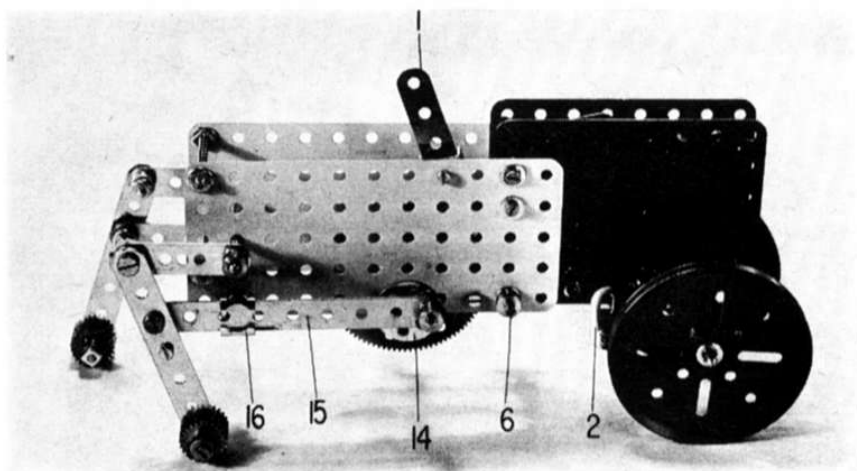


Whoever heard of a WALKING TRACTOR?

— asks 'Spanner'



MANY and various are the models which I have seen since my first days of association with the Meccano hobby—big and small, complex and simple, common and unusual—but few, if any, can compare for sheer appealing “oddness” with the Walking Tractor (whoever heard of a “Walking Tractor”?) featured here! Built round a No. 1 Clockwork Motor, it goes whirring and stamping along with a weird marching gait that has captured the hearts of all of us in the office—all, that is, except for our hard-working but delicate secretary who tells us it reminds her of a “big, creepy-crawly cockroach”!

Creepy-crawlies aside, though, full credit for the model illustrated goes to Mr. H. J. Halliday of South East London, who supplied us with all the constructional details. Mr. Halliday, however, disclaims credit for the original idea as the model is actually based on a construction which appeared in a pre-war No. 7 Instructions Manual. Considerable modifications have of course been made, not least of which is the substitution of the No. 1 Clockwork for a long obsolete-electric motor, plus a greatly improved drive and gearing system.

Construction of the modified model is relatively simple. To begin with, a 3 in. Strip 1 is lock-nutted to the outside of the No. 1 Clockwork Motor's reversing lever, then a $2\frac{1}{2}$ in. Flat Girder 2 is secured to each sideplate of the Motor in the position shown, but is spaced from the sideplate by a Collar on each of the two securing $\frac{1}{2}$ in. Bolts. Note that, on the winding side, these securing Bolts pass through the end elongated holes of the Girder, while, on the other side, they pass through the end and fourth elongated holes of the Girder so as not to foul the reversing lever. Three $2\frac{1}{2}$ in. Strips 3, one on top of the other, are bolted along the inside lower edge of each Flat Girder to provide extended bearing surfaces.

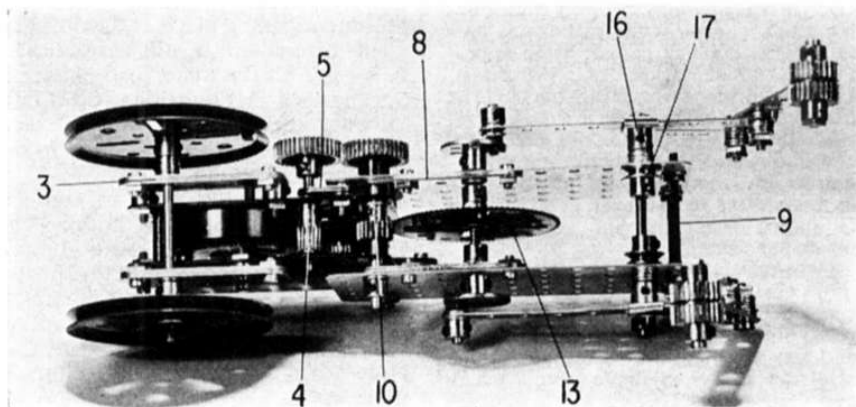
Next, and most important, the output shaft of the Motor is removed, along with the long-faced, 13-teeth final drive Pinion 4 it carries. This is achieved by simply loosening the Pinion's Grub Screw and sliding out the shaft which, in turn, enables the Pinion to be withdrawn. Once out, three Fishplates 5, one on top of the other, are bolted through their elongated holes to the outside of the non-winding sideplate of the Motor in such a position

that the circular holes of the Fishplates coincide with the output shaft hole of the Motor. A 2 in. Rod 6, replacing the standard output shaft, is then mounted in the sideplates, this protruding at least three-quarters of an inch through the Fishplates and of course being fitted with Motor Pinion 4.

The Motor sideplates are now extended nine holes by two $5\frac{1}{2} \times 2\frac{1}{2}$ in. Flat Plates 7, fixed in the positions shown, but spaced from the sideplates, as with the earlier-mentioned Flat Girders, by a Collar on the shank of each securing Bolt. These Bolts should be positioned one hole in from the ends of the Flat Plates—in the first and fourth holes down on the winding side of the Motor and the first and second holes down on its other side. Again as with the Flat Girders, three $2\frac{1}{2}$ in. Strips 8 are secured along the inside lower edge of each Flat Plate to provide extended bearings. The outer ends of the Plates at each side are then rigidly connected together by Nuts and Washers on two 2 in. Screwed Rods 9 which pass through the end row first and fourth holes down of the Plates. Care must be taken to ensure that the Plates are arranged perfectly parallel to each other and to the Motor sideplates. A Double Bracket is bolted to the inside upper edge of one of the Flat Plates in the position shown, this acting as a guide for Strip 1, bolted to the Motor reversing lever.

Drive System

With Flat Plates 7 carefully lined up, a $2\frac{1}{2}$ in. Rod, carrying a $\frac{1}{2}$ in.



Heading shows clearly this utterly captivating Walking Tractor model designed by Mr. H. J. Halliday of South East London from an original idea featured in a pre-war Manual. Left, an underside view showing the inner gear arrangement.