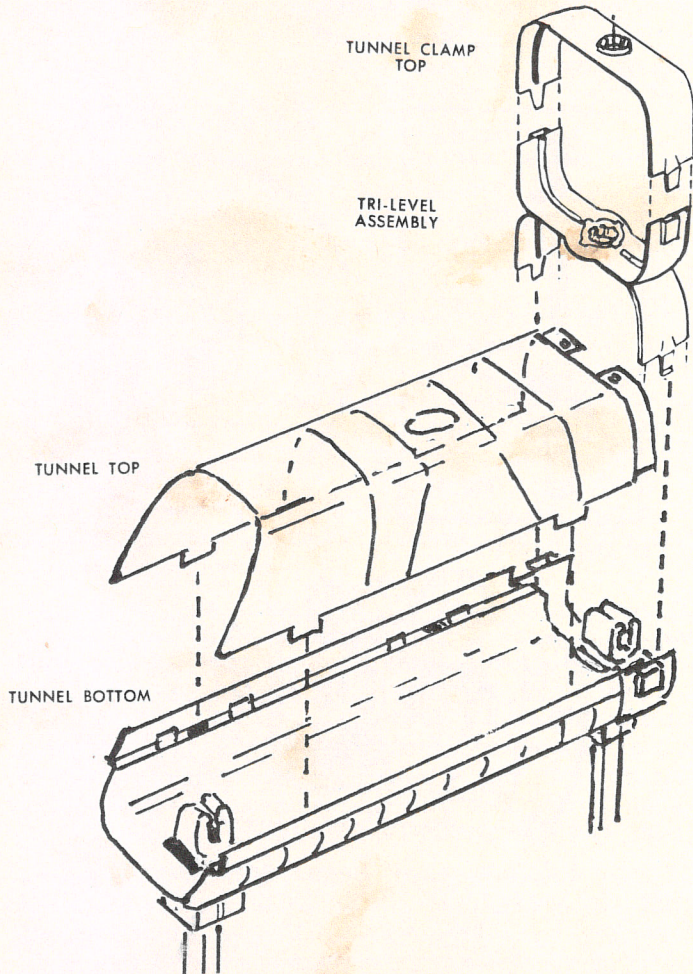
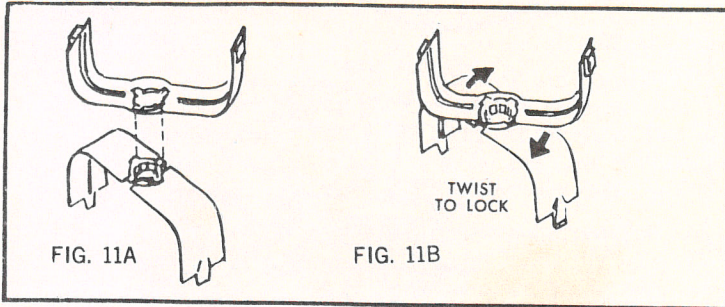


□ **STEP 14.** Fit the tunnel clamp tops over the bottom mounted on stanchions "B" and "C" (Fig. 10) and snap them in place. Next, fit the tunnel top over the tunnel bottom.

□ **STEP 15** Assemble the two halves of the tri-level assembly by twisting them together. (See Figs. 11A and 11B) Snap a tunnel clamp top into the tri-level assembly. Then mount the entire assembly over the tunnel top at stanchion "G". (Fig. 10) Now fit the four stanchion stubs into tunnel top clamps. Make sure the slots line up as shown in Fig. 10.



□ **STEP 16.** Complete the track layout by installing the remaining track sections as shown in Fig. 12.

□ **STEP 17.** If the layout is going to stand freely on the floor, a rubber foot should be pressed on the bottom of each of the stanchions (Fig. 13A) to keep the layout from sliding around. If the layout is to be screwed down permanently to a piece of plywood (you will need a piece 36 inches by 36 inches, 1/2 inch thick) then plastic stanchion bases should be snapped on the stanchions (Fig. 13B) in locations shown in Fig. 12.

□ **STEP 18.** After the layout is assembled adjust all the cross braces so that they are level and parallel with the floor.

