

Resilion Brake Hints

ON sports machines the caliper brake working on an Endrick rim is one of the most popular types in use to-day, and where this type is concerned the products of the Resilion Company are outstanding. Three models are on the market—Cantilever for high-grade machines; Cantilette, which is a cheaper grade; and the interesting Anchor model. Some notes regarding the servicing of these brakes have been supplied to us by the company.

With the exception of the cable control on the Cantilever and Cantilette types, there is nothing in either the adjustment or overhauling of all parts of these brakes which is not simplicity itself.

Even the replacement of frayed or broken cables is a simple matter, but since extreme accuracy in cutting the inner wires to length and a special clenching operation on the junction nipple before soldering are required, the makers prefer that dealers make use of the replacement service whereby new cables can be obtained either from the factory at 200, Liverpool Road, London, N.1, or from any Resilion stockists.

Of the three types made, we propose, for the sake of simplicity, to deal with their adjustment and overhaul separately, commencing with the Cantilever type.

THE CANTILEVER MODEL

ORDERING

When ordering it is essential to give the following information in order that the brake may be exactly suited to the job which it must perform:—

Front or rear.

Width between stays or fork blades opposite the rim.

Section and dimensions of stays or fork blades.

Length of cable.

By giving these details the correct size brake blocks, bracket and clamping shield will be obtained.

One of our illustrations shows one side of the brake completely dismantled, whilst the adjusting nuts and the parts mentioned in the following paragraph are lettered in another.

FITTING

Remove the cable nipple from the cable bar D in the quadrants (C1 & C2)

by compressing the springs and pulling the nipple with a pair of pliers. Next turn the cable bar through 90 deg. and press it downwards out of the slots in the quadrants.

Unscrew the fixing screws and detach the clamping shield—the part to which the cable stop is attached. The brake is now sufficiently dismantled to permit of its being fixed in place.

Make sure that the assembly is fitted on the right side, i.e., that the blind end of the brake shoe faces forward. Place one fixing bracket together with the crank members and shoe in position inside the stays, replace the clamping shield, leaving the fixing screws slack. **Make** sure that the rear wheel is properly aligned and true and slide the fixing bracket up or down the chain stays until a position is obtained where the full surface of the block bears on the rim. The nuts B which hold the shoe should be

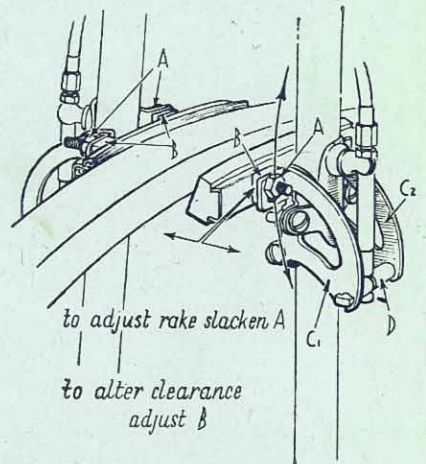
slackened so that the right rake is obtained.

Tighten up the fixing screws with the shoe pressed firmly against the rim and proceed to repeat these operations on the other side. Incidentally the makers recommend that the rear brake junction shoe should be placed above the top tube with the twin cables passing one each side of the seat pillar.

Next replace the cable bar (right way up, please!) and the cable nipples fit the handlebar lever and all is ready for the final adjustments.

ADJUSTING REAR BRAKES

Screw the main cable adjuster home until the back of one brake shoe bears against the fixing bracket. Whilst this is being done, both secondary adjusters should be screwed right



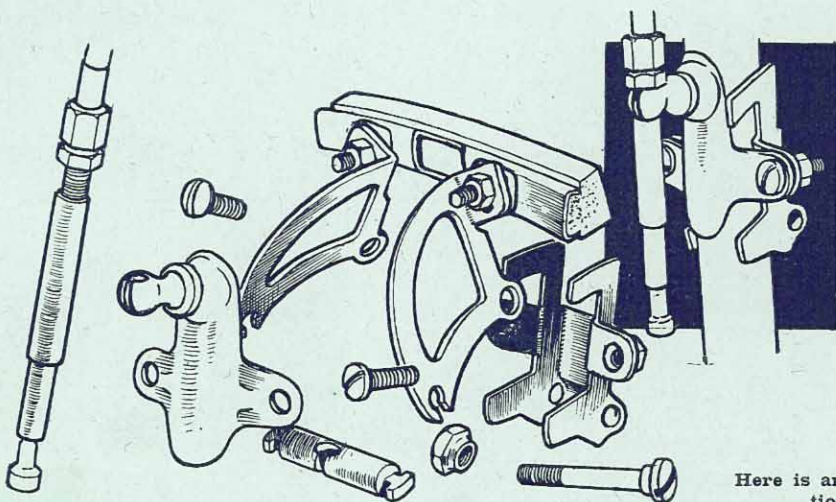
Resilion Cantilever adjustments

home. Unscrew the secondary adjuster on this side and screw the main adjuster further home until both shoes bear on the fixing brackets with no slack in the cables.

