

Fig. 3. A semi-plan view of the lorry revealing details of the cab plating.

and a Formed Slotted Strip 12. The upper edge of each side is strengthened by a $3\frac{1}{2}$ " Strip, and a $4\frac{1}{2}$ " \times $\frac{1}{2}$ " Double Angle Strip 13 is bolted between the front ends of these Strips on each side.

The back of the cab is made by bolting a $4\frac{1}{2}$ " \times $2\frac{1}{2}$ " Flexible Plate between the ends of the Plates 11, and curved $2\frac{1}{2}$ " \times $2\frac{1}{2}$ " Flexible Plates 14 above each of these Plates. The rear window is edged by $2\frac{1}{2}$ " and $1\frac{1}{2}$ " Strips as shown in Fig. 3. Each side window consists of a 2" and two $2\frac{1}{2}$ " Strips arranged as shown. The roof consists of two $4\frac{1}{2}$ " \times $2\frac{1}{2}$ " Flexible Plates, curved and overlapped three holes, with a curved $2\frac{1}{2}$ " \times $1\frac{1}{2}$ " Flexible Plate on each side. It is bolted to the back of the cab and is connected to the front corners of the window frames by 1 " \times $\frac{1}{2}$ " Angle Brackets. The centre division of the windscreen is a $1\frac{1}{2}$ " Strip bolted to Obtuse Angle Brackets.

The steering column can now be fitted. It is supported in a Flat Trunnion bolted to Double Angle Strip 13 and in the 1 " \times 1 " Angle Bracket mentioned previously. A $\frac{3}{4}$ " Pinion on the lower end of the steering column engages the Contrate 7, and a Collar is used to hold the column in position.

The top of the bonnet is a curved $4\frac{1}{2}$ " \times $2\frac{1}{2}$ " Flexible Plate with a $1\frac{1}{4}$ " radius Curved Plate 15 and a $2\frac{1}{2}$ " \times $1\frac{1}{2}$ " Triangular Flexible Plate 16 on each side. The Flexible Plate is attached to Double Angle Strip 13 by an Angle Bracket, and is

bolted to a plate 17 fixed to the front of the chassis. Plate 17 consists of two $5\frac{1}{2}$ " \times $1\frac{1}{2}$ " Flexible Plates curved and overlapped as shown and strengthened by a $5\frac{1}{2}$ " Strip. The side of each front mudguard is made from a $2\frac{1}{2}$ " \times 2" Triangular Flexible Plate, a $2\frac{1}{2}$ " Strip and three $2\frac{1}{2}$ " Stepped Curved Strips. These are joined together by Fishplates as shown in Fig. 1 and are connected by Angle Brackets to the plate 17. The top of each mudguard consists of a $3\frac{1}{2}$ " \times $1\frac{1}{2}$ " Triangular Flexible Plate and a Formed Slotted Strip. The $3\frac{1}{2}$ " \times $1\frac{1}{2}$ " Triangular Flexible Plate is attached to the side of the mudguard by Angle Brackets, and the Formed Slotted Strip and one of the Curved Strips are bolted to a Double Bracket fixed to the lower front corner of the cab side. The step is a $2\frac{1}{2}$ " \times $\frac{1}{2}$ " Double Angle Strip, and it also is bolted to the Double Bracket.

A $2\frac{1}{2}$ " \times $1\frac{1}{2}$ " Flanged Plate 18 is bolted to the chassis and a Double Bent Strip fixed to it forms the pivot for the trailer coupling. The $5\frac{1}{2}$ " \times $1\frac{1}{2}$ " Flexible Plates forming the rear mudguards are supported by 1 " \times 1 " Angle Brackets.

