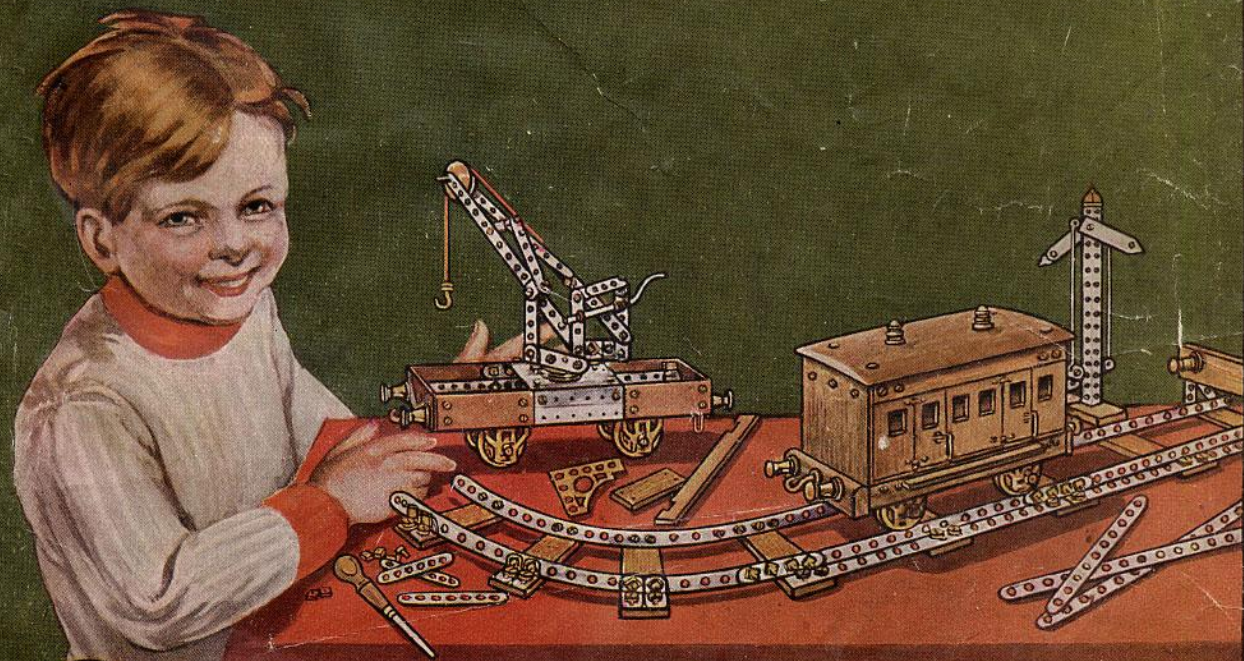


PRIMUS ENGINEERING



"Look-it's Wood and Metal!"

W. BUTCHER & SONS, LTD. CAMERA HOUSE, LONDON, E.C.

Primus Engineering

IS A TOY. A PRIMUS Outfit will amuse and interest children from the age of six.

IS ENTERTAINING. Young people will work at it for hours and not be tired, so also will grown-ups.

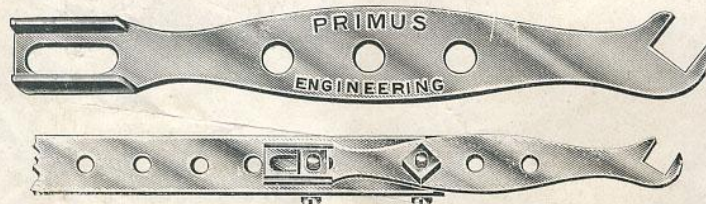
IS A REAL HOBBY. Once interest a boy in PRIMUS, it fascinates and holds him and becomes his first spare-time thought.

IS INSTRUCTIVE. An Outfit teaches a boy, from his earliest years, to make things.

IS EDUCATIVE. Simple and scientific engineering models can be made; encourage inventiveness—the stepping-stone to constructional engineering.

IS LIMITLESS. One model made brings thoughts for more—there is no end to its possibilities.

THE PRIMUS SPANNER.



NO. 103.

This new spanner, which is now included in all outfits, will be found a most useful addition. One end has a plain nut grip, the other is turned up to form a channel, in which a nut can be placed and securely held while the screw is turned home; this will be found of great service in reaching positions difficult of access. In case of need it can be lengthened by bolting on one of the strips by means of the centre holes.

PRIMUS ENGINEERING

BRITISH MADE

THE BRITISH TOY FOR THE BRITISH BOY.

PRELIMINARY NOTE.

IN making up the models in this book many ideas will suggest themselves, even useful little things that you have around you may be brought into co-operation. In some cases cardboard may be usefully employed to add a finish to models, such as the covers for vans, carts, etc. ; it must also be remembered that the metal plates and strips can be bent to various shapes, and can even be cut to make new parts. After some of the models shown have been mastered the inventive mind will feel an inclination to vary them, and this will suggest original models.

GENERAL INSTRUCTIONS.

ALWAYS COLLECT TOGETHER ALL THE PARTS REQUIRED FOR MAKING UP THE MODEL DECIDED UPON BEFORE BEGINNING.

BRACKETS.

It is important to understand why one side has a round hole and the other side a slot. This is to allow for the thickness of the wood or metal parts that are joined on, as in some cases more than one piece is joined together and the slot permits of the necessary play.



No. 66.

They are also used in many models to adjust the length of the screws ; for example, when it is desired to fix a bracket exactly at right angles one of the screws must be shortened by means of washers, so that it will not jam on the other (Fig. A). They are likewise used to adjust the bracket to the width of some of the other fittings (Fig. B).

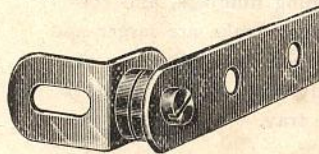


Fig. A.

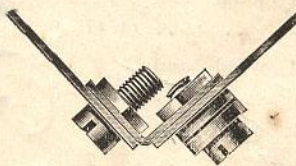


Fig. B.

WASHERS.

These play a very important part in mechanics. They are put on the axles between the wheels and trunnions, or between the collars and any facing part, to avoid friction.



No. 84.

WOOD BASES.

Some of the models are shown screwed down to wooden base boards. These are not included in the outfits, as they are most likely readily available and the size varies to suit the situation.

PRIMUS ENGINEERING

BRITISH MADE



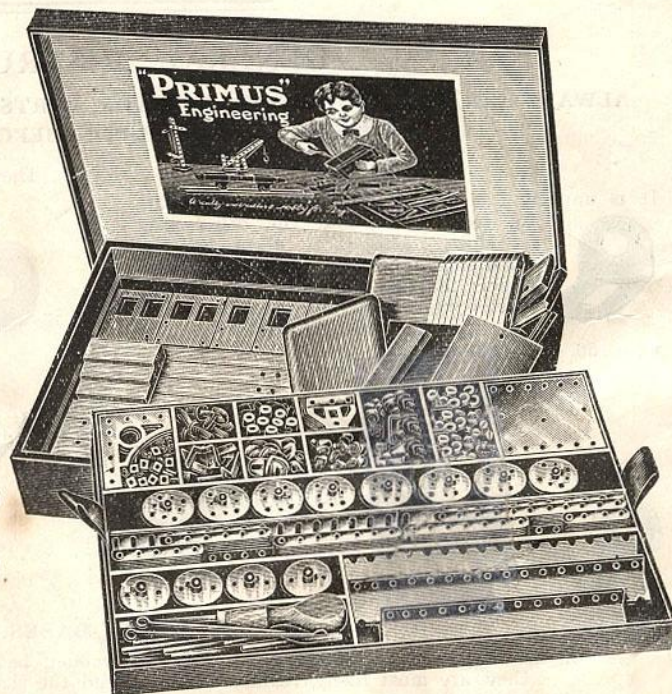
PRICES OF OUTFITS

Primus outfits are complete and ready for use. They contain wood and metal parts necessary for building an unlimited number of most instructive models. As a guide for the youthful model builder, a complete instruction book is included with each outfit, which, although very complete, does not by any means exhaust the possibilities of Primus.

- | | | | |
|-------|-------------------------------------|---------|------|
| No. 1 | Containing 140 wood and metal parts | .. .. . | 10/6 |
| No. 2 | Containing 267 wood and metal parts | .. .. . | 21/0 |

These outfits contain a wider selection of parts than the preceding numbers, and consequently the models they make are larger and more imposing, and their possibilities greater. The boxes are handy and strong, with the metal parts in a loose tray.

- | | | | |
|-------|---------------------------------------|---------|---------|
| No. 3 | Containing 473 wood and metal parts | .. .. . | £1 17 6 |
| No. 4 | Containing 649 wood and metal parts | .. .. . | 2 17 6 |
| No. 5 | Containing 1,131 wood and metal parts | .. .. . | 4 7 6 |



PRIMUS ENGINEERING

BRITISH MADE

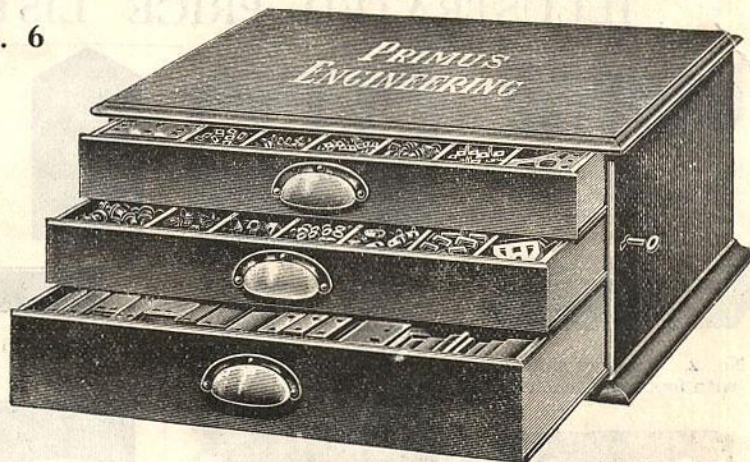
THE PRIMUS CABINET OUTFIT No. 6

The most practical method
of storing and handling
Primus Parts.

An outfit de Luxe, suitable for presentation, etc., containing the same number of parts as the No. 5 outfit, with the addition of a useful set of gear wheels, pinions, etc.

The whole is contained in a handsome and very substantial cabinet, being made of polished oak, with three drawers, partitioned off to provide compartments for the various parts, with lock and key to secure the drawers when not in use.

No. 6—Containing 1,189 $\frac{1}{2}$ s. d.
wood and metal parts
in strong oak 3-
drawer cabinet .. 8 8 0
Cabinet supplied separ-
ately 4 4 0



LIST OF EXTRA PARTS.

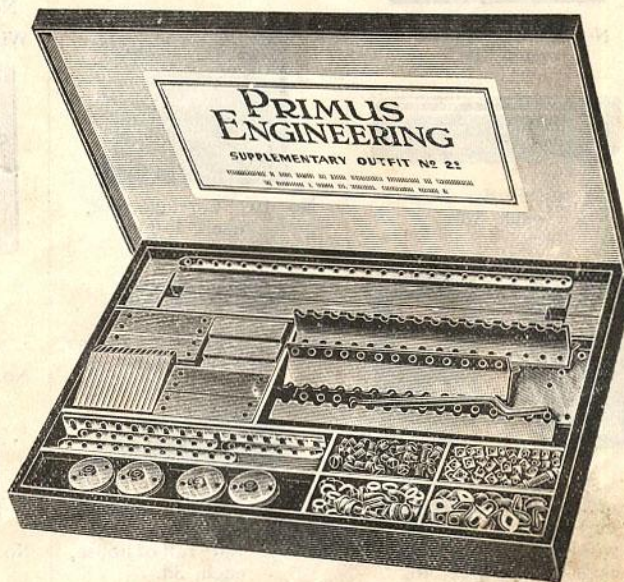
12 Wire Stays, 1 $\frac{1}{2}$ in.	No. 154	2 Gear Wheels	.. No. 160
12 " " 2 $\frac{1}{2}$ "	" 155	2 Pinion Wheels	.. " 161
6 " " 3 $\frac{1}{4}$ "	" 156	2 Bevel Gears	.. " 162
4 Pulley Wheels	" 158	6 Tapped Rods	.. " 167
6 " " "	" 159	4 " Collars	.. " 168

SUPPLEMENTARY OUTFITS

These outfits are supplementary to the standard sets, and should only be purchased as such.

The contents are not selected with the view to building complete models, but to supplement the parts of one of the standard sets, so that it becomes equal in its number of parts to that of the next higher price.

	Price
No. 1S—Converts the No. 1 Outfit into the No. 2	12/6
No. 2S—Converts the No. 2 Outfit into the No. 3	20/0
No. 3S—Converts the No. 3 Outfit into the No. 4	25/0
No. 4S—Converts the No. 4 Outfit into the No. 5	35/0



PRIMUS ENGINEERING

BRITISH MADE

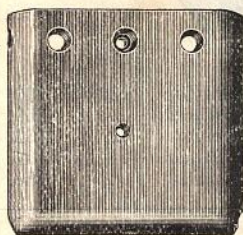
ILLUSTRATED PRICE LIST OF PARTS.



No. 1. Grooved side rail
for carriage and truck,
each, 4d.



No. 2. Grooved side rail
with footboard, each 6d.



No. 3. Carriage ends,
each, 6d.



No. 4. Buffer Blocks,
each, 3d.



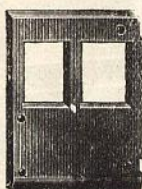
No. 5.
Left-hand
carriage
window,
each, 4d.



No. 6.
Right-hand
carriage
window,
each, 4d.



No. 7.
Carriage
doors,
each, 4d.



No. 8.
Centre
windows,
each, 9d.



No. 9. Floor for carriage,
each, 5d.



No. 10. Carriage roof,
each, 1/0



No. 11. Posts for railings
per doz., 1/6



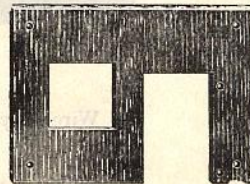
No. 12. End rail of house,
each, 3d.
No. 13. Side rail of house,
each, 3d.



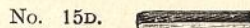
No. 14.
Sides of
house,
each, 8d.



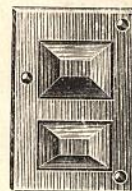
No. 15A. Window sills,
per doz., 1/0



No. 15B. Front and Back
of house, each, 1/6.



No. 15D.
Window sash, per doz., 9d.



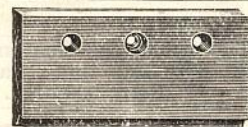
No. 16.
Door
of house,
each, 6d.



No. 16A. Door lintels,
per doz., 1/0



No. 17. Truck sides,
each, 4d.



No. 18. Truck Ends,
each, 6d.



No. 19. House baseboard,
each, 3/0



No. 21. Steps, each, 6d.



No. 22. Station Slope,
each, 8d.



No. 23. Platform centre,
each, 8d.



No. 24. Platform sides,
each, 10d.



No. 25. Wood slips,
3 by 1 in., per doz., 2/0

PRIMUS ENGINEERING

BRITISH MADE



Nos. 50 and 51. Screws and nuts, per doz., 6d.



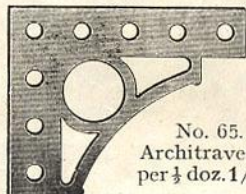
Angle Bars.

No.	Inches.	Per 1/2 doz.
52	6	1/3
53	6 1/2	1/6
54	8	1/9
55	12	2/3



Metal Strips.

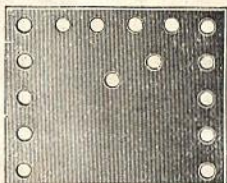
No.	Inches.	Per 1/2 doz.
56	2	4d.
57	2 1/2	4d.
58	3	4d.
59	3 1/2	5d.
60	4	7d.
61	5 1/2	9d.
62	6 1/2	10d.
63	8	1/0
64	12 1/2	1/3



No. 65. Architraves, per 1/2 doz. 1/0



No. 66. Brackets, per doz., 6d.



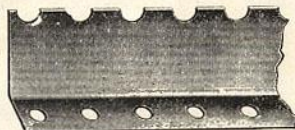
Metal Plates.

No.	Size.	Per 1/2 doz.
67	8 x 3 in.	3/0
68	3 x 3 in.	1/6



Ridge Tiles.

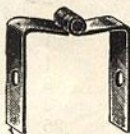
No.	Inches.	Per 1/2 doz.
69	6 1/2	3/0
70	8	4/0



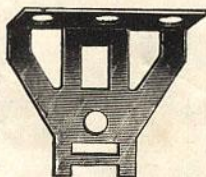
No. 71. Eaves, 8 in., per 1/2 doz., 4/0



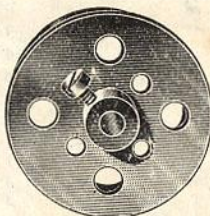
No. 72. Straight hinges, per doz., 9d.



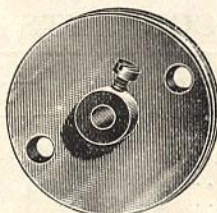
No. 73. Bent hinges, per 1/2 doz., 1/0



No. 74. Trunnions, each, 3d.



No. 75. Flanged wheels, each, 9d.



No. 76. Pulley wheels, grooved, each, 9d.

No.	Per dozen.
77 Axles, 3 1/2 in.	1/0
78 " 2 3/4 in.	1/0
79 " 1 1/2 in.	1/0
165 " 6 1/2 in.	2/0
166 " 8 in.	3/0
169 " 3/4 in.	1/0



No. 82. Collars and screws, each, 3d.



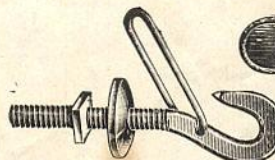
No. 83. Handle Axles, each, 3d.



No. 84. Washers, per doz., 2d.



No. 85. Buffers, each, 8d.



No. 86. Coupling Hook, each, 8d.



No. 87. Carriage lamps, each, 6d.



No. 88. Carriage door handles, each, 6d.
No. 89. Turnbuttons, per 1/2 doz., 4d.



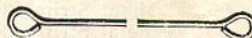
No. 90. Carriage Rails, per 1/2 doz., 4d.
No. 91. Carriage door screws, per doz., 1/6



No. 92. Knobscrew and nuts, per 1/2 doz., 2/0
No. 93. Turnbuttons, per 1/2 doz., 3d.

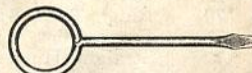


No. 95. Catches, per 1/2 doz., 4d.
No. 97. Wood Screws, per doz., 3d.



No. 96. Signal Post rods, per 1/2 doz., 8d.

No. 100. Wood handle screwdriver, each, 6d.



No. 101. All metal screwdriver, each, 3d.



CONTENTS OF OUTFITS.

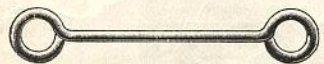
PART NO.	DESCRIPTION OF PART	OUTFIT NO.									
		1	1s	2	2s	3	3s	4	4s	5	
1	Side Rails	—	4	4	—	4	—	4	2	6	
2	Side Rails with Foot-board ..	—	—	—	—	—	2	2	—	2	
3	Carriage Ends	—	—	—	—	—	2	2	—	2	
4	Buffer Blocks	—	2	2	—	2	—	2	2	4	
5	Carriage Window	—	—	—	—	—	2	2	—	2	
6	Carriage Window	—	—	—	—	—	2	2	—	2	
7	Carriage Doors	—	—	—	—	—	4	4	—	4	
8	Central Window	—	—	—	—	—	2	2	—	2	
9	Carriage Floor	—	1	1	—	1	—	1	1	2	
10	Carriage Roof	—	—	—	—	—	1	1	—	1	
11	Posts for Railings	—	2	2	15	17	—	17	—	17	
12	End Rail	—	—	—	—	—	—	—	2	2	
13	Side Rail	—	—	—	—	—	—	—	2	2	
14	House Sides	—	—	—	—	—	—	—	2	2	
15A	Window Sills	—	—	—	—	—	—	—	4	4	
15D	Window Sash	—	—	—	—	—	—	—	2	2	
15B	House Fronts	—	—	—	—	—	—	—	2	2	
16	Doors of House	—	—	—	—	—	—	—	2	2	
16A	Lintels for House	—	—	—	—	—	—	—	2	2	
17	Sides of Goods Truck	—	2	2	—	2	—	2	—	2	
18	Ends of Goods Truck	—	2	2	—	2	—	2	—	2	
19	Baseboard	—	—	—	—	—	—	—	1	1	
21	Steps	—	—	—	1	1	—	1	—	1	
22	Platform Approach	—	—	—	1	1	—	1	—	1	
23	Platform Plank Centre	—	—	—	2	2	—	2	—	2	
24	Platform Plank Sides	—	—	—	2	2	—	2	—	2	
25	Wood Slips	8	8	16	9	25	—	25	—	25	
26	Glass for Windows	—	—	—	—	—	—	—	4	4	
50 & 51	Screws and Nuts	36	30	66	54	120	24	144	168	312	
52	Angle Bars, 6 in.	—	—	—	—	—	—	—	4	4	
53	Angle Bars, 6½ in.	—	2	2	—	2	—	2	6	8	
54	Angle Bars, 8 in.	2	—	2	2	4	—	4	4	8	
55	Angle Bars, 12 in.	—	—	—	—	—	2	2	—	2	
56	Metal Strips, 2 in.	4	4	8	—	8	2	10	6	16	
57	Metal Strips, 2½ in.	6	—	6	2	8	—	8	8	16	
58	Metal Strips, 3 in.	—	—	—	4	4	4	8	—	8	
59	Metal Strips, 3½ in.	2	6	8	—	8	6	14	—	14	
60	Metal Strips, 4 in.	2	—	2	1	3	—	3	—	3	
61	Metal Strips, 5½ in.	—	—	—	4	4	—	4	—	4	
62	Metal Strips, 6½ in.	—	2	2	2	4	—	4	—	4	
63	Metal Strips, 8 in.	2	—	2	4	6	—	6	6	12	
64	Metal Strips, 12½ in.	—	—	—	3	3	—	3	—	3	
65	Architraves	—	4	4	—	4	—	4	4	8	
66	Brackets	12	4	16	22	38	2	40	38	78	
67	Metal Plates, 8 × 3	—	—	—	4	4	—	4	6	10	
68	Metal Plates, 3 × 3	3	—	3	—	3	11	14	—	14	
69	Ridge Tiles, 6½ in.	—	—	—	1	1	—	1	—	1	
70	Ridge Tiles, 8 in.	—	—	—	1	1	—	1	1	2	
71	Eaves Tiles, 8 in.	—	—	—	4	4	—	4	6	10	
72	Straight Hinges	—	4	4	—	4	—	4	2	6	
73	Bent Hinges	—	—	—	—	—	8	8	—	8	
74	Trunnions for Wheels	4	—	4	—	4	4	8	—	8	
75	Flanged Wheels	4	—	4	—	4	4	8	—	8	
76	Grooved Wheels	—	—	—	4	4	—	4	—	4	
77	Axle Rods, 3½ in.	2	—	2	—	2	2	4	—	4	

PRIMUS ENGINEERING

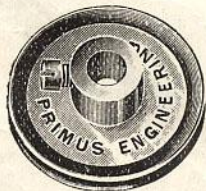
BRITISH MADE

PART NO.	DESCRIPTION OF PART	OUTFIT NO.									
		1	1s	2	2s	3	3s	4	4s	5	
78	Axle Rods, 2 $\frac{3}{4}$ in.	—	2	2	—	2	4	6	—	6	
79	Axle Rods, 1 $\frac{1}{2}$ in.	—	—	—	1	1	—	1	—	1	
82	Collars, and Set Screws	4	—	4	4	8	5	13	—	13	
83	Handle Axles	—	—	—	1	1	—	1	—	1	
84	Washers	12	—	12	—	12	24	36	12	48	
85	Buffers	—	4	4	—	4	—	4	4	8	
86	Coupling Hooks	—	2	2	1	3	—	3	1	4	
87	Lamps	—	—	—	2	2	2	4	2	6	
88	Carriage Door Handles	—	—	—	—	—	4	4	—	4	
89	Turn-buttons	—	—	—	—	—	4	4	—	4	
90	Side Rails	—	—	—	—	—	4	4	—	4	
91	Door Screws	—	—	—	—	—	16	16	—	16	
92	Knob Screws	—	—	—	1	1	3	4	—	4	
93	Turn-buttons	—	—	—	—	—	2	2	—	2	
95	Catches	—	4	4	—	4	—	4	—	4	
96	Connecting Rods	—	2	2	—	2	—	2	2	4	
97	Wood Screws	—	6	6	—	6	—	6	6	12	
100	Screw-driver	—	—	1	—	1	—	1	—	1	
101	Screw-driver	1	—	—	—	—	—	—	—	—	

EXTRA PARTS NOT INCLUDED IN OUTFITS.



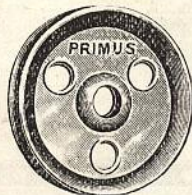
No.	Wire Stays	Length	Per doz.
154	"	1 $\frac{1}{2}$ inches,	3d.
155	"	2 $\frac{1}{2}$ "	3d.
156	"	3 $\frac{1}{4}$ "	4d.



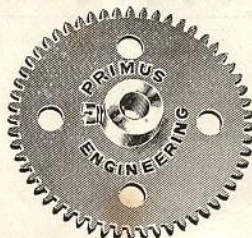
No. 158. Pulley Wheels with set screws, each 6d.



No. 168. Double Tapped Collars, each, 4d.



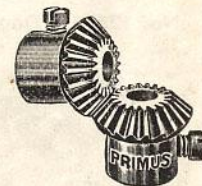
No. 159
Pulley
Wheels
plain.
each, 3d.



No. 160. Cog Gear Wheels,
1 $\frac{1}{2}$ in., 56 teeth, each 1/0



No. 167 Double Tapped Rods,
3 $\frac{1}{2}$ in., each 3d.
No. 167a do. 2 $\frac{1}{2}$ " " 3d.



No. 161 Pinion Wheels, No. 162 Bevel Gears,
 $\frac{1}{2}$ in., each 9d. per pair 2/0

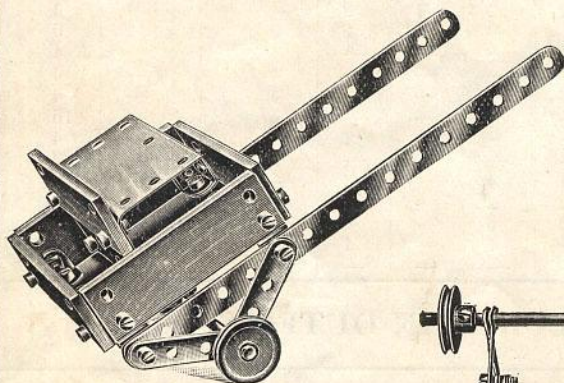


No. 164 Crank Arm each 8d.

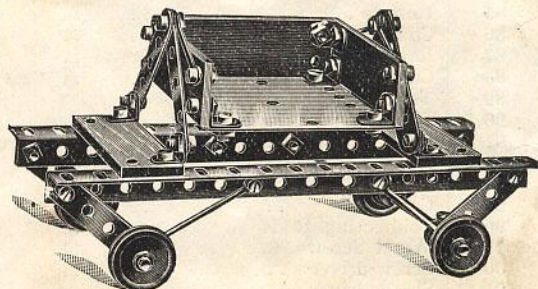


No. 163 Eccentric each 1/0

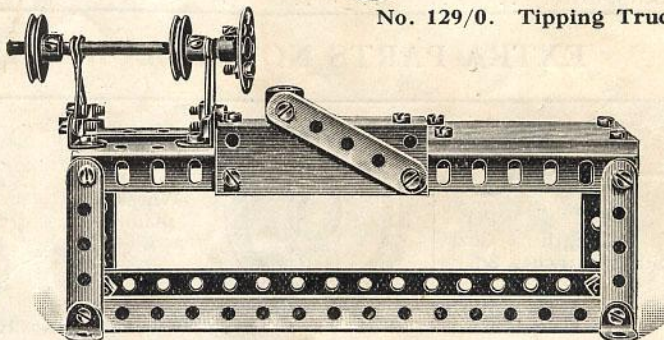
THESE MODELS ARE MADE WITH PRIMUS ENGINEERING Nº 0 OUTFIT



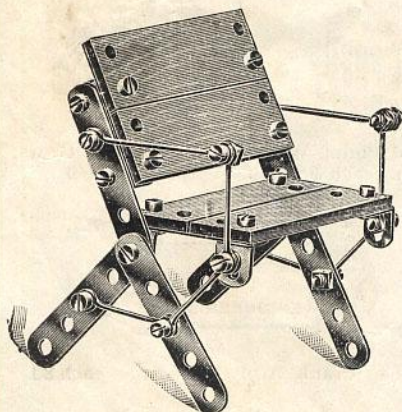
No. 125/0. Dog Cart.



No. 129/0. Tipping Truck.



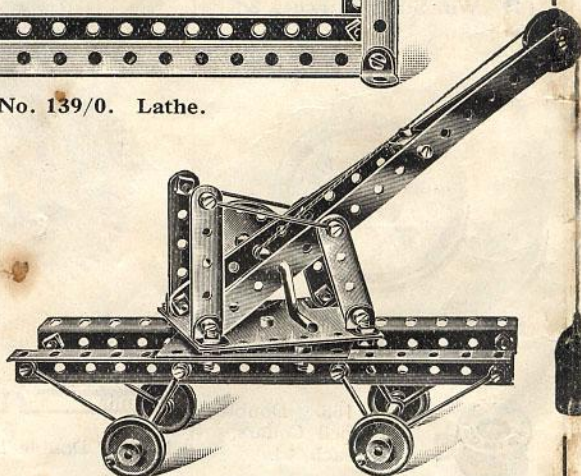
No. 139/0. Lathe.



No. 105/0. Garden Seat.

The No. 0 outfit has several parts not included in the standard sets—it is intended to be a simple constructional toy for the younger children.

PRICE, 7/6.

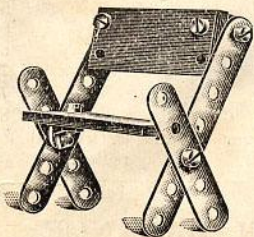


No. 118/0. Travelling Crane.

These models are made with

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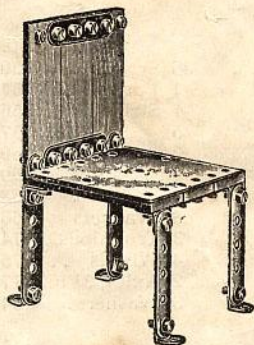
Nº 1 OUTFIT



SEAT No. 1.

2	Wood slips	..	No. 25
8	Screws	..	50
2	Strips, 2½ in.	..	57
2	" 3½ "	..	59
4	Brackets	..	66

Brackets fixed with slot on wood.



CHAIR No. 4.

6	Slips	..	No. 25
32	Screws	..	50
4	Strips, 2 in.	..	56
4	" 2½ "	..	57
10	Brackets	..	66
1	Plate	..	68

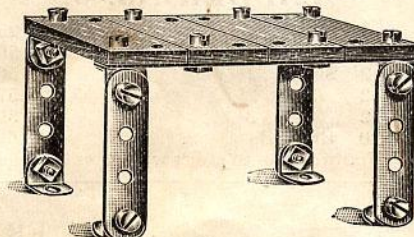


TABLE No. 2.

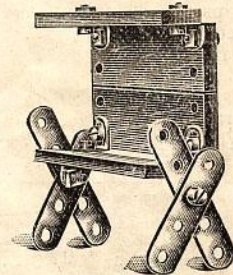
4	Slips	..	..	No. 25
16	Screws	..	..	50
4	Strips, 2 in.	..	..	56
2	" 4 "	..	..	66
8	Brackets	..	..	66

4-in. strips screwed below table to hold top.

CHAIR No. 5.



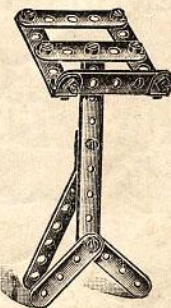
6	Slips	..	No. 25	2	Strips, 4in.	No. 60
30	Screws	..	50	10	Brackets	66
4	Strips, 2 in.	..	56	4	Wheels	75
6	" 2½ "	..	57	2	Axles	77
2	" 3½ "	..	59			



SEAT No. 3.

4	Slips	..	..	No. 25
10	Screws	..	..	50
4	Strips, 2 in.	..	..	56
2	" 2½ "	..	..	57
6	Brackets	..	..	66

2-in. strips screwed behind the wood back.

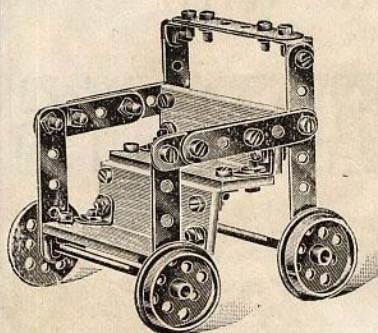


MUSIC STAND No. 8.

12	Screws	No. 50
2	Strips, 2 in.	56
6	" 2½ "	57
2	" 4 "	60
3	Brackets	66

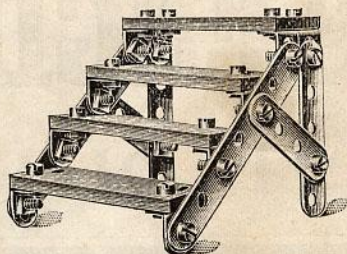
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CHAIR No. 6.

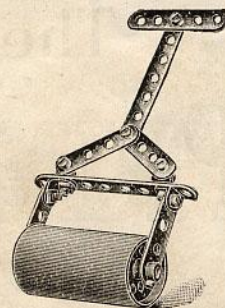
4 Slips ..	No. 25
30 Screws ..	50
2 Strips, 2 in. ..	56
6 " 2½ " ..	57
2 " 3½ " ..	59
12 Brackets ..	66
4 Wheels ..	75
2 Axles, 3½ in. ..	77



LADDER No. 6.

4 Slips ..	No. 25
22 Screws ..	50
2 Strips, 2 in. ..	56
2 " 2½ " ..	57
2 " 3½ " ..	59
10 Brackets ..	66

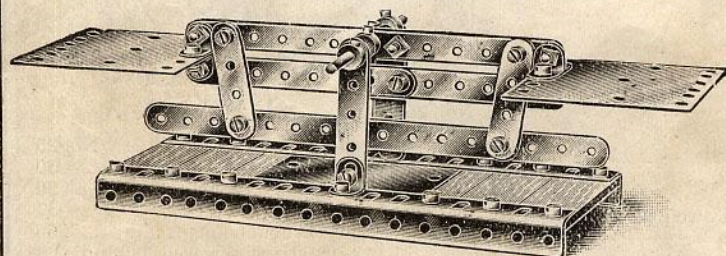
Fix brackets to steps with slots at side.



ROLLER No. 9.

