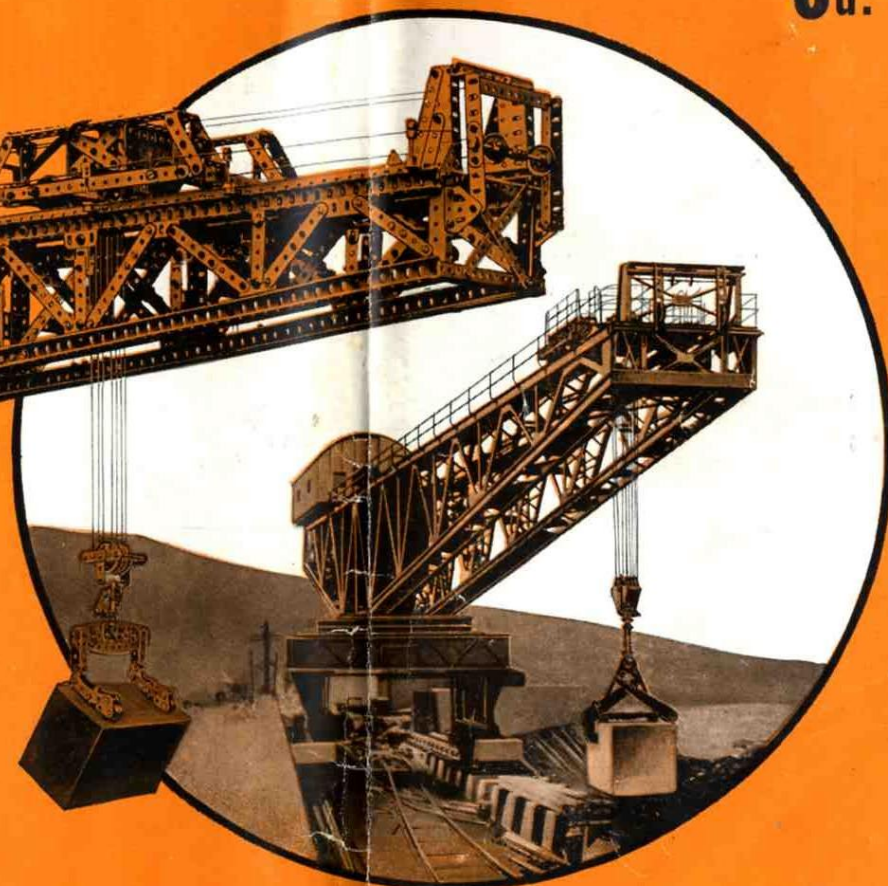


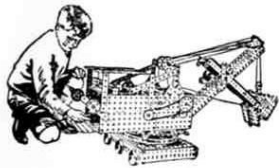
MECCANO

HORNBY'S ORIGINAL SYSTEM.—FIRST PATENTED, 1901

INSTRUCTIONS FOR OUTFIT Aa

PRICE
3d.





MECCANO



REAL ENGINEERING FOR BOYS

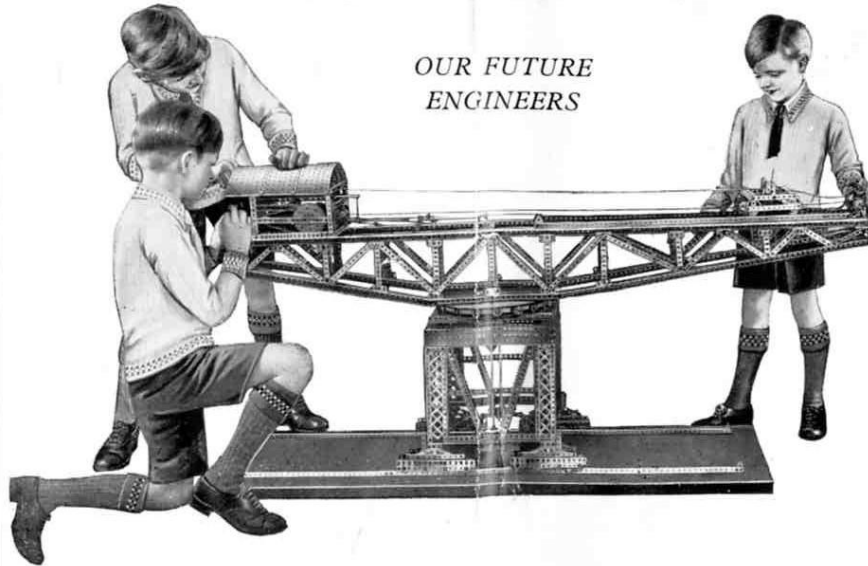
REAL ENGINEERING IN MINIATURE

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



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 a copy of the special Manual "Meccano Standard Mechanisms," which shows a large number of real engineering mechanisms, built of Meccano parts, that can be incorporated in various models. You can obtain a copy of this Manual 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.*

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

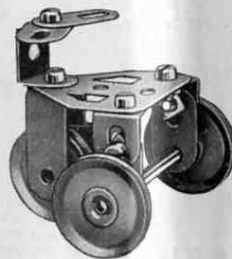
B1. Man and Boy



Parts required

4 of No. 2
2 " " 5
5 " " 10
1 " " 11
8 " " 12
1 " " 22
1 " " 24
25 " " 37
1 " " 52
2 " " 54a
1 " " 90a
2 " " 111c
2 " " 125
1 " " 126a

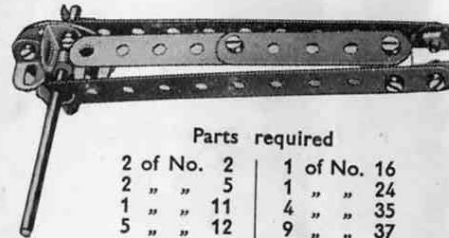
B4. Tricycle



Parts required

4 of No. 10
1 " " 11
2 " " 12
1 " " 17
3 " " 22
6 " " 37
1 " " 44
1 " " 111c
1 " " 126a

B7. Rattle



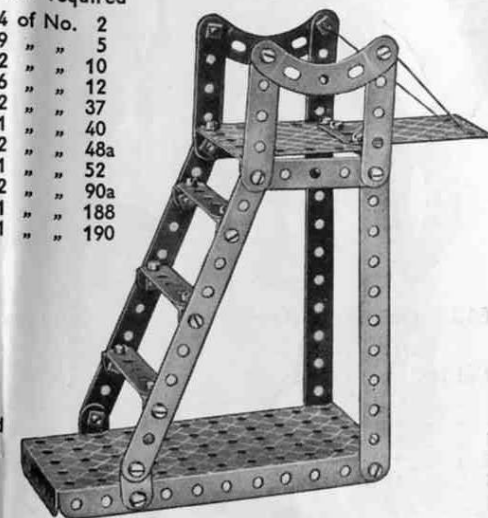
Parts required

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

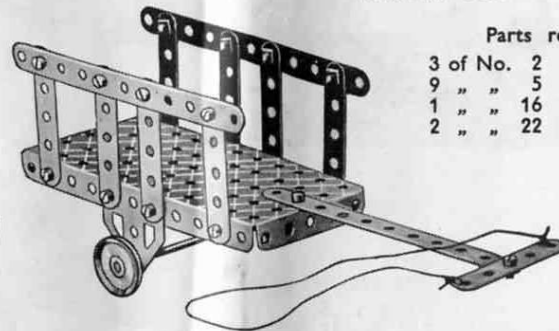
Parts required

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

B9. High Diving Board



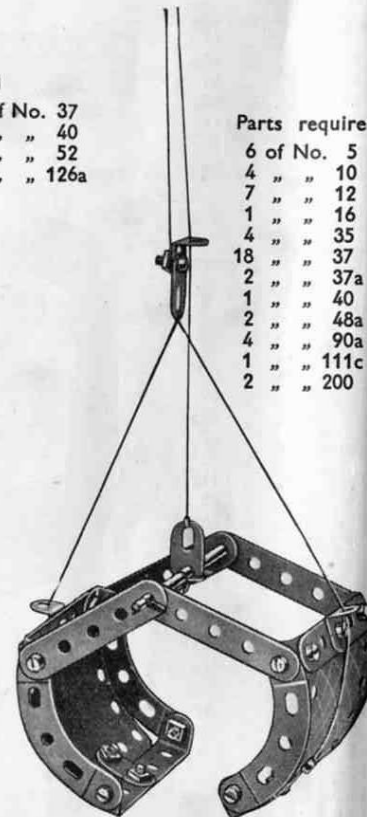
B5. Bullock Cart



Parts required

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

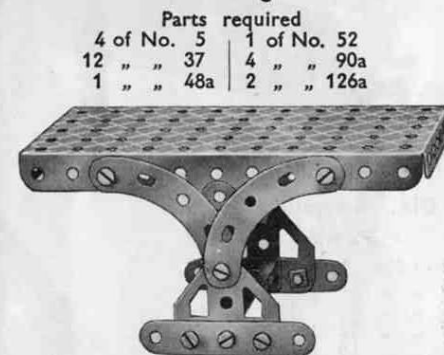
B8. Crane Grab



Parts required

6 of No. 5
4 " " 10
7 " " 12
1 " " 16
4 " " 35
18 " " 37
2 " " 37a
1 " " 40
2 " " 48a
4 " " 90a
1 " " 111c
2 " " 200

B10. Drafting Table



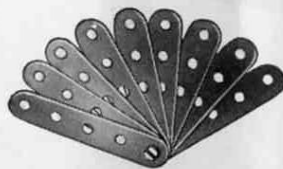
Parts required

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

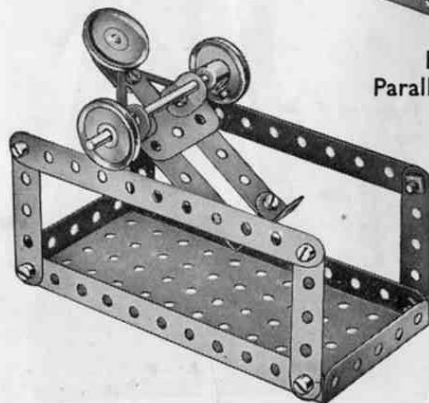
B2. Fan

Parts required

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



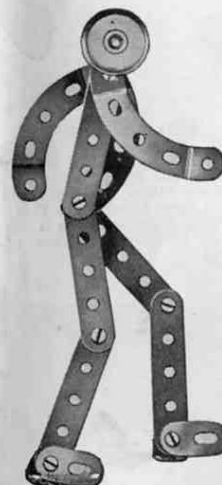
B3. Parallel Bars



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

B6. Walking Man

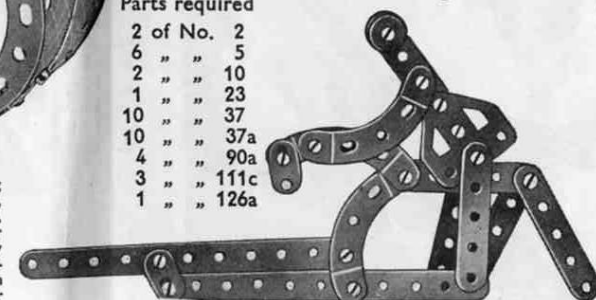


Parts required

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

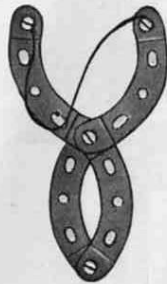
The $\frac{3}{4}$ " Bolts used for connecting the $5\frac{1}{2}$ " Strips, the horse's legs, and the rider's legs and arms, are all locknuted. The lower $5\frac{1}{2}$ " Strip should be held rigidly and the upper one jerked forward; the horse will then throw its rider completely over its head.

