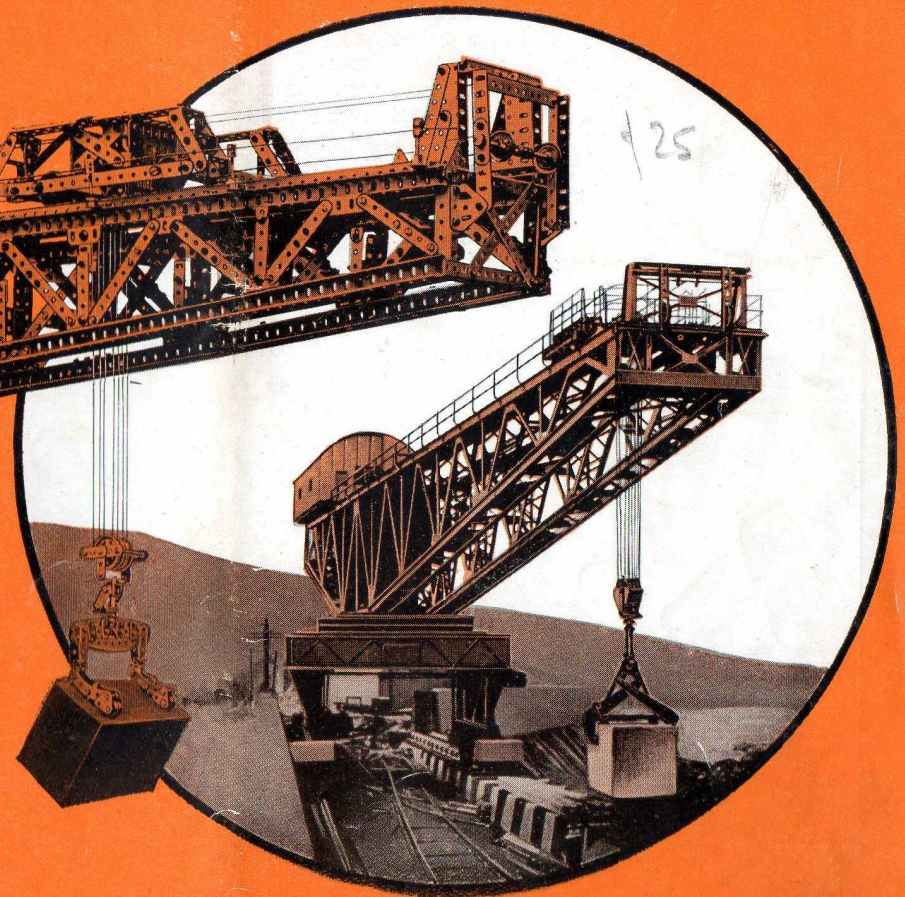
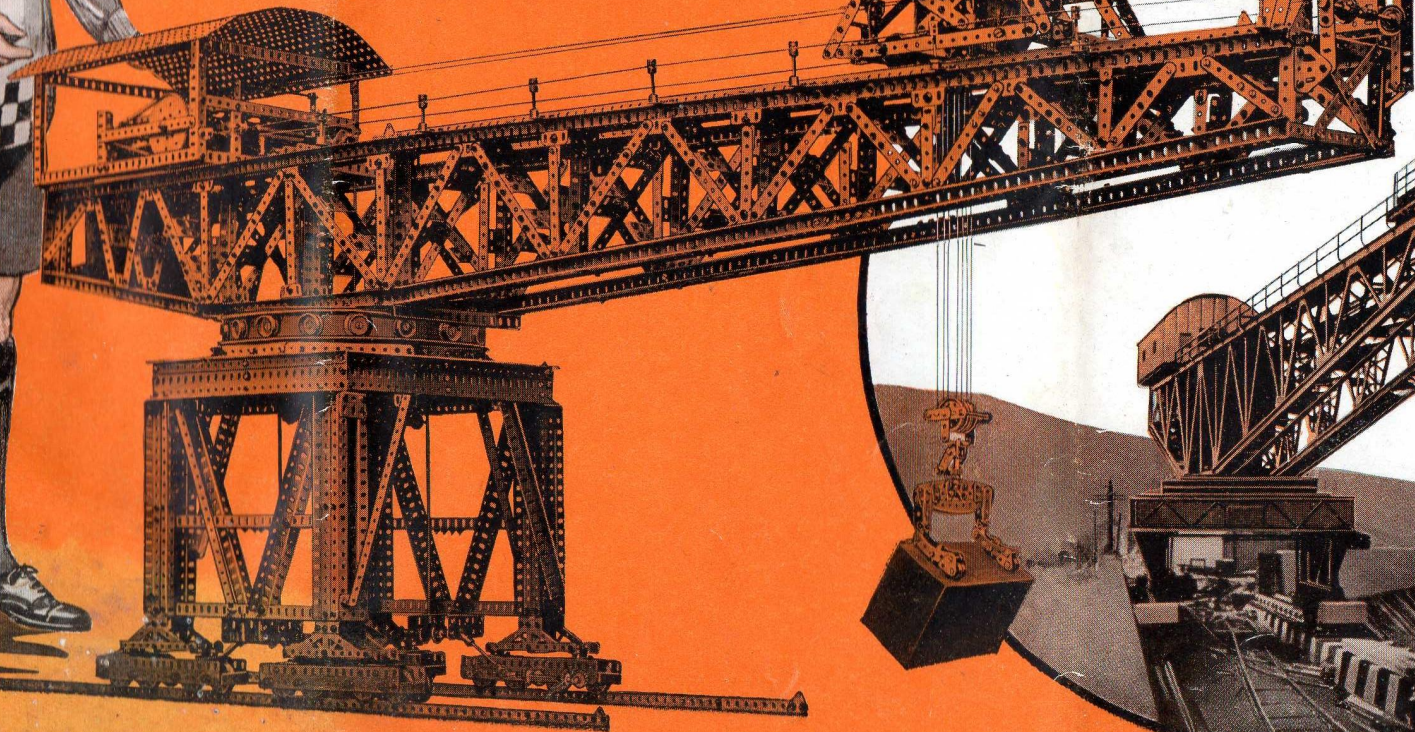
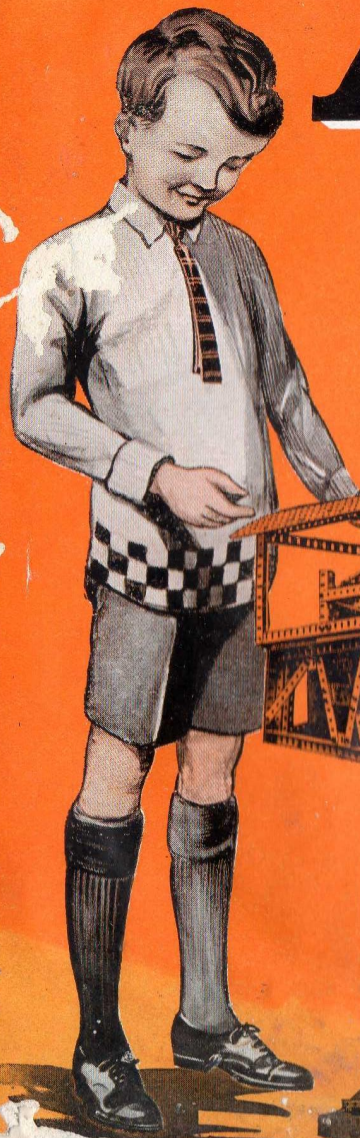


MECCANO

HORNBY'S ORIGINAL SYSTEM — FIRST PATENTED 1901

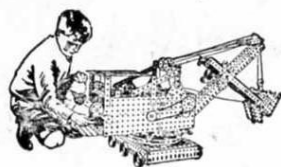
INSTRUCTIONS FOR OUTFIT Aa



35Aa

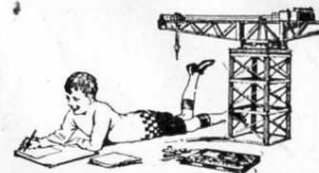
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13/635/45 (Aus.)



MECCANO

HORNBY'S ORIGINAL SYSTEM — FIRST PATENTED 1901



REAL ENGINEERING IN MINIATURE

The Meccano Accessory Outfit A₁ converts your Outfit A into a B, and enables you to build the additional models illustrated in this Manual. As a Meccano enthusiast you will realise that our examples do not exhaust the scope of your Outfit. It is no exaggeration to say that the possibilities of Meccano are limitless—there is always something new that you can invent and build, and most models can be constructed in many alternative ways. In addition to the fascination and satisfaction obtained by building new models, you can enter them in the model-building competitions that are a regular feature of the "Meccano Magazine." These competitions are open to all Meccano boys and valuable prizes are offered in each class.

THE "MECCANO MAGAZINE"

The "Meccano Magazine" is essential to the full enjoyment of the Meccano hobby. A section of it is devoted to the Editor's replies to his readers' enquiries; the progress of Meccano Clubs throughout the world is

reported; and full details are given of the latest model-building achievements. In addition, a wealth of informative articles on all subjects of interest to boys is included in every issue. The publishing date is the first of each month. If you are not already a reader of the "Meccano Magazine" write to the Editor for full particulars, or order a copy from your Meccano dealer or newsagent.

HOW TO PROGRESS

When you desire to make further progress and to build bigger and better models, it is only necessary for you to purchase an Accessory Outfit B₁ which will convert your B into a C. In turn, an Accessory Outfit C₁ will convert your C into a D, and so you go on, until finally your ambition is realised and you are the proud possessor of an L Outfit.

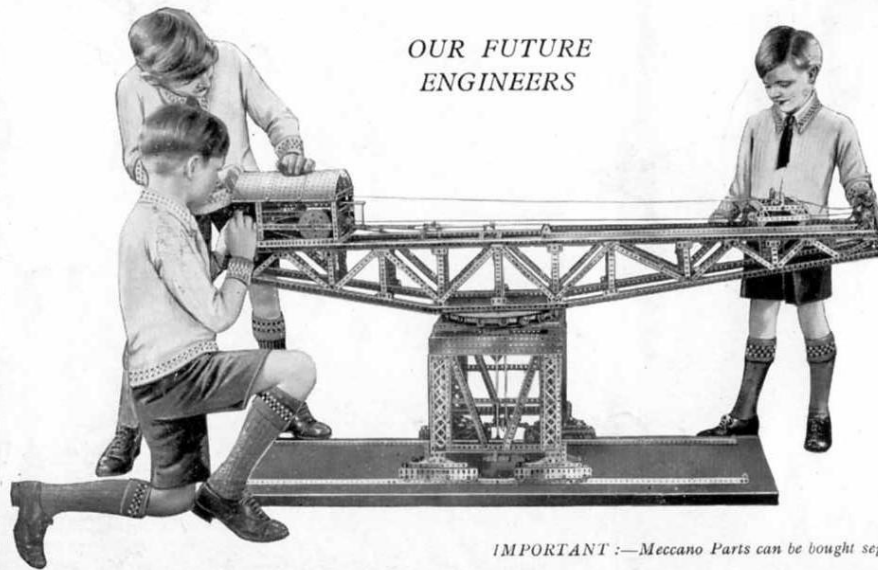
As a keen and inventive Meccano model-builder you should possess copies of the special Manuals "How to use Meccano Parts" and "Meccano Standard Mechanisms." In the former the principal uses of Meccano parts are outlined, while the latter shows a large number of real engineering mechanisms, built of Meccano parts, that can be incorporated in various models. You can obtain copies of these Manuals from your dealer, or direct from Meccano Ltd., Binns Road, Liverpool 13.

MECCANO SERVICE

The service of Meccano does not end with selling an Outfit and an Instruction Manual. When you want to know something more about engineering than is now shown in our books, or when you strike a tough problem of any kind, write to us. We receive over 200 letters from boys every day, all the year round. Some write to us because they are in difficulty, others because they want advice on their work or pleasures, or about the choice of a career. Others, again, write to us just because they like to do so and we are glad to know that they regard us as their friends.

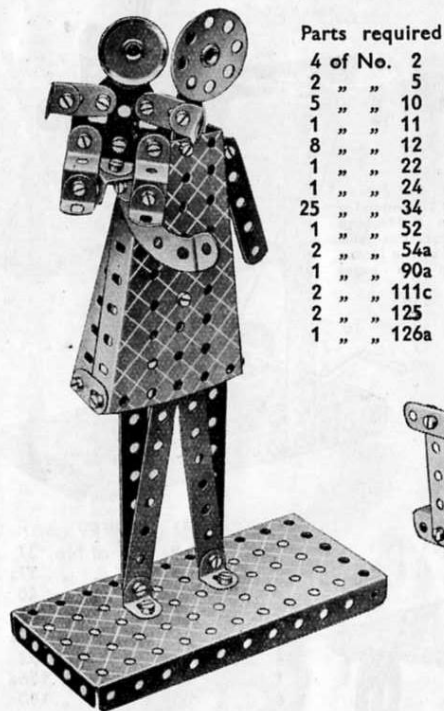
Although all kinds of queries are put to us on all manner of subjects, the main interest is, of course, engineering. The wonderful knowledge of engineering matters possessed by our staff of experts is unique. This vast store of knowledge, gained only by many years of hard-earned experience, is at your service. *We want the Meccano boy of to-day to be the famous engineer of to-morrow.*

OUR FUTURE ENGINEERS



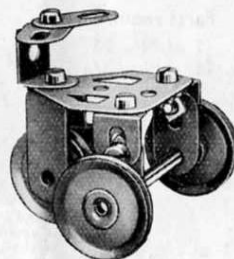
IMPORTANT:—Meccano Parts can be bought separately at any time in any quantity from your Meccano dealer.

B1. Man and Boy



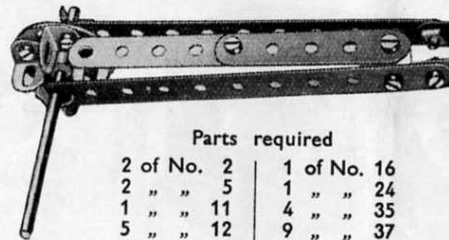
Parts required	
4 of No. 2	2
2 " " 5	5
5 " " 10	10
1 " " 11	11
8 " " 12	12
1 " " 22	22
1 " " 24	24
25 " " 34	34
1 " " 52	52
2 " " 54a	54a
1 " " 90a	90a
2 " " 111c	111c
2 " " 125	125
1 " " 126a	126a

B4. Tricycle



Parts required	
4 of No. 10	10
1 " " 11	11
2 " " 12	12
1 " " 17	17
3 " " 22	22
6 " " 37	37
1 " " 45	45
1 " " 111c	111c
1 " " 126a	126a

B7. Rattle

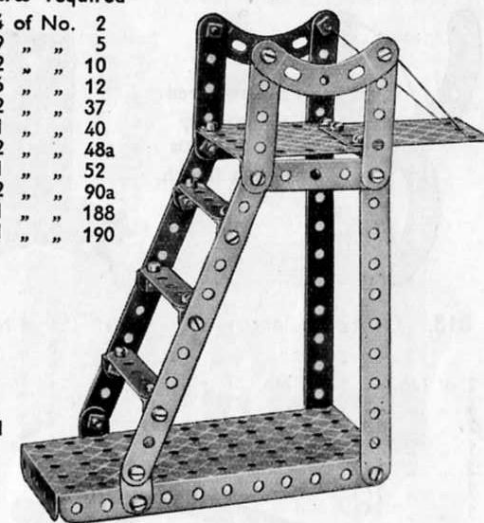


Parts required	
2 of No. 2	2
2 " " 5	5
1 " " 11	11
5 " " 12	12
1 of No. 16	16
1 " " 24	24
4 " " 35	35
9 " " 37	37

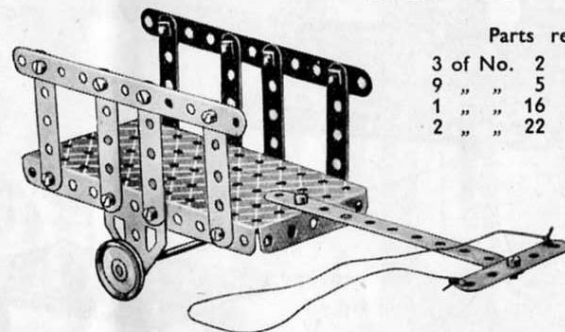
Parts required

4 of No. 2	2
9 " " 5	5
2 " " 10	10
6 " " 12	12
32 " " 37	37
1 " " 40	40
2 " " 48a	48a
1 " " 52	52
2 " " 90a	90a
1 " " 188	188
1 " " 190	190

B9. High Diving Board

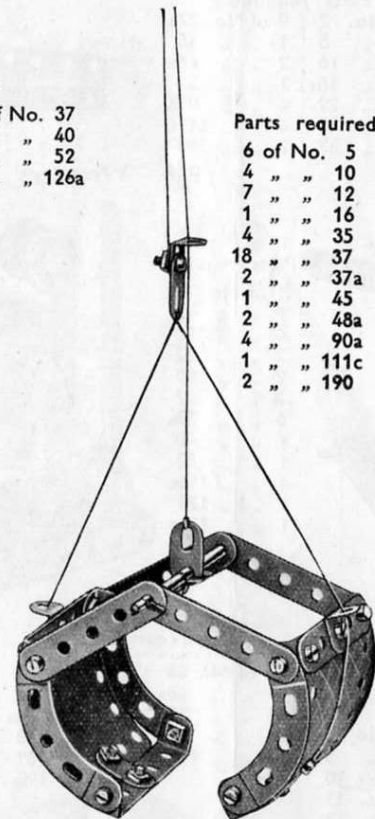


B5. Bullock Cart



Parts required	
3 of No. 2	2
9 " " 5	5
1 " " 16	16
2 " " 22	22
18 of No. 37	37
1 " " 40	40
1 " " 52	52
2 " " 126a	126a

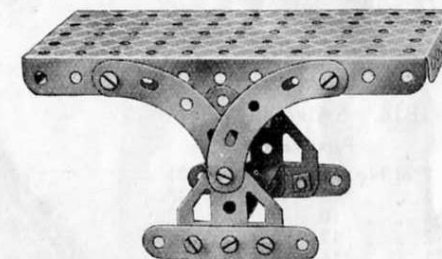
B8. Crane Grab



Parts required	
6 of No. 5	5
4 " " 10	10
7 " " 12	12
1 " " 16	16
4 " " 35	35
18 " " 37	37
2 " " 37a	37a
1 " " 45	45
2 " " 48a	48a
4 " " 90a	90a
1 " " 111c	111c
2 " " 190	190

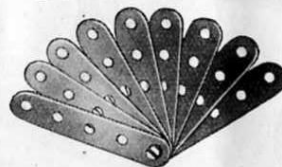
B10. Drafting Table

Parts required	
4 of No. 5	5
12 " " 37	37
1 " " 48a	48a
1 of No. 52	52
4 " " 90a	90a
2 " " 126a	126a



B2. Fan

Parts required	
9 of No. 5	5
1 " " 37a	37a
1 " " 111c	111c

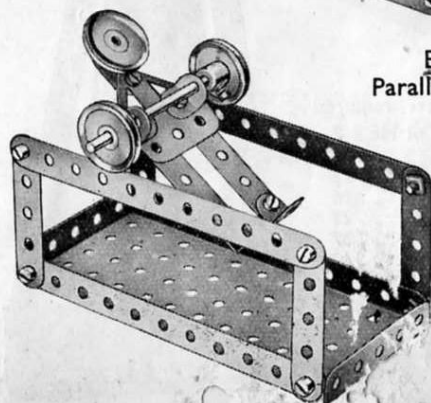


B6. Walking Man



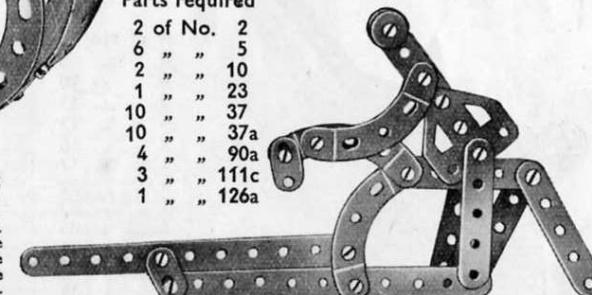
Parts required	
5 of No. 5	5
3 " " 10	10
2 " " 12	12
1 " " 22	22
5 " " 37	37
1 " " 37a	37a
3 " " 90a	90a
2 " " 111c	111c

B3. Parallel Bars



Parts required	
2 of No. 2	2
6 " " 5	5
1 " " 10	10
4 " " 12	12
1 " " 16	16
3 " " 22	22
2 " " 35	35
13 " " 37	37
1 " " 52	52
1 " " 111c	111c
1 " " 126a	126a

B11. Bucking Broncho



Parts required	
2 of No. 2	2
6 " " 5	5
2 " " 10	10
1 " " 23	23
10 " " 37	37
10 " " 37a	37a
4 " " 90a	90a
3 " " 111c	111c
1 " " 126a	126a

The $\frac{3}{8}$ " Bolts used for connecting the $\frac{5}{16}$ " Strips, the horse's legs, and the rider's legs and arms, are all locknutted to form pivots. The lower $\frac{5}{16}$ " Strip should be held rigidly and the upper one jerked forward; the horse will then throw its rider completely over its head.

