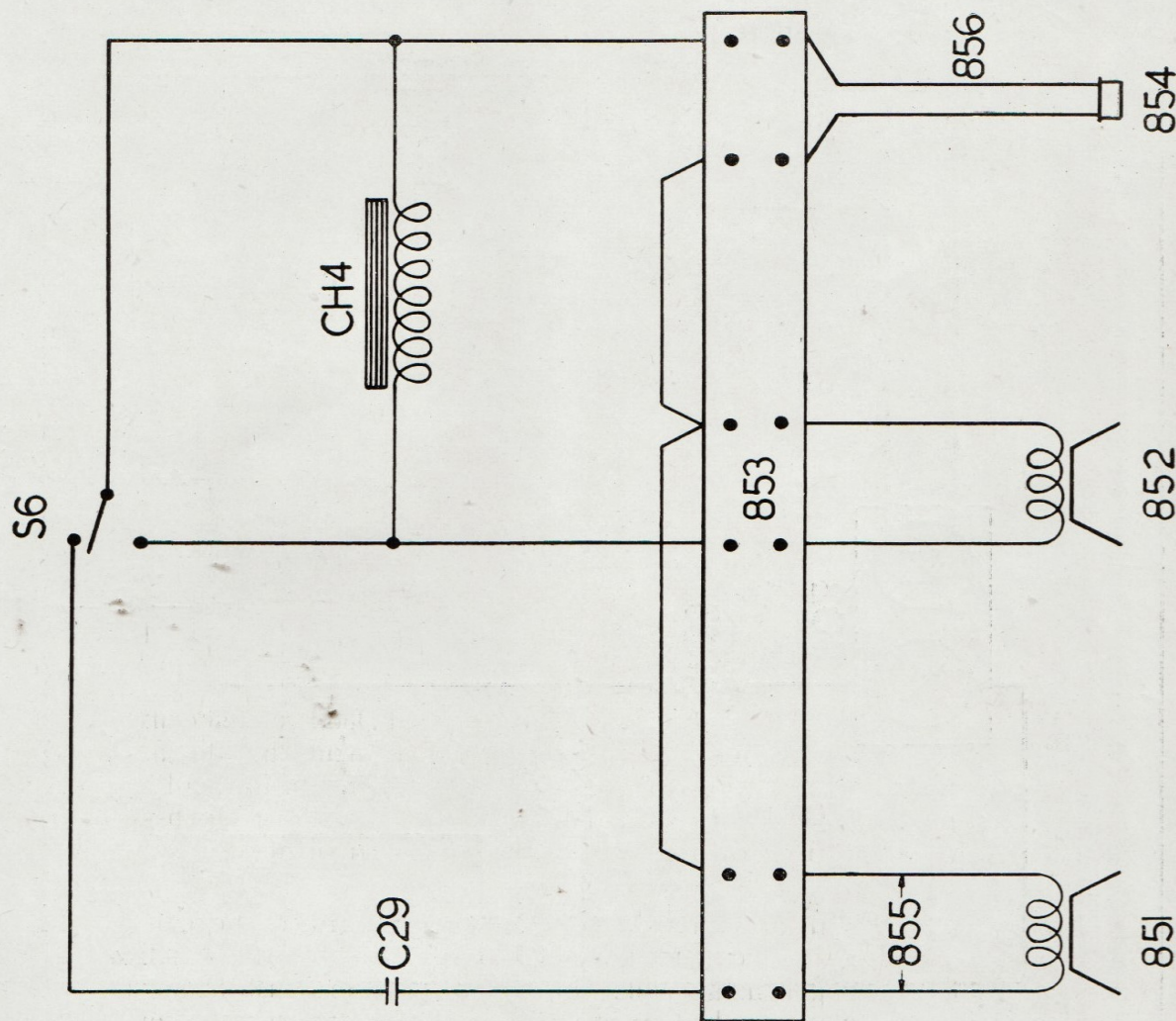
40R34a	45 ohm Potentiometer
40R34b	Potentiometer Knob
40S5	3 amps 'On-Off' Switch
40T5a	Microphone Transformer
40T5b	Screw, Transformer
40T5c	Nut, Transformer
40831a	Rala, 8Z Speaker
40831b	Screw, Speaker
40831c	Nut, Speaker
40831d	Washer, Speaker
40832a	Vitavox Junior Mk. E. Microphone
40832b	Felt Ring
40833	Jack Plug
40834	2-pin Plug
40835	Monitor Speaker Lead
40836	Microphone Lead