B11. Bucking Broncho

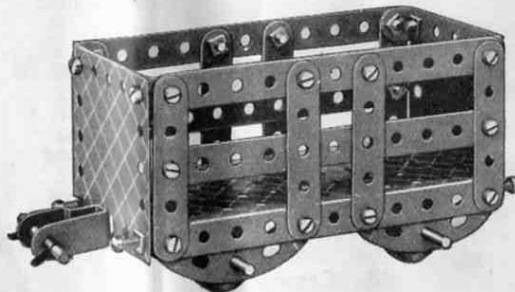


Parts required

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

B12. Catapult

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

B15. Cattle Truck

Parts required		Parts required	
4 of No. 2	9 of No. 37a	8 " " 5	1 " " 44
8 " " 5	1 " " 44	2 " " 16	2 " " 48a
2 " " 10	2 " " 48a	1 " " 18a	1 " " 52
1 " " 11	1 " " 52	4 " " 22	4 " " 90a
2 " " 12		2 " " 35	4 " " 111c
1 " " 17		25 " " 37	2 " " 190
1 " " 24			

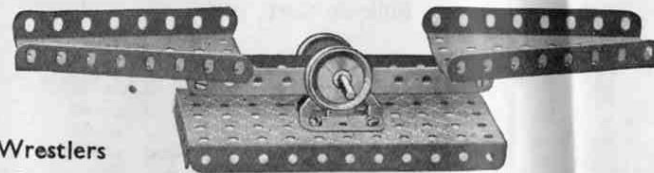
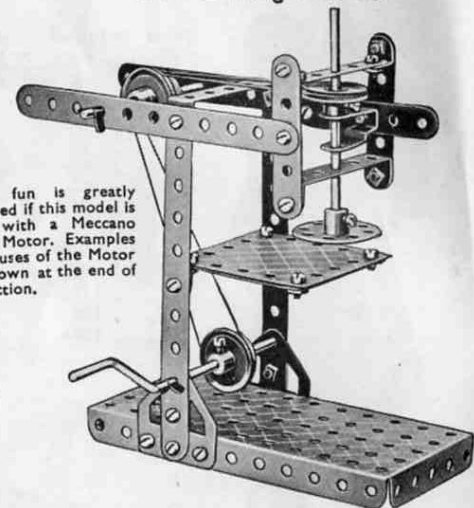
B18. Single Sheave Pulley Block

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

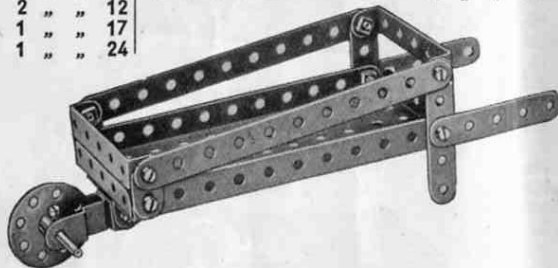
**B21. Drilling Machine**

The fun is greatly increased if this model is fitted with a Meccano *Magic* Motor. Examples of the uses of the Motor are shown at the end of this section.

B13. Coster's Barrow

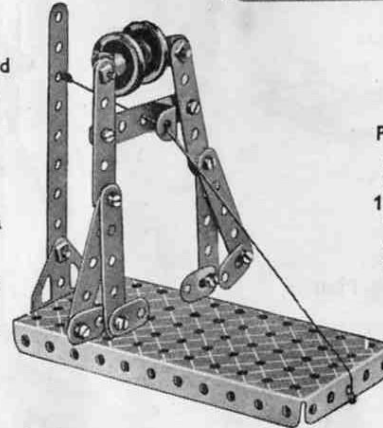
Parts required

2 of No. 2	13 of No. 37
4 " " 5	1 " " 44
2 " " 10	2 " " 48a
1 " " 11	1 " " 52
2 " " 12	
1 " " 17	
1 " " 24	

**B16. Wrestlers**

Parts required

1 of No. 2
7 " " 5
4 " " 10
2 " " 12
2 " " 22
13 " " 37
6 " " 37a
1 " " 40
1 " " 52
4 " " 111c
1 " " 125
1 " " 126a

**B20. Card Table**

Parts required

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



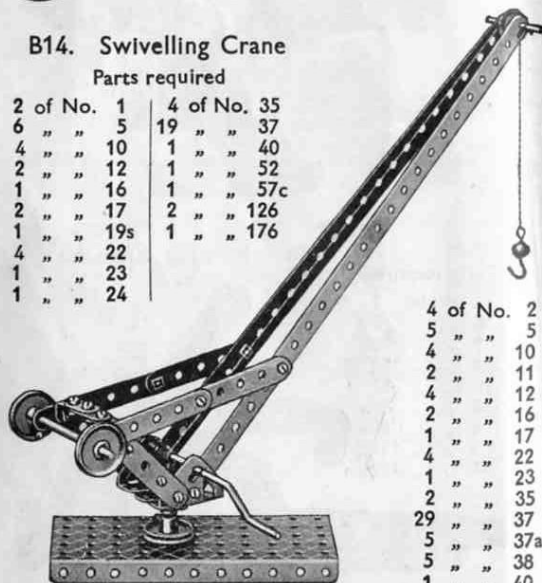
Parts required

4 of No. 2	28 of No. 37
8 " " 5	1 " " 37a
6 " " 12	1 " " 40
2 " " 16	1 " " 44
4 " " 19s	2 " " 48a
1 " " 22	1 " " 52
1 " " 24	2 " " 126a
6 " " 35	1 " " 190

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	

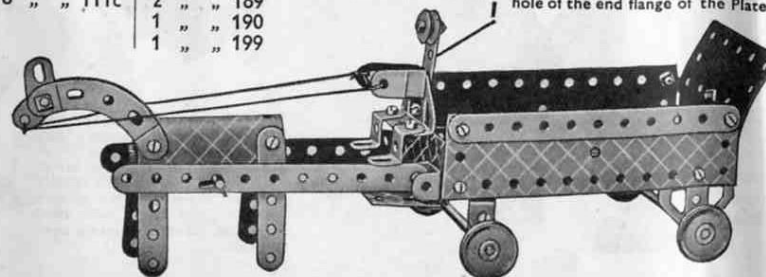


Parts required

1 of No. 44	2 of No. 125
1 " " 48a	1 " " 126
1 " " 52	2 " " 126a
2 " " 90a	2 " " 188
3 " " 111c	2 " " 189
	1 " " 190
	1 " " 199

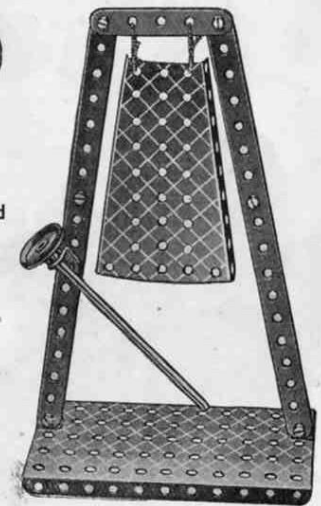
B17. Hay Cart

The fun is greatly increased if this model is fitted with a Meccano *Magic* Motor. Examples of the uses of the motor are shown at the end of this section. If the Motor is fitted, a Bush Wheel should be mounted on a 2" Rod fitted between the hind legs of the horse. The 2½" Strip 1 forming the driver's body is bolted to the centre hole of the end flange of the Plate.

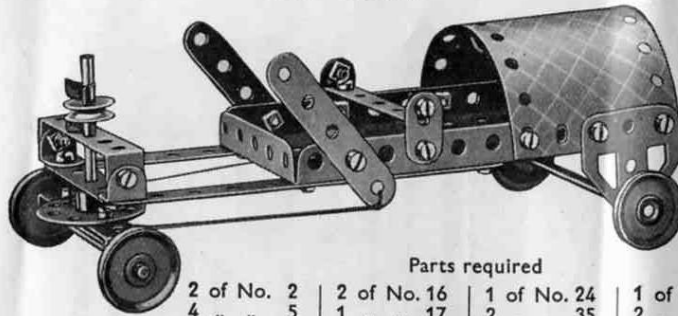


Parts required

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

B22. Gong

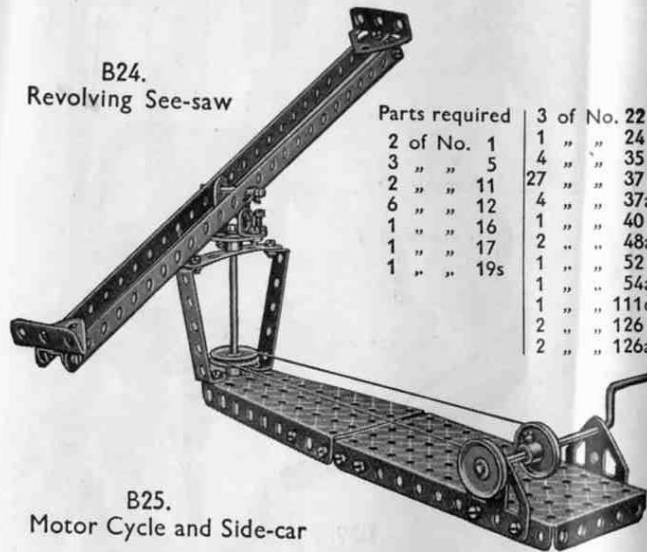
B23. Coaster



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

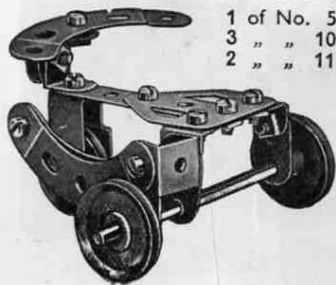
B24. Revolving See-saw



Parts required

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

B25. Motor Cycle and Side-car



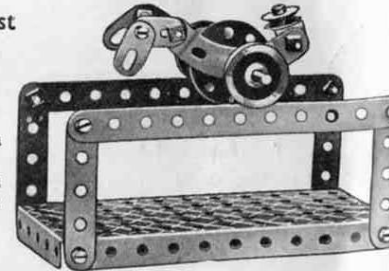
Parts required

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

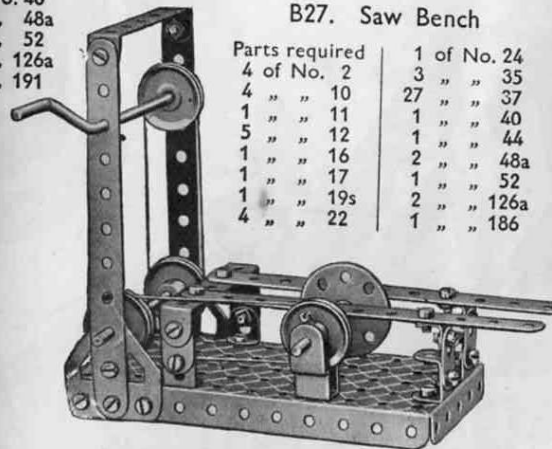
2 of No. 2	1 of No. 24
4 " " 5	13 " " 37
4 " " 10	1 " " 37a
1 " " 12	1 " " 52
1 " " 16	1 " " 90a
2 " " 22	1 " " 111c
1 " " 23	



B27. Saw Bench

Parts required

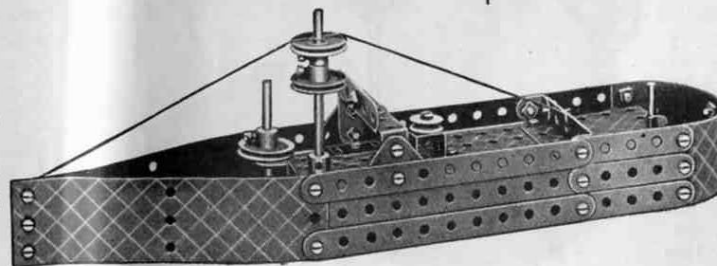
4 of No. 2	1 of No. 24
4 " " 10	3 " " 35
1 " " 11	27 " " 37
5 " " 12	1 " " 40
1 " " 16	1 " " 44
1 " " 17	2 " " 48a
1 " " 19s	1 " " 52
4 " " 22	2 " " 126a
	1 " " 186



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 " " 188
1 " " 16	1 " " 40	2 " " 189
2 " " 17	2 " " 48a	1 " " 190
3 " " 22		

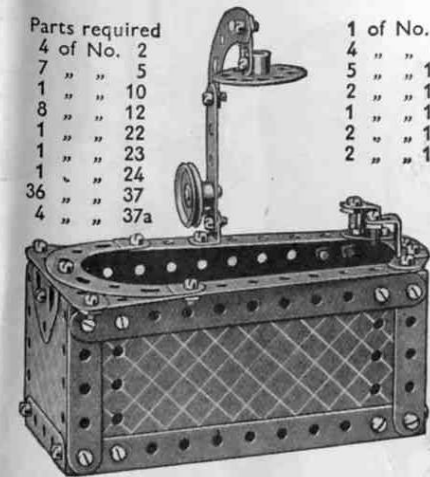


An alternative design of this model (B30M), fitted with the Meccano Magic Motor, is shown at the end of this section.