B12. Catapult

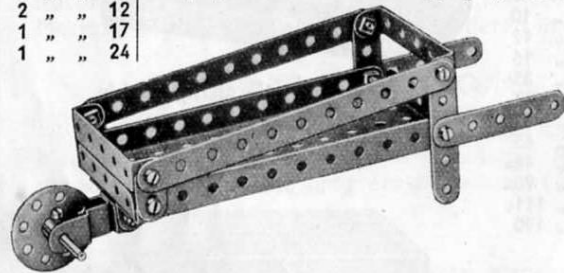


Parts required
4 of No. 37
4 " " 90a
A short length
of elastic

B13. Coster's Barrow

Parts required

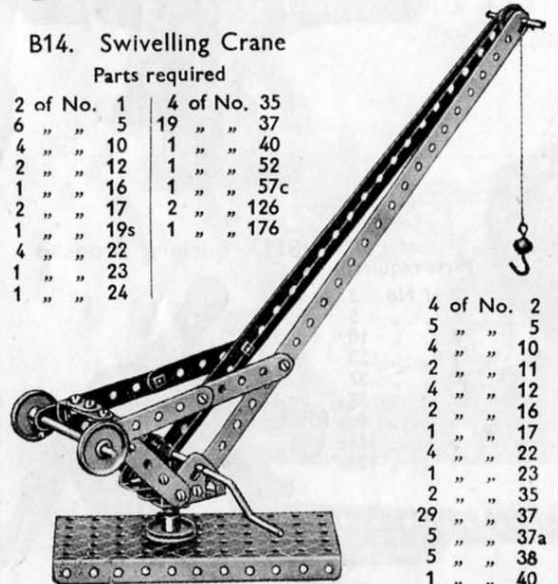
2 of No. 2	13 of No. 37
4 " " 5	1 " " 45
2 " " 10	2 " " 48a
1 " " 11	1 " " 52
2 " " 12	
1 " " 17	
1 " " 24	



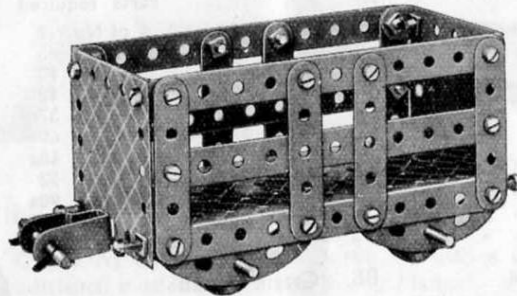
B14. Swivelling Crane

Parts required

2 of No. 1	4 of No. 35
6 " " 5	19 " " 37
4 " " 10	1 " " 40
2 " " 12	1 " " 52
1 " " 16	1 " " 57c
2 " " 17	2 " " 126
1 " " 19s	1 " " 176
1 " " 22	
1 " " 23	
1 " " 24	



B15. Cattle Truck

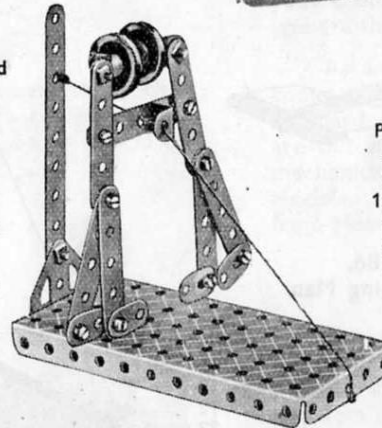


4 of No. 2	9 of No. 37a
8 " " 5	1 " " 45
2 " " 16	2 " " 48a
1 " " 18a	1 " " 52
4 " " 22	4 " " 90a
2 " " 35	4 " " 111c
25 " " 37	2 " " 190

B16. Wrestlers

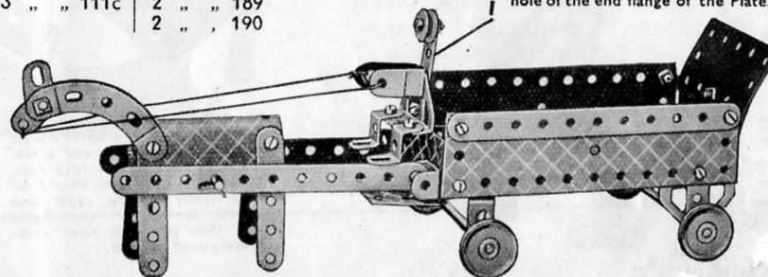
Parts required

1 of No. 2	
7 " " 5	
4 " " 10	
2 " " 12	
2 " " 22	
3 " " 37	
6 " " 37a	
1 " " 40	
1 " " 52	
4 " " 111c	
1 " " 125	
1 " " 126a	

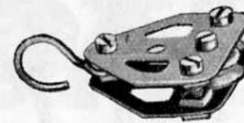


Parts required

1 of No. 44	2 of No. 125
1 " " 48a	1 " " 126
1 " " 52	2 " " 126a
2 " " 90a	2 " " 188
3 " " 111c	2 " " 189
	2 " " 190



B18. Single Sheave Pulley Block



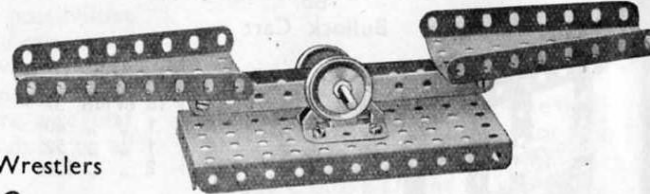
Parts required

1 of No. 23	
11 " " 37a	
1 " " 57c	
4 " " 111c	
2 " " 126a	

B19. Scales

Parts required

2 of No. 2	2 of No. 22	1 of No. 52
2 " " 11	10 " " 37	2 " " 54a
1 " " 17	4 " " 38	2 " " 126



B20. Card Table

Parts required

4 of No. 5	
2 " " 12	
10 " " 37	
1 " " 48a	
4 " " 90a	
1 " " 190	



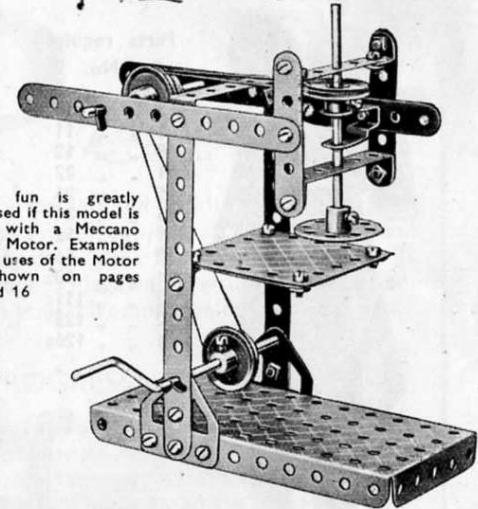
B17. Hay Cart

The fun is greatly increased if this model is fitted with a Meccano *Magic Motor*. The method of incorporating this motor is shown on page 16 (Model B51M). If the Motor is fitted, a Bush Wheel should be mounted on a 2" Rod fitted between the hind legs of the horse. The 2 1/2" Strip 1 forming the driver's body is bolted to the centre hole of the end flange of the Plate.

Parts required

4 of No. 2	
1 " " 5	
3 " " 12	
1 " " 16	
1 " " 22	
9 " " 37	
1 " " 40	
1 " " 52	
1 " " 54a	

B21. Drilling Machine

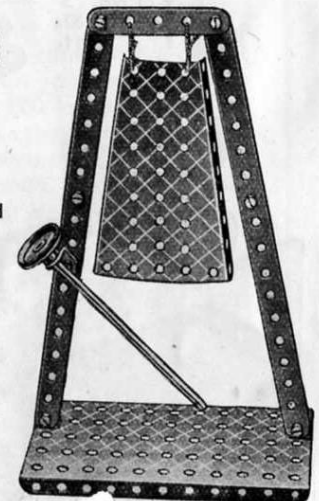


The fun is greatly increased if this model is fitted with a Meccano *Magic Motor*. Examples of the uses of the Motor are shown on pages 15 and 16

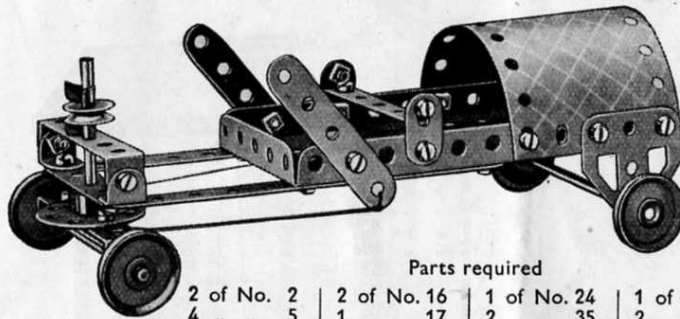
Parts required

4 of No. 2	28 of No. 37
8 " " 5	1 " " 37a
6 " " 12	1 " " 40
2 " " 16	1 " " 45
1 " " 19s	2 " " 48a
4 " " 22	1 " " 52
1 " " 24	2 " " 126a
6 " " 35	1 " " 190

B22. Gong

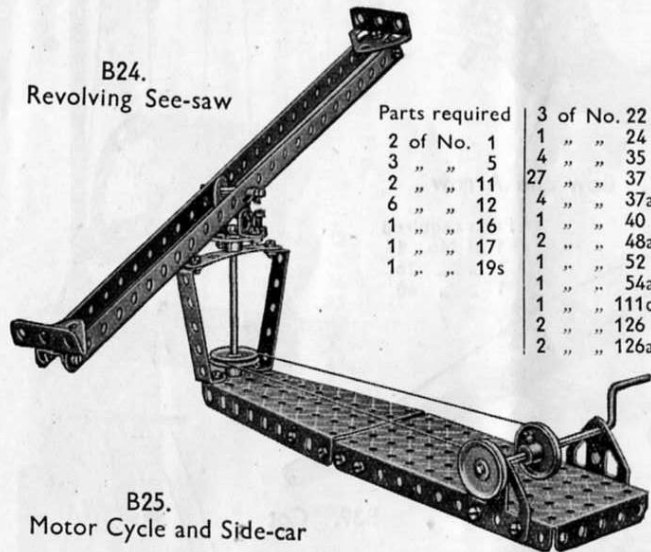


B23. Coaster



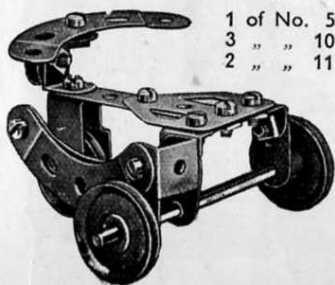
Parts required

2 of No. 2	2 of No. 16	1 of No. 24	1 of No. 40
4 " " 5	1 " " 17	2 " " 35	2 " " 48a
2 " " 10	4 " " 22	24 " " 37	1 " " 52
4 " " 12	1 " " 23	2 " " 37a	2 " " 126a
			1 " " 191

B24.
Revolving See-saw

Parts required

2 of No. 1	3 of No. 22
3 " " 5	1 " " 24
2 " " 11	4 " " 35
6 " " 12	27 " " 37
1 " " 16	4 " " 37a
1 " " 17	1 " " 40
1 " " 19s	2 " " 48a
	1 " " 52
	1 " " 54a
	1 " " 111c
	2 " " 126
	2 " " 126a

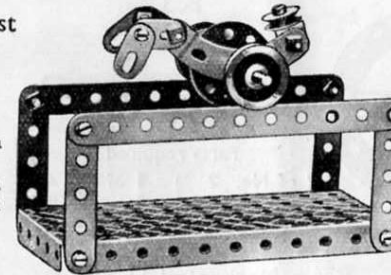
B25.
Motor Cycle and Side-car

Parts required

1 of No. 5	2 of No. 12
3 " " 10	1 " " 16
2 " " 11	3 " " 22
	1 " " 23
	10 " " 37
	2 " " 37a
	1 " " 44
	3 " " 90a
	2 " " 111c
	1 " " 126a

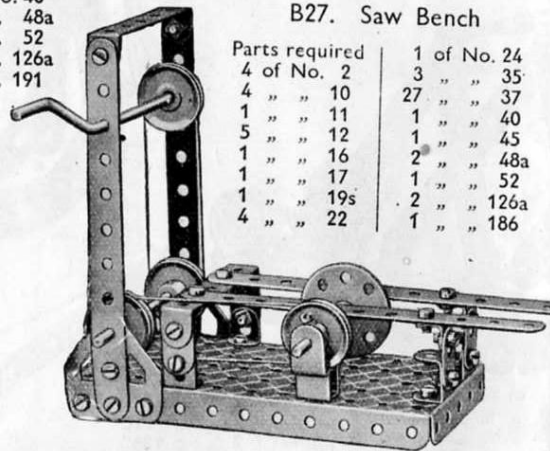
B26. Gymnast

Parts required	
2 of No. 2	1 of No. 24
4 " " 5	13 " " 37
4 " " 10	1 " " 37a
1 " " 12	1 " " 52
1 " " 16	1 " " 90a
2 " " 22	1 " " 111c
1 " " 23	



B27. Saw Bench

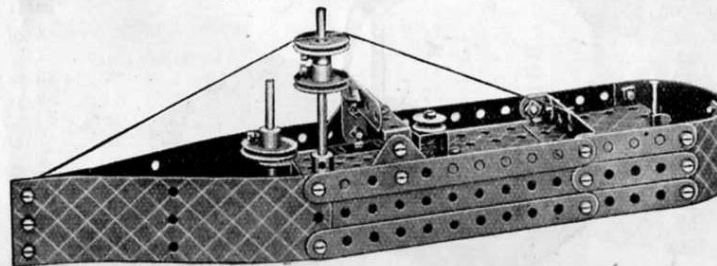
Parts required	
4 of No. 2	1 of No. 24
4 " " 10	3 " " 35
1 " " 11	27 " " 37
5 " " 12	1 " " 40
1 " " 16	1 " " 45
1 " " 17	2 " " 48a
1 " " 19s	1 " " 52
4 " " 22	2 " " 126a
	1 " " 186



B28. Battleship

Parts required

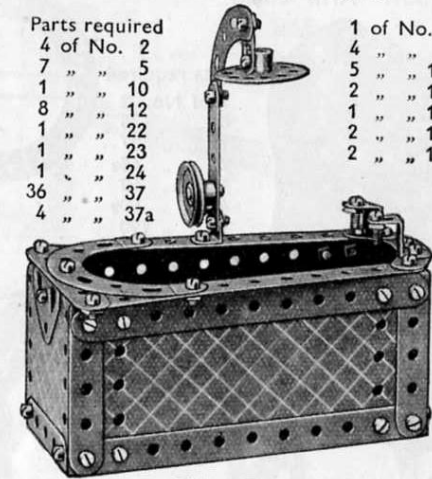
4 of No. 2	1 of No. 23	1 of No. 52
9 " " 5	1 " " 24	4 " " 111c
4 " " 10	5 " " 35	2 " " 125
1 " " 11	36 " " 37	2 " " 126
5 " " 12	4 " " 37a	2 " " 183
1 " " 16	1 " " 40	2 " " 189
2 " " 17	2 " " 48a	1 " " 190
3 " " 22		



An alternative design of this model (B30M), fitted with the Meccano Magic Motor, is shown on page 16.

B29. Bath with Shower

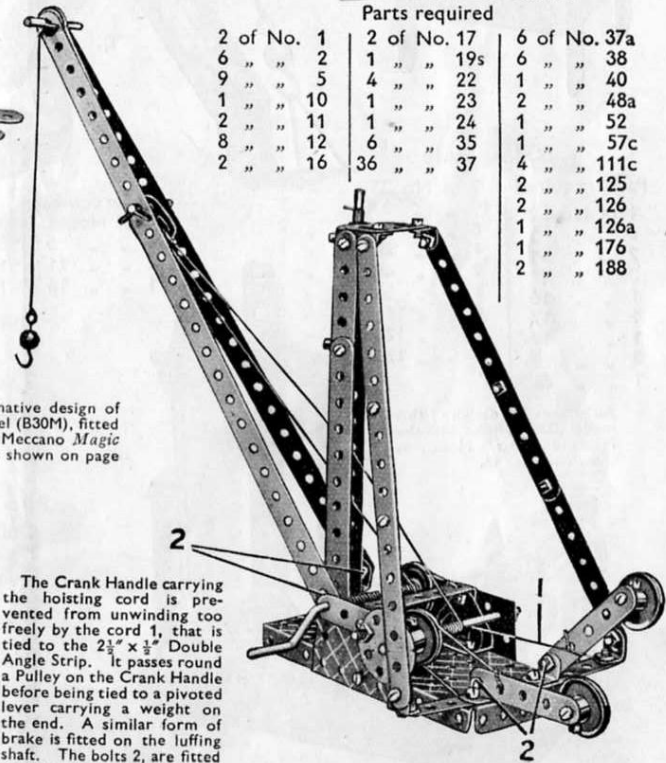
Parts required		1 of No. 52	
4 of No. 2	4 " " 90a		
7 " " 5	5 " " 111c		
1 " " 10	2 " " 125		
8 " " 12	1 " " 126		
1 " " 22	2 " " 190		
1 " " 23	2 " " 191		
1 " " 24			
36 " " 37			
4 " " 37a			



B30. Derrick Crane

Parts required

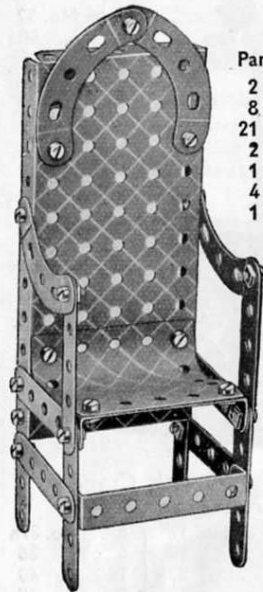
2 of No. 1	2 of No. 17	6 of No. 37a
6 " " 2	1 " " 19s	6 " " 38
9 " " 5	4 " " 22	1 " " 40
1 " " 10	1 " " 23	2 " " 48a
2 " " 11	1 " " 24	1 " " 52
8 " " 12	6 " " 35	1 " " 57c
2 " " 16	36 " " 37	4 " " 111c
		2 " " 125
		2 " " 126
		1 " " 126a
		1 " " 176
		2 " " 188



The Crank Handle carrying the hoisting cord is prevented from unwinding too freely by the cord 1, that is tied to the $2\frac{1}{2} \times \frac{1}{2}$ Double Angle Strip. It passes round a Pulley on the Crank Handle before being tied to a pivoted lever carrying a weight on the end. A similar form of brake is fitted on the luffing shaft. The bolts 2, are fitted with locknuts.

