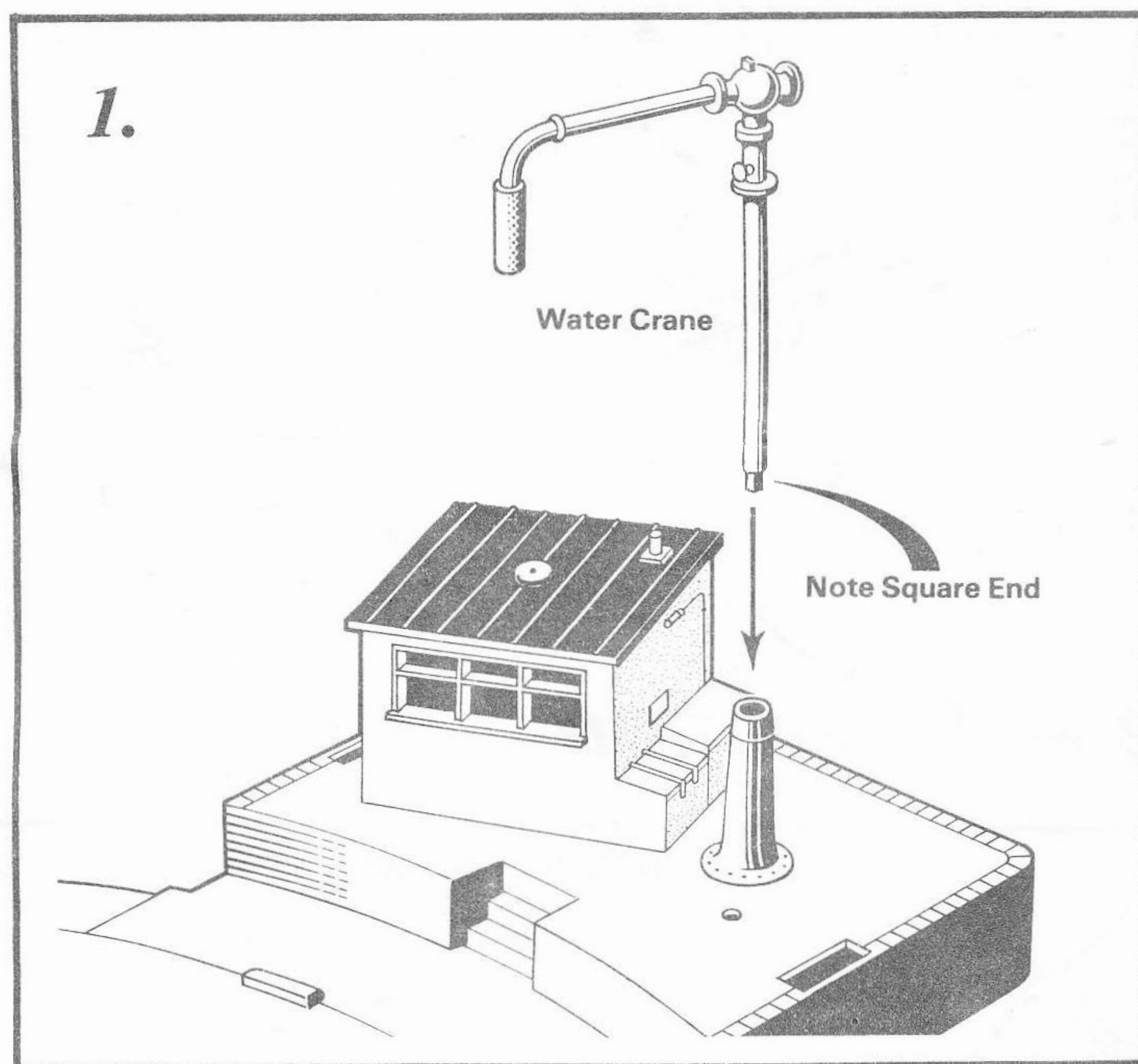


Hand Operated Turntable & Turntable Motorising Unit



To ensure safe transit some parts of the Hand Operated Turntable are packed loose.

Caution

- (a) Never attempt to turn the turntable bridge directly by hand.
- (b) When handling always use both hands — do not allow the turntable base to twist or distort.
- (c) Always operate on a firm flat surface.

Hand Operated Turntable — Assembly

1. The Water Crane

First insert the water crane into its base (*Diag. 1*) and turn it slightly until its square end is felt to engage with a socket in an internal gear. It is by rotating this crane that the turntable bridge is made to revolve. A system of gears to a "geneva" drive causes the rotation of the bridge to pause whenever the rails come into alignment with the inlet or any of the outlet tracks. Test that the turntable is operating correctly by rotating the water crane until the bridge has turned through about 90° (quarter circle). **IF AT ANY STAGE IT TENDS TO JAM DO NOT USE FORCE — Refer to paragraph 9.**