The tank is made by bolting six curved $5\frac{1}{2}$ " \times $2\frac{1}{2}$ " Flexible Plates to each side of a $12\frac{1}{2}$ " \times $2\frac{1}{2}$ " Strip Plate. Two T-section girders 19, each made from two $12\frac{1}{2}$ " and two $5\frac{1}{2}$ " Angle Girders, are bolted to the Flexible Plates on each side (Fig. 4) and these girders are connected at the centre and at the rear by $2\frac{1}{2}$ " \times $\frac{1}{2}$ " Double Angle Strips. The joints between the Plates are strengthened on the inside by $12\frac{1}{2}$ " and $5\frac{1}{2}$ " Strips. A catwalk 20 is formed by a $12\frac{1}{2}$ " Strip supported by Obtuse Angle Brackets. Two of the filler caps are $1\frac{1}{8}$ " Flanged Wheels fixed on Pivot Bolts passed through the centre holes of $2\frac{1}{2}$ " Strips bolted to the top of the tank. The third cap is fixed on a $\frac{3}{4}$ " Bolt passed through a $2\frac{1}{2}$ " Stepped Curved Strip.

The front end of the tank consists of a $2\frac{1}{2}$ " \times $2\frac{1}{2}$ " Flexible Plate and two Face Plates, and is attached to Angle Brackets. The two lower bolts used for this purpose are passed through the Angle Brackets first and are fixed in them by nuts. The Plates forming the end can then be swung over the bolts and held by further nuts. The rear end of the tank is similar except that Semi-Circular Plates are used instead of Face Plates.

A platform 21 on each side of the tank is made by bolting two $12\frac{1}{2}$ " and two $5\frac{1}{2}$ " Strips to a $1\frac{1}{2}$ " Strip and a Flat Trunnion fixed to the girder 19, and a ladder, formed by Cord laced between two $2\frac{1}{2}$ " \times $\frac{1}{2}$ " Double Angle Strips, is arranged between the platform and the catwalk on one side.

The trailer wheels are fixed on a 5" Rod mounted in Double Brackets bolted to two leaf springs. Each of these springs is made and is mounted in the same way as the rear springs of the lorry described previously.

The trailer coupling is a $1\frac{1}{2}$ " Rod 22 held in a 3" Pulley bolted to $\frac{1}{2}$ " Reversed (Continued on page 518)

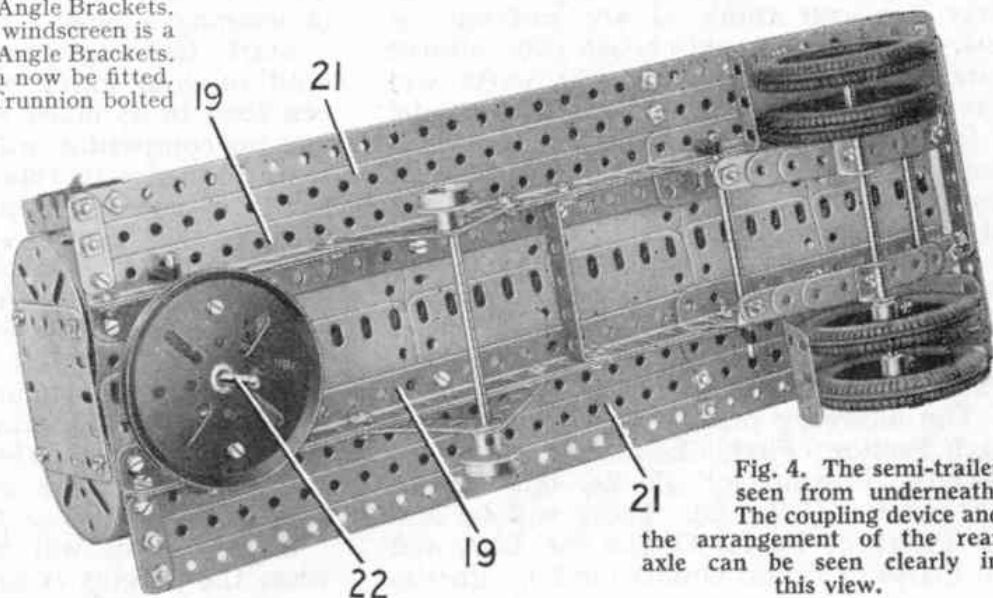


Fig. 4. The semi-trailer seen from underneath. The coupling device and the arrangement of the rear axle can be seen clearly in this view.