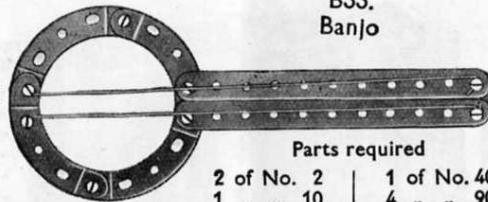
These Models can be built with MECCANO Outfit B (or Outfits A and Aa)

B31. Arm Chair



Parts required	
2 of No. 2	
8 " " 5	
21 " " 37	
2 " " 48a	
1 " " 52	
4 " " 90a	
1 " " 190	

B33. Banjo



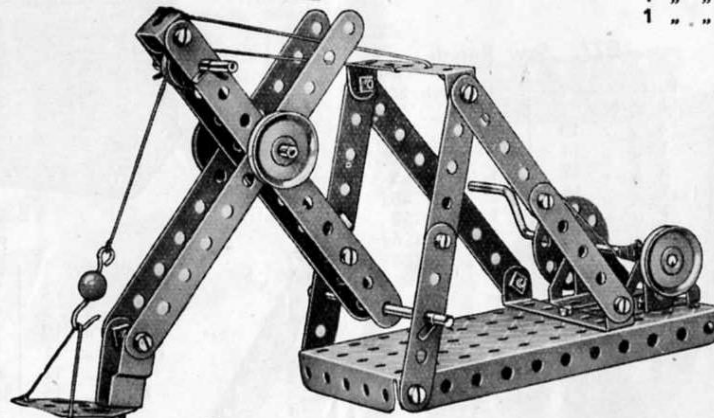
Parts required	
2 of No. 2	1 of No. 40
1 " " 10	4 " " 90a
8 " " 37	

B36. Rocking Horse



Parts required	
9 of No. 5	
4 " " 10	
6 " " 12	
1 " " 23	
17 " " 37	
8 " " 37a	
1 " " 40	
4 " " 90a	
5 " " 111c	
1 " " 126a	
1 " " 190	

B34. Mechanical Shovel

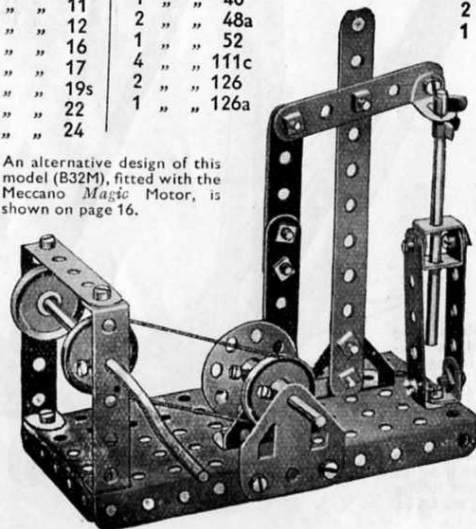


Parts required	2 of No. 17	5 of No. 35	1 of No. 52
4 of No. 2	1 " " 19s	20 " " 37	1 " " 57c
8 " " 5	3 " " 22	1 " " 40	2 " " 126
2 " " 11	1 " " 23	1 " " 45	1 " " 126a
1 " " 16	1 " " 24	2 " " 48a	1 " " 176

B32. Pump

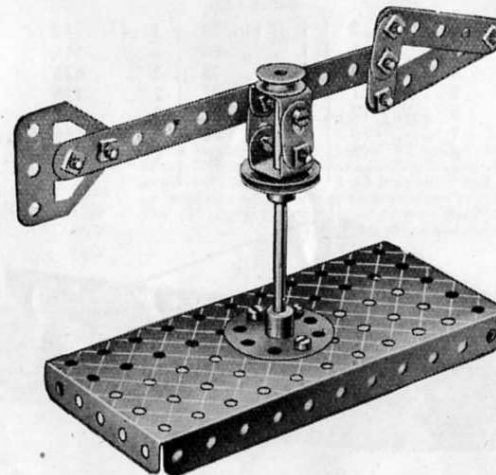
Parts required	
1 of No. 2	2 of No. 35
6 " " 5	19 " " 37
2 " " 11	8 " " 37a
3 " " 12	1 " " 40
1 " " 16	2 " " 48a
1 " " 17	1 " " 52
1 " " 19s	4 " " 111c
3 " " 22	2 " " 126
1 " " 24	1 " " 126a

An alternative design of this model (B32M), fitted with the Meccano Magic Motor, is shown on page 16.



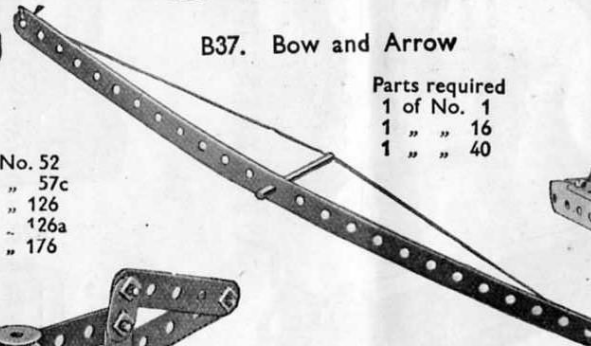
B35. Weather Vane

Parts required	
1 of No. 2	
2 " " 5	
4 " " 10	
2 " " 11	
1 " " 16	
1 " " 22	
1 " " 23	
1 " " 24	
12 " " 37	
1 " " 52	
1 " " 126a	

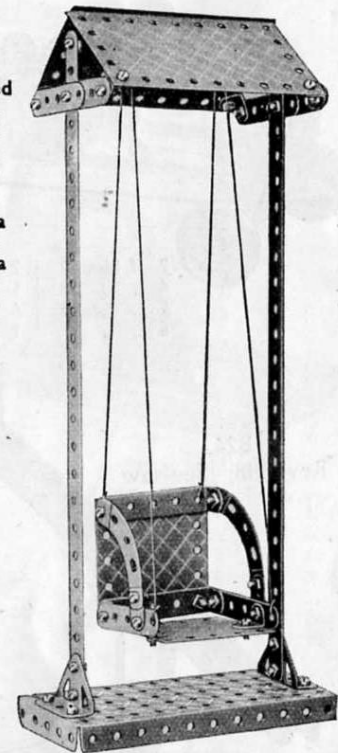


B37. Bow and Arrow

Parts required	
1 of No. 1	
1 " " 16	
1 " " 40	

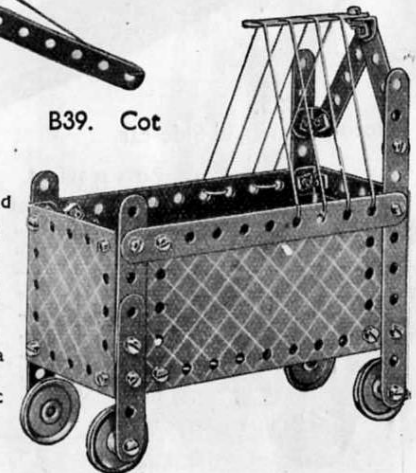


B38. Swing

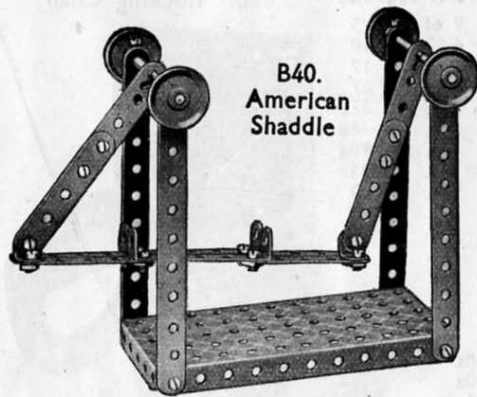


Parts required	
4 of No. 2	
8 " " 5	
8 " " 12	
33 " " 37	
1 " " 40	
2 " " 48a	
1 " " 52	
2 " " 90a	
2 " " 126	
2 " " 190	
2 " " 191	

B39. Cot



Parts required	
4 of No. 2	
7 " " 5	
3 " " 12	
4 " " 22	
30 " " 37	
1 " " 40	
2 " " 48a	
1 " " 52	
4 " " 111c	
2 " " 190	
2 " " 191	

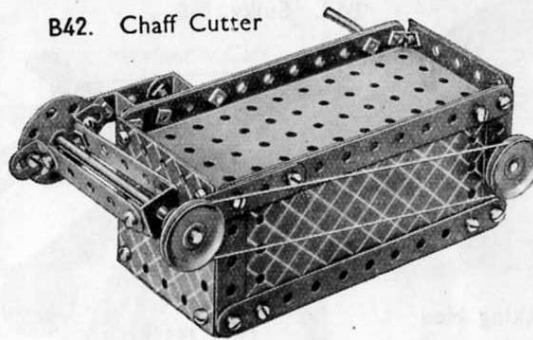


B40.
American
Shackle

Parts required

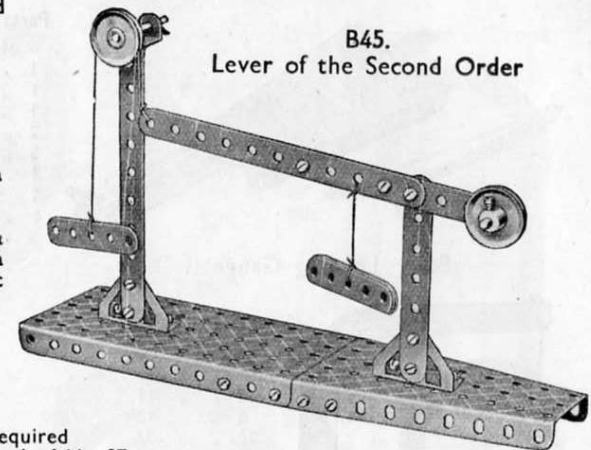
4 of No. 2
8 " " 5
1 " " 11
6 " " 12
1 " " 16
1 " " 19s
2 " " 22
1 " " 24
2 " " 35
33 " " 37
1 " " 40
1 " " 52
2 " " 125
2 " " 190
2 " " 191

B42. Chaff Cutter



Parts required

2 of No. 2
9 " " 5
2 " " 17
2 " " 22
1 " " 23
2 " " 35
21 " " 37
2 " " 37a
5 " " 38
1 " " 40
1 " " 52a
1 " " 54a
1 " " 111c
1 " " 125
2 " " 126



B45.
Lever of the Second Order

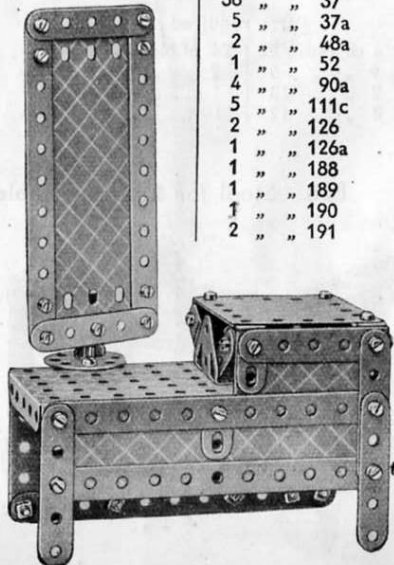
Parts required

4 of No. 2	2 of No. 12	18 of No. 37
9 " " 5	4 " " 16	2 " " 37a
2 " " 10	4 " " 22	2 " " 48a
	4 " " 35	1 " " 52

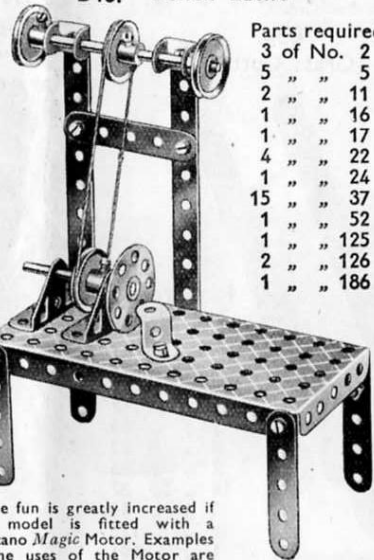
B41.
Modern Dressing Table

Parts required

4 of No. 2	4 of No. 12
9 " " 5	1 " " 17
4 " " 10	1 " " 24
1 " " 11	2 " " 35
	36 " " 37
	5 " " 37a
	2 " " 48a
	1 " " 52
	4 " " 90a
	5 " " 111c
	2 " " 126
	1 " " 126a
	1 " " 188
	1 " " 189
	1 " " 190
	2 " " 191



B43. Bench Lathe



Parts required

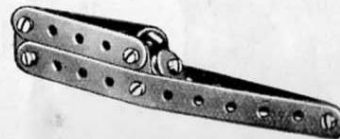
3 of No. 2
5 " " 5
2 " " 11
1 " " 16
1 " " 17
4 " " 22
1 " " 24
15 " " 37
1 " " 52
1 " " 125
2 " " 126
1 " " 186

The fun is greatly increased if this model is fitted with a Meccano Magic Motor. Examples of the uses of the Motor are shown on pages 15 and 16.

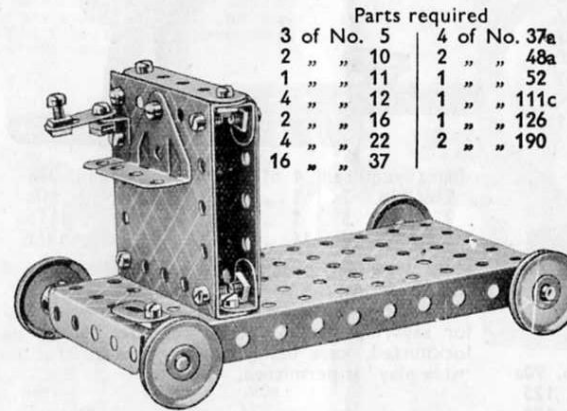
B44. Motor Boat

Parts required

2 of No. 2	1 of No. 23
2 " " 5	7 " " 37
3 " " 10	1 " " 37a
1 " " 11	1 " " 111c



B46. Electric Trolley



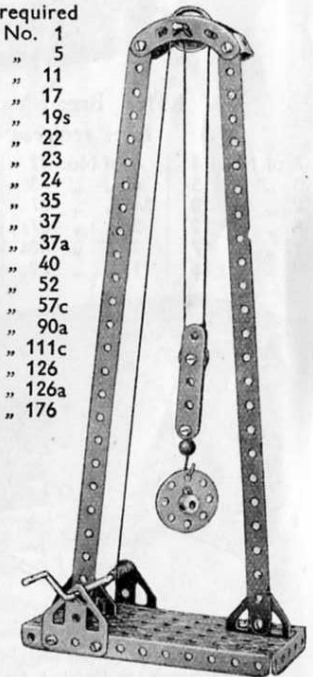
Parts required

3 of No. 5	4 of No. 37a
2 " " 10	2 " " 48a
1 " " 11	1 " " 52
4 " " 12	1 " " 111c
2 " " 16	1 " " 126
4 " " 22	2 " " 190
16 " " 37	

B48. Pulley Block

Parts required

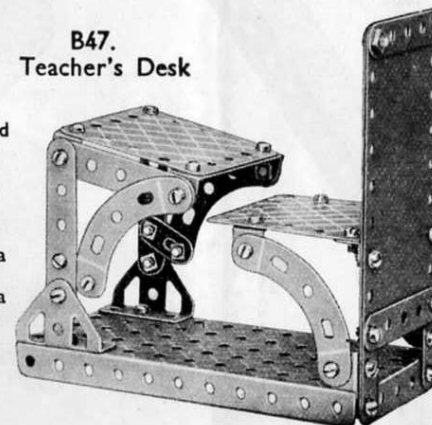
2 of No. 1
2 " " 5
2 " " 11
1 " " 17
1 " " 19s
1 " " 22
1 " " 23
1 " " 24
4 " " 35
14 " " 37
2 " " 37a
1 " " 40
1 " " 52
1 " " 57c
2 " " 90a
2 " " 111c
2 " " 126
2 " " 126a
1 " " 176



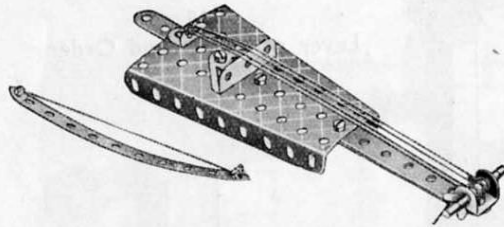
B47.
Teacher's Desk

Parts required

2 of No. 2
9 " " 5
2 " " 10
6 " " 12
34 " " 37
2 " " 48a
1 " " 52
4 " " 90a
2 " " 126
2 " " 190
1 " " 191



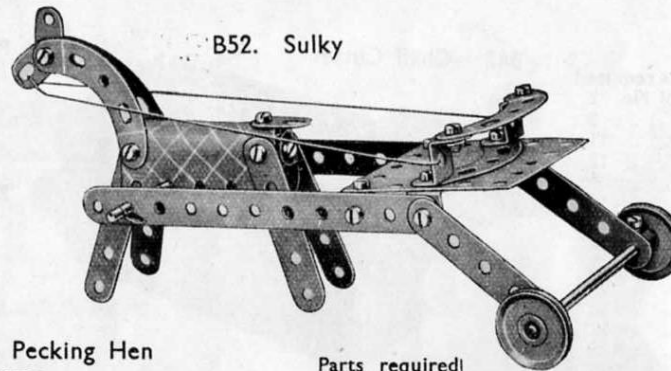
B49. Violin and Bow



Parts required

4 of No. 2
1 " " 11
1 " " 12
1 " " 17
2 " " 35
5 " " 37
1 " " 40
1 " " 54a
1 " " 126

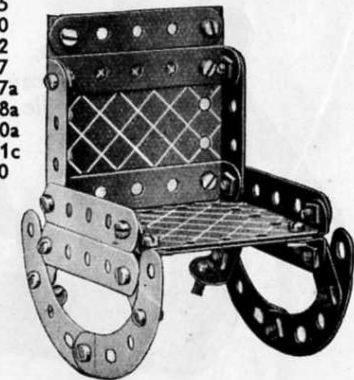
B52. Sulky



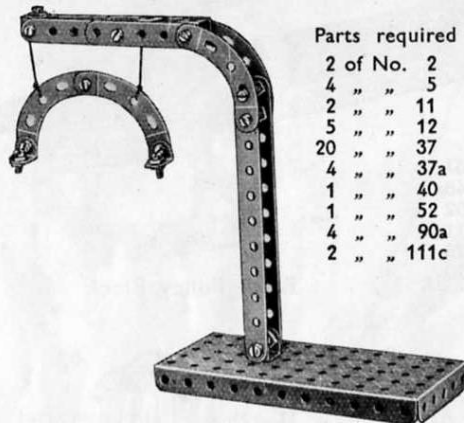
Parts required

9 of No. 5
4 " " 10
8 " " 12
26 " " 37
2 " " 37a
2 " " 48a
4 " " 90a
2 " " 111c
2 " " 190

B56. Rocking Chair



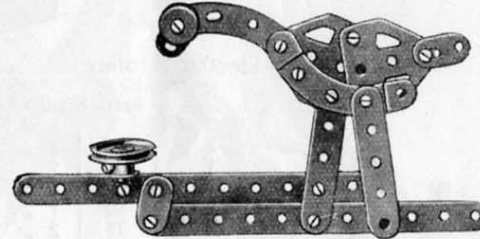
B50. Loading Gauge



Parts required

2 of No. 2
4 " " 5
2 " " 11
5 " " 12
20 " " 37
4 " " 37a
1 " " 40
1 " " 52
4 " " 90a
2 " " 111c

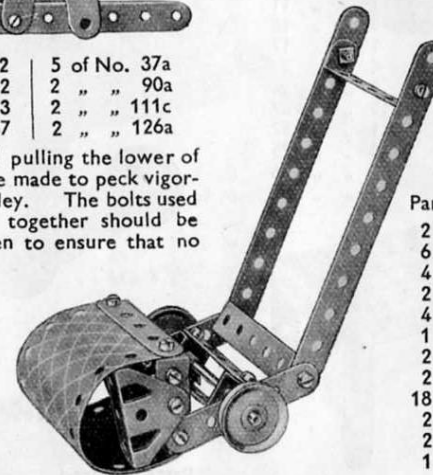
B53. Pecking Hen



Parts required

2 of No. 2	2 of No. 22	1 of No. 48a
6 " " 5	4 " " 35	4 " " 90a
3 " " 10	17 " " 37	1 " " 111c
6 " " 12	1 " " 37a	2 " " 125
2 " " 16	1 " " 40	2 " " 190

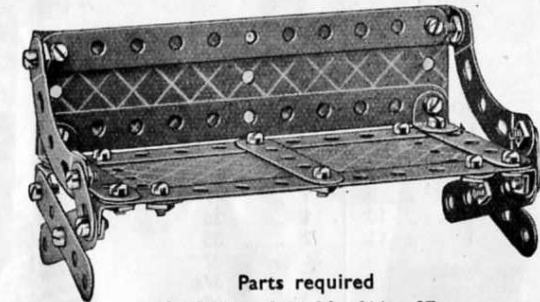
B54. Grass Cutter



Parts required

2 of No. 2
6 " " 5
4 " " 10
2 " " 11
4 " " 12
1 " " 16
2 " " 22
2 " " 35
18 " " 37
2 " " 48a
2 " " 126
1 " " 191

B57. Station Seat



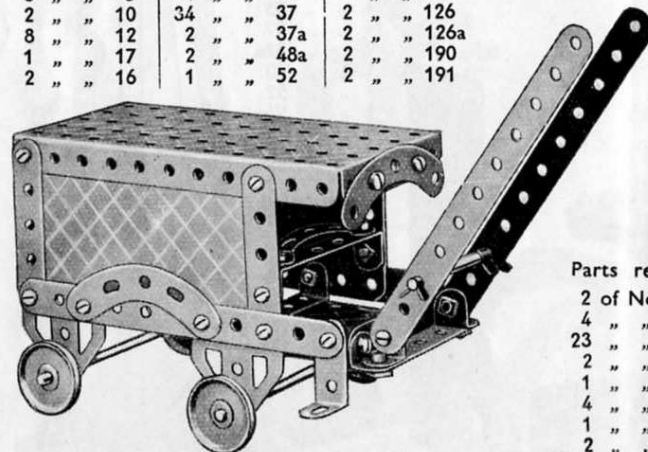
Parts required

4 of No. 2	24 of No. 37
9 " " 5	2 " " 90a
2 " " 10	1 " " 189
8 " " 12	1 " " 191

B51. Bread Van

Parts required

4 of No. 2	4 of No. 22	4 of No. 90a
8 " " 5	4 " " 35	1 " " 125
2 " " 10	34 " " 37	2 " " 126
8 " " 12	2 " " 37a	2 " " 126a
1 " " 17	2 " " 48a	2 " " 190
2 " " 16	1 " " 52	2 " " 191



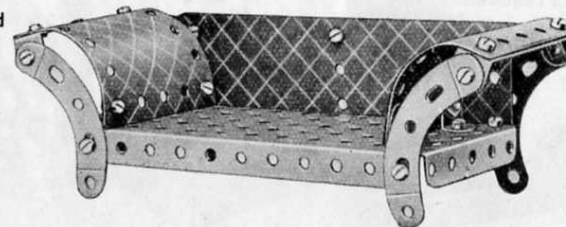
Parts required	1 of No. 12	5 of No. 37a
2 of No. 2	1 " " 22	2 " " 90a
2 " " 5	1 " " 23	2 " " 111c
3 " " 10	11 " " 37	2 " " 126a

By alternately pushing and pulling the lower of the $5\frac{1}{2}$ " Strips, the hen can be made to peck vigorously at the "bowl," a 1" Pulley. The bolts used for securing the $5\frac{1}{2}$ " Strips together should be locknotted, care being taken to ensure that no "side play" is permitted.

