

MECCANO

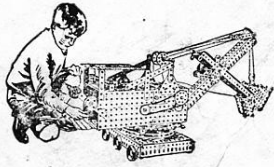
HORNBY'S ORIGINAL SYSTEM — FIRST PATENTED 1901

INSTRUCTIONS FOR OUTFIT Aa

PRICE

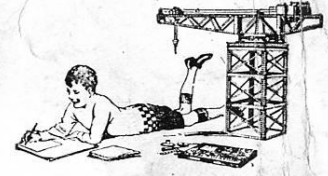
3d.





MECCANO

HORNBY'S ORIGINAL SYSTEM — FIRST PATENTED 1901



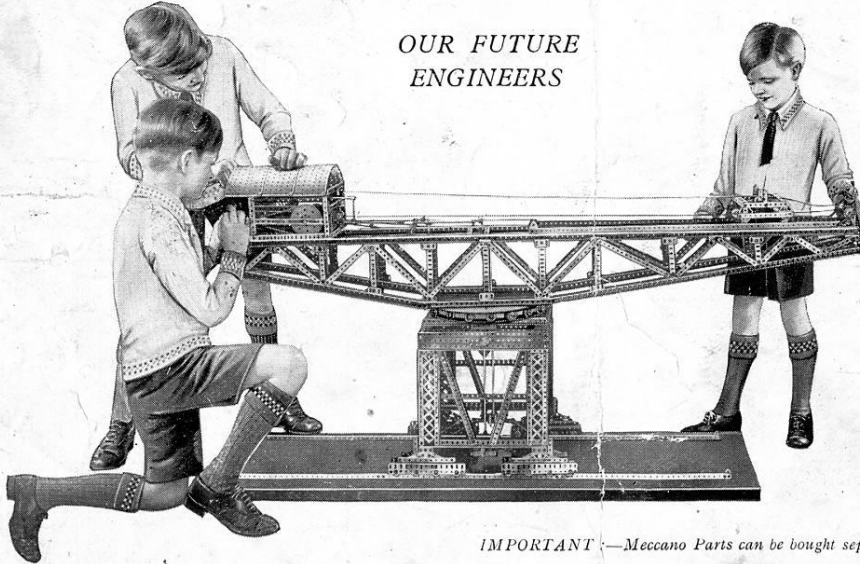
REAL ENGINEERING IN MINIATURE

The Meccano Accessory Outfit Aa 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

OUR FUTURE ENGINEERS



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

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 Ba which will convert your B into a C. In turn, an Accessory Outfit Ca 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 engineer of to-morrow.*

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

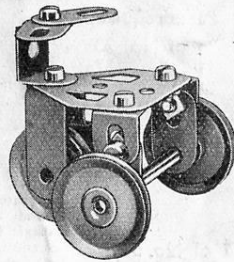
1

B1. Man and Boy



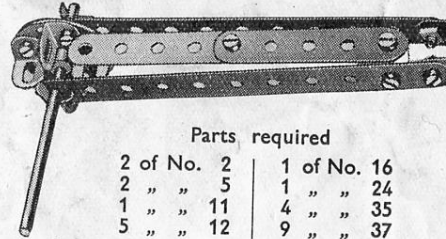
Parts required	
4 of No.	2
2 " "	5
5 " "	10
1 " "	11
8 " "	12
1 " "	22
1 " "	24
1 " "	34
1 " "	52
2 " "	54a
1 " "	90a
2 " "	111c
2 " "	125
1 " "	126a

B4. Tricycle



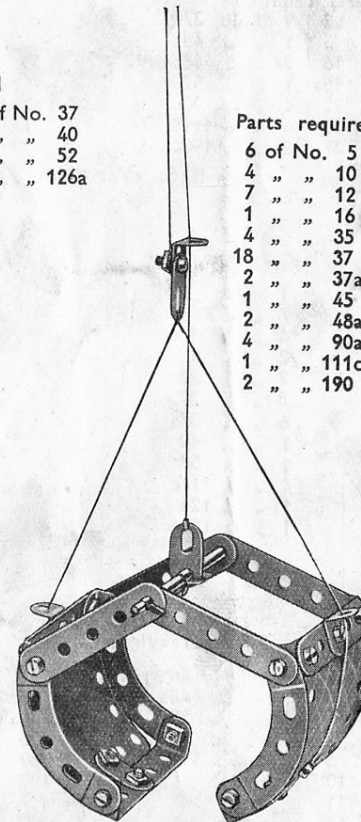
Parts required	
4 of No.	10
1 " "	11
1 " "	12
2 " "	17
3 " "	22
6 " "	37
1 " "	45
1 " "	111c
1 " "	126a

B7. Rattle



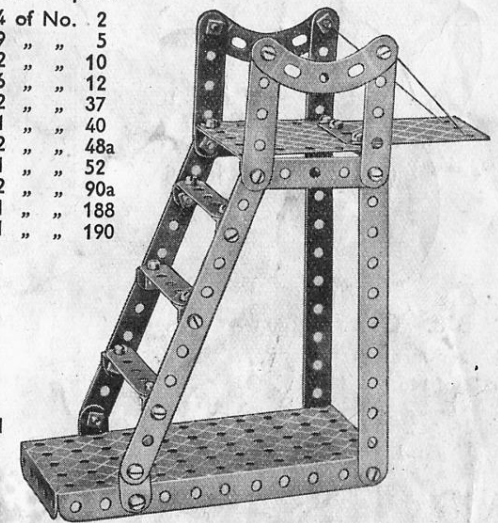
Parts required	
2 of No.	2
2 " "	5
1 " "	11
5 " "	12
1 of No.	16
1 " "	24
4 " "	35
9 " "	37

B8. Crane Grab



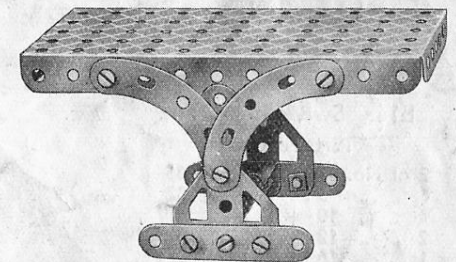
Parts required	
6 of No.	5
4 " "	10
7 " "	12
1 " "	16
4 " "	35
18 " "	37
2 " "	37a
1 " "	45
2 " "	48a
4 " "	90a
1 " "	111c
2 " "	190

B9. High Diving Board



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

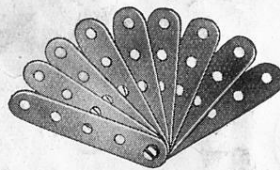
B10. Drafting Table



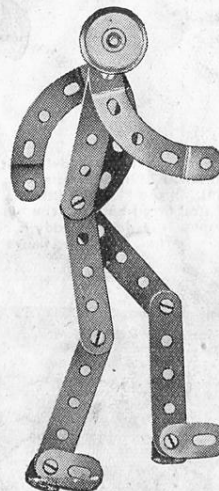
Parts required	
4 of No.	5
12 " "	37
1 " "	48a
1 of No.	52
4 " "	90a
2 " "	126a

B2. Fan

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

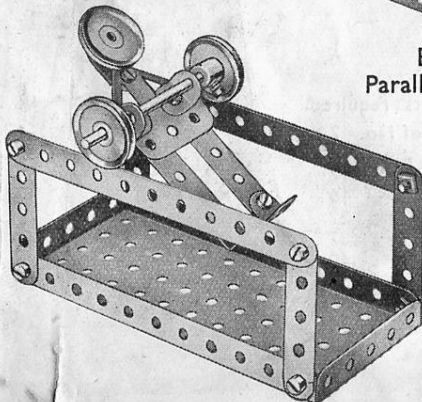


B6. Walking Man



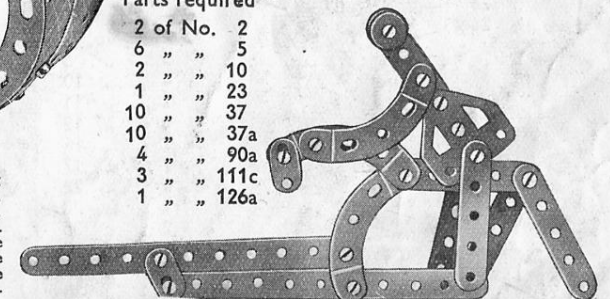
Parts required	
5 of No.	5
3 " "	10
2 " "	12
1 " "	22
5 " "	37
1 " "	37a
3 " "	90a
2 " "	111c

B3. Parallel Bars



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

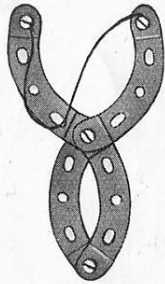
B11. Bucking Broncho



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

The $\frac{3}{8}$ " Bolts used for connecting the $5\frac{1}{2}$ " Strips, the horse's legs, and the rider's legs and arms, are all locknitted to form pivots. The lower $5\frac{1}{2}$ " Strip should be held rigidly and the upper one jerked forward; the horse will then throw its rider completely over its head.

B12. Catapult

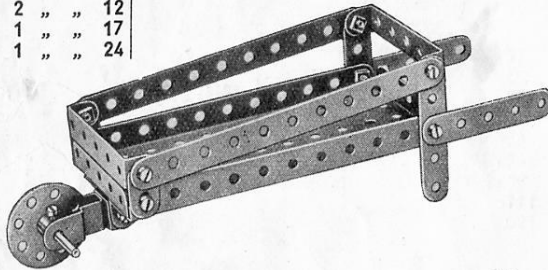


Parts required
4 of No. 37
4 " " 90a
A short length
of elastic

B13. Coster's Barrow

Parts required

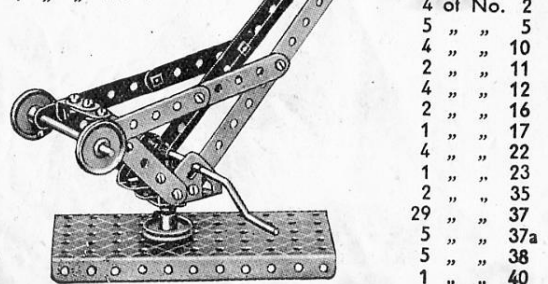
2 of No. 2	13 of No. 37
4 " " 5	1 " " 45
2 " " 10	2 " " 48a
1 " " 11	1 " " 52
2 " " 12	
1 " " 17	
1 " " 24	



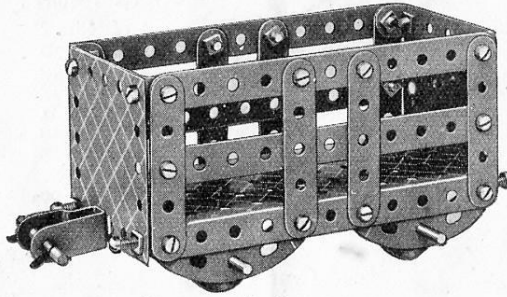
B14. Swivelling Crane

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
4 " " 22	
1 " " 23	
1 " " 24	



B15. Cattle Truck

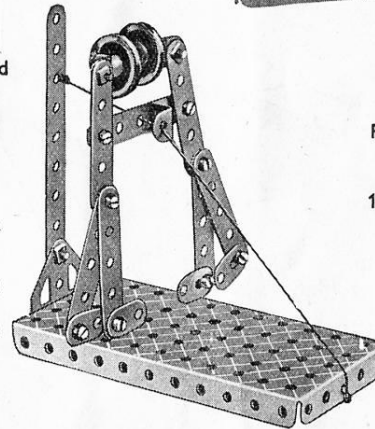


Parts required	
4 of No. 2	9 of No. 37a
8 " " 5	1 " " 45
2 " " 16	2 " " 48a
1 " " 18a	1 " " 52
4 " " 22	4 " " 90a
2 " " 35	4 " " 111c
25 " " 37	2 " " 190

B16. Wrestlers

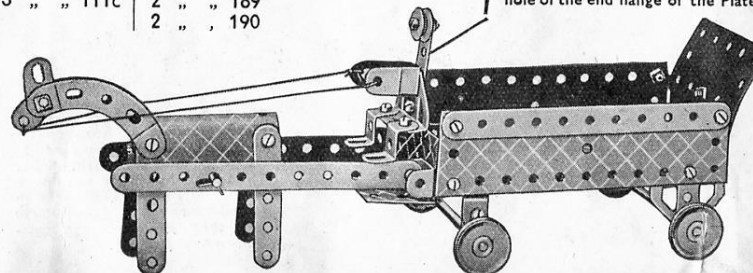
Parts required

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

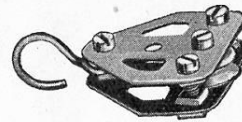


Parts required

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



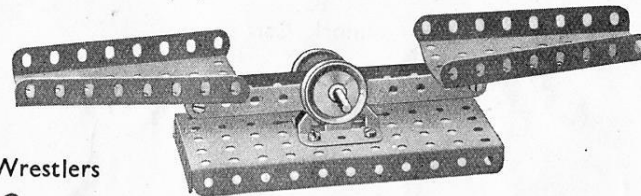
Parts required

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



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

B20. Card Table

Parts required

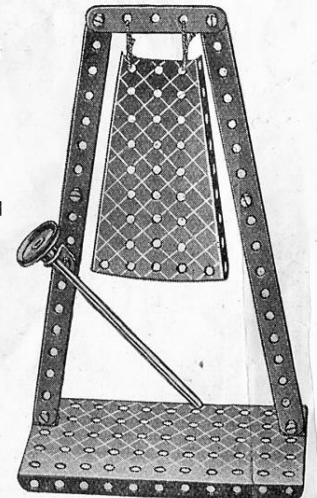
4 of No. 5
2 " " 12
10 " " 37
1 " " 48a
4 " " 90a
1 " " 190



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

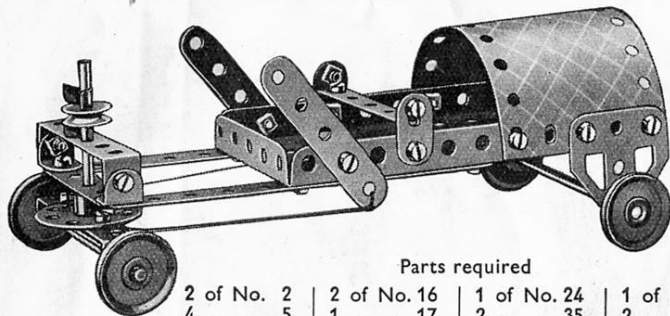
B22. Gong



Parts required

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

B23. Coaster



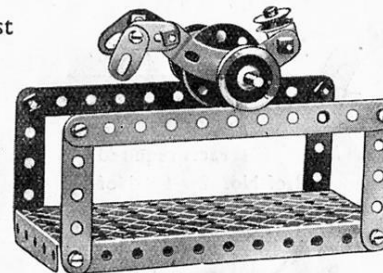
Parts required

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

B26. Gymnast

Parts required

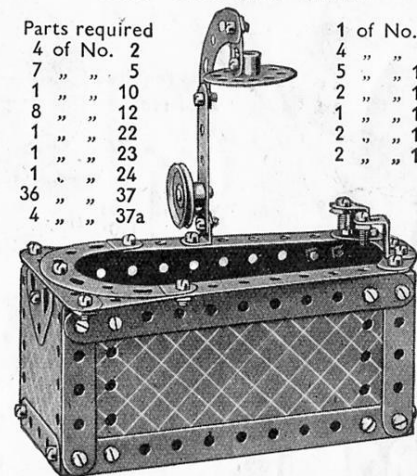
2 of No. 2	1 of No. 24
4 " " 5	13 " " 37
4 " " 10	1 " " 37a
1 " " 12	1 " " 52
1 " " 16	1 " " 90a
2 " " 22	1 " " 111c
1 " " 23	