8 Screws ..	No. 50
4 Strips, 2 in. ..	56
1 " 2½ " ..	57
1 " 3½ " ..	59
1 " 4 " ..	60
4 Brackets ..	66
2 Wheels ..	75
1 Axle, 3½ in. ..	77
2 Collars ..	82

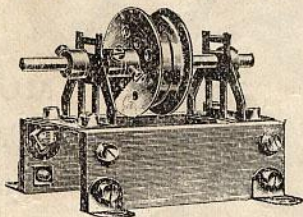
Cover wheels with card for roller.



FRENCH BALANCE No. 10.

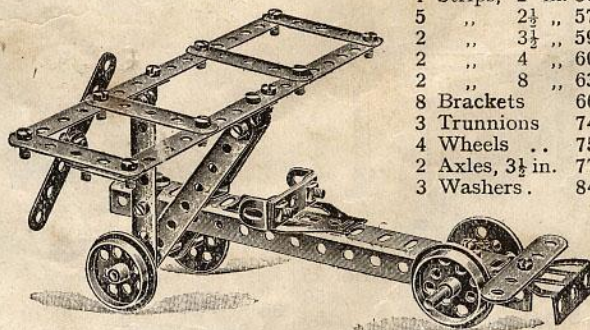
6 Slips ..	No. 25	2 Strips, 4 in. No. 60
30 Screws ..	50	1 " 8 " .. 63
2 Bars, 8 in. ..	54	10 Brackets .. 66
2 Strips, 2 " ..	56	3 Plates, 3 x 3 in. 68
2 " 2½ " ..	57	1 Axle, 3½ in. .. 77
2 " 3½ " ..	59	4 Collars .. 82

COUNTER SHAFT No. 23.



2 Slips ..	No. 25	2 Wheels ..	No. 75
12 Screws ..	50	1 Axle, 3½ in. ..	77
8 Brackets ..	66	3 Collars ..	82
2 Trunnions ..	74	3 Washers ..	84

MONOPLANE No. 13.



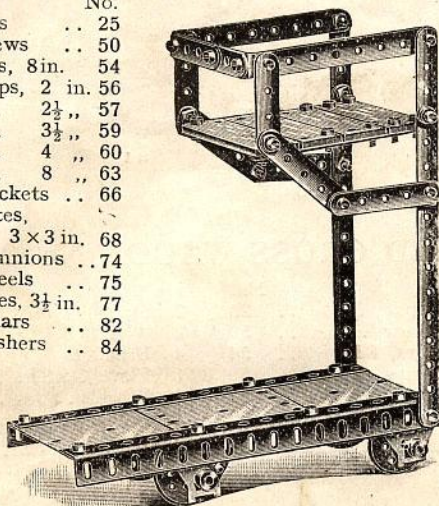
26 Screws ..	No. 50
1 Bar, 8 in. ..	54
1 Strips, 2 in. ..	56
5 " 2½ " ..	57
2 " 3½ " ..	59
2 " 4 " ..	60
2 " 8 " ..	63
8 Brackets ..	66
3 Trunnions ..	74
4 Wheels ..	75
2 Axles, 3½ in. ..	77
3 Washers ..	84

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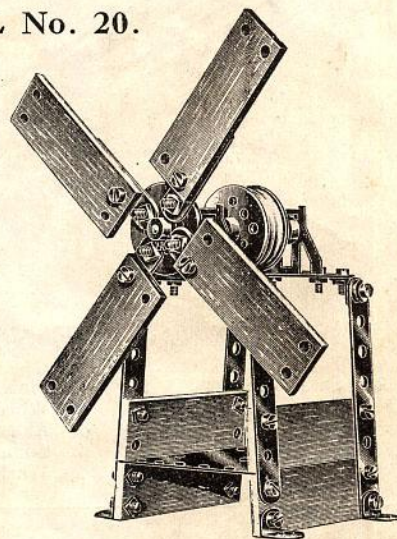
TOWER WAGON No. 44.

	No.
4 Slips ..	25
35 Screws ..	50
2 Bars, 8 in.	54
4 Strips, 2 in.	56
4 " 2½ "	57
2 " 3½ "	59
2 " 4 "	60
2 " 8 "	63
6 Brackets ..	66
3 Plates, 3 × 3 in.	68
4 Trunnions ..	74
4 Wheels ..	75
2 Axles, 3½ in.	77
4 Collars ..	82
5 Washers ..	84

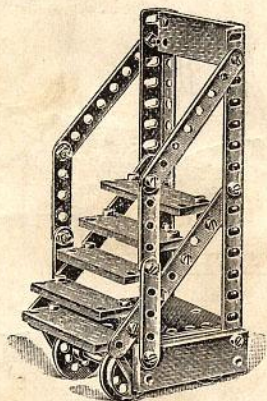


WINDMILL No. 20.

	No.
8 Slips ..	25
32 Screws ..	50
4 Strips, 2 in.	56
2 " 2½ "	57
2 " 3½ "	59
2 " 4 "	60
8 Brackets ..	66
1 Plate, 3 × 3 in.	68
2 Trunnions ..	74
3 Wheels ..	75
1 Axle, 3½ in.	77
2 Collars ..	82
10 Washers ..	84

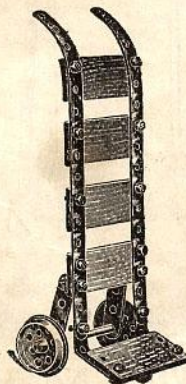


LIBRARY LADDER No. 42.



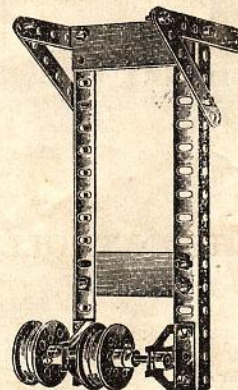
	No.		No.
8 Slips ..	25	1 Plate, 3 × 3 in.	68
36 Screws ..	50	2 Trunnions	74
2 Bars, 8 in.	54	4 Wheels	75
2 Strips, 2 in.	56	2 Axles, 3½ in.	77
4 " 2½ "	57	2 Collars ..	82
2 " 3½ "	59	2 Washers ..	84
2 " 4 "	60		
10 Brackets	66		

TRUCK No. 33.



	No.		No.
5 Slips ..	25		
16 Screws ..	50		
4 Strips, 2 in.	56		
2 " 8 "	63		
2 Brackets ..	66		
2 Wheels ..	75		
1 Axle, 3½ in.	77		

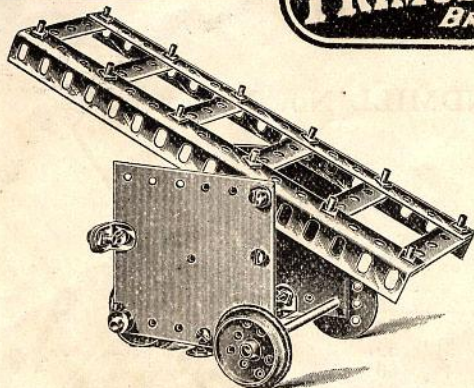
SHAFTING No. 35.



	No.		No.
2 Slips ..	52	2 Trunnions	74
16 Screws ..	50	4 Wheels	75
2 Bars, 8 in.	54	1 Axle, 3½ in.	77
2 Strips, 3½ in.	59	3 Collars ..	82
2 " 4 "	60	3 Washers ..	84

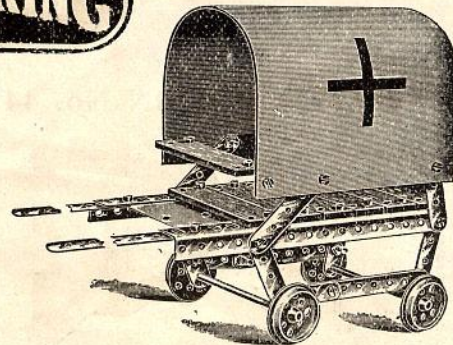
PRIMUS ENGINEERING

BRITISH MADE



FIRE ESCAPE No. 30.

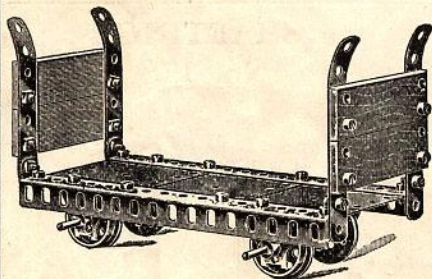
	No.		No.
24 Screws ..	50	2 Plates, 3 × 3 in.	68
2 Bars, 8 in.	54	4 Wheels ..	75
6 Strips, 2½ in.	57	2 Axles, 3½ in.	77
1 " 3½ "	59	2 Collars ..	82
1 " 4 "	60	2 Washers ..	84
4 Brackets ..	66		



RED CROSS WAGON No. 24.

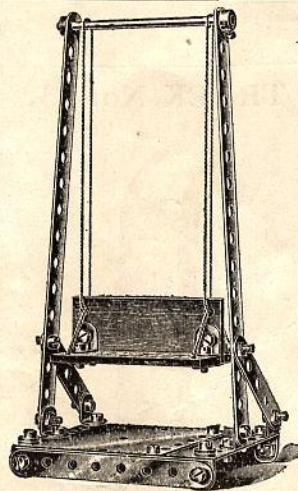
	No.		No.
8 7/8 Slips ..	25	2 Strips, 4 in.	60
34 Screw ..	50	2 " 8 "	63
2 Bars, 8 in.	54	4 Brackets ..	66
4 Strips, 2 in.	56	1 Plate, 3 × 3 in.	68
6 " 2½ "	57	4 Wheels ..	75
2 " 3½ "	59	2 Axles, 3½ in.	77

Hood is made of stiff card.



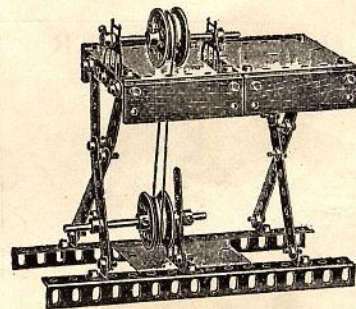
CHURN TROLLEY No. 27.

	No.		No.
4 Slips ..	25		
24 Screws ..	50		
2 Bars, 8 in.	54		
2 Strips, 3½ in.	59		
2 " 4 "	60		
4 Brackets ..	66		
3 Plates, 3 × 3 in.	68		
4 Trunnions ..	74		
4 Wheels ..	75		
2 Axles, 3½ in.	77		
4 Collars ..	82		



SWING No. 34.

	No.		No.
3 Slips ..	25		
24 Screws ..	50		
2 Strips, 2½ in.	57		
2 " 4 "	60		
2 " 8 "	63		
12 Brackets ..	66		
2 Plates, 3 × 3 in.	68		
1 Axle, 3½ in.	77		
2 Collars ..	82		
4 Washers ..	84		

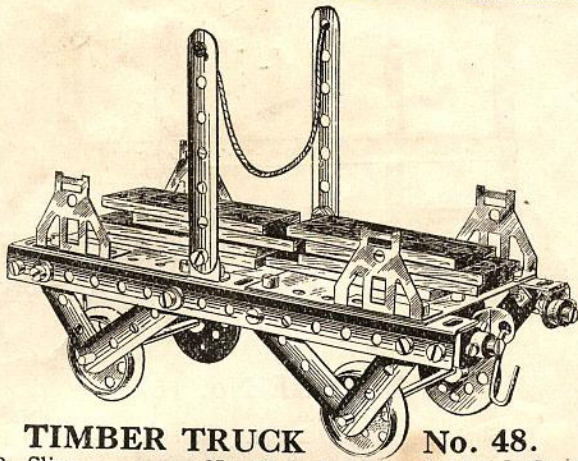


LATHE No. 43.

	No.		No.
4 Slips ..	25		
36 Screws ..	50		
2 Bars, 8 in.	54		
4 Strips, 2 in.	56		
5 " 2½ "	57		
5 " 3½ "	59		
2 " 4 "	60		
12 Brackets ..	66		
3 Plates, 3 × 3 in.	68		
4 Trunnions ..	74		
4 Wheels ..	75		
2 Axles, 3½ in.	77		
4 Collars ..	82		
9 Washers ..	84		

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TIMBER TRUCK No. 48.

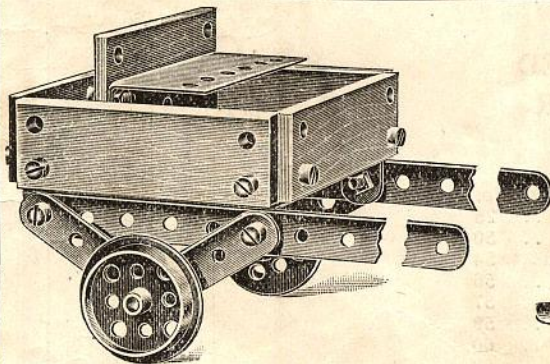
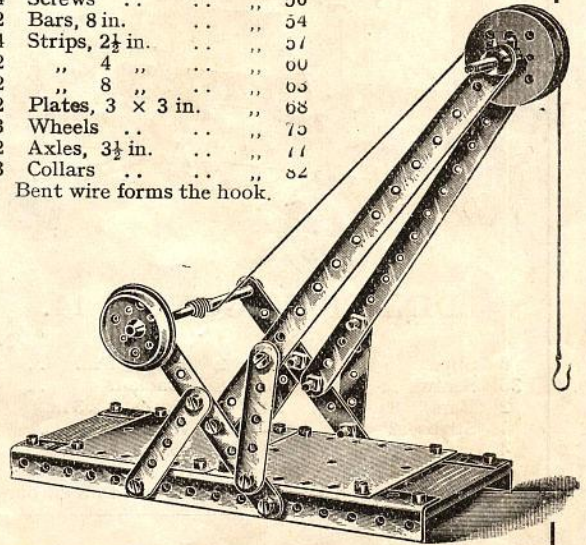
8 Slips ..	No. 25	2 Plates, 3 x 3 in.	No. 68
33 Screws ..	50	4 Trunnions ..	74
2 Bars ..	54	4 Wheels ..	75
4 Strips, 2 in.	56	2 Axles, 3 1/2 in.	77
4 " 2 1/2 " ..	57	4 Collars ..	82
2 " 3 1/2 " ..	59	12 Washers ..	84
10 Brackets ..	66		

Wood slips are laid on to represent timber.
Hooks are made from two pieces of bent wire.

CRANE No. 21.

2 Slips ..	No. 25
24 Screws ..	50
2 Bars, 8 in.	54
4 Strips, 2 1/2 in.	56
2 " 4 " ..	60
2 " 8 " ..	63
2 Plates, 3 x 3 in.	68
3 Wheels ..	75
2 Axles, 3 1/2 in.	77
3 Collars ..	82

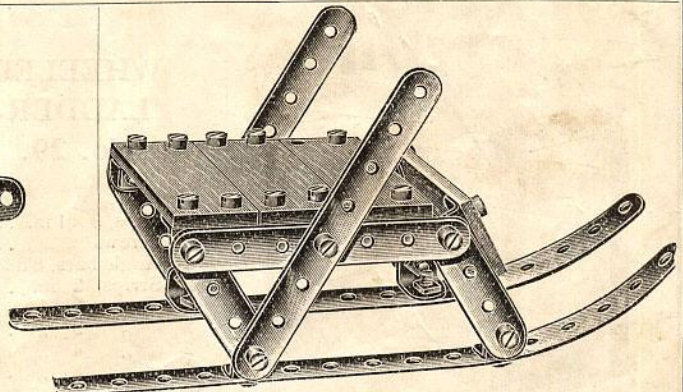
Bent wire forms the hook.



DOG CART No. 26.

5 Slips ..	No. 25
20 Screws ..	50
4 Strips, 2 in.	56
2 " 8 " ..	63
12 Brackets ..	66
2 Plates, 3 x 3 in.	68
2 Wheels ..	75
1 Axle, 3 1/2 in.	77

The 8 in. strips form the shafts.

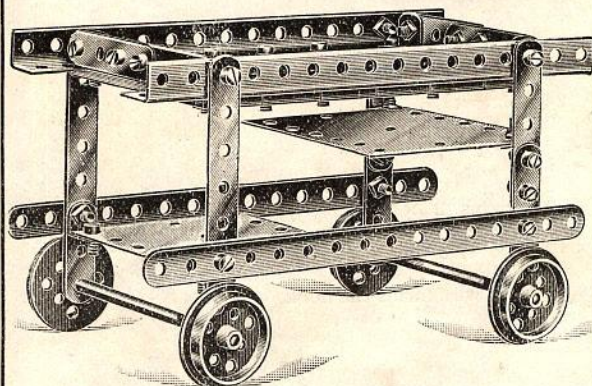


SLEDGE No. 19.

4 Slips ..	No. 25
26 Screws ..	50
4 Strips, 2 in.	56
2 " 2 1/2 " ..	57
2 " 3 1/2 " ..	59
2 " 4 " ..	60
2 " 8 " ..	63
10 Brackets ..	66

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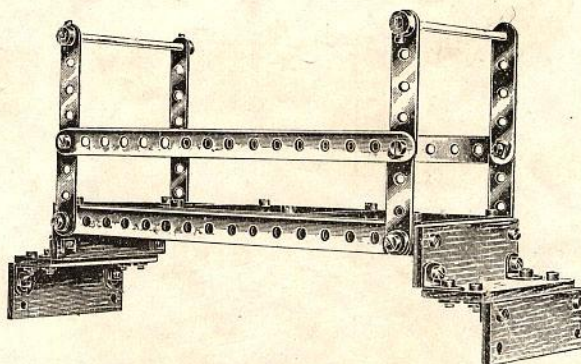
BRITISH MADE



DINNER WAGON No. 14.

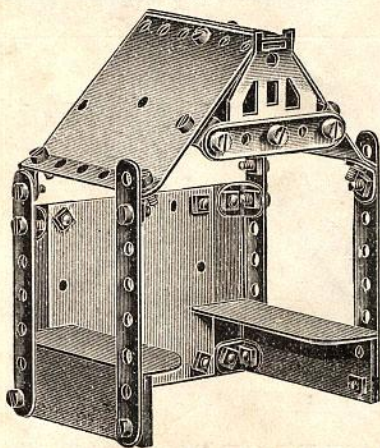
	No.		No.
6 Slips	25	2 Strips, 8 in.	63
36 Screws	50	8 Brackets	66
2 Bars, 8 in.	54	2 Plates, 3 x 3 in.	68
4 Strips, 2 "	56	4 Wheels	75
4 " 2 1/2 "	57	2 Axles, 3 1/2 in.	77
2 " 4 "	60		

The top table is 3 x 1 in. slips, screwed to 8 in. bars.



BRIDGE No. 16.

	No.		No.
6 Slips	25	12 Brackets	66
36 Screws	50	3 Plates, 3 x 3 in.	68
2 Bars, 8 in.	54	2 Axles, 3 1/2 in.	77
4 Strips, 2 "	56	4 Collars	82
4 " 2 1/2 "	57	8 Washers	84
2 " 8 "	63		



SUMMER HOUSE No. 12.

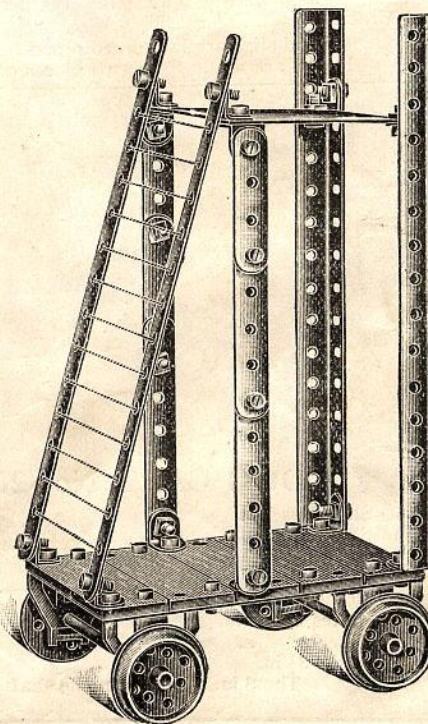
	No.
4 Slips	25
30 Screws	50
1 Strip, 2 1/2 in.	57
2 Strips, 3 1/2 "	59
2 " 4 "	60
12 Brackets	66
3 Plates, 3 x 3 in.	68
1 Trunnion	74

The seats are formed of cardboard.

WHEELED LADDER No. 29.

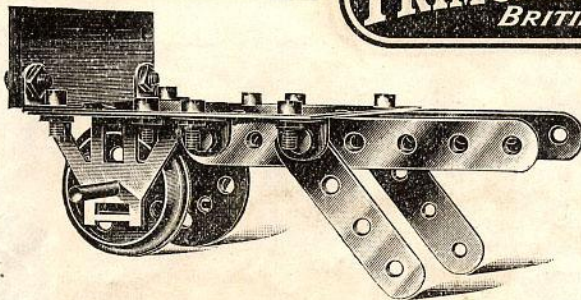
	No.
5 Slips, 3 x 1 in.	25
34 Screws	50
2 Angle bars, 8 in.	54
2 Strips, 2 in.	56
2 " 2 1/2 "	57
2 " 3 1/2 "	59
2 " 4 "	60
2 " 8 "	63
12 Brackets	66
1 Plate, 3 x 3 in.	68
4 Trunnions	74
4 Wheels	75
2 Axles, 3 1/2 in.	77

The rungs in the ladder are made by lacing cord through the 8-in. metal strips.



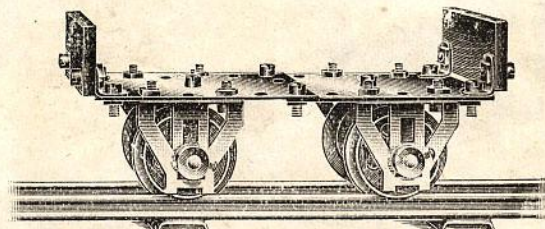
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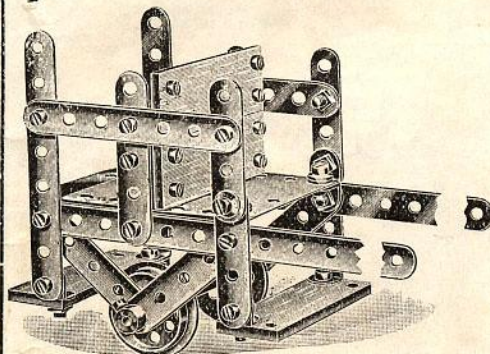
LUGGAGE BARROW No. 15.

	No.		No.
1 Slip ..	25	1 Plate, 3 x 3 in. ...	68
10 Screws ..	50	2 Trunnions ..	74
2 Strips, 2 in. ..	56	2 Wheels ..	75
2 " 3½ " ..	59	1 Axle, 3½ in. ..	77
6 Brackets ..	66		



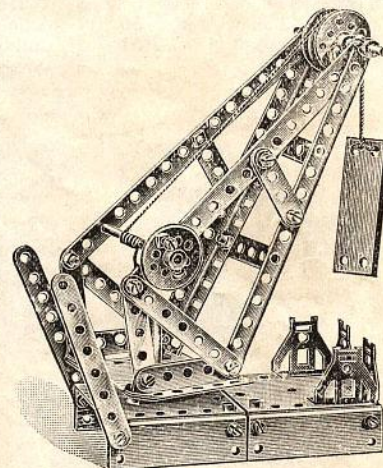
TROLLEY TRUCK No. 28

	No.		No.
2 Slips ..	25	4 Trunnions ..	74
20 Screws ..	50	4 Wheels ..	75
4 Brackets ..	66	4 Collars ..	82
2 Plates, 3 x 3 ..	68	12 Washers ..	84



MAIL CART No. 25.

	No.
4 Slips ..	25
35 Screws ..	50
4 Strips, 2 in. ..	56
6 " 2½ " ..	57
2 " 3½ " ..	59
2 " 4 " ..	60
2 " 8 " ..	63
12 Brackets ..	66
2 Plates, 3 x 3 in. ..	68
2 Wheels ..	75
1 Axle, 3½ in. ..	77
2 Collars ..	82
12 Washers ..	84



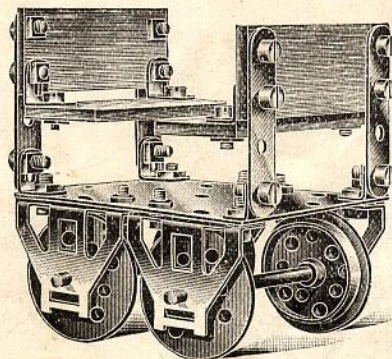
CRANE No. 46.

	No.
5 Slips, 3 x 1 in. ..	25
36 Screws ..	50
2 Bars, 8 in. ..	54
4 Strips, 2 " ..	56
6 " 2½ " ..	57
2 " 3½ " ..	59
2 " 4 " ..	60
2 " 8 " ..	63
12 Brackets ..	66
3 Plates, 3 x 3 in. ..	68
4 Trunnions ..	74
4 Wheels ..	75
2 Axles, 3½ in. ..	77
4 Collars ..	82
6 Washers ..	84

A long nail is used for centre pin.

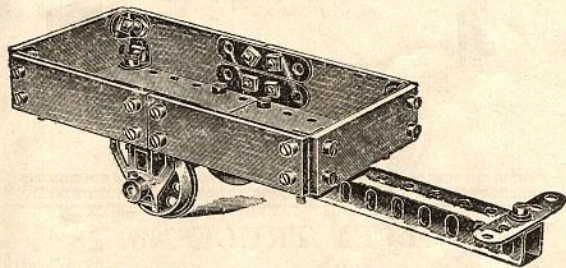
TRAILER No. 37.

	No.
4 Slips ..	25
24 Screws ..	50
4 Strips, 2 in. ..	56
8 Brackets ..	66
1 Plate, 3 x 3 in. ..	68
4 Trunnions ..	74
4 Wheels ..	75
2 Axles, 3½ in. ..	77
12 Washers ..	84



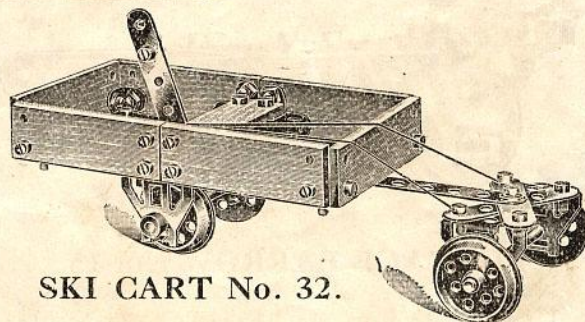
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BAGGAGE TRUCK No. 31.

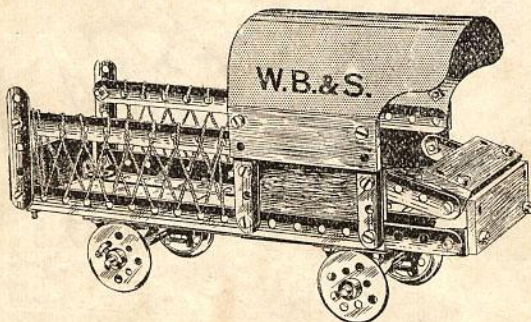
6 Slips ..	No. 25	2 Plates, 3 x 3 in.	No. 68
33 Screws ..	50	2 Trunnions ..	74
2 Bars, 8 in.	54	2 Wheels ..	75
4 Strips, 2 in.	56	1 Axle, 3 1/2 in.	77
1 " 2 1/2 "	57	2 Collars ..	82
12 Brackets ..	66	5 Washers ..	84



SKI CART No. 32.

7 Slips ..	No. 25	4 Trunnions ..	No. 74
36 Screws ..	50	4 Wheels ..	75
2 Strips, 2 in.	56	2 Axles, 3 1/2 in.	77
3 " 2 1/2 "	57	2 Collars ..	82
1 " 8 "	63	3 Washers ..	84
12 Brackets ..	66		
2 Plates, 3 x 3 in.	68		

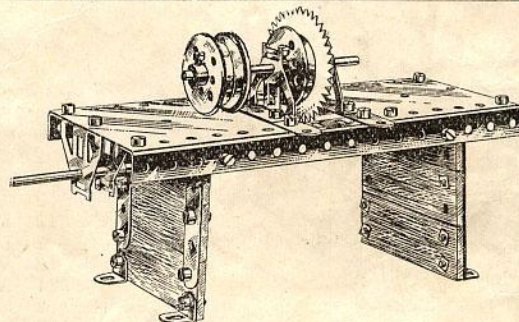
Cord used for steering.



MOTOR LORRY No. 55.

7 Slips ..	No. 25	2 Strips, 8 in.	No. 63
36 Screws ..	50	6 Brackets ..	66
2 Bars, 8 in.	54	4 Trunnions ..	74
4 Strips, 2 in.	56	4 Wheels ..	75
6 " 2 1/2 "	57	2 Axles, 3 1/2 in.	77

Piece of card cut to make hood.



CIRCULAR SAW No. 56.

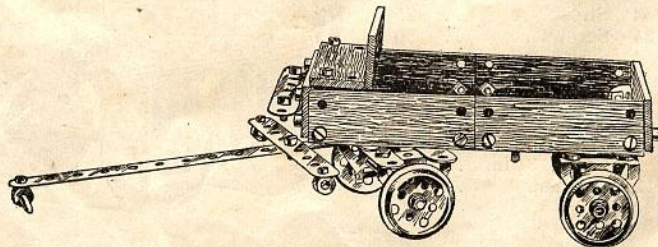
6 Slips ..	No. 25	2 Plates	No. 68
35 Screws ..	50	4 Trunnions ..	74
2 Bars ..	54	2 Axles ..	77
4 Strips, 2 1/2 in.	57	1 Collar ..	82
2 " 4 "	60	1 Washer ..	84
8 Brackets ..	66		

The saw can be cut out of a piece of cardboard.

A.S.C. WAGON No. 57.

8 Slips ..	No. 25	12 Brackets ..	No. 66
34 Screws ..	50	2 Plates ..	68
4 Strips, 2 in.	56	4 Trunnions ..	74
4 " 2 1/2 "	57	4 Wheels ..	75
1 " 3 1/2 "	59	2 Axles ..	77
1 " 4 "	60	4 Collars ..	82
1 " 8 "	63	8 Washers ..	84

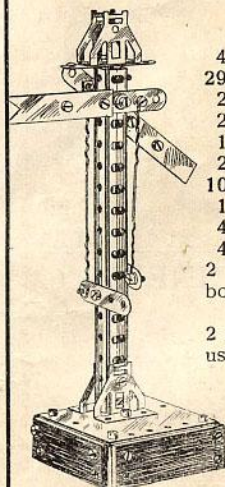
Use a short nail to form pivot of front wheels.



PRIMUS ENGINEERING

BRITISH MADE

SIGNAL No. 50.



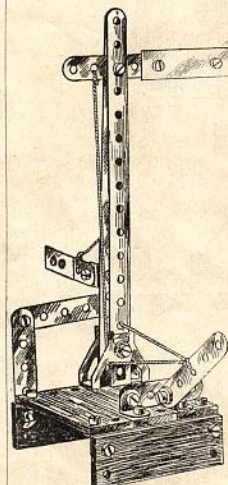
	No.
4 Slips	25
29 Screws	50
2 Bars, 8 in.	54
2 Strips, 2 in.	56
1 " 2½ "	57
2 " 3½ "	59
10 Brackets	66
1 Plate	68
4 Trunnions	74
4 Washers	84
2 Strips of card-board cut for signal arms.	
2 hairpins are also used for signal rods.	

VANE No. 51.



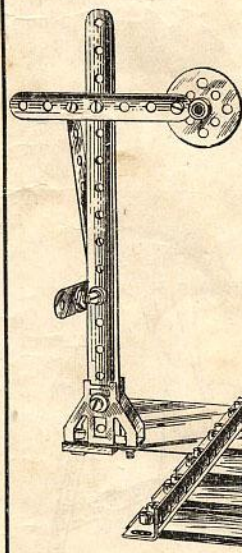
	No.
4 Slips	25
26 Screws	50
2 Bars	54
4 Strips, 2 in.	56
6 " 2½ "	57
1 " 4 "	60
11 Brackets	66
2 Plates	68
2 Trunnions	74
1 Axle, 3½ in.	77
3 Collars	82
6 Washers	84
The letters N.S.E. W. can be cut out of a book and fixed on to strips.	

SIGNAL No. 52.



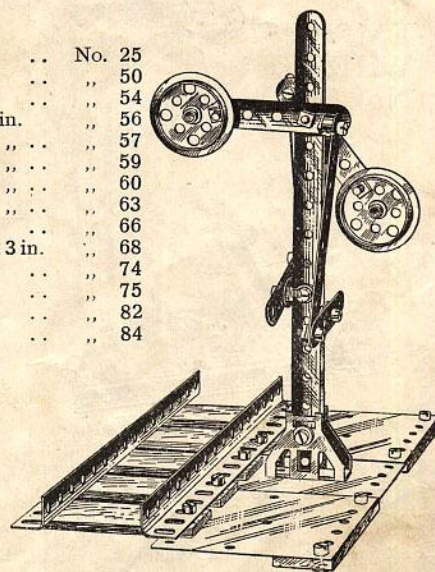
	No.
5 Slips	25
21 Screws	50
2 Strips, 2 in.	56
5 " 2½ "	57
1 " 4 "	60
2 " 8 "	63
7 Brackets	66
2 Trunnions	74
1 Collar	82
A piece of card is used for shape of signal.	

SIGNAL No. 53.



	No.
6 Slips	25
26 Screws	50
2 Bars	54
1 Strips, 2 in.	56
1 " 3½ "	59
2 " 4 "	60
2 " 8 "	63
1 Bracket	66
1 Plate, 3 x 3 in.	68
2 Trunnions	74
1 Wheel	75
1 Collar	82
4 Washers	84

SIGNAL No. 54.

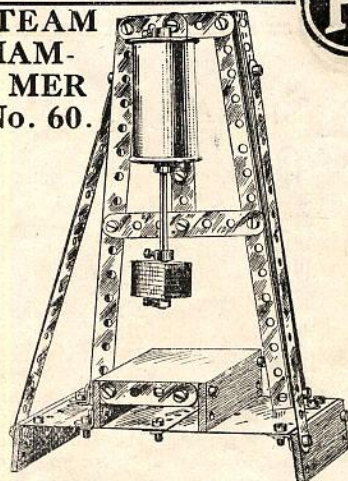


	No.
7 Slips	25
28 Screws	50
2 Bars	54
2 Strips, 2 in.	56
2 " 2½ "	57
1 " 3½ "	59
1 " 4 "	60
2 " 8 "	63
2 Brackets	66
3 Plates, 3 x 3 in.	68
2 Trunnions	74
2 Wheels	75
2 Collars	82
4 Washers	84

PRIMUS ENGINEERING

BRITISH MADE

STEAM HAM-MER No. 60.