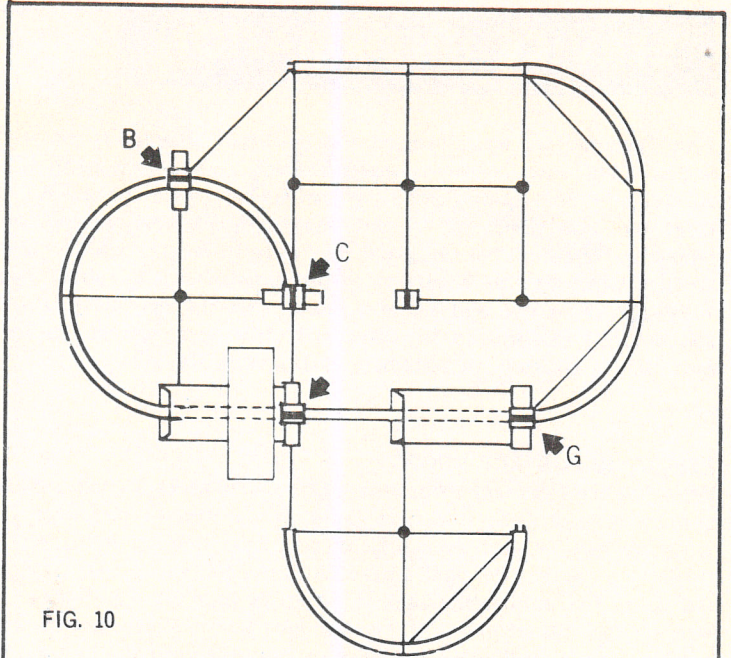


FIG. 10

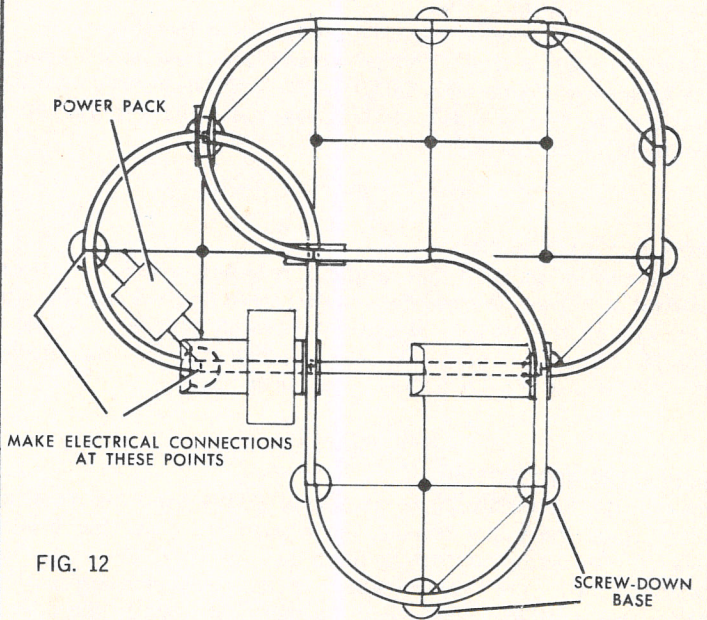


FIG. 12

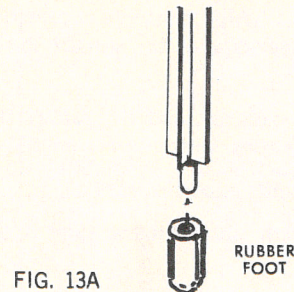


FIG. 13A

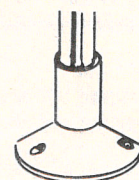


FIG. 13B

ELECTRICAL CONNECTIONS

Electrical connections between the track and the power pack can be made at any piece of track but in this layout they are most convenient at the curved track shown in Fig. 12. Here is the way to do it.

- Snap out and remove this piece of track from the layout.
- Note that the connecting wires have a spade lug at one end and a special slotted brass connector at the other. Fit one of these connectors to the end of the track section so that the slot in the connector snaps over the track clip. The little knob in the track end should fit through one of the holes in the connector. (Fig. 14)

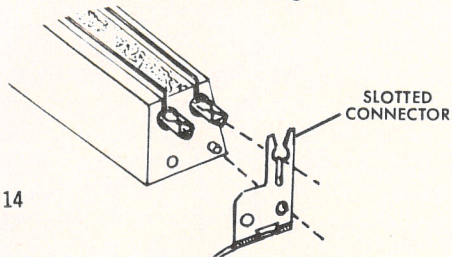


FIG. 14

- Turn the connector of the second wire in the opposite direction to the first. (Fig. 15) Fit the connector to the next piece of straight track so that the slot snaps on the **opposite** rail. **The two connectors must not fit on the same rail**, or the train will not operate. Join the tracks so that the connectors are clamped in the joints between the track sections. Then press them in place to the stanchion slots.