B29. Bath with Shower

Parts required

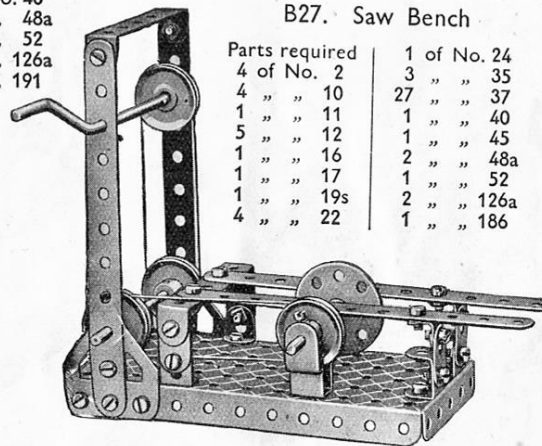
4 of No. 2	1 of No. 52
7 " " 5	4 " " 90a
1 " " 10	5 " " 111c
8 " " 12	2 " " 125
1 " " 22	1 " " 126
1 " " 23	2 " " 190
1 " " 24	2 " " 191
1 " " 37	
36 " " 37a	
4 " " 37a	



B27. Saw Bench

Parts required

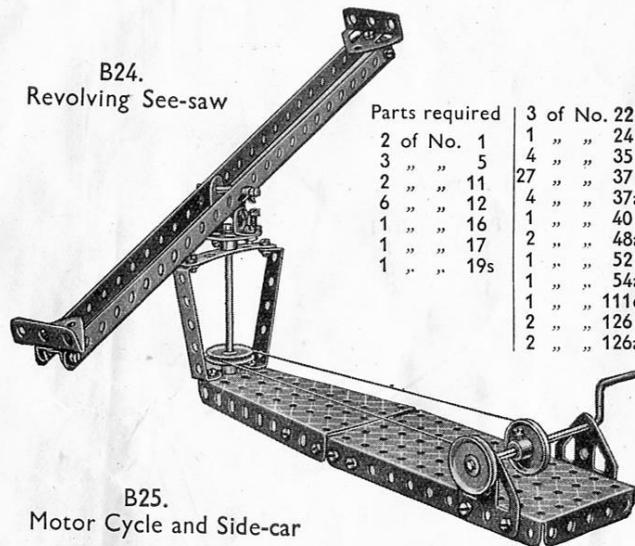
4 of No. 2	1 of No. 24
4 " " 10	3 " " 35
1 " " 11	27 " " 37
5 " " 12	1 " " 40
1 " " 16	1 " " 45
1 " " 17	2 " " 48a
1 " " 19s	1 " " 52
4 " " 22	2 " " 126a
	1 " " 186



B24. Revolving See-saw

Parts required

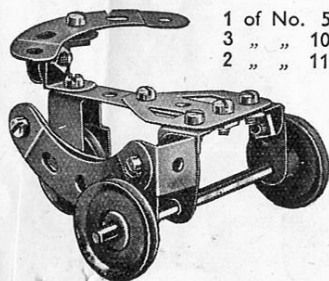
3 of No. 22
2 of No. 1
3 " " 5
2 " " 11
6 " " 12
1 " " 16
1 " " 17
1 " " 19s
1 " " 24
4 " " 35
27 " " 37
4 " " 37a
1 " " 40
2 " " 48a
1 " " 52
1 " " 54a
1 " " 111c
2 " " 126
2 " " 126a



B25. Motor Cycle and Side-car

Parts required

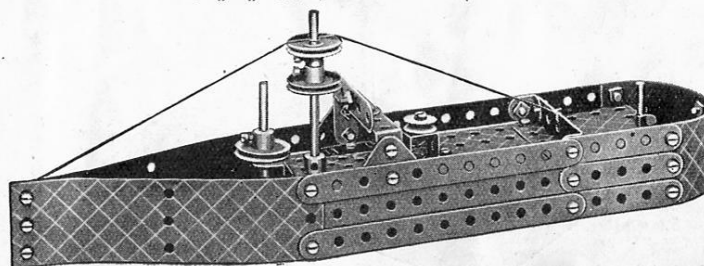
1 of No. 5	2 of No. 12
3 " " 10	1 " " 16
2 " " 11	3 " " 22
	1 " " 23
	10 " " 37
	2 " " 37a
	1 " " 44
	3 " " 90a
	2 " " 111c
	1 " " 126a



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		

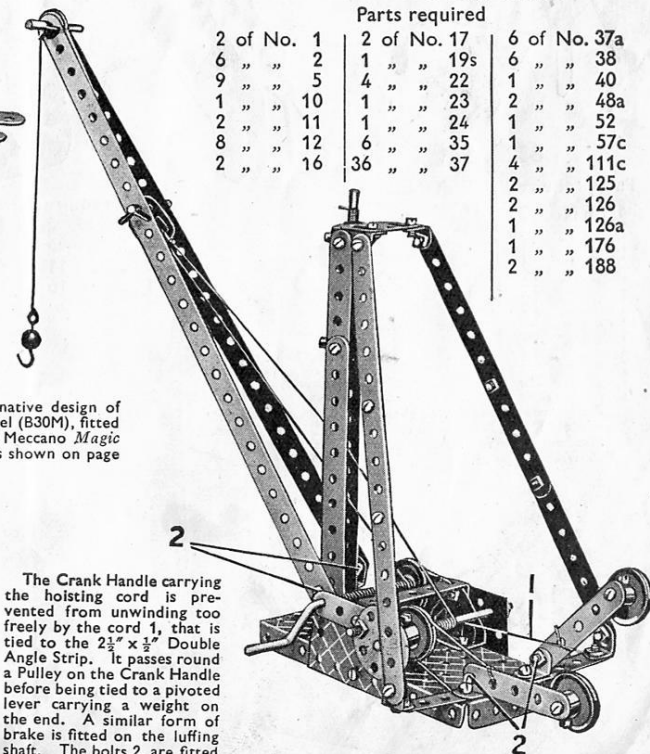


An alternative design of this model (B30M), fitted with the Meccano Magic Motor, is shown on page 16.

B30. Derrick Crane

Parts required

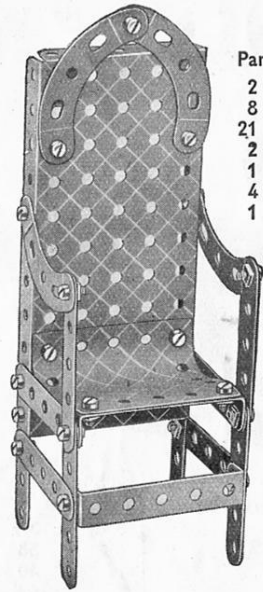
2 of No. 1	2 of No. 17	6 of No. 37a
6 " " 2	1 " " 19s	1 " " 38
9 " " 5	4 " " 22	1 " " 40
1 " " 10	1 " " 23	2 " " 48a
2 " " 11	1 " " 24	1 " " 52
8 " " 12	6 " " 35	1 " " 57c
2 " " 16	36 " " 37	4 " " 111c
		2 " " 125
		2 " " 126
		1 " " 126a
		1 " " 176
		2 " " 188



The Crank Handle carrying the hoisting cord is prevented from unwinding too freely by the cord 1, that is tied to the 2 1/2" x 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.

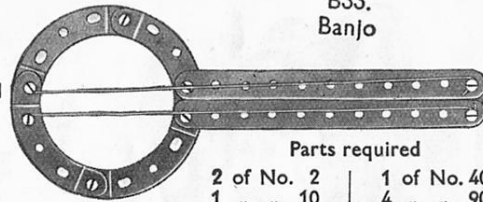
These Models can be built with MECCANO Outfit B (or Outfits A and Aa)

B31. Arm Chair



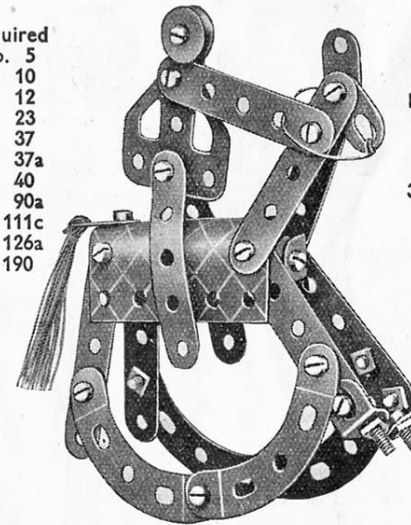
Parts required	
2 of No. 2	
8 " " 5	
21 " " 37	
2 " " 48a	
1 " " 52	
4 " " 90a	
1 " " 190	

B33. Banjo



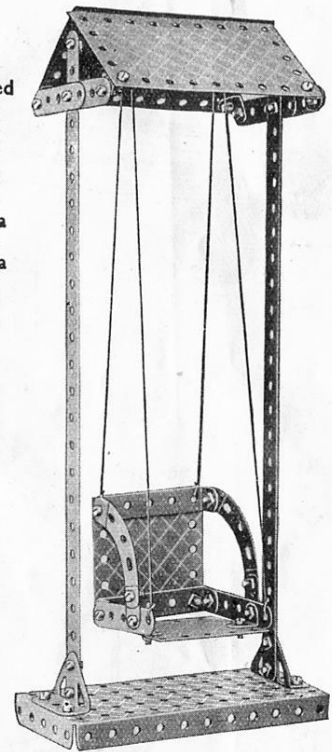
Parts required	
2 of No. 2	1 of No. 40
1 " " 10	4 " " 90a
8 " " 37	

B36. Rocking Horse



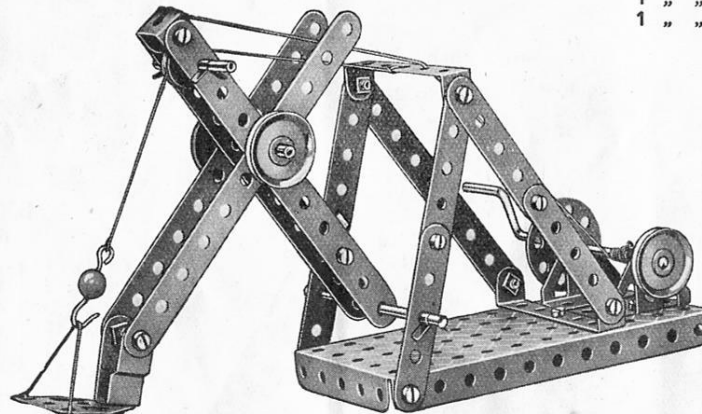
Parts required	
9 of No. 5	
4 " " 10	
6 " " 12	
1 " " 23	
17 " " 37	
8 " " 37a	
1 " " 40	
4 " " 90a	
5 " " 111c	
1 " " 126a	
1 " " 190	

B38. Swing



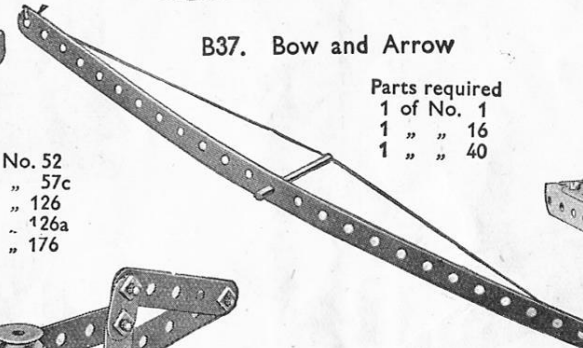
Parts required	
4 of No. 2	
8 " " 5	
8 " " 12	
33 " " 37	
1 " " 40	
2 " " 48a	
1 " " 52	
2 " " 90a	
2 " " 126	
2 " " 190	
2 " " 191	

B34. Mechanical Shovel



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

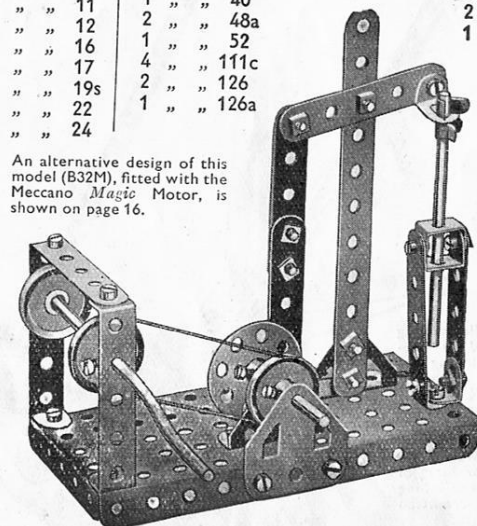
B37. Bow and Arrow



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

B32. Pump

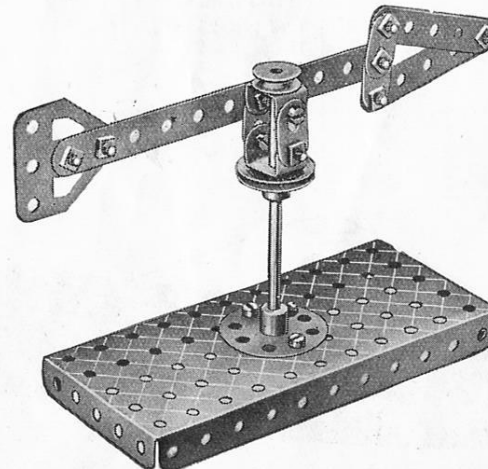
Parts required	
1 of No. 2	2 of No. 35
6 " " 5	19 " " 37
2 " " 11	8 " " 37a
3 " " 12	1 " " 40
1 " " 16	2 " " 48a
1 " " 17	1 " " 52
1 " " 19s	4 " " 111c
3 " " 22	2 " " 126
1 " " 24	1 " " 126a



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

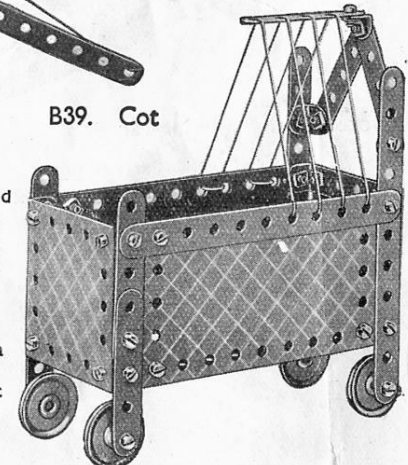
B35. Weather Vane

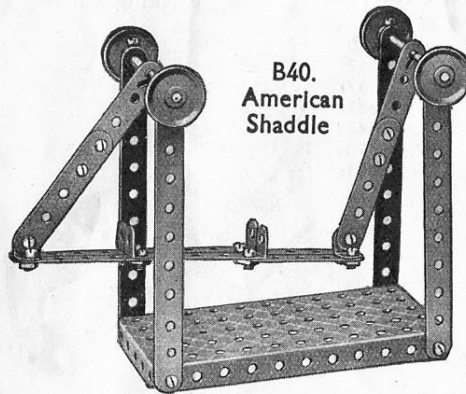
Parts required	
1 of No. 2	
2 " " 5	
4 " " 10	
2 " " 11	
1 " " 16	
1 " " 22	
1 " " 23	
1 " " 24	
12 " " 37	
1 " " 52	
1 " " 126a	