SPARE PARTS

SPEAKERS AND CROSS-OVER BOX

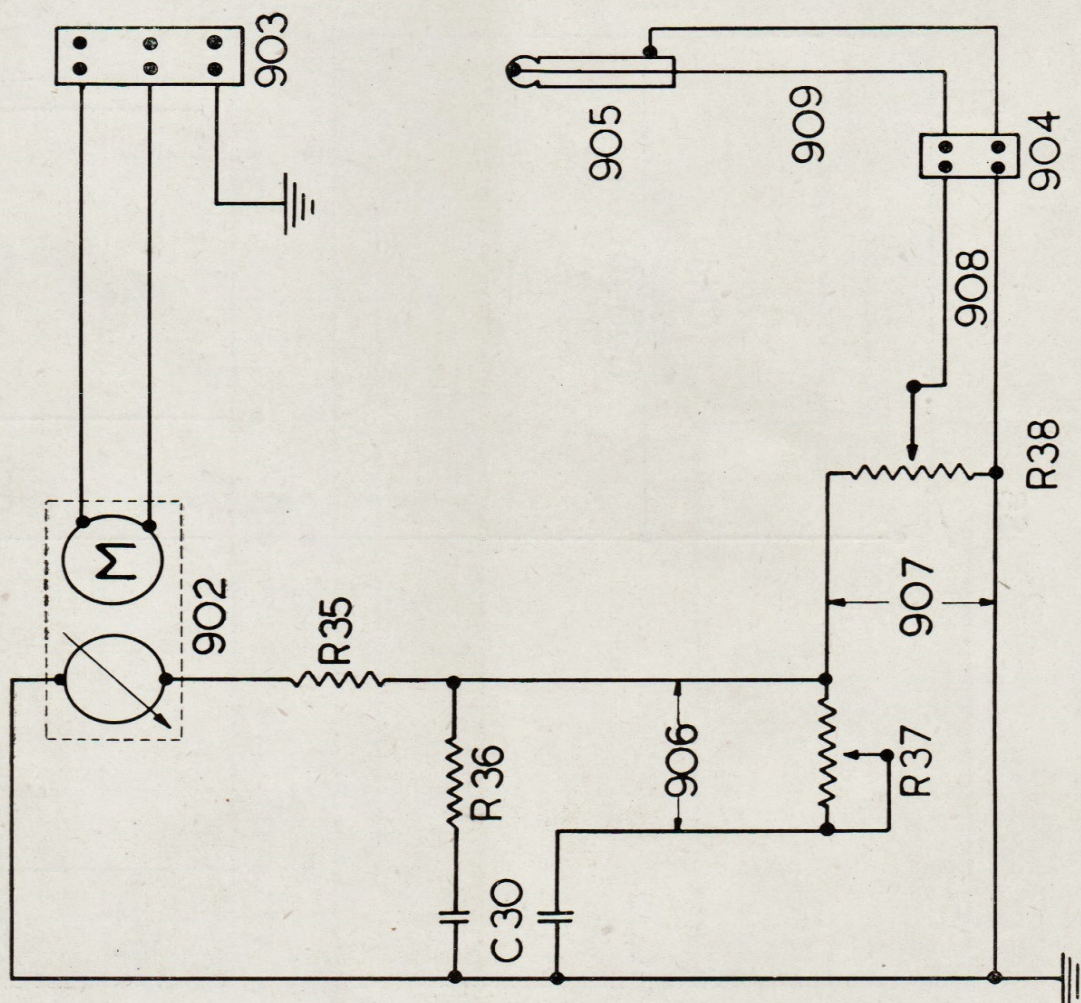
- 40C29a 24 mfd. 100 volts A.C. Condenser
- 40C29b Screw, Condenser
- 40C29c Nut, Condenser
- 40C29d Washer, Condenser
- 40CH4a 6 milli-henry Choke
- 40CH4b Choke Fastening Strip
- 40CH4c Screw, Choke
- 40CH4d Nut, Choke
- 40CH4e Washer, Choke
- 40S6 1 amp D.P.D.T. Switch
- 40851 Vitavox Senior 'N' H.F. Speaker
- 40852a Vitavox 12 in. Bass Speaker (Type K12-20)
- 40852b Screw, 12 in. Speaker
- 40852c Nut, 12 in. Speaker
- 40852d Washer, 12 in. Speaker
- 40852e Vitavox 15 in. Bass Speaker (Type K13)
- 40852f Bolt, 15 in. Speaker
- 40852g Nut, 15 in. Speaker
- 40853a 6-way Terminal Block
- 40853b Screw, Terminal Block
- 40853c Nut, Terminal Block
- 40853d Washer, Terminal Block
- 40854 10-pin Plug
- 40855 H.F. Speaker Lead
- 40856 Cross-Over Box Lead