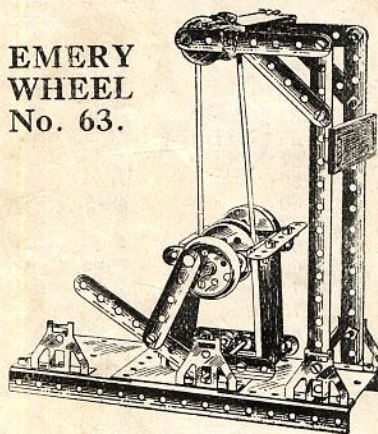


4 Slips No. 25	2 Strips, 8 in. No. 63
33 Screws .. 50	12 Brackets .. 66
2 Bars .. 54	2 Plates .. 68
1 Strip, 2 in. .. 56	2 Wheels .. 75
2 " 2½ " .. 57	1 Axle .. 77
1 " 3½ " .. 59	2 Collars .. 82

Small squares of cardboard fixed on to axle for hammer.

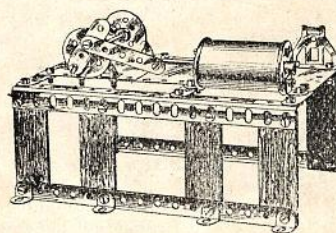
Flat piece of cardboard for bed and an inverted mantle-case is used for cylinder.

EMERY WHEEL No. 63.



6 Slips No. 25	8 Brackets No. 66
30 Screws .. 50	3 Plates .. 68
2 Bars, 8 in. .. 54	4 Trunnions .. 74
2 Strips, 2 in. .. 56	3 Wheels .. 75
5 " 2½ " .. 57	2 Axles, 3½ in. .. 77
2 " 3½ " .. 59	2 Collars .. 82
2 " 4 " .. 60	4 Washers .. 84
2 " 8 " .. 63	

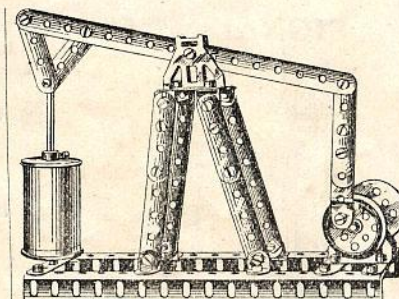
A French nail and cotton reel are used in this model; also a pill-box lid for emery wheel.



MILL ENGINE No. 61.

6 Slips .. 25	8 Brackets .. 66
34 Screws .. 50	3 Plates .. 68
2 Bars .. 54	4 Trunnions .. 74
1 Strip, 2 in. .. 56	4 Wheels .. 75
4 " 2½ " .. 57	2 Axles .. 77
2 " 8 " .. 63	2 Collars .. 82

Use inverted mantle-case for cylinder. Worked with hand or power.



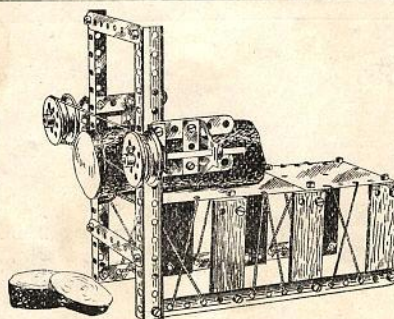
BEAM ENGINE No. 62.

35 Screws .. 50	2 Strips, 8 in. No. 63
2 Bars .. 54	8 Brackets .. 66
4 Strips, 2 in. .. 56	4 Trunnions .. 74
6 " 2½ " .. 57	4 Wheels .. 75
2 " 3½ " .. 59	2 Axles .. 77
2 " 4 " .. 60	3 Collars .. 82

An inverted mantle-case is used for cylinder.

BAND SAW No. 64.

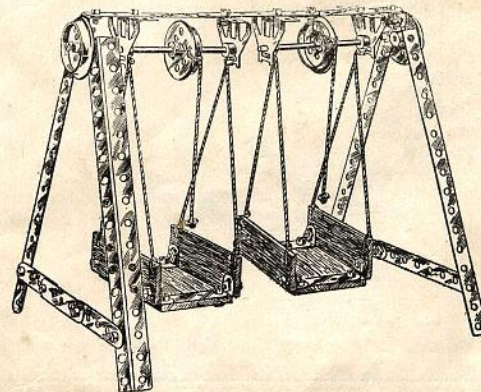
6 Slips .. 25
36 Screws .. 50
2 Bars, 8 in. .. 54
4 Strips, 2½ in. .. 57
2 " 4 " .. 60
2 " 8 " .. 63
8 Brackets .. 66
3 Plates .. 68
4 Trunnions .. 74
4 Wheels .. 75
2 Axles, 3½ in. .. 77
2 Collars .. 82
10 Washers .. 84



SWING

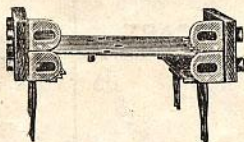
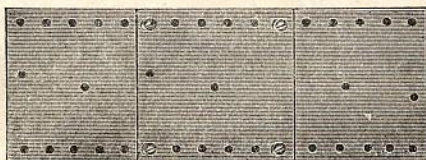
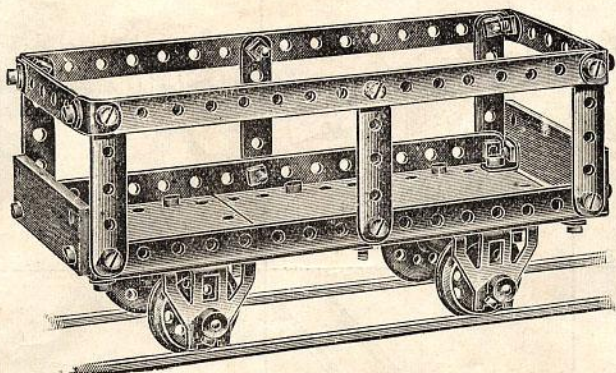
No. 65.

8 Slips .. 25
36 Screws .. 50
2 Angle Bars, 8 in. .. 54
4 Strips, 2 in. .. 56
4 " 2½ " .. 57
2 " 3½ " .. 59
2 " 4 " .. 60
2 " 8 " .. 63
12 Brackets .. 66
4 Wheels .. 75
2 Axles .. 77
4 Collars .. 82
2 Washers .. 84



PRIMUS ENGINEERING

BRITISH MADE



TIMBER TRUCK No. 38.

	No.		No.
2 Slips ..	25	3 Plates ..	68
36 Screws ..	50	4 Trunnions ..	74
2 Bars, 8 in. ..	54	4 Wheels ..	75
6 Strips, 2½ in. ..	57	2 Axles, 3½ in. ..	77
2 " 3½ " ..	59	4 Collars ..	82
2 " 8 " ..	63	12 Washers ..	84
12 Brackets ..	66		

Make this truck before you attempt the others.

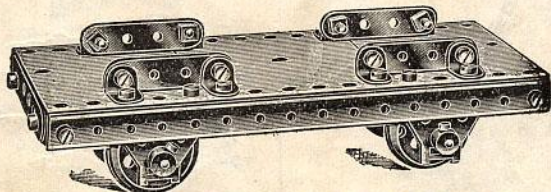
(1) Fit Brackets inside Angle bars to slotted sides, with two washers to each screw.

(2) The trunnions should be fitted on first.

(3) The axles and wheels must be put in last and a washer placed between EACH collar and the FACE of trunnion to allow the axles to run easily.

The base is composed of three No. 68 plates, which can be laid in loose, and caught between the sides when they are pressed in and the end screws tightened up, or they can be bolted together as shown in diagram. NOTE.—In trucks with a short base reduce the length by bolting in other holes.

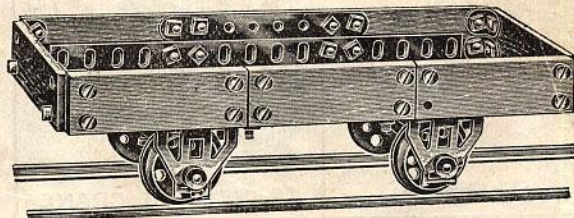
POSITION OF BRACKETS TO SECURE THE ENDS.—The Brackets are fitted on with the slots at the ENDS as shown; this allows a little play to introduce the base plates, and afterwards the sides can be pressed in and the screws tightened.



TRANSPORT TRUCK No. 39.

24 Screws ..	..	..	..	No. 50
2 Bars, 8 in. ..	..	..	..	54
4 Strips, 2 in. ..	..	..	..	56
2 " 2½ " ..	..	..	..	57
12 Brackets ..	..	..	..	66
3 Plates, 3 × 3 in. ..	..	..	..	68
4 Trunnions ..	..	..	..	74
4 Wheels ..	..	..	..	75
2 Axles, 3½ in. ..	..	..	..	77
4 Collars ..	..	..	..	82
12 Washers ..	..	..	..	84

Two washers are placed between each Bracket and the Bars where they are bolted on, to adjust the 2½ in. strips.

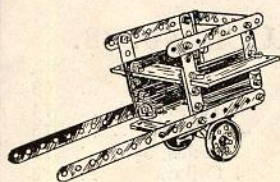


BALLAST TRUCK No. 40.

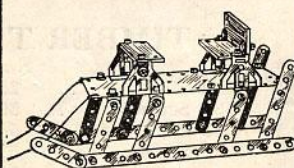
8 Slips ..	..	..	..	No. 25
36 Screws ..	..	..	..	50
2 Bars, 8 in. ..	..	..	..	54
4 Strips, 2 in. ..	..	..	..	56
2 " 4 " ..	..	..	..	60
8 Brackets ..	..	..	..	66
3 Plates, 3 × 3 in. ..	..	..	..	68
4 Trunnions ..	..	..	..	74
4 Wheels ..	..	..	..	75
2 Axles, 3½ in. ..	..	..	..	77
4 Collars ..	..	..	..	82
8 Washers ..	..	..	..	84

PRIMUS ENGINEERING

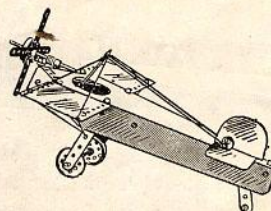
BRITISH MADE



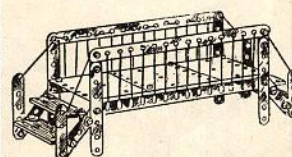
GOVERNESS CART



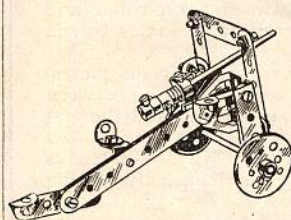
SLEIGH



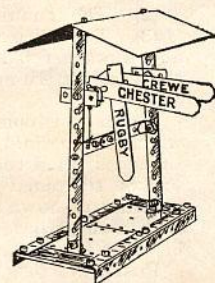
MONOPLANE



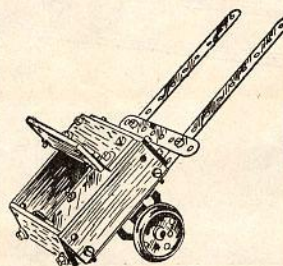
BRIDGE



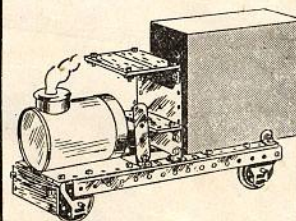
FIELD GUN



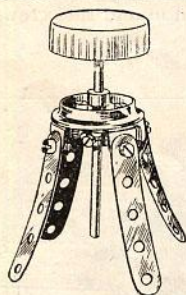
TRAIN INDICATOR



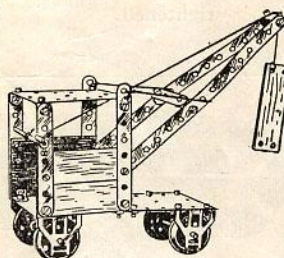
MARKET CART



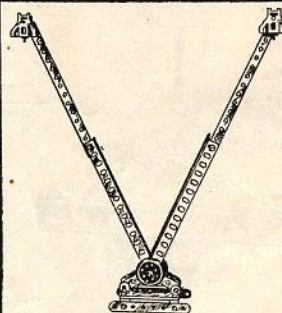
STEAM LORRY



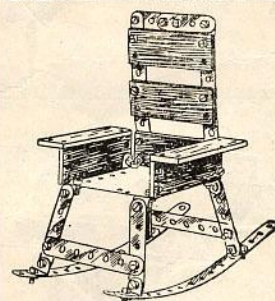
MUSIC STOOL



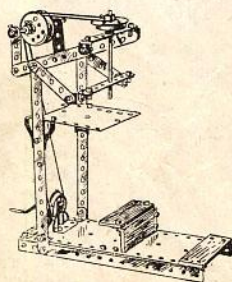
TRAVELLING CRANE



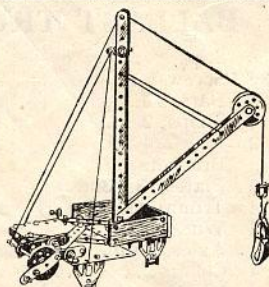
FLIP-FLAP



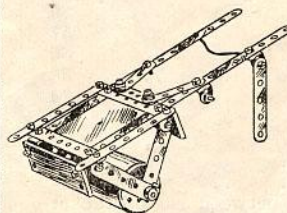
ROCKING CHAIR



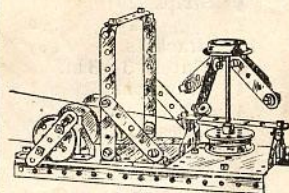
DRILL



DERRICK



ROLLER

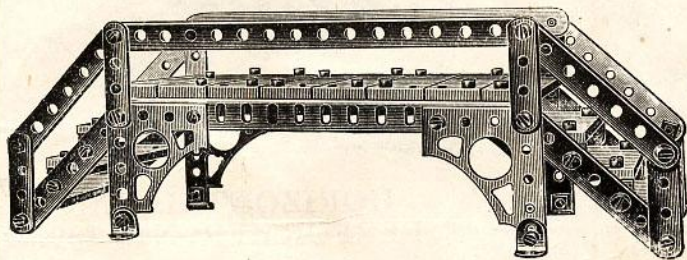


GOVERNERS

These models are made with

PRIMUS ENGINEERING

Nº 2 OUTFIT



FOOT BRIDGE No. 107.

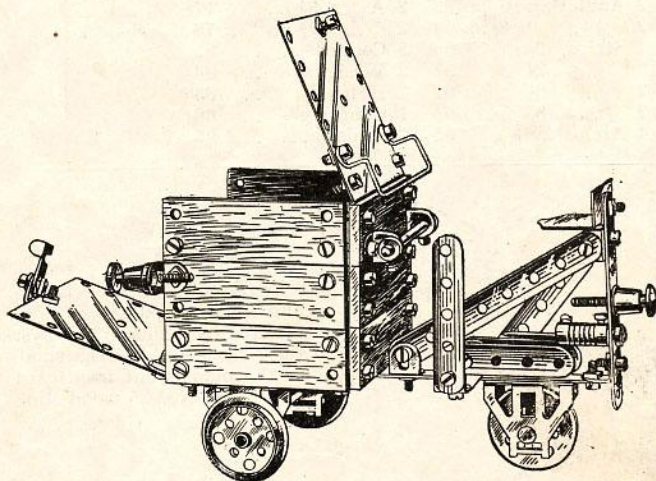
14	Slips	..	..	..	..	No. 25
60	Screws	..	..	..	..	50
2	Bars, 8 in.	..	..	..	..	54
8	Strips, 2 in.	..	..	..	..	56
8	" 3½ "	..	..	..	..	59
2	" 8 "	..	..	..	..	63
16	Brackets	..	..	..	..	66
4	Architraves	..	..	..	..	85

CARRIER TRICYCLE

No. 131.

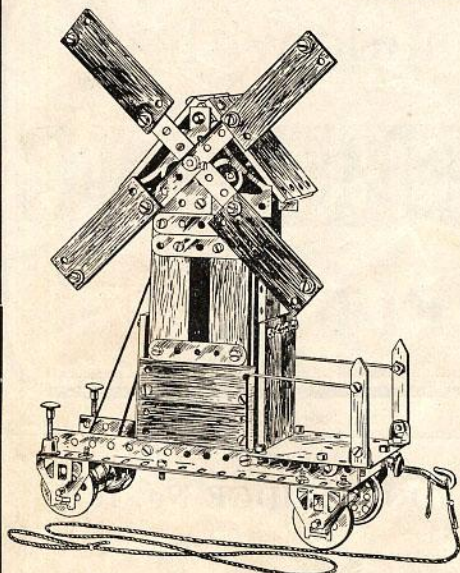
	No.		No.
9	Slips	..	25
60	Screws	..	50
8	Strips, 2 in.	56	3
3	" 2½ "	57	1
1	" 3½ "	59	1
1	" 4 "	60	1
1	" 6½ "	62	13
13	Brackets	..	66
3	Plates,		
	3 x 3 in.	68	1
4	Hinges	..	72
4	Trunnions	..	74
3	Wheels	..	75
1	Axle, 3½ in.	77	1
1	" 2½ "	78	4
4	Collars	..	82
6	Washers	..	84
3	Buffers	..	85
1	Catch	..	95
1	Rod	..	96

Driver's seat made of cardboard.



PRIMUS ENGINEERING

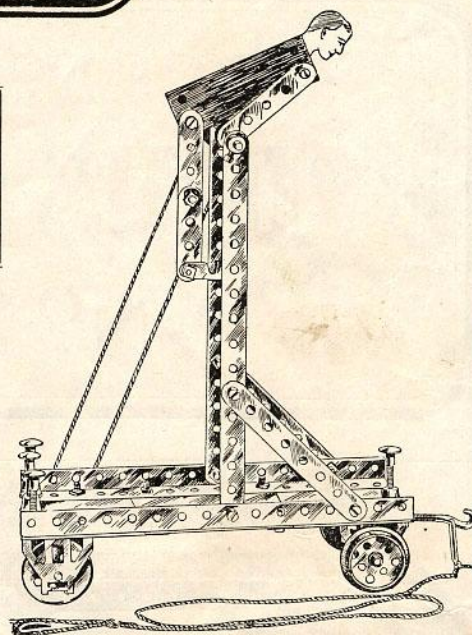
BRITISH MADE



WORKING MODELS.

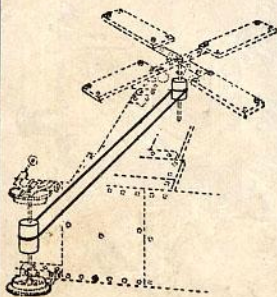
WORKING WINDMILL No. 138.

	No.		No.
1 Floor ..	9	9 Brackets ..	66
2 Posts ..	11	3 Plates, 3 x 3 ..	68
16 Slips ..	25	4 Trunnions ..	74
55 Screws ..	50	4 Wheels ..	75
2 Angle Bars, 6½ in.	53	2 Axles, 3½ in.	77
2 " 8 in.	54	2 " 2¾ "	78
4 Strips, 2 in.	56	3 Collars ..	82
3 " 2½ "	57	2 Washers ..	84
2 " 6½ "	62	2 Buffers ..	85
2 " 8 "	63	1 Coupling ..	86
4 Architraves ..	65	2 Rods ..	96

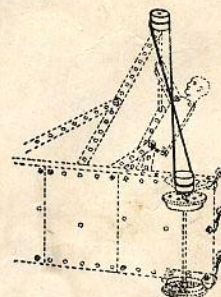


HORIZONTAL BAR PERFORMER No. 139.

	No.		No.
1 Slip ..	25	4 Trunnions ..	74
19 Screws ..	50	4 Wheels ..	75
2 Angle Bars, 8 in.	54	2 Axles, 3½ in.	77
4 Strips, 2 in.	56	1 Axle, 2¾ "	78
2 " 2½ "	57	2 Collars ..	82
2 " 4 "	60	4 Buffers ..	85
2 " 8 "	63	1 Coupling ..	86
1 Bracket ..	66	2 Catches ..	95
3 Plates, 3 x 3 ..	68		



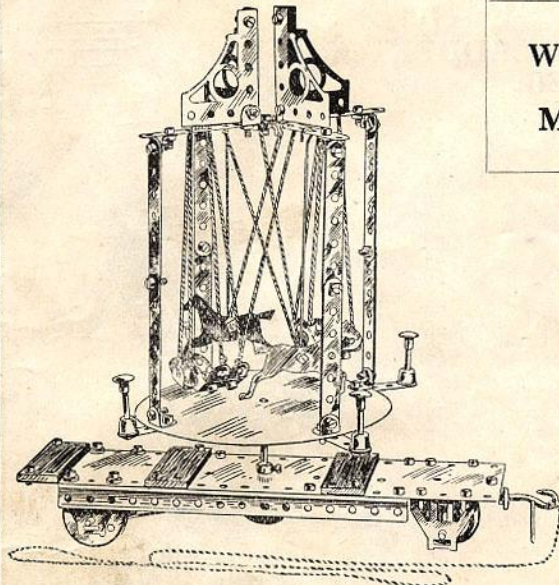
NOTE.—These models are mounted on trolleys and when pulled along the figures perform. This is effected by a simple belt system, using cotton reels, fully explained by the small drawings. The head of the man is cut from card and inserted in a slit cut in the No. 25 wood slip.



PRIMUS ENGINEERING

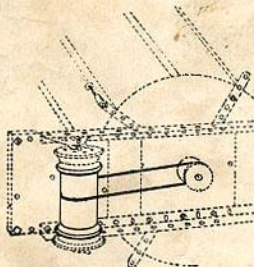
BRITISH MADE

WORKING MODELS.



ROUNABOUT No. 135.

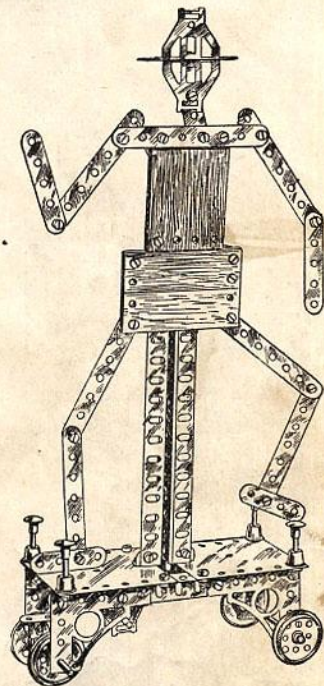
	No.		No.
3 Slips ..	25	3 Plates, 3 x 3 in.	68
64 Screws ..	50	4 Trunnions ..	74
2 Angle Bars, 8 in.	54	4 Wheels ..	75
8 Strips, 2 in.	56	2 Axles, 3 1/2 in.	77
8 " 3 1/2 "	59	1 Axle, 2 3/4 "	78
2 " 6 1/2 "	62	1 Collar ..	82
2 " 8 "	63	4 Washers ..	84
4 Architraves ..	65	4 Buffers ..	85
16 Brackets ..	66	1 Coupling ..	86



When drawn along this model works. Illustration shows the simple means used—two cotton reels and a band of cord. A disc should be cut from cardboard to form the base of the roundabout and the horses can be sketched and cut from card.

DANCING NIGGER No. 141.

	No.
4 Slips ..	25
36 Screws ..	50
2 Angle Bars ..	53
6 Strips, 2 in.	56
4 " 2 1/2 "	57
5 " 3 1/2 "	59
2 " 4 "	60
1 Strip 6 1/2 "	62
4 Architraves ..	65
5 Brackets ..	66
2 Plates, 3 x 3 in.	68
2 Hinges ..	72
4 Trunnions ..	74
4 Wheels ..	75
2 Axles, 3 1/2 in.	77
1 Axle, 2 3/4 "	78
12 Washers ..	84
4 Buffers ..	85
2 Wood Screws	97



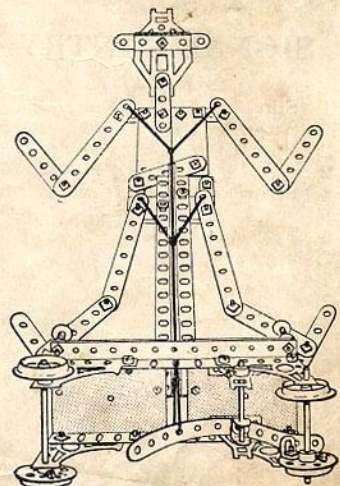
CONSTRUCTION of WORKING PARTS.

1. A 6 1/2-in. strip is curved and bent at one end. Two brackets are attached to form a bearing for the axle, which is supported in the frame by two trunnions.

2. A bracket is attached to one of the back wheels, which as it revolves strikes the curved strip, giving an intermittent movement.

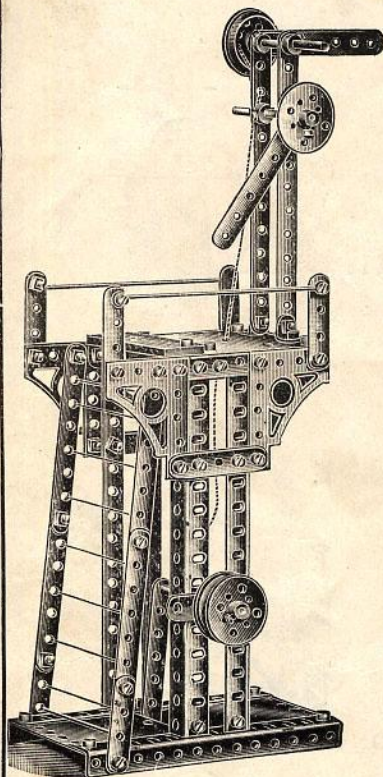
3. Cord is attached to the curved strip, also the legs and arms of the dancer, as shown.

4. As the bracket strikes the curved strip so the cord jerks the arms and legs of the figure.



PRIMUS ENGINEERING

BRITISH MADE



SIGNAL GANTRY
No. 118.

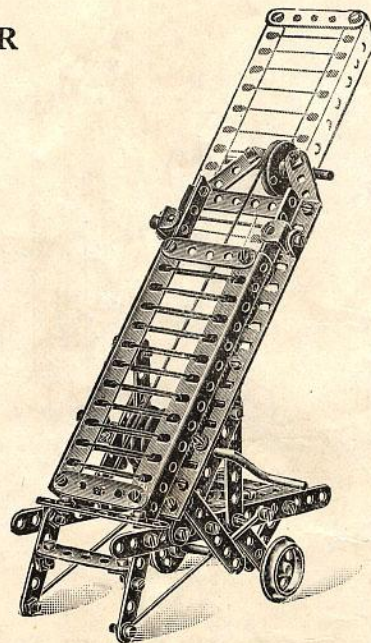
1	Slip	No. 25
55	Screws	50
2	Bars, 6½ in.	53
2	" 8	54
8	Strips, 2 in.	56
5	" 2½	57
5	" 3½	59
2	" 4	60
2	" 6½	62
2	" 8	63
4	Architraves	65
11	Brackets	66
3	Plates	68
4	Wheels	75
1	Rod, 3½ in.	77
2	Rods, 2½	78
4	Collars	82
2	Rods	96

Use cord for ladder rungs.

EXTENDING LADDER

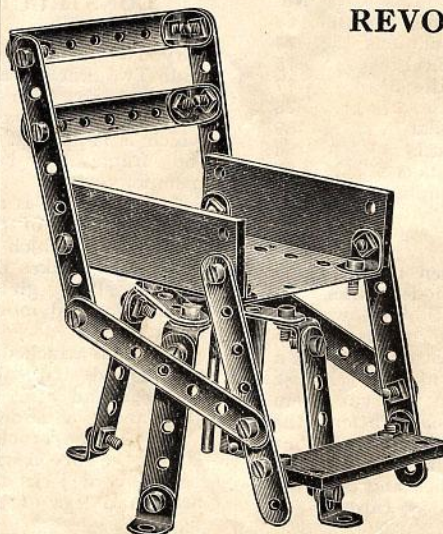
No. 130.

2	Slips	No. 25
53	Screws	50
2	Bars, 6½ in.	53
2	" 8	54
4	Strips, 2 in.	56
6	" 2½	57
5	" 3½	59
2	" 4	60
2	" 8	63
2	Architraves	65
16	Brackets	66
1	Hinge	72
4	Wheels	75
1	Axle, 3½ in.	77
1	" 2½	78
3	Collars	82
12	Washers	84
1	Catch	95
2	Rods	96
Extra parts required.		
1	Wheel	76
1	Handle	83



REVOLVING CHAIR

No. 216.

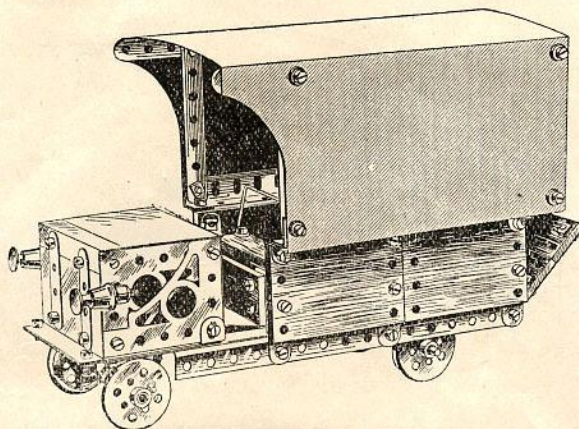


3	Wood slips	No. 25
36	Screws	50
1	Strips, 2 in.	56
6	" 2½	57
6	" 3½	59
2	" 4	60
16	Brackets	66
1	Plate, 3 x 3 in.	68
1	Wheel	75
1	Axle, 2½ in.	78
2	Collars	82

PRIMUS ENGINEERING

BRITISH MADE

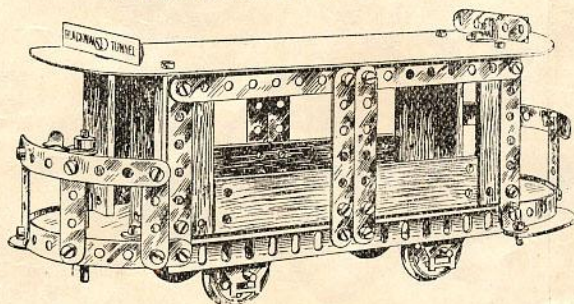
MOTOR VAN No. 132.



13 Slips ..	No. 25	3 Plates, 3 x 3 in.	No. 68
58 Screws ..	50	2 Hinges ..	72
2 Angle Bars, 6½ in.	53	4 Trunnions ..	74
2 " " 8	54	4 Wheels ..	75
6 Strips, 2 in.	56	2 Axles, 3½ in.	77
6 " " 2½	57	2 " " 2½	78
4 " " 3½	59	3 Collars ..	82
2 " " 8	63	8 Washers ..	84
4 Architraves	65	3 Buffers ..	85
10 Brackets ..	66	1 Rod ..	96

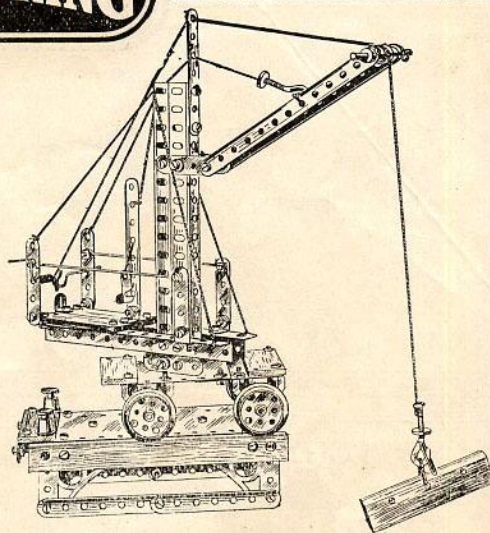
Cardboard is used for cover of wagon and engine bonnet.

TRAMCAR No. 133.



12 Slips ..	No. 25	14 Brackets	No. 66
66 Screws ..	50	3 Plates, 3 x 3 in.	68
2 Angle Bars, 8 in.	54	4 Trunnions ..	74
6 Strips, 2 in.	56	4 Wheels ..	75
2 " " 2½	57	2 Axles, 3½ in.	77
8 " " 3½	59	2 " " 2½	78
2 " " 4	60	4 Collars ..	82
2 " " 6½	62	8 Washers ..	84
2 " " 8	63		

Cardboard is used for roof, platforms, and steps.

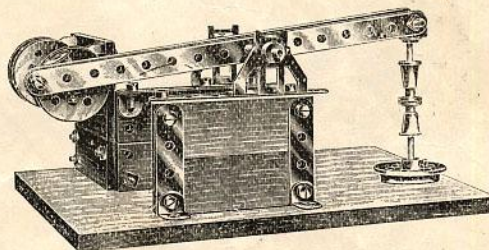


TRAVELLING CRANE No. 134.

No.	No.	No.
2 Rails .. 1	4 Strips, 2½ in.	4 Wheels 75
1 Buffer .. 4	6 " " 3½	2 Axles, 3½ in. 77
6 Slips .. 25	2 " " 4	1 " " 2½ 78
65 Screws 50	2 " " 6½	3 Collars 82
2 Angle Bars, 6½ in.	4 Architraves	1 Washer 84
2 " " 8	65	4 Buffers 85
4 Strips, 2 in.	16 Brackets 66	2 Couplings 86
	3 Plates, 3 x 3 in.	1 Catch 95
		1 Rod .. 96

A piece of wire bent for crank handle.

MECHANICAL HAMMER No. 108.

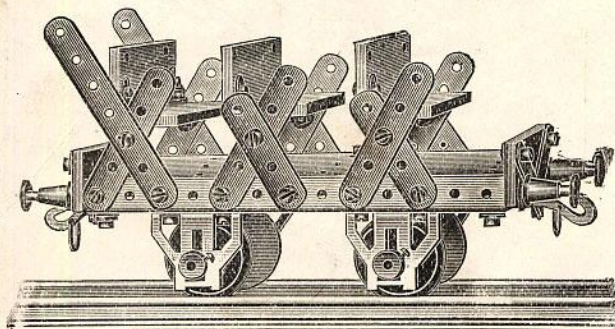


7 Slips, 3 x 3 in.	No. 25	4 Trunnions	No. 74
26 Screws ..	50	4 Wheels ..	75
4 Strips, 2 in.	56	2 Axles, 3½ in.	77
4 " " 2½	57	4 Collars ..	82
2 " " 3½	59	8 Washers ..	84
2 " " 8	63	2 Buffers ..	85
12 Brackets	66	6 Screws ..	97

This model can be worked by a motor.

PRIMUS ENGINEERING

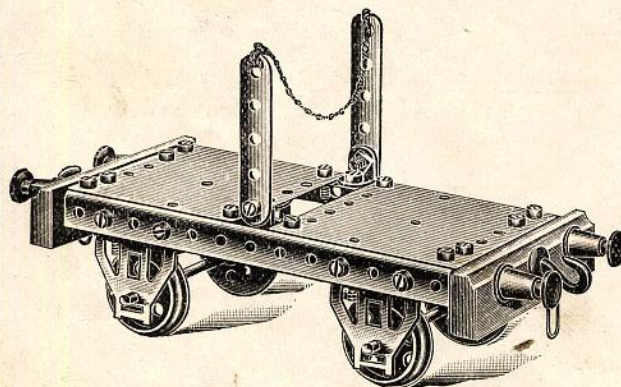
BRITISH MADE



SWITCHBACK CAR No. 115.