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	

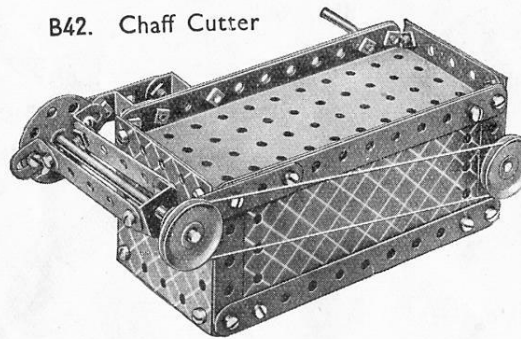




B40.
American
Shackle

Parts required

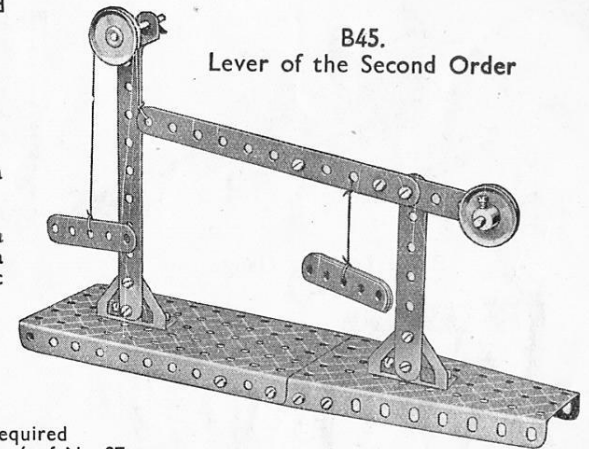
4 of No. 2
8 " " 5
1 " " 11
6 " " 12
1 " " 16
1 " " 19s
2 " " 22
1 " " 24
2 " " 35
33 " " 37
1 " " 40
1 " " 52
2 " " 125
2 " " 190
2 " " 191



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

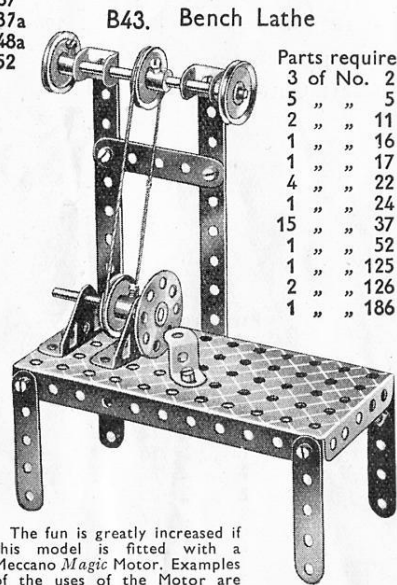
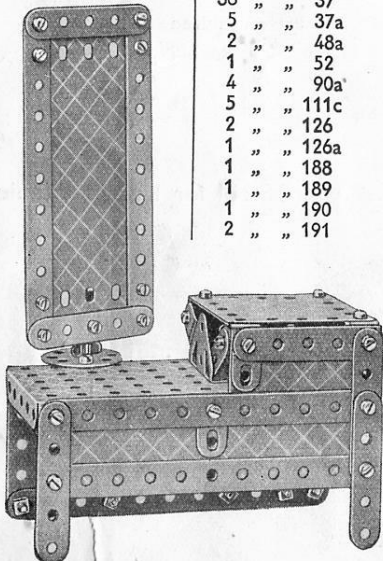
Parts required

4 of No. 2	2 of No. 12	18 of No. 37
9 " " 5	2 " " 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

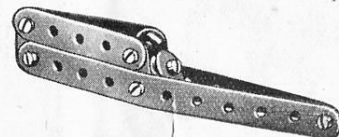
3 of No. 2
5 " " 5
2 " " 11
1 " " 16
1 " " 17
4 " " 22
1 " " 24
15 " " 37
1 " " 52
1 " " 125
2 " " 126
1 " " 186

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

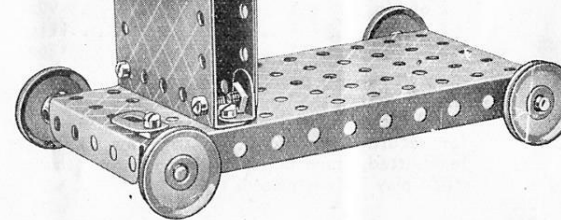
2 of No. 2	1 of No. 23
2 " " 5	7 " " 37
3 " " 10	1 " " 37a
1 " " 11	1 " " 111c



B46. Electric Trolley

Parts required

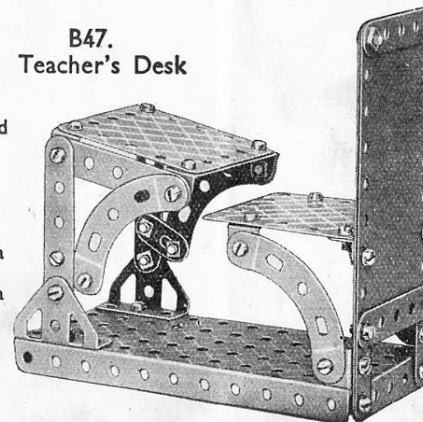
3 of No. 5	4 of No. 37a
2 " " 10	2 " " 48a
1 " " 11	1 " " 52
4 " " 12	1 " " 111c
2 " " 16	1 " " 126
4 " " 22	2 " " 190
16 " " 37	



B47.
Teacher's Desk

Parts required

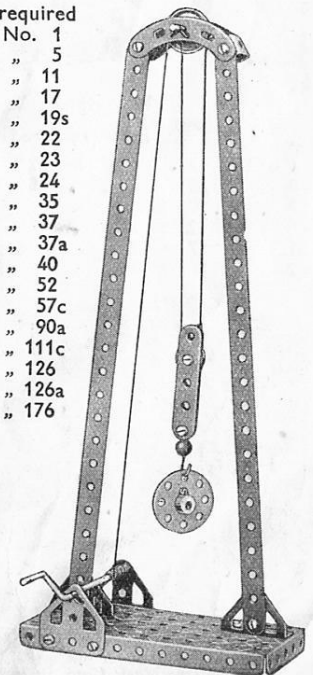
2 of No. 2
9 " " 5
2 " " 10
6 " " 12
34 " " 37
2 " " 48a
1 " " 52
4 " " 90a
2 " " 126
2 " " 190
1 " " 191



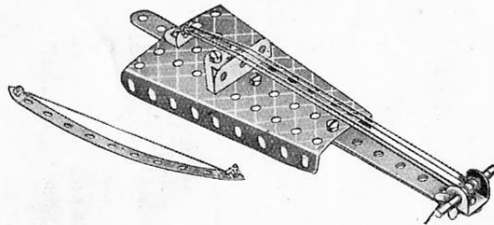
B48. Pulley Block

Parts required

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

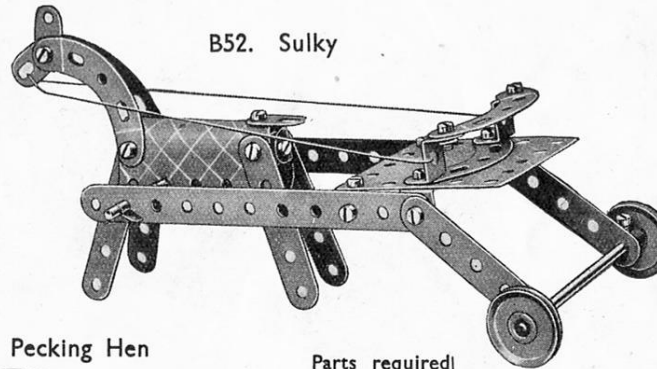


B49. Violin and Bow



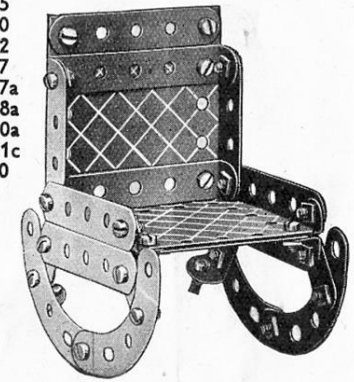
Parts required	
4 of No. 2	
1 " " 11	
1 " " 12	
1 " " 17	
1 " " 35	
5 " " 37	
1 " " 40	
1 " " 54a	
1 " " 126	

B52. Sulky

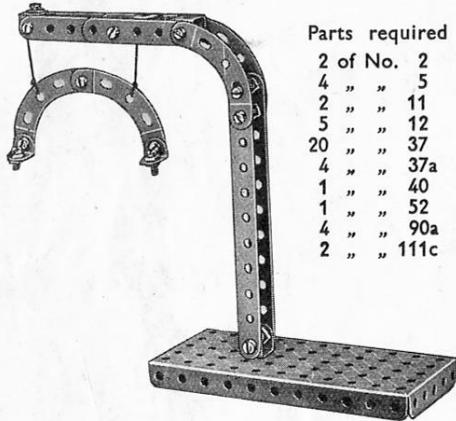


Parts required	
9 of No. 5	
4 " " 10	
8 " " 12	
26 " " 37	
2 " " 37a	
2 " " 48a	
4 " " 90a	
2 " " 111c	
2 " " 190	

B56. Rocking Chair

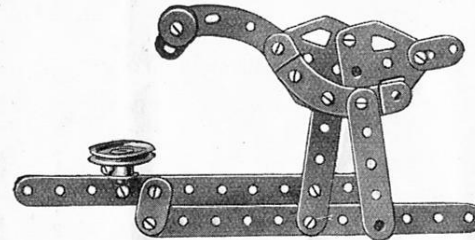


B50. Loading Gauge



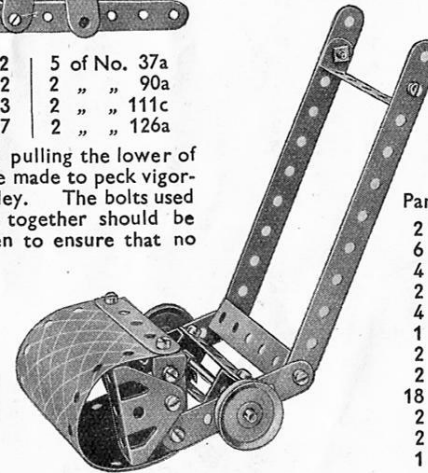
Parts required	
2 of No. 2	
4 " " 5	
2 " " 11	
5 " " 12	
20 " " 37	
4 " " 37a	
1 " " 40	
1 " " 52	
4 " " 90a	
2 " " 111c	

B53. Pecking Hen



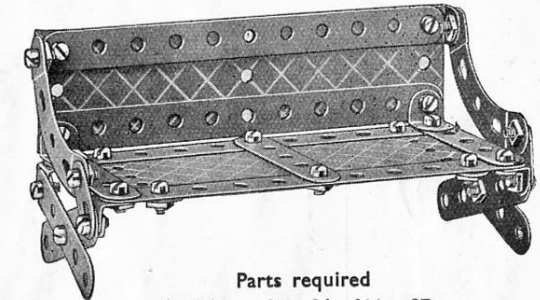
Parts required	
2 of No. 2	2 of No. 22
6 " " 5	4 " " 35
3 " " 10	17 " " 37
6 " " 12	1 " " 37a
2 " " 16	1 " " 40
	1 of No. 48a
	4 " " 90a
	1 " " 111c
	2 " " 125
	2 " " 190

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	

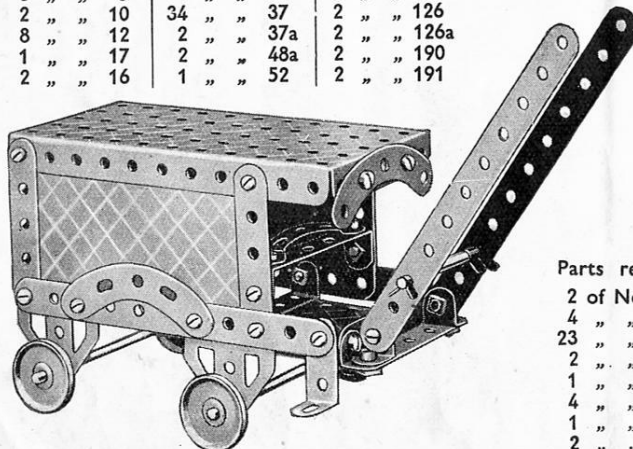
B57. Station Seat



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

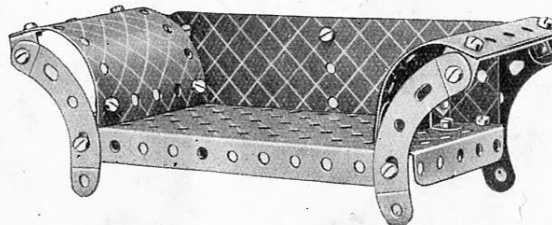
Parts required		
4 of No. 2	4 of No. 22	4 of No. 90a
8 " " 5	4 " " 35	1 " " 125
2 " " 10	34 " " 37	2 " " 126
8 " " 12	2 " " 37a	2 " " 126a
1 " " 17	2 " " 48a	2 " " 190
2 " " 16	1 " " 52	2 " " 191



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.

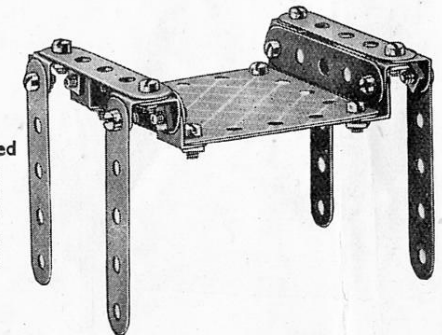
B55. Couch

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

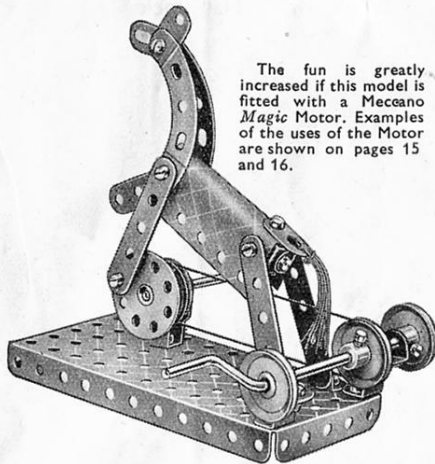


Parts required	
9 of No. 5	
8 " " 12	
16 " " 37	
2 " " 125	
1 " " 190	

B58. Stool for Dressing Table

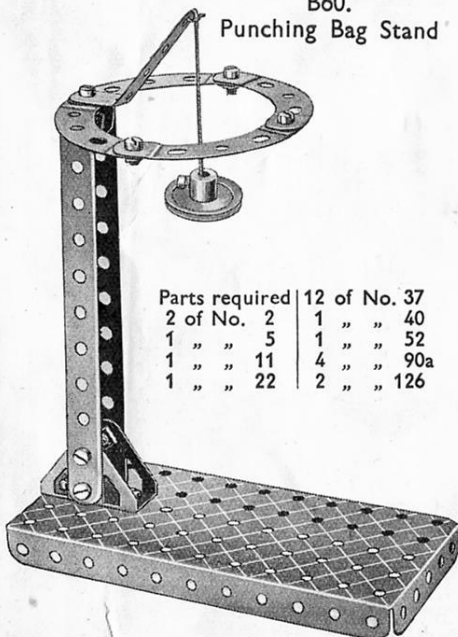


B59. Prancing Horse



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

B60. Punching Bag Stand

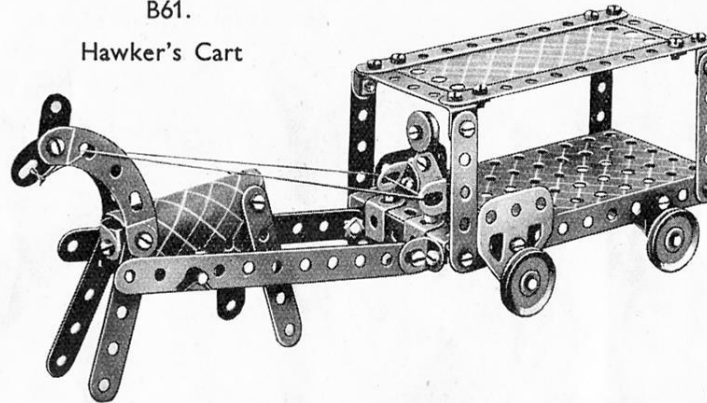


Parts required	12 of No. 37
2 of No. 2	1 " " 40
1 " " 5	1 " " 52
1 " " 11	4 " " 90a
1 " " 22	2 " " 126