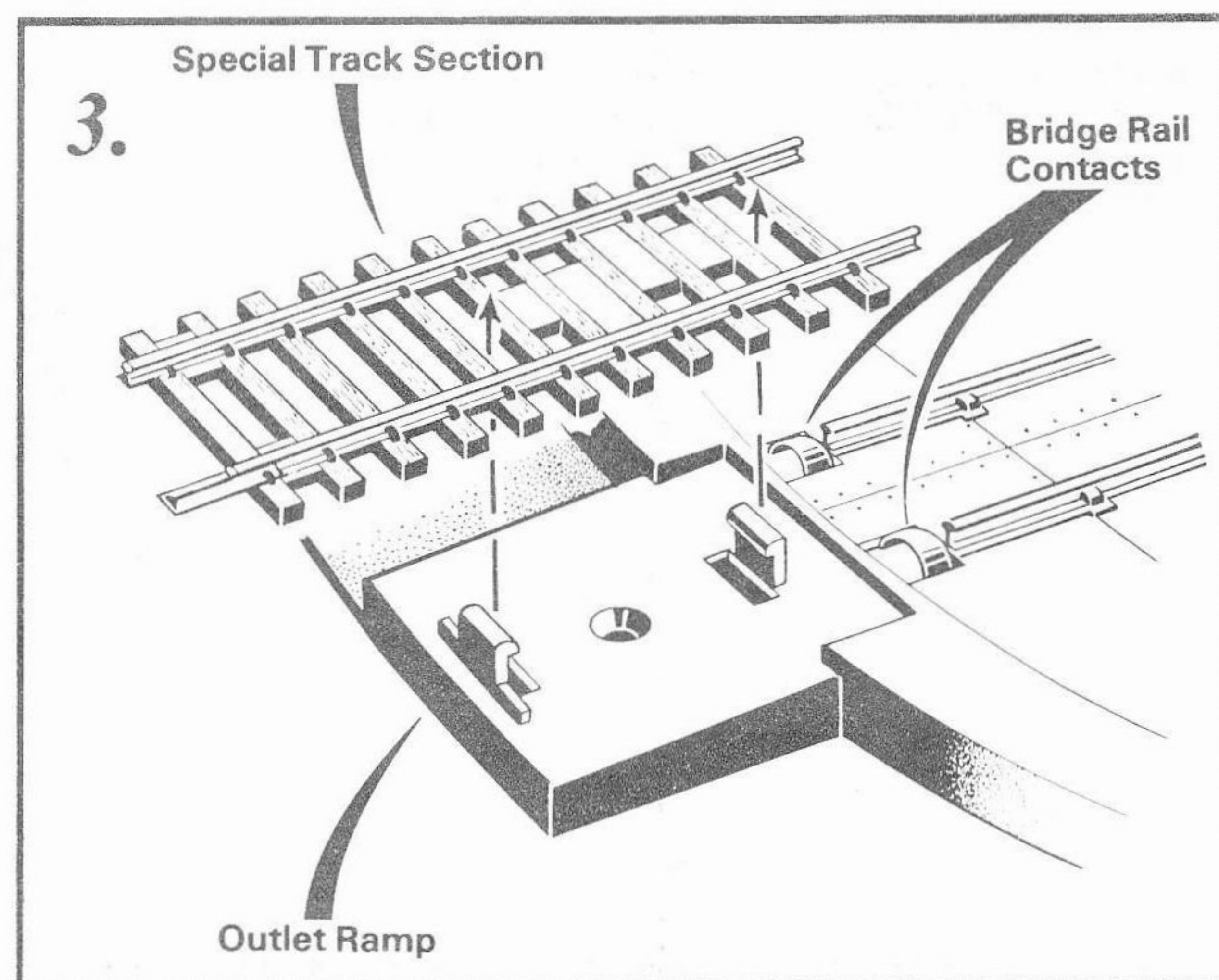
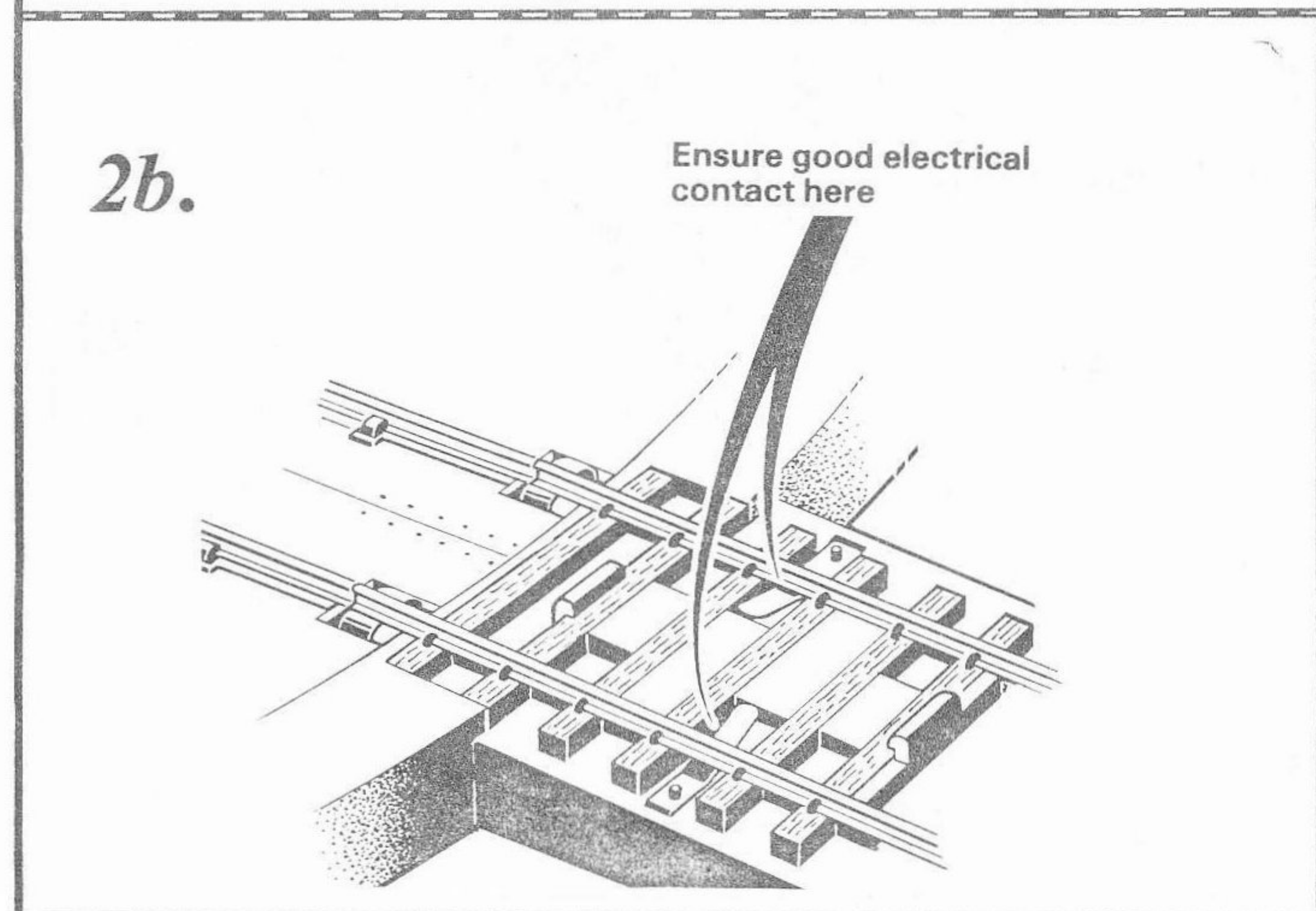
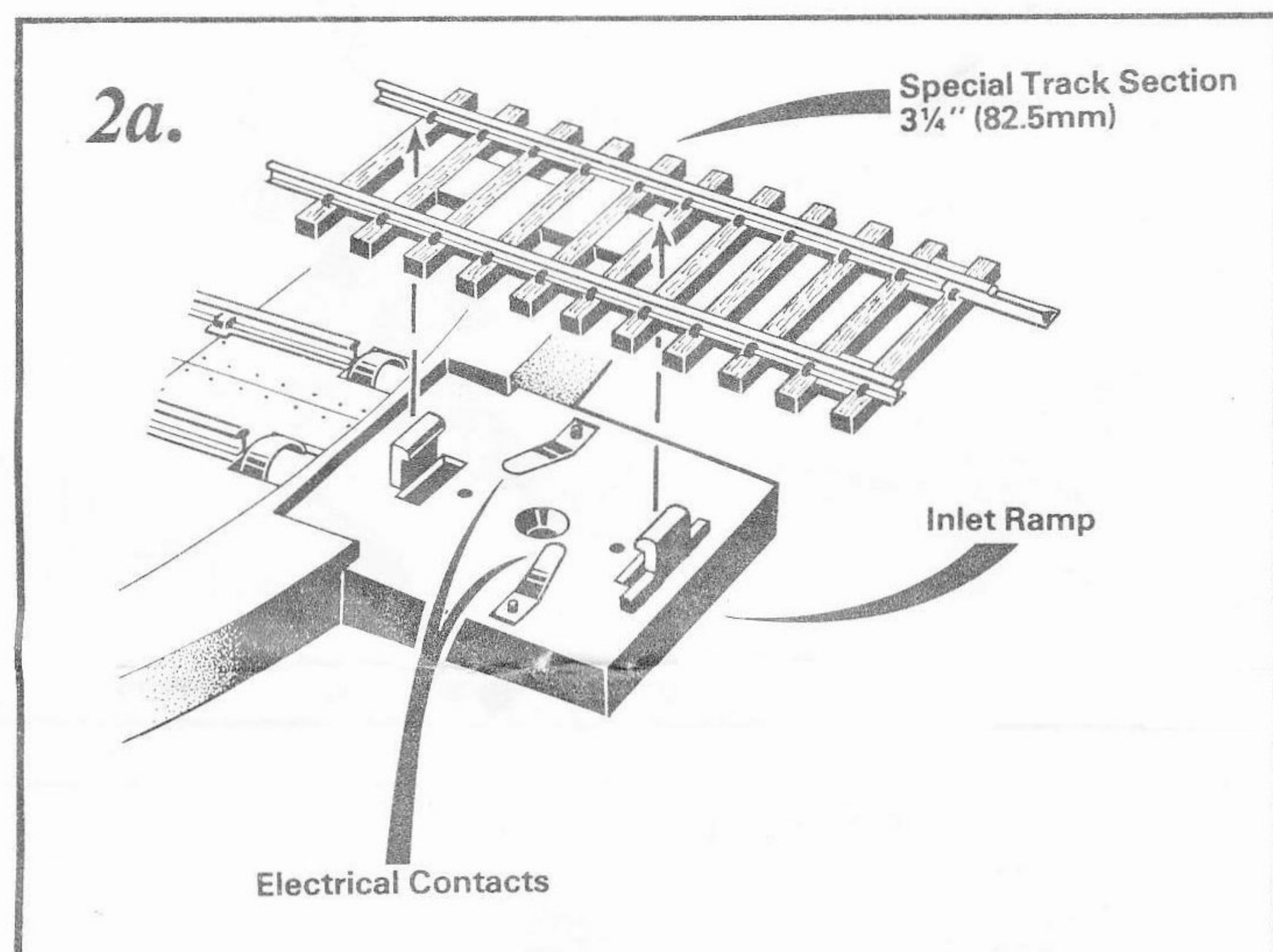
2. Inlet Ramp