B55. Couch

Parts required

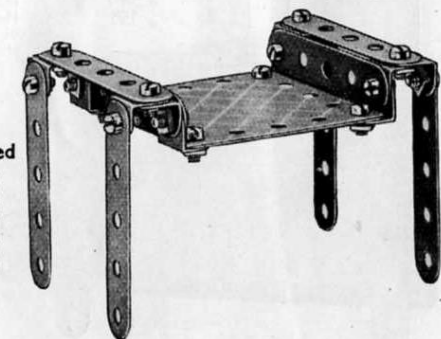
2 of No. 2
4 " " 12
23 " " 37
2 " " 48a
1 " " 52
4 " " 90a
1 " " 189
2 " " 190



Parts required

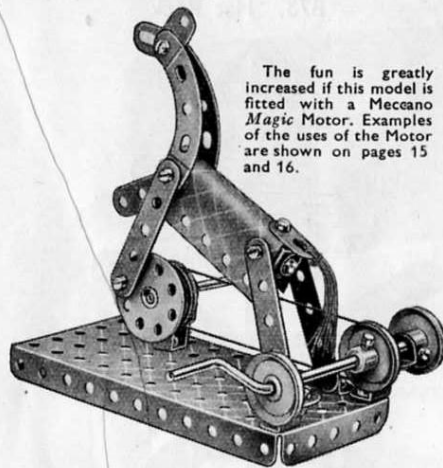
9 of No. 5
8 " " 12
16 " " 37
2 " " 125
1 " " 190

B58. Stool for Dressing Table



An alternative design of this model (B51M), fitted with the Meccano Magic Motor, is shown on page 16.

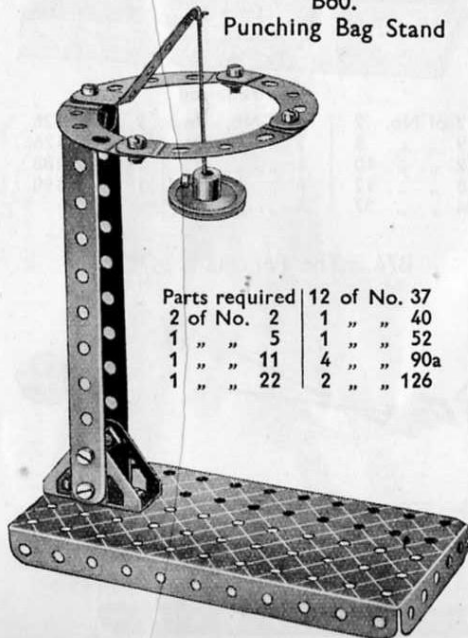
B59. Prancing Horse



The fun is greatly increased if this model is fitted with a Meccano Magic Motor. Examples of the uses of the Motor are shown on pages 15 and 16.

Parts required	4 of No. 22	1 of No. 52
4 of No. 5	1 " " 24	2 " " 90a
3 " " 10	14 " " 37	4 " " 111c
8 " " 12	8 " " 37a	2 " " 125
1 " " 17	1 " " 40	1 " " 186
1 " " 19s	1 " " 44	1 " " 190

B60. Punching Bag Stand

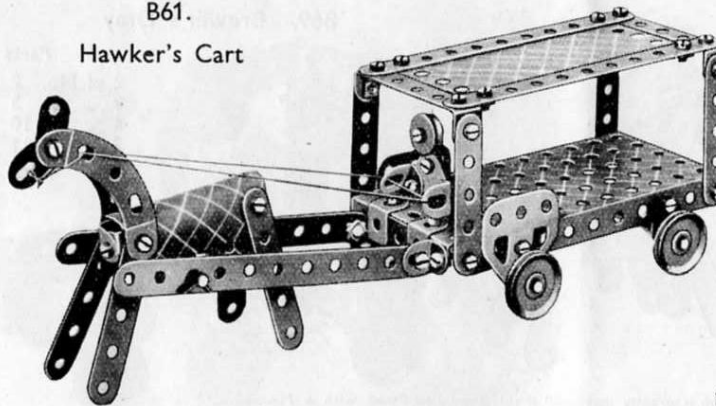


Parts required	12 of No. 37
2 of No. 2	1 " " 40
1 " " 5	1 " " 52
1 " " 11	4 " " 90a
1 " " 22	2 " " 126

Parts required

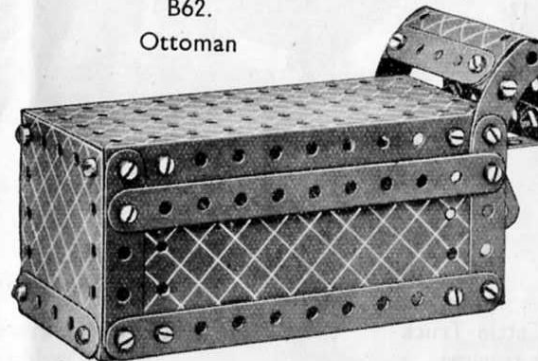
4 of No. 2	8 " " 5	4 " " 10	8 " " 12	2 " " 16	1 " " 17	4 " " 22	1 " " 23	4 " " 35	35 " " 37	4 " " 37a	1 " " 40	2 " " 48a	1 " " 52	2 " " 90a	2 " " 111c	2 " " 125	2 " " 126	2 " " 126a	1 " " 190	1 " " 191
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B61. Hawker's Cart



The fun is greatly increased if this model is fitted with a Meccano Magic Motor. For examples of the uses of the Motor see pages 15 and 16. If the Motor is fitted, a Bush Wheel should be mounted on a 2" Rod fitted between the hind legs of the horse.

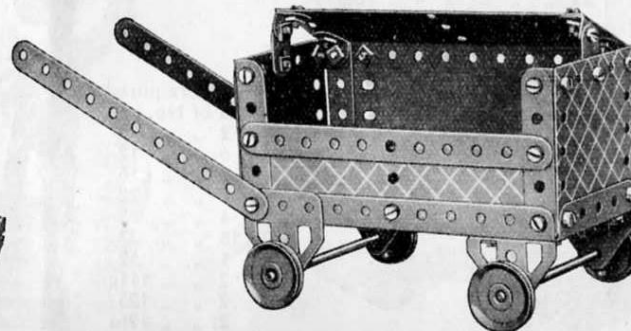
B62. Ottoman



Parts required

4 of No. 2	7 " " 5	2 " " 10	2 " " 11	4 " " 12	34 " " 37	1 " " 48a	1 " " 52	2 " " 90a	2 " " 190	2 " " 191
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B63. Ash Cart



Parts required

4 of No. 2	4 " " 5	2 " " 10	4 " " 12	2 " " 16	4 " " 22	34 " " 37	2 " " 37a	2 " " 48a	1 " " 52	2 " " 111c	2 " " 126	2 " " 126a	2 " " 189	2 " " 190	1 " " 191
------------	---------	----------	----------	----------	----------	-----------	-----------	-----------	----------	------------	-----------	------------	-----------	-----------	-----------

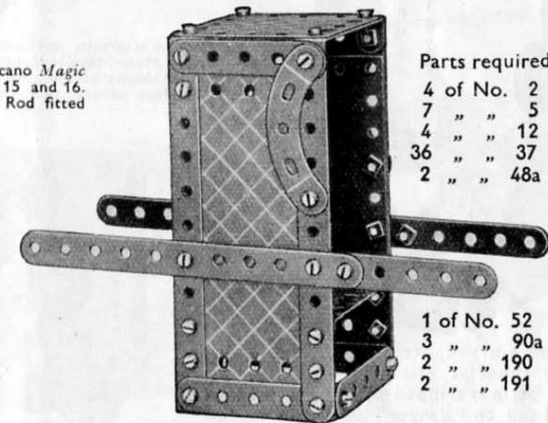
B64. Shepherd's Crook



Parts required

2 of No. 1	7 " " 37	4 " " 90a
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B65. Sedan Chair

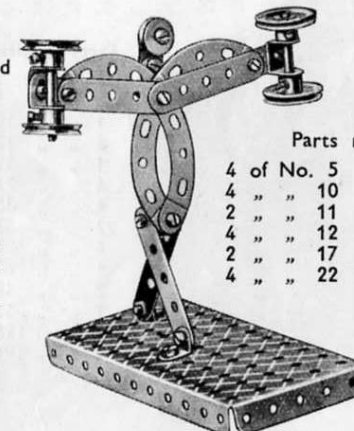


Parts required

4 of No. 2	7 " " 5	4 " " 12	36 " " 37	2 " " 48a
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1 of No. 52	3 " " 90a	2 " " 190	2 " " 191
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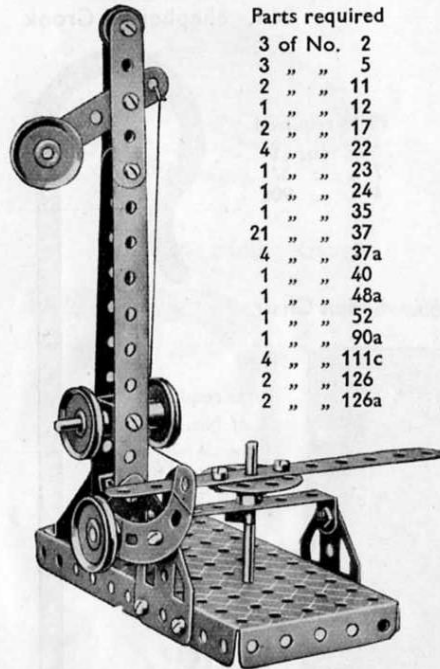
B66. Strong Man



Parts required

4 of No. 5	4 " " 10	2 " " 11	4 " " 12	2 " " 17	4 " " 22	12 of No. 37	2 " " 37a	1 " " 52	4 " " 90a	2 " " 111c
------------	----------	----------	----------	----------	----------	--------------	-----------	----------	-----------	------------

B67. Automatic Signals

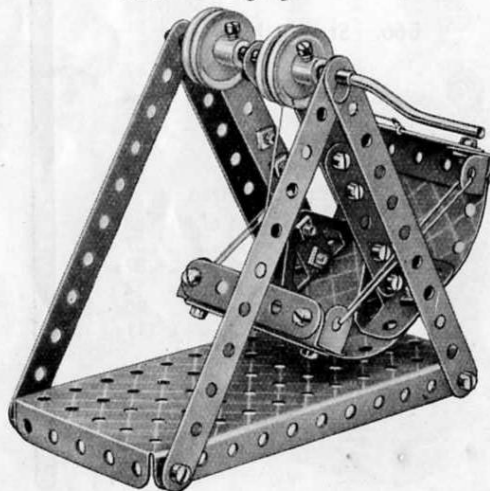


Parts required

3 of No.	2
3 "	5
2 "	11
1 "	12
2 "	17
4 "	22
1 "	23
1 "	24
1 "	35
21 "	37
4 "	37a
1 "	40
1 "	48a
1 "	52
1 "	90a
4 "	111c
2 "	126
2 "	126a

The weighted Curved Strip pivots on a bolt locknitted to the Flat Trunnion. When the horizontal $5\frac{1}{2}$ " Strip is tripped by the locomotive the signal is raised to "danger" until the mechanism is re-set.

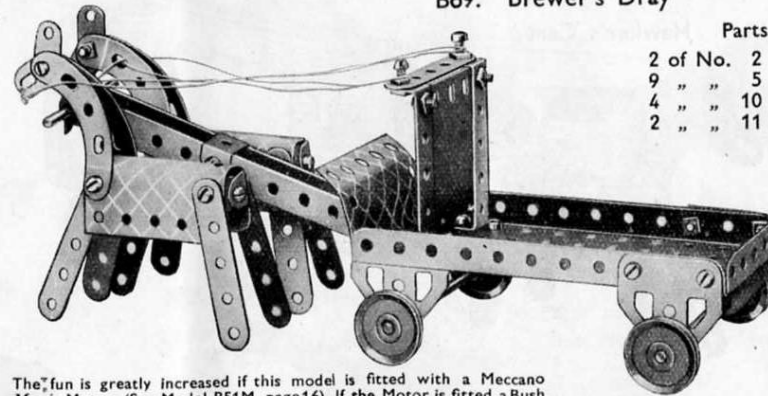
B68. Swinging Boat



Parts required

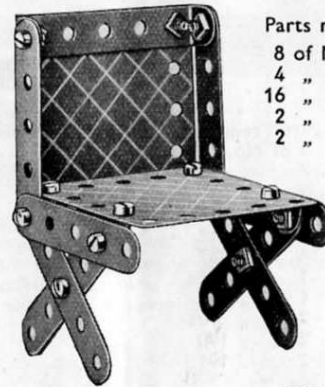
4 of No.	2
8 "	5
1 "	10
4 "	12
1 "	19s
4 "	22
6 "	35
22 "	37
4 "	37a
1 "	40
2 "	48a
1 "	52
2 "	126
1 "	191

B69. Brewer's Dray



The fun is greatly increased if this model is fitted with a Meccano Magic Motor. (See Model B51M, page 16). If the Motor is fitted, a Bush Wheel should be mounted on a 2" Rod fitted between the inner hind legs of the two horses.

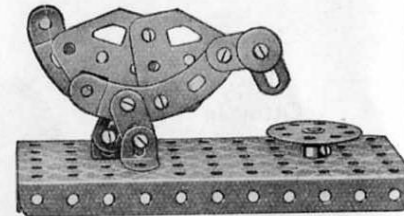
B70. Chair



Parts required

8 of No.	5
4 "	12
16 "	37
2 "	48a
2 "	190

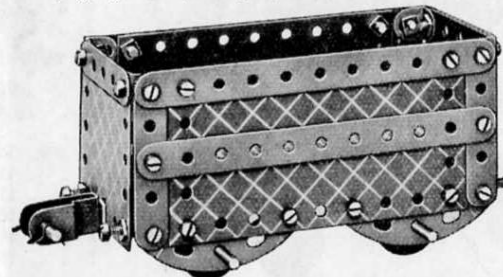
B71. Goose



Parts required

4 of No.	10	2 of No.	37a
2 "	12	1 "	52
1 "	23	2 "	90a
1 "	24	3 "	111c
6 "	37	2 "	126a

B72. Cattle Truck



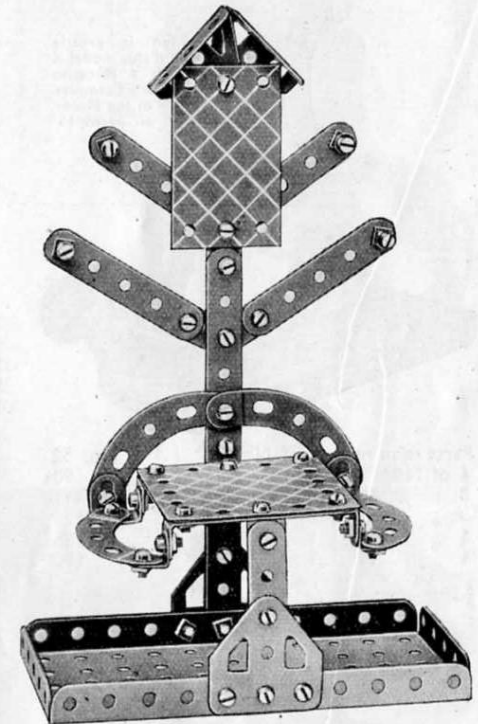
Parts required

4 of No.	2	4 of No.	22	1 of No.	52
6 "	5	2 "	35	4 "	90a
4 "	12	29 "	37	4 "	111c
2 "	16	9 "	37a	2 "	190
1 "	17	1 "	45	2 "	191

Parts required

2 of No.	2	8 of No.	12
9 "	5	2 "	16
4 "	10	2 "	17
2 "	11	4 "	22
		6 "	35
		29 "	37
		8 "	37a
		1 "	40
		2 "	48a
		1 "	52
		4 "	90a
		4 "	111c
		2 "	126
		2 "	126a
		2 "	190
		1 "	191

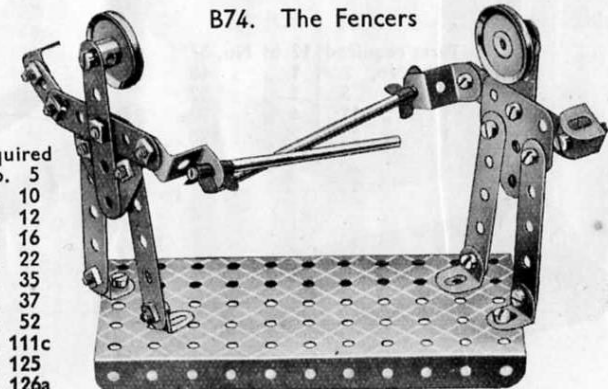
B73. Hat Rack



Parts required

2 of No.	2	8 of No.	37a	2 of No.	126
9 "	5	2 "	48a	2 "	126a
2 "	10	1 "	52	1 "	188
8 "	12	4 "	90a	1 "	190
34 "	37	4 "	111c		

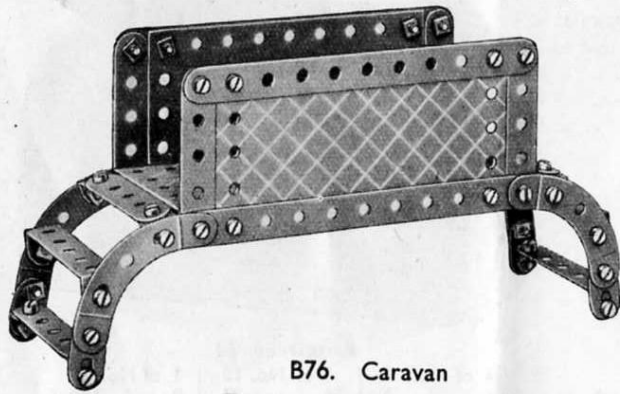
B74. The Fencers



Parts required

8 of No.	5
2 "	10
6 "	12
2 "	16
2 "	22
4 "	35
18 "	37
1 "	52
2 "	111c
2 "	125
2 "	126a

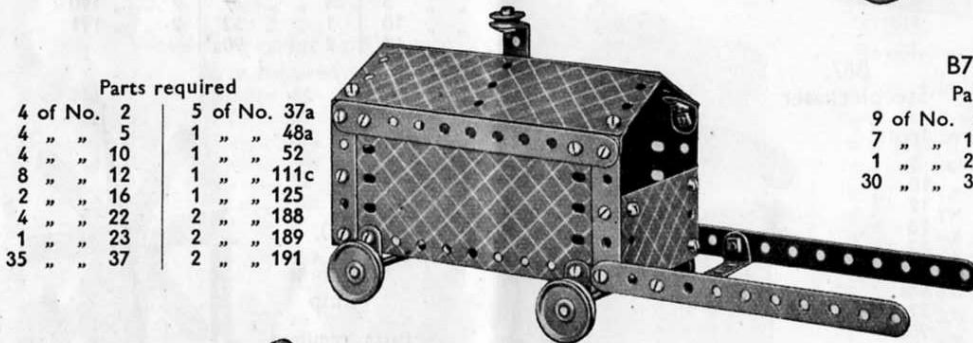
B75. Footbridge



Parts required

4 of No.	2
8 "	5
4 "	10
8 "	12
36 "	37
4 "	37a
2 "	48a
1 "	52
4 "	90a
4 "	111c
2 "	191