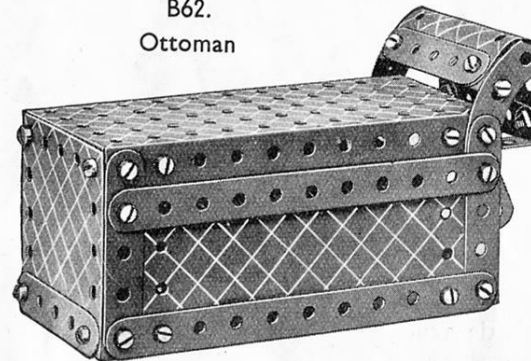
Parts required

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

B61. Hawker's Cart

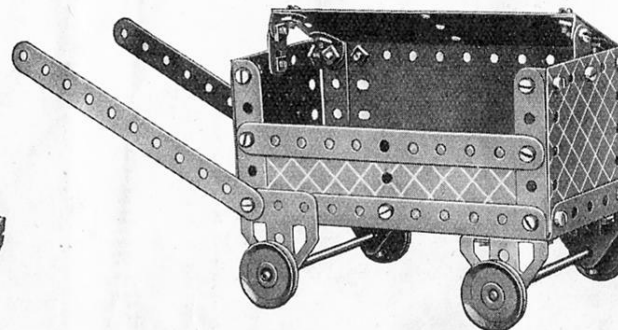


B62. Ottoman



Parts required	4 of No. 2
7 " " 5	10
2 " " 11	12
4 " " 37	48a
1 " " 52	90a
2 " " 190	191

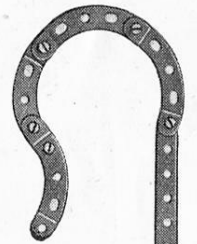
B63. Ash Cart



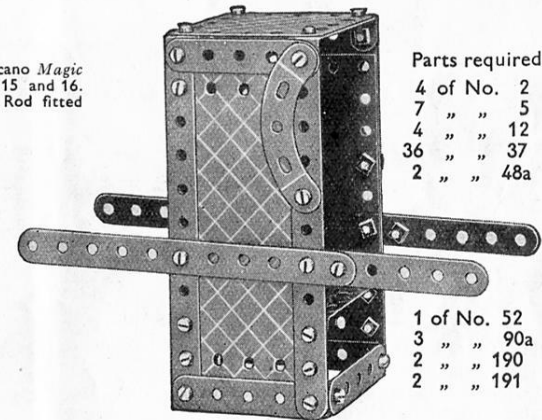
Parts required	4 of No. 2
4 " " 5	10
2 " " 12	16
2 " " 22	37
34 " " 37a	48a
2 " " 52	111c
2 " " 126	126a
2 " " 189	190
2 " " 191	

B64. Shepherd's Crook

Parts required	2 of No. 1
7 " " 37	90a

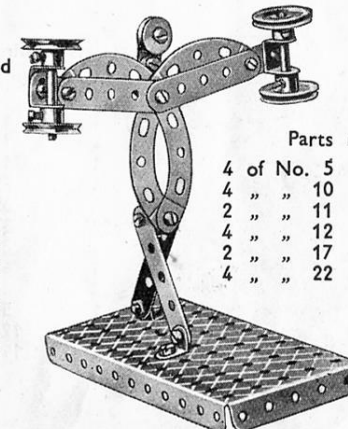


B65. Sedan Chair



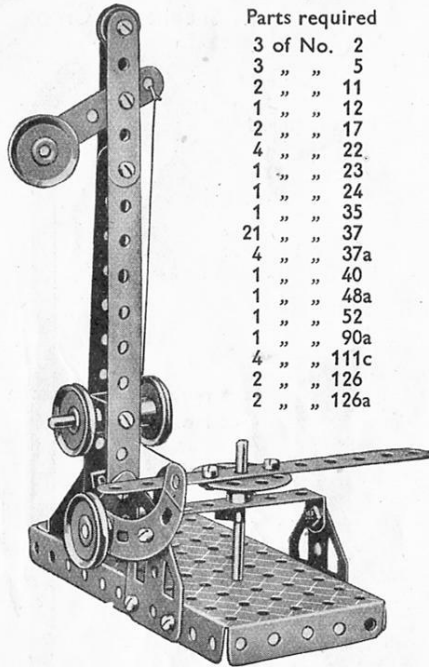
Parts required	4 of No. 2
7 " " 5	12
36 " " 37	48a
2 " " 52	90a
2 " " 190	191

B66. Strong Man



Parts required	4 of No. 5	1 of No. 23
4 " " 10	12 " " 37	
2 " " 11	2 " " 37a	
4 " " 12	1 " " 52	
2 " " 17	4 " " 90a	
4 " " 22	2 " " 111c	

B67. Automatic Signals

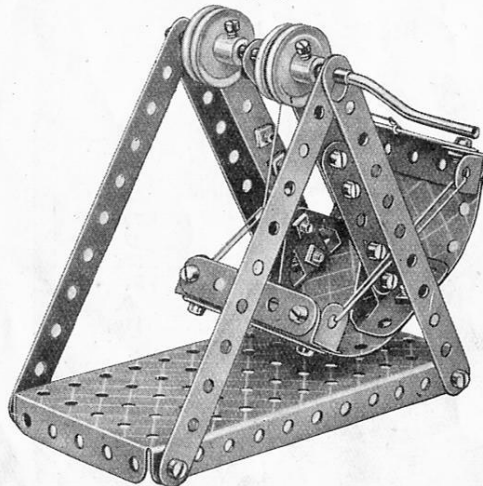


Parts required

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.

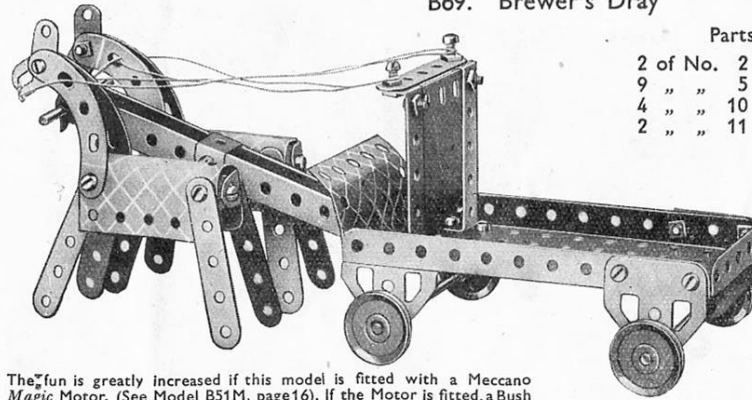
B68. Swinging Boat



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

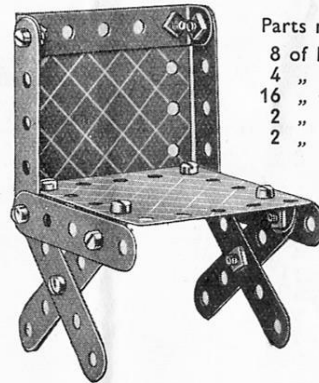


Parts required

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

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.

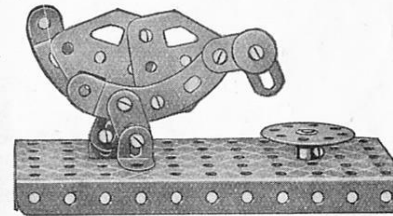
B70. Chair



Parts required

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

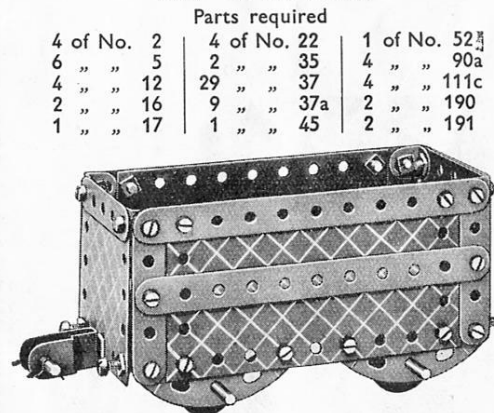
B71. Goose



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



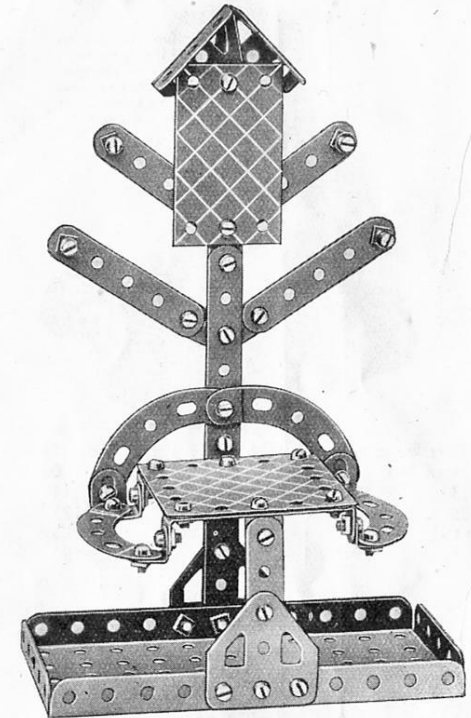
Parts required

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

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

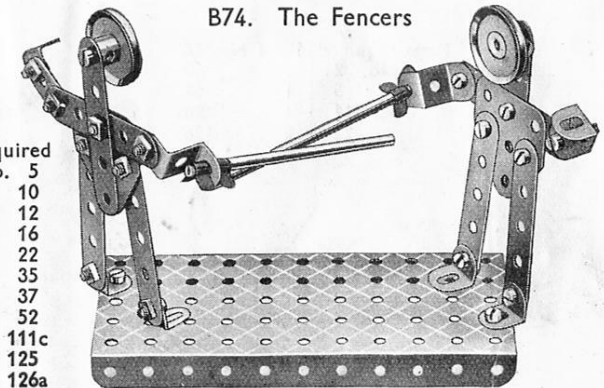
B73. Hat Rack



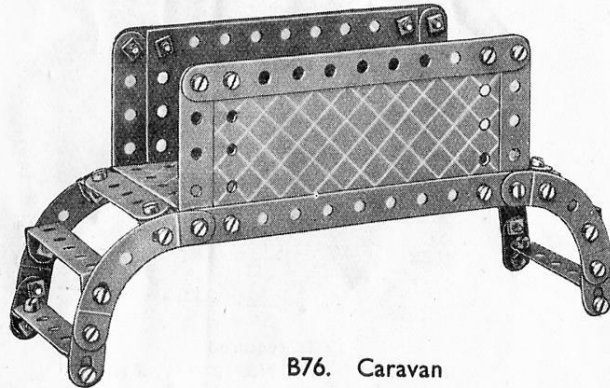
Parts required

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



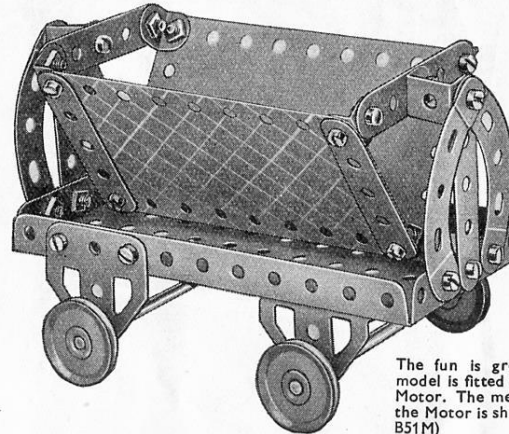
B75. Footbridge



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

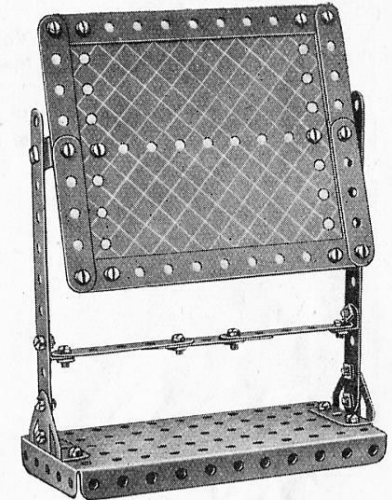
B78. Dump Car



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

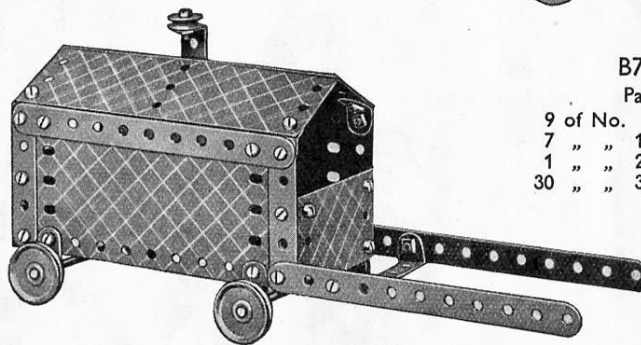
B81. School Blackboard



Parts required

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

B76. Caravan



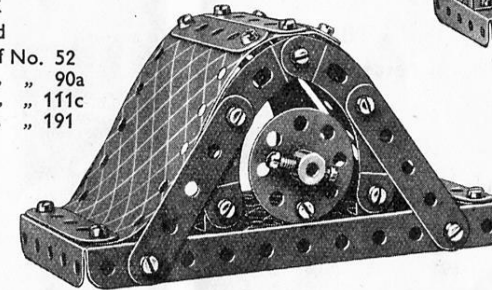
Parts required

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

B79. Clock

Parts required

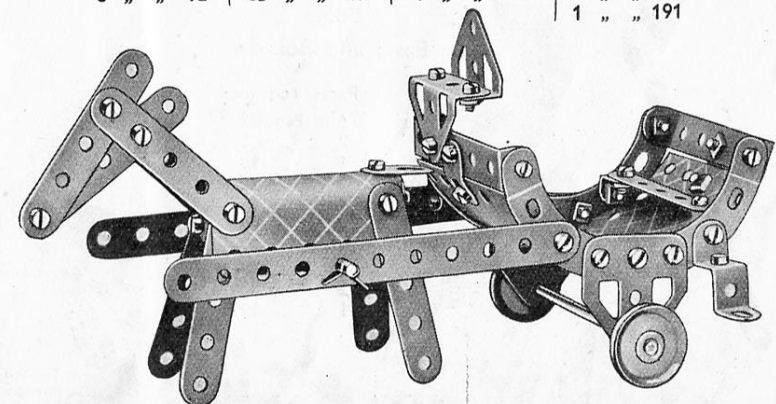
9 of No. 5	1 of No. 52
7 " " 12	4 " " 90a
1 " " 24	2 " " 111c
30 " " 37	2 " " 191