B29. Bath with Shower

Parts required

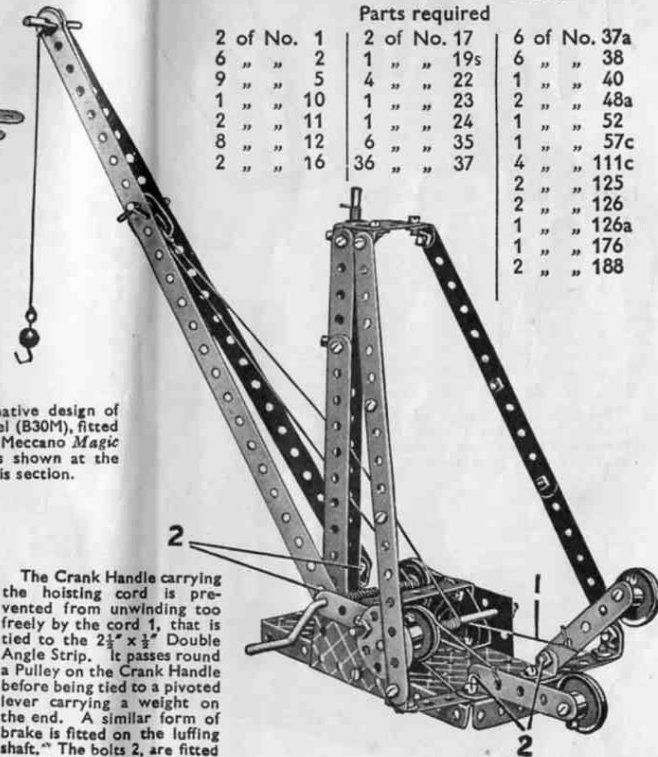
4 of No. 2	1 of No. 52
7 " " 5	4 " " 90a
1 " " 10	5 " " 111c
8 " " 12	2 " " 125
1 " " 22	1 " " 126
1 " " 23	2 " " 190
1 " " 24	2 " " 191
36 " " 37	
4 " " 37a	



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



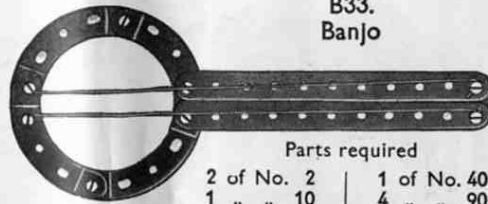
The Crank Handle carrying the hoisting cord is prevented from unwinding too freely by the cord 1, that is tied to the 2½" x ½" Double Angle Strip. It passes round a Pulley on the Crank Handle before being tied to a pivoted lever carrying a weight on the end. A similar form of brake is fitted on the luffing shaft. The bolts 2, are fitted with locknuts.

B31. Arm Chair



Parts required	
2 of No. 2	
8 " " 5	
21 " " 37	
2 " " 48a	
1 " " 52	
4 " " 90a	
1 " " 200	

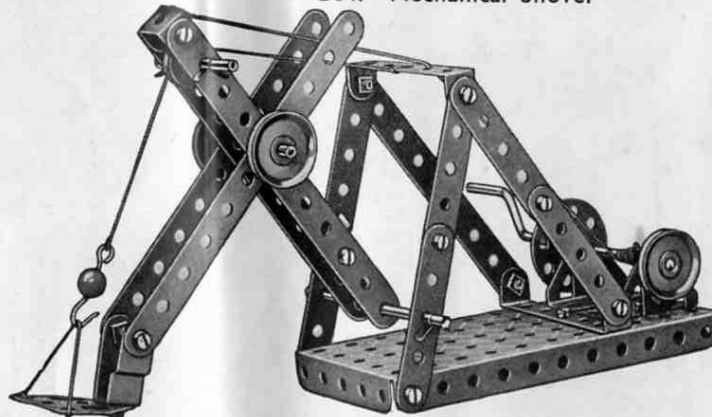
B33. Banjo



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

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 " " 199	

B34. Mechanical Shovel

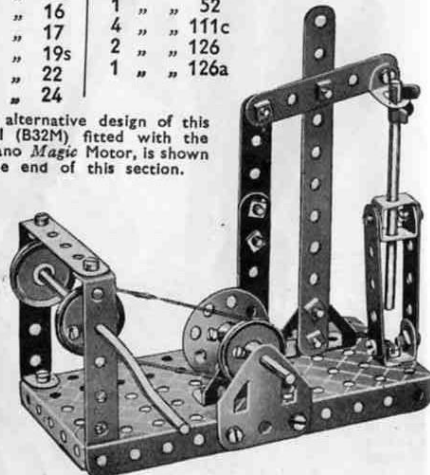


Parts required		Parts required		Parts required		Parts required	
2 of No. 17		5 of No. 35		1 of No. 52			
4 of No. 2	1 " " 19s	20 " " 37	1 " " 57c				
8 " " 5	3 " " 22	1 " " 40	2 " " 126				
2 " " 11	1 " " 23	1 " " 44	1 " " 126a				
1 " " 16	1 " " 24	2 " " 48a	1 " " 176				

B32. Pump

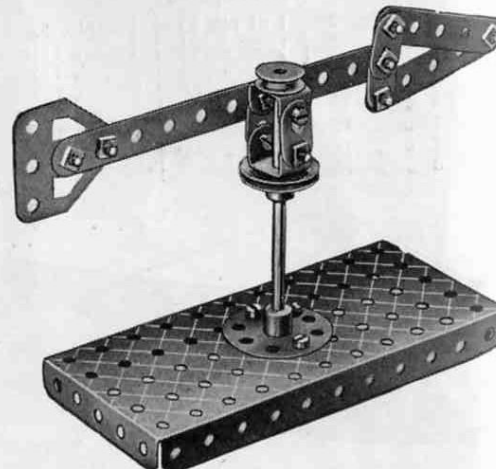
Parts required	
1 of No. 2	2 of No. 35
6 " " 5	19 " " 37
2 " " 11	1 " " 37a
3 " " 12	1 " " 40
1 " " 16	2 " " 48a
1 " " 17	1 " " 52
1 " " 17s	4 " " 111c
3 " " 22	2 " " 126
1 " " 24	1 " " 126a

An alternative design of this model (B32M) fitted with the Meccano Magic Motor, is shown at the end of this section.

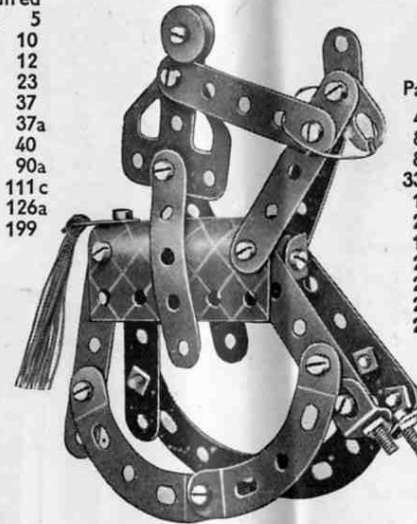


B35. Weather Vane

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	

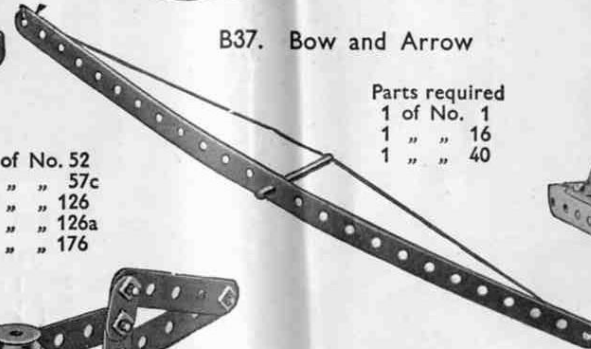


B36. Rocking Horse



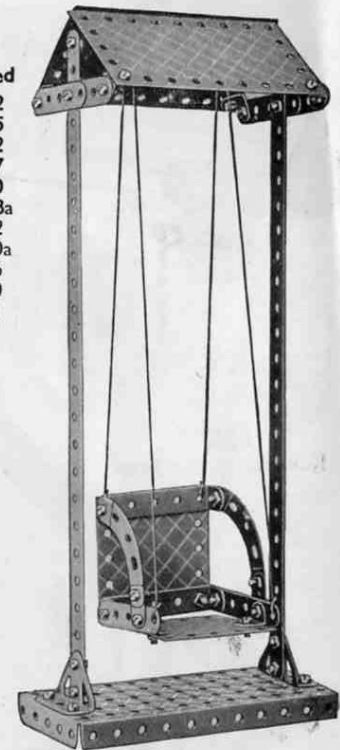
Parts required	
4 of No. 2	
8 " " 5	
8 " " 12	
33 " " 37	
1 " " 40	
2 " " 48a	
1 " " 52	
2 " " 90a	
2 " " 126	
2 " " 190	
2 " " 191	

B37. Bow and Arrow



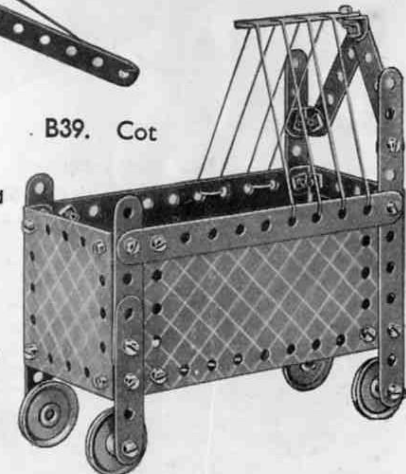
Parts required	
1 of No. 1	
1 " " 16	
1 " " 40	

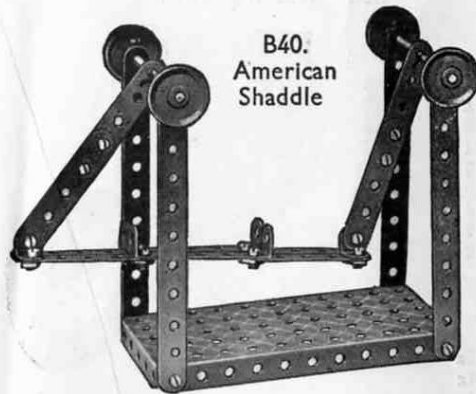
B38. Swing



B39. Cot

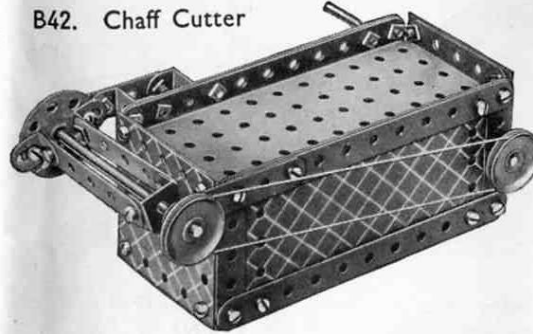
Parts required	
4 of No. 2	
7 " " 5	
3 " " 12	
4 " " 22	
30 " " 37	
1 " " 40	
2 " " 48a	
1 " " 52	
4 " " 111c	
2 " " 190	
2 " " 191	