- Loosen the two screws in the back of the power pack. Slip the two spade lugs under the screw heads and tighten them in place with a screw driver. The order of the wires does not matter. (Fig. 16)

- Now slip the two power pack supports into holes in the braces (Fig. 17) and snap the two plastic power pack holders over the supports.

- Set the power pack on the holders. (Fig. 18) When you are ready to run the train, plug the power pack cord into a wall outlet and you're ready to go.

Note: The power pack can be set in any convenient place but placing it on the wire supports helps to keep the trestle steady when the train is running.

TRAIN OPERATION

DECORATING THE TRAIN

To decorate your rolling stock, peel an adhesive strip from the backing paper and press on the side of the car. The two longer strips in the set furnished with the passenger outfit are for the observation car.

SETTING UP

To set the locomotive on the track, press it down on a straight track section. It fits snugly and must be snapped in place. To remove the locomotive, move it to a straight track, squeeze the sides of the track slightly together, and lift locomotive off. The observation car (the one with the slanted back) is attached and removed in the same way as the locomotive. All other cars are simply set on the track.

COUPLING

The cars can be coupled to the train in any order, except for the observation car which must always be last. Fig. 19 shows method of coupling cars together.

OPERATION

After the train is on the track and the electrical connections are made, plug the power pack cord into a wall outlet and move the speed control lever slowly from left to right until you get the "feel" of controlling the train. Top scale speed of the Speedrail is 250 mph — about twice as fast as the fastest real train can go today. To make the train move backwards, use the Direction Switch.

