'LITTLE JOE' AND

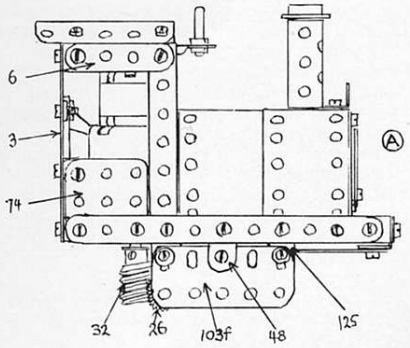
Designed by Dr. Keith Cameron

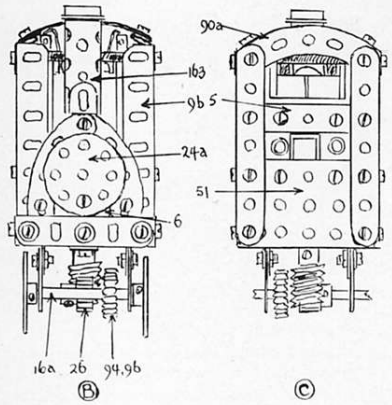
WITHOUT a doubt one of the most 'natural' Meccano Exhibition models I've seen to date, is this immediately eye-catching 'fun' orientated miniature railway system designed by advanced Meccano modeller Dr. Keith Cameron of Florida, USA. The locomotive, affectionately termed 'Little Joe' by its creator, is motivated by a 6-12 volt Motor With Gearbox, powered by four 'AA' size batteries concealed within its boiler.

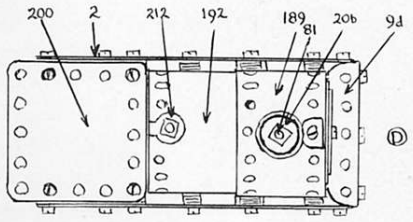
The locomotive can be run independently or on its purpose-built obstacle course railway, 'Tricky Track', views of which appear opposite.

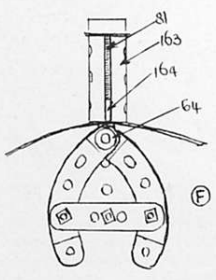
This obstacle course consists of a rolling bridge, a pair of hinged lift bridges and two reversing loops with switches, all incorporated into a track built largely of Flanged Sector Plates, in fact, 68 Flanged Sector Plates are used! Having seen this fine model in use, I can certainly vouch for it's crowd-pulling ability!

Although the construction of the 'Little Joe' locomotive has been described below, this has not been attempted in the case of the obstacle course railway due to its very large size and complex construction. In fact, many pages of the Meccano Magazine would have to be devoted to this one model alone, if every aspect of construction were to be adequately described. The photographs do, however, give a very good idea of the salient features and convey an accurate impression of the operation of this very novel display model. Look out for it at Meccano Exhibitions everywhere!









"Little Joe"

'LITTLE JOE'—the 'Go-Anywhere' Loco

Construction should be straightforward, following the lettered drawings which are:

(A) Side elevation (right)
(B) End elevation (front)
(C) End elevation (rear)
(D) Plan view
(E) Underneath plan view
(F) Boiler unit removed (rear view)

The underframe carrying the wheels consists of two 2½" Flat Girders and this is attached to the main structure of the locomotive by four Reversed Angle Brackets. The choice of wheels depends largely on the type of surface on which the locomotive will run; for general use, four 1" Pulleys with Tyres will grip almost anything, but for use with the 'Tricky Track', the front wheels must be a pair of Bush Wheels and the rear wheels a pair of 1¼" Gear Wheels.

The 4½" Perforated Strip, labelled 2a in drawing E, performs the important function of preventing slippage between the Worm Gear on the motor output shaft and the 2" Pinion on the rear axle, when under load. The rear hole of this 4½" Strip is passed over the output shaft of the Power Drive Motor, (M5), and is held by an Angle Bracket, bolted to it's forward hole and centre hole of the front 2½" Angle Girder. Adjustment can then be made to ensure good meshing of the Worm with the ½" Pinion.

The front and rear axles are connected by Sprocket Chain and this arrangement promotes improved traction. The reversing switch on the motor is extended by a Threaded Pin bolted to a Rod and Strip Connector. The 5½" x 2½" and 5½" x 1½" Flexible Plates comprising the boiler are connected by a 2" Threaded Rod, the locknut of which secures a Sleeve Adaptor.