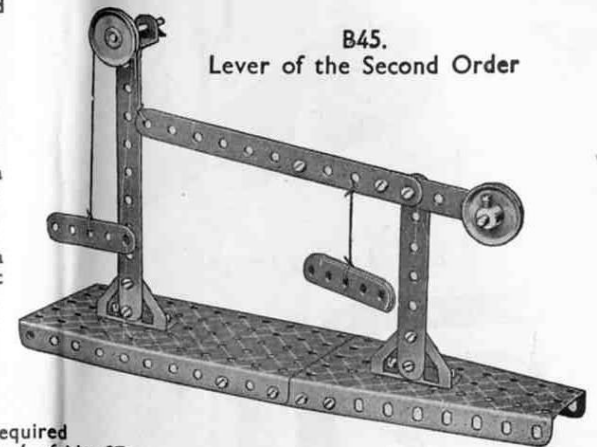
B40.
American
Shackle

Parts required	
4 of No. 2	
8 " " 5	
1 " " 11	
6 " " 12	
1 " " 16	
1 " " 19s	
2 " " 22	
1 " " 24	
1 " " 35	
2 " " 37	
33 " " 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 " " 52	
1 " " 54a	
1 " " 111c	
1 " " 125	
2 " " 126	



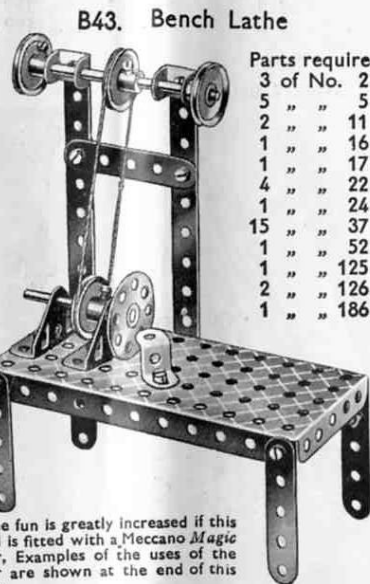
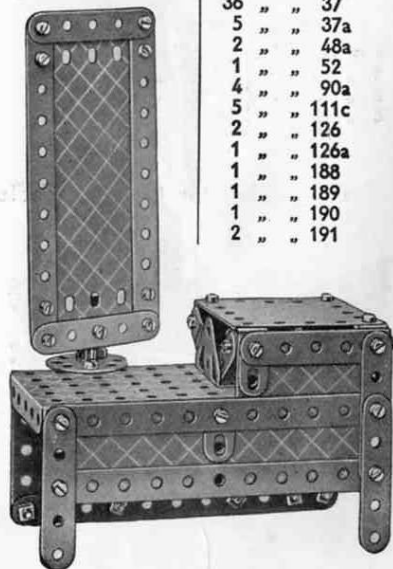
B45.
Lever of the Second Order

Parts required	
4 of No. 2	2 of No. 12
9 " " 5	2 " " 16
2 " " 10	4 " " 22
	4 " " 35
	18 of No. 37
	2 " " 37a
	2 " " 48a
	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 at the end of this section.

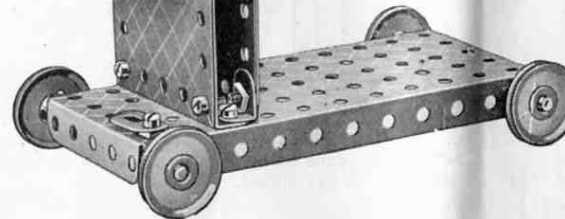
B44. Motor Boat

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



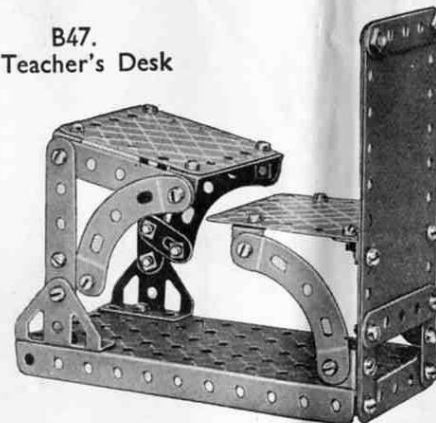
B46. Electric Trolley

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	



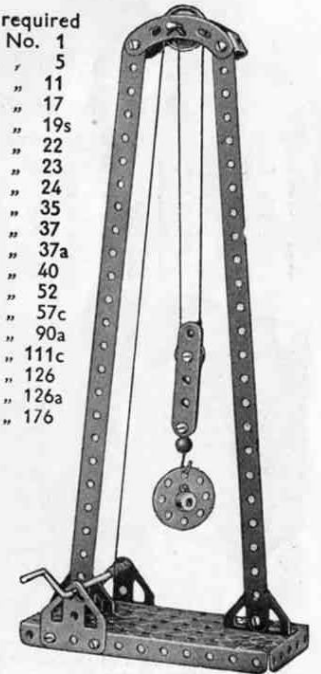
B47.
Teacher's Desk

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	

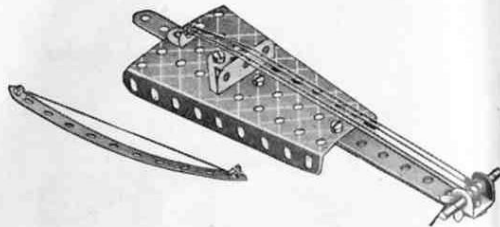


B48. Pulley Block

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



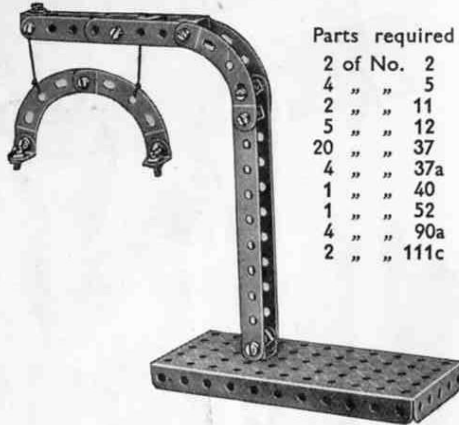
B49. Violin and Bow



Parts required

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

B50. Loading Gauge



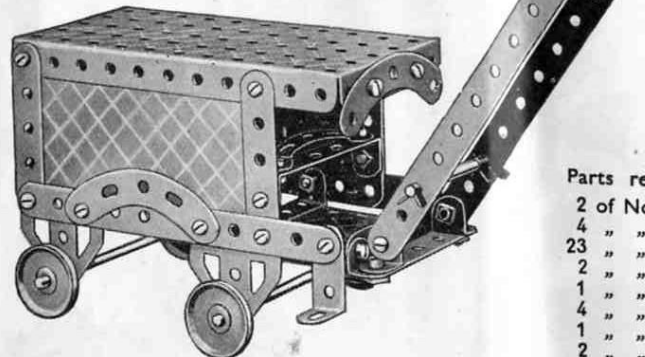
Parts required

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

B51. Bread Van

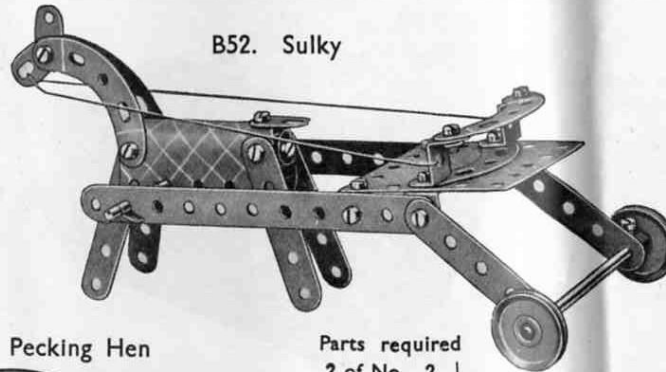
Parts required

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
2 " " 16	2 " " 48a	2 " " 190
1 " " 17	1 " " 52	2 " " 191

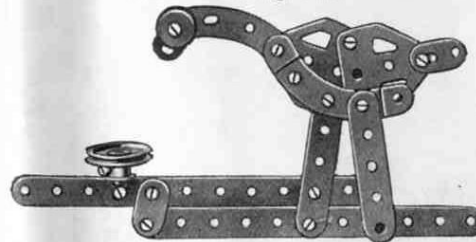


An alternative design of this model (B51M), fitted with the Meccano Magic Motor, is shown at the end of this section

B52. Sully



B53. Pecking Hen



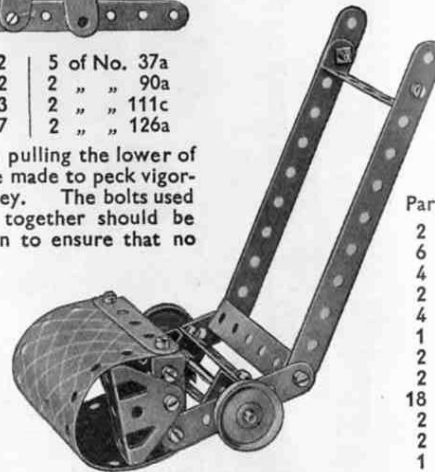
Parts required	1 of No. 12	5 of No. 37a
2 of No. 2	1 " " 22	2 " " 90a
2 " " 5	1 " " 23	2 " " 111c
3 " " 10	11 " " 37	2 " " 126a

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 locknuttred, care being taken to ensure that no "side play" is permitted.

Parts required

2 of No. 2	4 of No. 35	4 of No. 90a
6 " " 5	17 " " 37	1 " " 111c
3 " " 10	1 " " 37a	2 " " 125
6 " " 12	1 " " 40	1 " " 190
2 " " 16	1 " " 48a	1 " " 199
2 " " 22		

B54. Grass Cutter



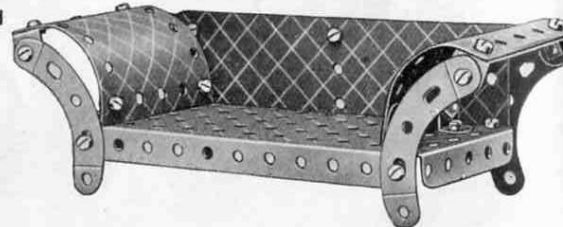
Parts required

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

B55. Couch

Parts required

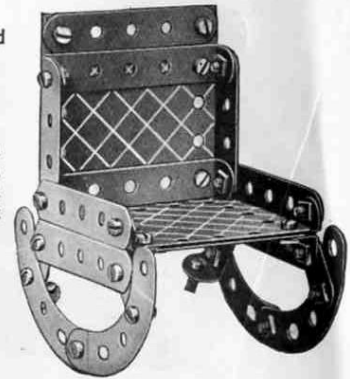
2	of No.	2
4	"	12
23	"	37
2	"	48a
1	"	52
4	"	90a
1	"	189
2	"	200