The "inlet" ramp has two electrical contacts (*Diag. 2a*). Clip one of the special track sections to the ramp (*Diag. 2b*) ensuring that the underside of each metal rail makes a good connection with the appropriate contact. This ramp must always be fitted with track as electric power is supplied through it to operate locomotives on all other turntable tracks.

3. Outlet Ramps

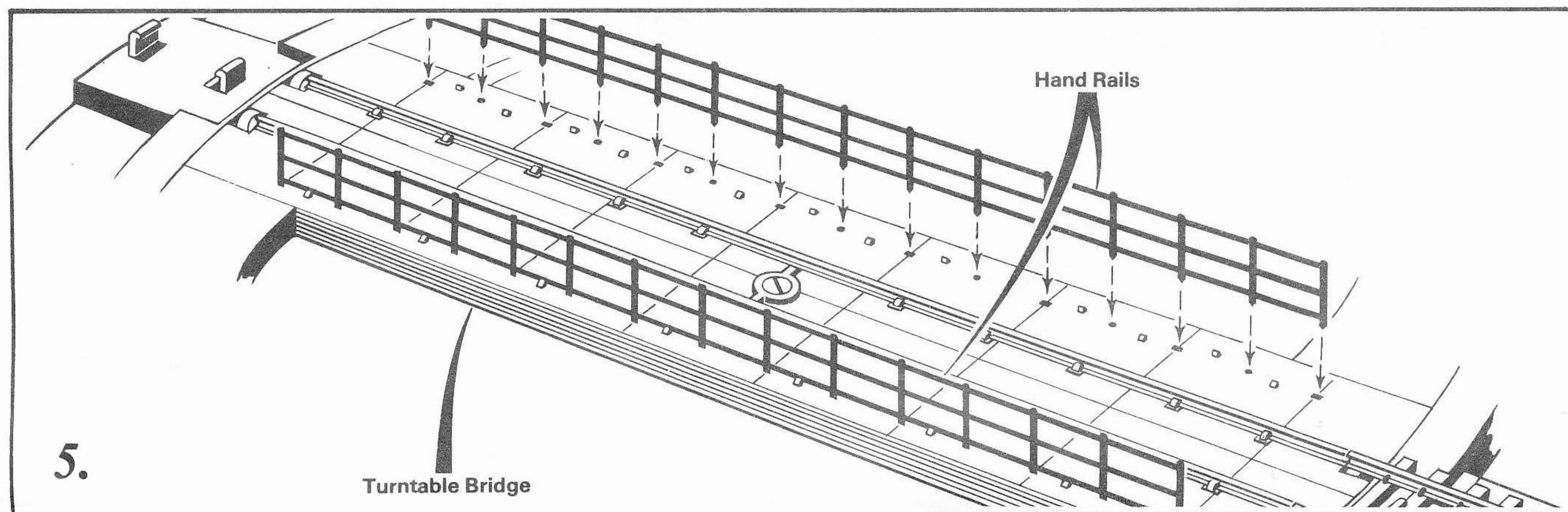
There are seven "outlet" ramps. If space is limited they need not all be utilised. Clip special track sections to the ramps to be used ensuring that the rail ends overhanging the bridge will make good connection with the rail contacts (*Diag. 3*).

Any special track sections left over may be fitted with buffer stops (*not included*) and used at the ends of sidings.



4. Track Height

To provide room for the operating mechanism the track on the turntable is a little higher than normal and the special track sections fitted to the ramps are inclined slightly. This height variation can be minimised by laying approach tracks on Hornby Track Underlay which should be laid at double thickness for about 2 inches (50 mm) from the end of the ramp.