A Sleeve Piece is slid over this, forming a chimney, and a 3/4" Flanged Wheel completes this., being held on the 2" Screwed Rod by a further Nut. 'H' in drawing E depicts a battery holder, for the four 'AA' batteries, bolted to the 1½" x ½" Double Angle Strip. The boiler is held in position by it's own springiness, on three pairs of 3/8ths' Bolts as shown in drawing D. Thus, the boiler can easily be removed at any time. The boiler front consists of two 2½" Stepped Curved Strips, a 5-hole 2" Strip and a Wheel Disc, the whole being held in place by a Threaded Boss secured to the inside top forward edge of the boiler.

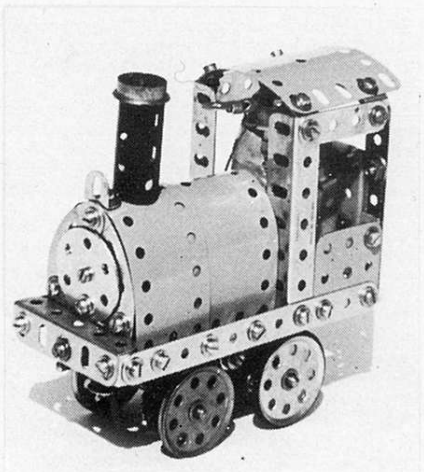
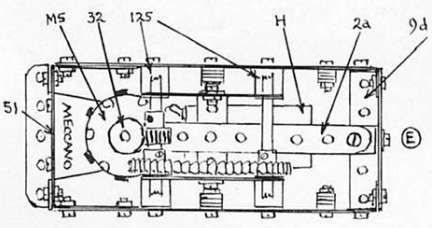


Fig. 5: The star of the show, 'Little Joe'! Its considerable power allows fine performance over a wide range of surfaces, the obstacle course railway is by no means neccessary to enjoy the fun given by this little model. Why not experiment with rolling stock, double combinations, railway tracks, the possibilities are endless!



PARTS LIST

2 of 2	1 of 74
1 of 2a	1 of 81
2 of 3	3 of 90a
1 of 5	18 cm 94
3 of 6	2 of 96
2 of 9b	2 of 103f
1 of 9d	6 of 111c
5 of 12	1 of 115
4 of 12c	4 of 125
2 of 16a	4 of 142c
1 of 20b	1 of 163
4 of 22	1 of 164
1 of 24a	1 of 189
1 of 26	1 of 192
1 of 32	1 of 200
49 of 37	1 of 212
6 of 37a	1 x 6-12 Volt Motor with Gearbox
32 of 38	Wire, batteries,
1 of 48	battery holder,
1 of 51	sockets.
1 of 64	

. . . 'TRICKY TRACK'

Photographs by Nicholas Wright

'TRICKY TRACK'