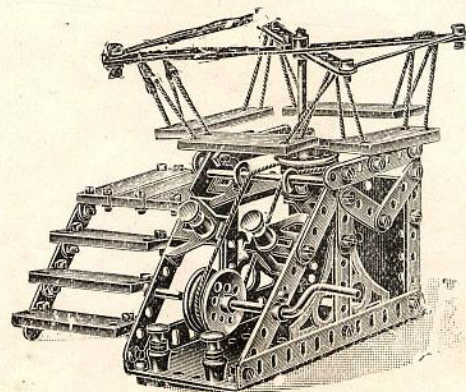
8 Slips ..	No. 25	4 Trunnions ..	No. 74
50 Screws ..	50	4 Wheels ..	75
2 Bars, 6½ in. ..	53	2 Axles, 3½ in. ..	77
8 Strips, 2 in. ..	56	4 Collars ..	82
6 " 2½ " ..	57	12 Washers ..	84
2 " 3½ " ..	59	4 Buffers ..	85
16 Brackets ..	66	2 Couplings ..	86
3 Plates, 3 × 3 in. ..	68		

NOTE.—2 Washers placed over screw that secures brackets to bars.



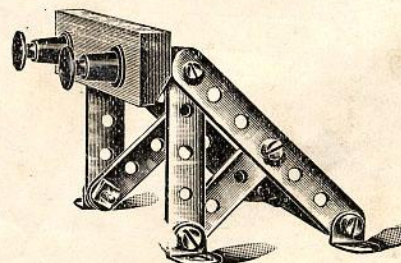
TIMBER TRUCK No. 123.

2 Blocks ..	No. 4	2 Plates, 3 × 3 in. ..	No. 68
32 Screws ..	50	4 Trunnions ..	74
2 Bars, 6½ in. ..	53	4 Wheels ..	75
2 Strips, 2 in. ..	56	2 Axles, 3½ in. ..	77
2 " 2½ " ..	57	4 Buffers ..	85
12 Brackets ..	66	2 Couplings ..	86



ROUNABOUT No. 129.

	No.		No.
11 Slips ..	25	16 Brackets ..	66
61 Screws ..	50	3 Plates, 3 × 3 in. ..	68
2 Bars, 6½ in. ..	53	4 Trunnions ..	74
5 Strips, 2 in. ..	56	4 Wheels ..	75
5 " 2½ " ..	57	2 Axles, 3½ in. ..	77
8 " 3½ " ..	59	4 Collars ..	82
2 " 4 " ..	60	10 Washers ..	84
2 " 8 " ..	63	4 Buffers ..	85
4 Architraves ..	65	2 Rods ..	96

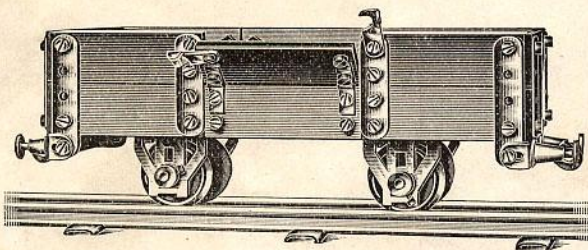


BUFFER END No. 100.

1 Block ..	No. 4
10 Screws ..	50
2 Strips, 2 in. ..	56
3 " 2½ " ..	57
2 " 3½ " ..	59
8 Brackets ..	66
2 Buffers ..	85

PRIMUS ENGINEERING

BRITISH MADE



COAL TRUCK

No. 113.

16	Slips	No. 25
64	Screws	50
2	Bars, 8 in.	54
8	Strips, 2 in.	56
4	" 2½ "	57
2	" 3½ "	59
2	" 4 "	60
12	Brackets	66
3	Plates	68
4	Hinges	72
4	Trunnions	74
4	Wheels	75
2	Axles, 3½ in.	77
4	Collars	82
4	Washers	84
4	Buffers	85
2	Couplings	86
4	Catches	95

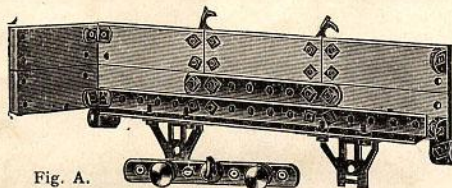


Fig. A.

DIAGRAMS TO SHOW.

- (a) How the sides are fitted up.
(b) How the end is formed.

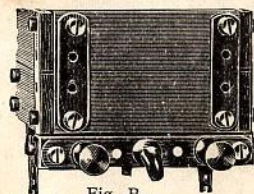


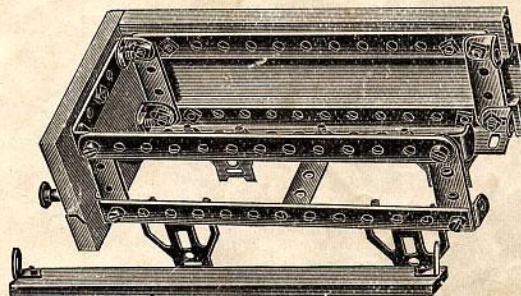
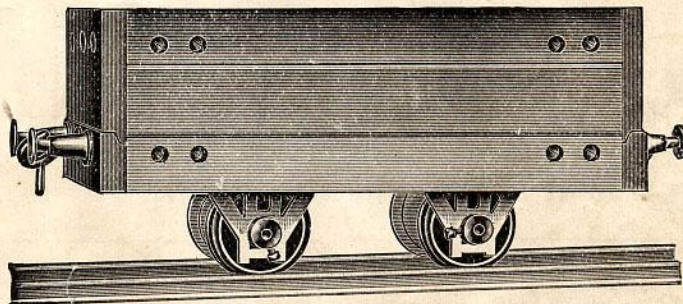
Fig. B.

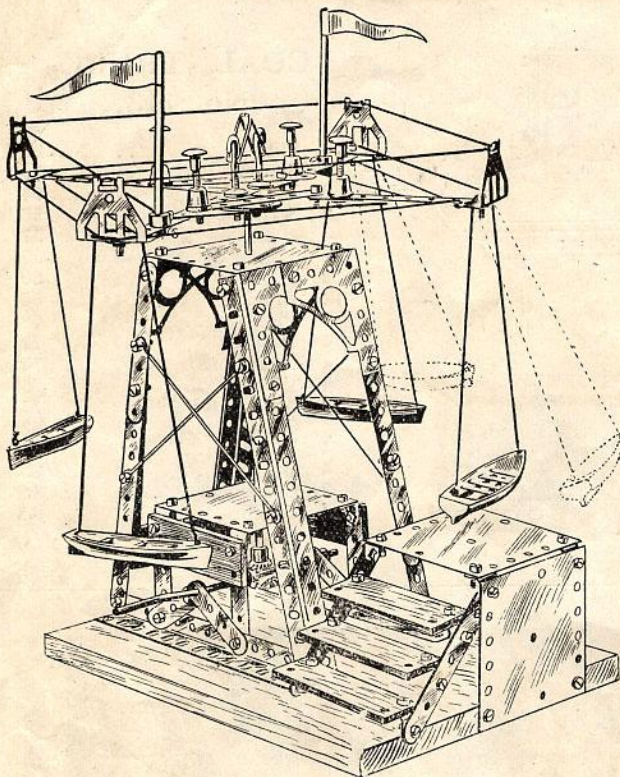
HEAVY GOODS TRUCK No. 116.

ALL WOOD SIDES, ENDS AND
BUFFER BLOCKS.

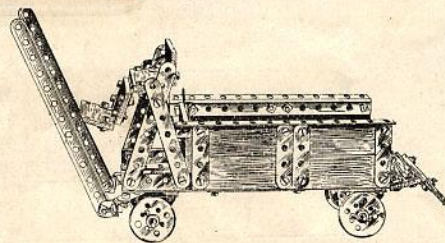
4	Rails	No. 1
2	Blocks	4
1	Floor	9
2	Sides	17
2	Ends	18
36	Screws	50
2	Bars, 6½ in.	53
4	Strips, 2 in.	56
3	" 2½ "	57
2	" 6½ "	62
10	Brackets	66
4	Trunnions	74
4	Wheels	75
2	Axles, 2½ in.	78
4	Collars	82
4	Washers	84
4	Buffers	85
2	Couplings	86

Diagram showing how the frame is made up. The floor has two brackets as shown, and is then placed inside brackets down, and secured by means of the coupling hooks.

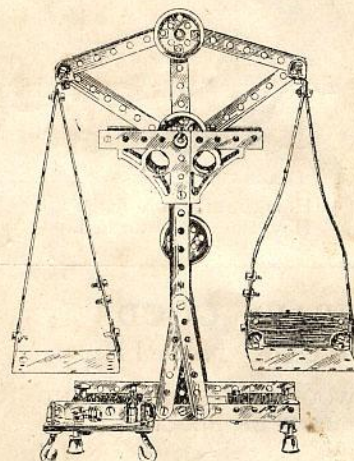




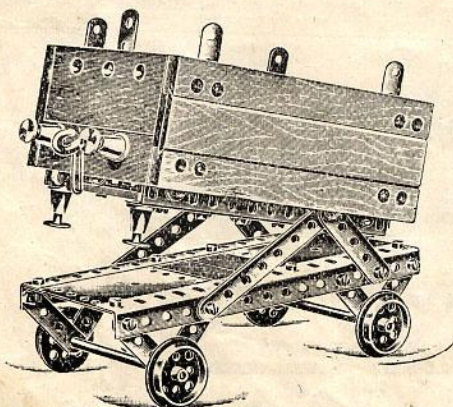
H. MAXIM'S FLYING MACHINE



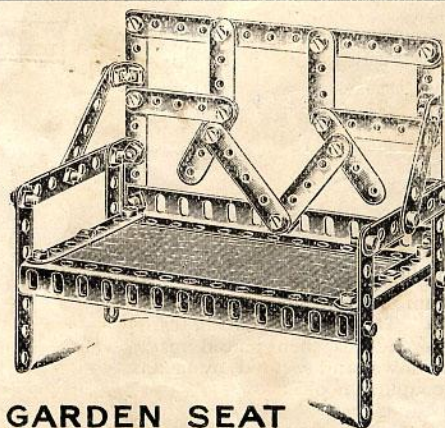
A.S. C. WAGON



JOCKEY SCALES



TIPPING TRUCK



GARDEN SEAT

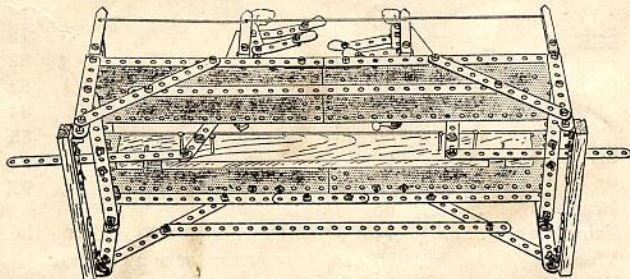
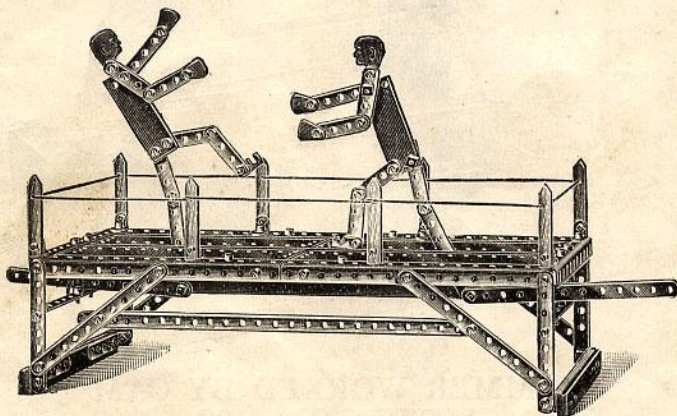
These models are made with

PRIMUS ENGINEERING

Nº3 OUTFIT

BOXERS IN RING No. 204.

A clever working model of two pugilists who actually box.



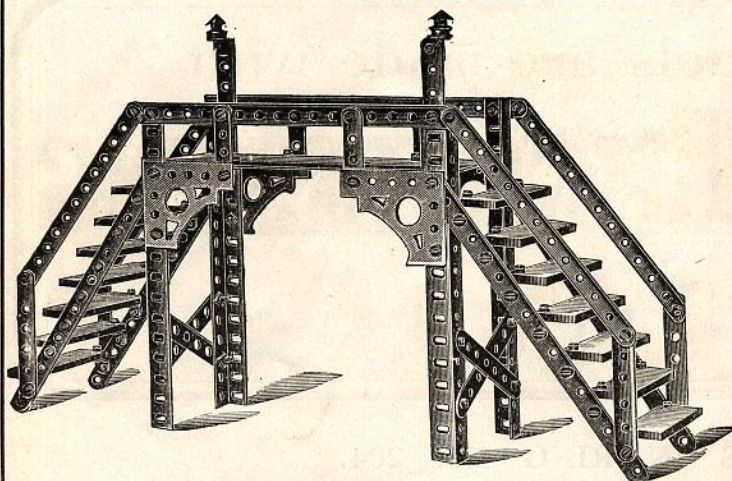
2	Grooved side rails	..	No. 1
8	Posts for railings	..	11
1	Plain platform plank	..	23
2	Wood slips	..	25
85	Screws	..	50
2	Angle bars, 6½ in.	..	53
4	" 8 "	..	54
10	Strips, 2 in.	..	56
6	" 2½ "	..	57
4	" 3½ "	..	59
4	" 4 "	..	60
4	" 5½ "	..	61
4	" 6½ "	..	62
2	" 12½ "	..	64
16	Brackets	..	66
4	Plates, 8 x 3	..	67
2	Trunnions	..	74
6	Washers	..	84
4	Catches	..	95
2	Wood screws	..	97

Heads and boxing gloves can be cut out of cardboard.

The system of operating the boxers is clearly shown in the diagram. Note that it is advisable to use small nails to act as stops to prevent the figures assuming unnatural positions.

PRIMUS ENGINEERING

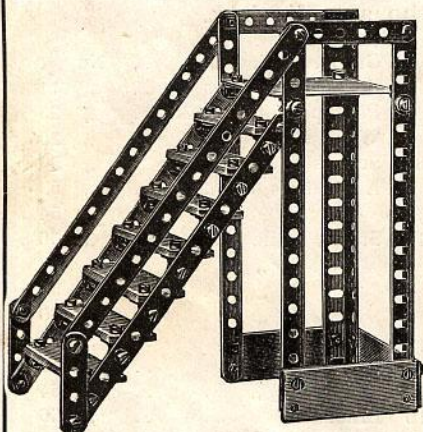
BRITISH MADE



HIGH LEVEL BRIDGE No. 185.

14	Slips	..	..	No. 25
98	Screws	..	..	50
4	Angle bars, 8 in.	..	..	54
6	Strips, 2 in.	..	..	56
4	" 3 "	..	..	58
4	" 3½ "	..	..	59
4	" 5½ "	..	..	61
4	" 6½ "	..	..	62
4	" 8 "	..	..	63
4	Architraves	..	..	65
38	Brackets	..	..	66
1	Plate, 8 x 3 in.	..	..	67
2	Lamps	..	..	87

The side rails of bridge are composed of two 5½-in. strips, bolted together.

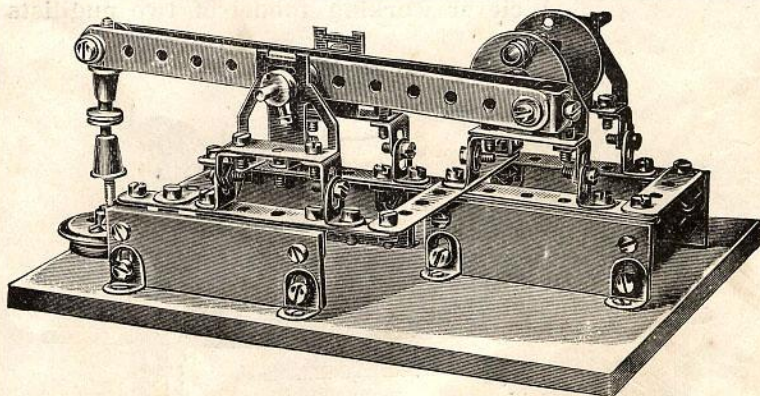


STAIRCASE WITH LANDING No. 186.

10	Slips	..	..	No. 25
50	Screws	..	..	50
2	Angle bars, 8 in.	..	..	54
2	Strips, 2 in.	..	..	56
2	" 3 "	..	..	58
6	" 8 "	..	..	63
18	Brackets	..	..	66
1	Plate, 3 x 3 in.	..	..	68

The brackets fit to the front holes of the No. 25 slips.

Washers are put over the 4 screws that bolt the metal plate in to keep it square.



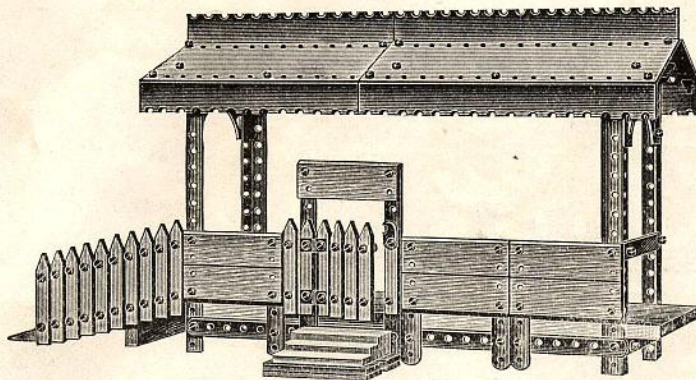
HAMMER WORKED BY CAM ACTION No. 192.

4	Slips	..	No. 25	1	Axle, 2½ in.	No. 78
54	Screws	..	50	6	Collars	82
1	Strip, 2 in.	..	56	1	Handle	83
1	" 2½ "	..	57	10	Washers	84
1	" 3 "	..	58	2	Buffers	85
2	Strips, 4 in.	..	60	1	Knob screw	92
3	" 6½ "	..	62	6	Wood screws	97
28	Brackets	..	66	The knob screw for the eccentric action should be double nutted into the wheel.		
4	Trunnions	..	74			
1	Wheel	..	75			
2	Wheels	..	76			

PRIMUS ENGINEERING

BRITISH MADE

SIDE STATION No. 180.

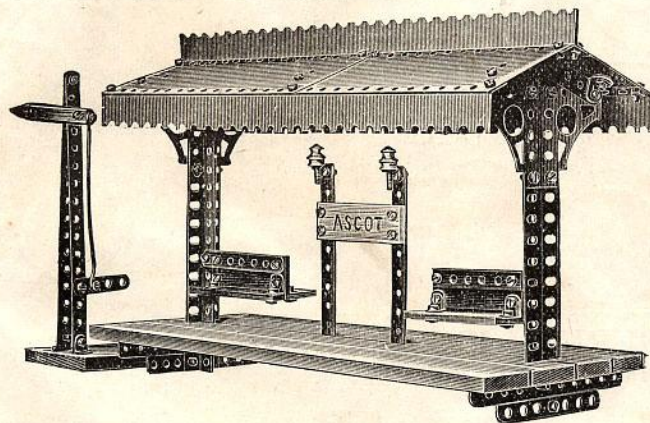
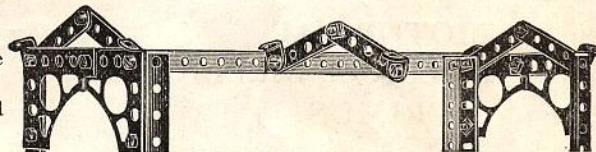


16	Posts	..	..	No. 11
1	Step ..	..	..	21
1	Slope ..	..	..	22
3	Platforms ..	..	..	23
7	Slips ..	..	..	25
88	Screws ..	..	..	50
4	Angle bars, 8 in.	..	..	54
4	Strips, 2 in.	..	..	56
6	" 2½ "	..	..	57
4	" 3½ "	..	..	59
3	" 4 "	..	..	60
4	" 5½ "	..	..	61
3	" 12½ "	..	..	64
7	Brackets ..	..	..	66
4	Plates, 8×3 in.	..	..	67
1	Tile, 6½ in.	..	..	69
1	" 8 "	..	..	70
4	Eaves, 8 in.	..	..	71
2	Hinges ..	..	..	72
1	Catch ..	..	..	95

COMPOSITION OF ROOF FRAME.

1. Study this diagram carefully and note how the brackets are put on—this is important.

2. The whole roof, with ridge tiles and eaves, should be bolted up before it is fitted on the framework.



ISLAND STATION No. 183.

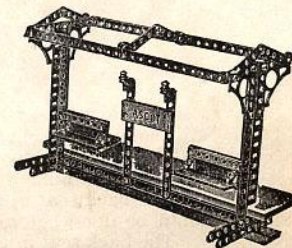
1	Post	..	..	No. 11
4	Platform sides ..	..	..	23
7	Slips ..	..	..	25
72	Screws ..	..	..	50
4	Angle Bars, 8 in.	..	..	54
6	Strips, 2½ in.	..	..	57
4	" 4 "	..	..	60
4	" 5½ "	..	..	61
3	" 12½ "	..	..	64
4	Architraves ..	..	..	65
22	Brackets ..	..	..	66
4	Plates, 8×3 in.	..	..	67
1	Tile, 6½ in.	..	..	69
1	" 8 "	..	..	70
4	Eaves, 8 in.	..	..	71
2	Lamps ..	..	..	87

HOW TO FIT ON THE ROOF.

The 12½ inch strip below the platform must be fitted between the angle bars.

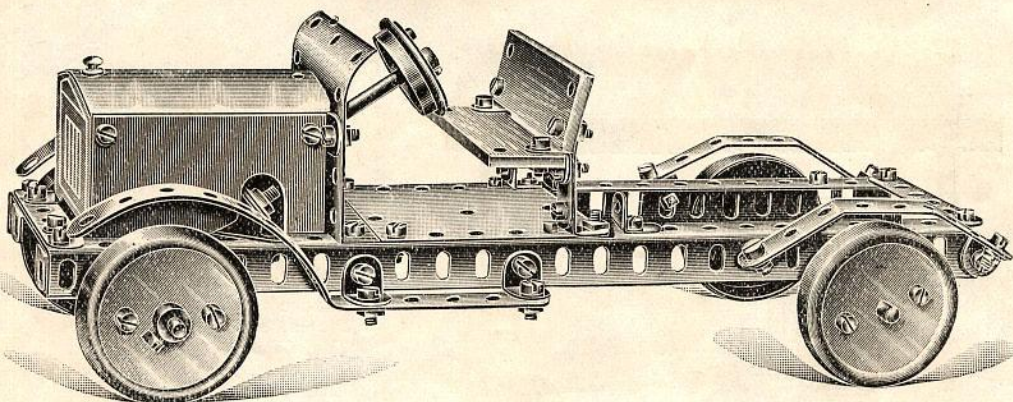
Note position of brackets for securing roof to frame.

The name of station can be painted on a wood slip to suit locality.



PRIMUS ENGINEERING

BRITISH MADE



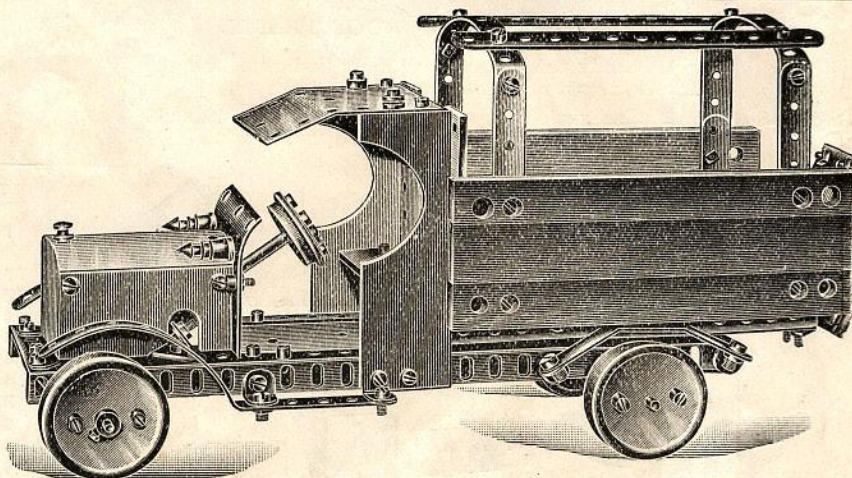
- 2 Slips .
- 71 Screws .
- 2 Strips, 2 x 3
- 4 " 2
- 1 Strip, 3
- 2 Strips, 4
- 2 " 6
- 2 " 8
- 22 Brackets
- 3 Plates, 3 x 3

The wheels
box lids (powder)
No. 68 3 x 3 plates
is also made by

MOTOR-CAR BUILDING With PRIMUS.

A motor-car is perhaps the most interesting and instructive Model that can be built, and this can easily be done by anyone who has become acquainted with the possibilities of Primus Engineering.

The models illustrated were constructed by a lad of thirteen years, following the method adopted in building real cars—first, the chassis (to which any body can be attached); then, as standard types, the W. D. Lorry and a smart coupé. These will give any young engineer the idea; and, having constructed the chassis, he will find it quite a simple matter to erect thereon bodies of any description.



TOURING COUPÉ. No. 211.

PARTS TO MAKE THE BODY.

8	Wood Slips	..	No. 25
34	Screws	..	50
12	Brackets	..	66
2	Plates, 8 x 3	..	67
4	Hinges	..	72
2	Lamps	..	87

EXTRA PARTS REQUIRED.

8	Hinges	..	No. 68
2	Door Handles	..	88
2	Turnbuttons	..	89
16	Screws	..	91

Remove from chassis back mudguards and 3 x 3 plates in the floor, fix 8 x 3 plate to form whole floor, replace seat. The sides and doors of coupé are cut from cardboard, the opposite side being without doors. The top and back is formed out of one 8 x 3 plate; the boot is fixed to the frame by means of brackets.

The back seat in the closed body is fitted to the 8 x 3 plate forming the top and back by two brackets. This should be done before the sides are fitted on.

The back seat in the boot is fitted to the wood slips forming the sides by brackets, the wood slip at back being secured to the base.

PRIMUS ENGINEERING

BRITISH MADE

MOTOR-CAR CHASSIS. No. 209.

PARTS FROM NO. 3 OUTFIT.

No.		No.	EXTRA PARTS REQUIRED.	No.
25	2 Trunnions	74		
50	1 Wheel	75	2 Angle Bars, 12 in.	55
56	4 Wheels	76	1 Collar	82
57	1 Axle Rod, 3½ in.	77	1 1½-in. Cog	160
58	1 " 1½ "	79	1 Bevel Gear	162
60	8 Collars	82	1 Axle, 6 in.	165
62	12 Washers	84	2 Axles, 2½ in.	167
63	4 Buffers	85	1 Collar	168
66	1 Knob Screw	92		
68				

Wheels are constructed with No. 76 pulleys, to which are bolted small tin powder boxes about 2 in. diameter). The bonnet is made by bending a plate for the top and using cardboard for the front and sides. The dash by bending a No. 68 3×3 plate.

W. D. WAGON. No. 210.

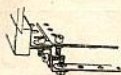
PARTS FROM NO. 3 OUTFIT TO MAKE THE BODY.

No.		No.		No.
4	Grooved Rails	1	2 Strips, 5½ in.	61
2	Truck Sides	17	2 " 6½ "	62
6	Wood Slips	25	2 " 8 "	63
49	Screws	50	4 Brackets	66
2	Angle Bars, 6½ in.	53	1 Plate, 8×3	67
4	Strips, 2 in.	56	2 Hinges	72
2	" 2½ "	57	2 Lamps	87
4	" 3½ "	59		
1	Strip, 4 "	60		

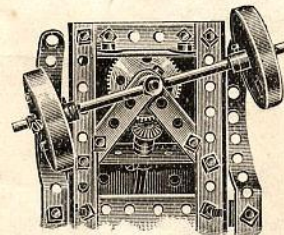
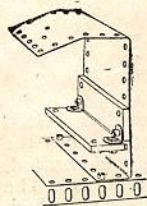
EXTRA PARTS REQUIRED.

2	Angle Bars, 6½ in.	53
1	Strip, 2 in.	57

The driver's seat is made by bending an 8×3 plate thus:—



Cut the sides out of cardboard.
The body overlaps the wheels and is fitted as sketch, using two 6½ in. angle bars on each side.



THE STEERING GEAR.

This must be built on to the frame before the bonnet is fitted.

1. Lay two 2½-in. metal strips at angles as shown, and secure.

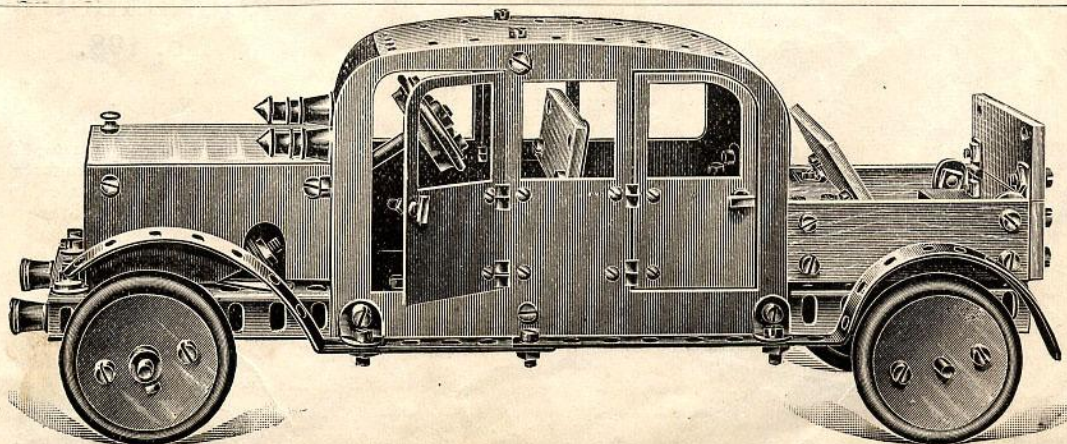
2. Place a 2½-in. metal strip across the base of the triangle, and secure to brackets.

3. Fix No. 160 gear wheel to 1½-in. axle, and pass through the ends of the 2½ in. strips. Place washers on and secure with a double-tapped collar.

4. A 3½-in. axle is then used for the steering pillar, which is passed through the centre hole of the dash plate and the 2½-in. metal strip.

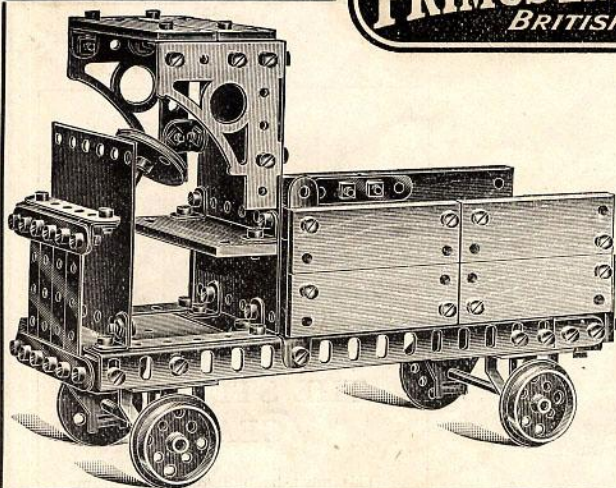
5. Secure with a collar, and use washers to adjust the bevel gear so that it engages in the large cog.

6. Fix the wheels to 2½-in. tapped axles and screw into the double-tapped collar.



PRIMUS ENGINEERING

BRITISH MADE

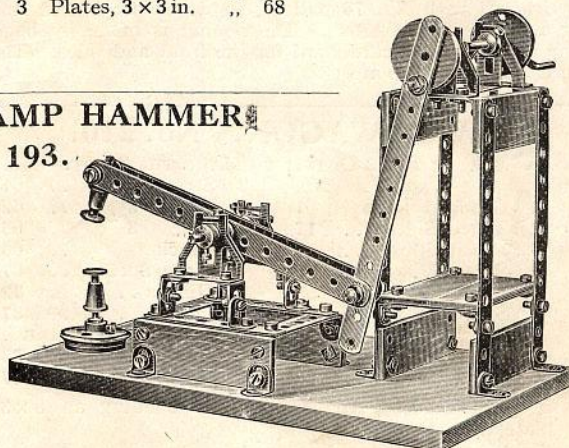


MOTOR TRANSPORT WAGON No. 202.

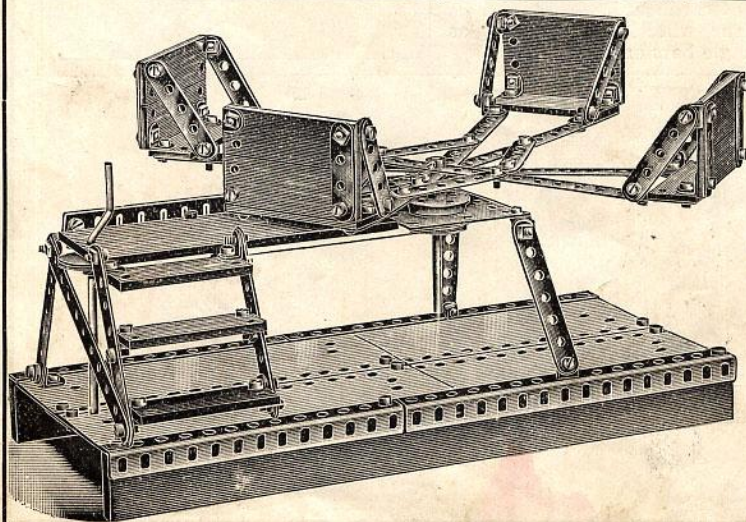
14 Slips	No. 25	2 Hinges	No. 72
72 Screws	50	4 Trunnions	74
2 Angle bars, 8 in. ..	54	4 Wheels	75
8 Strips, 2 in.	56	1 Wheel	76
4 " 2½ "	57	2 Axles, 3½ in. ..	77
4 " 3 "	58	1 " 2½ "	78
2 " 3½ "	59	2 Collars	82
2 Architraves	65		
24 Brackets	66		
1 Plate, 8 × 2 in. ..	67		
3 Plates, 3 × 3 in. ..	68		

8 Slips	No. 25	1 Wheel	No. 75
54 Screws	50	2 Wheels	76
2 Strips, 2 in. ..	56	1 Axle, 2½ in. ..	78
2 " 2½ "	57	6 Collars	82
2 " 3 "	58	1 Handle	83
4 " 5½ "	61	10 Washers	84
3 " 6½ "	62	2 Buffers	85
30 Brackets	66	2 Knob screws ..	92
4 Trunnions	74	8 Wood screws ..	97

STAMP HAMMER No. 193.



FITTING CRANK ARM.—A knob screw should be bolted through the pulley wheel, then a washer put on, then the crank arm and another washer, and lastly double nutted. It should be fitted to the beam in a similar manner. The table below shafting is supported on 2-in. strips, which cannot be seen in the illustration.



ROUNABOUT No. 198.