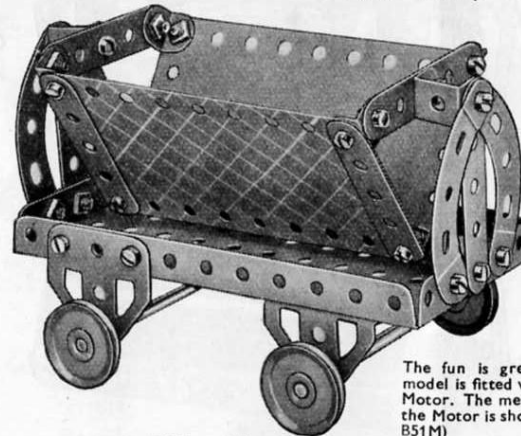
B76. Caravan



Parts required

4 of No.	2	5 of No.	37a
4 "	5	1 "	48a
4 "	10	1 "	52
8 "	12	1 "	111c
2 "	16	1 "	125
4 "	22	2 "	188
1 "	23	2 "	189
35 "	37	2 "	191

B78. Dump Car



Parts required

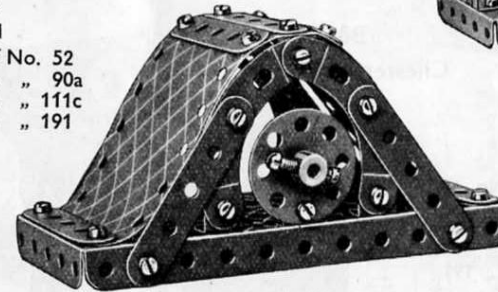
8 of No.	5
2 "	11
6 "	12
2 "	16
4 "	22
29 "	37
4 "	37a
1 "	52
4 "	90a
1 "	111c
2 "	126
2 "	126a
2 "	191

The fun is greatly increased if this model is fitted with a Meccano Magic Motor. The method of incorporating the Motor is shown on page 16 (Model B51M)

B79. Clock

Parts required

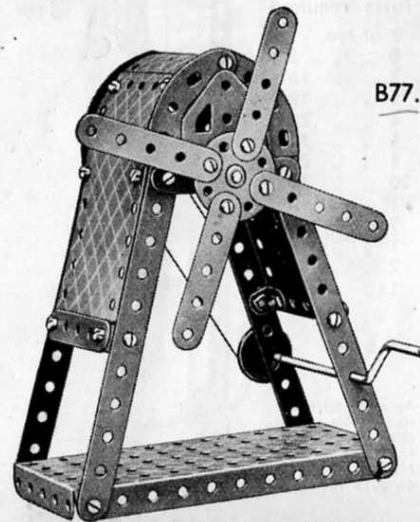
9 of No.	5	1 of No.	52
7 "	12	4 "	90a
1 "	24	2 "	111c
30 "	37	2 "	191



Parts required

4 of No.	2
7 "	5
2 "	10
4 "	12
28 "	37
2 "	37a
1 "	52
2 "	126
2 "	191

B77. Windmill

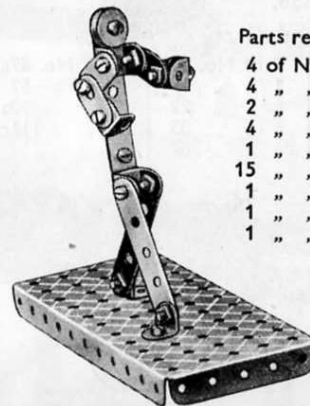


Parts required

4 of No.	2
8 "	5
4 "	10
4 "	12
1 "	16
1 "	19s
2 "	22
1 "	24
1 "	35
36 "	37
2 "	37a
2 "	48a
1 "	52
4 "	90a
2 "	111c
2 "	126a
1 "	186
1 "	190
2 "	191

An alternative design of this model (B77M), fitted with the Meccano Magic Motor, is shown on page 15:

B80. Boxer



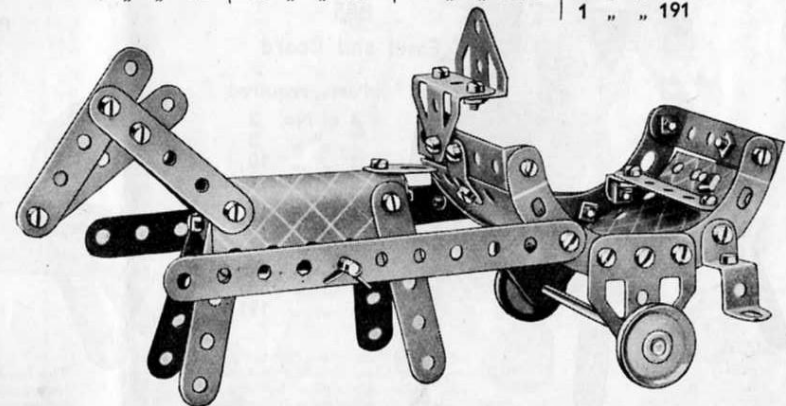
Parts required

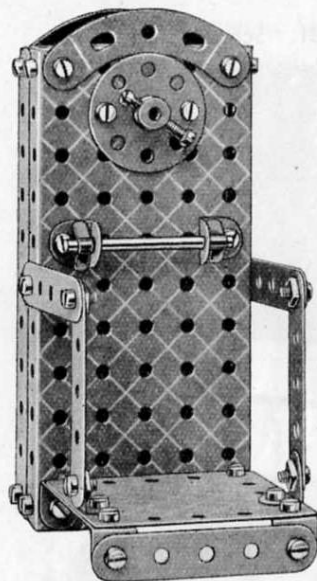
4 of No.	5
4 "	10
2 "	11
4 "	12
1 "	23
15 "	37
1 "	37a
1 "	52
1 "	111c

B82. Two-wheeled Trap

Parts required

2 of No.	2	2 of No.	16	1 of No.	37a	2 of No.	125
9 "	5	2 "	22	2 "	48a	2 "	126
3 "	10	4 "	35	4 "	90a	2 "	126a
8 "	12	35 "	37	1 "	111c	1 "	190
						1 "	191

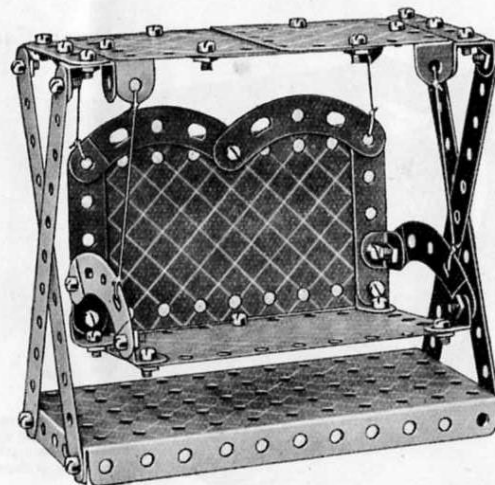




B83.
Weighing Machine

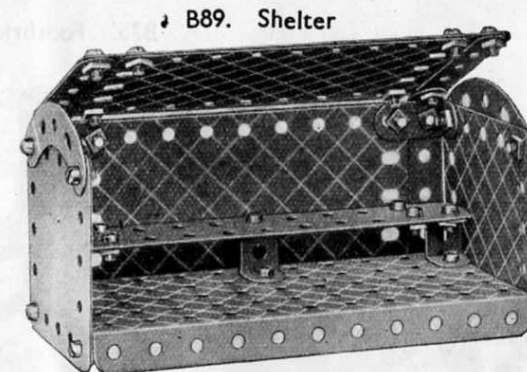
Parts required

4 of No.	2
7 " "	5
4 " "	10
8 " "	12
1 " "	17
1 " "	24
2 " "	35
36 " "	37
2 " "	37a
2 " "	48a
1 " "	52
2 " "	90a
3 " "	111c
1 " "	190
1 " "	191



B86.
Swinging Garden Seat
Parts required

4 of No.	2
8 " "	5
2 " "	11
8 " "	12
34 " "	37
1 " "	40
2 " "	48a
1 " "	52
4 " "	90a
2 " "	126a
2 " "	190
2 " "	191

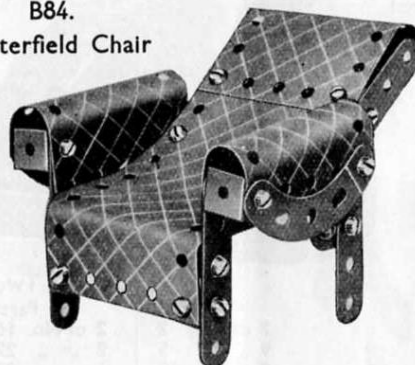


B89. Shelter

Parts required

4 of No.	2	4 of No.	12	1 of No.	125
8 " "	5	34 " "	37	2 " "	190
4 " "	10	1 " "	52	2 " "	191
2 " "	11	2 " "	90a		

B84.
Chesterfield Chair



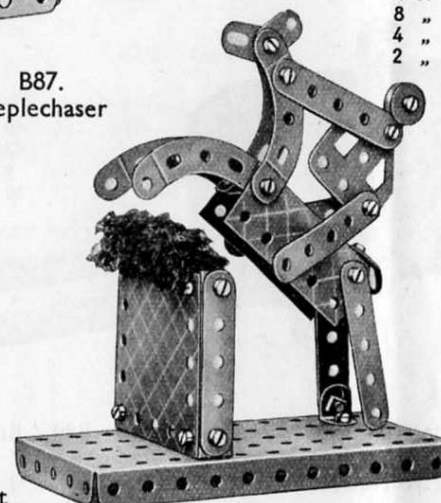
Parts required

9 of No.	5	2 of No.	48a
2 " "	10	2 " "	90a
2 " "	11	2 " "	125
8 " "	12	2 " "	190
32 " "	37	2 " "	191

B87.
Steeplechaser

Parts required

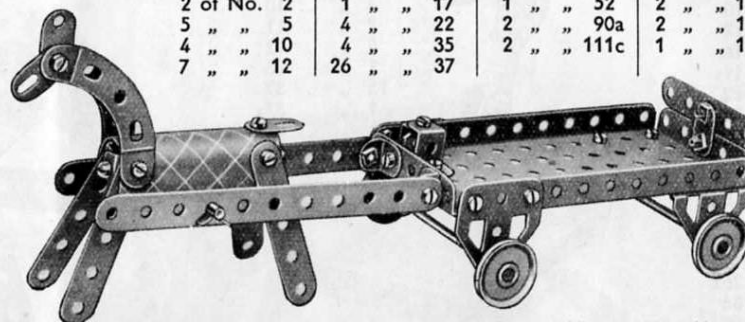
9 of No.	5
4 " "	10
7 " "	12
1 " "	23
20 " "	37
8 " "	37a
2 " "	48a
1 " "	52
4 " "	90a
4 " "	111c
1 " "	126a
2 " "	190



B88.

Horse and Cart

Parts required	2 of No. 16	2 of No. 37a	1 of No.125
2 of No. 2	1 " " 17	1 " " 52	2 " " 126
5 " " 5	4 " " 22	2 " " 90a	2 " " 126a
4 " " 10	4 " " 35	2 " " 111c	1 " " 190
7 " " 12	26 " " 37		



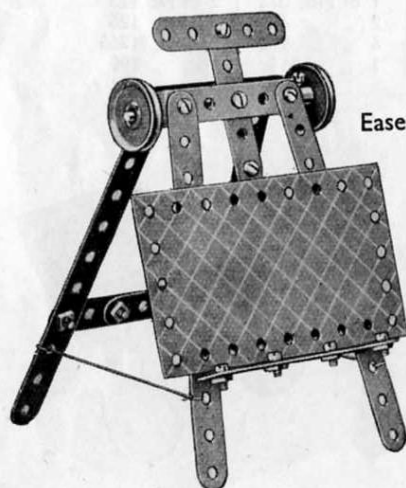
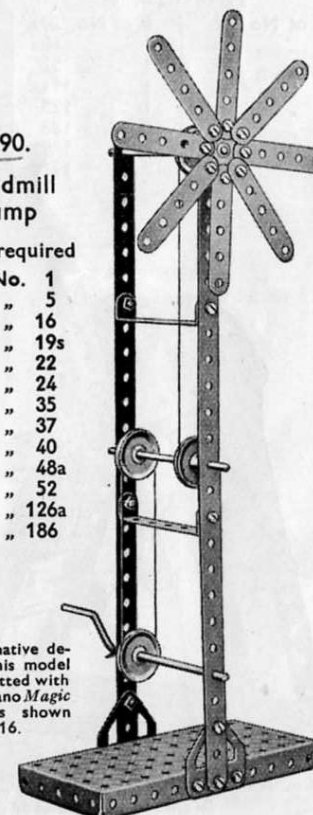
The fun is greatly increased if this model is fitted with a Meccano Magic Motor. The method of incorporating the Motor is shown on page 16 (B51M). If the Motor is fitted, a Bush Wheel should be mounted on a 2" Rod fitted between the hind legs of the horse.

B90.
Windmill Pump

Parts required

2 of No.	1
8 " "	5
2 " "	16
1 " "	19s
4 " "	22
1 " "	24
1 " "	35
20 " "	37
1 " "	40
2 " "	48a
1 " "	52
2 " "	126a
1 " "	186

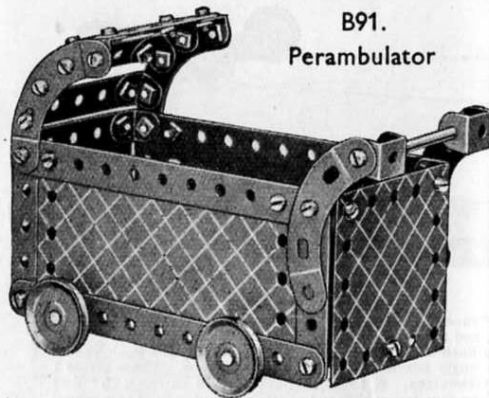
An alternative design of this model (B90M), fitted with the Meccano Magic Motor, is shown on page 16.



B85.
Easel and Board

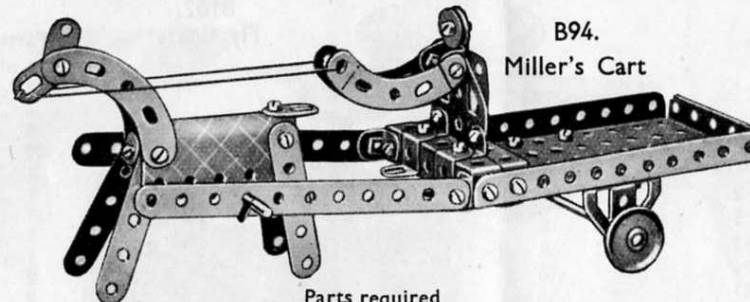
Parts required

4 of No.	2
7 " "	5
1 " "	10
2 " "	12
1 " "	16
2 " "	22
20 " "	37
1 " "	40
2 " "	48a
1 " "	191



B91.
Perambulator

Parts required	
4 of No. 2	
8 " " 5	
2 " " 11	
8 " " 12	
2 " " 16	
1 " " 17	
4 " " 22	
36 " " 37	
2 " " 48a	
1 " " 52	
4 " " 90a	
2 " " 190	
2 " " 191	



B94.
Miller's Cart

Parts required			
2 of No. 2	2 of No. 16	2 of No. 37a	2 of No. 111c
4 " " 5	2 " " 22	1 " " 40	2 " " 125
4 " " 10	1 " " 23	2 " " 48a	2 " " 126
1 " " 11	4 " " 35	1 " " 52	2 " " 126a
8 " " 12	26 " " 37	4 " " 90a	1 " " 190

An alternative design of this model (B94M), fitted with the Meccano Magic Motor is shown on page 15.

B97. Step Ladder on Wheels



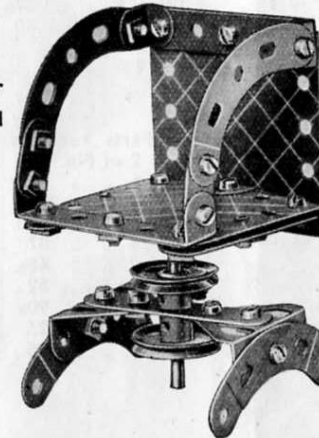
Parts required		
4 of No. 2	2 of No. 16	1 of No. 52
5 " " 5	4 " " 22	2 " " 90a
2 " " 11	32 " " 37	2 " " 126a
8 " " 12	2 " " 48a	1 " " 188

B92.
Watchman's Hut and Fire

Parts required		
2 of No. 2	2 of No. 35	3 of No. 111c
9 " " 5	34 " " 37	2 " " 126
2 " " 10	3 " " 37a	2 " " 126a
6 " " 12	2 " " 48a	1 " " 188
1 " " 16	1 " " 52	1 " " 190
1 " " 23	4 " " 90a	2 " " 191

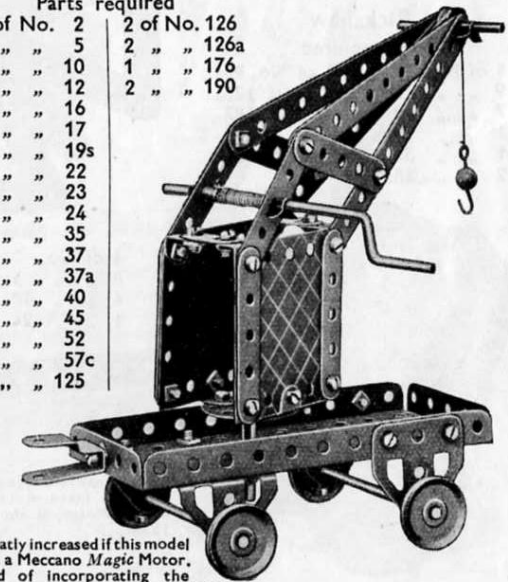
B95.
Revolving
Office Chair

Parts required	
6 of No. 5	
4 " " 10	
3 " " 12	
1 " " 17	
2 " " 22	
1 " " 24	
26 " " 37	
4 " " 37a	
1 " " 48a	
4 " " 90a	
2 " " 126	
2 " " 190	

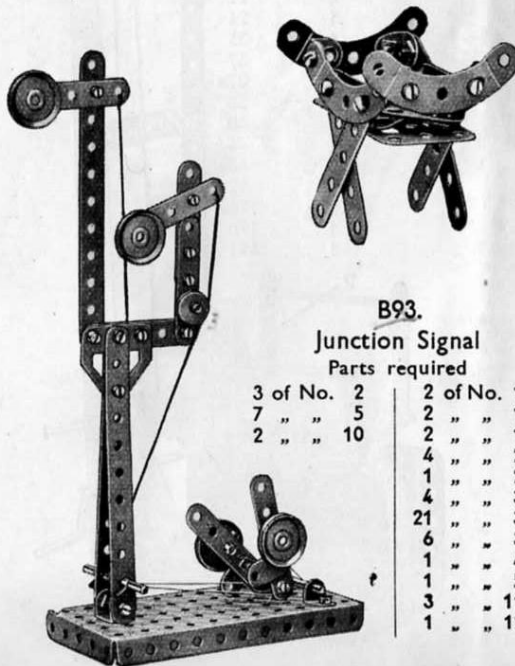


B98. Breakdown Crane

Parts required		
4 of No. 2	2 of No. 126	
8 " " 5	2 " " 126a	
3 " " 10	1 " " 176	
8 " " 12	2 " " 190	
2 " " 16		
2 " " 17		
1 " " 19s		
4 " " 22		
1 " " 23		
1 " " 24		
5 " " 35		
32 " " 37		
1 " " 37a		
1 " " 40		
1 " " 45		
1 " " 52		
1 " " 57c		
1 " " 125		



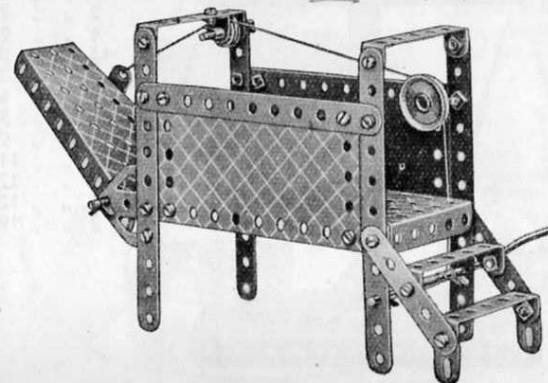
The fun is greatly increased if this model is fitted with a Meccano Magic Motor. The method of incorporating the Motor is shown on page 16. (Model B51M)