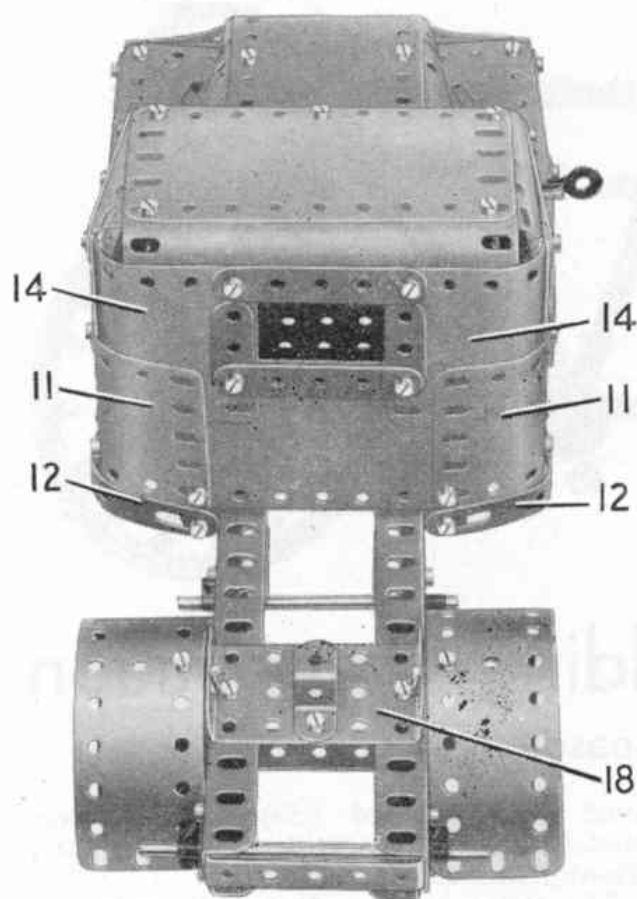


Fig. 3. A semi-plan view of the lorry revealing details of the cab plating.

and a Formed Slotted Strip 12. The upper edge of each side is strengthened by a $3\frac{1}{2}$ " Strip, and a $4\frac{1}{2}$ " \times $\frac{1}{2}$ " Double Angle Strip 13 is bolted between the front ends of these Strips on each side.

The back of the cab is made by bolting a $4\frac{1}{2}$ " \times $2\frac{1}{2}$ " Flexible Plate between the ends of the Plates 11, and curved $2\frac{1}{2}$ " \times $2\frac{1}{2}$ " Flexible Plates 14 above each of these Plates. The rear window is edged by $2\frac{1}{2}$ " and $1\frac{1}{2}$ " Strips as shown in Fig. 3. Each side window consists of a 2" and two $2\frac{1}{2}$ " Strips arranged as shown. The roof consists of two $4\frac{1}{2}$ " \times $2\frac{1}{2}$ " Flexible Plates, curved and overlapped three holes, with a curved $2\frac{1}{2}$ " \times $1\frac{1}{2}$ " Flexible Plate on each side. It is bolted to the back of the cab and is connected to the front corners of the window frames by 1 " \times $\frac{1}{2}$ " Angle Brackets. The centre division of the windscreen is a $1\frac{1}{2}$ " Strip bolted to Obtuse Angle Brackets.

The steering column can now be fitted. It is supported in a Flat Trunnion bolted to Double Angle Strip 13 and in the 1 " \times 1 " Angle Bracket mentioned previously. A $\frac{1}{2}$ " Pinion on the lower end of the steering column engages the Contrate 7, and a Collar is used to hold the column in position.