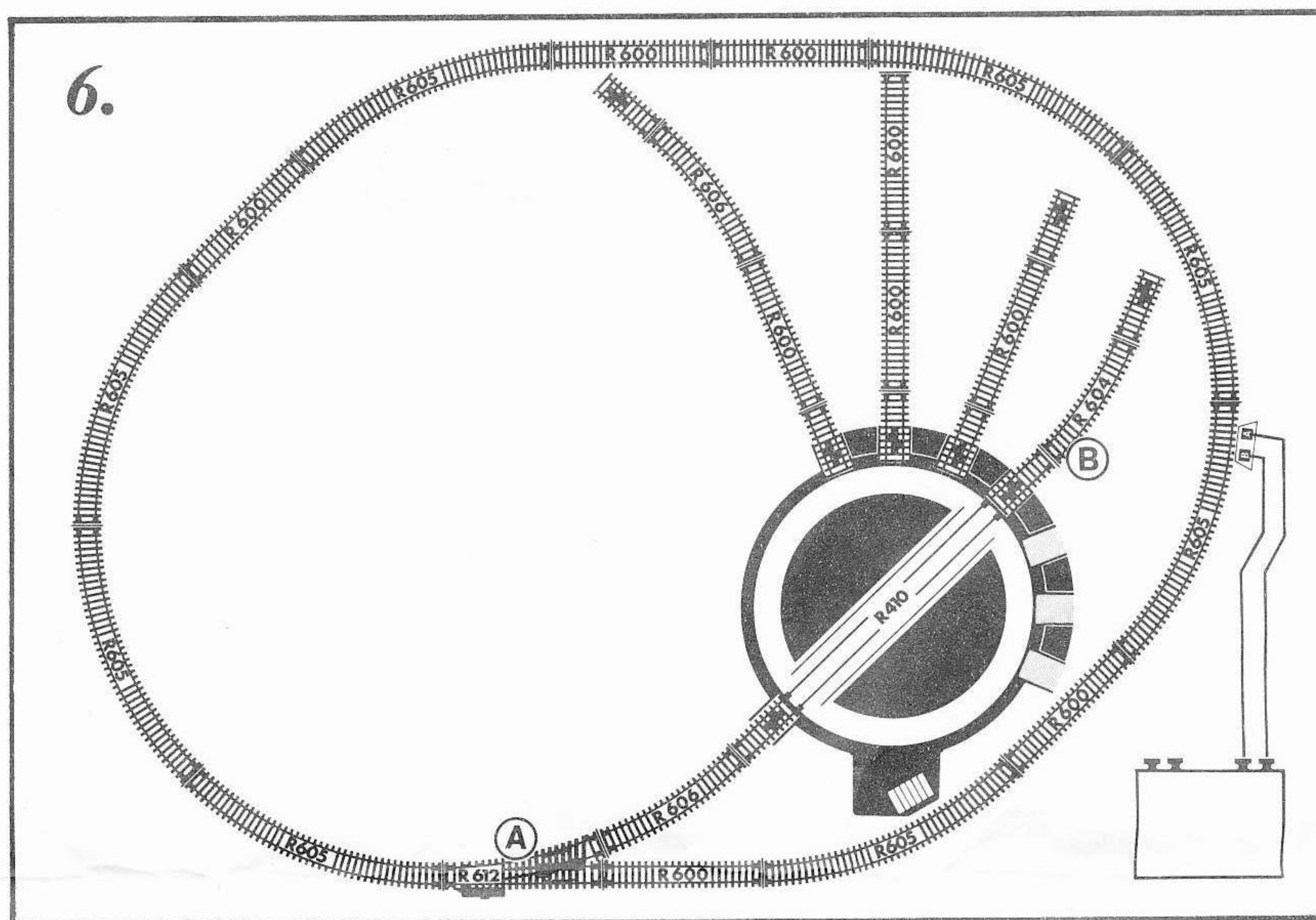
5. Hand Rails

Fix a hand rail on each side of the bridge (Diag. 5).

Hand Operated Turntable — Operation

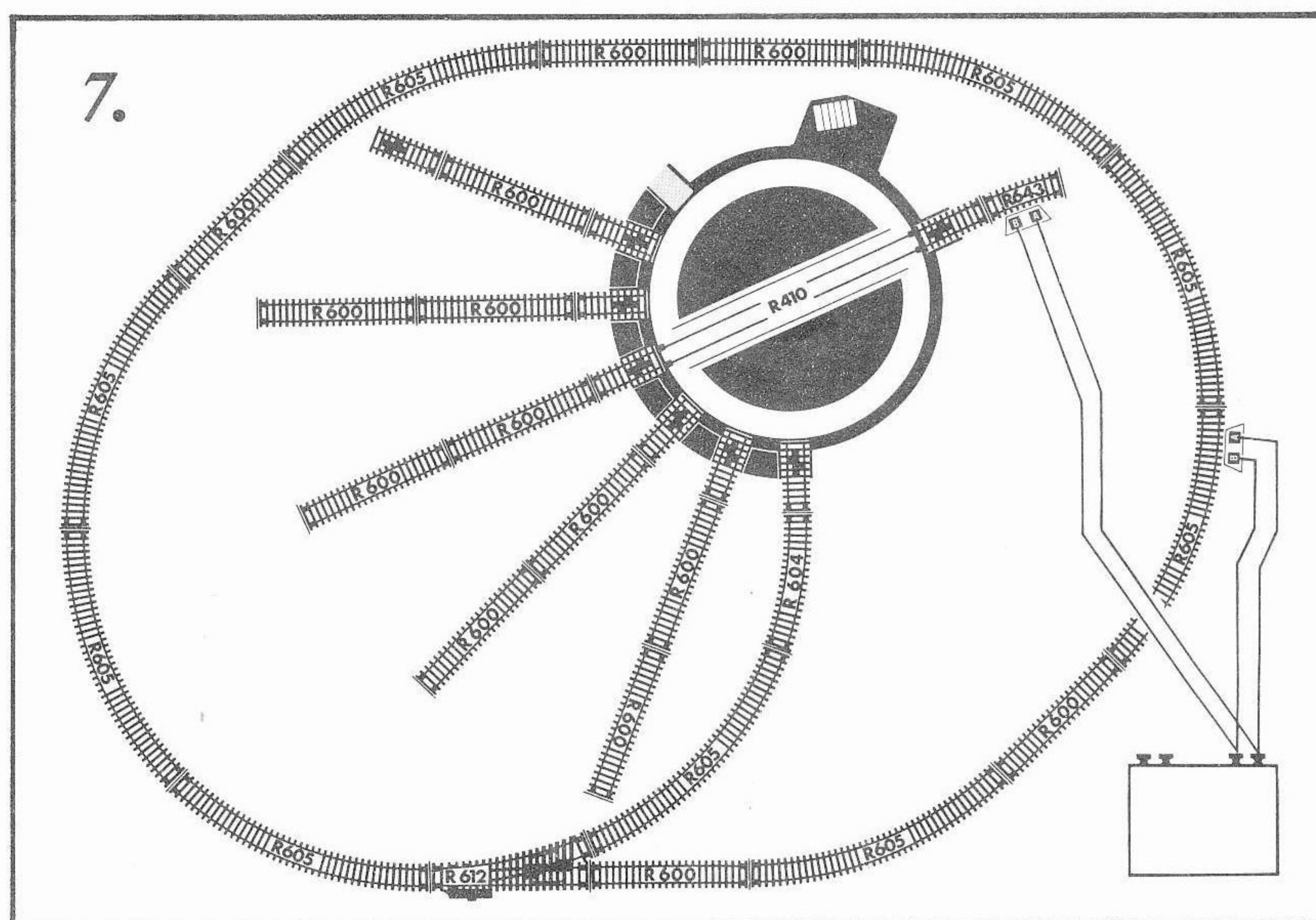
6. Standard Assembly into Layout

The inlet track of the Turntable must be connected to a spur off the main layout and it is essential that this spur has power available for the movement of locomotives. The layout plan in diagram 6 shows a small layout where power is fed to the turntable spur through Hornby self isolating points in the same manner that it is fed to other sidings. (For alternative method of layout assembly see para. 7)