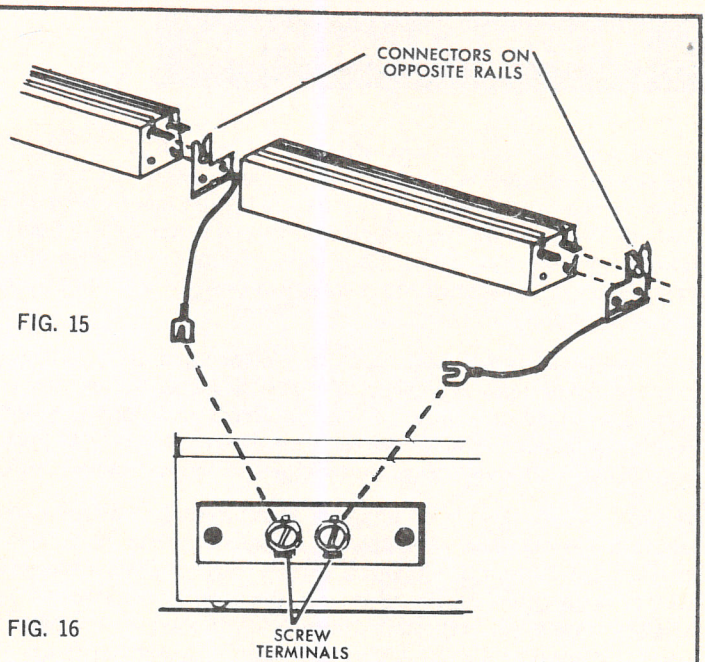


FIG. 15

FIG. 16

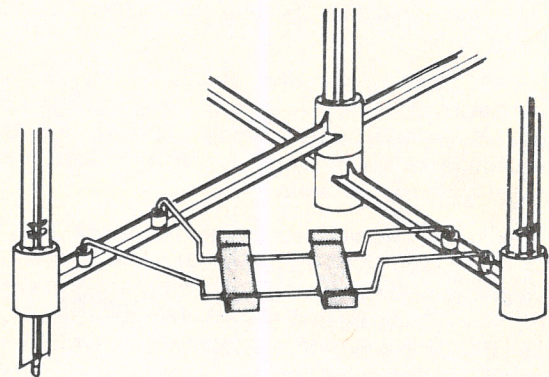


FIG. 17

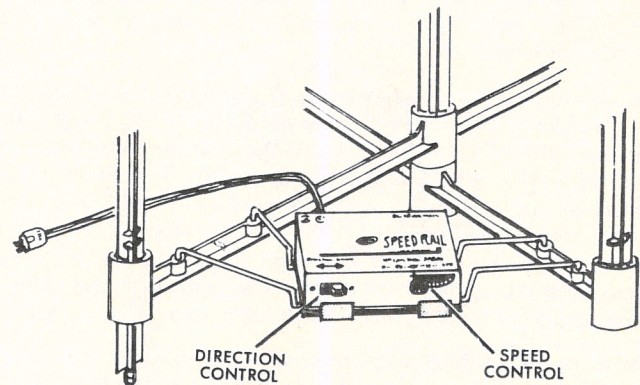


FIG. 18

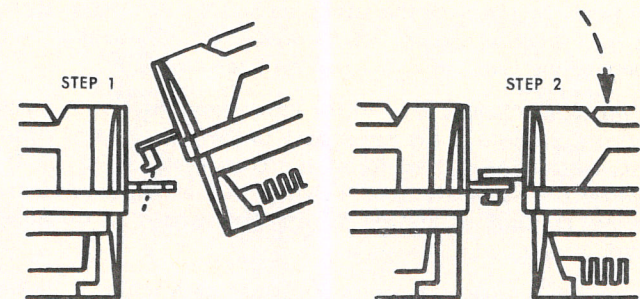


FIG. 19

TROUBLE SHOOTING

All the electrical connections are made. The train is on the track. The power pack cord is plugged into the wall outlet. The speed control is moved all the way on. The train does not move. What is the trouble? There can be five possible reasons: (1) power pack not getting current from the wall outlet, (2) a short circuit, (3) an open circuit, (4) a defective locomotive, (5) a defective power pack. Here is how to find the trouble.

(1) Listen to the power pack. Is there a humming sound? If there is, then the power pack is connected to the household power lines. If there is no sound, the power pack is not properly connected. Possible trouble: (a) broken or disconnected wire inside the cord, (b) bent or loose blade on the wall plug, (c) no power in the wall outlet itself.

(2) Short circuit. This is an improper or accidental connection which causes the power pack to supply an excessive amount of current. A short circuit causes a protective circuit breaker inside the power pack to open automatically to protect the power pack from damage. Possible causes: (a) both slotted connectors placed on the **same** instead of **opposite** rails, (b) a piece of metal or metal foil (such as a Christmas tree "icicle") lying across the track and connecting opposite rails, (c) the two spade lugs touching each other. (Figs. 20A, 20B and 20C)

Note: When the cause of the short circuit is removed, the circuit breaker will remain off. To set it back on, move the speed control to zero (or pull out the power pack cord) wait 15-20 seconds, then move the speed control back to full speed. If a short circuit still exists, the circuit breaker will snap off again.

