

MELBOURNE AND METROPOLITAN TRAMWAYS BOARD.

IMPROVEMENTS RELATING TO A DEVICE TO ELIMINATE
NOISE OF TRAMWAY SWITCH TONGUES AND THE LIKE.

This invention relates to a device to eliminate noise of switch tongues and the like when operated mechanically or by any other means. Its adoption will provide for the free and full movement of the switch tongues and permit of their transfer from either extreme position by a trailing tramway vehicle. Its retarding action will prevent sudden impact between switch tongue and rail, thus eliminating noise.

The invention is illustrated in the accompanying drawing of which -

Figure 1 is a plan view showing a switch tongue provided with one form of silencing device embodying one form of the invention.

Figures 2 and 3 are each an enlarged sectional view of the silencing device.

Similar reference characters refer to similar parts of each of the several views.

Figure 1 shows a tramway switch with tongue A and silencing device B attached to the spring-toggle C which keeps tongue A in set position. A leading wheel of a trailing vehicle passing through the switch along rail head D will operate the switch tongue A from position E to its extreme position at E₁, and bringing the silencing device B into action through the rod F attached to the tongue A and toggle link G which is attached to piston rod H of silencing device B.

In figures 2 & 3, piston H is attached to a piston I working in cylinder 2 which is filled with oil through an orifice M which is kept oil tight by means of screw plug N and fabric washer P. The piston rod H moves through an oil tight gland R/

While switch tongue A is being brought to position E₁ Fig. 1, the piston 1 Fig. 2 will be moved towards the end K of cylinder 2 causing oil to lift valve 4 and pass freely through large ports 3 at the same time a very small portion of oil will leak past the restricted orifice 5 in port 6. At the completion of this movement the valve 4 is brought back to its seat 8 Fig. 3 by the action of the light spring 7 and closing ports 3 to any return of oil towards end K of cylinder 2. While in this position of the piston 1 Fig. 3, the switch tongue A Fig. 1 is prevented from returning suddenly to position E and strike the rail D when released by trailing wheel until a time limit has elapsed that enables all the wheels of the trailing vehicle to pass through the switch. The time limit for the return of switch tongue A to its set position E Fig. 1, is regulated by adjusting screw 9 Figs. 2 and 3 which restricts the opening of orifice 5 for oil passing back towards end K of cylinder 2 through port 6 when piston 1 is moving towards end L of cylinder 2.

It is apparent, therefore, that with apparatus embodying the invention no noise would result from the contact of switch tongue A with rail D.

Having now fully described and ascertained our said invention and the manner in which it is to be performed, we declare that we claim -