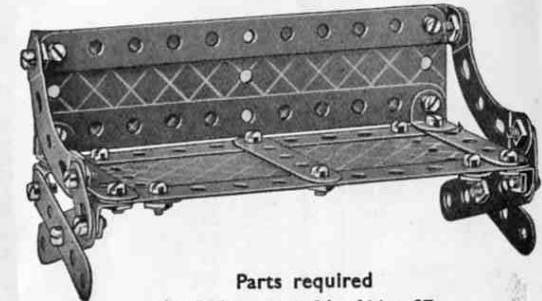
B56. Rocking Chair

Parts required

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



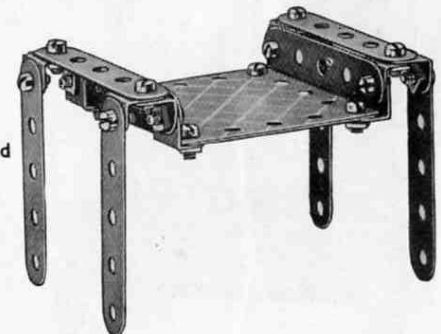
B57. Station Seat



Parts required

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

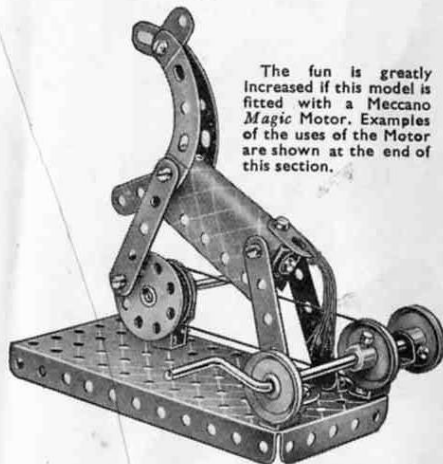
B58. Stool for Dressing Table



Parts required

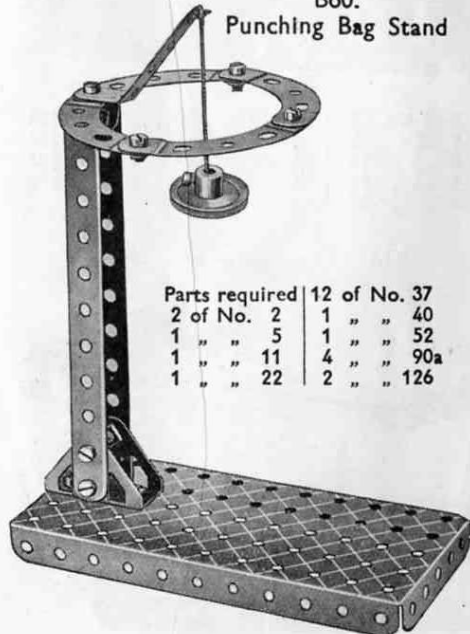
9	of No.	5
8	"	12
16	"	37
2	"	125
1	"	190

B59. Prancing Horse



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 " " 199

B60. Punching Bag Stand

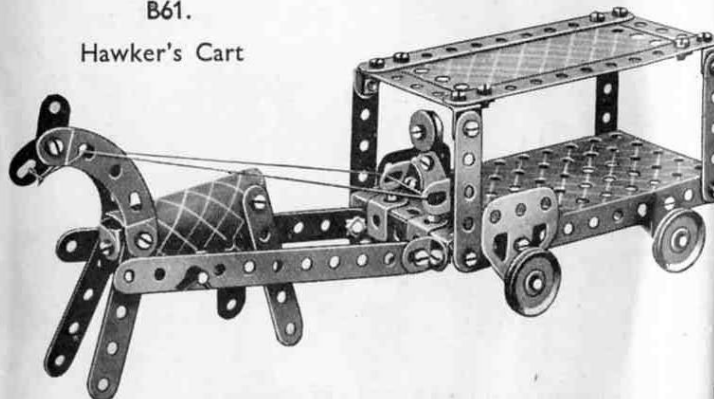


Parts required	12 of No. 37
2 of No. 2	1 " " 40
1 " " 5	1 " " 52
1 " " 11	4 " " 90a
1 " " 22	2 " " 126

Parts required

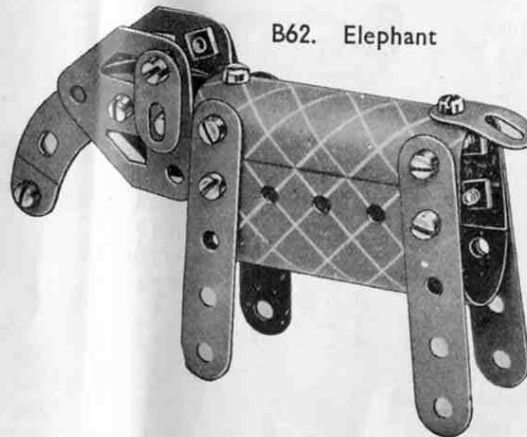
4 of No. 2	
8 " " 5	
4 " " 10	
8 " " 12	
2 " " 16	
1 " " 17	
4 " " 22	
1 " " 23	
4 " " 35	
35 " " 37	
4 " " 37a	
1 " " 40	
2 " " 48a	
2 " " 52	
2 " " 90a	
2 " " 111c	
2 " " 125	
2 " " 126	
2 " " 126a	
1 " " 191	
1 " " 199	

B61. Hawker's Cart



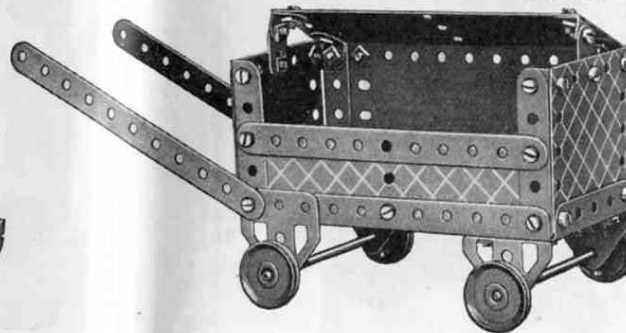
The fun is greatly increased if this model is fitted with a Meccano Magic Motor. For examples of the uses of the Motor see the Magic Motor pages at the end of this section. If the Motor is fitted, a Bush Wheel should be mounted on a 2" Rod fitted between the hind legs of the horse.

B62. Elephant



Parts required	4 of No. 5
3 " " 10	
15 " " 37	
2 " " 37a	
2 " " 90a	
2 " " 126a	
2 " " 199	

B63. Ash Cart



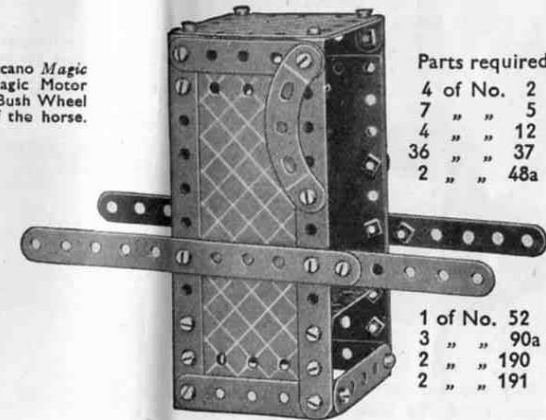
Parts required	4 of No. 2
4 " " 5	
2 " " 10	
4 " " 12	
2 " " 16	
4 " " 22	
34 " " 37	
2 " " 37a	
2 " " 48a	
1 " " 52	
2 " " 111c	
2 " " 126	
2 " " 126a	
2 " " 189	
2 " " 190	
1 " " 191	

B64. Shepherd's Crook

Parts required	2 of No. 1
7 " " 37	
4 " " 90a	



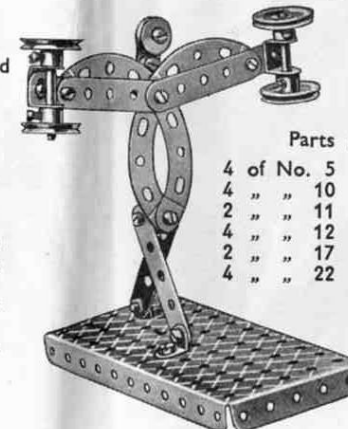
B65. Sedan Chair



Parts required	4 of No. 2
7 " " 5	
4 " " 12	
36 " " 37	
2 " " 48a	

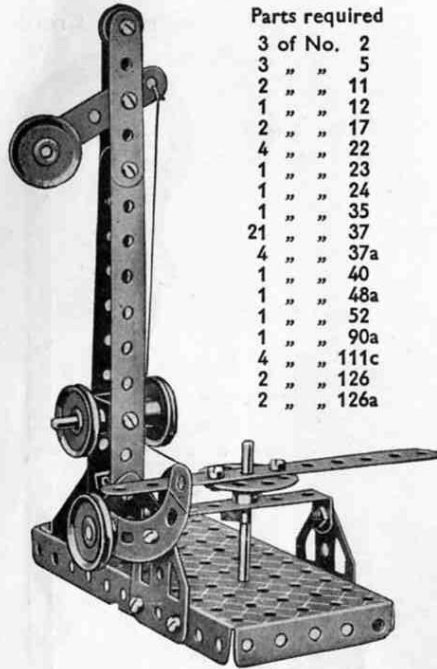
Parts required	1 of No. 52
3 " " 90a	
2 " " 190	
2 " " 191	

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

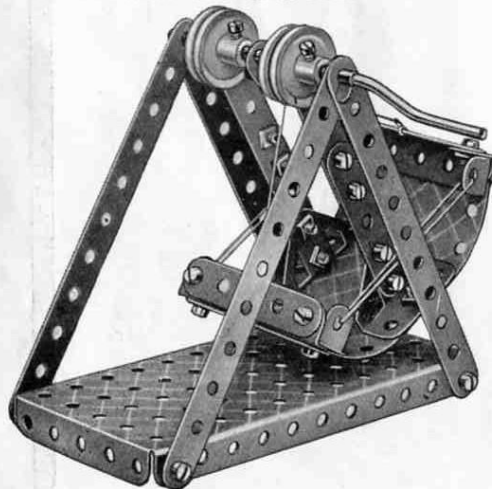


Parts required

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 is locknuttet 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.

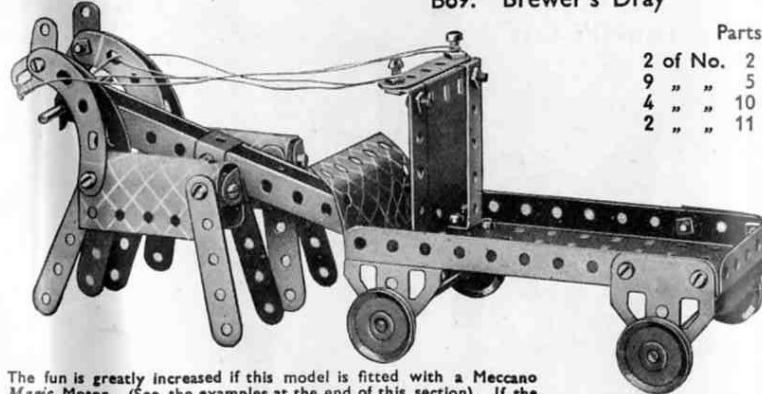
B68. Swinging Boat



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 the examples at the end of this section). If the Motor is fitted, a BushWheel should be mounted on a 2" Rod fitted between the inner hind legs of the two horses.

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
		1 "	191
		2 "	199

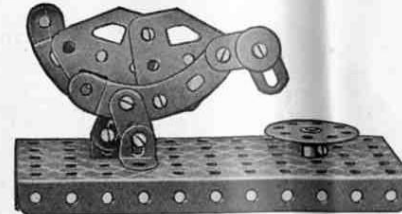
B70. Chair



Parts required

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

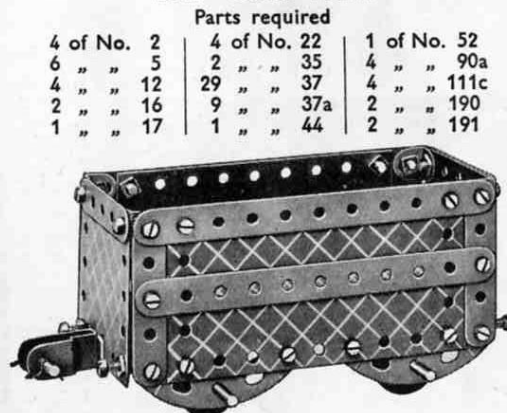
B71. Goose



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



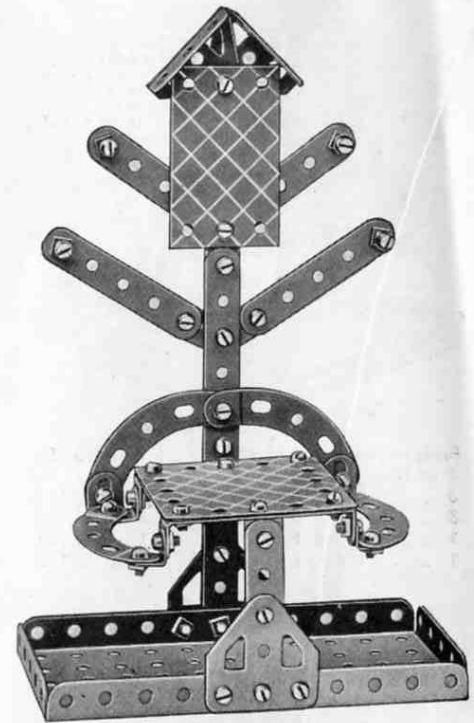
Parts required

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 "	44	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