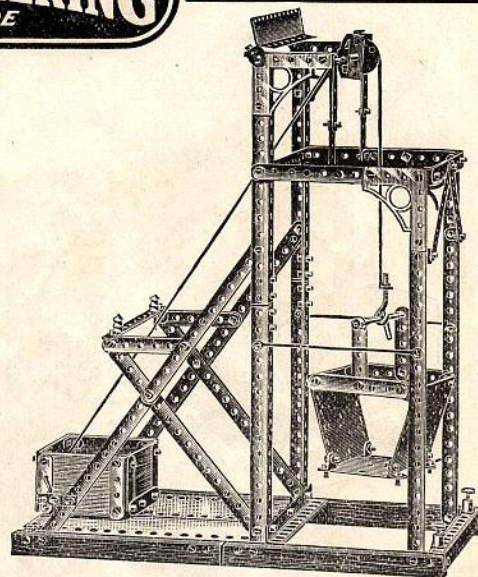
1 Floor	No. 9	1 Strip, 8 in. ..	No. 63
2 Platforms	23	3 Strips, 12 " ..	64
15 Slips	25	38 Brackets	66
95 Screws	50	4 Plates, 8 × 3 in. ..	67
2 Angle bars,		1 Plate, 3 × 3 in. ..	68
6½ in.	53	1 Wheel	75
3 " 8 "	54	3 Wheels	76
8 Strips, 2 in. ..	56	1 Axle, 3½ in. ..	77
8 " 2½ "	57	1 Collar	82
4 " 3 "	58	1 Handle	83
4 " 3½ "	59	2 Washers	84
2 " 4 "	60	6 Wood screws ..	97
3 " 5½ "	61		

PRIMUS ENGINEERING

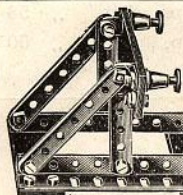
BRITISH MADE

PIT HEADGEAR No. 203.

4	Side rails	..	No. 1	2	Plates, 8 x 3 in.	No. 67
6	Slips	..	" 25	3	" 3 x 3 in.	" 68
114	Screws	..	" 50	1	Tile, 6½ in.	" 69
2	Angle bars, 6½ in.	..	" 53	1	Hinge	" 72
4	" 8 "	..	" 54	2	Trunnions	" 74
8	Strips, 2 in.	..	" 56	1	Wheel	" 76
8	" 2½ "	..	" 57	2	Axles, 3½ in.	" 77
3	" 3 "	..	" 58	4	Collars	" 82
5	" 3½ "	..	" 59	1	Handle	" 83
2	" 4 "	..	" 60	10	Washers	" 84
4	" 5½ "	..	" 61	2	Buffers	" 85
4	" 6½ "	..	" 62	1	Coupling	" 86
5	" 8 "	..	" 63	2	Lamps	" 87
3	" 12½ "	..	" 64	1	Catch	" 95
4	Architraves	..	" 65	2	Rods..	" 96
32	Brackets	..	" 66	2	Wood screws	" 97



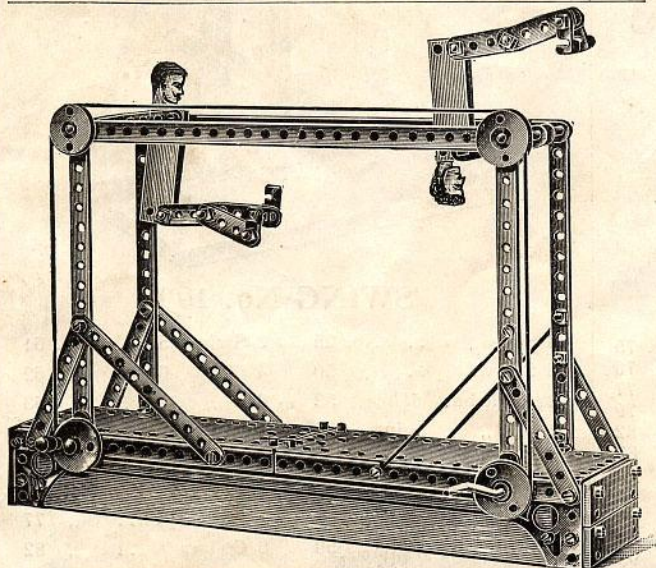
REALISTIC RAILWAY TRACK No. 205.



This illustration shows how to build railway track. Use angle bars for the rails and bolt to No. 25 slips. Use metal strips to form the curves, bolting to the 25 slips by brackets.



Shows how the rails are joined together.



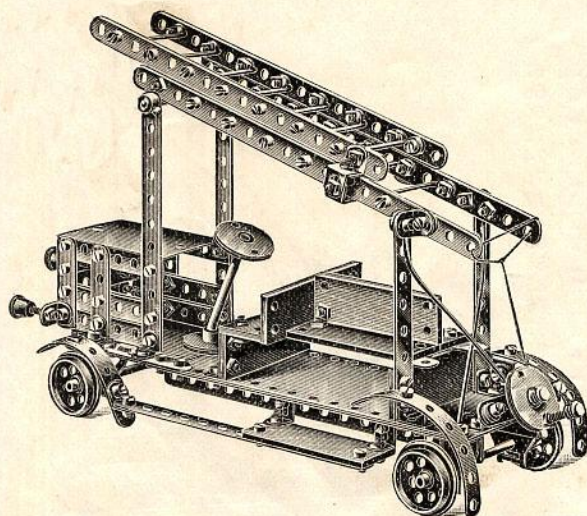
DOUBLE BAR PERFORMERS No. 206.

	No.		No.
2	Platforms	..	23
6	Slips	..	25
53	Screws	..	50
4	Angle bars, 8 in.	..	54
8	Strips, 2 in.	..	56
8	" 2½ "	..	57
2	" 3½ "	..	59
2	" 4 "	..	60
2	" 5½ "	..	61
4	" 8 "	..	63
2	" 12½ "	..	64
4	Architraves	..	65
12	Brackets	..	66
2	Plates, 8 x 3 in.	..	67
4	Wheels	..	76
2	Axles, 3½ in.	..	77
5	Collars	..	82
1	Handle	..	83
8	Washers	..	84
1	Lamp	..	87
1	Knob	..	92
4	Catches	..	95
2	Posts	..	96
4	Wood screws	..	97

Heads of men cut from cardboard. A slit in wood should be made to wedge heads in.

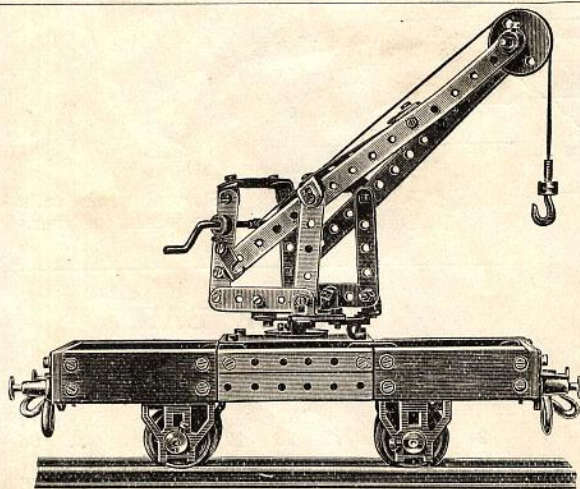
PRIMUS ENGINEERING

BRITISH MADE



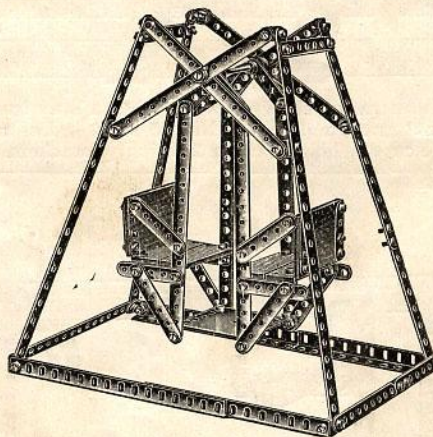
FIRE ESCAPE No. 207.

8 Slips .. No. 25	2 Plates, 3 x 3 in. No. 68
118 Screws .. ,, 50	4 Trunnions .. ,, 74
2 Angle Bars, 8 in. ,, 54	4 Wheels .. ,, 75
10 Strips, 2 in. ,, 56	3 ,, .. ,, 76
3 ,, 2½ ,, ,, 57	2 Axle Rods, 3½ in. ,, 77
6 ,, 3 ,, ,, 58	5 Collars .. ,, 82
2 ,, 3½ ,, ,, 59	8 Washers .. ,, 84
4 ,, 4 ,, ,, 60	4 Buffers .. ,, 85
2 ,, 5½ ,, ,, 61	2 Rods .. ,, 96
2 ,, 6½ ,, ,, 62	Additional Parts.
4 ,, 8 ,, ,, 63	14 Tie Rods .. No. 155
35 Brackets .. ,, 66	2 Strips, 3 in. ,, 58
1 Plate, 8 x 3 in. ,, 67	1 Strip, 4 ,, ,, 60



CRANE TRUCK No. 189.

6 Slips ... No. 25	4 Wheels .. No. 75
63 Screws .. ,, 50	2 ,, .. ,, 76
2 Angle bars, 8 in. ,, 54	2 Axles, 3½ in. ,, 77
5 Strips, 2 in. ,, 56	1 Axle, 1½ ,, ,, 79
8 ,, 2½ ,, ,, 57	8 Collars .. ,, 82
2 ,, 4 ,, ,, 60	1 Handle .. ,, 83
2 ,, 8 ,, ,, 63	12 Washers .. ,, 84
19 Brackets .. ,, 66	4 Buffers .. ,, 85
3 Plates, 3 x 3 in. ,, 68	2 Couplings .. ,, 86
4 Trunnions .. ,, 74	1 Knob screw .. ,, 92
	1 Catch .. ,, 95

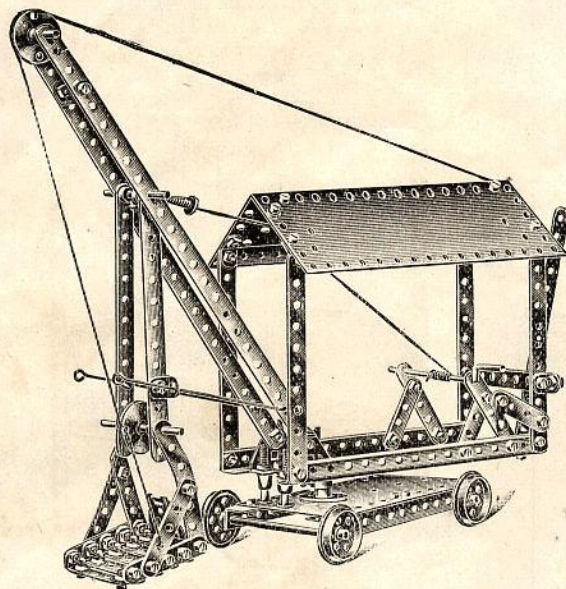


SWING No. 199.

8 Slips .. No. 25	2 Strips, 5½ in. No. 61
85 Screws .. ,, 50	4 ,, 6½ ,, ,, 62
2 Angle bars, 6½ in. ,, 53	6 ,, 8 ,, ,, 63
2 ,, 8 in. ,, 54	3 ,, 12½ ,, ,, 64
8 Strips, 2 in. ,, 56	34 Brackets .. ,, 66
6 ,, 2½ ,, ,, 57	1 Plate, 3 x 3 in. ,, 68
4 ,, 3 ,, ,, 58	1 Axle, 3½ in. .. ,, 77
3 ,, 3½ ,, ,, 59	6 Collars .. ,, 82

PRIMUS ENGINEERING

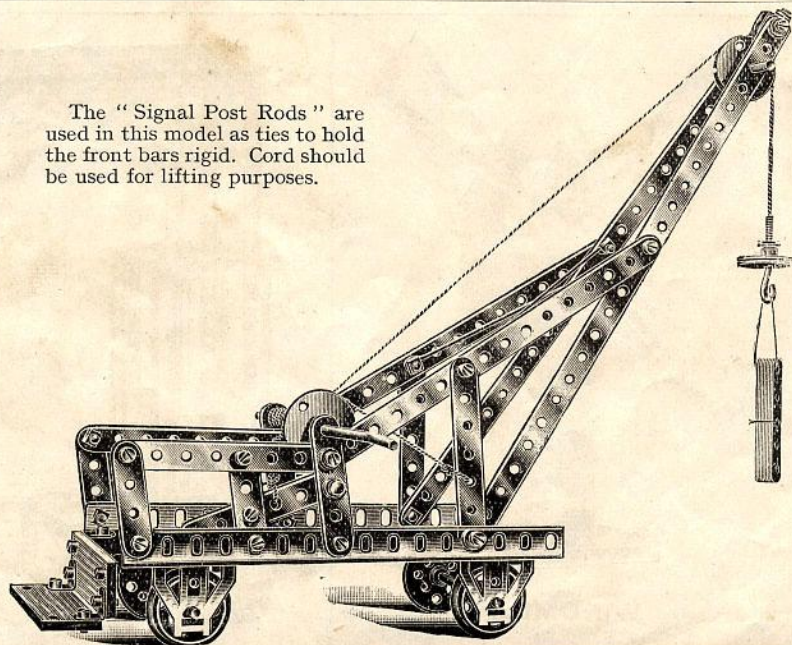
BRITISH MADE



STEAM NAVVY No. 208.

78	Screws	No.	50
2	Angle Bars, $6\frac{1}{2}$ in.	.. .. .	53
2	" 8 "	.. .. .	54
2	" 12 "	.. .. .	55
3	Strips, 2 in.	.. .. .	56
9	" $2\frac{1}{2}$ "	.. .. .	57
2	" $3\frac{1}{2}$ "	.. .. .	59
1	" 4 "	.. .. .	60
4	" $5\frac{1}{2}$ "	.. .. .	61
3	" $6\frac{1}{2}$ "	.. .. .	62
2	" $12\frac{1}{2}$ "	.. .. .	64
18	Brackets .. .. .	.. .. .	66
3	Plates, 8×3 in.	.. .. .	67
2	" 3×3 "	.. .. .	68
4	Trunnions .. .. .	.. .. .	74
4	Wheels .. .. .	.. .. .	75
4	" .. .. .	.. .. .	76
2	Axles, $3\frac{1}{2}$ in.	.. .. .	77
1	" $2\frac{3}{4}$ "	.. .. .	78
1	" $1\frac{1}{2}$ "	.. .. .	79
5	Collars .. .. .	.. .. .	82
1	Handle .. .. .	.. .. .	83
9	Washers.. .. .	.. .. .	84
3	Buffers .. .. .	.. .. .	85
1	Coupling .. .. .	.. .. .	86
1	Catch .. .. .	.. .. .	95
2	Rods .. .. .	.. .. .	96

The "Signal Post Rods" are used in this model as ties to hold the front bars rigid. Cord should be used for lifting purposes.

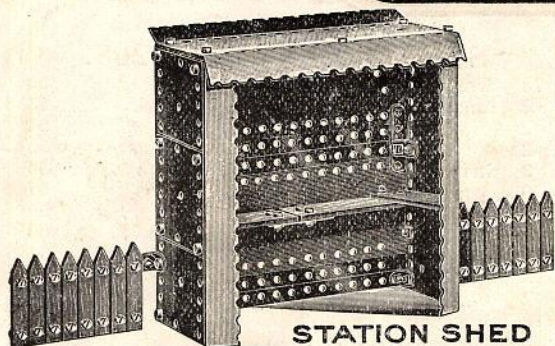


CRANE ON WHEELS No. 190.

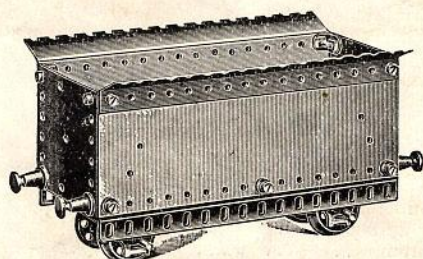
2	Slips, 3×1 in.	No.	25
36	Screws .. .. .	.. .. .	50
2	Angle bars, 8 in.	.. .. .	54
3	Strips, 2 in.	.. .. .	56
2	" $2\frac{1}{2}$ "	.. .. .	57
1	" 3 "	.. .. .	58
2	" $3\frac{1}{2}$ "	.. .. .	59
2	" 4 "	.. .. .	60
2	" 8 "	.. .. .	63
2	" $12\frac{1}{2}$ "	.. .. .	64
7	Brackets .. .. .	.. .. .	66
1	Plate .. .. .	.. .. .	67
4	Trunnions .. .. .	.. .. .	74
4	Wheels .. .. .	.. .. .	75
3	" .. .. .	.. .. .	76
2	Axles, $3\frac{1}{2}$ in.	.. .. .	77
1	" $1\frac{1}{2}$ "	.. .. .	78
1	Collar .. .. .	.. .. .	82
1	Handle .. .. .	.. .. .	83
11	Washers .. .. .	.. .. .	84
1	Coupling .. .. .	.. .. .	85
1	Knob screw .. .. .	.. .. .	92
2	Rods .. .. .	.. .. .	96

PRIMUS ENGINEERING

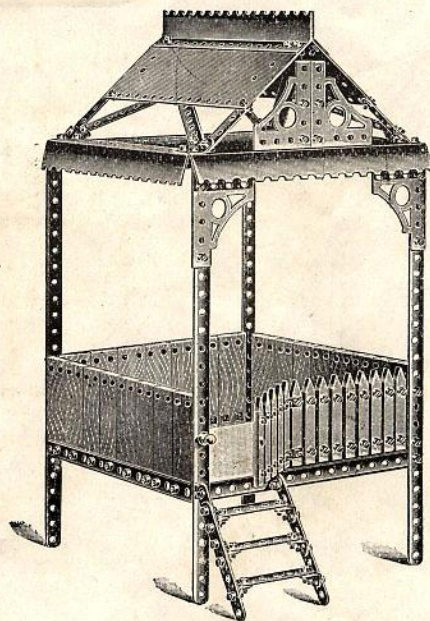
BRITISH MADE



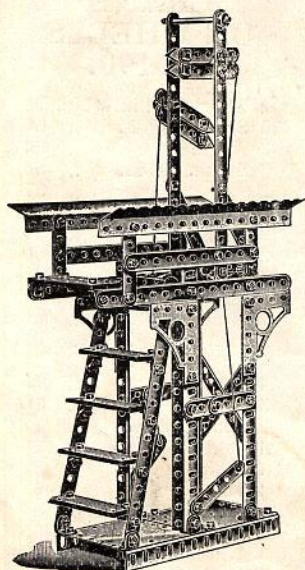
STATION SHED



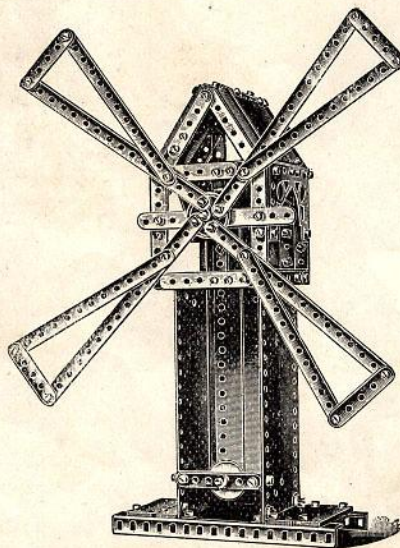
COAL TRUCK



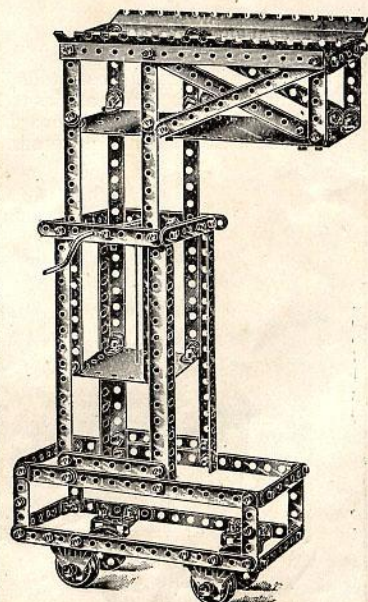
BANDSTAND



SIGNAL GANTRY



WINDMILL



TOWER WAGON

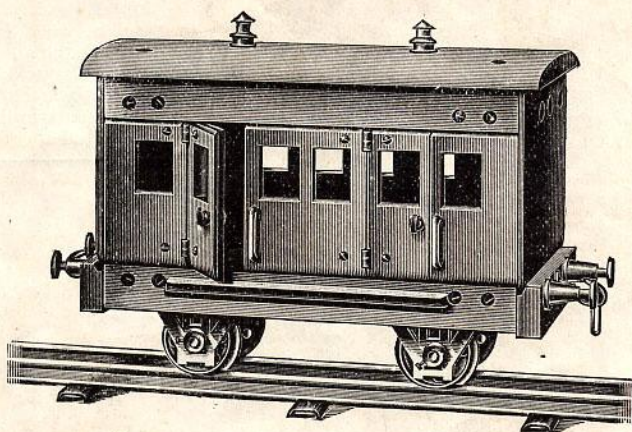
These models are made with

PRIMUS ENGINEERING

Nº4 OUTFIT

PASSENGER COACH, No. 254.

2	Side rails	..	..	..	No. 1
2	"	..	..	..	" 2
2	Carriage ends	..	..	..	" 3
2	Blocks	..	..	..	" 4
2	Windows	..	..	..	" 5
2	"	..	..	..	" 6
4	Doors	..	..	..	" 7
2	Central Windows	..	..	..	" 8
1	Floor	..	..	..	" 9
1	Roof	..	..	..	" 10
40	Screws	..	..	..	50
2	Angle bars, $6\frac{1}{2}$ in.	..	..	..	53
3	Strips, $2\frac{1}{2}$ in.	..	..	..	57
4	" $3\frac{1}{2}$ "	..	..	..	59
2	" $6\frac{1}{2}$ "	..	..	..	62
14	Brackets	..	..	..	66
8	Hinges	..	..	..	73
4	Trunnions	..	..	..	74
4	Wheels	..	..	..	75
2	Axles, $3\frac{1}{2}$ in.	..	..	..	77
4	Collars	..	..	..	82
4	Washers..	..	..	..	84
4	Buffers	..	..	..	85
2	Couplings	..	..	..	86
2	Lamps	..	..	..	87
4	Handles	..	..	..	88
4	Turnbuttons	..	..	..	89
4	Side rails	..	..	..	90
16	Screws and nuts	..	..	..	91



(1) Make up the whole metal frame and be careful in fixing brackets.

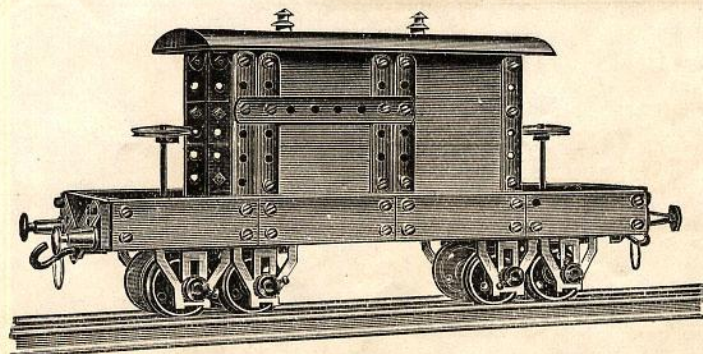
(2) Fit on side rails, one buffer block and one end.

(3) Slide windows and doors in the grooves—put in floor.

(4) Fix on second buffer block and then the second end. The screw for fastening this should be put in, and the nut carefully adjusted inside by opening the two doors and sliding the windows along to give space. The floor is fitted in same as in Heavy Goods Truck, page 27.

PRIMUS ENGINEERING

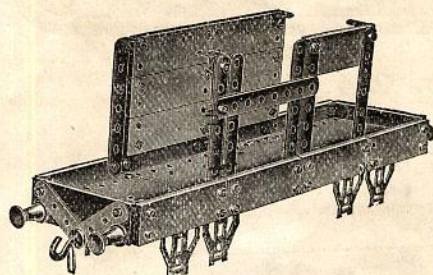
BRITISH MADE



DOUBLE BRAKE

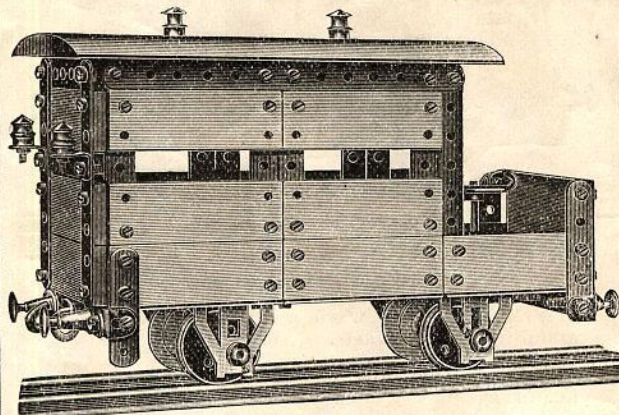
VAN No. 256.

1	Roof	No. 10
22	Wood slips, 3 x 1 in. ..	25
84	Screws	50
2	Angle bars, 12 in. ..	55
4	Strips, 2 in. ..	56
10	" 3½ " ..	59
2	" 4 " ..	60
12	Brackets	66
1	Metal plate, 8 x 3 in. ..	67
2	" plates, 3 x 3 " ..	68
8	Trunnions	74
8	Flanged wheels	75
2	Grooved wheels	76
4	Axle rods, 3½ in. ..	77
2	" 2½ " ..	78
12	Collars	82
12	Washers	84
4	Buffers	85
2	Coupling hooks	86
2	Lamps	87



Fit the No. 25 slips inside the frame; this is important, as the roof screw-holes are 2 in. centres, and by fixing the brackets inside the wood body at back this width will be found exact. Washers are used between the brackets and 3½-in. strips in the front to adjust the width.

The base is composed of one 8-in. plate and two 3-in. plates bolted together.



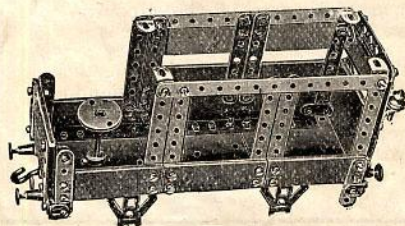
SINGLE BRAKE VAN

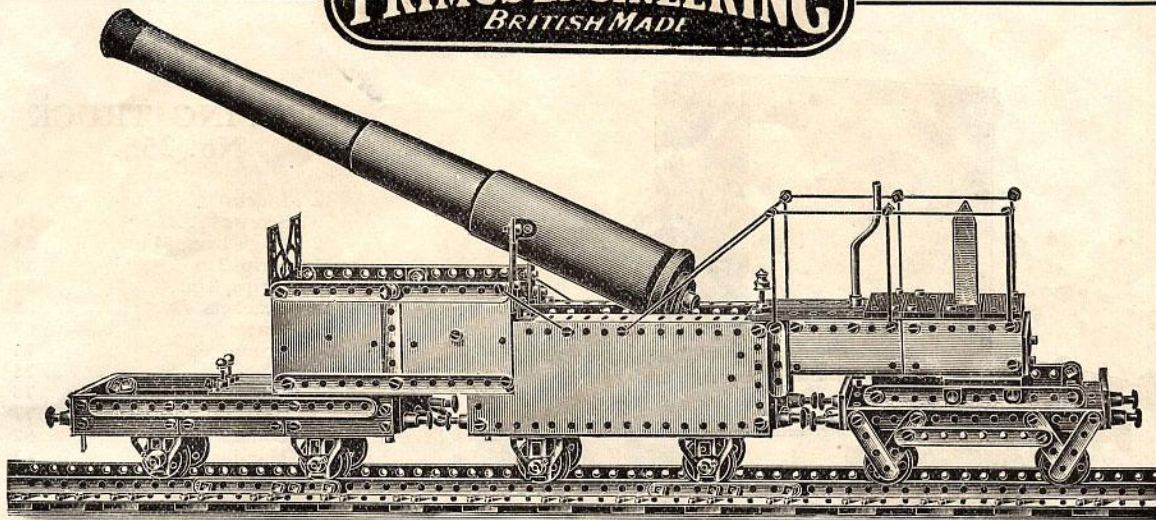
No. 257.

1	Roof	No. 10
19	Wood slips, 3 x 1 in. ..	25
72	Screws	50
2	Angle bars, 8 in. ..	54
4	Strips, 2 in. ..	56
2	" 2½ " ..	57
2	" 3 " ..	58
12	" 3½ " ..	59
3	" 4 " ..	60
2	" 6½ " ..	62
16	Brackets	66
3	Metal plates, 3 x 3 in. ..	68
4	Trunnions	74
4	Flanged wheels	75
1	Grooved wheel	76
2	Axles, 3½ in. ..	77
1	Axle, 2½ " ..	78
6	Collars	82
18	Washers	84
4	Buffers	85
2	Coupling hooks	86
4	Lamps	87

Build the chassis like Truck No. 113 on page 27. The No. 25 slips are fitted OUTSIDE the frame, and washers are used to adjust the brackets to fit roof.

The base plates are bolted on to the angle bars BELOW, and secured by the screws that fix the trunnions.





19	Wood slips, 3 × 1 in.	No. 25	13	Collars	No. 82
139	Screws	50	1	Handle	83
2	Angle bars, 6 in.	53	14	Washers	84
4	" 8 "	54	4	Buffers	85
2	" 12 "	55	3	Couplings	86
10	Metal strips, 2 in.	56	1	Lamp	87
4	" 2½ "	57	3	Knob screws	92
8	" 3 "	58	2	Signal rods	96
2	" 3½ "	59	2	Wood screws	97
2	" 5½ "	61							
4	" 6½ "	62							
2	" 8 "	63							
2	Architraves	65	2	Axles, 3½ in.	77
40	Brackets	66	3	Collars	82
4	Metal plates, 8 × 3 in.	67	8	Buffers	85
11	" 3 × 3 "	68							
8	Trunnions	74							
8	Flanged wheels	75	2	Wire stays	154
4	Pulley wheels	76	10	" "	155
4	Axles, 3½ in.	77	1	Pulley wheel	156

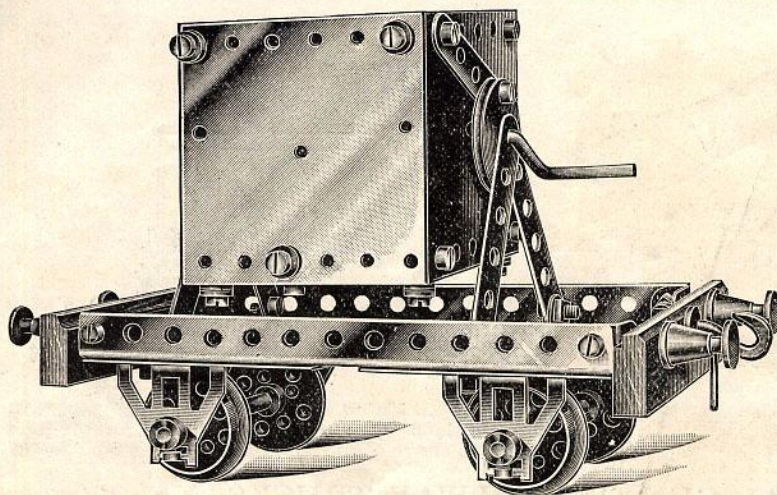
SPECIAL PARTS REQUIRED.

- ## PARTS FOR BUILDING RAILWAY TRACK.

17	Wood slips, 3 x 1 in.	..	..	..	No. 25	4	Angle bars, 12 in.	..	..	..	No. 55
84	Screws	..	..	..	50	4	Metal strips, 4 in.	..	..	..	60
2	Angle bars, 8 in.	..	..	..	54						

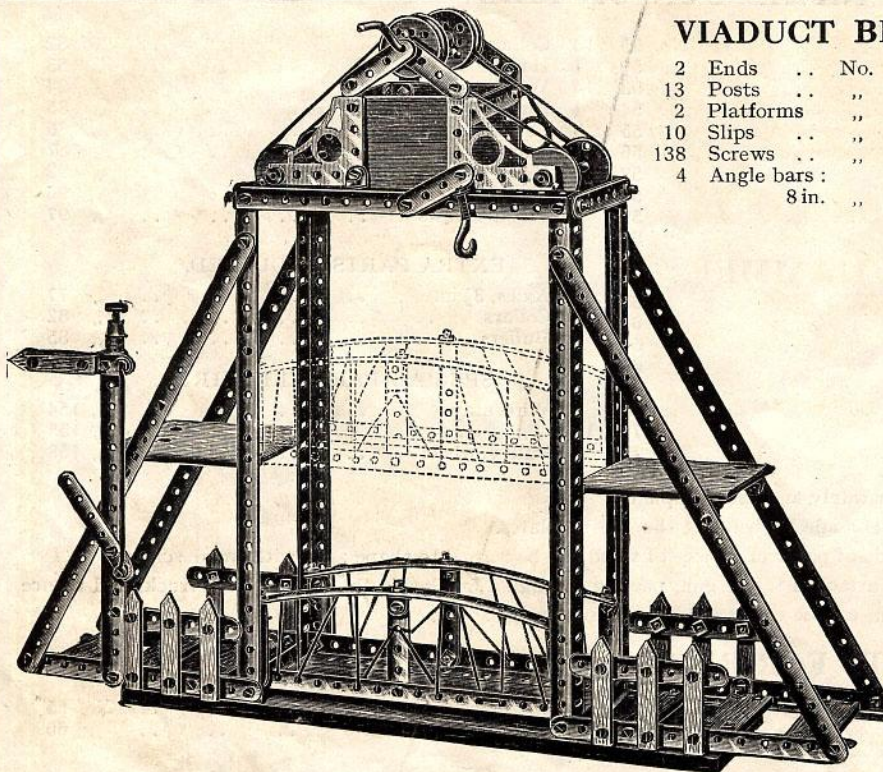
PRIMUS ENGINEERING

BRITISH MADE



TIPPING TRUCK No. 255.

2	Blocks	..	..	No.	4
39	Screws	..	..	..	50
2	Angle bars, 6½ in.	..	..	..	53
1	Strip, 2 in.	..	..	..	56
4	Strips, 3 in.	..	..	..	58
18	Brackets	..	..	..	66
7	Plates	..	..	..	68
4	Trunnions	..	..	..	74
4	Wheels	..	..	..	75
1	Wheel	..	..	..	76
2	Axle rods, 3½ in.	..	..	..	77
5	Collars	..	..	..	82
1	Handle	..	..	..	83
28	Washers	..	..	..	84
4	Buffers	..	..	..	85
2	Couplings	..	..	..	86



VIADUCT BRIDGE No. 268.