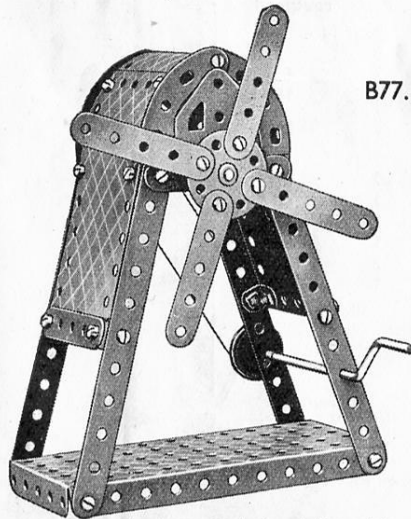
B82. Two-wheeled Trap

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



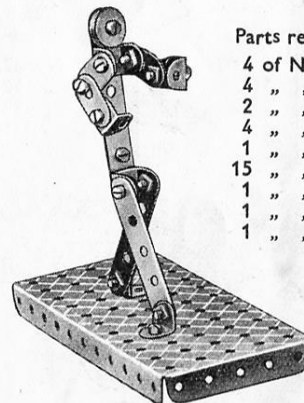
B77. Windmill



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

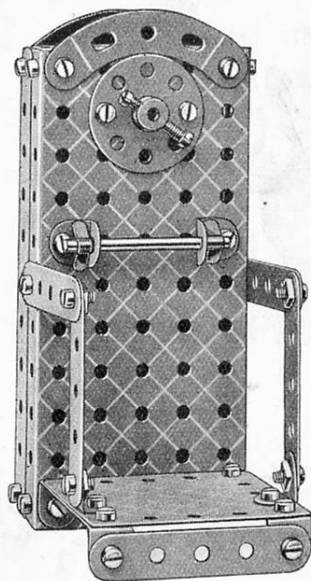
B80. Boxer



Parts required

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

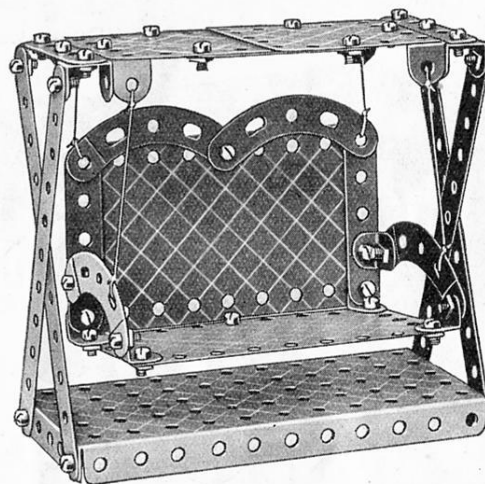
An alternative design of this model (B77M), fitted with the Meccano Magic Motor, is shown on page 15:



B83.
Weighing Machine

Parts required

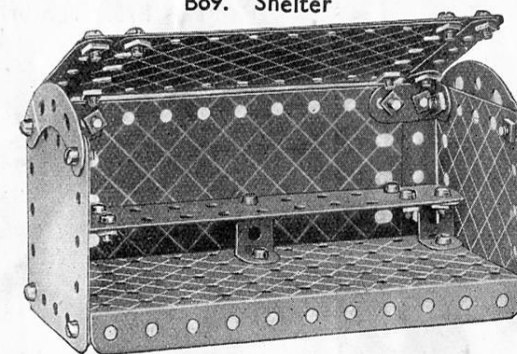
4 of No. 2
7 " " 5
4 " " 10
8 " " 12
1 " " 17
1 " " 24
2 " " 35
36 " " 37
2 " " 37a
2 " " 48a
1 " " 52
2 " " 90a
3 " " 111c
1 " " 190
1 " " 191



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

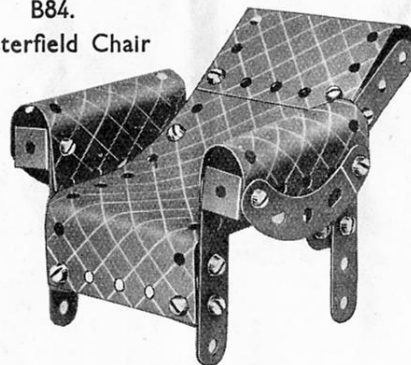


B89. Shelter

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



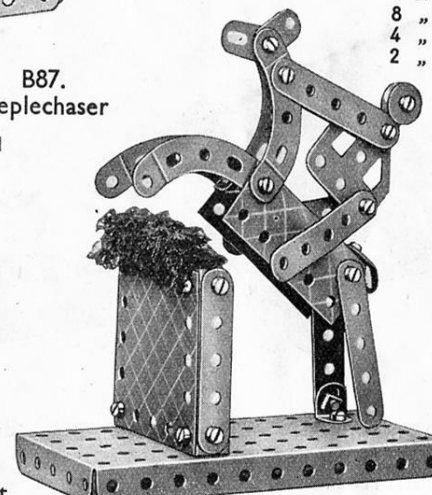
Parts required

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

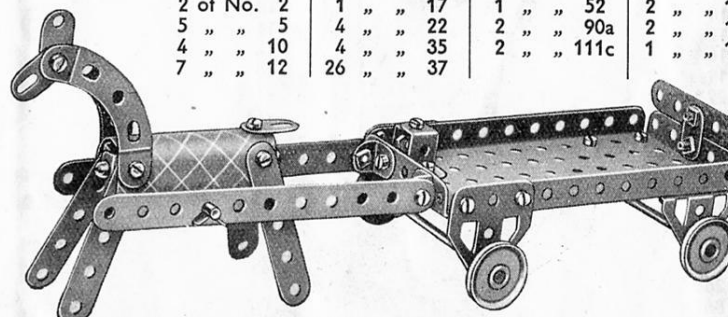
Parts required

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		

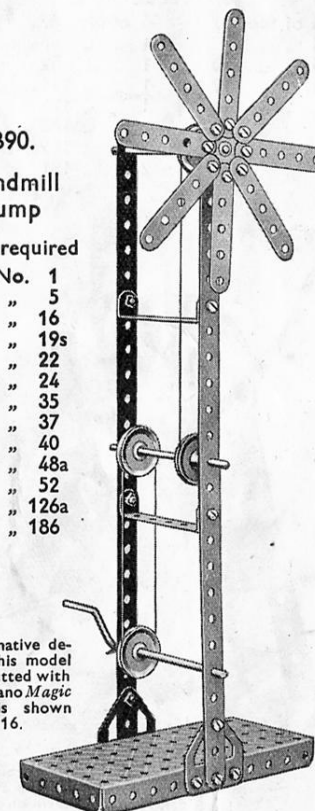


B90.
Windmill Pump

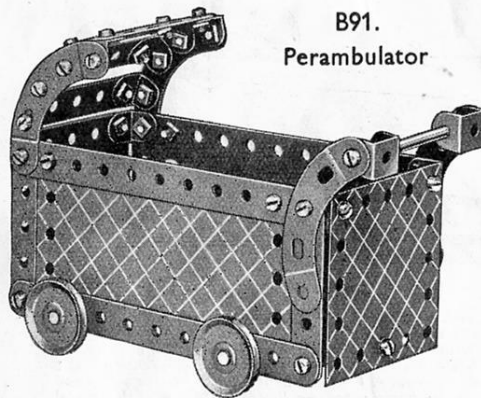
Parts required

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.

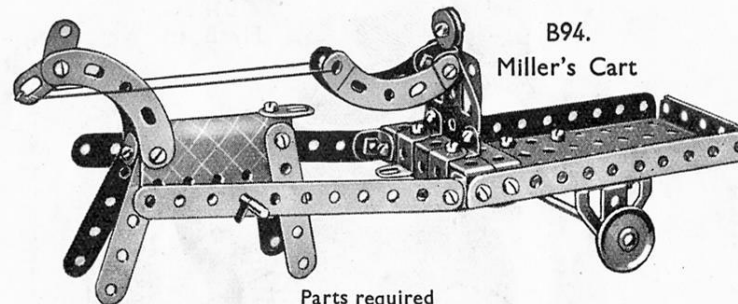


The fun is greatly increased if this model is fitted with a Meccano Magic Motor. The method of incorporating the Motor is shown on page 16 (B51M). If the Motor is fitted, a Bush Wheel should be mounted on a 2" Rod fitted between the hind legs of the horse.



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	

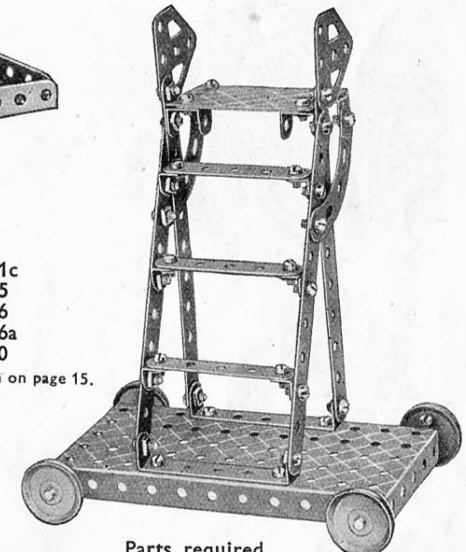


B94.
Miller's Cart

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



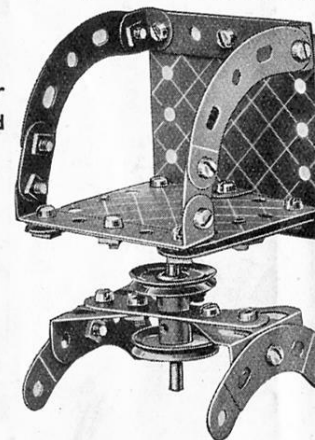
Parts required		
4 of No.	2	2 of No.
5 "	5	16
2 "	11	2 "
8 "	12	22
		32 "
		37
		2 "
		48a
		1 of No.
		52
		2 "
		90a
		2 "
		126a
		1 "
		188

B92.
Watchman's Hut and Fire

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

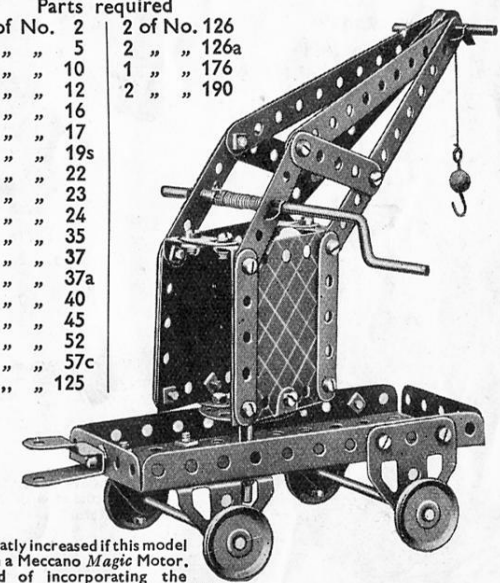
B95.
Revolving
Office Chair

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	

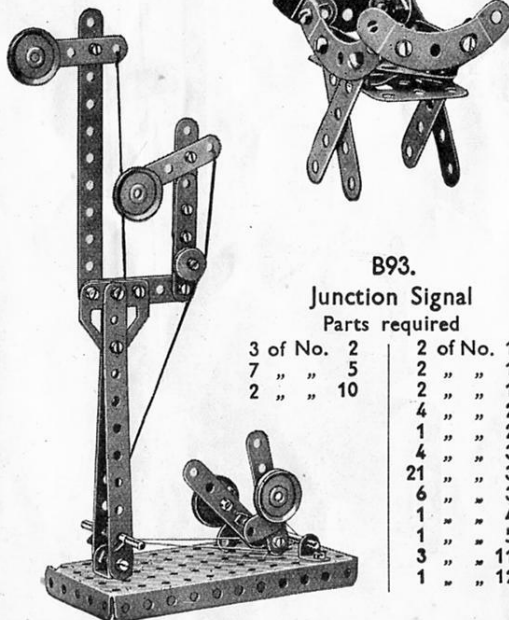


B98. Breakdown Crane

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



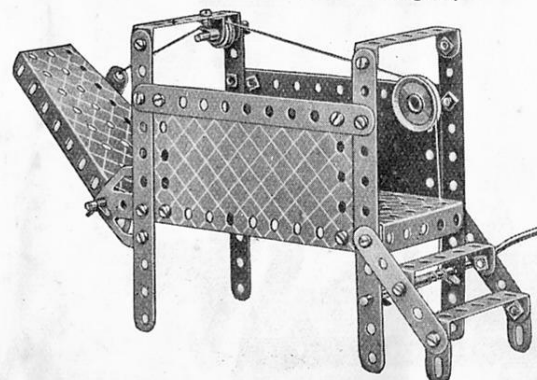
The fun is greatly increased if this model is fitted with a Meccano *Magic Motor*. The method of incorporating the Motor is shown on page 16. (Model B51M)



B93.
Junction Signal

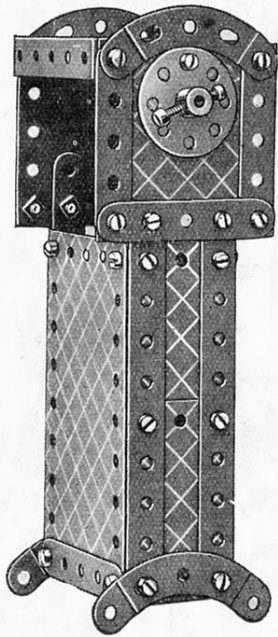
Parts required		
3 of No.	2	2 of No.
7 "	5	11
2 "	10	2 "
		12
		2 "
		17
		4 "
		22
		1 "
		23
		4 "
		35
		21 "
		37
		6 "
		37a
		1 "
		40
		1 "
		52
		3 "
		111c
		1 "
		126a

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	

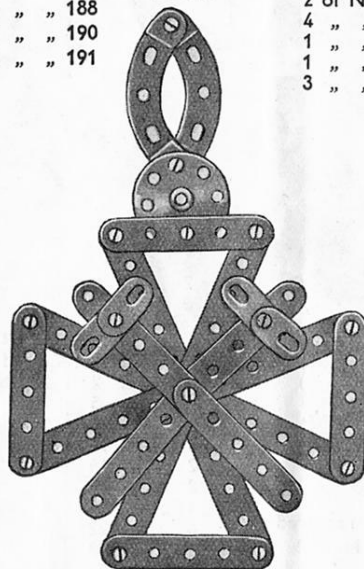
B99. Grandfather Clock



Parts required

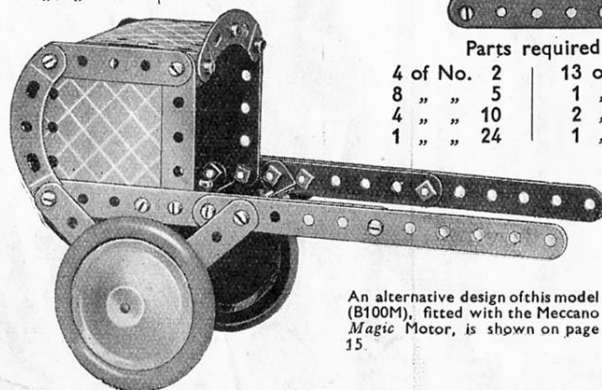
4 of No. 2
8 " " 5
8 " " 12
1 " " 24
31 " " 37
2 " " 48a
4 " " 90a
1 " " 111c
2 " " 188
2 " " 190
2 " " 191