7. Alternative Layout Assembly

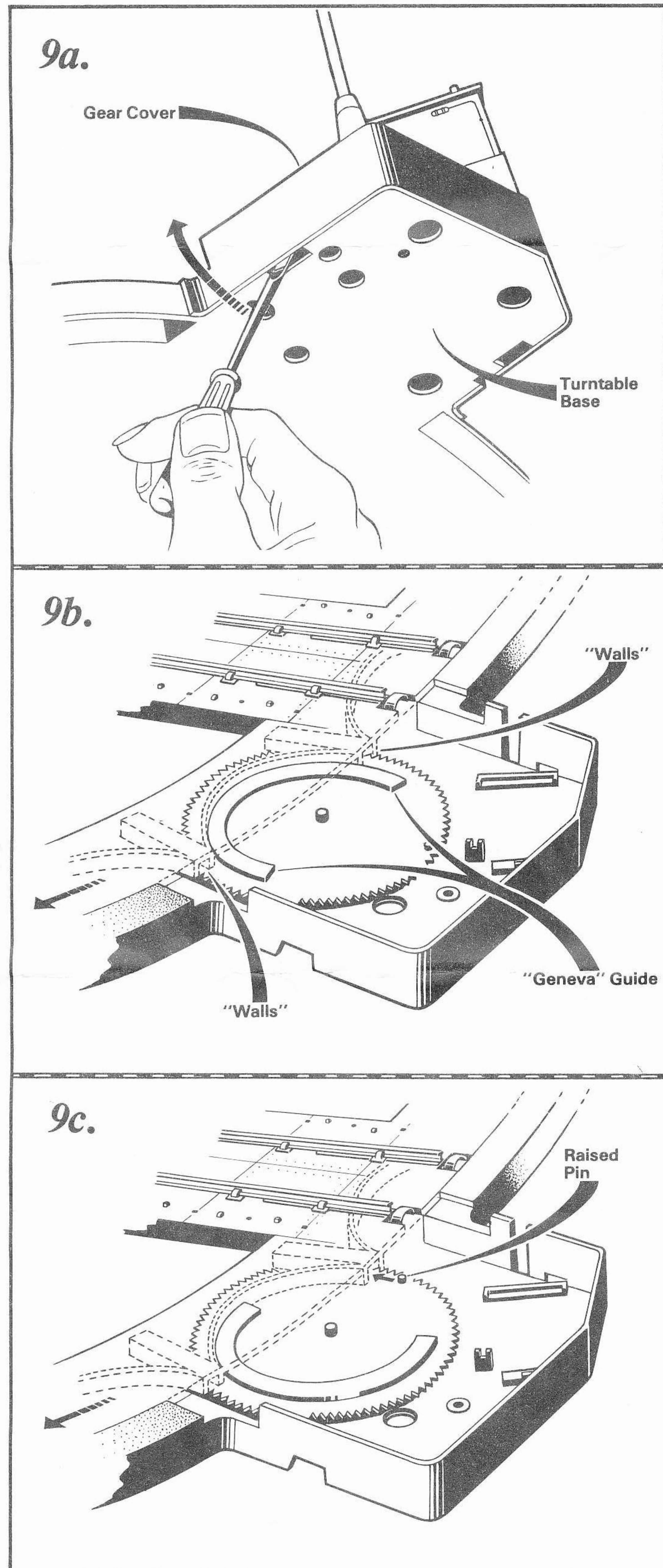
In a limited space it may be advantageous to use one of the outlet tracks for locomotive entry to the turntable (Diag. 7). Note that an additional power feed must be connected to the inlet ramp.



8. Locomotive Operation

- (i) **To turn a locomotive**
Switch point **A** (*Diag. 6*) for the turntable spur, run the locomotive from the main line onto the spur and continue slowly on to the centre of the turntable bridge — Stop. Rotate the water crane until the bridge has turned through 180° and the locomotive has been turned completely around. Reverse the direction switch on the power controller and the locomotive is ready to run back to the main circuit.
- (ii) **To run a locomotive to any outlet track.**
Switch point **A** for the turntable, run the locomotive onto the bridge — Stop. Rotate the water crane until the bridge is lined up with the required outlet track then operate the power controller to run the locomotive off the bridge.

The only outlet that is electrically "live" is the one with which the bridge is aligned and that will only be live when the power connected to the inlet track is "on". Locomotives can be "stored" on the outlet tracks but track **B** (*Diag. 6*) will always be live when a locomotive is run between the bridge and the inlet track and should not be used for storing locomotives.