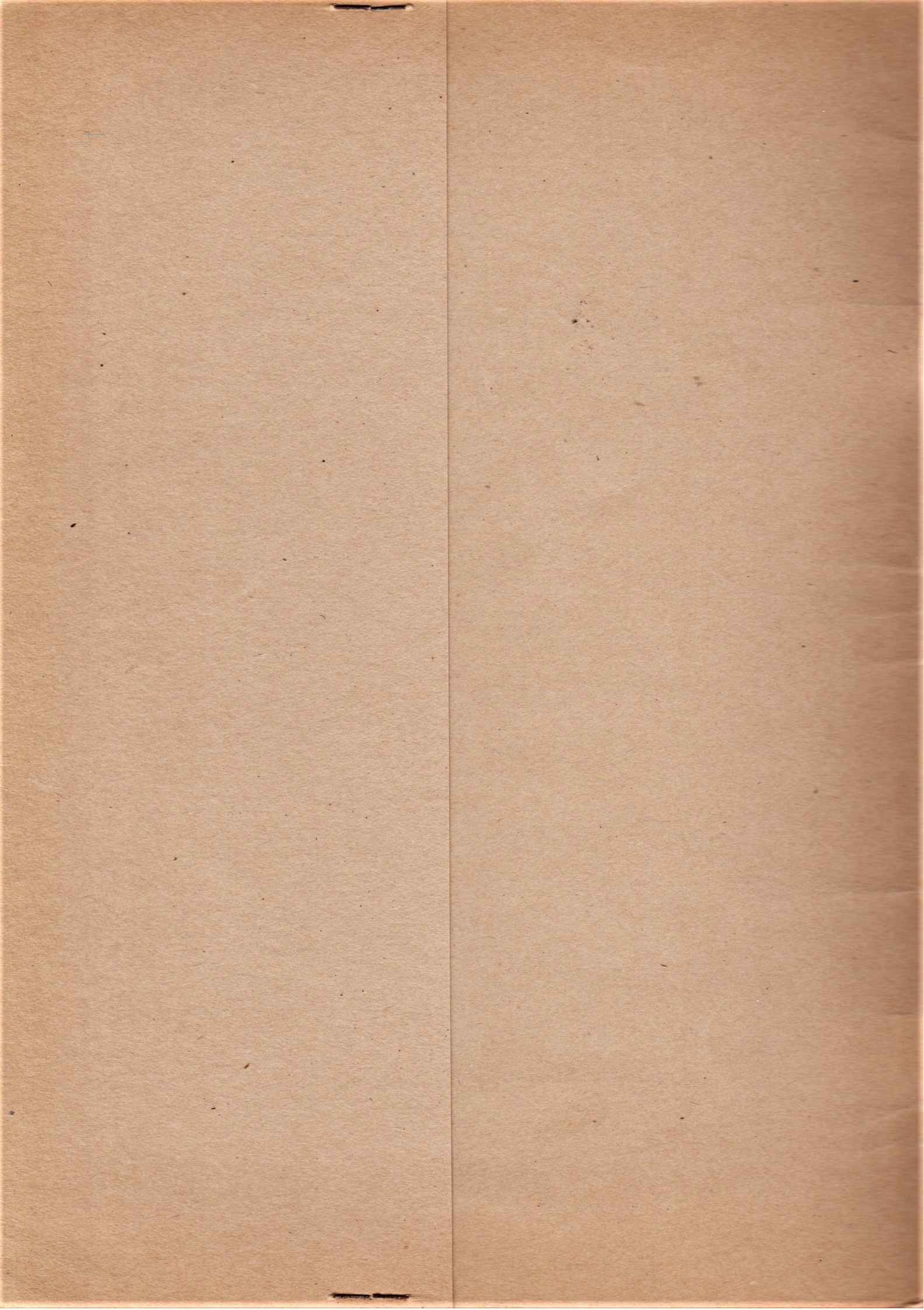


SPARE PARTS

NON-SYNCH

*40901a	Non-Synch. Group Board Assembly comprising condensers C30 (two) and resistors R35 and R36
*40901b	Screw, Group Board
*40901c	Nut, Group Board
40C30	0.01 mfd. 350 volts Mica Condenser
40R35	220 K. ohms $\frac{1}{2}$ watt Resistor
40R36	68 K. ohms $\frac{1}{2}$ watt Resistor
40R37	50 K. ohms Potentiometer (Tone)
40R38a	1 M. ohm Potentiometer (Volume)
40R38b	Potentiometer Knob
40R38c	Spacing Washer, Potentiometer
40902a	Turntable and Pickup
40902b	Screw, Turntable
40902c	Nut, Turntable
40903a	3-way Terminal Block
40903b	Screw, 3-way Block
40903c	Nut, 3-way Block
40904a	2-way Terminal Block
40904b	Terminal Plate
40904c	Screw, 2-way Block
40904d	Nut, 2-way Block
40905	Jack Plug
40906	Tone-Group Board Lead
40907	Volume-Group Board Lead
40908	Volume-Terminal Lead
40909	Pick-up—Amplifier Lead





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