The top of the bonnet is a curved $4\frac{1}{2}$ " \times $2\frac{1}{2}$ " Flexible Plate with a $1\frac{1}{4}$ " radius Curved Plate 15 and a $2\frac{1}{2}$ " \times $1\frac{1}{2}$ " Triangular Flexible Plate 16 on each side. The Flexible Plate is attached to Double Angle Strip 13 by an Angle Bracket, and is

bolted to a plate 17 fixed to the front of the chassis. Plate 17 consists of two $5\frac{1}{2}$ " \times $1\frac{1}{2}$ " Flexible Plates curved and overlapped as shown and strengthened by a $5\frac{1}{2}$ " Strip. The side of each front mudguard is made from a $2\frac{1}{2}$ " \times 2" Triangular Flexible Plate, a $2\frac{1}{2}$ " Strip and three $2\frac{1}{2}$ " Stepped Curved Strips. These are joined together by Fishplates as shown in Fig. 1 and are connected by Angle Brackets to the plate 17. The top of each mudguard consists of a $3\frac{1}{2}$ " \times $1\frac{1}{2}$ " Triangular Flexible Plate and a Formed Slotted Strip. The $3\frac{1}{2}$ " \times $1\frac{1}{2}$ " Triangular Flexible Plate is attached to the side of the mudguard by Angle Brackets, and the Formed Slotted Strip and one of the Curved Strips are bolted to a Double Bracket fixed to the lower front corner of the cab side. The step is a $2\frac{1}{2}$ " \times $\frac{1}{2}$ " Double Angle Strip, and it also is bolted to the Double Bracket.

A $2\frac{1}{2}$ " \times $1\frac{1}{2}$ " Flanged Plate 18 is bolted to the chassis and a Double Bent Strip fixed to it forms the pivot for the trailer coupling. The $5\frac{1}{2}$ " \times $1\frac{1}{2}$ " Flexible Plates forming the rear mudguards are supported by 1 " \times 1" Angle Brackets.

The tank is made by bolting six curved $5\frac{1}{2}$ " \times $2\frac{1}{2}$ " Flexible Plates to each side of a $12\frac{1}{2}$ " \times $2\frac{1}{2}$ " Strip Plate. Two T-section girders 19, each made from two $12\frac{1}{2}$ " and two $5\frac{1}{2}$ " Angle Girders, are bolted to the Flexible Plates on each side (Fig. 4) and these girders are connected at the centre and at the rear by $2\frac{1}{2}$ " \times $\frac{1}{2}$ " Double Angle Strips. The joints between the Plates are strengthened on the inside by $12\frac{1}{2}$ " and $5\frac{1}{2}$ " Strips. A catwalk 20 is formed by a $12\frac{1}{2}$ " Strip supported by Obtuse Angle Brackets. Two of the filler caps are $1\frac{1}{8}$ " Flanged Wheels fixed on Pivot Bolts passed through the centre holes of $2\frac{1}{2}$ " Strips bolted to the top of the tank. The third cap is fixed on a $\frac{3}{4}$ " Bolt passed through a $2\frac{1}{2}$ " Stepped Curved Strip.

The front end of the tank consists of a $2\frac{1}{2}$ " \times $2\frac{1}{2}$ " Flexible Plate and two Face Plates, and is attached to Angle Brackets. The two lower bolts used for this purpose are passed through the Angle Brackets first and are fixed in them by nuts. The Plates forming the end can then be swung over the bolts and held by further nuts. The rear end of the tank is similar except that Semi-Circular Plates are used instead of Face Plates.

A platform 21 on each side of the tank is made by bolting two $12\frac{1}{2}$ " and two $5\frac{1}{2}$ " Strips to a $1\frac{1}{2}$ " Strip and a Flat Trunnion fixed to the girder 19, and a ladder, formed by Cord laced between two $2\frac{1}{2}$ " \times $\frac{1}{2}$ " Double Angle Strips, is arranged between the platform and the catwalk on one side.

The trailer wheels are fixed on a 5" Rod mounted in Double Brackets bolted to two leaf springs. Each of these springs is made and is mounted in the same way as the rear springs of the lorry described previously.