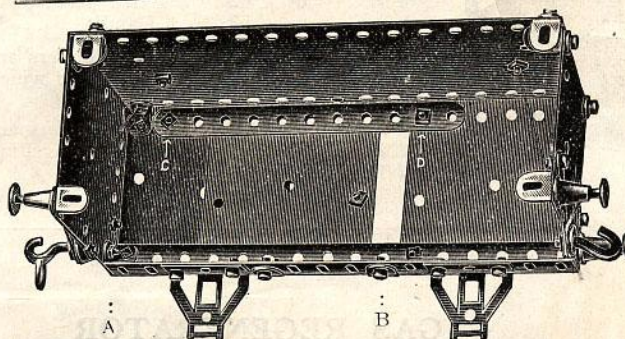
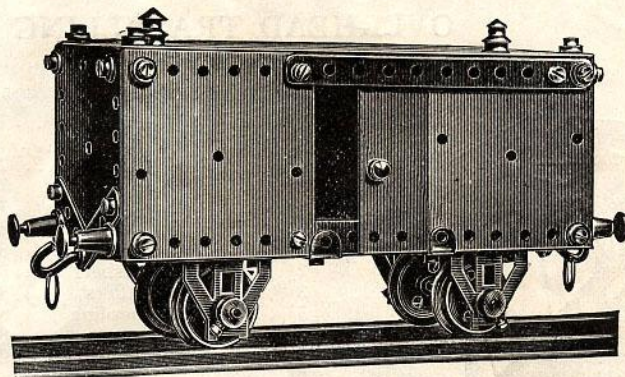
2	Ends	..	No.	3	2	Angle bars :	
13	Posts	..	..	11		12 in.	No. 55
2	Platforms	..	..	23	9	Strips, 2 in.	.. 56
10	Slips	..	..	25	8	.. 2½	.. 57
138	Screws	..	..	50	7	.. 3	.. 58
4	Angle bars :				13	.. 3½	.. 59
	8 in.	..	..	54	3	.. 4	.. 60
					4	.. 5½	.. 61
					4	.. 6½	.. 62
					5	.. 8	.. 63
					3	.. 12½	.. 64
					4	Architraves	.. 65
					27	Brackets	.. 66
					1	Plate	.. 67
					4	Wheels	.. 75
					4	..	.. 76
					2	Axles, 3½ in.	.. 77
					6	Collars	.. 82
					1	Handle	.. 83
					34	Washers	.. 84
					1	Buffer	.. 85
					1	Coupling	.. 86
					1	Rod	.. 96
					4	Wood screws	.. 97

The cord is gripped between the two sets of flanged wheels at the top.

The handle axle must always be turned to the right to raise the bridge.

PRIMUS ENGINEERING

BRITISH MADE



ARMOURED TRUCK No. 261 WITH SLIDING DOOR.

38 Screws .. No. 50	2 Axles, 3½ in. No. 77
2 Angle bars, 8 in. .. 54	4 Collars 82
4 Strips, 2 in. .. 56	34 Washers 84
4 " 5½ " .. 61	4 Buffers 85
16 Brackets .. 66	2 Couplings .. 86
2 Plates 67	2 Lamps 87
8 " 68	2 Knob screws .. 92
4 Wheels 75	

1) Fix Trunnions on angle bars.

(2) Fix up the two ends, fix buffers and a washer beneath each; see that the brackets are right way; put two washers beneath each screw in the corners; then fit 2 in. strips and coupling hooks.

(3) Fit on the plates for one side, and note when fixing the 5½ in. strips one goes inside and one out, and washers must be put between the inside strip, at C and D, and the 3×3 in. plates, so as to allow for the door to slide in, also washers must be put between plates and angle bars at A and B.

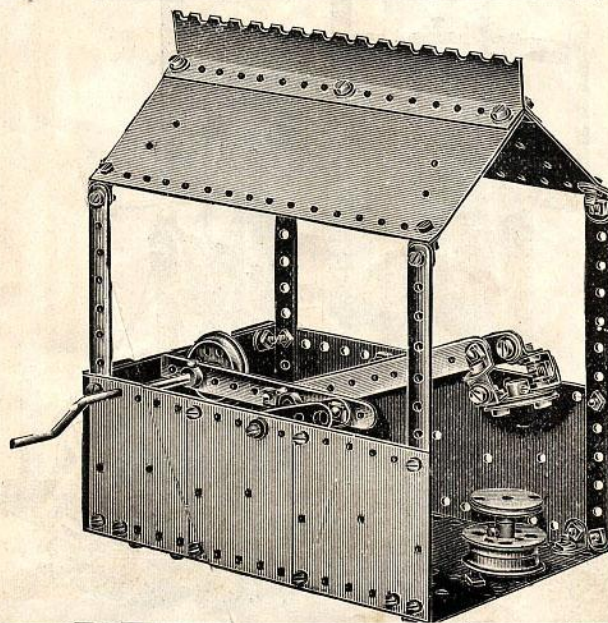
(4) Fix on roof with lamps, and lay floor loose inside.

(5) Fit on second angle bar and remainder of 2-in. side. The second door can then be slipped in the groove and secured by the two angle brackets. Knob screws for handles can be fixed last, and the floor will rest on the screws of buffers. Wheels are fitted as in other models.

AUTOMATIC HAMMER IN SHED No. 265

2 Slips	No. 25
70 Screws	50
5 Strips, 2 in. .. .	56
3 " 2½ "	57
1 Strip, 3 "	58
1 " 3½ "	59
2 Strips, 5½ " .. .	61
4 " 6½ "	62
24 Brackets	66
4 Plates, 8×3 in. .. .	67
7 " 3×3 "	68
1 Ridge, 8 in.	70
3 Wheels	75
2 "	76
1 Axle, 3½ in.	77
1 " 2 "	79
7 Collars	82
1 Axle	83
19 Washers	84

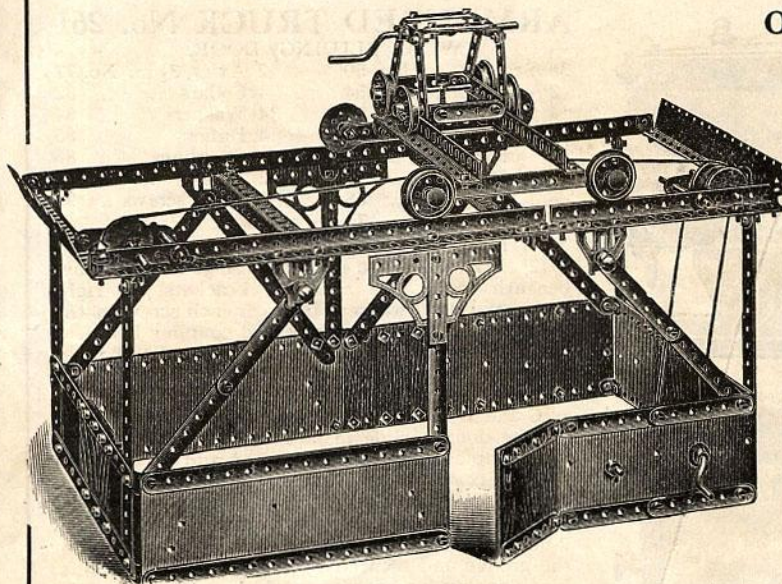
The hammer works on a similar principle to that illustrated on page 25.



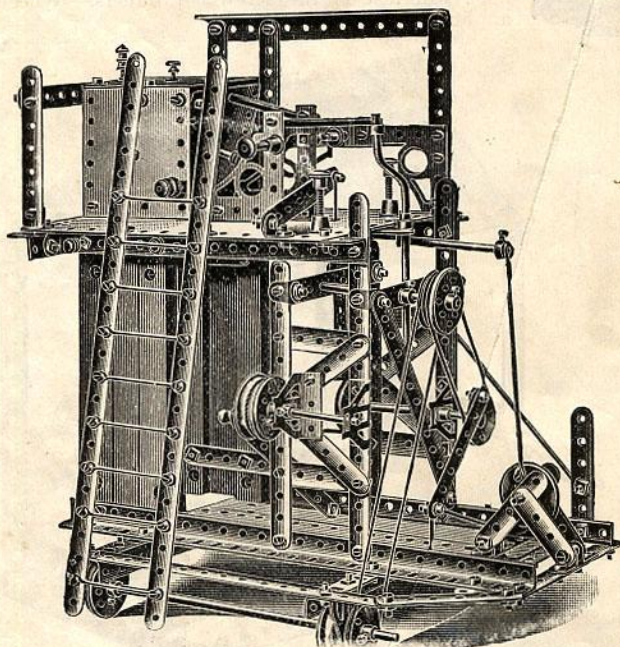
PRIMUS ENGINEERING

BRITISH MADE

OVERHEAD TRAVELLING CRANE No. 267.



No.	No.
12 Slips, 3×1 in. 25	4 Trunnions .. 74
44 Screws .. 50	8 Wheels .. 75
2 Angle bars :	4 " .. 76
$6\frac{1}{2}$ in. .. 53	2 Axles, $3\frac{1}{2}$ in. 77
4 " 8 " .. 54	5 " $2\frac{3}{8}$ in. 78
2 " 12 " .. 55	11 Collars .. 82
10 Strips, 2 in. 56	1 Handle .. 83
8 " $2\frac{1}{2}$ " .. 57	36 Washers .. 84
8 " 3 " .. 58	4 Buffers .. 85
14 " $3\frac{1}{2}$ " .. 59	1 Coupling .. 86
3 " 4 " .. 60	4 Lamps .. 87
4 " $5\frac{1}{2}$ " .. 61	1 Catch .. 95
4 " $6\frac{1}{2}$ " .. 62	Extra part :
6 " 8 " .. 63	1 Handle .. 83
3 " $12\frac{1}{2}$ " .. 64	Collars of buffers are
4 Architraves 65	used on lower winch
31 Brackets .. 66	gear.
2 Plates .. 67	
8 " .. 68	Screws of buffers are
2 Eaves, 8 in. 71	used on travelling
2 Hinges .. 72	trolley.



GAS REGENERATOR

No. 269.

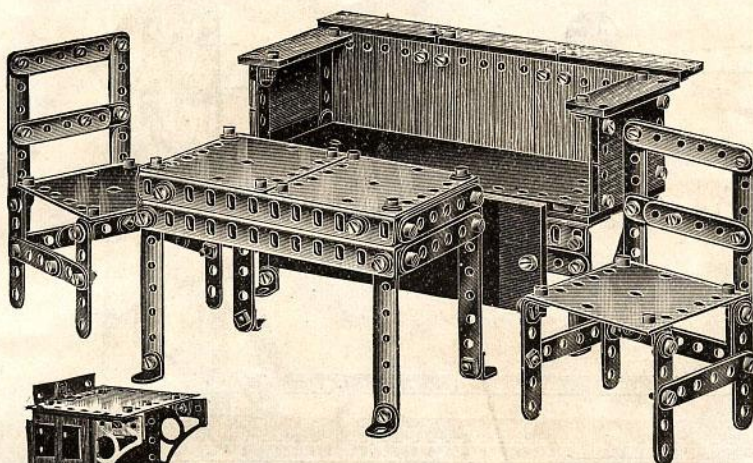
No.	No.
4 Side rails .. 1	4 Plates, 3×3 .. 68
2 Truck sides .. 17	8 Trunnions .. 74
144 Screws .. 50	8 Wheels .. 75
2 Angle bars, $6\frac{1}{2}$ in. 53	4 " .. 76
4 " 8 " .. 54	4 Axles, $3\frac{1}{2}$ in. 77
2 " 12 " .. 55	3 " $2\frac{3}{8}$ " .. 78
9 Strips, 2 in. .. 56	1 " $1\frac{1}{2}$ " .. 79
6 " $2\frac{1}{2}$ " .. 57	16 Collars .. 82
6 " 3 " .. 58	1 Handle .. 83
7 " $3\frac{1}{2}$ " .. 59	13 Washers .. 84
3 " 4 " .. 60	4 Buffers .. 85
4 " $5\frac{1}{2}$ " .. 61	3 Lamps .. 87
3 " $6\frac{1}{2}$ " .. 62	3 Knob screws .. 92
3 " 8 " .. 63	2 Rods .. 96
2 " $12\frac{1}{2}$ " .. 64	6 Wood screws .. 97
4 Architraves .. 65	Extra parts :
31 Brackets .. 66	4 Collars .. 82
4 Plates, 8×3 .. 67	2 Axles, 8 in. .. 166

PRIMUS ENGINEERING

BRITISH MADE

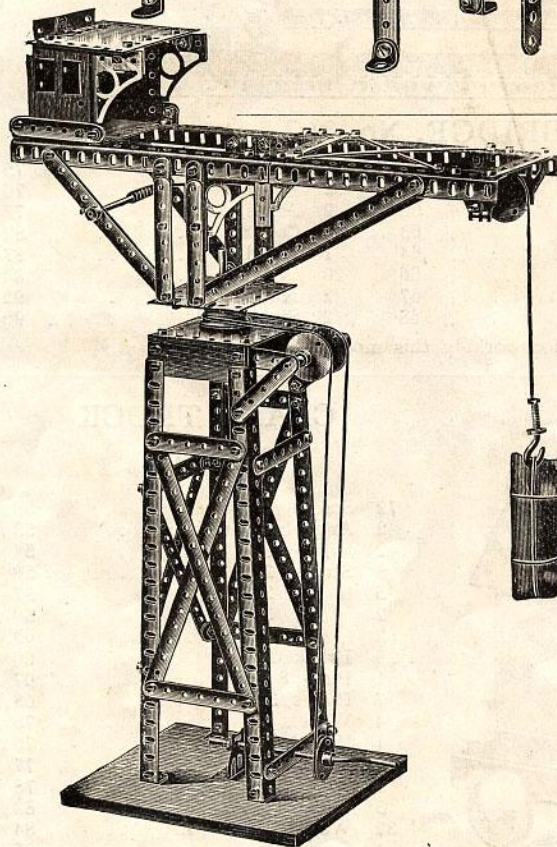
SMOKING LOUNGE No. 309.

LOUNGE TABLE AND TWO
CHAIRS.



1	Floor ..	No.	9
17	Slips, 3 x 1 in. ..	"	25
124	Screws ..	"	50
4	Angle bars ..	"	52
2	" ..	"	54
16	Strips, 2 in. ..	"	56
15	" 2½ " ..	"	57
8	" 3 " ..	"	58
5	" 3½ " ..	"	59
3	" 4 " ..	"	60
48	Brackets ..	"	66
1	Plate ..	"	67
4	Plates ..	"	68
24	Washers ..	"	84

GIRDER CRANE No. 266.



2	Windows ..	No.	8
2	Slips. ..	"	25
86	Screws ..	"	50
2	Angle bars, 6½ in. ..	"	53
2	" 8 " ..	"	54
2	" 12 " ..	"	55
6	Strips, 2 in. ..	"	56
2	" 2½ " ..	"	57
4	" 3 " ..	"	58
8	" 3½ " ..	"	59
3	" 4 " ..	"	60
2	" 5½ " ..	"	61
2	" 6½ " ..	"	62
6	" 8 " ..	"	63
2	" 12½ " ..	"	64
4	Architraves ..	"	65
26	Brackets ..	"	66
7	Plates ..	"	68
3	Trunnions ..	"	74
4	Wheels ..	"	75
3	" ..	"	76
3	Axles, 3½ in. ..	"	77
11	Collars ..	"	82
1	Handle ..	"	83
20	Washers ..	"	84
1	Coupling ..	"	86
4	Screws and nuts ..	"	91
2	Rods ..	"	96
6	Wood screws ..	"	97

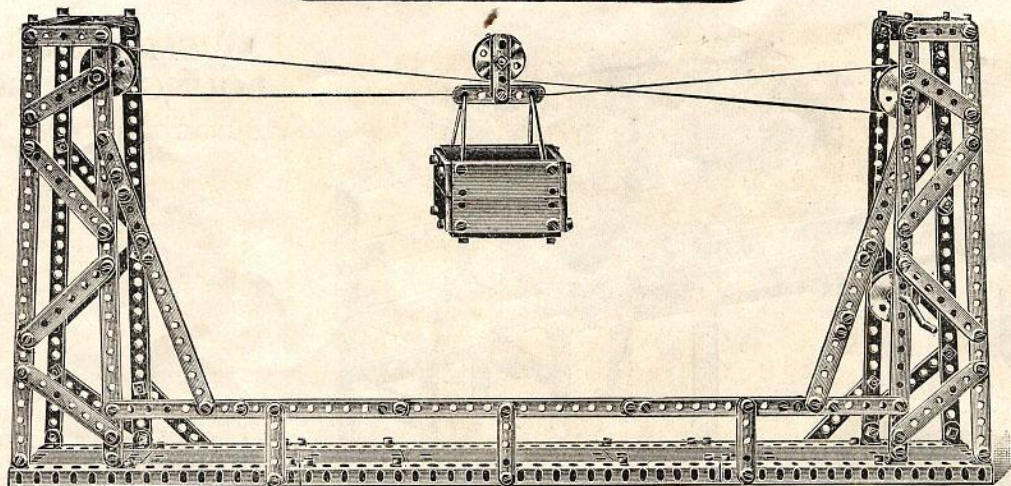
EXTRA PART REQUIRED.

1	Handle ..	"	83
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This model should be fixed to a wood base by means of the No. 97 wood screws as shown in sketch.

PRIMUS ENGINEERING

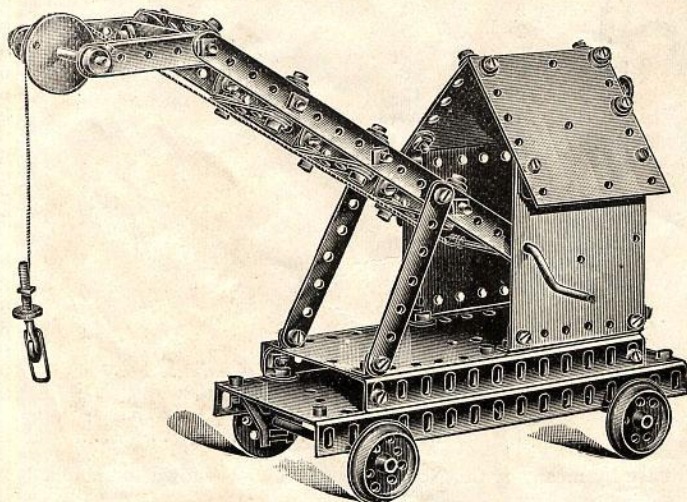
BRITISH MADE



TRANSPORTER BRIDGE, No. 262.

11	Slips, 3 × 1 in.	..	No. 25	3	Strips 4 in.	..	No. 60	4	Wheels	..	No. 75	
144	Screws	..	..	50	3	" 5½ "	..	61	2	"	..	76
4	Angle bars, 8 in.	..	..	54	3	" 6½ "	..	62	2	Axles, 3½ in.	..	77
2	" " 12 in.	..	..	55	6	" 8 "	..	63	8	Collars	..	82
12	Strips, 2 in.	..	..	56	3	" 12 "	..	64	1	Handle	..	83
8	" 2½ "	..	..	57	28	Brackets	..	66	20	Washers	..	84
7	" 3 "	..	..	58	3	Plates, 8 × 3 in.	..	67	2	Knob screws	..	92
14	" 3½ "	..	..	59	2	" 3 × 3 "	..	68	2	Signal rods	..	96

Use cord as illustration for working this model



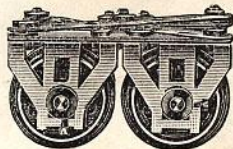
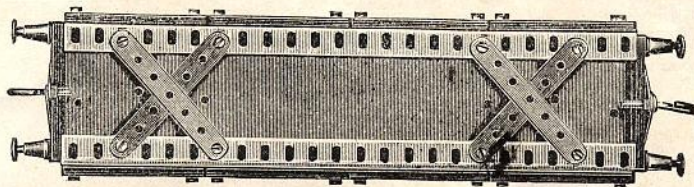
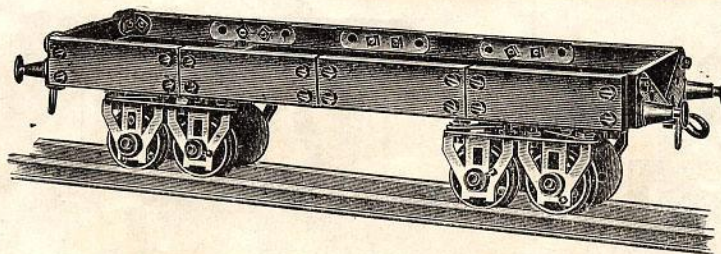
CRANE TRUCK No. 315.

72	Screws	..	..	No. 50
2	Angle bars, 6½ in.	..	..	53
8	" " 8 "	..	..	54
2	Strips, 2 in.	..	..	56
5	" 2½ "	..	..	57
2	" 3½ "	..	..	59
2	" 8 "	..	..	63
39	Brackets	..	..	66
1	Plate, 8 × 3 in.	..	..	67
7	Plates, 3 × 3 in.	..	..	68
4	Wheels	..	..	75
1	Wheel	..	..	76
2	Axles, 3½ in.	..	..	77
1	" 2½ "	..	..	78
3	Collars	..	..	82
32	Washers	..	..	84
1	Coupling	..	..	86

Use cord as illustration.

PRIMUS ENGINEERING

BRITISH MADE



ELEVATION OF BOGIE.



BOGIE FRAME

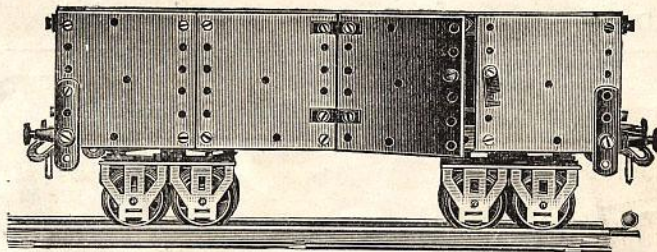
The Bogie frame is made up with two 3 in. strips for sides and two 3½ in. strips for cross-pieces; washers are set on the screws at opposite corners to level up the cross-strips.

It is secured to the truck through the central holes of end base plates by means of knob screws double natted, and washers are used on the screws to provide clearance for the truck to swing on the bogies.

EXPRESS TRUCK ON BOGIES. No. 258

10	Slips, 3 × 1 in.	..	No. 25
64	Screws	..	50
2	Angle bars, 12 in.	..	55
10	Strips, 2 in.	..	56
4	" 3	..	58
8	" 3½	..	59
8	Brackets	..	66
1	Plate	..	67
2	Plates	..	68
8	Trunnions	..	74
8	Wheels	..	75
4	Axles, 2½ in.	..	78
8	Collars	..	82
22	Washers	..	84
1	Buffers	..	85
2	Couplings	..	86
2	Knobs	..	92

EXPRESS COAL TRUCK ON BOGIES. No. 259.



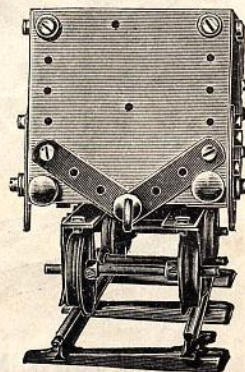
The ends should be fitted to the angle bars first and the sides fitted on afterwards.

The base and frames are made up as on the Express bogie truck.

Washers are again important, and two each are used on the corner screws at ends and lower screws at sides, beneath the buffers and on the knob screws and bogie frames.

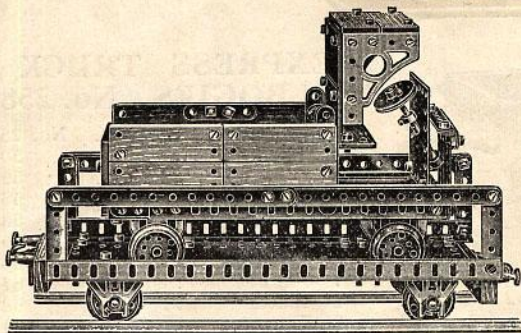
ALL METAL.

66	Screws	..	No. 50	8	Flanged wheels	..	No. 75
2	Angle bars, 12 in.	..	55	3	Axles, 2½ in.	..	78
10	Metal strips, 2 in.	..	56	8	Collars	..	82
4	" 3	..	58	28	Washers	..	84
8	" 3½	..	59	4	Buffers	..	85
8	Brackets	..	66	2	Coupling hooks	..	86
14	Metal plates, 3 × 3 in.	..	68	2	Knob screws	..	92
4	Straight hinges	..	72	2	Catches	..	95
8	Trunnions	..	74				

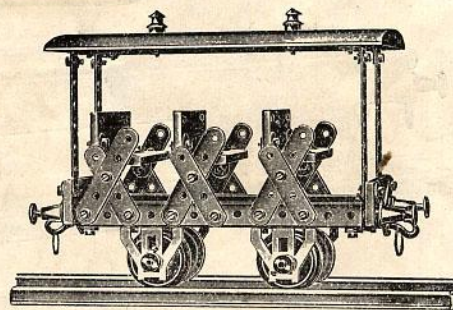


PRIMUS ENGINEERING

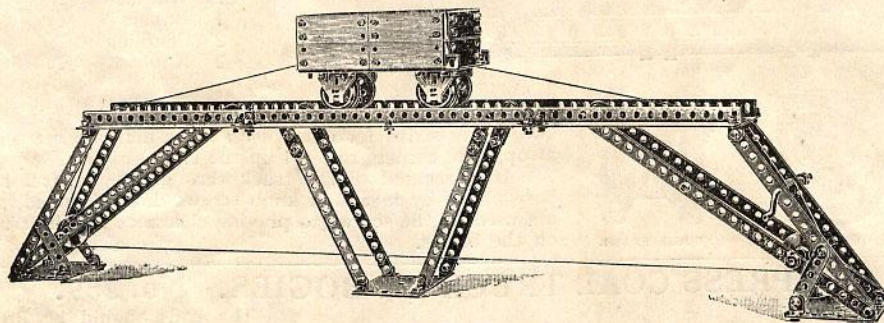
BRITISH MADE



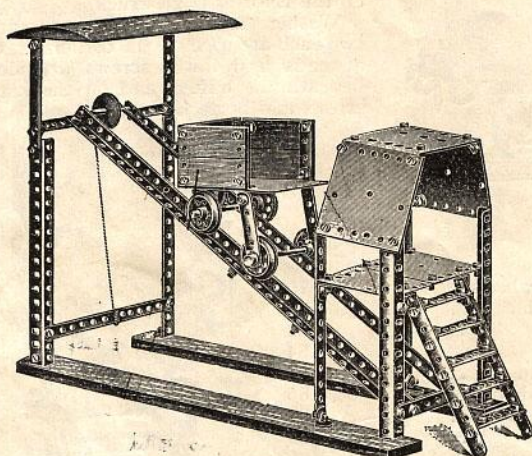
MOTOR TRANSPORT TRUCK



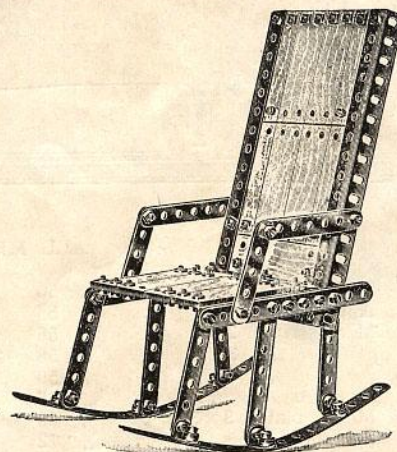
TOURIST CAR



OVERHEAD TRAVELLING TRUCK



MOUNTAIN RAILWAY



ROCKING CHAIR

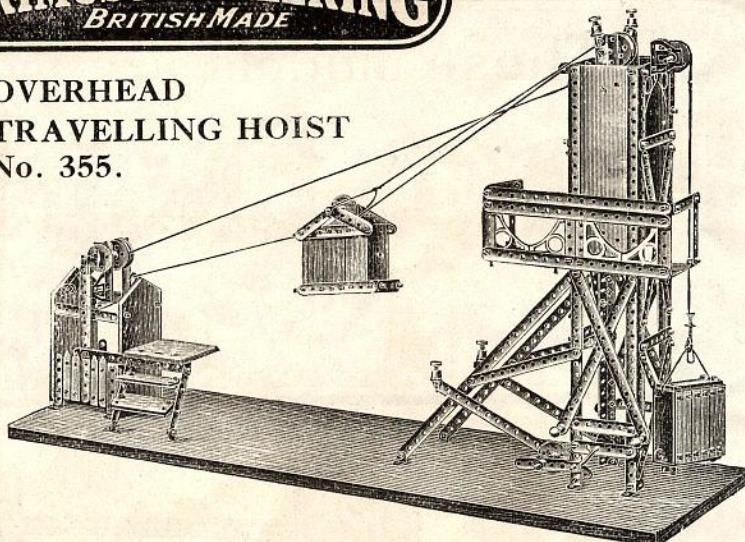
MODELS MADE WITH NO. 4 OUTFIT.

PRIMUS ENGINEERING

BRITISH MADE

1	End ..	..	No. 3
4	Posts ..	..	11
2	Sides ..	..	14
21	Slips ..	..	25
234	Screws ..	..	50
2	Angle bars, 6 in.	..	52
2	" " 6½ "	..	53
5	" " 8 "	..	54
2	" " 12 "	..	55
16	Strips, 2 in.	..	56
16	" 2½ "	..	57
8	" 3 "	..	58
14	" 3½ "	..	59
2	" 4 "	..	60
4	" 5½ "	..	61
3	" 6½ "	..	62
12	" 8 "	..	63
2	" 12½ "	..	64
8	Architraves ..	..	65
61	Brackets ..	..	66
3	Plates ..	..	67
7	Trunnions ..	..	74
8	Wheels ..	..	75
2	" ..	..	76
2	Axles, 3½ in.	..	77
3	" 2½ "	..	78
11	Collars ..	..	82
1	Handle ..	..	83
29	Washers ..	..	84

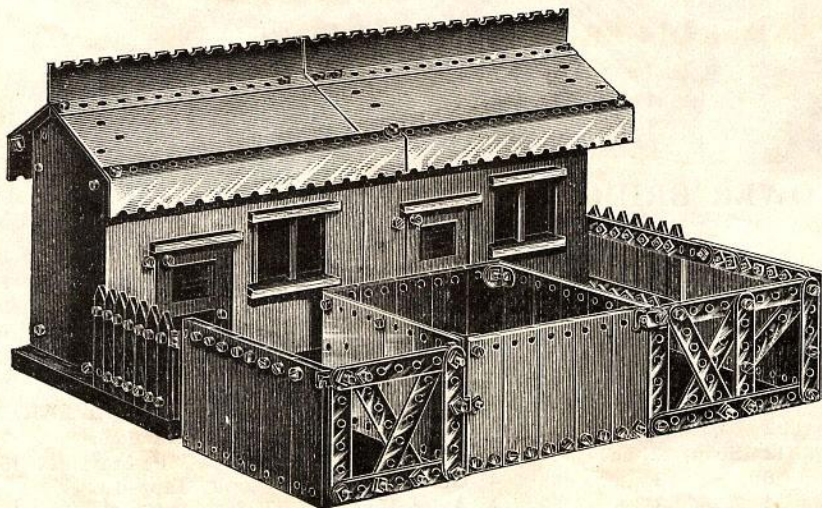
OVERHEAD TRAVELLING HOIST No. 355.



6	Buffers ..	..	No. 85	12	Wood screws ..	..	No. 97
3	Couplings ..	..	" 86	Extra parts required :			
2	Catches ..	..	" 95	11	Wood screws ..	..	97
2	Rods ..	..	" 96				

Cord is gripped between flanged wheels for pulley ropes.
This model should be screwed to a long wood plank.

BUNGALOW. No. 300.

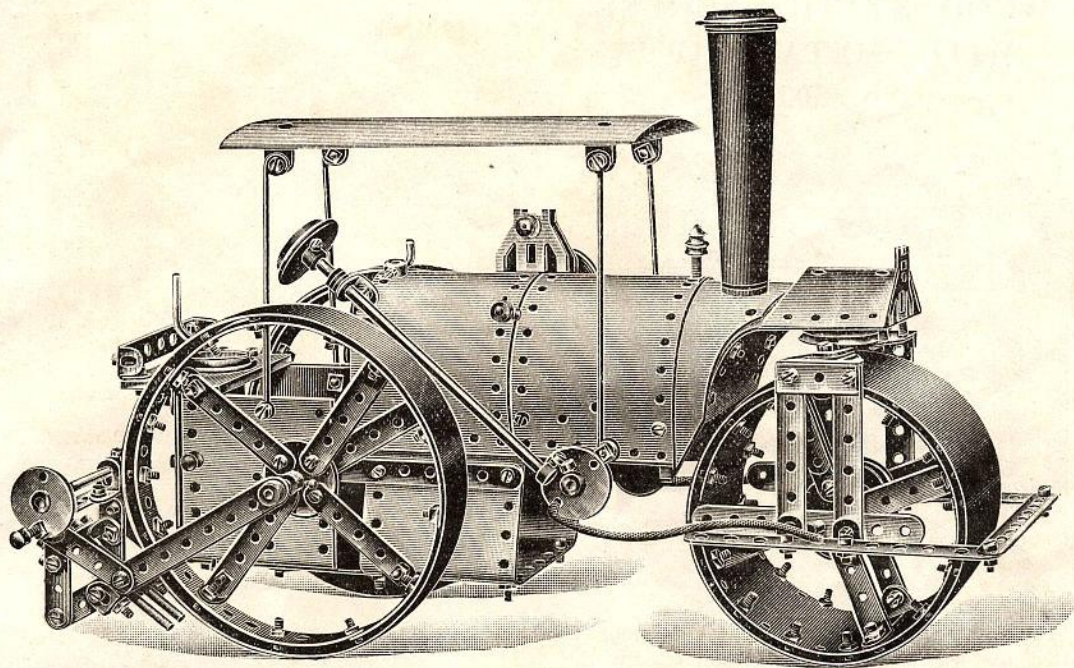


The back of the bungalow is made of metal plates bolted together ;
the roof is built and laid on last.

14	Posts ..	..	No. 11
2	Sides ..	..	14
4	Sills ..	..	15A
2	Sashes ..	..	15D
1	Front ..	..	15F
1	Back ..	..	15B
2	Doors ..	..	16
2	Lintels ..	..	16A
1	Baseboard ..	..	19
25	Slips ..	..	25
2	Glasses ..	..	26
150	Screws ..	..	50
7	Strips, 2 in.	..	56
3	" 2½ "	..	57
5	" 3 "	..	58
14	" 3½ "	..	59
1	" 4 "	..	60
16	Brackets ..	..	66
8	Plates, 8 x 3 "	..	67
4	" 3 x 3 "	..	68
1	Tile, 6½ in.	..	69
1	" 8 "	..	70
4	Eaves, 8 in.	..	71
6	Hinges ..	..	72
6	Washers ..	..	84
2	Handles ..	..	88
4	Knobs ..	..	92
2	Catches ..	..	95

PRIMUS ENGINEERING

BRITISH MADE



RUSTON STEAM ROLLER, WITH SCARIFIER. No. 360.