B93.
Junction Signal

Parts required	
3 of No. 2	2 of No. 11
7 " " 5	2 " " 12
2 " " 10	2 " " 17
	4 " " 22
	1 " " 23
	4 " " 35
	21 " " 37
	6 " " 37a
	1 " " 40
	1 " " 52
	3 " " 111c
	1 " " 126a

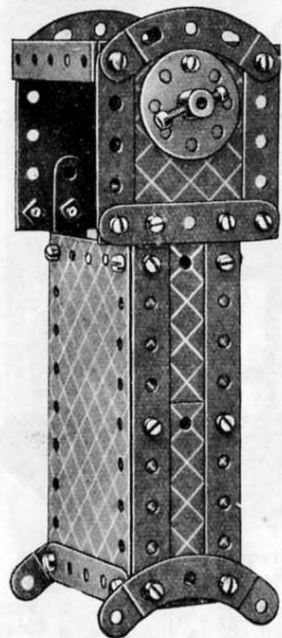
B96. Gangway



Parts required	
6 of No. 2	
4 " " 5	
3 " " 10	
5 " " 12	
1 " " 16	
1 " " 17	
1 " " 19s	
1 " " 22	
1 " " 23	
6 " " 35	
32 " " 37	
1 " " 37a	
1 " " 40	
2 " " 48a	
1 " " 52	
1 " " 54a	
1 " " 111c	
2 " " 126a	
1 " " 176	
2 " " 191	

These Models can be built with **MECCANO** Outfit B (or Outfits A and Aa)

B99. Grandfather Clock



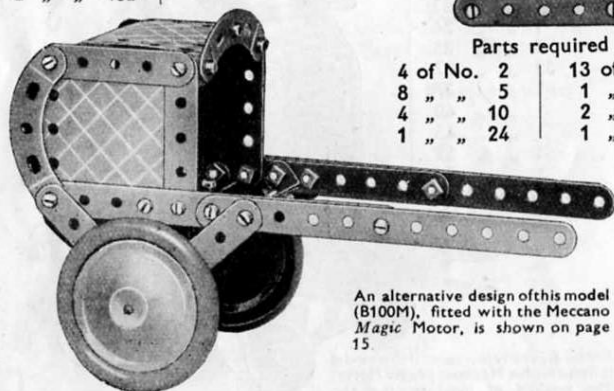
Parts required

4 of No. 2
8 " " 5
8 " " 12
1 " " 24
31 " " 37
2 " " 48a
4 " " 90a
1 " " 111c
2 " " 188
2 " " 190
2 " " 191

B100. Rickshaw

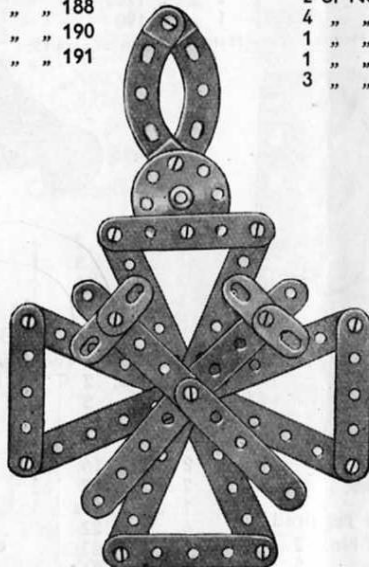
Parts required

4 of No. 2	3 of No. 90a
9 " " 5	2 " " 126a
7 " " 12	2 " " 187
1 " " 15b	2 " " 190
31 " " 37	2 " " 191
2 " " 48a	



An alternative design of this model (B100M), fitted with the Meccano Magic Motor, is shown on page 15.

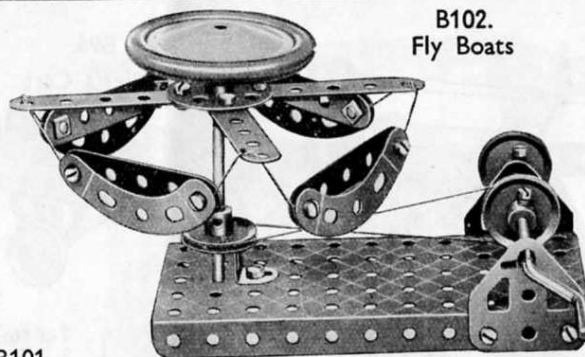
B101. Medal



Parts required

4 of No. 2	13 of No. 37
8 " " 5	1 " " 37a
4 " " 10	2 " " 90a
1 " " 24	1 " " 111c

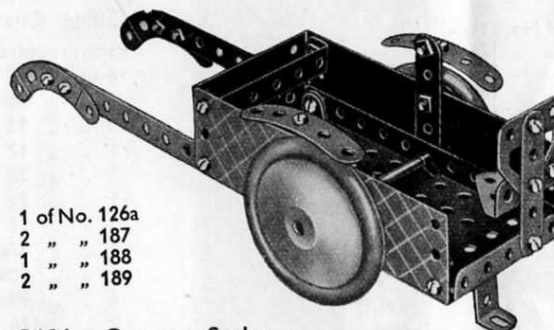
B102. Fly Boats



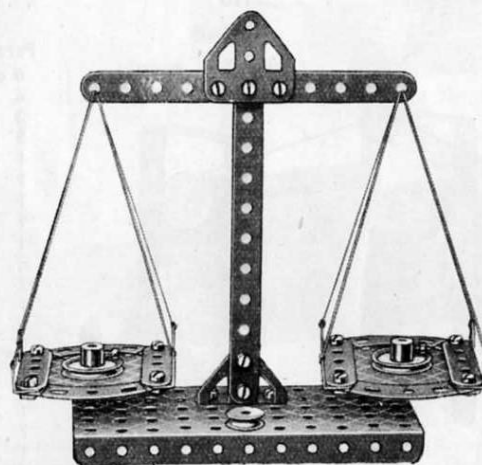
2 of No. 2	1 of No. 24	1 of No. 52
4 " " 5	2 " " 35	4 " " 90a
1 " " 15b	17 " " 37	1 " " 125
1 " " 19s	8 " " 37a	2 " " 126a
3 " " 22	1 " " 40	1 " " 187

Parts required

2 of No. 2
6 " " 5
5 " " 12
1 " " 15b
26 " " 37
2 " " 48a
1 " " 52
2 " " 90a
1 " " 125
1 " " 126



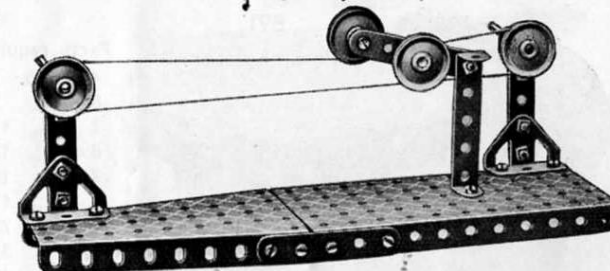
B104. Counter Scales



Parts required

2 of No. 2
4 " " 5
8 " " 12
2 " " 22
1 " " 23
14 " " 37
2 " " 37a
1 " " 40
1 " " 52
4 " " 90a
1 " " 111c
1 " " 126
1 " " 126a
2 " " 190

B105. Jockey Pulley



Parts required

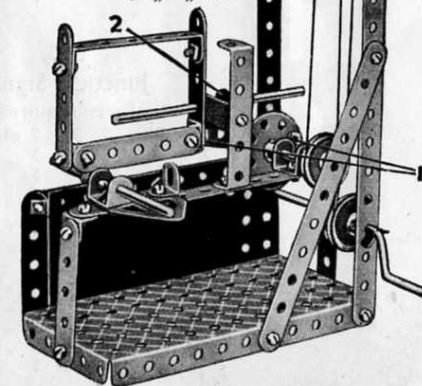
5 of No. 2
2 " " 17
4 " " 22
2 " " 35
20 " " 37
1 " " 37a
1 " " 40
1 " " 48a
1 " " 52
1 " " 54a
2 " " 111c
2 " " 125
2 " " 126

B106. Power Hack Saw

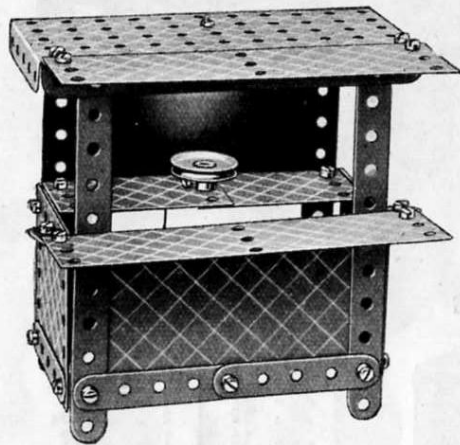
The Crank Handle drives an overhead shaft through 1" Pulleys and cord, and a similar arrangement conveys the drive to a 2" Rod carrying a Bush Wheel. A 2 1/2" Strip is pivoted to the Bush Wheel and to an Angle Bracket bolted to the saw frame. These pivots 1 are each locknotted. A Cranked Bent Strip 2 carries a 3 1/2" Rod on which the saw frame slides. An alternative design of this model (B106M) fitted with the Meccano Magic Motor, is shown on page 15.

Parts required

2 of No. 1
3 " " 2
8 " " 5
2 " " 11
8 " " 12
2 " " 15b
2 " " 16
1 " " 17
1 " " 19s
4 " " 22
1 " " 24
6 " " 35
33 " " 37
2 " " 37a
2 " " 38
1 " " 40
1 " " 44
2 " " 48a
1 " " 52
1 " " 126a
1 " " 176
1 " " 191



B107.
Coffee Stall



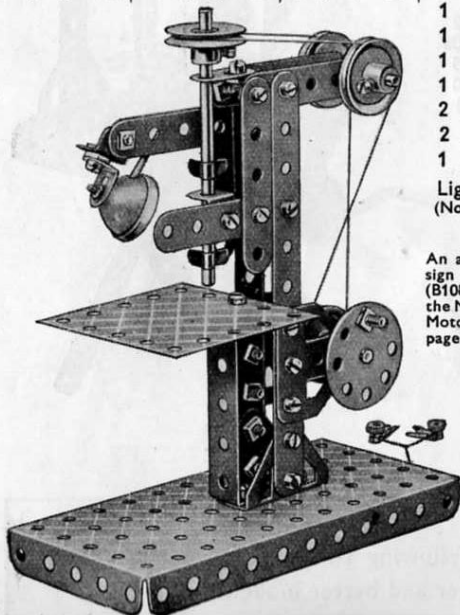
Parts required

4 of No. 2
8 " " 5
4 " " 10
8 " " 12
1 " " 22
35 " " 37
2 " " 48a
1 " " 52
1 " " 111c
2 " " 188
2 " " 189
2 " " 190
2 " " 191

Lighting Set
(Not included in Outfit).

B108.
Sensitive Drill

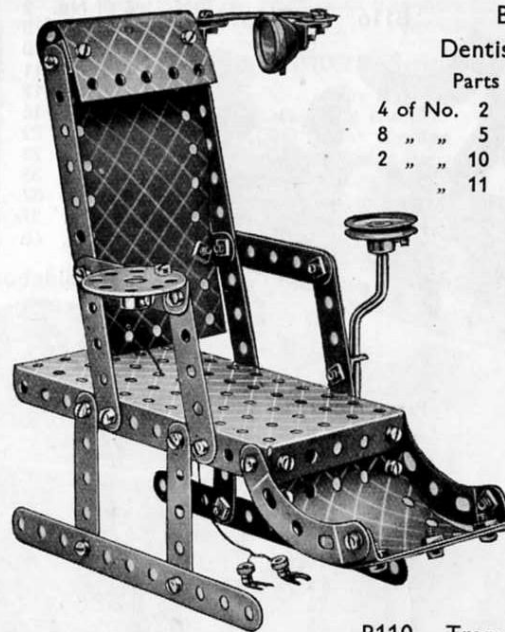
2 of No. 2	2 of No. 11	2 of No. 17
6 " " 5	3 " " 12	4 " " 22
2 " " 10	1 " " 16	1 " " 24



3 of No. 35
28 " " 37
5 " " 37a
1 " " 40
1 " " 48a
1 " " 52
1 " " 111c
2 " " 126
2 " " 126a
1 " " 190

Lighting Set
(Not included in Outfit).

An alternative design of this model (B108M), fitted with the Meccano Magic Motor, is shown on page 15.



B109.

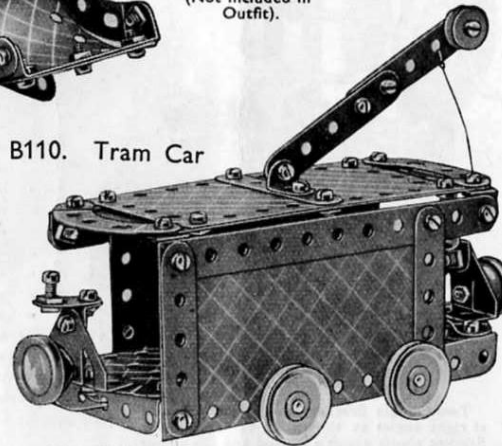
Dentist's Chair

Parts required

4 of No. 2	7 of No. 12
8 " " 5	1 " " 19s
2 " " 10	1 " " 22
" " 11	1 " " 24
	3 " " 35
	36 " " 37
	6 " " 37a
	1 " " 48a
	1 " " 52
	3 " " 90a
	4 " " 111c
	1 " " 126a
	2 " " 190
	1 " " 191

Lighting Set
(Not included in Outfit).

B110. Tram Car



Parts required

4 of No. 2	1 of No. 40
2 " " 10	2 " " 48a
2 " " 11	1 " " 52
3 " " 12	4 " " 90a
2 " " 16	3 " " 111c
4 " " 22	2 " " 126
1 " " 23	2 " " 190
34 " " 37	2 " " 191
6 " " 37a	

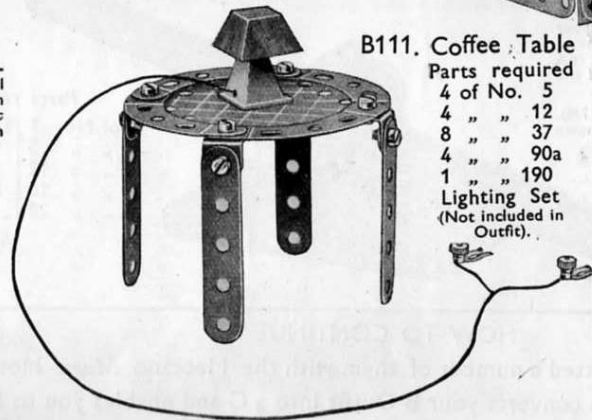
Lighting Set
(Not included in Outfit).

B111. Coffee Table

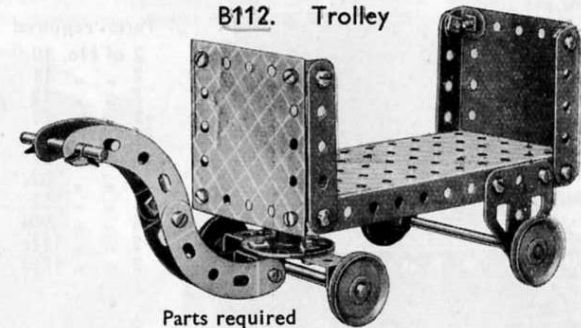
Parts required

4 of No. 5
4 " " 12
8 " " 37
4 " " 90a
1 " " 190

Lighting Set
(Not included in Outfit).



B112. Trolley



Parts required

4 of No. 5	4 of No. 22	1 of No. 52
1 " " 11	1 " " 24	4 " " 90a
4 " " 12	3 " " 35	2 " " 125
2 " " 16	28 " " 37	2 " " 126a
2 " " 17	1 " " 48a	2 " " 190

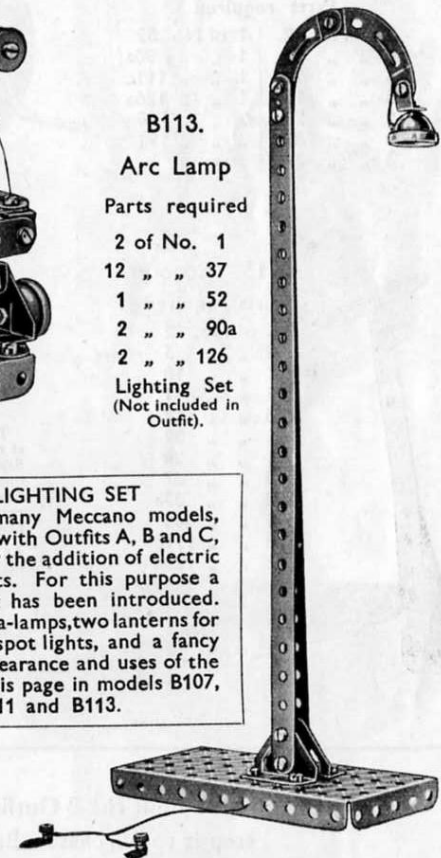
B113.

Arc Lamp

Parts required

2 of No. 1
12 " " 37
1 " " 52
2 " " 90a
2 " " 126

Lighting Set
(Not included in Outfit).



MECCANO LIGHTING SET

The appearance of many Meccano models, especially those built with Outfits A, B and C, is greatly improved by the addition of electric lights at suitable points. For this purpose a Meccano Lighting Set has been introduced. This consists of two pea-lamps, two lanterns for use as headlamps or spot lights, and a fancy stand lamp. The appearance and uses of the parts are shown on this page in models B107, B108, B109, B110, B111 and B113.

These Models can be built with MECCANO Outfit B (or Outfits A and Aa)

B114. Dressing Table



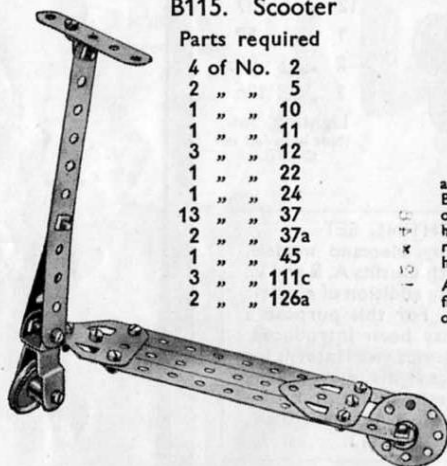
Parts required

3 of No. 2	1 of No. 52
9 " " 5	1 " " 90a
4 " " 10	1 " " 111c
8 " " 12	1 " " 126a
1 " " 23	2 " " 190
33 " " 37	2 " " 191
3 " " 37a	

B115. Scooter

Parts required

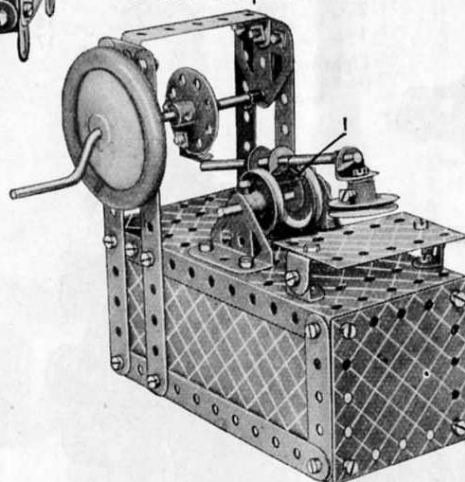
4 of No. 2
2 " " 5
1 " " 10
1 " " 11
3 " " 12
1 " " 22
1 " " 24
13 " " 37
2 " " 37a
1 " " 45
3 " " 111c
2 " " 126a



Parts required

2 of No. 10
2 " " 11
7 " " 12
1 " " 22
1 " " 23
16 " " 37
1 " " 37a
1 " " 52
4 " " 90a
2 " " 111c
2 " " 126a

B117. Trip Hammer



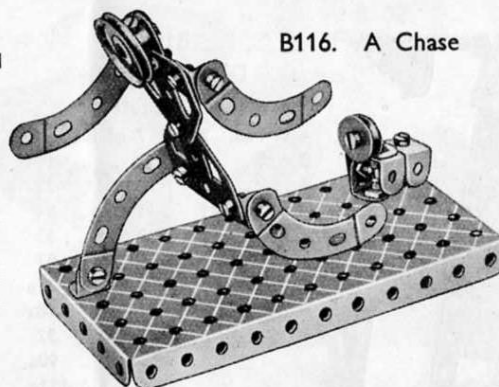
Parts required

6 of No. 2
2 " " 5
2 " " 11
8 " " 12
1 " " 15b
1 " " 17
1 " " 19s
3 " " 22
1 " " 24
4 " " 35
40 " " 37
1 " " 38
2 " " 48a
1 " " 52
1 " " 111c
2 " " 126
2 " " 126a
1 " " 176
1 " " 187
1 " " 188
2 " " 190
2 " " 191

Two Double Brackets are bolted together at right angles as shown at 1. The lower Bracket pivots about a 2" Rod and the upper one carries a 3½" Rod to which the hammer head is fitted. An Angle Bracket bolted to a rotating Bush Wheel strikes the end of the hammer Rod and operates the hammer.

