

SPRING WHEEL, MARK 2—continued

steel slipper pads have been removed for replacement or adjustment will be necessary to assemble the spring box less the springs, plates and nuts. This will enable the fitter to operate the axle and guide in the case of the roller clearances.

Slipper and slipper pad must have an equal clearance of .002" on each side, any deformation after the springs have been fitted. To enable the fitter to get correct clearance aluminium shims of .002" and .003" thickness are used when the pads have been fitted ensure that the screws securing them to the wheel are well tightened with a suitable screwdriver.

When the pads have been fitted correctly the case should be parted and then proceed with the springs. If the above work has not been necessary as paragraph 3, proceed from this point. Place the axle and guide on the bench with the convex side of the axle to the left and the convex side uppermost. Lubricate and insert heavy and light spring in the bottom hole with the curvature of the spring to the guide. Place the other spring in the top hole in a like manner. Fit rubber buffers and spring plates to the springs, plate curve conforming to the wheel.

Fit the assembly to the jig, the two springs being in lower position. Screw down the springs have been compressed sufficiently to enable the spring box to be fitted. Grease and fit the casing, then unscrew the jig to remove assembly.

When the gap between the cases, fill with lubricant and then tap the cases with a mallet. Fit and tighten up the six nuts and bolts. NOTE—The top and bottom front are made from H.T. Steel; colour blue-black.

FINISHING THE SPRING WHEEL.

Fit the bearings with grease and assemble to the back plate and brake bearing chip shield should in each case face towards the hub centre.

Fit bolts to both sides of the hub shell.

Fit the brake drum to the hub and lock the nuts with new locking plates.

Fit the plunger guide box assembly to the hub and press well home into the ring.

Fit shims to the hub and ensure the correct number as removed have been (see illustration on page 8 if new parts have been fitted).

Fit the end plate and tighten up the ten nuts securely.

Fit the slipper pads and spindle on the back plate side and fit the slipper

25. Fit the dust excluder, concave facing forward, centre sleeve spring and sliding portion. The chamfered collar should be fitted with the chamfer towards the hub centre.

26. Turn the wheel over and fit the distance sleeve over the spindle then grease the slipper pads and fit the slipper roller.

27. The cast iron ring should be placed over the guide box case so that it abuts against the inner ring of the bearing.

28. Assemble the brake anchor plate assembly to the brake drum, it is advisable at this stage to release the spring off the brake lever to prevent the shoes binding in the drum.

29. Replace the dust excluder assembly in the same manner as the opposite side, and secure the cover with the two screws. Ensure the wheel spindle is in its topmost position and the brake anchor arm facing forward. Then place the split collars into the groove and fit the frame anchorage lever to the spindle. Re-fit the brake lever spring and fit the wheel to the frame.

CHECKING THE PLUNGER IN THE GUIDE BOX.

30. When the assembly is taken out of the hub it should not be split until the amount of play between the plunger and guide box is ascertained. This is done by placing either end of the spindle in the vice so that the plunger is held rigid, while the box is rocked to estimate the amount of "shake."

31. Dismantle the assembly and thoroughly degrease all parts. A minute amount of metal should now be removed from the joint surfaces of the plunger guide box, bearing in mind the amount of "shake" which was present when the unit was tested. The metal can be removed by "draw-filing" with a flat smooth file or by placing a piece of smooth emery on the surface plate and rubbing the joint surface of the box over it. Again wash the boxes and dry off. Apply marking blue to the four contact surfaces of the plunger and install it in the guide box without the springs. Replace the securing bolts and nuts. Now test the fit by gripping the spindle ends and with the guide box in contact with the work bench, depress the plunger to its full extent, then invert the box and repeat. This operation should be carried out three or four times.

32. Dismantle the guide box unit and ease off all high spots shown on the internal walls by the marking blue. Re-assemble the unit and repeat the operation until a bearing area of approximately 80% is obtained. When this stage is reached the plunger should be a good tight push fit in the guide box without any perceptible side play at any point.