1	Carriage roof	..	..	..	No. 10	8	Flanged wheels	..	..	..	No. 75
2	Wood slips	..	..	..	25	3	Grooved wheels	..	..	..	76
150	Screws	..	..	..	50	1	Axle rods, $3\frac{1}{2}$ in.	..	..	..	77
2	Angle bars, 6 in.	..	..	..	52	3	" $2\frac{3}{4}$ "	..	..	..	78
16	Metal strips, 2 in.	..	..	..	56	13	Collars	..	..	..	82
9	" $2\frac{1}{2}$ "	..	..	..	57	1	Handle axle	..	..	..	83
5	" 3 "	..	..	..	58	18	Washers	..	..	..	84
3	" $3\frac{1}{2}$ "	..	..	..	59	1	Buffer	..	..	..	85
2	" 4 "	..	..	..	60	2	Lamps	..	..	..	87
3	" $5\frac{1}{2}$ "	..	..	..	61	1	Carriage side rail	..	..	..	90
4	" $6\frac{1}{2}$ "	..	..	..	62	3	Knob screws and nuts	..	..	..	92
5	" 8 "	..	..	..	63	4	Signal post rods	..	..	..	96
59	Brackets	..	..	..	66	3	Wood screws	..	..	..	97
7	Plates, 8×3 in.	..	..	..	67						
6	" 3×3 in.	..	..	..	68						
8	Trunnions	..	..	..	74						

EXTRA PART.

1 Axle, 6 in.

Fit up front roller first; for this two 8×3 plates are used. Roll them round a large bottle or jar to make them form circle, lapping two holes each end. Screw on outside fittings to boiler before fixing back plate; screw piece of wood on to bracket at front of boiler to slip funnel on.

Roller and wheels are covered with cardboard.

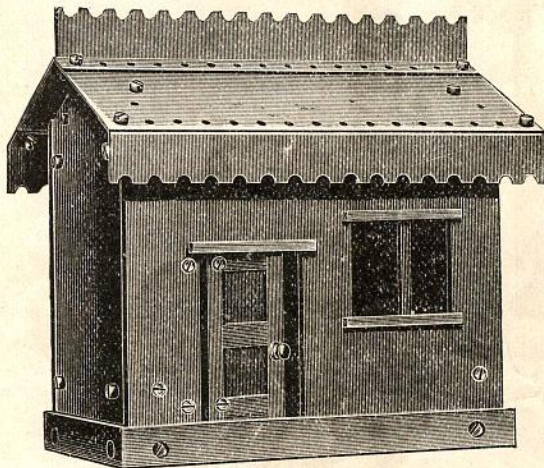
To make funnel to shape screw a piece of round wood underneath wheel at top.

The model is $11\frac{1}{2}$ in. high, $17\frac{1}{2}$ in. long, 8 in. wide.

PRIMUS ENGINEERING

BRITISH MADE

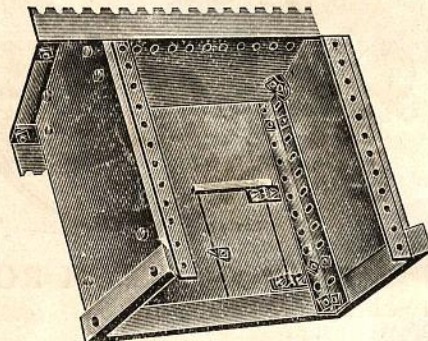
WOOD STATION HOUSE WITH METAL ROOF No. 302.



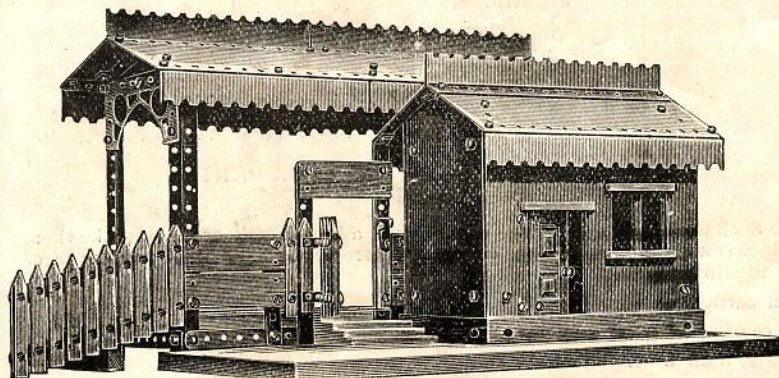
The drawing clearly shows the way the house is fitted up. The glass for windows is pushed in the grooves before the front and back are screwed to the angle bars.

Fit up the base frame and ends first.

2	House, front rails	..	..	..	No. 12
2	„ side rails	..	..	..	13
2	„ sides	..	..	..	14
4	Window sills	..	..	..	15A
1	House, back	..	..	..	15B
1	„ front	..	..	..	15F
2	Sash bars	..	..	..	15D
2	Doors	..	..	..	16
2	Lintels	..	..	..	16A
2	Window glass	..	..	..	26
48	Screws	..	..	..	50
4	Angle bars, 6 in.	..	..	..	52
4	Brackets	..	..	..	66
2	Plates, 8 x 3 in.	..	..	..	67
1	Ridge, 8 in.	..	..	..	70
2	Eaves, 8 in.	..	..	..	71
4	Hinges	..	..	..	72
2	Knob screws	..	..	..	92
2	Turn buttons	..	..	..	93



STATION AND STATION HOUSE. No. 306.



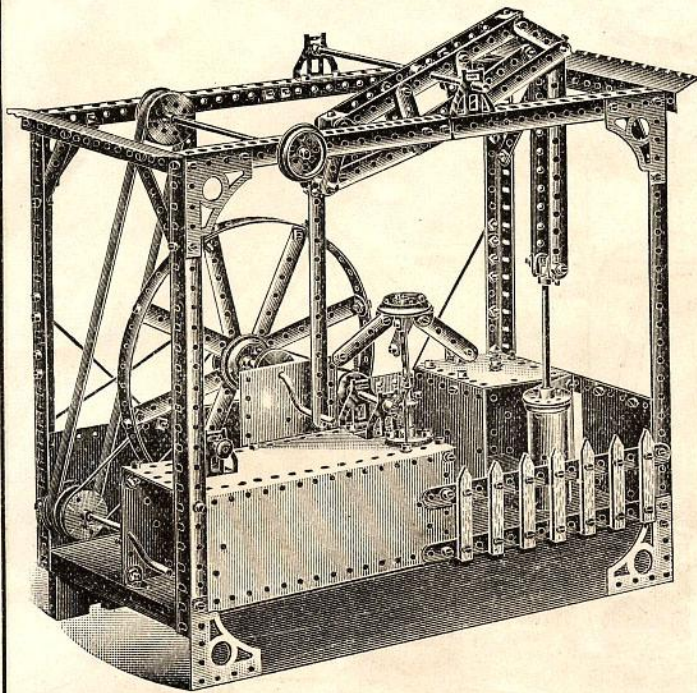
The parts for this handsome model are given on page 31, and only large wood base board is added to the model to make it a complete station.

Signal Posts, Lamps and High Level Bridge can be added as desired.

With the No. 5 Outfit, the Carriage, Goods Truck, Side Station, Station House, and High Level Bridge with Covered Gallery can be made up complete at the same time, as well as many other smaller models.

PRIMUS ENGINEERING

BRITISH MADE



BEAM ENGINE

	No.	No. 357.	No.
7 Posts ..	11	2 Eaves, 8 in.	71
1 Baseboard ..	19	4 Trunnions..	74
2 Platforms ..	24	8 Wheels ..	75
166 Screws ..	50	4 " ..	76
4 Angle bars :		1 Axle, 3½ in.	77
6 in. . .	52	1 " 1½ " ..	79
4 " 8 " ..	54	13 Collars ..	82
2 " 12 " ..	55	1 Handle ..	83
14 Strips, 2 in.	56	44 Washers ..	84
5 " 2½ " ..	57	2 Buffers ..	85
3 " 3 " ..	58	2 Lamps ..	87
11 " 3½ " ..	59	4 Connecting	
3 " 5½ " ..	61	rods	96
3 " 6½ " ..	62	8 Wood screws	97
2 " 8 " ..	63	Extra parts—	
3 " 12½ " ..	64	2 Axle rods, 1½ "	79
6 Architraves	65	1 Handle axle, 1½ "	83
30 Brackets ..	66	1 Wheel ..	158
5 Plates, 8 × 3"	67	2 Bevel gears	162
9 " 3 × 3"	68	2 8 in. Axles	166

To make wheel join two 12½-in. strips and leave five holes between each spoke.
Fit governors, etc., to 8 × 3 in. plate before fixing plate on.

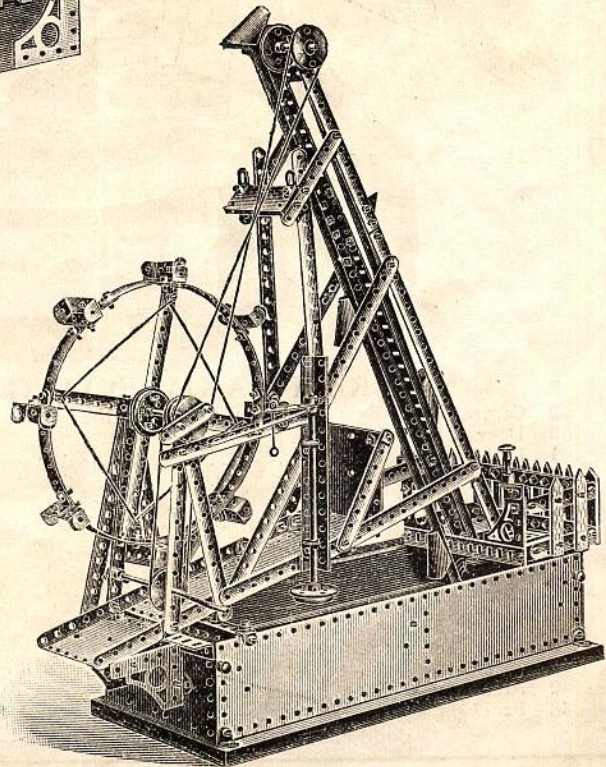
DREDGER WATERWHEEL AND PILE DRIVER No. 358.

	No.		No.
16 Posts ..	11	61 Brackets ..	66
1 Baseboard ..	19	5 Plates, 8 × 3 in.	67
2 Plain platforms	23	6 " 3 × 3 "	68
2 Fitted ..	24	2 Trunnions ..	74
5 Slips ..	25	6 Wheels ..	75
170 Screws ..	50	4 " ..	76
4 Angle bars, 6 in.	52	2 Axles, 3½ in.	77
3 " " 6½ "	53	1 " 1½ " ..	79
2 " " 12 " "	55	7 Collars ..	82
14 Strips, 2 in.	56	1 Handle Axle	83
8 " 2½ " ..	57	13 Washers ..	84
4 " 3 " ..	58	2 Buffers ..	85
9 " 3½ " ..	59	2 Screws and nuts	91
3 " 4 " ..	60	2 Knobs ..	92
4 " 5½ " ..	61	4 Signal Post rods	96
4 " 6½ " ..	62	15 Wood screws	97
4 " 8 " ..	63	Extra parts—	
2 " 12½ " ..	64	3 Wood screws	97
4 Architraves ..	65		

Base should be built first, and then wheels for bottom of band should be fitted in. Four 3½ strips, three 8 in strips and one 2 in. strip are used to construct wheel.

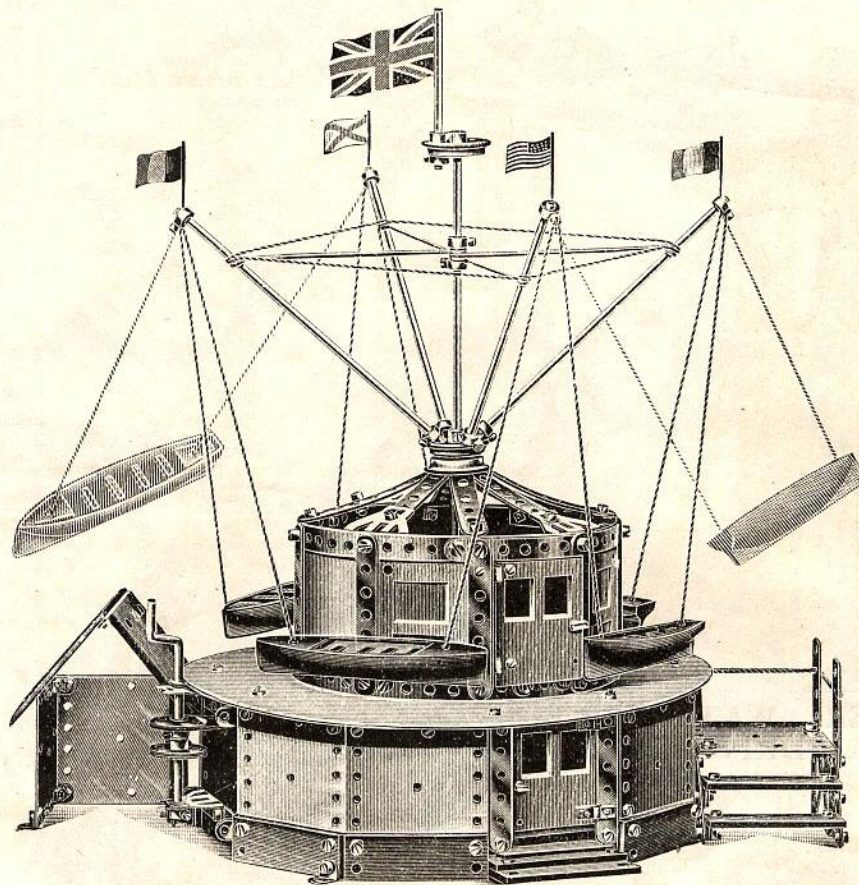
Pieces of card can be made into shape for buckets.

This model can be run by power by adding extra pulley wheel to big wheel axle.



PRIMUS ENGINEERING

BRITISH MADE



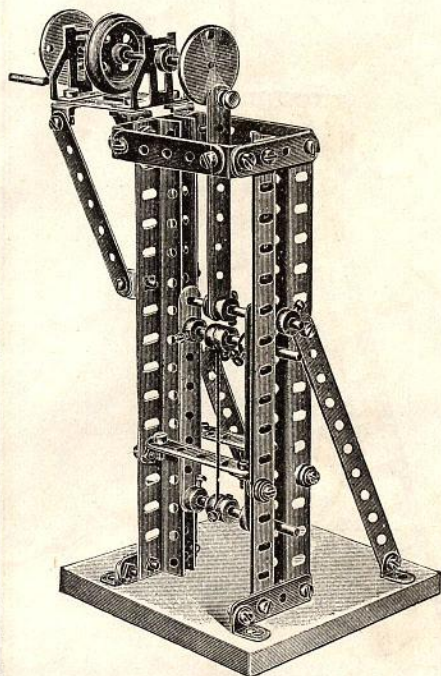
HIRAM MAXIM FLYING BOATS, No. 363.

2	Central windows	..	..	No. 8	14	Plates, 3 in. x 3 in.	..	..	No. 68
2	Doors of house	..	..	16	2	Straight hinges	..	..	72
1	Lintel for house	..	..	16A	2	Bent hinges	..	..	73
14	Wood slips	..	..	25	6	Trunnions	..	..	74
100	Screws	..	..	50	4	Flanged wheels	..	..	75
7	Strips, 2 in.	..	..	56	4	Grooved wheels	..	..	76
9	" 2½ "	..	..	57	1	Axle, 3½ in.	..	..	77
3	" 3 "	..	..	58	13	Collars	..	..	82
14	" 3½ "	..	..	59	1	Handle	..	..	83
3	" 4 "	..	..	60	16	Washers	..	..	84
2	" 5½ "	..	..	61	2	Door handles	..	..	88
5	" 8 "	..	..	63	2	" screws	..	..	91
3	" 12½ "	..	..	64	4	Rods	..	..	96
2	Architraves	..	..	65	Additional Parnts.				
48	Brackets	..	..	66	6	Axles, 8 in.	..	..	166

Build base first ; card disc for top of base ; use four wood boats to make swings.

PRIMUS ENGINEERING

BRITISH MADE



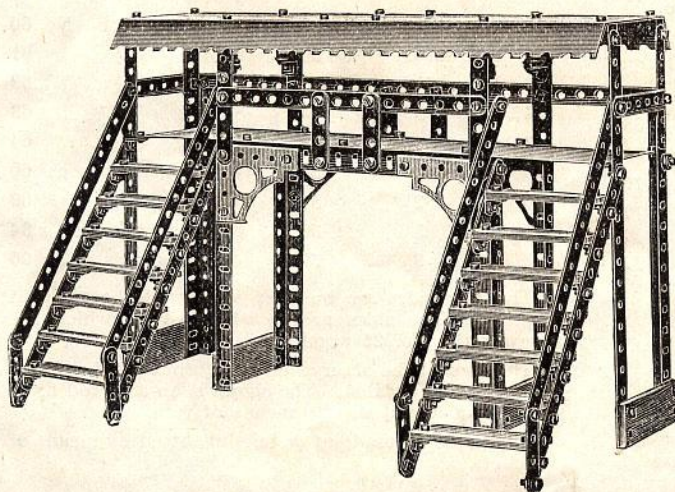
VERTICAL SAW No. 304.

37	Screws	No.	50
4	Angle bars, 8 in.	"	54
6	Strips, 2 in.	"	56
4	" 2½ "	"	57
2	" 3½ "	"	59
3	" 4 "	"	60
2	" 5½ "	"	61
18	Brackets	"	66
2	Trunnions	"	74
1	Wheel	"	75
2	Wheels	"	76
3	Axles, 3½ in.	"	77
13	Collars	"	82
1	Handle	"	83
1	Washer	"	84
4	Wood screws	"	97

The crank arm is fitted to the grooved wheel by means of knob screw with washers and double nutted.

The frame to carry saw is composed of two 4-in. strips with three 3½ in. axle rods and held together by collars. Two of the collars are placed OUTSIDE the angle bars on the upper rod, to make it slide easily in the grooves.

A fretsaw can be placed between the collars to complete the model.



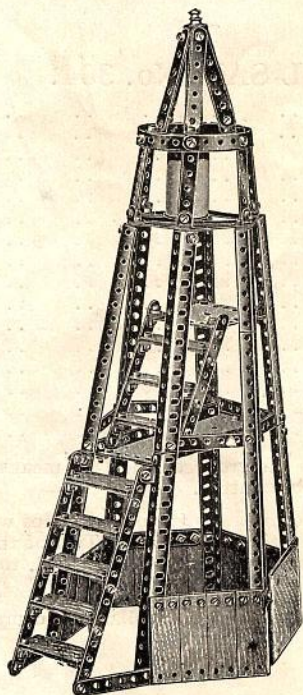
COVERED BRIDGE No. 305.

18	Slips	No.	25
144	Screws	"	50
4	Angle bars, 8 in.	"	54
8	Strips, 2 in.	"	56
4	" 3 "	"	58
4	" 3½ "	"	59
4	Angle bars, 6½ in.	"	62
11	Strips, 8 in.	"	63
4	Architraves	"	65
46	Brackets	"	66
4	Plates, 8 x 3 in.	"	67
4	Eaves, 8 in.	"	71
6	Washers	"	84
4	Lamps	"	87

This model can be raised on piers to suit height of platforms, and can be made wider for double rails by the use of 12-in. angle bars and other parts to correspond.

PRIMUS ENGINEERING

BRITISH MADE

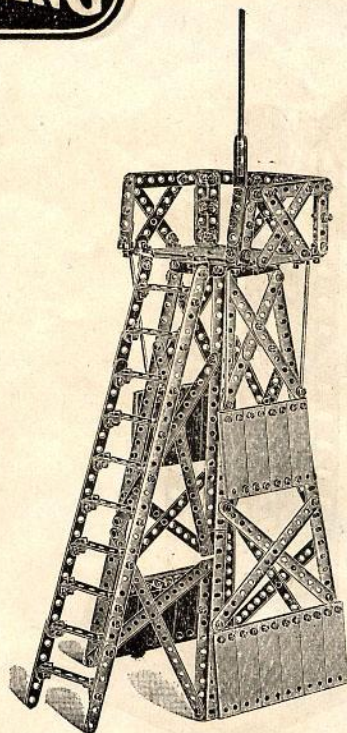


LIGHTHOUSE No. 312.

1 End .. No. 3	1 Strip, 4 in. No. 60
25 Slips, 3 x 1 in. ,, 25	3 Strips, 5½ in. ,, 61
150 Screws .. ,, 50	2 ,, 8 ,, ,, 63
4 Bars, 6 in. ,, 52	45 Brackets.. ,, 66
8 ,, 8 ,, ,, 54	3 Plates, 3 x 3 ,, 68
2 ,, 12 ,, ,, 55	2 Wheels .. 75
2 Strips, 2 in. ,, 56	1 Wheel .. 76
14 ,, 2½ ,, ,, 57	1 Axle, 3½ in... 77
7 ,, 3 ,, ,, 58	16 Washers 84
13 ,, 3½ ,, ,, 59	1 Lamp .. 87

The skeleton is made on angle bars screwed together and secured by metal strips, which are slightly bent. The platforms are made of 3 x 3 in. plates.

To form the lantern, slightly curve six 2½-in. strips. The beacon light is made by rolling pink paper round two flanged wheels, one being placed at the top and the other near the bottom of a 2½-in. axle, which passes through a 4-in. metal strip placed across the base of the lantern as shown, and is secured in position by a pulley wheel.



PYLON No. 313.

20 Slips, 3 x 1 in. No. 25	4 Strips, 4 in. No. 60
190 Screws .. ,, 50	2 ,, 5½ ,, ,, 61
2 Bars, 6½ in. ,, 53	4 ,, 6½ ,, ,, 62
4 ,, 8 ,, ,, 54	8 ,, 8 ,, ,, 63
2 ,, 12 ,, ,, 55	2 ,, 12 ,, ,, 64
16 Strips, 2 in. ,, 56	44 Brackets.. ,, 66
16 ,, 2½ ,, ,, 57	4 Plates .. 68
5 ,, 3 ,, ,, 58	6 Washers ,, 84
12 ,, 3½ ,, ,, 59	4 Signal rods ,, 96

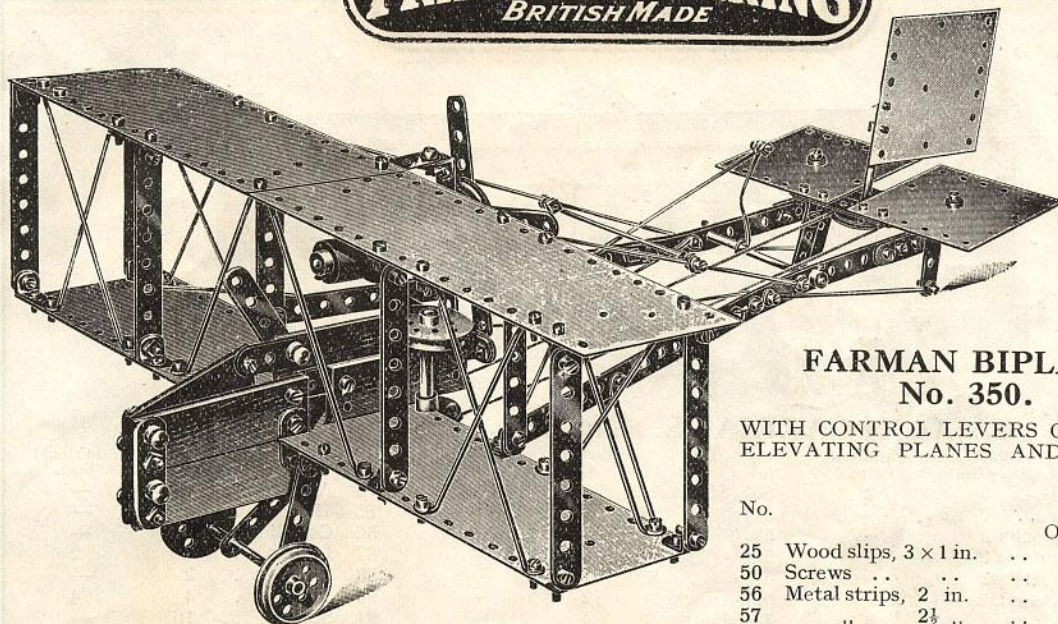
The four sides are built up with angle bars joined together. The sides are metal strips on which are screwed the No. 25 wood slips.

The floor of the observation platform consists of four 3 x 3 in. metal plates. The signal is an axle rod fixed to a 3½ in. metal slip by means of wire.

The ladder is made of metal slips fitted by means of brackets.

PRIMUS ENGINEERING

BRITISH MADE



FARMAN BIPLANE No. 350.

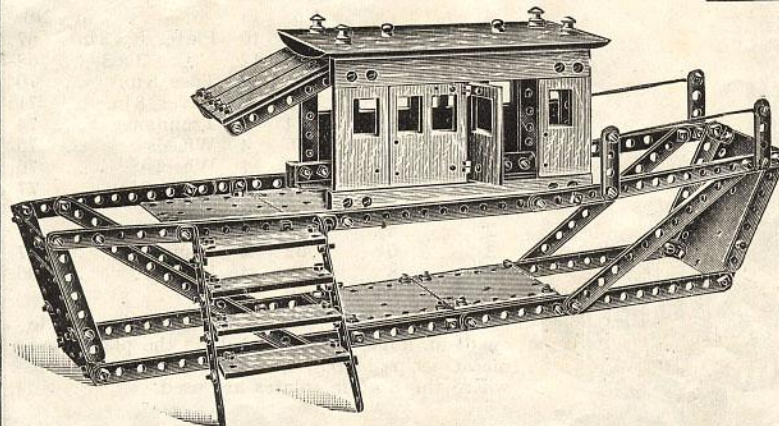
WITH CONTROL LEVERS OPERATING
ELEVATING PLANES AND RUDDER.

No.		With No. 5 Outfit.	Addi- tional Parts.
25	Wood slips, 3 x 1 in. . .	6	—
50	Screws . . .	112	—
56	Metal strips, 2 in. . .	16	1
57	" 2½ " . . .	4	—
60	" 4 " . . .	3	7
64	" 12½ " . . .	2	—
66	Brackets . . .	34	—
67	Metal plates, 8 x 3 in. . .	4	—
68	" 3 x 3 " . . .	3	—
75	Flanged wheels . . .	4	—
76	Grooved wheels . . .	3	—
77	Axle rods, 3½ in. . .	4	—
78	" 2½ " . . .	2	—
82	Collars . . .	13	—
84	Washers . . .	20	—
92	Knob screws . . .	4	1
96	Signal post rods . . .	4	18

The planes are made with 8 x 3 in. metal plates, overlapping and screwed together. Signal post rods are used for the stays and as connecting rods for steering. Cord is used as illustration for operating the rudder.

HOUSE BOAT No. 308.

4 Rails . . .	No. 1	7 Slips . . .	No. 25
2 Windows . . .	5	111 Screws . . .	50
2 " . . .	6	2 Angle bars, 6½ in. . .	53
2 Doors . . .	7	9 Strips, 2 in. . .	56
2 Windows . . .	8	3 " 2½ " . . .	57
1 Roof . . .	10	1 " 3 " . . .	58

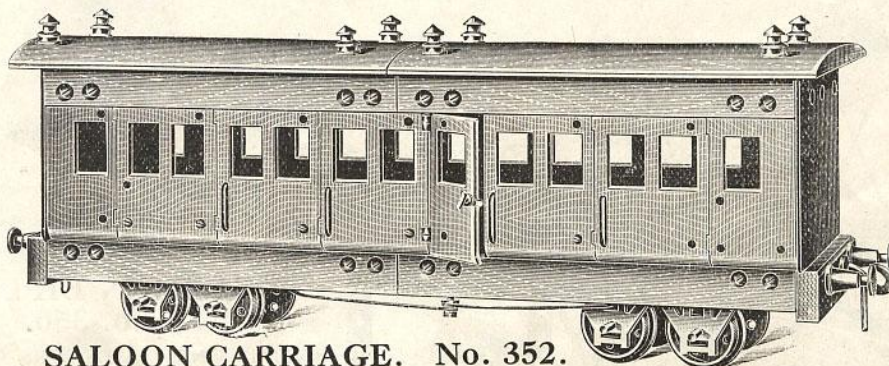


10 Strips, 3½ in. . .	No. 59
2 " 4 " . . .	60
5 " 5½ " . . .	61
4 " 6½ " . . .	62
5 " 8 " . . .	63
3 " 12½ " . . .	64
36 Brackets . . .	66
2 Plates . . .	67
8 " . . .	68
4 Hinges . . .	73
4 Lamps . . .	87
4 Screws . . .	92
2 Rods . . .	96

MODELS MADE WITH NO. 5 OUTFIT.

PRIMUS ENGINEERING

BRITISH MADE

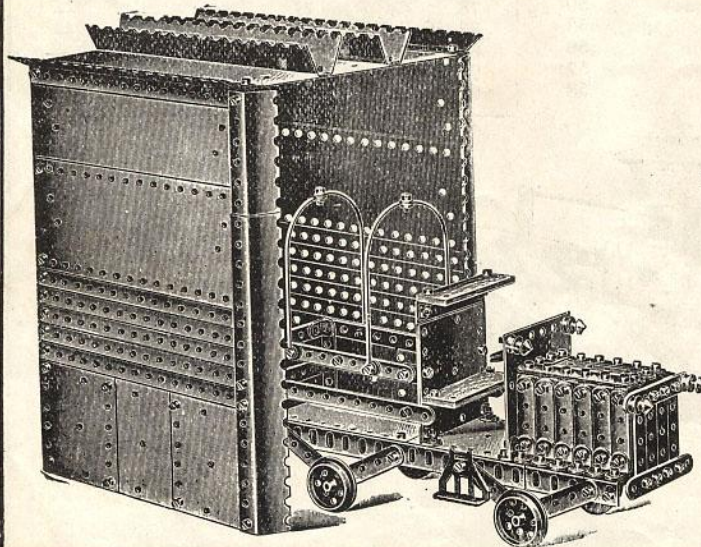


SALOON CARRIAGE. No. 352.

No.	Parts in No. 5 Outfit.	Additional Parts.	No.	Parts in No. 5 Outfit.	Additional Parts.	No.	Parts in No. 5 Outfit.	Additional Parts.
1	Side rails 6	2	56	Strips, 2 in. 3	—	78	Axles, 2½ in. 4	—
3	C. ends .. 2	—	57	" 2½ " 8	—	85	Buffers .. 4	—
4	Buffer blocks 2	—	58	" 3 " 1	—	86	Couplings 2	—
5	R.H. windows 2	—	59	" 3½ " 10	—	87	Lamps .. 6	2
6	L.H. " 2	—	63	" 8 " 2	—	88	Handles .. 2	—
7	Carriage doors 2	—	66	Brackets " 12	—	90	Rails .. 4	4
8	" windows 2	8	73	Hinges 4	—	91	Screws .. 16	—
10	Roof .. 1	1	74	Trunnions 8	—	92	Screws 2	—
50	Screws .. 57	—	75	Wheels .. 8	—	96	Rods .. 4	—
53	Angle bars, 6½" 4	—	76	Wheels .. 2	—			

The metal framework of saloon should be made first ; join two 6½-in. angle bars with a 2½-in. metal strip, leaving only the central hole between them. This applies to both sides. The top is supported with three 4-in. slips each side, and the top sides are made by joining one 8½-in. and one 6½-in. metal slips. Then fix wood as illustration. Bogie wheels, see page 47.

MOTOR CAR AND GARAGE. No. 311

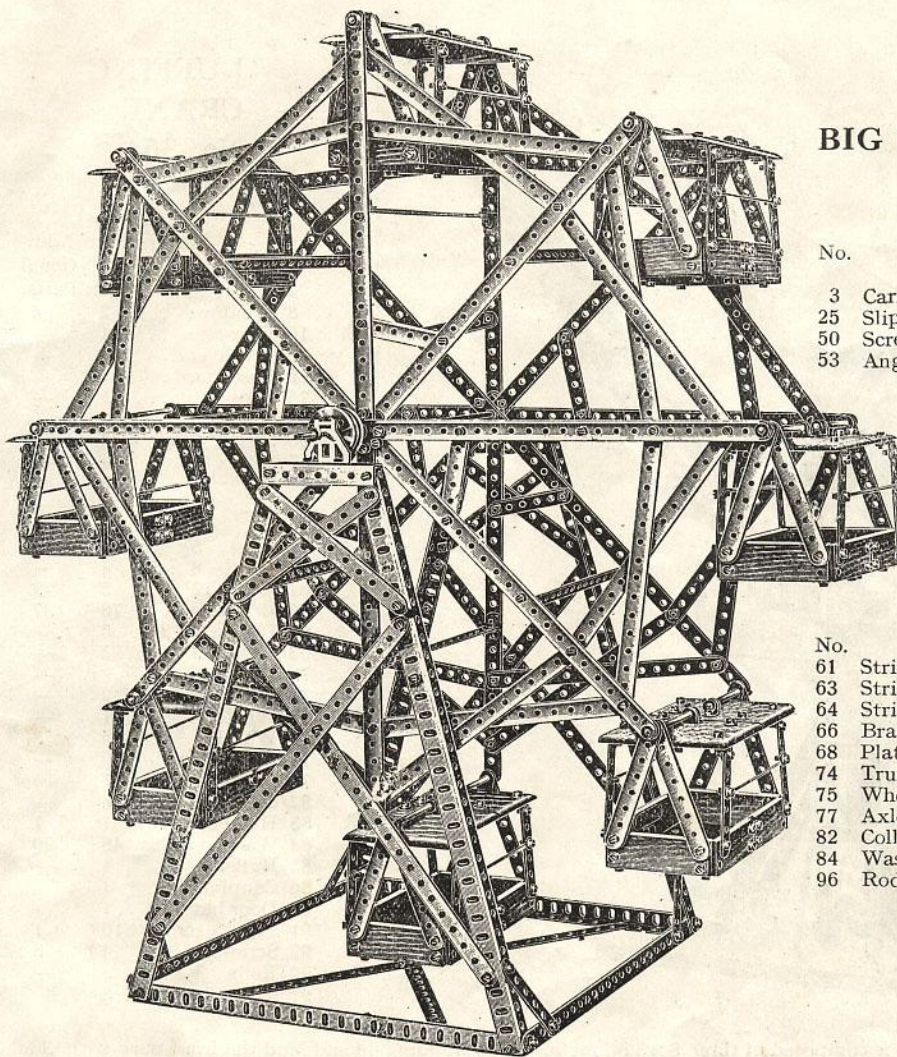


No.		No.		m	No.
2	Slips, 3 x 1 in. . . 25	10	Plates, 8 x 3 in. . . 67		
174	Screws .. 50	12	" 3 x 3 " .. 68		
6	Angle bars, 6½ in. . . 53	2	Tiles, 8 in. " .. 70		
2	" " 8 " .. 54	8	Eaves, 8 in. " .. 71		
14	Strips, 2 in. . . 56	2	Trunnions .. 74		
16	" 2½ " .. 57	4	Wheels .. 75		
8	" 3 " .. 58	1	Wheel .. 76		
2	" 4 " .. 60	3	Axles, 3½ in. . . 77		
2	" 5½ " .. 61	2	Collars .. 82		
3	" 6½ " .. 62	10	Washers .. 84		
12	" 8 " .. 63	4	Lamps .. 87		
50	Brackets .. 66	4	Rods .. 96		

The lower portion of the garage is made on 6½-in. angle bars, which hold the plates and metal strips. Higher, brackets are sufficient where the 8 x 3-in. plates are used.