The trailer coupling is a $1\frac{1}{2}$ " Rod 22 held in a 3" Pulley bolted to $\frac{1}{2}$ " Reversed (Continued on page 518)

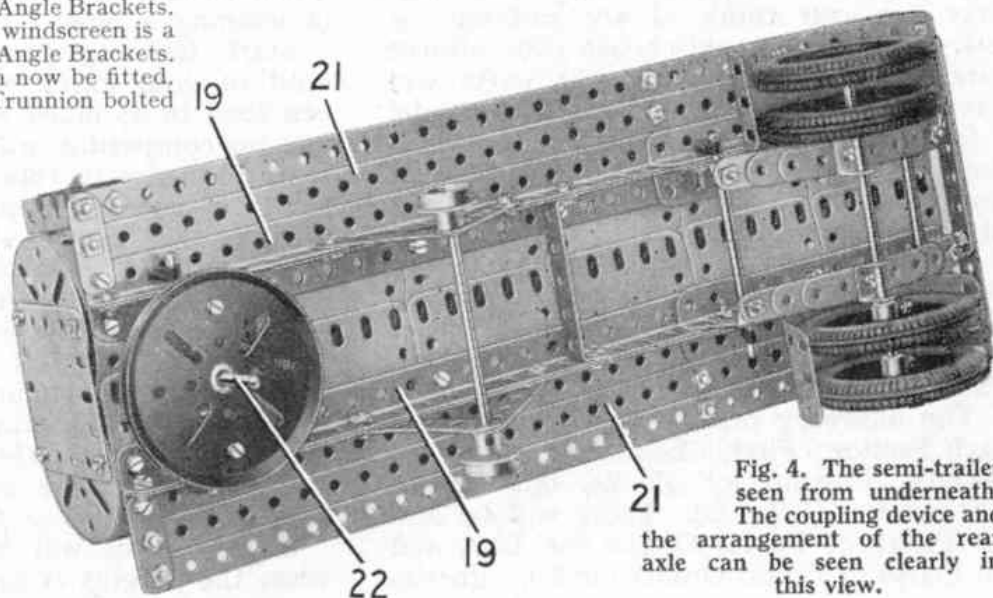


Fig. 4. The semi-trailer seen from underneath. The coupling device and the arrangement of the rear axle can be seen clearly in this view.

Stamp Collectors' Corner—*(Continued from page 515)*

into consideration.

There was a "Child Welfare" set in 1923, but it sold badly, unfortunately, for no more sets of this character were issued, and the set which did appear now costs over a pound to buy!

Next we got a short set of K.G. V heads, and now we come to the K.G. VI set, still in use. I haven't room to go into details over this issue, but it is full of interest. There are a number of shades and perforation varieties, and one of the shades, the 1½d. light red-brown, is always causing discussion.

I actually discovered this variety. I received a sheet from the Kingston post office in 1944, and as the shade differed greatly from the rest, I showed a copy to the late Stanley Phillips, who decided to list it in Gibbons. There is no mistaking the right shade. Unfortunately it is generally the wrong one that collectors get hold of.

Perhaps the poorest set that Jamaica has issued was that which appeared in 1945 to commemorate the New Constitution. The 2/- value looks like the front page of a horror comic.

And there I am afraid I must leave Jamaican stamps. It is a grand country to collect, and you might do worse than take it up, if you are looking for something new to collect.

New Meccano Models—*(Continued from page 503)*

Angle Brackets fixed to a 2½" × ½" Double Angle Strip. The latter pivots on a Rod held in the girders 19 by Spring Clips.