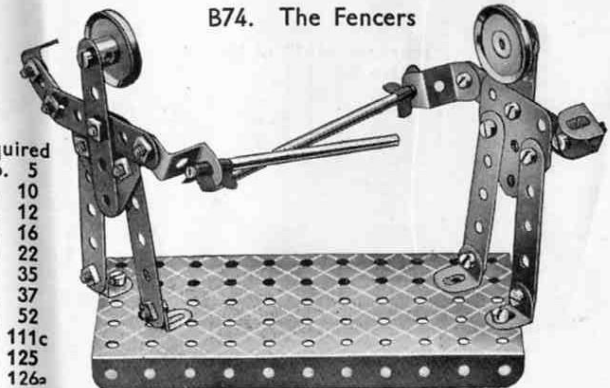
B73. Hat Rack



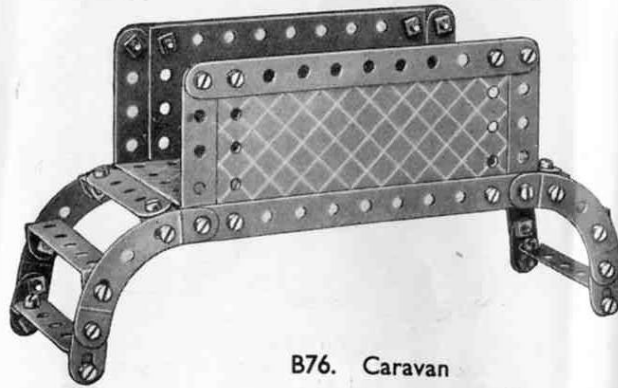
Parts required

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



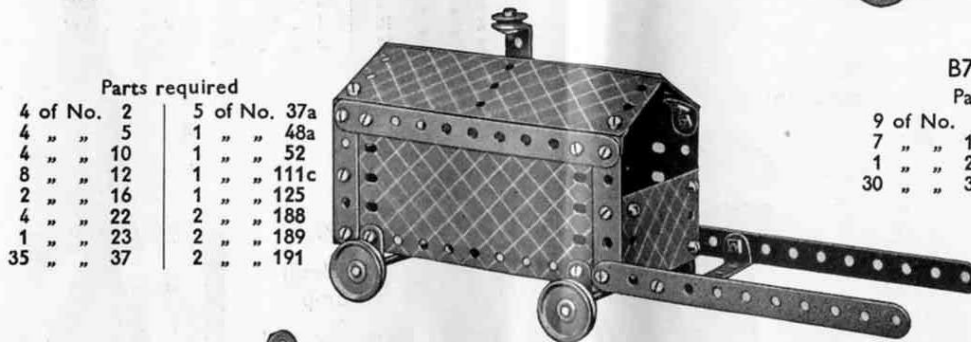
B75. Footbridge



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

B76. Caravan



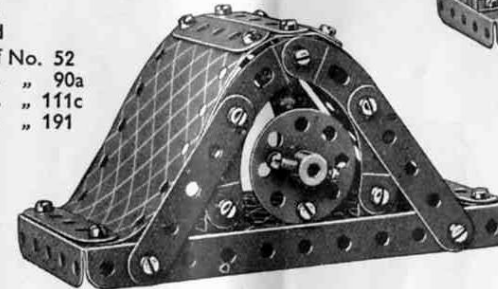
Parts required

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

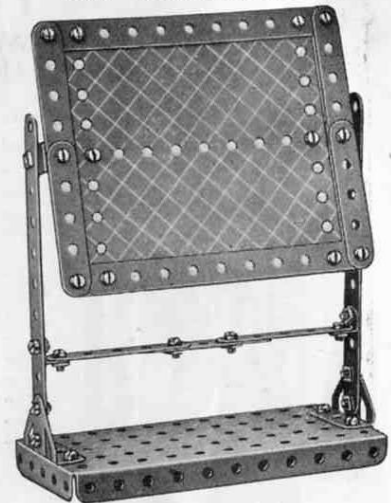
Parts required

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



The fun is greatly increased if this model is fitted with a Meccano Magic Motor. Examples of the uses of this motor are shown at the end of this section.

B81. School Blackboard



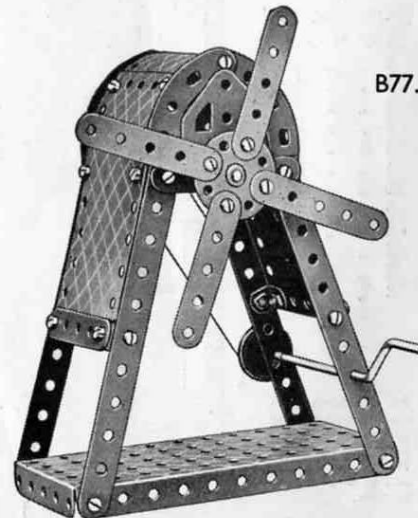
Parts required

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

Parts required

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

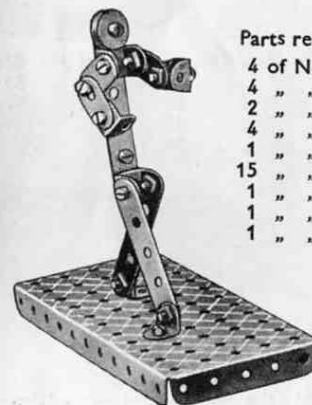
B77. Windmill



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

B80. Boxer



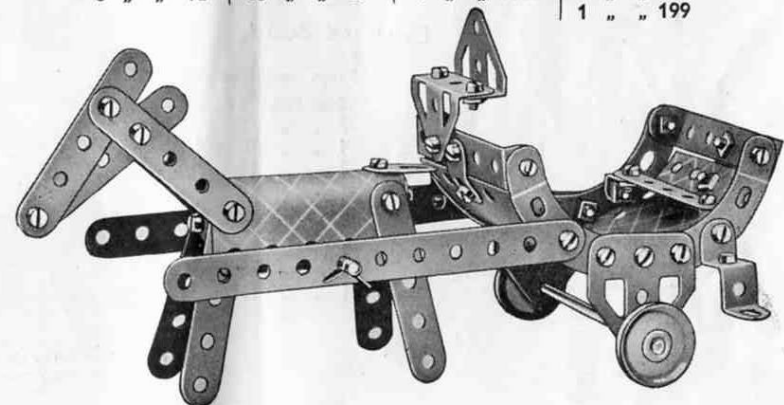
Parts required

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

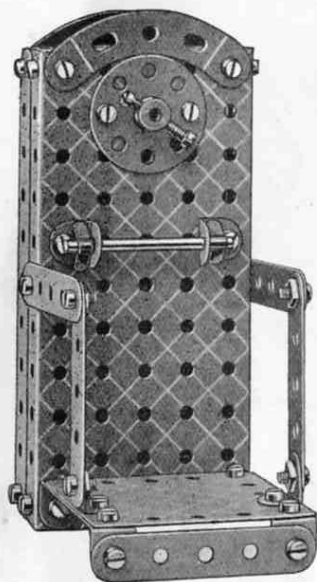
B82. Two-wheeled Trap

Parts required

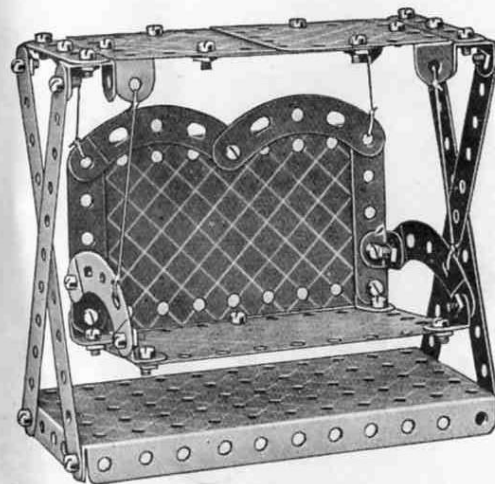
2 of No.	2	2 of No.	16	1 of No.	37a	2 of No.	125
9 "	5	2 "	22	2 "	48a	2 "	126
3 "	10	4 "	35	4 "	90a	2 "	126a
8 "	12	35 "	37	1 "	111c	1 "	191
						1 "	199



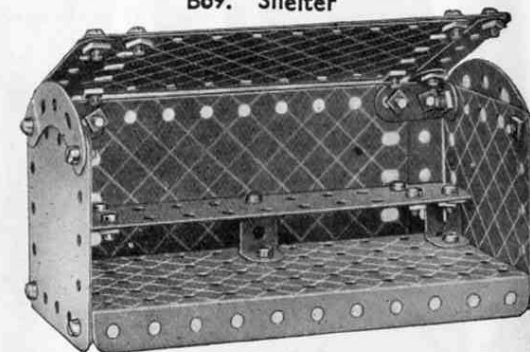
An alternative design of this model (B77M), fitted with the Meccano Magic Motor, is shown at the end of this section.

**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**

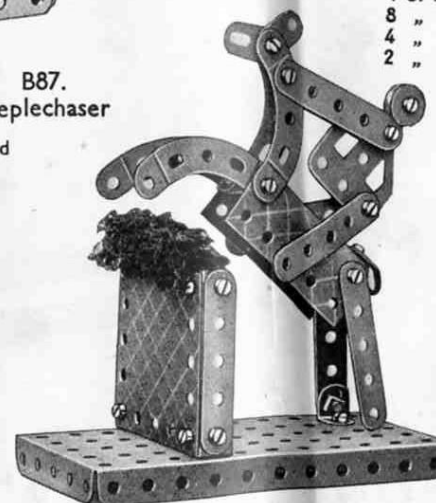
4 of No. 2	4 of No. 12	1 of No. 125
8 " " 5	34 " " 37	2 " " 190
4 " " 10	1 " " 52	2 " " 191
2 " " 11	2 " " 90a	

B84.
Ottoman**Parts required**

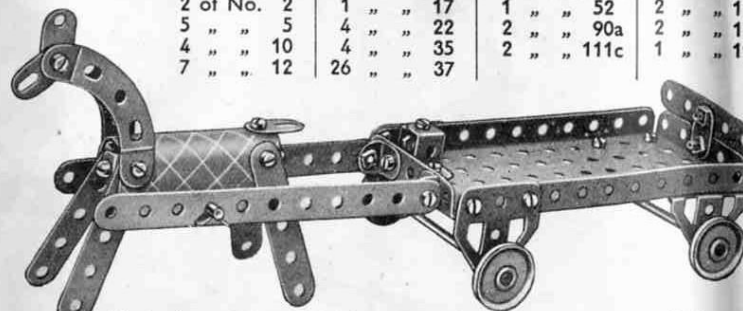
4 of No. 2	1 of No. 48a
7 " " 5	1 " " 52
2 " " 10	2 " " 90a
2 " " 11	1 " " 190
4 " " 12	2 " " 191
34 " " 37	1 " " 199

Parts required

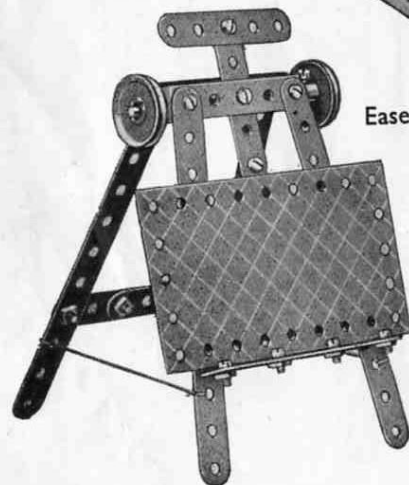
9 of No. 5
4 " " 10
7 " " 12
1 " " 23
20 " " 37
8 " " 37a
2 " " 48a
1 " " 52
4 " " 90a
4 " " 111c
1 " " 126a
1 " " 190
1 " " 199