PRIMUS ENGINEERING

BRITISH MADE



BIG WHEEL No. 353

No.		Parts from No. 5 Outfit.	Additional Parts.
3	Carriage ends ..	2	14
25	Slips ..	25	23
50	Screws ..	312	195
53	Angle bars, 6½ in.	4	—

No.			
55	Angle bars, 12 in.	2	4
56	Strips, 2 in.	16	32
58	Strips, 3 in.	8	36
60	Strips, 4 in.	3	29

No.			
61	Strips, 5½ in.	4	—
63	Strips, 8 "	12	32
64	Strips, 12½ "	3	19
66	Brackets ..	78	66
68	Plates ..	10	6
74	Trunnions ..	2	—
75	Wheels ..	2	—
77	Axles, 3½ in.	4	12
82	Collars ..	13	23
84	Washers ..	48	22
96	Rods ..	4	12

SPECIAL. 1 Special 12-in. Axle rod, price 1s. 1 8-in. Angle bar cut in half, price 3d.

MEASUREMENTS.

Height	28½ in.	Diameter of wheel	23 in.
Width	25 "	Depth of wheel	8½ "

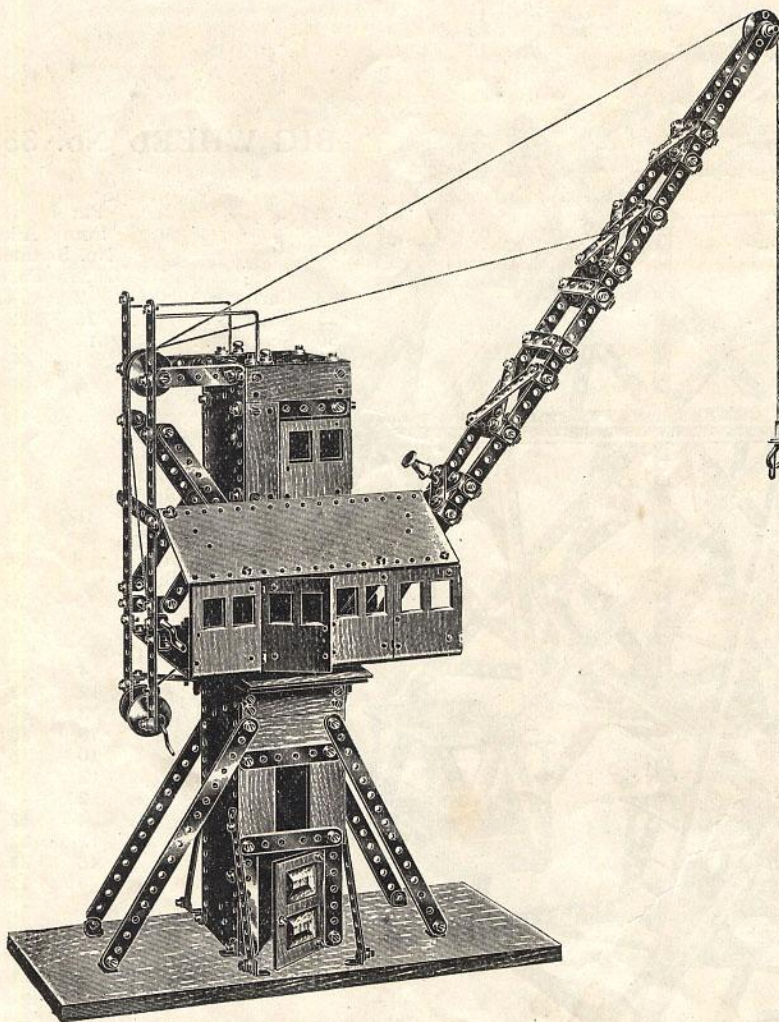
The stand should be built and then the framework of the wheel.

The roofs of the carriages are made with two carriage ends, placed lengthways, and are joined together with 2-in. metal strips. Two extra holes require to be made in each, for brackets to be fixed to for sides to hang from. The model otherwise is straightforward.

MODELS MADE WITH NO. 5 OUTFIT.

PRIMUS ENGINEERING

BRITISH MADE



LUFFING CRANE No. 354.

No.	Parts from No. 5 Outfit.	Additional Parts.
8 Windows ..	2	4
16 Door ..	1	—
18 Truck ends ..	1	—
19 Baseboard ..	1	—
25 Slips ..	11	—
50 Screws ..	202	—
56 Strips, 2 in.	14	—
57 " 2½ "	4	—
58 " 3 "	8	3
59 " 3½ "	6	—
60 " 4 "	3	—
61 " 5½ "	4	4
63 " 8 "	4	—
64 " 12½ "	3	3
66 Brackets ..	78	37
67 Plates, 8 x 3 in.	6	—
68 " 3 x 3 in.	5	—
72 Hinges ..	2	—
73 Bent hinges ..	2	—
75 Wheel ..	1	—
76 Wheels ..	4	3
77 Axle, 3½ in.	2	—
79 " 1½ " "	1	—
82 Collars ..	8	—
83 Handle ..	1	1
84 Washers ..	48	90
85 Buffers ..	1	—
86 Coupling ..	1	—
88 Door handle ..	1	—
91 " screws	16	1
92 Screws ..	4	3
96 Rods ..	3	—
97 Wood screws	8	—

The base of this model is composed of three 8 x 3 in. metal plates standing on end, and the front part with 3-in. and 3½-in. metal strips and 3 x 1-in. wood slips, and is supported by means of four 8½-in. metal slips at each corner, joined to brackets, screwed to the baseboard. The roof of engine house is a 3 x 3-in. plate. The floor of engine house is two 8 x 3-in. plates screwed together, and is joined to the lower part by means of a 3½-in. axle rod, using pulley and flanged wheels, as in earlier models. The balance is kept by using four knob screws inserted in 3 x 3-in. plate at similar height to one flanged and one pulley wheel. The front and back of engine house are made with 8 x 3-in. plates, the lower parts of sides with 3 x 3-in. plates, and the upper part with carriage windows and 3 x 1-in. wood slip; the remainder is easily gleaned from illustration.

PRIMUS ENGINEERING
BRITISH MADE

PRIMUS BIG WHEEL OUTFIT PATENT



A series of new and ingenious parts with which "Primus Engineers" can build up wheels of 4, 6 and 8 in. diameter to be used in connection with many of the models in the Primus Manual or for other special models.

The Wheels are built up in sections. Three sizes can be made, suitable for Fly-Wheels, Pulley-Wheels, and Paddle-Wheels, also Wheels for Carts, Carriages, Traction Engines, Wagons, Gun-Carriage, in fact wheels for all things and all purposes, and Composite Wheels for Steam Rollers.

These parts are used with the regular Primus parts, making the Primus Outfits more varied, amusing and instructive than any other constructional toy.

The sectional parts can be used for forming the curved parts of Roundabouts, Lighthouses, Towers, Arches in Bridges, etc.

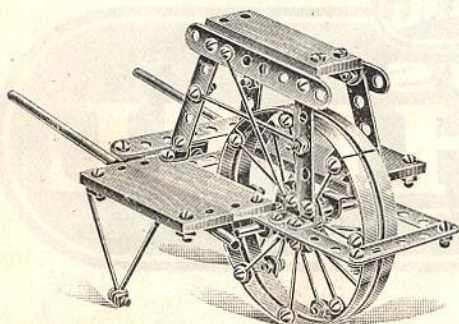
The Patent Wheel sections themselves are strikingly novel, and as they may be easily bent to any curve or made quite straight, it will be at once evident how useful they become in making up new models. The Spokes, which are of three different sizes, may also be used as Stays, Supports, Levers, etc., and besides making the models look more like the real thing, they offer a pleasing alternative to the use of perforated strips.

Many new uses will soon be found for the Hubs, either singly or in combination.

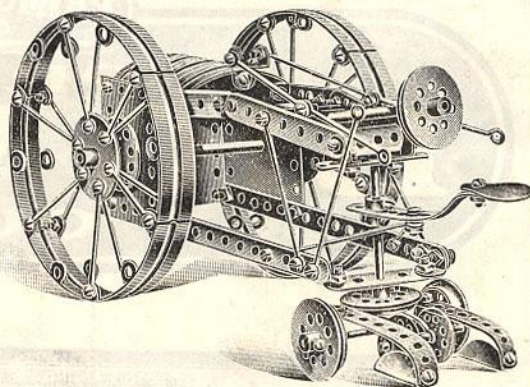
PRICE, complete - 15/0.

Instruction Booklet supplied with each Outfit.

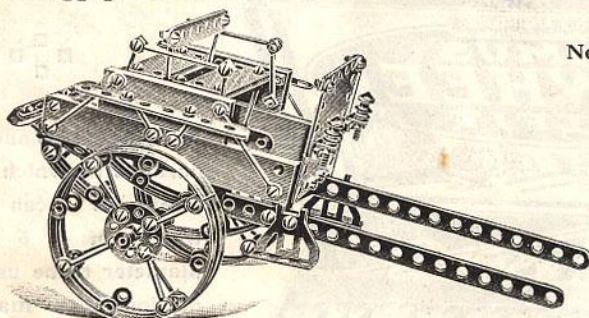
Models made with **PRIMUS BIG-WHEEL & N° 1** standard outfit



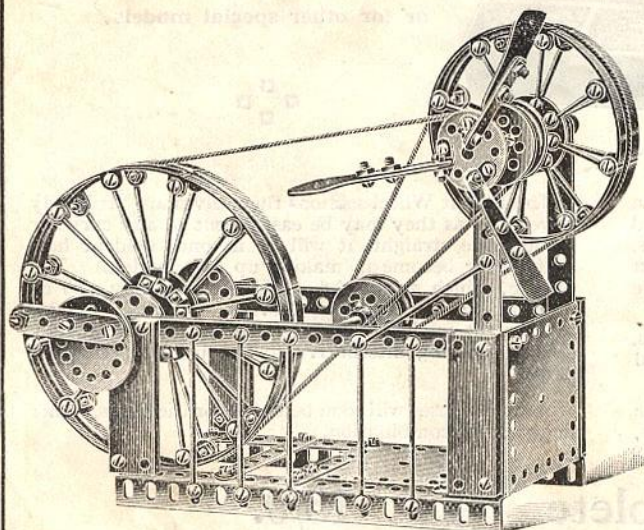
No. 1004. Chinese Luggage Barrow.



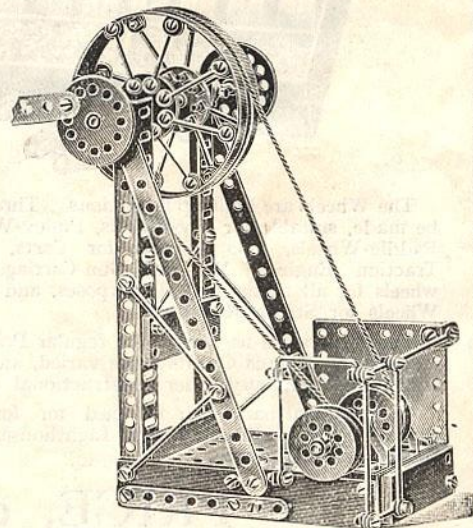
No. 1001. Tractor Plough.



No. 1000. Dog Cart.

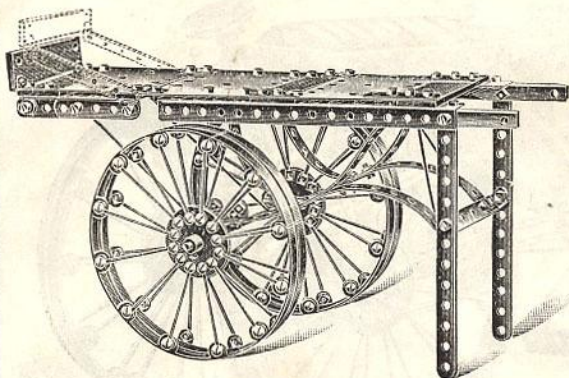


No. 1003. Power Driving Wheel and Fan.

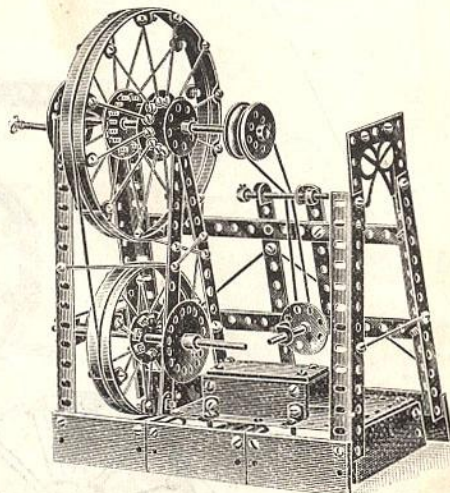


No. 1005. Power Wheel and Counter Shafting.

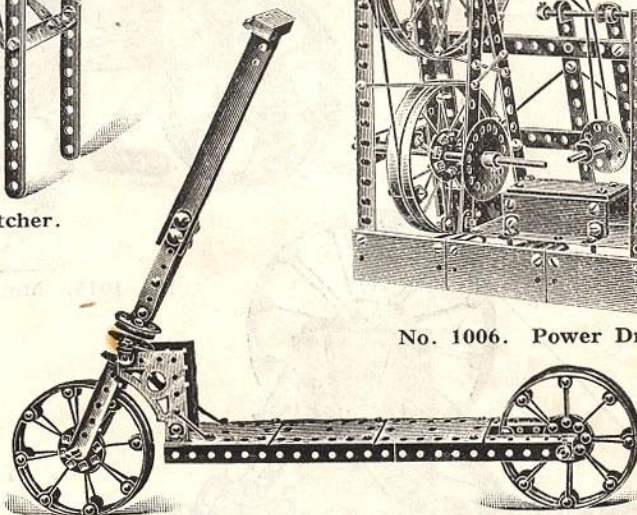
Models made with **PRIMUS BIG-WHEEL & N° 2** standard outfit



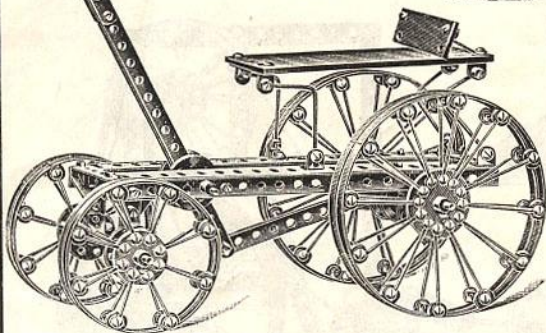
No. 1008 Wheeled Hospital Stretcher.



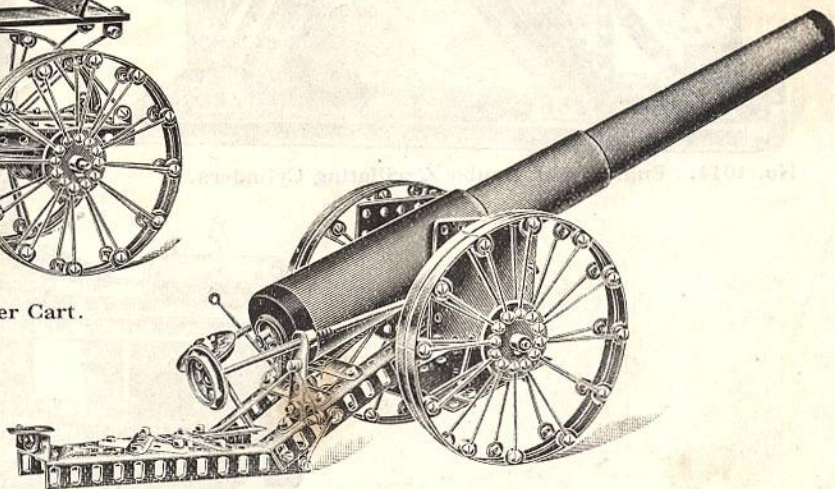
No. 1006. Power Drill.



No. 1007. Scooter.

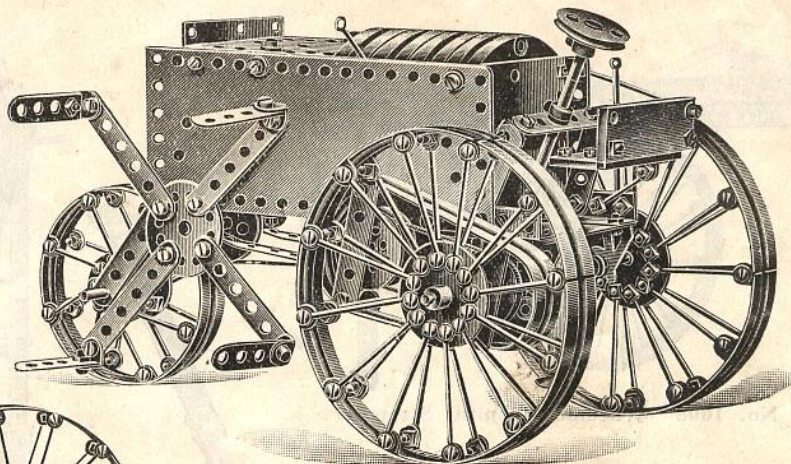


No. 1010. Boy's Scooter Cart.

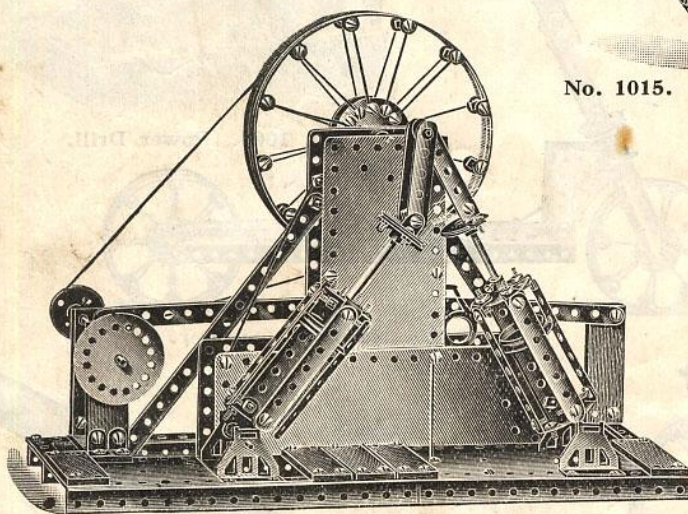


No. 1011. Model of 6-in. Quick Firer.

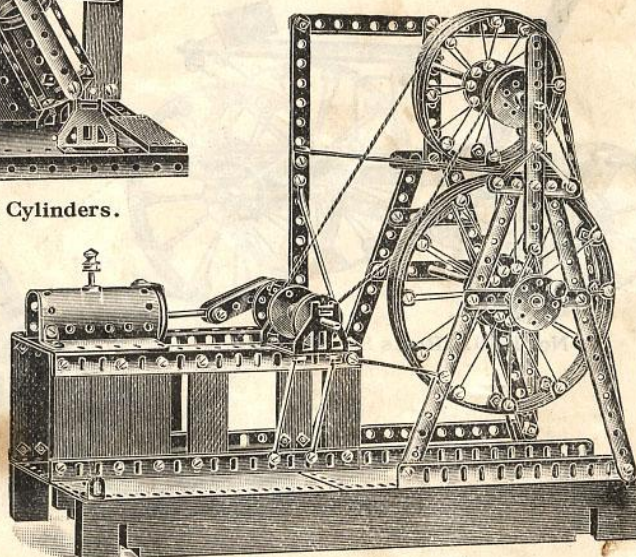
Models made with **PRIMUS BIG-WHEEL & N° 3** standard outfit



No. 1015. Motor Reaping Machine.

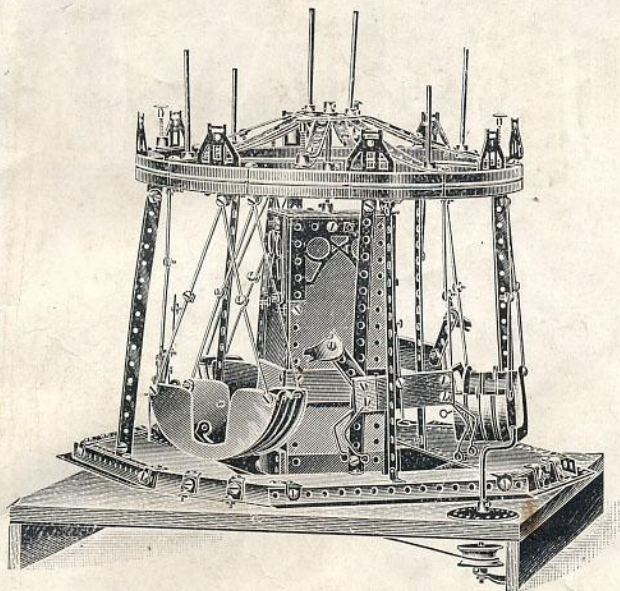


No. 1014. Engine with Double Oscillating Cylinders.

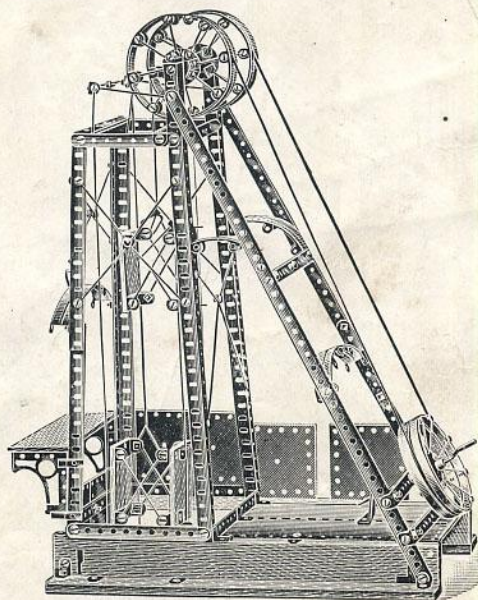


No. 1013. Power Plant with Cylinder

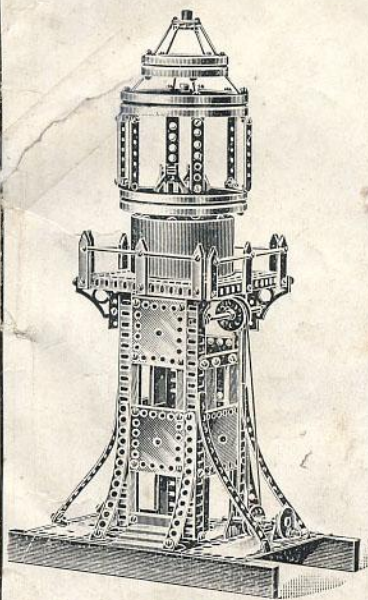
Models made with **PRIMUS BIG-WHEEL** & N^o 4 standard outfit



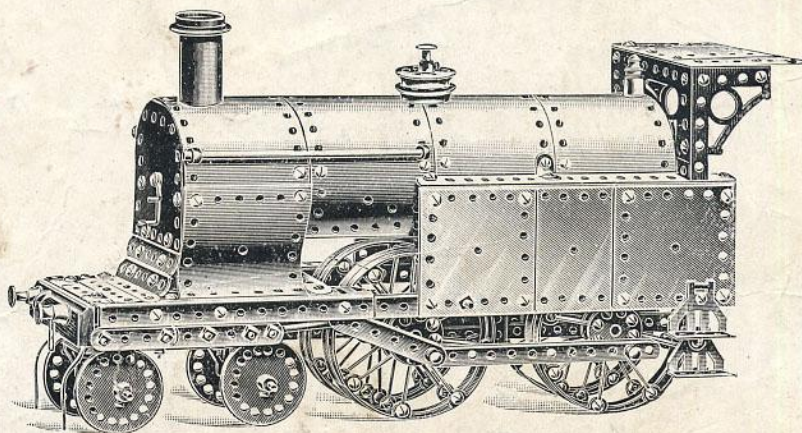
No. 1019. Roundabout.



No. 1017. Pit Head Gear.



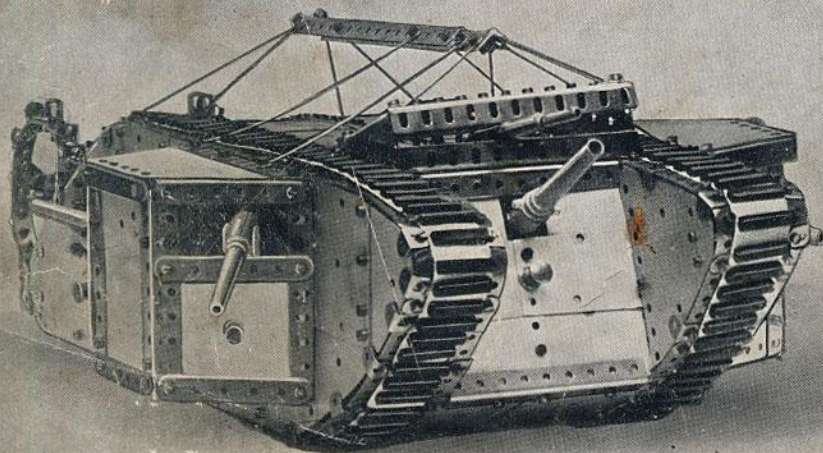
No. 1018. Lighthouse.



No. 1020. Midland Locomotive 4—4—0 Type.

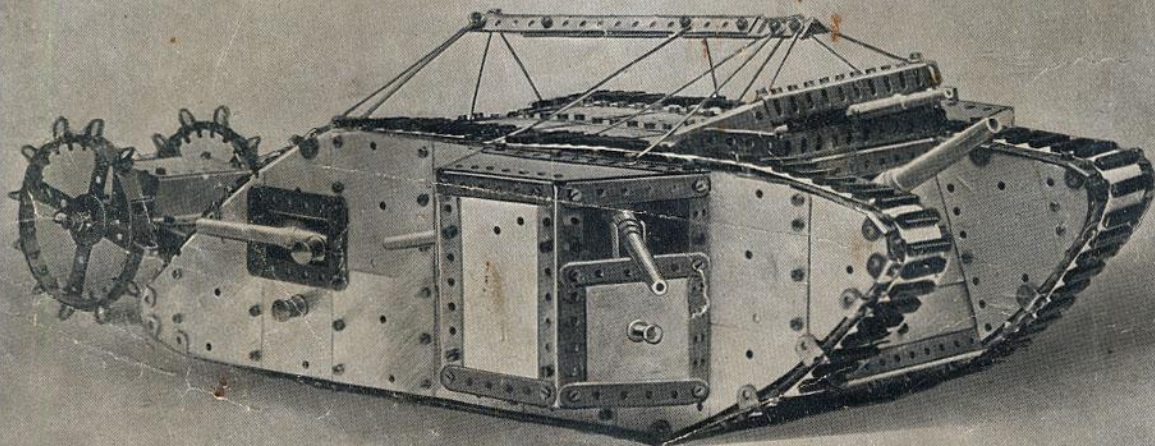
"The PRIMUS" TANK

CONSTRUCTED WITH
PRIMUS ENGINEERING



CAN BE MADE
WITH
No. 5 OUTFIT
AND
EXTRA PARTS

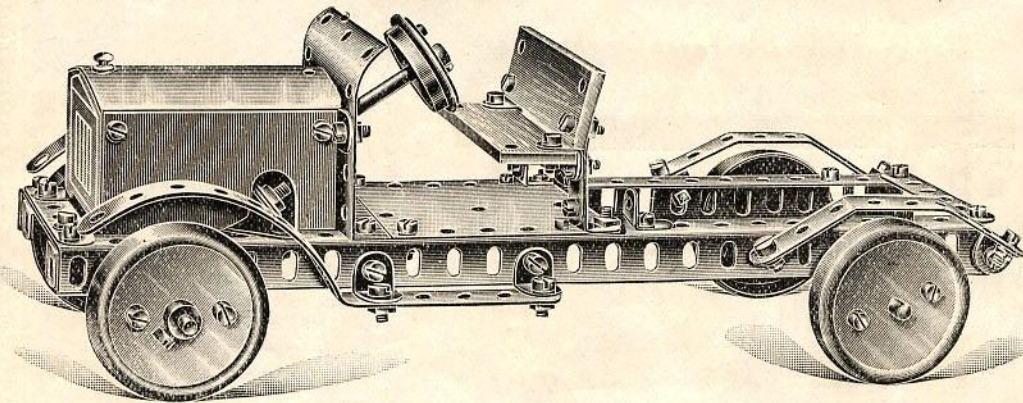
PRIMUS TANK. FRONT VIEW.



PRIMUS TANK. SIDE VIEW.

PRIMUS ENGINEERING

BRITISH MADE



MOTOR-CAR CHASSIS. No. 209.

PARTS FROM NO. 3 OUTFIT.

	No.		No.
2 Slips ..	25	2 Trunnions ..	74
71 Screws ..	50	1 Wheel ..	75
2 Strips, 2 in. ..	56	4 Wheels ..	76
4 " 2 " ..	57	1 Axle Rod, 3½ in. ..	77
1 Strip, 3 " ..	58	1 " 1½ " ..	79
2 Strips, 4 " ..	60	8 Collars ..	82
2 " 6 " ..	62	12 Washers ..	84
2 " 8 " ..	63	4 Buffers ..	85
22 Brackets ..	66	1 Knob Screw ..	92
3 Plates, 3×3 ..	68		

EXTRA PARTS REQUIRED.

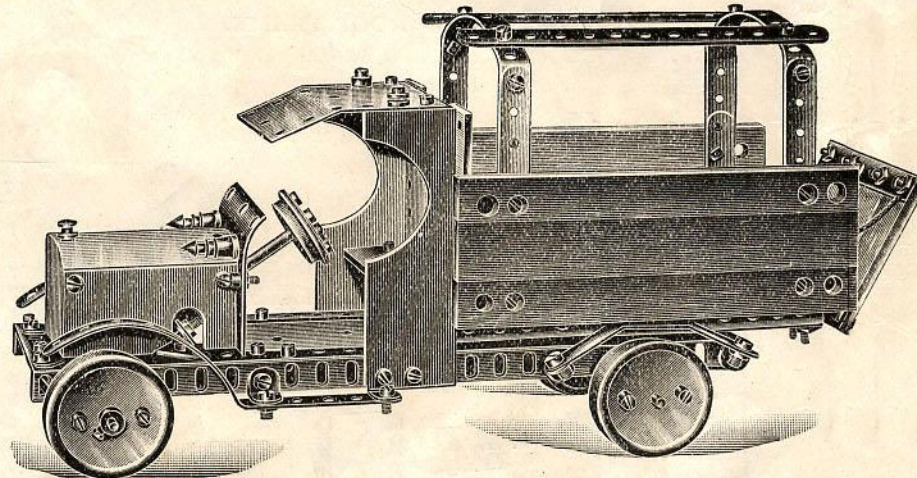
	No.
2 Angle Bars, 12 in. ..	55
1 Collar ..	82
1 1½-in. Cog ..	160
1 Bevel Gear ..	162
1 Axle, 6 in. ..	165
2 Axles, 2½ in. ..	167
1 Collar ..	168

The wheels are constructed with No. 76 pulleys, to which are bolted small tin box lids (powder boxes about 2 in. diameter). The bonnet is made by bending a No. 68 3×3 plate for the top and using cardboard for the front and sides. The dash is also made by bending a No. 68 3×3 plate.

MOTOR-CAR BUILDING With PRIMUS.

A motor-car is perhaps the most interesting and instructive Model that can be built, and this can easily be done by anyone who has become acquainted with the possibilities of Primus Engineering.

The models illustrated were constructed by a lad of thirteen years, following the method adopted in building real cars—first, the chassis (to which any body can be attached); then, as standard types, the W. D. Lorry and a smart coupé. These will give any young engineer the idea; and, having constructed the chassis, he will find it quite a simple matter to erect thereon bodies of any description.

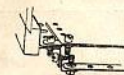


W. D. WAGON. No. 210.

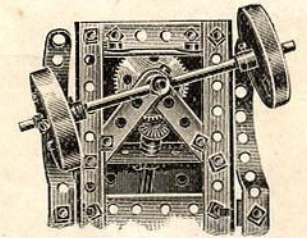
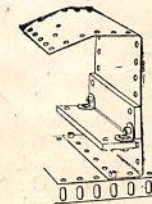
PARTS FROM NO. 3 OUTFIT TO MAKE THE BODY.

	No.		No.
4 Grooved Rails ..	1	2 Strips, 5½ in. ..	61
2 Truck Sides ..	17	2 " 6½ " ..	62
6 Wood Slips ..	25	2 " 8 " ..	63
49 Screws ..	50	4 Brackets ..	66
2 Angle Bars, 6½ in. ..	53	1 Plate, 8×3 ..	67
4 Strips, 2 in. ..	56	2 Hinges ..	72
2 " 2½ " ..	57	2 Lamps ..	87
4 " 3½ " ..	59	EXTRA PARTS REQUIRED.	
1 Strip, 4 " ..	60	2 Angle Bars, 6½ in. ..	53
		1 Strip, 2 in. ..	57

The driver's seat is made by bending an 8×3 plate thus:—



Cut the sides out of cardboard. The body overlaps the wheels and is fitted as sketch, using two 6½ in. angle bars on each side.



THE STEERING GEAR.

This must be built on to the frame before the bonnet is fitted.

1. Lay two 2½-in. metal strips at angles as shown, and secure.
2. Place a 2½-in. metal strip across the base of the triangle, and secure to brackets.
3. Fix No. 160 gear wheel to 1½-in. axle, and pass through the ends of the 2½ in. strips. Place washers on and secure with a double-tapped collar.
4. A 3½-in. axle is then used for the steering pillar, which is passed through the centre hole of the dash plate and the 2½-in. metal strip.
5. Secure with a collar, and use washers to adjust the bevel gear so that it engages in the large cog.
6. Fix the wheels to 2½-in. tapped axles and screw into the double-tapped collar.

TOURING COUPÉ. No. 211.

PARTS TO MAKE THE BODY.

	No.
8 Wood Slips ..	25
34 Screws ..	50
12 Brackets ..	66
2 Plates, 8×3 ..	67
4 Hinges ..	72
2 Lamps ..	87

EXTRA PARTS REQUIRED.

	No.
8 Hinges ..	68
2 Door Handles ..	88
2 Turnbuttons ..	89
16 Screws ..	91

Remove from chassis back mudguards and 3×3 plates in the floor, fix 8×3 plate to form whole floor, replace seat. The sides and doors of coupé are cut from cardboard, the opposite side being without doors. The top and back is formed out of one 8×3 plate; the boot is fixed to the frame by means of brackets.

The back seat in the closed body is fitted to the 8×3 plate forming the top and back by two brackets. This should be done before the sides are fitted on.

The back seat in the boot is fitted to the wood slips forming the sides by brackets, the wood slip at back being secured to the base.