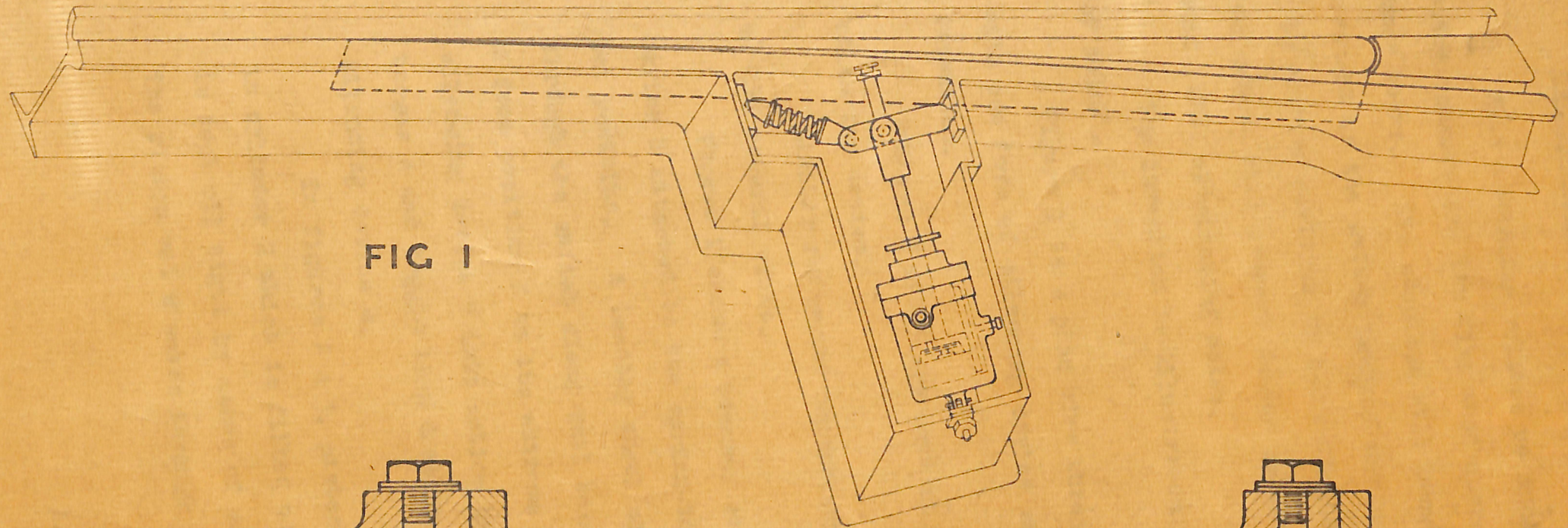


FIG 1

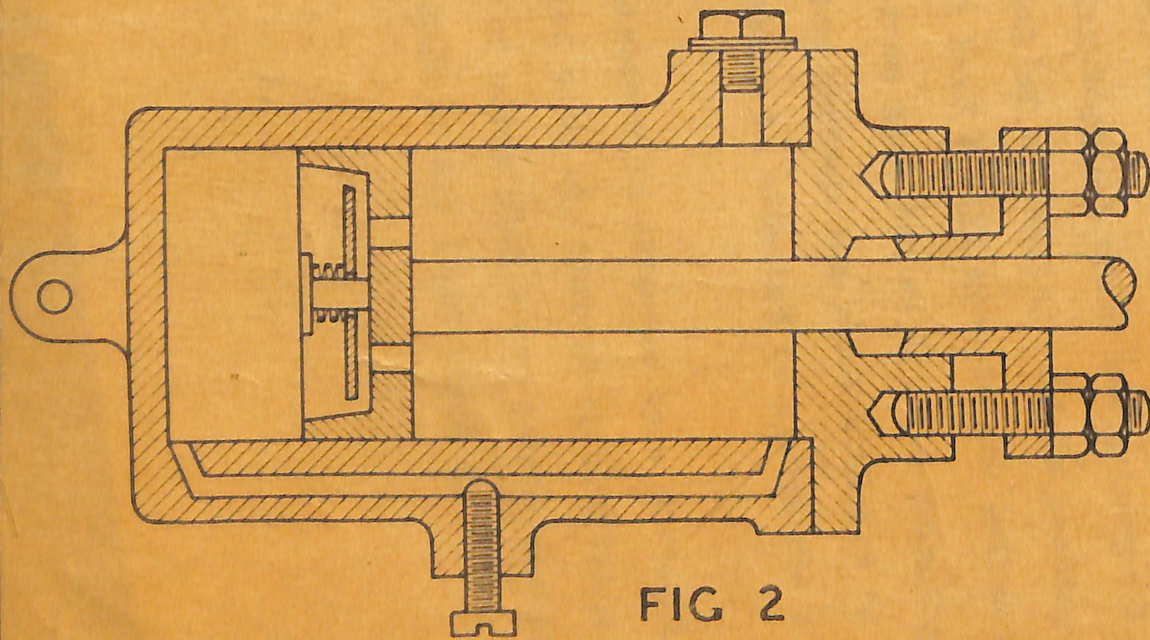


FIG 2

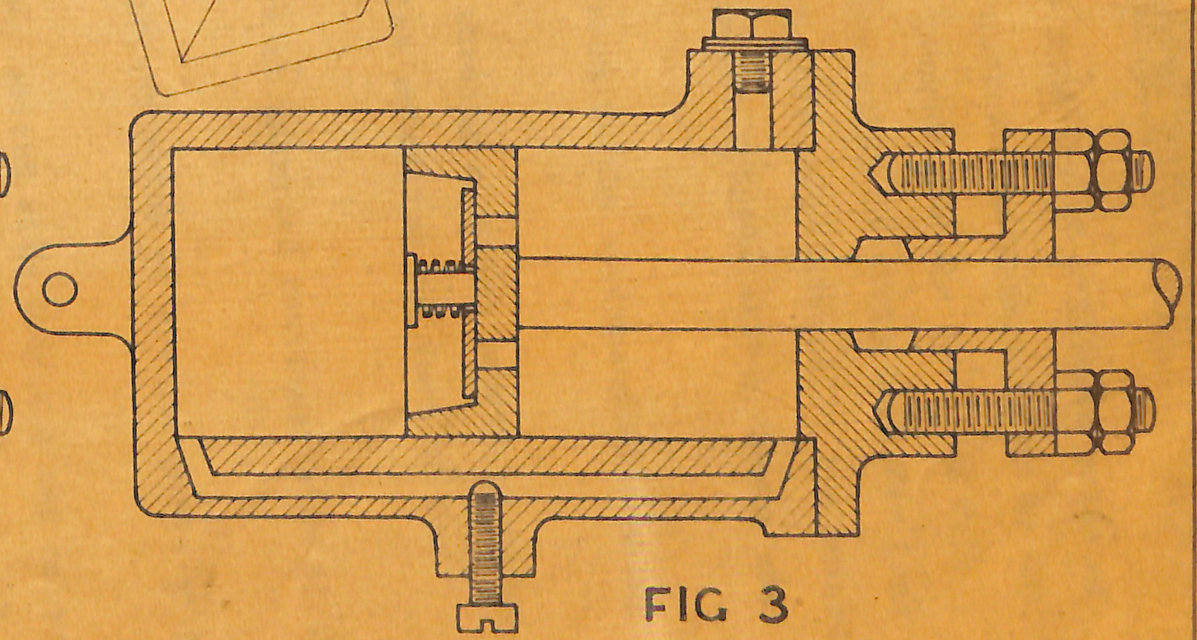


FIG 3