B87.
Steeplechaser**B88.****Horse and Cart**

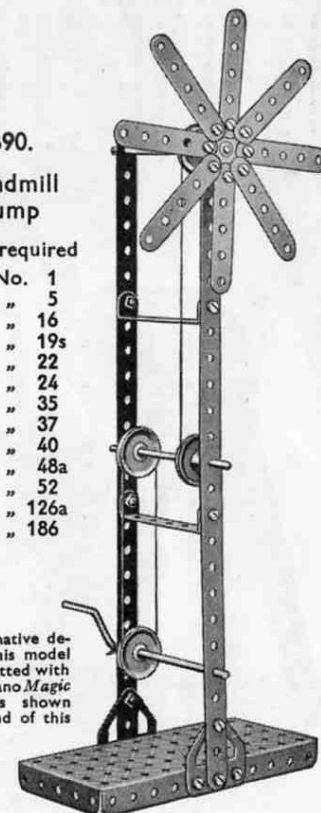
Parts required	2 of No. 16	2 of No. 37a	1 of No. 125
2 of No. 2	1 " " 17	1 " " 52	2 " " 126
5 " " 5	4 " " 22	2 " " 90a	2 " " 126a
4 " " 10	4 " " 35	2 " " 111c	1 " " 199
7 " " 12	26 " " 37		

**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

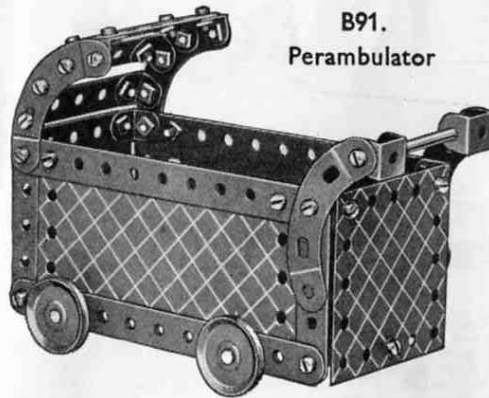
**B90.****Windmill Pump****Parts required**

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



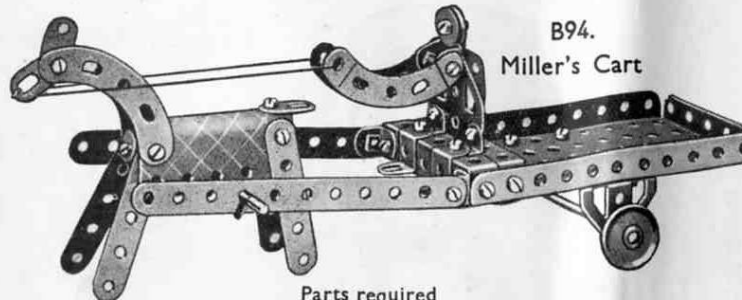
An alternative design of this model (B90M), fitted with the Meccano Magic Motor, is shown at the end of this section.

The fun is greatly increased if this model is fitted with a Meccano Magic Motor. Examples showing how the motor can be incorporated in models is shown at the end of this section. 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	2 of No.	111c
1 " "	40	2 " "	125
2 " "	48a	2 " "	126
1 " "	52	2 " "	126a
4 " "	90a	1 " "	199

An alternative design of this model (B94M), fitted with the Meccano Magic Motor is shown at the end of this section.

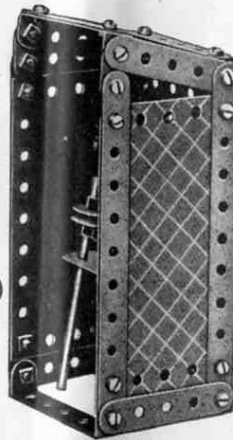


B97. Step Ladder on Wheels

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

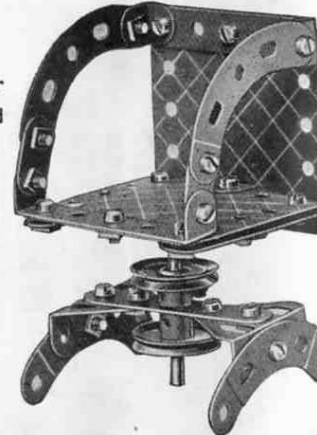
Parts required		
2 of No.	2	2 of No.
9 " "	5	35
2 " "	10	3 " "
6 " "	12	37
1 " "	16	3 " "
1 " "	23	37a
		2 " "
		48a
		1 " "
		188
		1 " "
		190
		2 " "
		191

B92.
Watchman's Hut and Fire



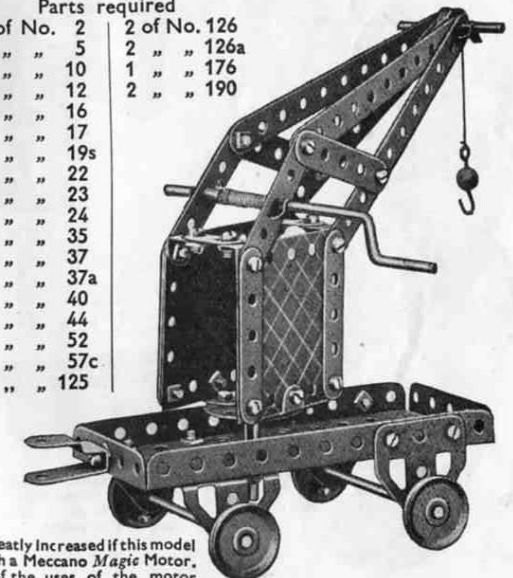
B95.
Revolving
Office Chair

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

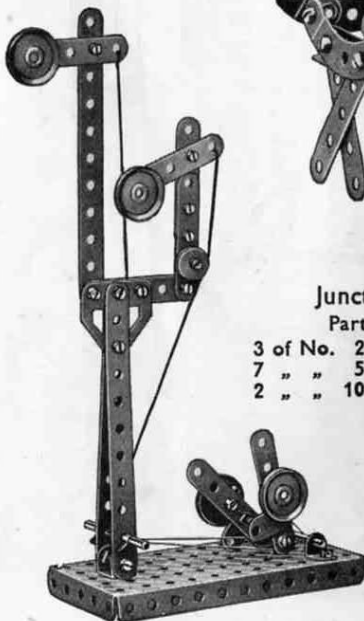


B98. Breakdown Crane

Parts required	
4 of No.	2
8 " "	5
3 " "	10
2 " "	12
2 " "	16
2 " "	17
1 " "	19s
4 " "	22
1 " "	23
1 " "	24
5 " "	35
32 " "	37
1 " "	37a
1 " "	40
1 " "	44
1 " "	52
1 " "	57c
1 " "	125

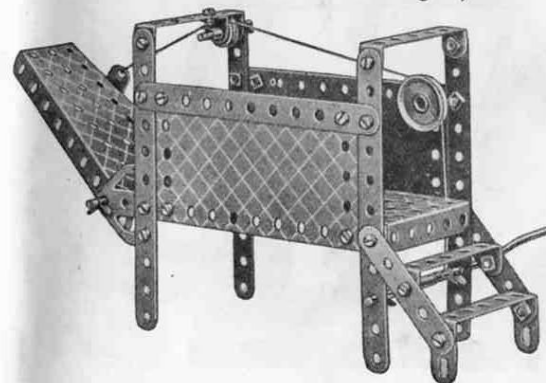


The fun is greatly increased if this model is fitted with a Meccano Magic Motor. Examples of the uses of the motor are shown at the end of this section.



B93.
Junction Signal

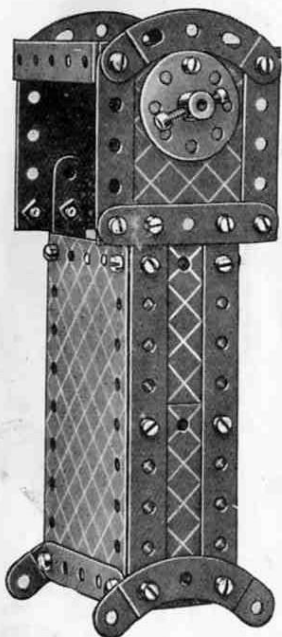
Parts required	
3 of No.	2
7 " "	5
2 " "	10
2 of No.	11
2 " "	12
2 " "	17
4 " "	22
1 " "	23
4 " "	35
21 " "	37
6 " "	37a
1 " "	40
1 " "	52
3 " "	111c
1 " "	126a



B96. Gangway

Parts required	
6 of No.	2
14 " "	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

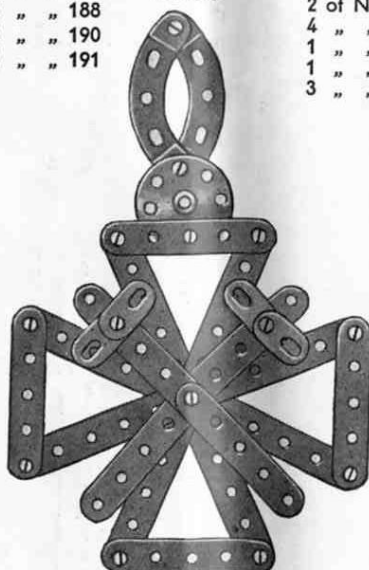
B99. Grandfather Clock



Parts required

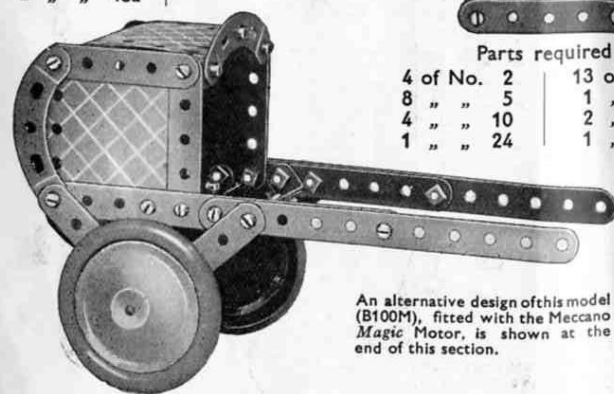
4 of No. 2
8 " " 5
8 " " 12
1 " " 24
31 " " 37
2 " " 48a
4 " " 90a
1 " " 111c
2 " " 188
2 " " 190
2 " " 191

B101. Medal



Parts required

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

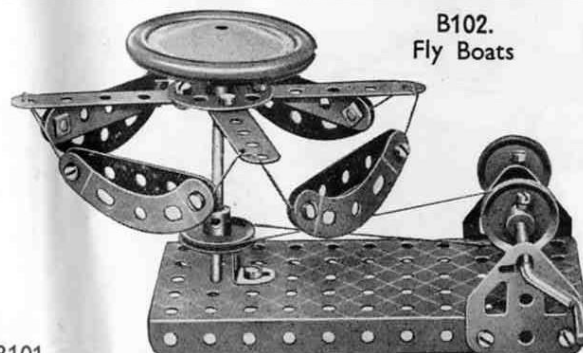


B100.