B101. Medal



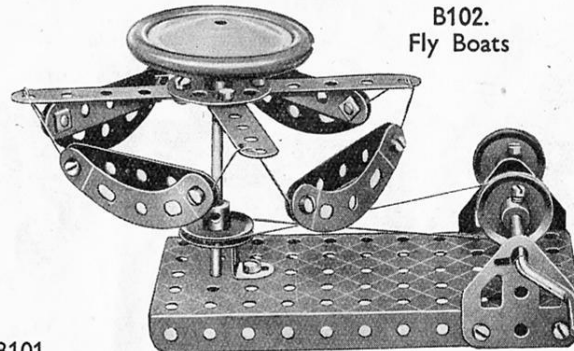
Parts required

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



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

B102. Fly Boats



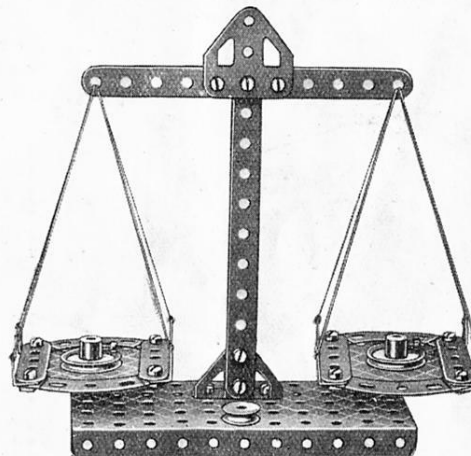
Parts required

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	1 of No. 126a
6 " " 5	2 " " 187
5 " " 12	1 " " 188
1 " " 15b	2 " " 189
26 " " 37	
2 " " 48a	
1 " " 52	
2 " " 90a	
1 " " 125	
1 " " 126	

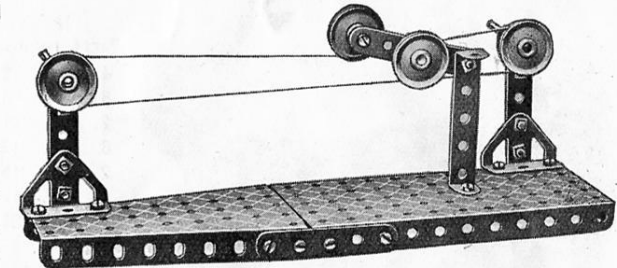
B104. Counter Scales



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

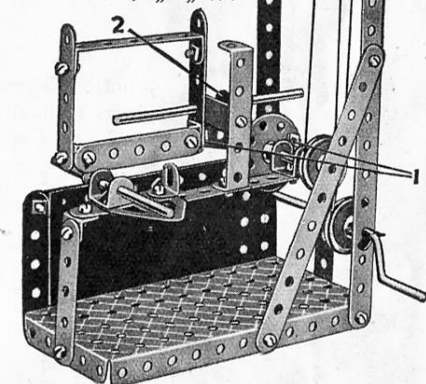
5 of No. 2
2 " " 17
4 " " 22
2 " " 35
20 " " 37
1 " " 37a
1 " " 40
1 " " 48a
1 " " 52
1 " " 54a
2 " " 111c
2 " " 125
2 " " 126

B106. Power Hack Saw

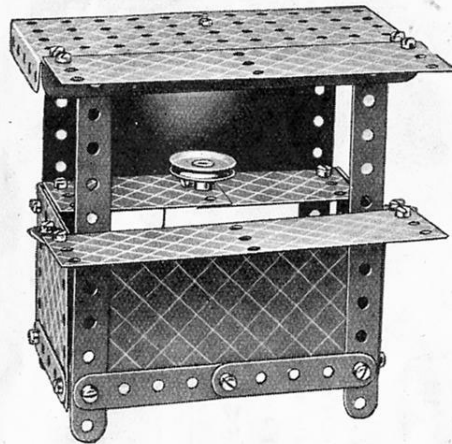
The Crank Handle drives an overhead shaft through 1" Pulleys and cord, and a similar arrangement conveys the drive to a 2" Rod carrying a Bush Wheel. A 2 1/2" Strip is pivoted to the Bush Wheel and to an Angle Bracket bolted to the saw frame. These pivots 1 are each locknuted. A Cranked Bent Strip 2 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
1 " " 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

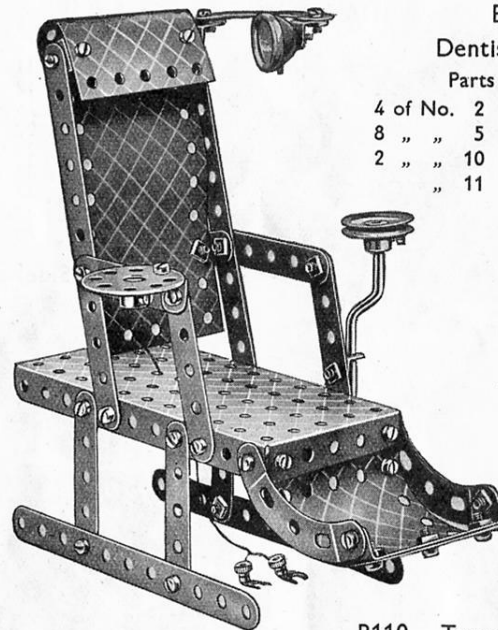
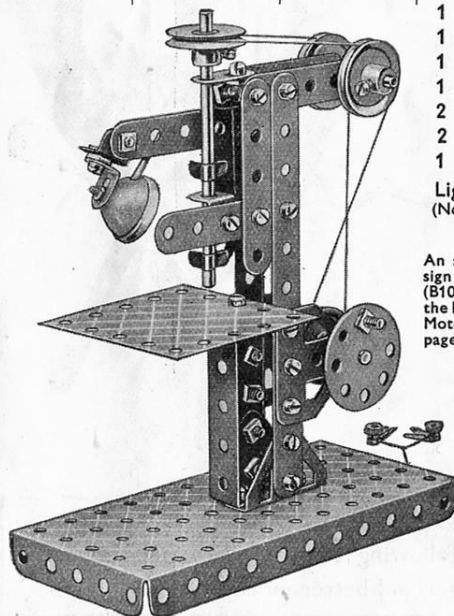
Parts required

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.



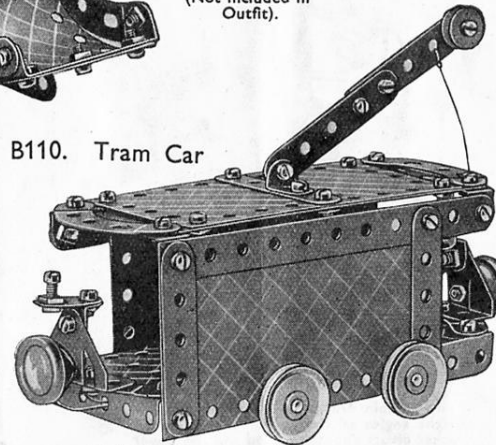
B109.
Dentist's Chair

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	

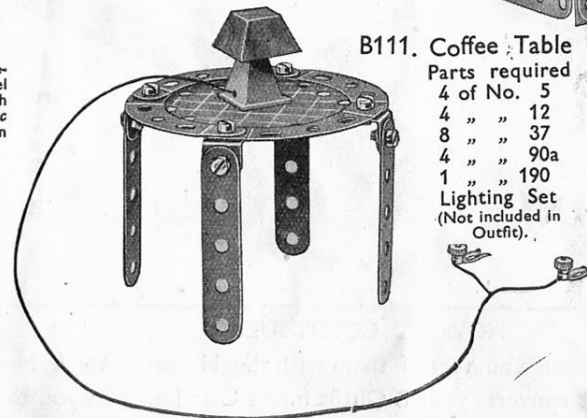
Lighting Set
(Not included in Outfit).

B111. Coffee Table

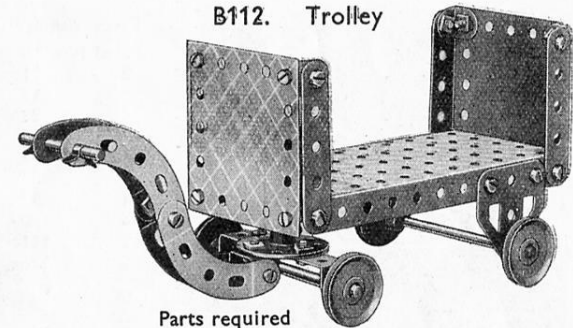
Parts required

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

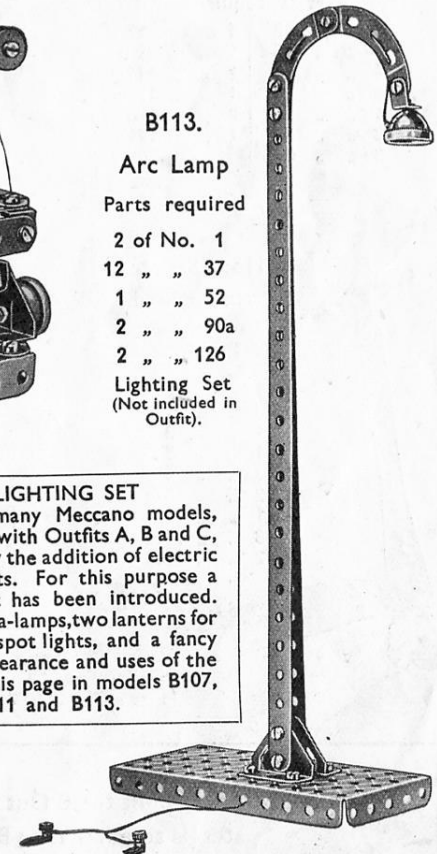
B113.

Arc Lamp

Parts required

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

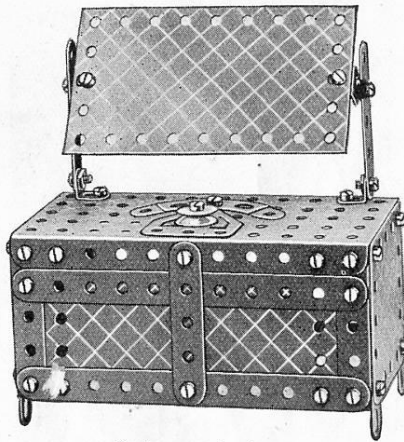
Lighting Set
(Not included in Outfit).



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.

B114. Dressing Table



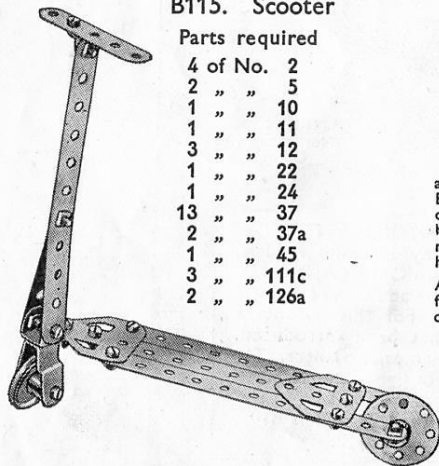
Parts required

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

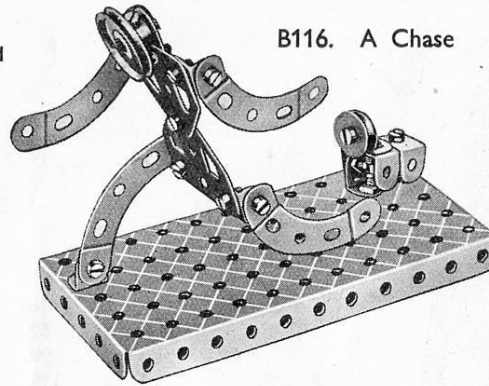
Parts required

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



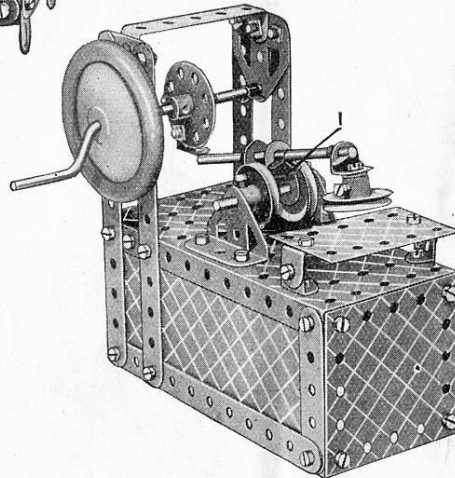
Parts required

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



B116. A Chase

B117. Trip Hammer

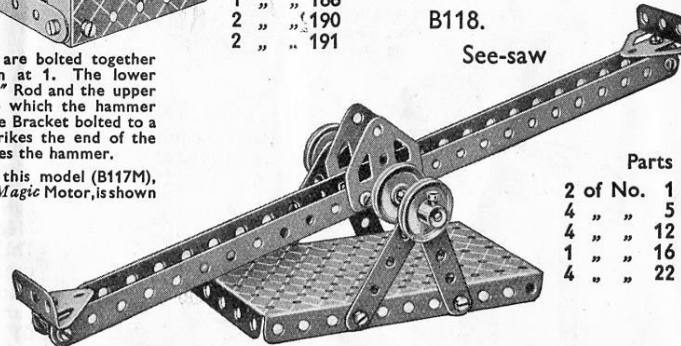


Parts required

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.



B118.

See-saw

Parts required

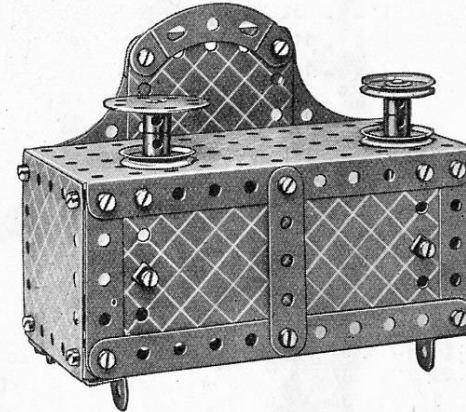
2 of No. 1	14 of No. 37
4 " " 5	1 " " 52
4 " " 12	2 " " 126
1 " " 16	2 " " 126a
4 " " 22	

Parts required

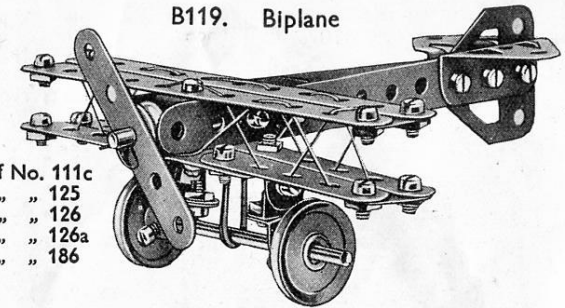
4 of No. 2	2
6 " " 5	
4 " " 10	
2 " " 11	
4 " " 12	
2 " " 16	
2 " " 22	
1 " " 23	
2 " " 35	
22 " " 37	
3 " " 37a	
1 " " 40	

3 of No. 111c
2 " " 125
2 " " 126
1 " " 126a
1 " " 186

B120. Sideboard



B119. Biplane

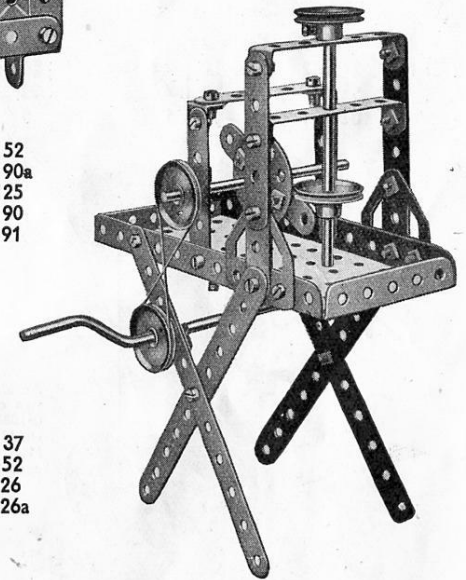


B121.