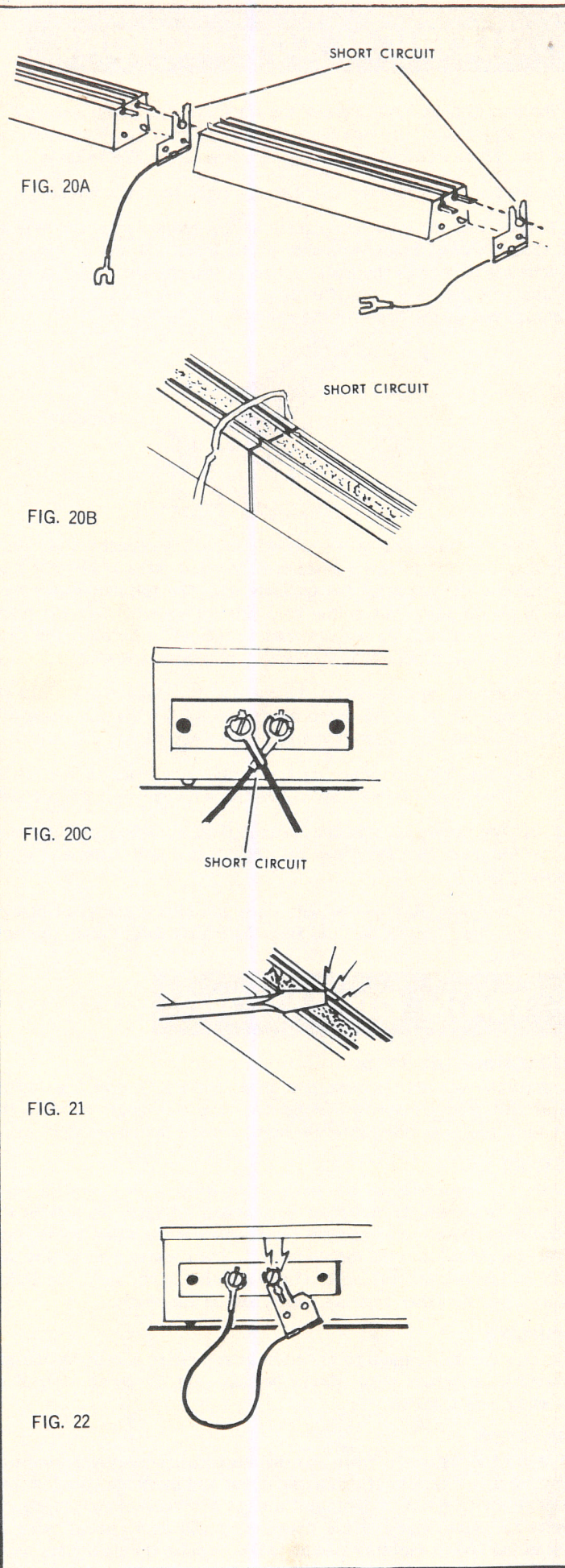
(3) Open circuit. This means simply that the electric path from the power pack to the train is not complete. Check as follows. Take the train off the track. Connect a metal screwdriver across the track rails momentarily. (Fig. 21) Do you see sparks? Then the electric circuit is all right but the trouble is with the locomotive. **Note:** By making a direct connection between the two rails you are really creating a short circuit. If this short circuit exists for more than a second or two, the circuit breaker will snap the current off — so you won't get any more sparks. In this case set the circuit breaker back on as described in the Note in section 2.

If there are no sparks at the track rails, place the screwdriver blade across the screw terminals of the power pack. If you do get sparks at that point then the trouble is somewhere between the power pack and the track rails. Possible causes: (a) one of the connecting wires is broken, (b) the wire is loose in the spade lug or the slotted connector, (c) some of the track clips are missing. **Note:** If only one track clip is missing, electric current will reach all parts of the rail anyway. Can you see how? If two track clips are missing from the same rail then the portion of track between the missing clips will be "dead."

To check the connecting wires, remove them from the track. Touch each slotted connector to the opposite terminal screw. (Fig. 22) (The power pack must be plugged in and the speed control turned on full.) If there is no spark then the connecting wire is defective. Make temporary repair by removing the spade lug and the connector, stripping about one inch of insulation from the wire ends and wrapping the bare wire around the terminal screw and the track connector.

(4) If the trouble seems to be in the locomotive, check it by touching two wires connected to the power pack to the main contact strips on the locomotive bottom, then to the two brass eyelets. (Fig. 23) If the locomotive driving wheel turns slowly or not at all, the locomotive motor may be worn out and will have to be replaced, as explained in the next section.

(5) If the trouble seems to be in the power pack return it to Remco Service Department for repair or replacement.



SERVICE INFORMATION

Your Speedrail set was designed and built with top-quality materials and craftsmanship to give you many hours of fun and enjoyment. Even so, the great speeds at which Speedrail travels (scale speed 250 mph maximum) means that certain parts eventually will wear out and need replacing. Some of the parts you may have to replace are the brass contact strips on the underside of the locomotive, the rubber drive wheel tire, the motor, and the drive gears inside the locomotive. Prices and ordering information for these and other parts are on the back page of this booklet. Replacement instructions are below.

REPLACING CONTACT STRIPS

When the brass contact strips on the locomotive become badly grooved or worn through, they should be replaced. To remove the strips, pry loose the front of each strip from its plastic locking lug with a screwdriver (see Fig. 24). Be careful not to lose the coil spring that is under the strip. Now unhook the back of the strips from the metal slots. To replace, hook the back end of the strip into the metal slot, put the coil spring in place, and press the front of the strip until the slot in the strip snaps over the locking lug.

REPLACING RUBBER TIRE

Take out the two metal screws in the bottom of the locomotive. You will need to use a small "Phillips" screwdriver. Take off the cover of the locomotive. Remove the square metal shaft which holds the single gear and the driving wheel. Replace the rubber tire (Fig. 25) and re-assemble all the parts.