Now slacken the shoe fixing nuts A and adjust the square nuts B until the shoes are parallel to the rim and have $\frac{1}{16}$ in. clearance. Before tightening make sure that the shoes have the proper rake, which is carried out by sliding the shoe fixing bolts in the slots in the quadrant bars. The adjustments are now complete.

FRONT BRAKE ADJUSTMENT

On front brakes there is no adjustment at the shoes, and if, when the cables are fully slackened off, there is



Here is an "exploded" view showing the construction of the Resilion Cantilever model

more than $\frac{1}{8}$ in. clearance between block and rim fit thicker blocks. The proper clearance in the off position is $\frac{1}{16}$ in., and with the correct block thickness should be obtained with the adjustment fully slackened off when the blocks are new. Minor variations are taken up by the main and secondary cable adjusters. Rake adjustment is carried out in the same way as on the rear brakes.

WHEN WEAR OCCURS

REAR BRAKES: As the blocks wear all adjustments should be made at the shoes as described above. Cable stretch only is taken up by the adjusters.

FRONT BRAKES: As wear takes place adjustment is made by means of the adjustable cable stops.

FITTING NEW BLOCKS

Prise out the old blocks, wet the new blocks and slide them into the open end of the shoe. The size of the new blocks and the adjustments after fitting are carried out in the same way as when fitting a new brake.

CABLES

Cables should occasionally be removed and soaked for an hour or so in thin oil.

To do this slacken off all adjustments, unhook the nipples from the cable bars, unscrew the secondary adjusters, remove the control lever fulcrum pin and unhitch the main cable.

The exposed cable at the lever end should be frequently greased.

Should a dealer not be within reach of a Resilion stockist and be called upon to repair a broken cable, it is advisable to renew all three inner wires. This simplifies matters, since if a secondary cable breaks—a rare occurrence—the remaining wire can be used as a pattern and both new wires can be cut to the same length. The main cable should be cut to length after the cable has been assembled, and should allow a fractional clearance with all adjusters screwed right home.

THE CANTILETTE MODEL

ORDERING

To order a Cantilette type brake the same details as are necessary for a Cantilever model should be supplied.

FITTING

Fitting is simplicity itself, since the shoe lock nuts can be slackened and the shoes removed. The fixing screws are then removed, the fixing bracket placed in position *outside* the stays or forks with the clamping bars on the

inside. The fixing screws and shoes are replaced and the same adjustments for height and rake carried out as have been described for the Cantilever model.

ADJUSTMENTS

Final adjustments and adjustments for wear are identically as described for the Cantilever type, whilst the cable assembly is the same and demands the same treatment.

THE ANCHOR MODEL

This type, the latest Resilion product, is of entirely new design, so that a special description of its fitting and adjustment is required.

The general design is illustrated and its absolute simplicity is well depicted.

FITTING

To fit this brake the nuts and bolts A in the illustration are removed and the fixing clips sprung open slightly to allow their ends to pass over the fork blades. The brake is then positioned so that the full faces of the blocks bear against the rim, the fixing bolts are replaced, and the whole assembly tightened up.

ADJUSTMENTS

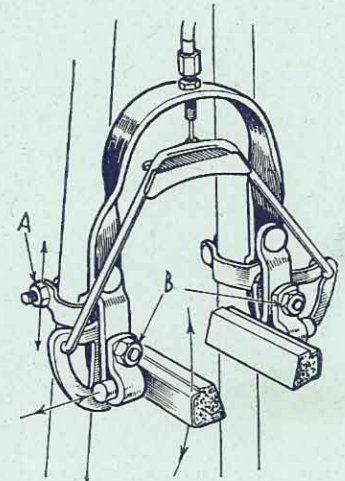
First slack off the cable until the shoes come back away from the rim as far as possible, then slacken nuts B and slide or twist the shoes until the correct rake and clearance ($\frac{1}{16}$ in. from block to rim) are obtained.

All future adjustments for block wear are made at B, the cable adjuster being only used to take up any slack in the cable.

CABLE DETAILS

The repair of the single cable—there is no junction box on this type—is a simple matter, since the nipples at either end can be unhooked without

dismantling anything. Removal of the adjuster then allows the cable to come away.



This illustration clearly shows the simple construction of the Resilion Anchor model. The adjustments provided are lettered and mentioned in the text

Readers' Repair Ideas

STRAIGHTENING TUBES

J. J. Davis, of Western Cycle Depot, Dundee, 1, uses a car jack for tube straightening. He writes as follows:—

"It often happens, when a tradesman's cycle comes in for repair, that the sides of the carrier are badly bent, presenting a difficulty in straightening. To overcome this, procure an

old car jack. Place it between the tubing of the carrier, and expand out the sides. You will find this is an effective repair.

"This method can be employed in the same way when the seat tube of a low-gravity cycle is bent forward, as is often the case. This time place the jack between the head of the frame and seat lugs, and expand as before."

STRIPPED PEDAL SPINDLES

"I am often asked to braze stripped pedal spindles to crank ends, and I find the following the most efficient method that I have tried for years.

"First of all I soften the end of the pedal spindle and drill a $\frac{5}{16}$ in. dia. or $\frac{3}{16}$ in. dia. hole about $\frac{1}{2}$ in. or $\frac{3}{4}$ in.

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