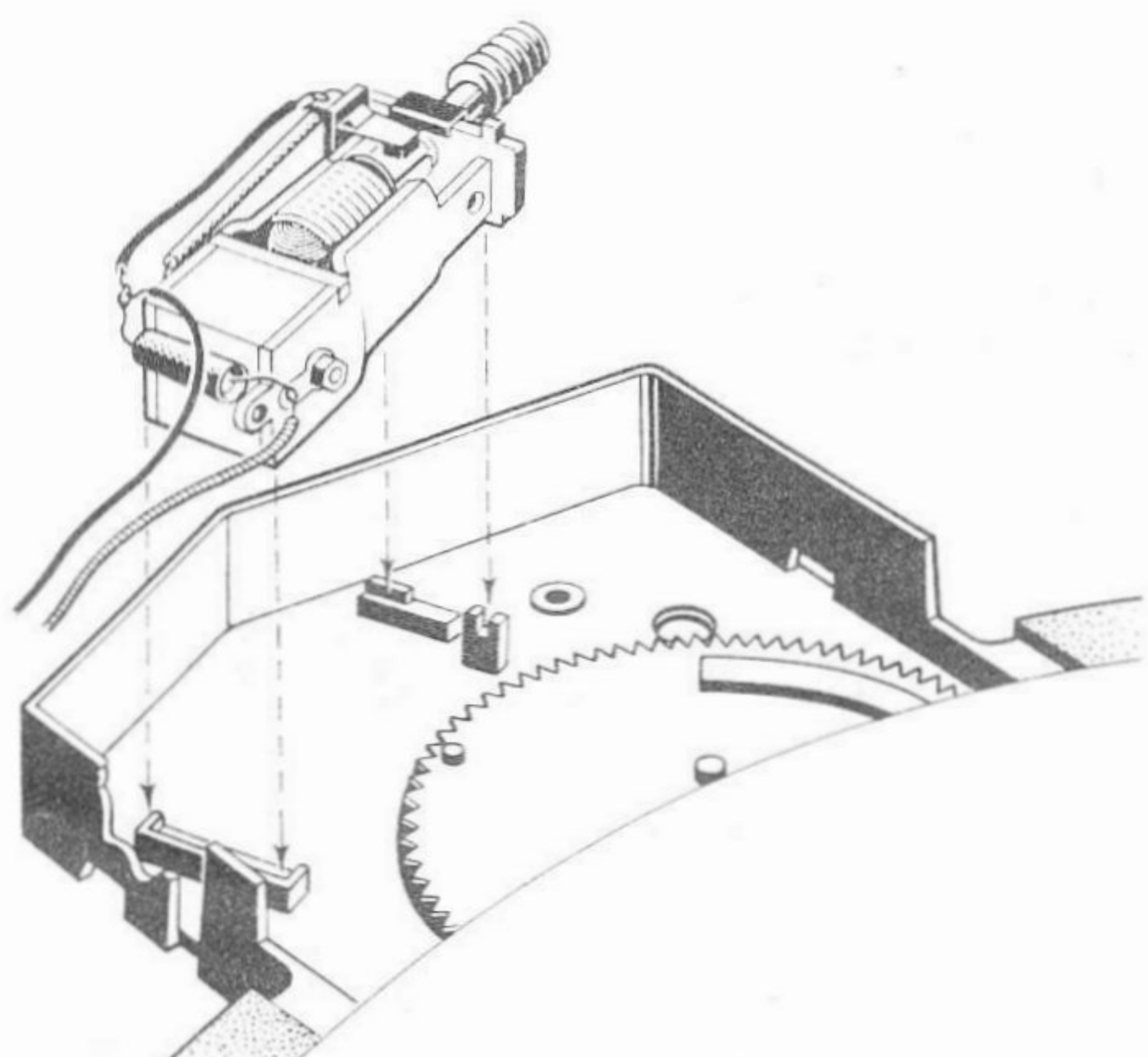
9. The "Geneva" Drive

If the turntable movement becomes jammed it will be necessary to check that the gearing is correctly positioned. The gear cover should be released by inserting a screwdriver blade between the side walls and the base (*Diag. 9a*). Remove the smaller gears. Check that the pivot on the underside of the "geneva" gear is correctly located in the turntable base. Very slightly lift the edge of the bridge unit and turn the gear so that both ends of the "geneva" guide are pointing outwards (*Diag. 9b*). Still lifting the edge of the bridge unit turn it until there are the ends of a pair of "walls" exactly in position on either side of the guide. Allow the side of the bridge to return to its natural position. Turn the "geneva" gear by hand and check that the raised pin will pass into the space between a pair of walls (*Diag. 9c*). Reposition the smaller gears (*Diagram 9d if hand operated or diagram 10c if motorised*) and carefully replace the gear cover ensuring that the tops of the vertical gear shafts fit into their correct positions.

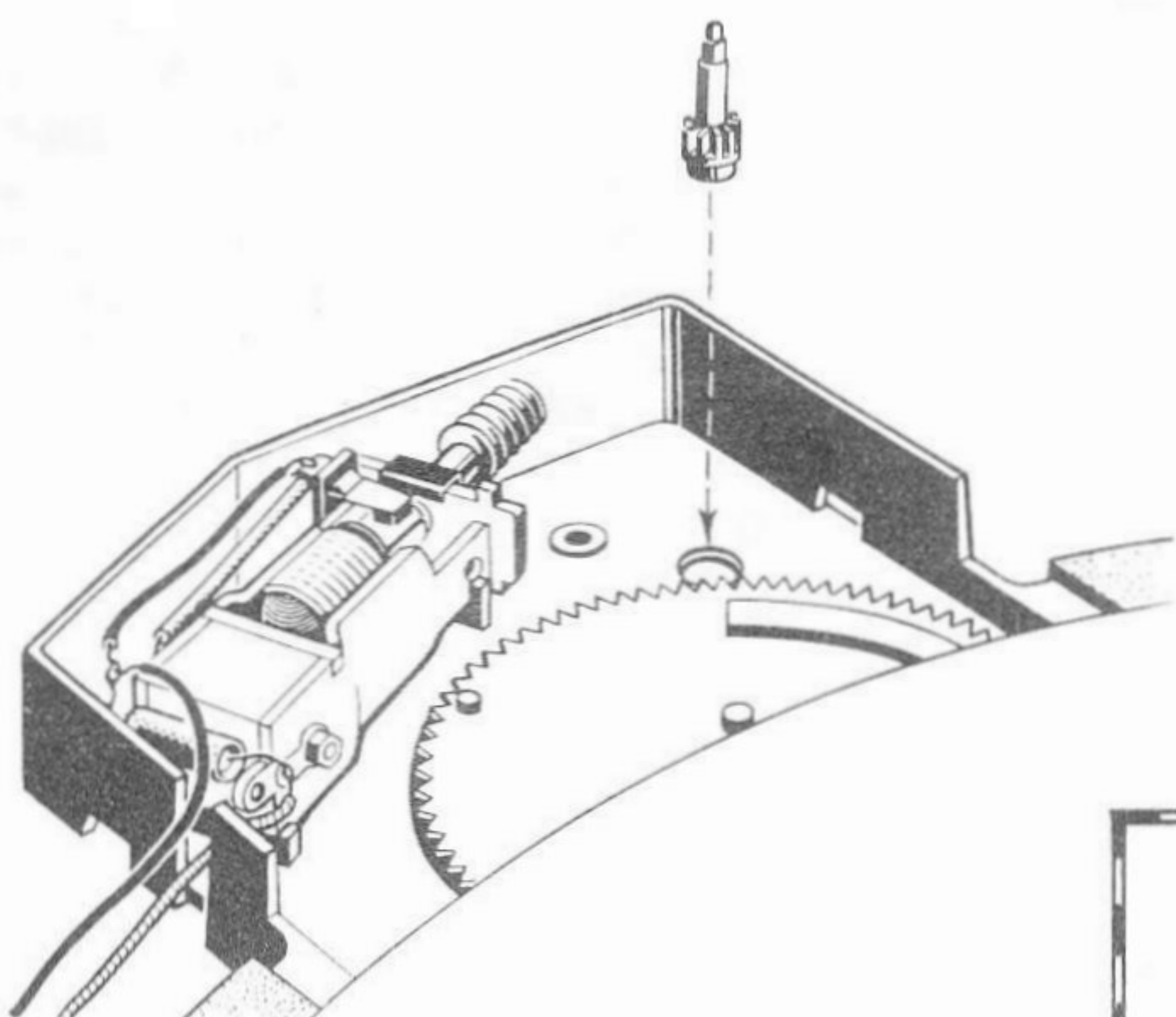
Electrifying the Turntable Mechanism

The turntable has been designed so that it can readily be converted to electric, remote control, operation by the addition of the **R.411 Turntable Motorising Unit** which requires a supply of 12 volts D.C. (e.g. as obtained from outputs 3 & 4 of the Hornby R.900 Power Controller).

10a.