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.

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

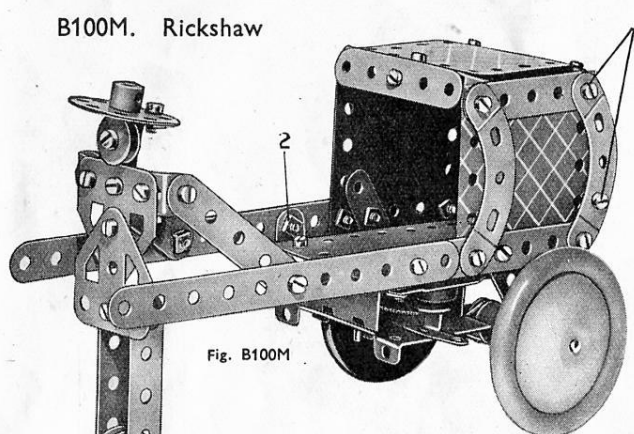
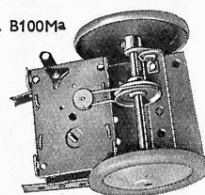


Fig. B100M

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.

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 journaled 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.

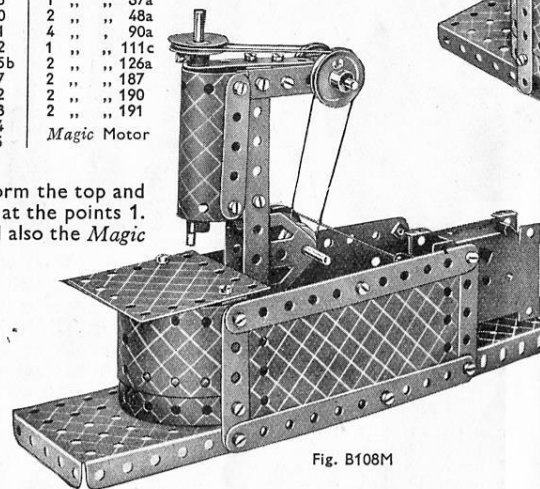


Fig. B108M

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.

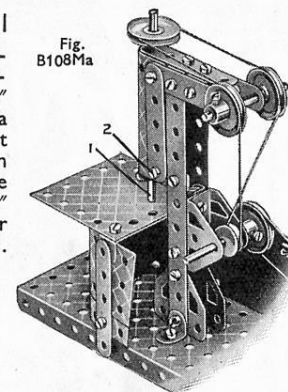


Fig. B106M

Parts required

2 of No. 1	6 of No. 12	2 of No. 38
3 " " 2	1 " " 15b	1 " " 40
6 " " 5	2 " " 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 $1''$ Pulley on the intermediate Rod drives a $1''$ Pulley on the Axle Rod carrying the "sails." (See Fig. B77Ma.)

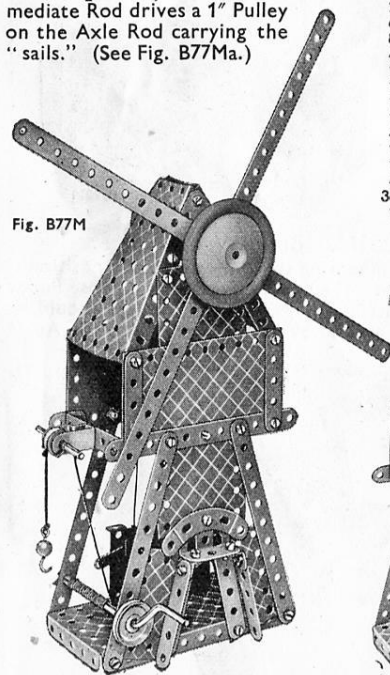


Fig. B77M

Parts required

2 of No. 1	1 of No. 44
6 " " 2	2 " " 48a
8 " " 5	1 " " 52
4 " " 12	2 " " 54a
1 " " 15b	1 " " 57c
1 " " 16	1 " " 90a
1 " " 17	2 " " 126
1 " " 19s	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
6 " " 5	2 " " 189
5 " " 10	1 " " 190
1 " " 11	
8 " " 12	<i>Magic Motor</i>
1 " " 15b	
2 " " 17	
1 " " 22	
1 " " 23	
1 " " 24	
4 " " 35	
36 " " 37	
3 " " 37a	
6 " " 38	
1 " " 40	
1 " " 48a	
4 " " 52	
3 " " 111c	
2 " " 125	
2 " " 126	
1 " " 126a	
2 " " 187	

Fig. B77Ma

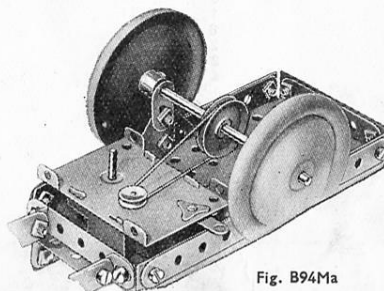
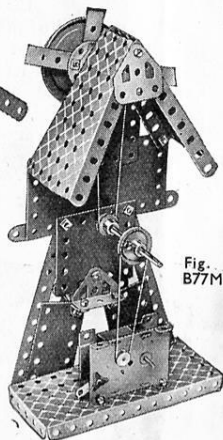


Fig. B94Ma

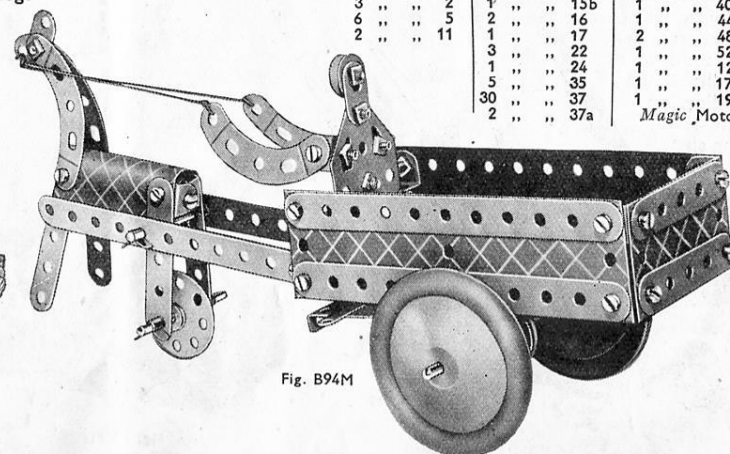


Fig. B94M

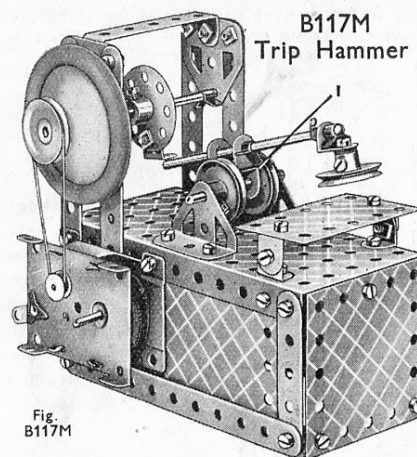
Outfit B Models fitted with the *Magic Motor*

Fig. B117M

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.

B117M
Trip Hammer

Parts required

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

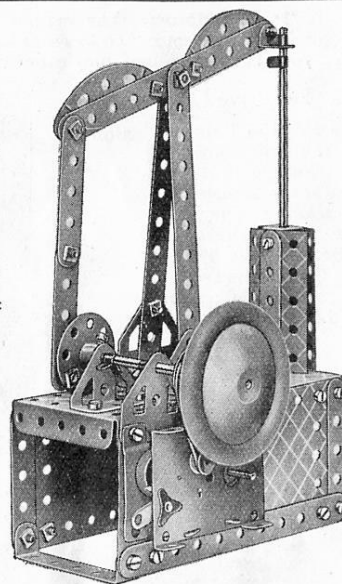
Magic Motor

Fig. B32M

B32M. Pump

Parts required

5 of No.	2
8 "	5
2 "	11
3 "	12
1 "	15b
1 "	16
1 "	17
4 "	24
4 "	35
34 "	37
8 "	37a

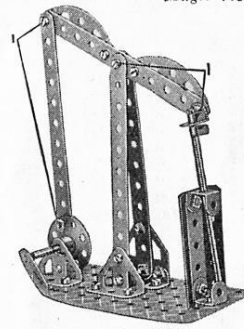
Magic Motor

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 locknutt to form pivots.

Parts required

2 of No.	1
5 "	2
9 "	5
2 "	11
7 "	12
1 "	15b
2 "	16
1 "	19s
4 "	22
1 "	24
6 "	35
36 "	37
5 "	37a
2 "	38
1 "	40
2 "	48a
1 "	52
4 "	90a
1 "	111c
1 "	126
2 "	126a
1 "	186
2 "	188
2 "	189
2 "	190

Magic Motor

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.

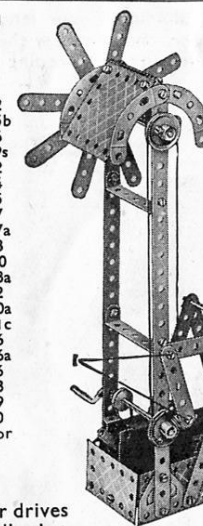


Fig. B90Ma

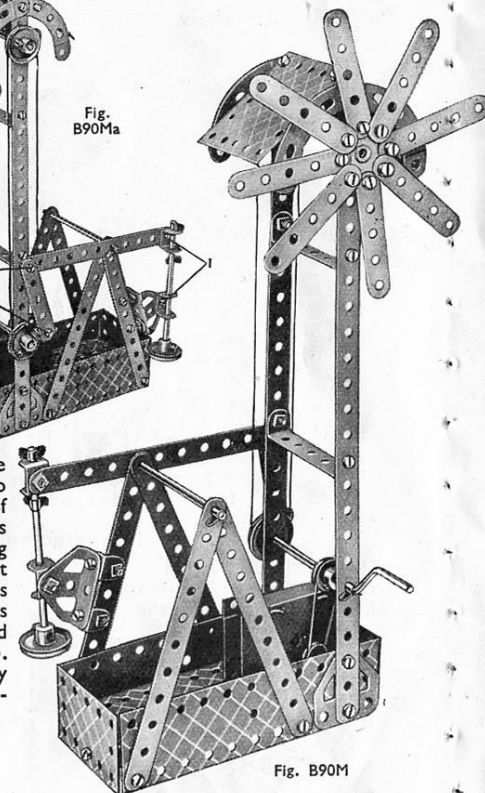
B90M.
Windmill Pump

Fig. B90M

B30M. Derrick Crane

Fig. B30Ma shows the method of mounting the jib on the base Plate. The bolts 1 form pivots and each is locknutt. 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
6 "	5
9 "	10
1 "	11
2 "	12
8 "	15b
1 "	16
2 "	17
1 "	19s
4 "	22
1 "	23
1 "	24
6 "	35

36 of No.	37
6 "	37a
6 "	38
1 "	40
2 "	48a
1 "	52
1 "	57c
6 "	111c
2 "	125
2 "	126
1 "	126a
1 "	176
1 "	187
2 "	188

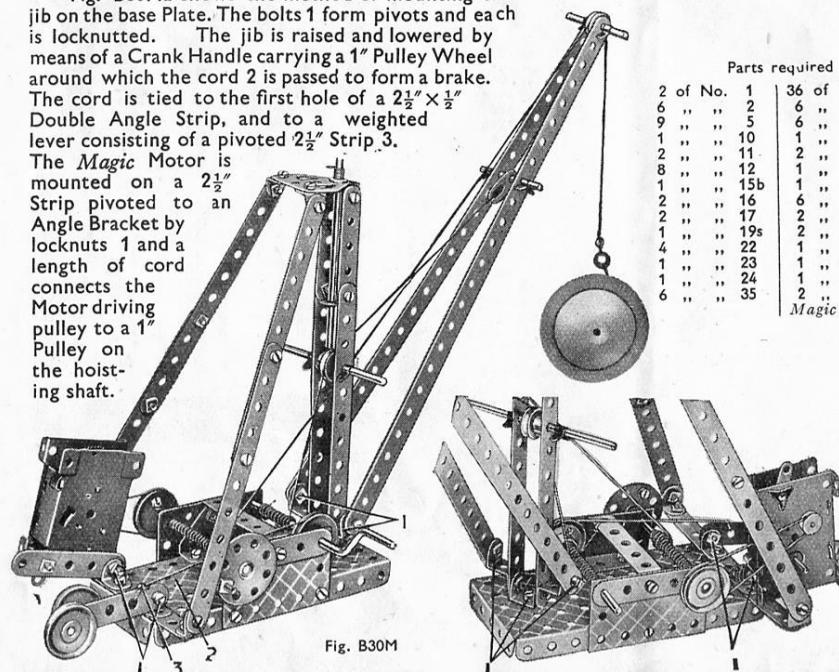
Magic Motor

Fig. B30M

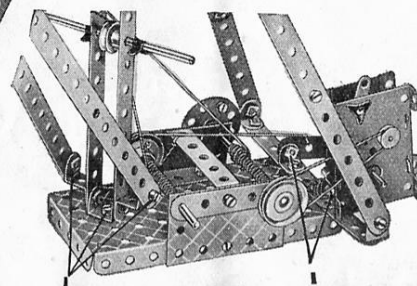


Fig. B30Ma

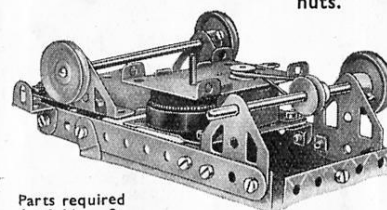


Fig. B51M

B51M. Bread Van

The method of mounting the *Magic Motor* in position is shown in Fig. B51Ma. The horse travels on a 1/2" 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.