Fig. 1

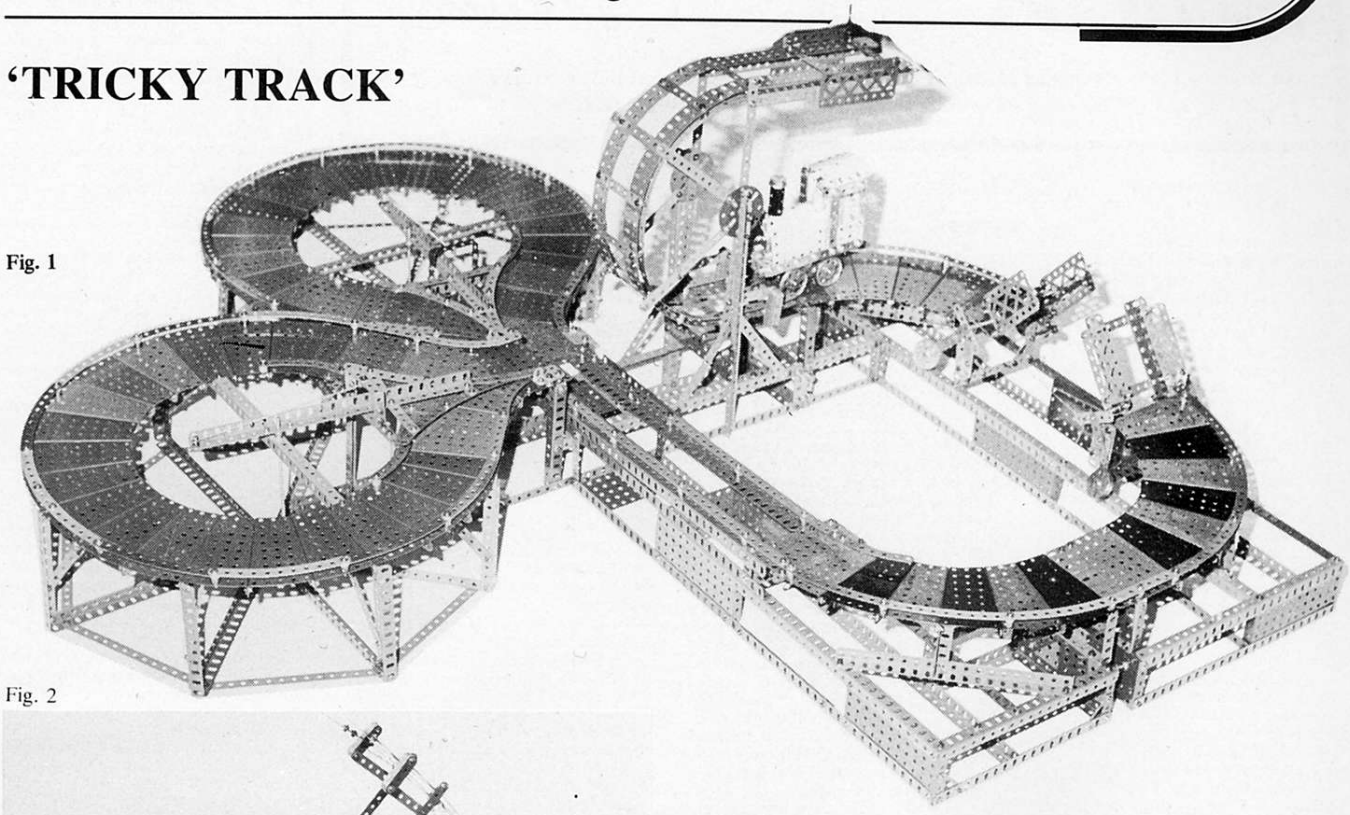


Fig. 2

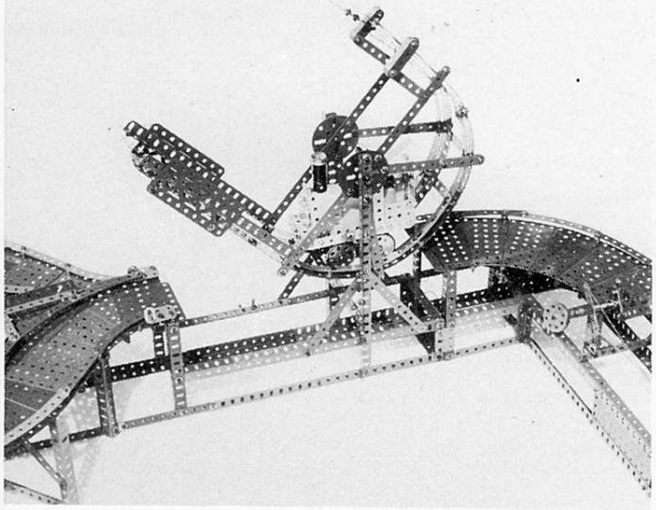
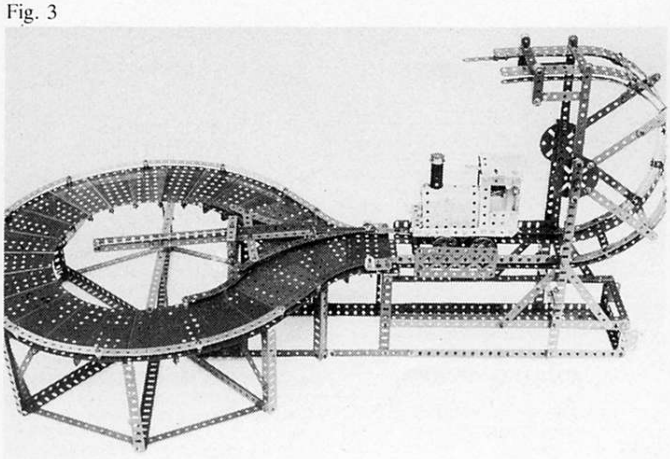


Fig. 3



Four views of Dr. Cameron's fine new display model.

Fig 1: This general view of the complete 'Tricky Track' shows the two reversing loops, rolling bridge and pair of hinged lift bridges. The 'Little Joe' locomotive can be seen to be aproaching the rolling bridge.

Fig 2: Over, over, and . .

Fig 3: ACROSS! Now 'Little Joe' can negotiate the reversing loop, enabling it to return over the rolling bridge.

Fig 4: Another obstacle for the go-anywhere Locomotive! This photograph gives a detailed look at the hinged lift bridges. The weight of the loco. causes one side to lower, and by the linkage shown, this automatically lowers the other side in exact synchronisation, allowing easy passage across.

Fig. 4