An alternative design of this model (B117M), fitted with the Meccano Magic Motor, is shown on page 16.

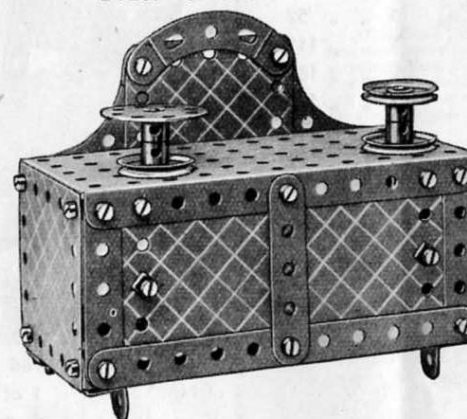
B116. A Chase



Parts required

4 of No. 2
6 " " 5
4 " " 10
2 " " 11
4 " " 12
2 " " 16
2 " " 22
1 " " 23
2 " " 35
22 " " 37
3 " " 37a
1 " " 40

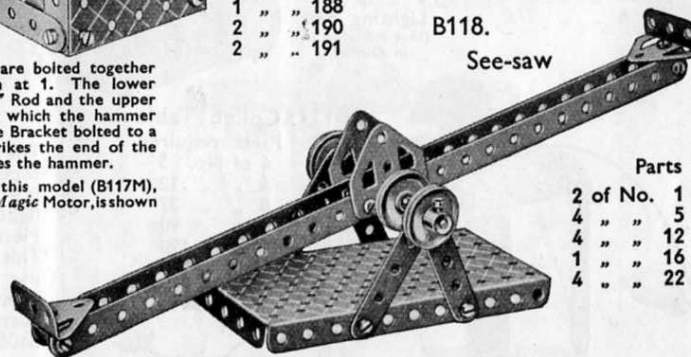
B120. Sideboard



Parts required	3 of No. 22	1 of No. 52
2 of No. 2	1 " " 24	3 " " 90a
5 " " 5	2 " " 35	2 " " 125
8 " " 12	28 " " 37	2 " " 190
2 " " 17	2 " " 37a	2 " " 191

B118.

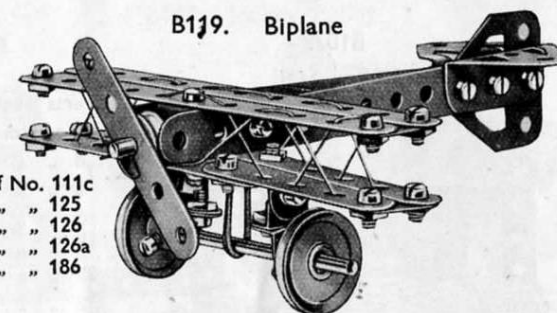
See-saw



Parts required

2 of No. 1	14 of No. 37
4 " " 5	1 " " 52
4 " " 12	2 " " 126
1 " " 16	2 " " 126a
4 " " 22	

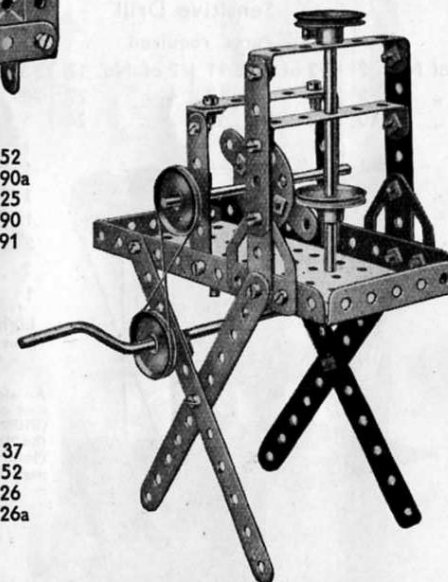
B119. Biplane



B121. Stamping Machine

Parts required

4 of No. 2	1 of No. 24
7 " " 5	2 " " 35
2 " " 10	20 " " 37
2 " " 12	2 " " 48a
2 " " 16	1 " " 52
1 " " 19s	2 " " 126a
4 " " 22	1 " " 186



HOW TO CONTINUE

When you have built the B Outfit Models illustrated, and fitted a number of them with the Meccano Magic Motor (see following two pages), your next step is to purchase a Ba Accessory Outfit. This converts your B Outfit into a C and enables you to build bigger and better models.

Outfit B Models fitted with the *Magic Motor*

15

The greatest thrill in Meccano model-building is experienced when a model is set to work by means of a Meccano Motor. The models featured on this and the next page are more elaborate variations of a selection of Outfit B Models, showing how the new Meccano *Magic Motor* can be fitted to give more realism and to increase the fun. The numbers of these re-designed models are the same as those of the corresponding models in the preceding pages, with the addition of the letter M. Try your hand at re-designing other models in a similar manner and become a real inventor.

B100M. Rickshaw

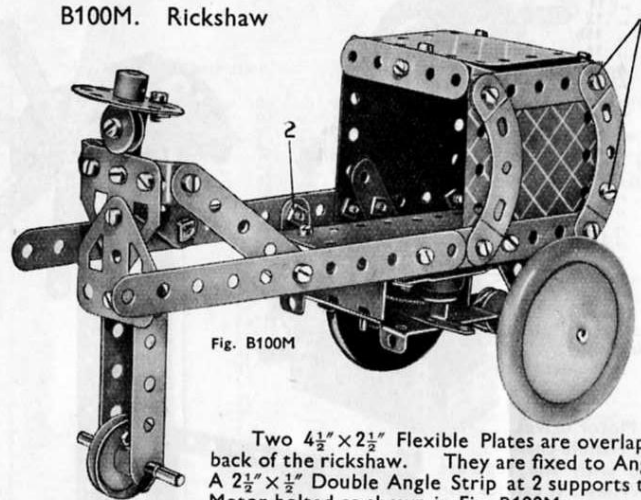
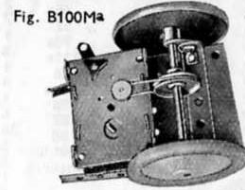


Fig. B100M

Two $4\frac{1}{2} \times 2\frac{1}{2}$ Flexible Plates are overlapped $\frac{1}{2}$ " to form the top and back of the rickshaw. They are fixed to Angle Brackets at the points 1. A $2\frac{1}{2} \times \frac{1}{2}$ Double Angle Strip at 2 supports the floor and also the *Magic Motor* bolted as shown in Fig. B100Ma.



Parts required

4 of No. 2	34 of No. 37
9 " " 5	1 " " 37a
1 " " 10	2 " " 48a
1 " " 11	4 " " 90a
8 " " 12	1 " " 111c
1 " " 15b	2 " " 126a
1 " " 17	2 " " 187
1 " " 22	2 " " 190
1 " " 23	2 " " 191
1 " " 24	
2 " " 35	<i>Magic Motor</i>

B108M. Sensitive Drill

The $3\frac{1}{2}$ " Rod 1 representing the drill is journalled at the top in a $2\frac{1}{2}$ " Strip and at the bottom in a Flat Bracket. The Flat Bracket is secured to an Angle Bracket held by the bolt 2. One of the two 1" Pulleys forming guides for the cord is free on its Rod.

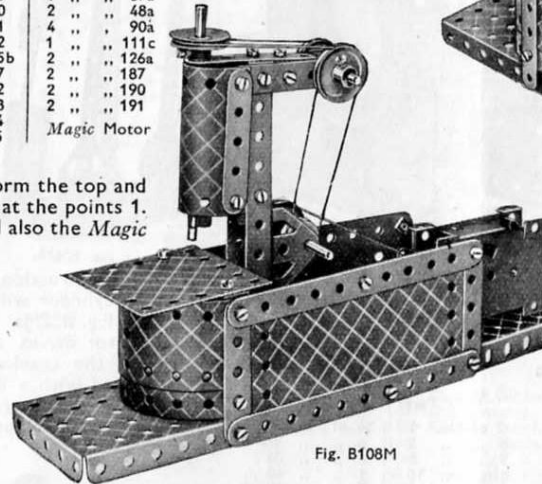


Fig. B108M

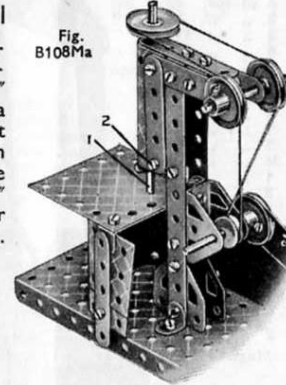


Fig. B108Ma

Parts required

6 of No. 2	
9 " " 5	
2 " " 10	
2 " " 11	
7 " " 12	
1 " " 15b	
2 " " 17	
4 " " 22	
1 " " 23	
2 " " 35	
36 " " 37	
6 " " 37a	
1 " " 40	
1 " " 48a	
1 " " 52	
1 " " 54a	
6 " " 111c	
2 " " 126	
2 " " 126a	
2 " " 189	
2 " " 190	
2 " " 191	
	<i>Magic Motor</i>

B106M.

Power Hacksaw

The saw frame slides on a $3\frac{1}{2}$ " Axle Rod held in a Cranked Bent Strip and is driven to and fro by a $2\frac{1}{2}$ " Strip connected to a revolving Bush Wheel. The bolts 1 are provided with locknuts to form pivots.

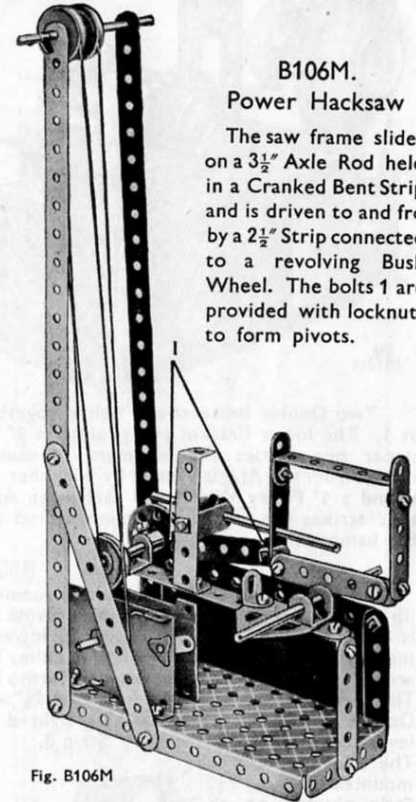


Fig. B106M

Parts required

2 of No. 1	6 of No. 12	2 of No. 38
3 " " 2	1 " " 15b	1 " " 40
2 " " 5	1 " " 16	1 " " 44
2 " " 11	1 " " 17	2 " " 48a
	3 " " 22	1 " " 52
	1 " " 24	1 " " 126
	5 " " 35	1 " " 176
	30 " " 37	1 " " 190
	2 " " 37a	<i>Magic Motor</i>

B77M. Windmill

The $\frac{1}{2}$ " Pulley on the intermediate Rod drives a 1" Pulley on the Axle Rod carrying the "sails." (See Fig. B77Ma.)

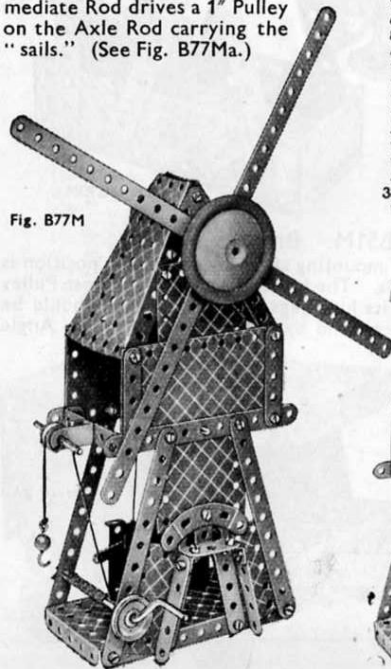


Fig. B77M



Fig. B77Ma

Parts required

2 of No. 1	1 of No. 44
6 " " 2	2 " " 48a
9 " " 5	1 " " 52
4 " " 12	2 " " 54a
1 " " 15b	1 " " 57c
1 " " 16	1 " " 90a
1 " " 17	2 " " 126
1 " " 19a	2 " " 126a
4 " " 22	1 " " 176
1 " " 23	1 " " 187
1 " " 24	2 " " 188
4 " " 35	2 " " 190
38 " " 37	2 " " 191
1 " " 40	<i>Magic Motor</i>

B94M. Miller's Cart

Fig. B94Ma shows how the *Magic Motor* is arranged to drive the Road Wheels. A Bush Wheel is mounted between the hind legs of the horse and the forelegs are kept off the ground by means of the reins.

Parts required

6 of No. 2	1 of No. 188
5 " " 5	2 " " 189
5 " " 10	1 " " 190
1 " " 11	<i>Magic Motor</i>
8 " " 12	
1 " " 15b	
2 " " 17	
1 " " 22	
1 " " 23	
1 " " 24	
4 " " 35	
36 " " 37	
3 " " 37a	
6 " " 38	
1 " " 40	
2 " " 48a	
1 " " 52	
4 " " 90a	
3 " " 111c	
2 " " 125	
2 " " 126	
1 " " 126a	
2 " " 187	

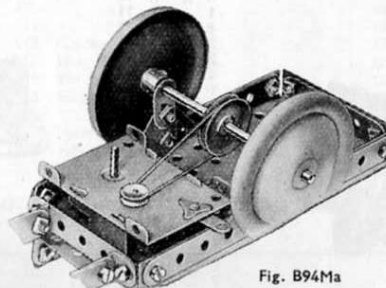


Fig. B94Ma

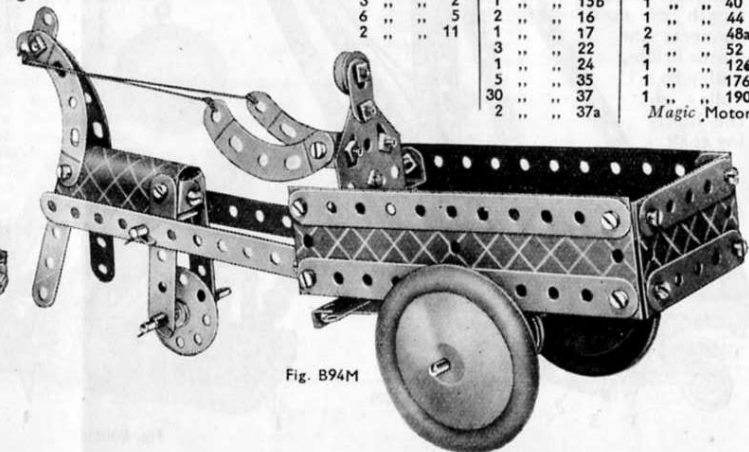
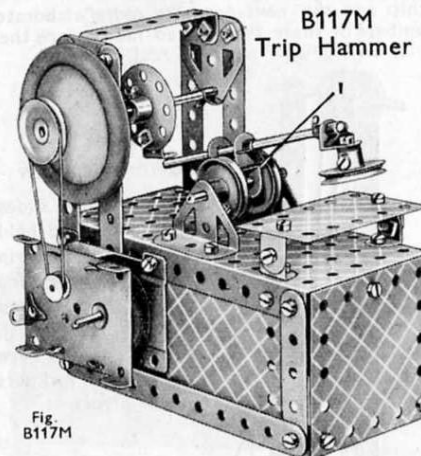


Fig. B94M

Outfit B Models fitted with the Magic Motor



B117M
Trip Hammer

Parts required	
6 of No. 2	2
2 " " 5	5
2 " " 11	11
8 " " 12	12
1 " " 15b	15b
1 " " 16	16
1 " " 17	17
4 " " 22	22
1 " " 24	24
5 " " 35	35
36 " " 37	37
1 " " 37a	37a
2 " " 48a	48a
1 " " 52	52
1 " " 111c	111c
2 " " 126	126
2 " " 126a	126a
1 " " 176	176
1 " " 187	187
1 " " 188	188
2 " " 190	190
2 " " 191	191

Magic Motor

Two Double Brackets are bolted together as shown at 1. The lower Bracket pivots about a 2" Rod and the upper one carries the hammer. A Bush Wheel is driven from the Magic Motor by a rubber band passing round a 1" Pulley Wheel and carries an Angle Bracket that strikes the end of the hammer Rod and operates the hammer.

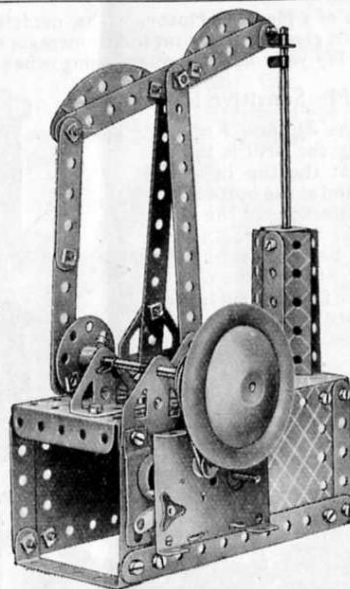


Fig. B32M

B32M. Pump

Parts required

5 of No. 2		3 of No. 38	
5 " " 2	2	2 " " 48a	48a
2 " " 11	11	1 " " 52	52
3 " " 12	12	2 " " 90a	90a
1 " " 15b	15b	6 " " 111c	111c
1 " " 16	16	2 " " 126	126
1 " " 22	22	2 " " 126a	126a
1 " " 24	24	1 " " 186	186
4 " " 35	35	1 " " 187	187
34 " " 37	37	2 " " 188	188
8 " " 37a	37a	2 " " 191	191

Magic Motor

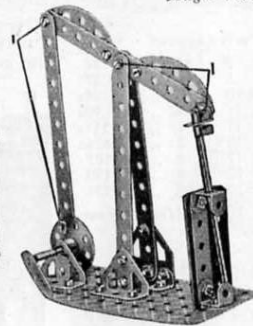


Fig. B32Ma

The construction of the pump cylinder will be clear from Fig. B32Ma. The Magic Motor drives a 1" Pulley on the crankshaft that is fitted with a Bush Wheel forming the crank. The bolts 1 are locknotted to form pivots.

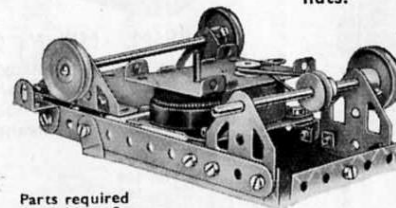


Fig. B51Ma

Parts required	
4 of No. 2	2
6 " " 10	10
3 " " 11	11
1 " " 12	12
2 " " 16	16
2 " " 17	17
1 " " 23	23
4 " " 35	35
36 " " 37	37
1 " " 40	40
2 " " 48a	48a
1 " " 52	52
4 " " 90a	90a
1 " " 125	125
2 " " 126	126
2 " " 126a	126a
1 " " 186	186
2 " " 188	188
2 " " 190	190
2 " " 191	191

Magic Motor

B90M. Windmill Pump

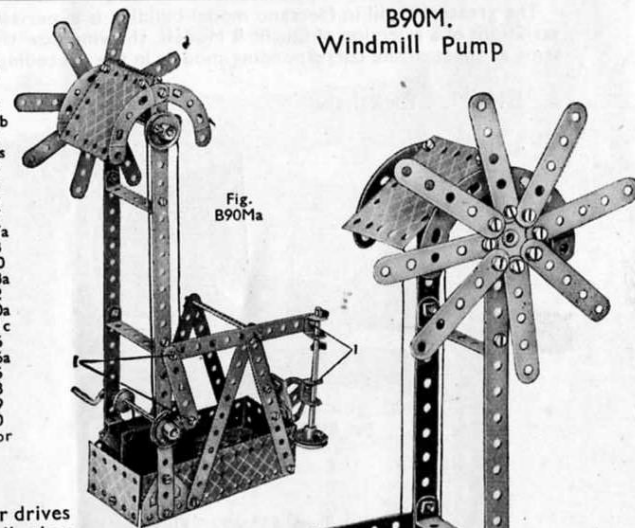


Fig. B90Ma

The Motor drives a Crank Handle that is fitted with the separate Pulley Wheel. It carries also a 1" Pulley, to the boss of which an Angle Bracket is secured, two Washers being placed on the securing bolt as shown in Fig. B90Ma. In this way a crank is formed and is connected to the pivoted beam that operates the pump. The bolts 1 are pivotally attached by means of locknuts.