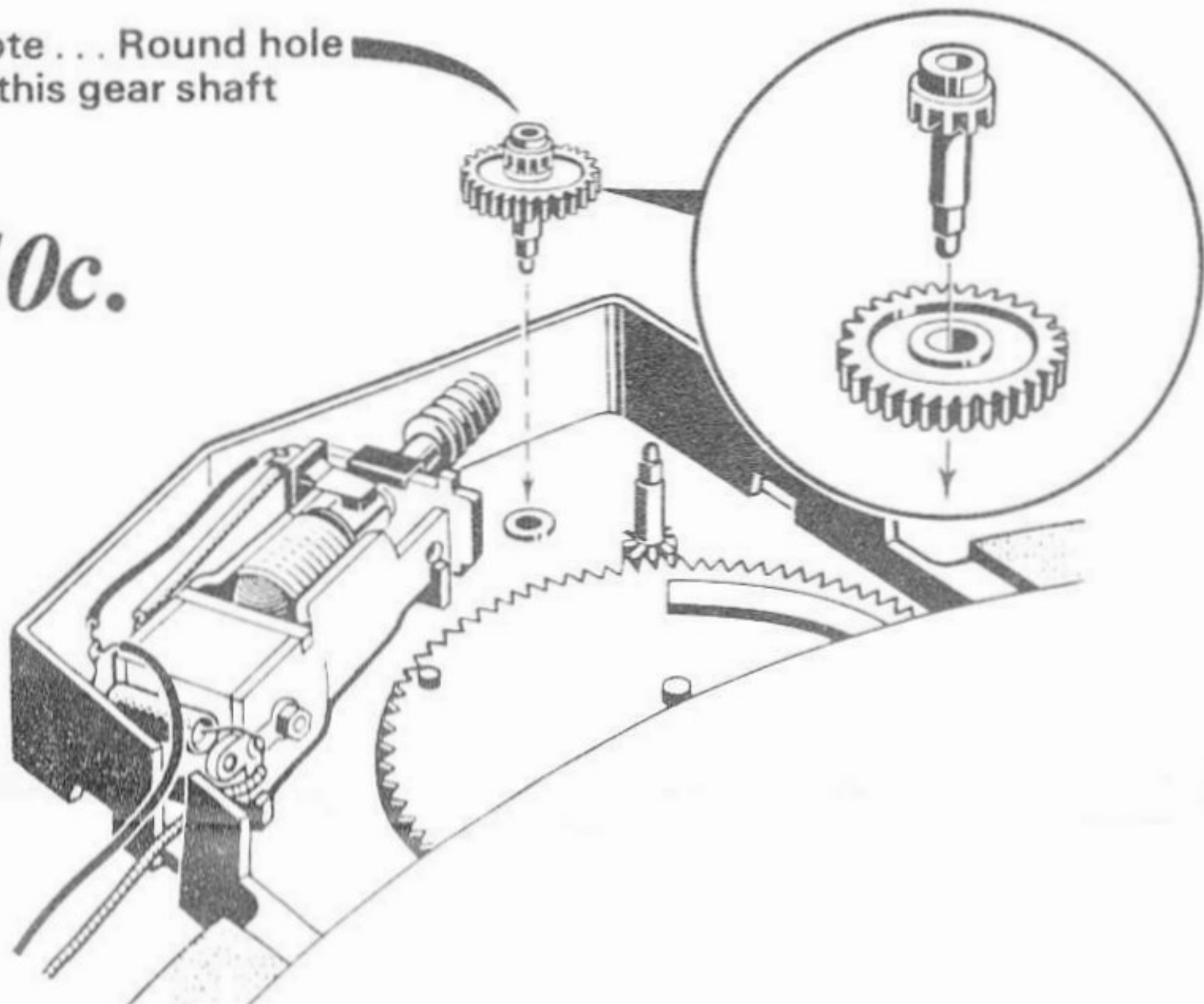


10b.