Parts required to build the Articulated Tank Lorry: 9 of No. 1; 10 of No. 2; 2 of No. 2a; 6 of No. 3; 6 of No. 4; 18 of No. 5; 2 of No. 6; 6 of No. 6a; 6 of No. 8; 4 of No. 9; 14 of No. 10; 4 of No. 11; 32 of No. 12; 3 of No. 12a; 2 of No. 12b; 5 of No. 12c; 2 of No. 15; 2 of No. 15a; 2 of No. 15b; 5 of No. 16; 1 of No. 17; 3 of No. 18a; 3 of No. 20; 2 of No. 20b; 1 of No. 19b; 4 of No. 20a; 1 of No. 26; 1 of No. 28; 14 of No. 35; 236 of No. 37a; 218 of No. 37b; 12 of No. 38; 2 of No. 38d; 1 of No. 40; 2 of No. 45; 2 of No. 46; 7 of No. 48a; 1 of No. 48b; 2 of No. 48c; 1 of No. 48d; 1 of No. 51; 7 of No. 59; 2 of No. 62; 1 of No. 63; 2 of No. 77; 2 of No. 90; 7 of No. 90a; 2 of No. 109; 3 of No. 111; 1 of No. 111a; 6 of No. 111c; 2 of No. 115; 4 of No. 125; 4 of No. 126; 4 of No. 126a; 4 of No. 142a; 2 of No. 147b; 1 of No. 185; 4 of No. 187; 4 of No. 188; 6 of No. 189; 7 of No. 190; 5 of No. 191; 12 of No. 192; 1 of No. 197; 2 of No. 199; 2 of No. 200; 1 of No. 212; 2 of No. 214; 4 of No. 215; 4 of No. 221; 2 of No. 222; 2 of No. 224.

ROYAL ENGINEERS DISPLAY AT LONGMOOR CAMP

The Transportation Centre, Royal Engineers, at Longmoor Camp, in Hampshire, will be open to the Public on Saturday, 3rd September, from 1.30 p.m. to 7.30 p.m. There will be displays and demonstrations showing the full range of Military Transportation, also an exhibition of Engineer Plant. These will include prefabricated plate-laying, a mobile railway workshop, the railway signalling school, port operating, diving,



Peter Holmes, of Thorpe Bay, Essex, won first prize at a Fancy Dress Competition last year with this striking display. He wore a red jacket with green Meccano parts stitched on to form a pattern, and green trousers with red Meccano parts attached down the side.

the Movement Control model room, and other items. Visitors will be able to take a trip on the Longmoor Military Railway, and there will be rides on the footplates of main line locomotives. The Chichester and District Model Engineering Society will demonstrate a radio controlled tank. Drill displays will be given during the afternoon, and programmes of music will be provided by the Royal Engineers' Band. The Royal Engineers' Association will be holding a reunion dance in the evening.

Proceeds from the sale of programmes, and from certain events for which a small charge will be made, will go to the Royal Engineers' Benevolent Fund.

Cheap day return tickets will be available from stations within 60 miles radius of Longmoor, and frequent services on the Longmoor Military Railway (no charge) will connect at Liss and Bordon. There are also good bus services to Longmoor from the Aldershot and Petersfield areas.

**1955
"PERCIVAL MARSHALL"
HANDBOOK CATALOGUE**

The name Percival Marshall is well known to all who follow modelmaking and will find plenty of titles to interest them in the 1955 complete catalogue of all the books published by Percival Marshall and Co. Ltd. These include practical handbooks, as well as more descriptive works of different kinds. The catalogue is well planned to make it easy to find what is wanted. Its publishers are Percival Marshall and Co. Ltd., 19-20 Noel Street London W.1, from whom copies can be obtained, price 6d. each including postage.

ACKNOWLEDGMENT

The interesting photograph of the *Mayflower* commemoration stone at Plymouth, reproduced on the Editorial page, is by Reece Winstone, Bristol.

THIS MONTH'S SPECIAL ARTICLES

	Page
Guardian of the Clyde	462
by G. H. Pursell	
A New Locomotive Boiler	464
by The Editor	
San Marino	466
by E. Emrys Jones	
The Canadair Story	468
by John W. R. Taylor	
Kruger National Park	471
by W. H. Owens	
The Rimutaka Incline	476
by J. R. Cook	
You're a Walking Column of Water	479
by Leslie E. Wells	
Salvage at Sea	482
by M. D. Hancock	
The Eighth Moth	486
by John W. R. Taylor	
A Mystery of Ancient China	498
by F. W. Cousins, A.M.I.E.E.	