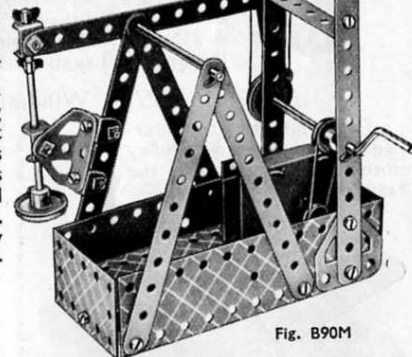


Fig. B90M

B51M. Bread Van

The method of mounting the Magic Motor in position is shown in Fig. B51Ma. The horse travels on a 3/4" loose Pulley mounted between its hind legs, and the forelegs should be kept clear of the ground by tying the reins to the Angle Bracket 1.

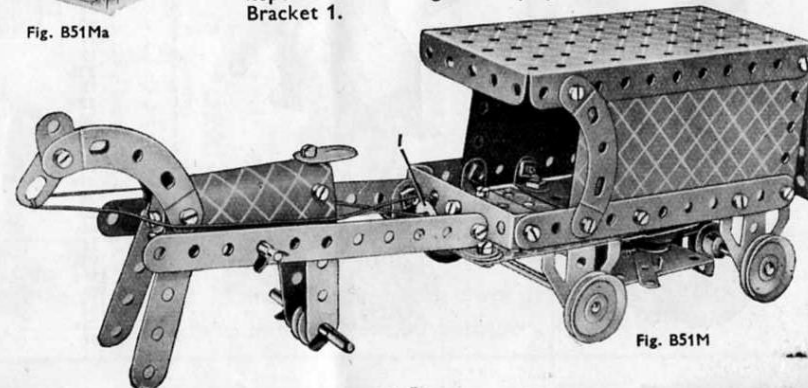


Fig. B51M

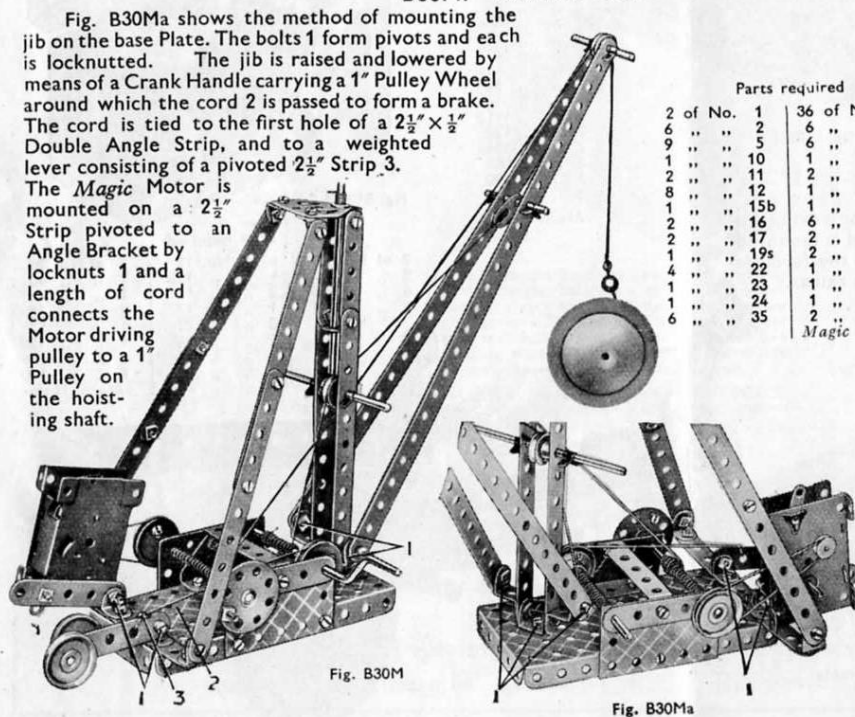


Fig. B30M

Fig. B30Ma

B30M. Derrick Crane

Fig. B30Ma shows the method of mounting the jib on the base Plate. The bolts 1 form pivots and each is locknotted. The jib is raised and lowered by means of a Crank Handle carrying a 1" Pulley Wheel around which the cord 2 is passed to form a brake. The cord is tied to the first hole of a 2 1/2" x 1/2" Double Angle Strip, and to a weighted lever consisting of a pivoted 2 1/2" Strip 3. The Magic Motor is mounted on a 2 1/2" Strip pivoted to an Angle Bracket by locknuts 1 and a length of cord connects the Motor driving pulley to a 1" Pulley on the hoisting shaft.

Parts required

2 of No. 1		36 of No. 37	
6 " " 2	2	6 " " 37a	37a
9 " " 5	5	6 " " 38	38
1 " " 10	10	1 " " 40	40
2 " " 11	11	2 " " 48a	48a
8 " " 12	12	1 " " 52	52
1 " " 15b	15b	1 " " 57c	57c
2 " " 16	16	6 " " 111c	111c
2 " " 17	17	2 " " 125	125
4 " " 19s	19s	2 " " 126	126
1 " " 22	22	1 " " 126a	126a
1 " " 23	23	1 " " 176	176
1 " " 24	24	1 " " 187	187
6 " " 35	35	2 " " 188	188

Magic Motor

LIST OF MECCANO PARTS

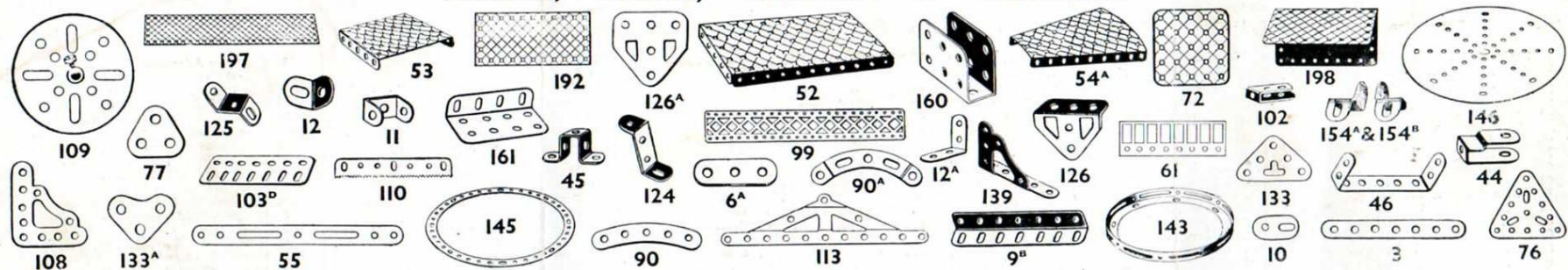
No.	Description.	No.	Description.	No.	Description.	No.	Description.	No.	Description.
1	Perforated Strips, 12 $\frac{1}{2}$ "	28	Contrate Wheels, 1 $\frac{1}{2}$ " diam.	73	Flat Plates, 3" x 1 $\frac{1}{2}$ "	120	Buffers	164	Chimney Adaptors
1a	" " " " "	29	" " " " "	76	Triangular Plates, 2 $\frac{1}{2}$ "	120a	Spring Buffers	165	Swivel Bearings
1b	" " " " "	30	Bevel Gears, 26 teeth	77	" " " " "	120b	Compression Springs	166	End
2	" " " " "	30a	" " " " " (Can only be	78	Screwed Rods, 11	121	Train Couplings	167	Geared Roller Bearings
2a	" " " " "	30c	" " " " " 1 $\frac{1}{2}$ " 48" used together)	79	" " " " "	122	Miniature Loaded Sacks	167a	Roller Races, geared, 192 teeth
3	" " " " "	31	Gear Wheels, 1", 38 teeth	79a	" " " " "	123	Cone Pulley	167b	Ring Frames for Rollers
4	" " " " "	32	Worms	80	" " " " "	124	Reversed Angle Brackets, 1"	167c	Pinions for Roller Bearings, 16 teeth
5	" " " " "	34	Spanners	80a	" " " " "	125	" " " " "	168	Ball Bearing, 4" diam.
6	" " " " "	34b	Box Spanners	80b	" " " " "	126	Trunnions	168a	" " Races, flanged disc
6a	" " " " "	35	Spring Clips	81	" " " " "	126a	Flat Trunnions	168b	" " " " " toothed
7	Angle Girders, 24 $\frac{1}{2}$ "	36	Screwdrivers	82	" " " " "	127	Simple Bell Cranks	168c	" " Casing, complete with balls
7a	" " " " "	36a	" " Extra Long	89	5 $\frac{1}{2}$ " Curved Strips, 10" radius	128	Boss Bell Cranks	169	Digger Buckets
8	" " " " "	36b	" " Special	89a	3 $\frac{1}{2}$ " " " " cranked, 1 $\frac{1}{2}$ "	129	Rack Segments, 3" diam.	170	Eccentrics, 1 $\frac{1}{2}$ " throw
8a	" " " " "	37	Nuts and Bolts, 7/32"	89b	4" Curved Strips, cranked, 4 $\frac{1}{2}$ "	130	Eccentrics, Triple Throw	171	Socket Couplings
8b	" " " " "	37a	Nuts	90	2 $\frac{1}{2}$ " Curved Strips, 2 $\frac{1}{2}$ " radius	131	Dredger Buckets	172	Pendulum Connections
9	" " " " "	37b	Bolts, 7/32"	90a	2 $\frac{1}{2}$ " " " " cranked, 1 $\frac{1}{2}$ "	132	Flywheels, 2 $\frac{1}{2}$ " diam.	173	Rail Adaptors
9a	" " " " "	38	Washers	94	" " " " " radius, 4 to circle	133	Corner Brackets, 1 $\frac{1}{2}$ "	174	Grease Cups
9b	" " " " "	40	Hanks of Cord	95	Sprocket Chain, 40" length	133a	" " " " "	175	Flexible Coupling Units
9c	" " " " "	41	Propeller Blades	95a	" " " " " Wheels, 36 teeth, 2" diam	134	Crank Shanks, 1" stroke	176	Anchoring Springs for Cord
9d	" " " " "	43	Springs	96	" " " " " 28" 1 $\frac{1}{2}$ "	135	Theodolite Protractors	177	Shafting Standards, large
9e	" " " " "	44	Cranked Bent Strips	96a	" " " " " 56" 3"	136	Handrail Supports	178	" " " " " small
9f	" " " " "	45	Double	97	Braced Girders, 31 $\frac{1}{2}$ " long	136a	" " " " " Couplings	179	Rod Sockets
10	Flat Brackets	47	Double Angle Strips, 2 $\frac{1}{2}$ " x 1"	97a	" " " " " 3 $\frac{1}{2}$ "	137	Wheel Flanges	180	Toothed Gear Rings, 3 $\frac{1}{2}$ " diam.
11	Double Brackets	47a	" " " " " 1" x 1"	98	" " " " " 12"	138	Ships' Funnels		(133 external teeth; 95 internal teeth)
12	Angle Brackets, 1" x 1"	48	" " " " " 1" x 1"	99	" " " " " 9"	138a-z	" " " " " Raked	181	Bobbins
12a	" " " " " 1" x 1"	48a	" " " " " 3" x 3"	99a	" " " " " 7"	139	Flanged Brackets (right)	182	Insulating Bushes, 6BA
12b	" " " " " 1" x 1"	48b	" " " " " 3" x 3"	99b	" " " " " 5"	139a	" " " " " (left)	183	Lamp Holders
12c	Obtuse Angle Brackets, 1" x 1"	48c	" " " " " 4" x 4"	100	" " " " " 4"	140	Universal Couplings	184	Lamps, 2 $\frac{1}{2}$ volt
13	Axle Rods, 11 $\frac{1}{2}$ "	48d	" " " " " 5" x 5"	100a	" " " " " 4"	141	Wire Lines (for suspending clock weights)	184a	" " 3 $\frac{1}{2}$ "
13a	" " " " "	50a	Eye Pieces, with boss	101	Heads, for looms	142	Rubber Rings, 3" rim	184b	" " 6"
14	" " " " "	51	Flanged Plates, 2 $\frac{1}{2}$ " x 1"	102	Single Bent Strips	142a	Motor Tyres (to fit 2" diam. rims)	184c	" " 10"
15	" " " " "	52	" " " " " 5 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "	103	Flat Girders, 5 $\frac{1}{2}$ " long	142b	" " " " " 2"	184d	" " 20"
15a	" " " " "	52a	Flat Plates, 5 $\frac{1}{2}$ " x 3 $\frac{1}{2}$ "	103a	" " " " " 9"	142c	" " " " " 1"	185	Steering Wheels, 1 $\frac{1}{2}$ " diam.
15b	" " " " "	53	Perforated Flanged Plates, 3 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "	103b	" " " " " 12 $\frac{1}{2}$ "	142d	" " " " " 1 $\frac{1}{2}$ "	186	Driving Bands
16	" " " " "	53a	Flat Plates, 4 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "	103c	" " " " " 4 $\frac{1}{2}$ "	143	Circular Girders, 5 $\frac{1}{2}$ " diam.	187	Road Wheels
16a	" " " " "	54	Flanged Sector Plates, 4 $\frac{1}{2}$ " long	103d	" " " " " 3 $\frac{1}{2}$ "	144	Dog Clutches	188	Flexible Plates, 2 $\frac{1}{2}$ " x 1 $\frac{1}{2}$ "
16b	" " " " "	55	Perforated Strips, slotted, 5 $\frac{1}{2}$ " long	103e	" " " " " 3"	145	Circular Strips, 7 $\frac{1}{2}$ " diam. overall	189	" " " " " 5 $\frac{1}{2}$ " x 1 $\frac{1}{2}$ "
17	" " " " "	55a	" " " " " 2"	103f	" " " " " 2 $\frac{1}{2}$ "	146	" " " " " Plates, 6"	190	" " " " " 2 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "
18	" " " " "	57	Hooks	103g	" " " " " 1 $\frac{1}{2}$ "	146a	" " " " " 4"	191	" " " " " 4 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "
18b	" " " " "	57a	" " Scientific	103h	" " " " " 7 $\frac{1}{2}$ "	147	Pawls, with Pivot Bolt and nuts	192	" " " " " 5 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "
19	Crank Handles, large, 5"	57b	" " Loaded, large	104	Shuttles, for looms	147a	Pawls	193	Strip Plates, 2 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "
19a	" " " " " small, 3 $\frac{1}{2}$ "	57c	" " " " " small	105	Reed Hooks, for looms	147b	Pivot Bolt with 2 nuts	194	" " " " " 3 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "
20	Flanged Wheels, 1 $\frac{1}{2}$ " diam.	58	Spring Cord	106	Wood Rollers	147c	Pawl without boss	195	" " " " " 5 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "
20a	" " " " "	58a	Coupling Screws for Spring Cord	106a	Sand Rollers	148	Ratchet Wheels	196	" " " " " 9 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "
20b	" " " " "	58b	Hooks for Spring Cord	107	Tables for designing machines	149	Collecting Shoes for Electric Loco	197	" " " " " 12 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "
19b	3" dia., with centre boss & set screw	59	Collars with Grub Screws	108	Architraves	150	Crane Grabs	198	Hinged Flat Plates, 4 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "
19c	6" " " " " " " "	61	Windmill Sails	109	Face Plates, 2 $\frac{1}{2}$ " diam.	151	Pulley Blocks, Single Sheave	201	Lamps with Flex
20a	2" " " " " " " "	62	Cranks	110	Rack Strips, 3 $\frac{1}{2}$ "	152	" " " " " Two	202	Angle Brackets (for Headlamps)
21	1 $\frac{1}{2}$ " " " " " " " "	62a	Threaded Cranks	110a	" " " " " 6 $\frac{1}{2}$ "	153	" " " " " Three	203	Headlamps
22	1" " " " " " " "	62b	Double Arm Cranks	111	Bolts, 2 $\frac{1}{2}$ "	154a	Corner Angle Brackets, 1 $\frac{1}{2}$ " (right hand)	204	Headlamp Nuts
23a	1 $\frac{1}{2}$ " " " " " " " "	63	Couplings	111a	" " " " " 3"	154b	Corner Angle Brackets, 1 $\frac{1}{2}$ " (left hand)	205	" " " " " Glasses (Green, Plain or Red)
23a	1 $\frac{1}{2}$ " " " " " " " "	63a	Octagonal Couplings	111c	" " " " " 1 $\frac{1}{2}$ "	155	Rubber Rings, 8" (for 1" Pulleys)	206	Lampshades
23b	1 $\frac{1}{2}$ " " " " " " " "	63b	Strip Couplings	113	Girder Frames	156	Pointers, (with boss) 2 $\frac{1}{2}$ " overall	207	Lamp Bases
24	Busin' Wheels	63c	Threaded Couplings	114	Hinges	157	Fans, 2" diam.	208	Battery Tags and Studs
25a	Pinion Wheels, 1 $\frac{1}{2}$ " diam., face	64	" " Bosses	115	Threaded Pins	158a	Signal Arms, Home	208a	Washers for Battery Studs
25b	" " " " "	65	Centre Forks	116	Fork Pieces, large	158b	" " Distant	210	Nuts
26	" " " " "	66	Weights, 50 grammes	116a	" " " " " small	160	Channel Bearings, 1 $\frac{1}{2}$ " x 1 $\frac{1}{2}$ "	211a	Helical Gear, 1 $\frac{1}{2}$ " (Can only be
26a	" " " " "	67	" " 25	117	Steel Balls, 3 $\frac{1}{2}$ " diam.	162	Boiler, complete, with ends	211b	" " " " " 1 $\frac{1}{2}$ " (used together)
26b	" " " " "	68	Woodscrews, 1 $\frac{1}{2}$ "	118	Hub Discs, 5 $\frac{1}{2}$ "	162a	" " ends		
27	50 teeth to gear with 1 $\frac{1}{2}$ " pinion	69	Set Screws			162b	" " without ends		
27a	57 " " " " "	69a	Grub Screws, 5/32"			163	Sleeve Pieces		
27b	133 " " " " " (3 $\frac{1}{2}$ " diam.)	69b	" " 7/32"						
27c	95 " " " " " (2 $\frac{1}{2}$ " diam.)	70	Flat Plates, 5 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "						
		72	" " " " " 2 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "						

* The series includes 26 Funnels in the correct designs and colours of leading shipping companies.

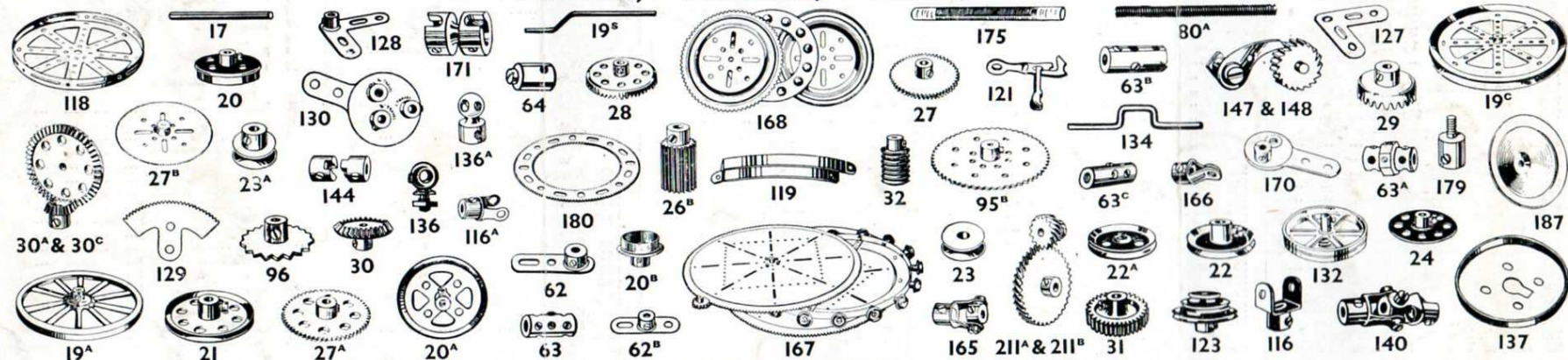
For illustrations of Meccano Parts, refer to back page

MECCANO PARTS & ACCESSORIES

PLATES, STRIPS, GIRDERS & BRACKETS



WHEELS, PULLEYS, GEARS, ETC.



MISCELLANEOUS