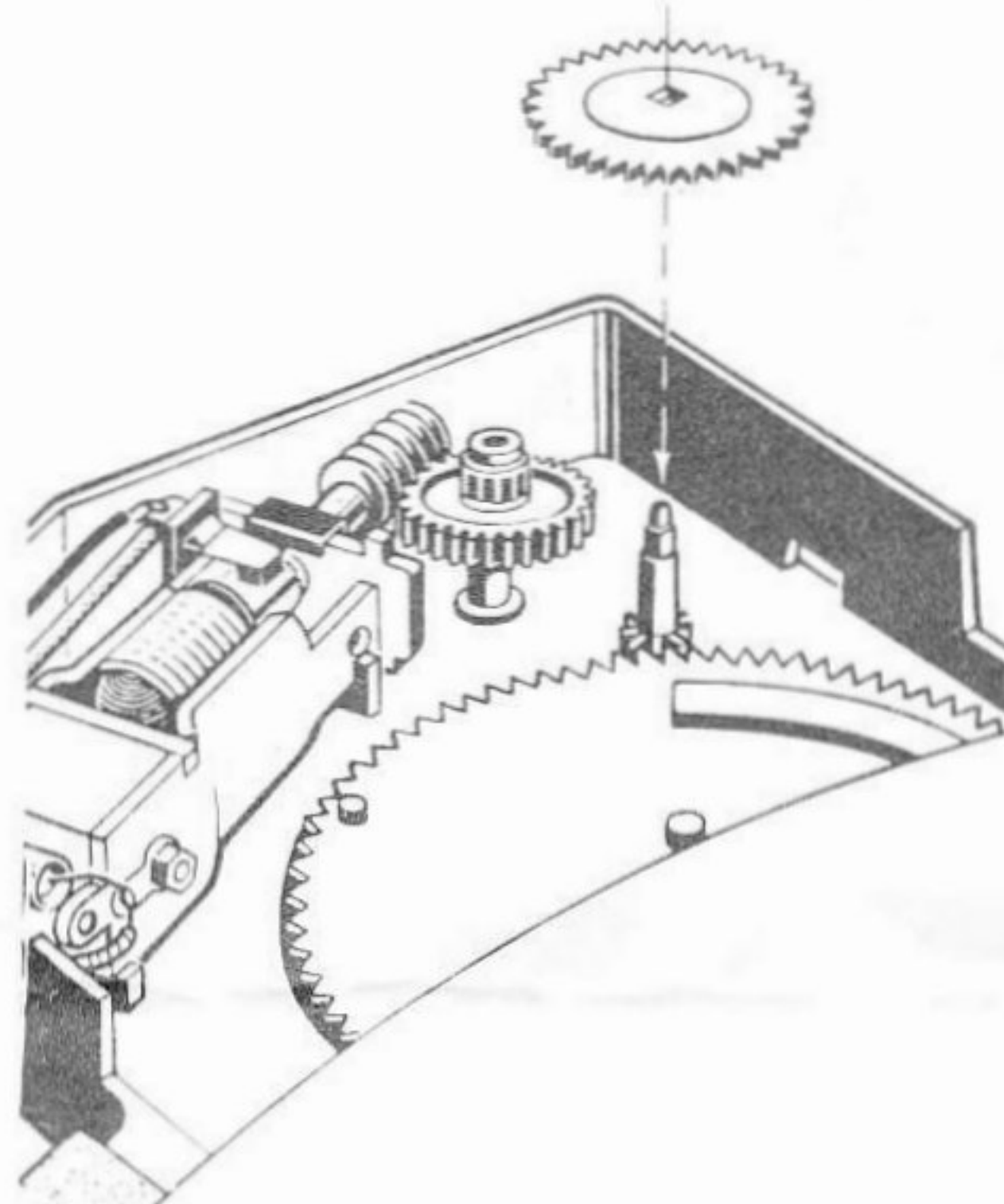


Note ... Round hole in this gear shaft

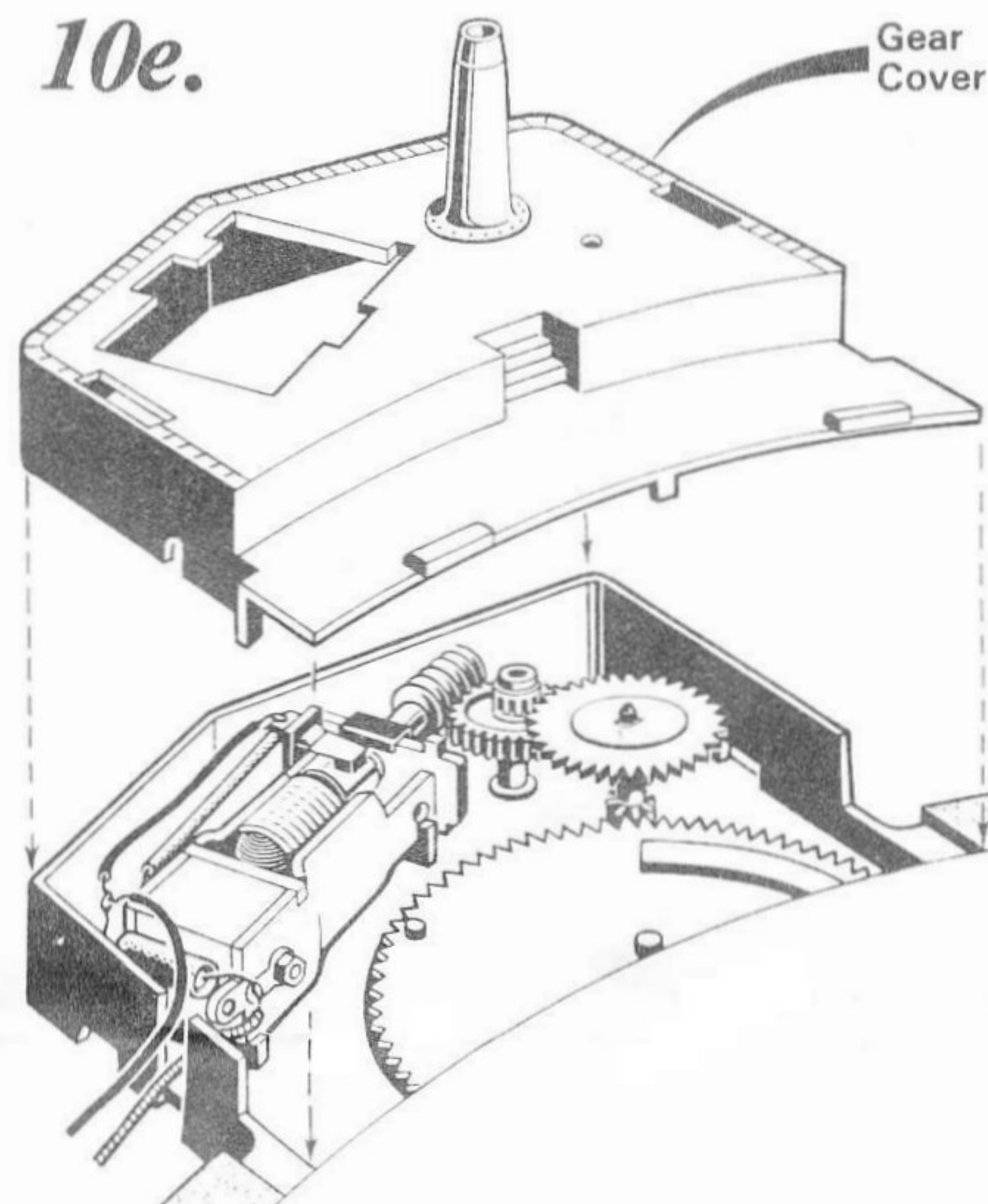
10c.



10d.



10e.



Turntable Motorising Unit — Assembly

10. Gear Assembly

Remove the gear cover (See paragraph 9) and small gears. Place the motor into position (Diags. 10a and 10b). Assemble the gears (Diags. 10b, 10c, 10d and 10e). Replace the gear cover ensuring that the wires are correctly positioned and will not interfere with the free running of the motor and that the upper ends of the two gear shafts fit correctly into the underside of the gear cover.

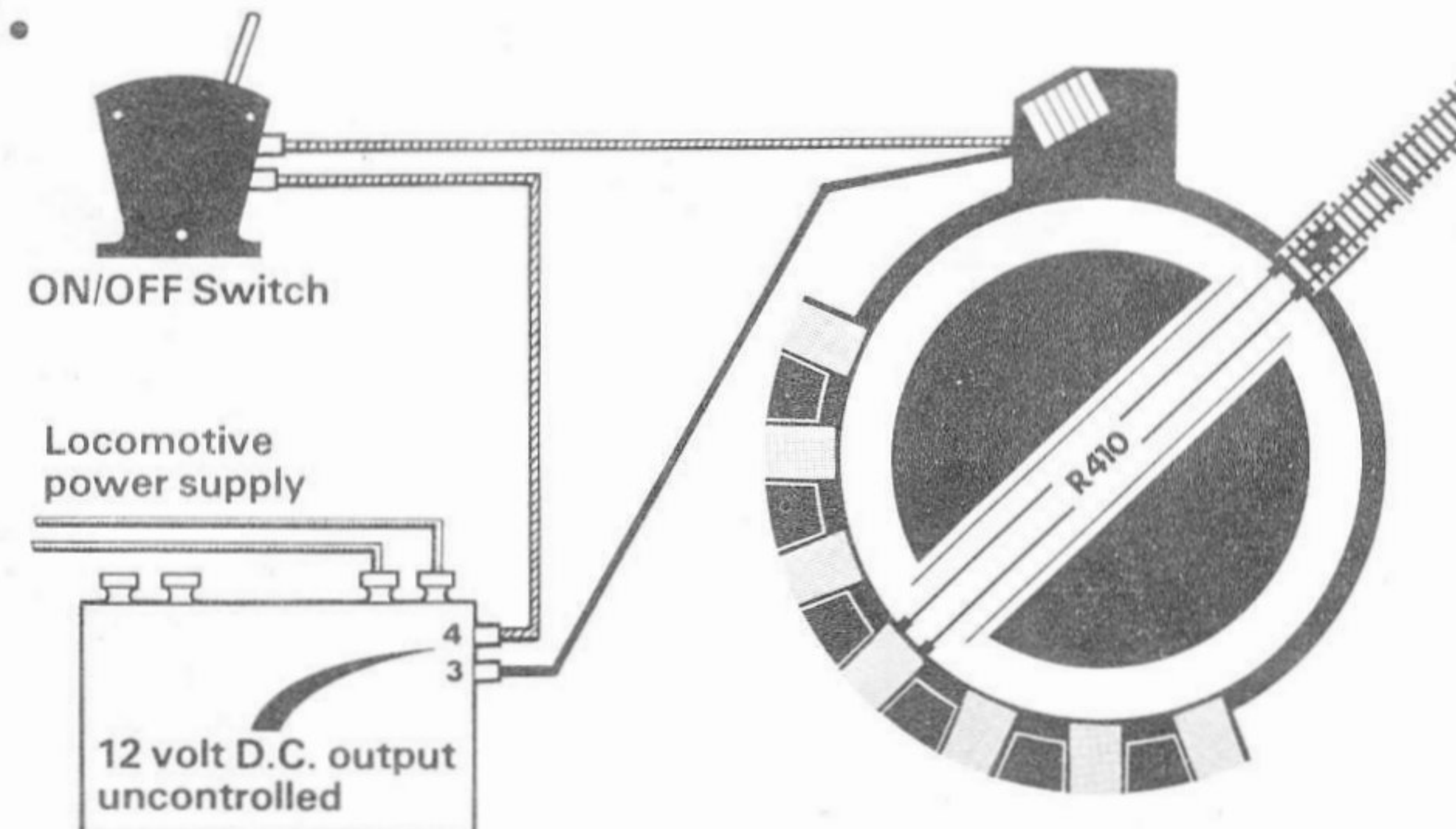
11. Wiring Assembly

Connect one turntable lead to the on/off switch and the other to terminal 3 of the uncontrolled 12 volt D.C. output of the power controller. Connect the separate lead from power controller terminal 4 to the on/off switch (Diag. 11).

12. Operation

See paragraphs 6, 7 and 8 but note that on a motorised turntable the water crane is disconnected from the gears. To turn the bridge operate the on/off switch. The bridge will stop for a moment each time it comes into line with an outlet track. At the required alignment switch the current off then operate the controller to move the locomotive.

11.



Made in Great Britain by

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