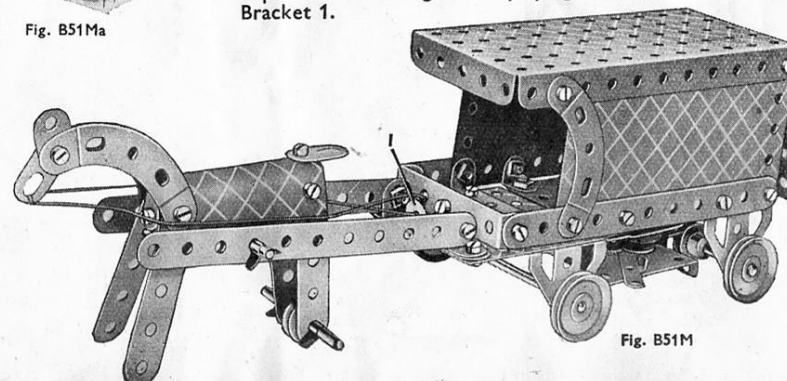


Fig. B51M

4 of No.	2
6 "	5
3 "	10
1 "	11
8 "	12
2 "	16
2 "	17
4 "	22
1 "	23
4 "	35
36 "	37
1 "	40
2 "	48a
1 "	52
4 "	90a
1 "	125
2 "	126
2 "	126a
1 "	186
2 "	188
2 "	190
2 "	191

Magic Motor

LIST OF MECCANO PARTS

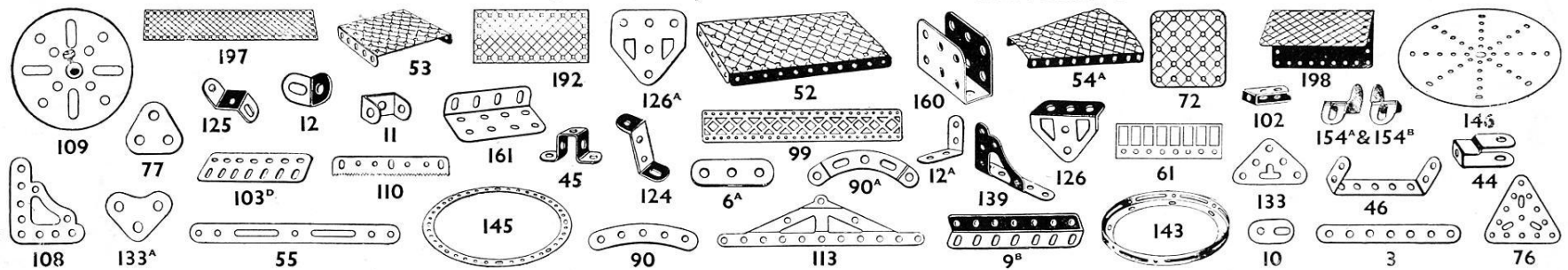
No.	Description.	No.	Description.	No.	Description.	No.	Description.	No.	Description.
1	Perforated Strips, 12" ...	28	Contrate Wheels, 1" diam. ...	73	Flat Plates, 3" x 1 1/2" ...	120	Buffers ...	164	Chimney Adaptors ...
1a	" " 9" ...	29	" " " " 1 1/2" diam. ...	76	Triangular Plates, 2 1/2" ...	120a	Spring Buffers ...	165	Swivel Bearings ...
1b	" " 7" ...	30	Bevel Gears, 1 1/2", 26 teeth ...	77	" " " " 1" ...	120b	Compression Springs ...	166	End ...
2	" " 5" ...	30a	" " " " 1 1/2", 16 " (Can only be used together)	78	Screwed Rods, 11 1/2" ...	121	Train Couplings ...	167	Geared Roller Bearings ...
2a	" " 4" ...	30c	" " " " 1 1/2", 48 " (used together)	79	" " " " 8" ...	122	Miniature Loaded Sacks ...	167a	Roller Races, geared, 192 teeth ...
3	" " 3" ...	31	Gear Wheels, 1", 38 teeth ...	79a	" " " " 6" ...	123	Cone Pulley ...	167b	Ring Frames for Rollers ...
4	" " 2 1/2" ...	32	Worms ...	80	" " " " 5" ...	124	Reversed Angle Brackets, 1" ...	167c	Pinions for Roller Bearings, 16 teeth ...
5	" " 2" ...	34	Spanners ...	80a	" " " " 3 1/2" ...	125	" " " " 1/2" ...	168	Ball Bearing, 4" diam. ...
6	" " 1 1/2" ...	34b	Box Spanners ...	80b	" " " " 2 1/2" ...	126	Trunnions ...	168a	" " Races, flanged disc ...
6a	" " 1 1/4" ...	35	Spring Clips ...	81	" " " " 2" ...	126a	Flat Trunnions ...	168b	" " " " toothed ...
7	Angle Girders, 24 1/2" ...	36	Screwdrivers ...	82	" " " " 1 1/2" ...	127	Simple Bell Cranks ...	168c	" " " " casing, complete with balls ...
7a	" " 18 1/2" ...	36a	" " Extra Long ...	89	5 1/2" Curved Strips, 10" radius ...	128	Boss Bell Cranks ...	169	Digger Buckets ...
8	" " 12" ...	36b	" " Special ...	89a	3" radius, 4 to circle, cranked, 1 1/2" ...	129	Rack Segments, 3" diam. ...	170	Eccentrics, 1/2" throw ...
8a	" " 9" ...	37	Nuts and Bolts, 7/32" ...	89b	4" Curved Strips, cranked, 4 1/2" ...	130	Eccentrics, Triple Throw ...	171	Socket Couplings ...
8b	" " 7" ...	37a	Nuts ...	90	2 1/2" Curved Strips, 2 1/2" radius ...	131	Dredger Buckets ...	172	Pendulum Connections ...
9	" " 5" ...	37b	Bolts, 7/32" ...	90a	2 1/2" radius, 8 to circle, cranked, 1 1/2" ...	132	Flywheels, 2 1/2" diam. ...	173	Rail Adaptors ...
9a	" " 4" ...	38	Washers ...	90a	2 1/2" radius, 4 to circle, cranked, 1 1/2" ...	133	Corner Brackets, 1 1/2" ...	174	Grease Cups ...
9b	" " 3" ...	40	Hanks of Cord ...	94	Sprocket Chain, 40" length ...	133a	" " 1" ...	175	Flexible Coupling Units ...
9c	" " 2 1/2" ...	41	Propeller Blades ...	95	" " Wheels, 36 teeth, 2" diam ...	134	Crank Shanks, 1" stroke ...	176	Anchoring Springs for Cord ...
9d	" " 2" ...	43	Springs ...	95a	" " " " 28 " 1 1/2" ...	135	Theodolite Protractors ...	177	Shafting Standards, large ...
9e	" " 1 1/2" ...	44	Cranked Bent Strips ...	95b	" " " " 56 " 3" ...	136	Handrail Supports ...	178	" " small ...
9f	" " 1" ...	45	Double ...	96	" " " " 18 " 1" ...	136a	" " Couplings ...	179	Rod Sockets ...
10	Flat Brackets ...	46	Double Angle Strips, 2 1/2" x 1" ...	96a	" " " " 14 " 3/4" ...	137	Wheel Flanges ...	180	Toothed Gear Rings, 3 1/2" diam. (133 external teeth ; 95 internal teeth)
11	Double Brackets ...	47	" " " " 2 1/2" x 1 1/2" ...	97	Braced Girders, 3 1/2" long ...	138	Ships' Funnels ...	181	Bobbins ...
12	Angle Brackets, 1 1/2" x 1 1/2" ...	47a	" " " " 3" x 1 1/2" ...	97a	" " " " 3" " ...	138a-z	" " Raked ...	182	Insulating Bushes, 6BA ...
12a	" " 1 1/2" x 1" ...	48	" " " " 1" x 1 1/2" ...	98	" " " " 2 1/2" " ...	139	Flanged Brackets (right) ...	183	Lamp Holders ...
12b	" " 1" x 1 1/2" ...	48a	" " " " 2" x 1 1/2" ...	99	" " " " 12 1/2" " ...	139a	" " (left) ...	184a	Lamps, 2 1/2 volt ...
12c	Obtuse Angle Brackets, 1 1/2" x 1 1/2" ...	48b	" " " " 3" x 1 1/2" ...	99a	" " " " 9 1/2" " ...	140	Universal Couplings ...	184b	" " 3 1/2 " ...
13	Axle Rods, 11 1/2" ...	48c	" " " " 4" x 1 1/2" ...	99b	" " " " 7 1/2" " ...	141	Wire Lines (for suspending clock weights) ...	184c	" " 6 " ...
13a	" " 8" ...	48d	" " " " 5" x 1 1/2" ...	100	" " " " 5 1/2" " ...	142	Rubber Rings, 3" rim ...	184d	" " 10 " ...
14	" " 6" ...	50a	Eye Pieces, with boss ...	100a	" " " " 4 1/2" " ...	142a	Motor Tyres (to fit 2" diam. rims)	184e	" " 20 " ...
15	" " 5" ...	51	Flanged Plates, 2 1/2" x 1 1/2" ...	101	Healds, for looms ...	142b	" " " " 3" " ...	185	Steering Wheels, 1 1/2" diam. ...
15a	" " 4 1/2" ...	52	" " " " 5 1/2" x 2 1/2" ...	102	Single Bent Strips ...	142c	" " " " 1" " ...	186	Driving Bands ...
15b	" " 4" ...	52a	Flat Plates, 5 1/2" x 3 1/2" ...	103	Flat Girders, 5 1/2" long ...	142d	" " " " 1 1/2" " ...	187	Road Wheels ...
16	" " 3" ...	53	Perforated Flanged Plates, 3 1/2" x 2 1/2" ...	103a	" " " " 9 1/2" " ...	143	Circular Girders, 5 1/2" diam. ...	188	Flexible Plates, 2 1/2" x 1 1/2" ...
16a	" " 2 1/2" ...	53a	Flat Plates, 4 1/2" x 2 1/2" ...	103b	" " " " 12 1/2" " ...	144	Dog Clutches ...	189	" " 5 1/2" x 1 1/2" ...
16b	" " 3" ...	54	Flanged Sector Plates, 4 1/2" long ...	103c	" " " " 4 1/2" " ...	145	Circular Strips, 7 1/2" diam. overall ...	190	" " 2 1/2" x 2 1/2" ...
17	" " 2" ...	55	Perforated Strips, slotted, 5 1/2" long ...	103d	" " " " 3" " ...	146	" " Plates, 6" " ...	191	" " 4 1/2" x 2 1/2" ...
18a	" " 1 1/2" ...	55a	" " " " 2" " ...	103e	" " " " 3" " ...	146a	" " " " 4" " ...	192	" " 5 1/2" x 2 1/2" ...
18b	" " 1" ...	57	Hooks ...	103f	" " " " 2 1/2" " ...	147	Pawls, with Pivot Bolt and nuts ...	193	Strip Plates, 2 1/2" x 2 1/2" ...
19	Crank Handles, large, 5" ...	57a	" " Scientific ...	103g	" " " " 2" " ...	147a	Pawls ...	194	" " 3 1/2" x 2 1/2" ...
19a	Wheels, 3" diam., with set screws	57b	" " Loaded, large ...	103h	" " " " 1 1/2" " ...	147b	Pivot Bolt with 2 nuts ...	195	" " 5 1/2" x 2 1/2" ...
19b	Wheels, 1 1/2" diam. ...	57c	" " small ...	103i	" " " " 7 1/2" " ...	147c	Pawl without boss ...	196	" " 9 1/2" x 2 1/2" ...
20b	" " Pulley Wheels	58	Spring Cord ...	103k	" " " " 3 1/2" " ...	148	Ratchet Wheels ...	197	" " 12 1/2" x 2 1/2" ...
19b 3" dia., with centre boss & set screw		58a	Coupling Screws for Spring Cord ...	104	Shuttles, for looms ...	149	Collecting Shoes for Electric Locomotives ...	198	Hinged Flat Plates, 4 1/2" x 2 1/2" ...
19c 6" " " " " " "		58b	Collars for Spring Cord ...	105	Reed Hooks, for looms ...	150	Crane Grabs ...	201	Lamps with Flex ...
20a 2" " " " " " "		59	Collars with Grub Screws ...	106	Wood Rollers ...	151	Pulley Blocks, Single Sheave ...	202	Angle Brackets (for Headlamps) ...
21 1 1/2" " " " " " "		61	Windmill Sails ...	106a	Sand Rollers ...	152	" " Two " ...	203	Headlamps ...
22 1" " " " " " "		62	Cranks ...	107	Tables for designing machines ...	153	" " Three " ...	204	Headlamp Nuts ...
22a 1 1/2" " " " " " "		62a	Threaded Cranks ...	108	Architraves ...	154a	Corner Angle Brackets, 1/2" (right hand) ...	205	Glasses (Green, Plain or Red) ...
22b 1" " " " " " "		62b	Double Arm Cranks ...	109	Face Plates, 2 1/2" diam. ...	154b	Corner Angle Brackets, 1/2" (left hand) ...	206	Lampshades ...
23a 1 1/2" " " " " " "		63	Couplings ...	110	Rack Strips, 3 1/2" ...	155	Rubber Rings, 3/8" (for 1" Pulleys) ...	207	Lamp Bases ...
23b 1" " " " " " "		63a	Octagonal Couplings ...	110a	" " 6 1/2" ...	156	Pointers, (with boss) 2 1/2" overall ...	208	Battery Tags and Studs ...
24 Bush Wheels ...		63b	Strip Couplings ...	111	Bolts, 3/8" ...	157	Fans, 2" diam. ...	208a	Washers for Battery Studs ...
25 Pinion Wheels, 1 1/2" diam., face ...		63c	Threaded Couplings ...	111a	" " 1/2" ...	158a	Signal Arms, Home ...	210	Nuts ...
25a " " " " " " "		64	" " Bosses ...	111c	" " 3/4" ...	158b	" " Distant ...	211a	Helical Gear, 1 1/2" (Can only be used together)
25b " " " " " " "		65	Centre Forks ...	113	Girder Frames ...	160	Channel Bearings, 1 1/2" x 1" x 1/2" ...	211b	" " 1 1/2" (used together)
26 " " " " " " "		66	Weights, 50 grammes ...	114	Hinges ...	161	Girder Brackets, 2" x 1" x 1/2" ...		
26a " " " " " " "		67	" " 25 " ...	115	Threaded Pins ...	162	Boiler, complete, with ends ...		
26b " " " " " " "		68	Woodscrews, 1" ...	116	Fork Pieces, large ...	162a	" " ends ...		
27 50 teeth to gear with pinion ...		69	Set Screws ...	116a	" " small ...	162b	" " without ends ...		
27a 57 " " " " " " "		69a	Grub Screws, 5/32" ...	117	Steel Balls, 3/8" diam. ...	163	Sleeve Pieces ...		
27b 133 " " " " " " "		69b	" " 7/32" ...	118	Hub Discs, 5 1/2" ...				
27c 95 " " " " " " "		70	Flat Plates, 5 1/2" x 2 1/2" ...						
		72	" " 2 1/2" x 2 1/2" ...						

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

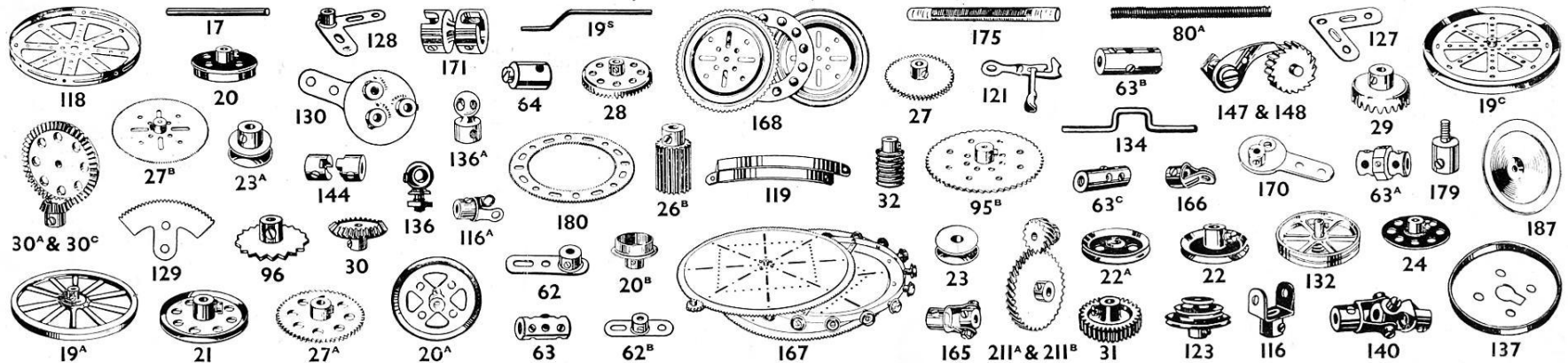
For illustrations of Meccano Parts, refer to back page

MECCANO PARTS & ACCESSORIES

PLATES, STRIPS, GIRDERS & BRACKETS



WHEELS, PULLEYS, GEARS, ETC.



MISCELLANEOUS