REPLACING COUPLERS

If you have an accident that results in a broken coupler you can replace it as follows. Remove the x-slotted screw from the bottom of the car. Lift off the bottom. Replace the broken coupler as shown in Fig. 26. Fit the car bottom in place, making sure that the couplers fit into holes in the car bottom. Replace the screw.

REPLACING THE MOTOR

Remove the locomotive cover, as before. Gently bend the metal tab which holds the motor bearing just enough to release the bearing. (Fig. 27) The motor can then be lifted out. Insert the new motor into position. Make sure that the side with the soldered bump and the paint mark is on top. Then bend the metal tab back to the original position to hold the bearing in its slot.

CLEANING

You will get more miles from your Speedrail, and have to replace fewer parts, if you follow the cleaning tips below.

- Periodically remove the brass contact strips from the locomotive and scrape clean with the tip of a screwdriver on the surface shown in Fig. 24A
- Periodically clean all six rollers on each car, and the rubber tire and brass contact strips on the locomotive, with paper toweling.
- Periodically wipe all track surfaces with paper toweling.
- Cars may be cleaned with a damp cloth. **Do not** allow water to get inside locomotive or cars.
- If rails rust, polish them lightly with fine sandpaper (grade 3-0 or 4-0).

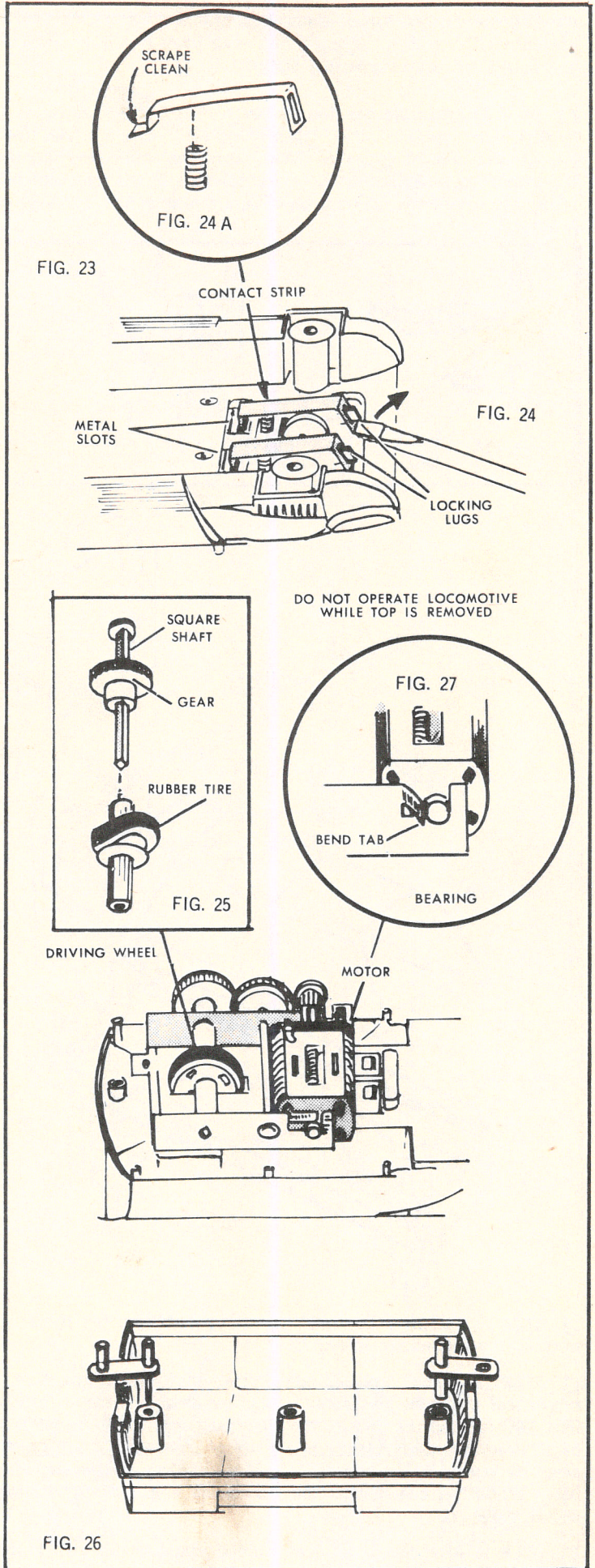


FIG. 26