Rickshaw

Parts required

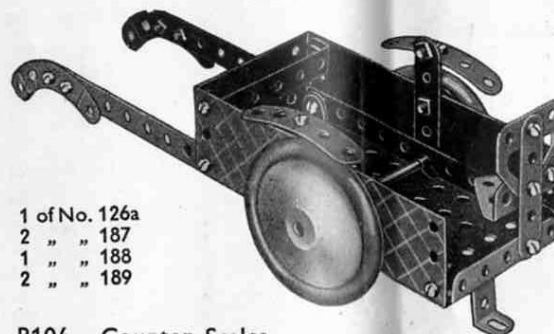
4 of No. 2	3 of No. 90a
9 " " 5	2 " " 126a
7 " " 12	2 " " 187
1 " " 15b	2 " " 190
31 " " 37	2 " " 191
2 " " 48a	

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

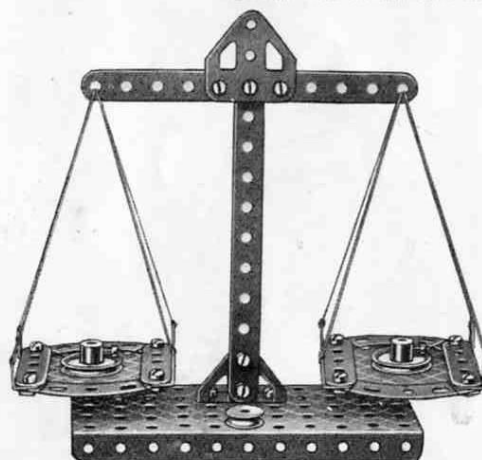
Parts required

2 of No. 2	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	



B103. Milk Float

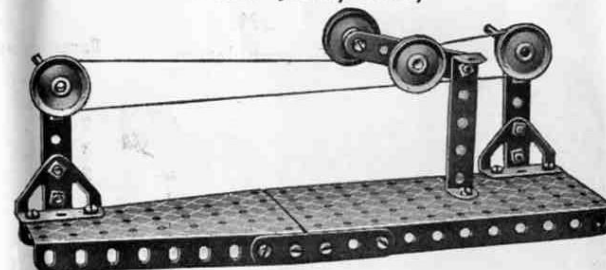
B104. Counter Scales



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

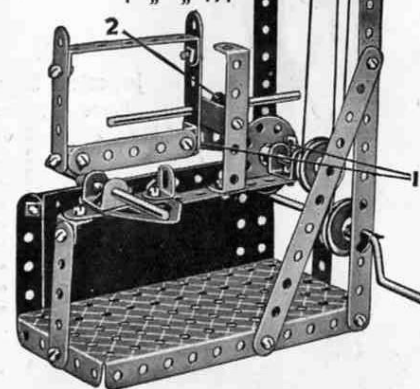


B106. Power Hack Saw

The Crank Handle drives an overhead shaft through 1 1/2" 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

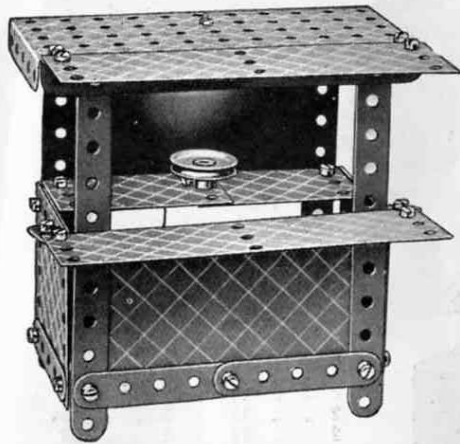
Parts required

2 of No. 1	with the Meccano Magic Motor, is shown at the end of this section.
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	



An alternative design of this model (B100M), fitted with the Meccano Magic Motor, is shown at the end of this section.

B107.
Coffee Stall



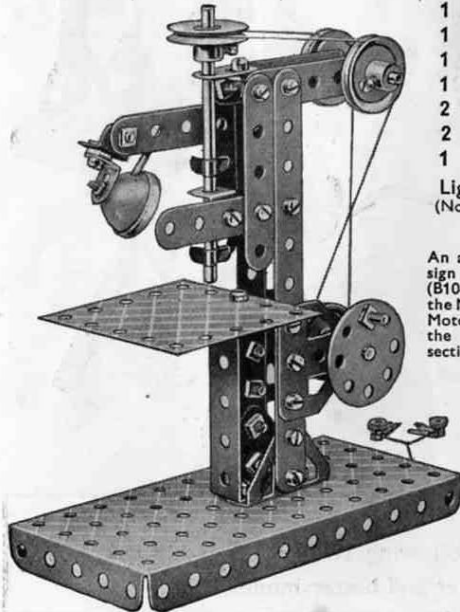
Parts required

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

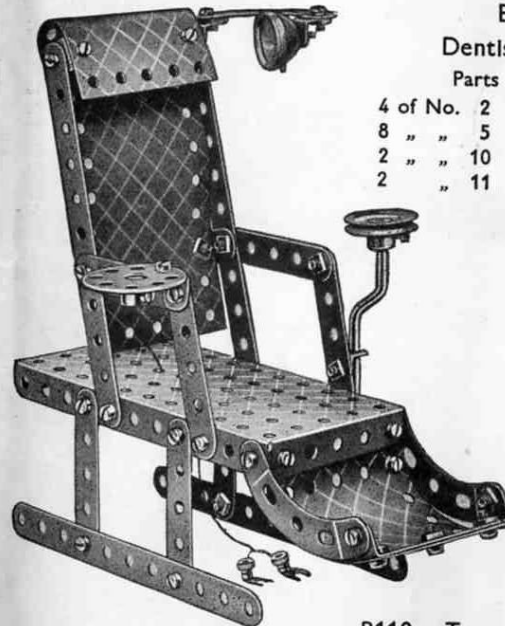
2 of No. 2	2 of No. 11	2 of No. 17	3 of No. 35
6 " " 5	3 " " 12	4 " " 22	28 " " 37
2 " " 10	1 " " 16	1 " " 24	5 " " 37a



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 at the end of this section.



B109.

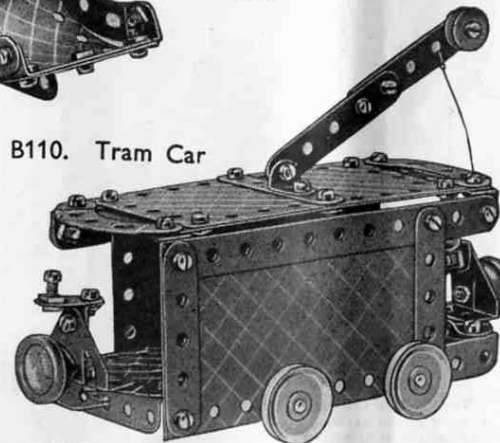
Dentist's Chair

Parts required

4 of No. 2	7 of No. 12
8 " " 5	1 " " 19s
2 " " 10	1 " " 22
2 " " 11	1 " " 24
	3 " " 35
	36 " " 37
	6 " " 37a
	1 " " 48a
	1 " " 52
	3 " " 90a
	4 " " 111c
	1 " " 126a
	1 " " 191
	1 " " 199
	1 " " 200

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	

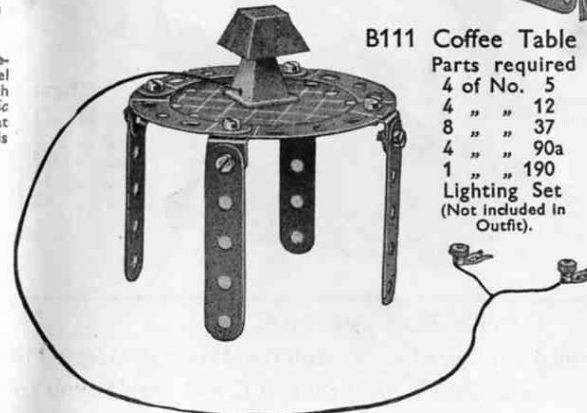
Lighting Set
(Not included in Outfit).

B111 Coffee Table

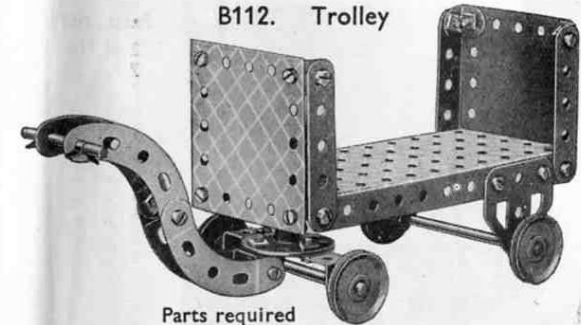
Parts required

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

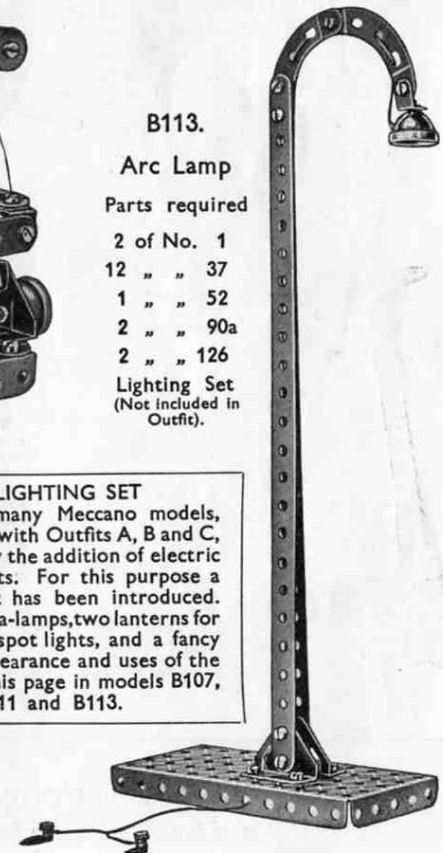
B113.

Arc Lamp

Parts required

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

Lighting Set
(Not included in Outfit).

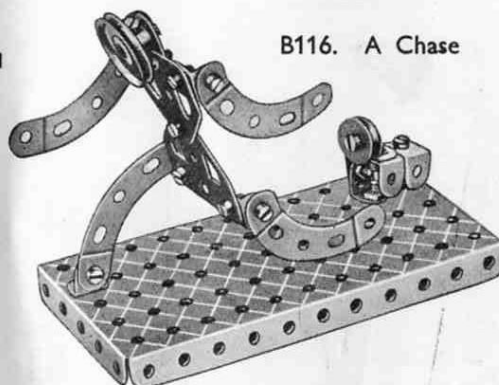


MECCANO LIGHTING SET

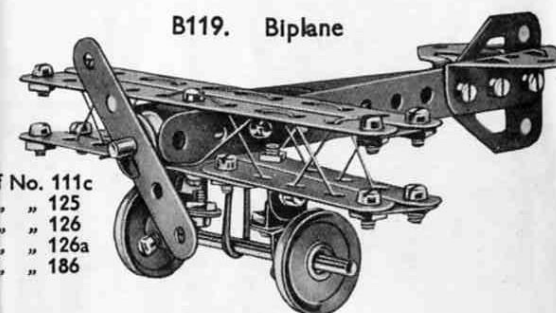
The appearance of many Meccano models, especially those built with Outfits A, B and C, is greatly improved by the addition of electric lights at suitable points. For this purpose a Meccano Lighting Set has been introduced. This consists of two pea-lamps, two lanterns for use as headlamps or spot lights, 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**

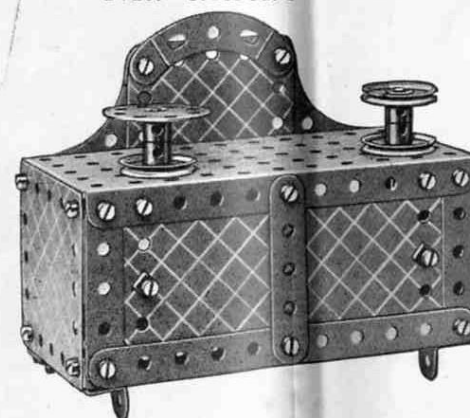
2 of No.	10
2 "	11
7 "	12
1 "	22
1 "	23
16 "	37
1 "	37a
1 "	52
4 "	90a
2 "	111c
2 "	126a

B116. A Chase**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

B119. Biplane

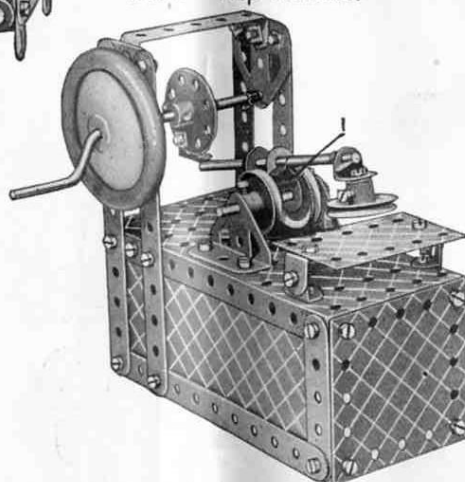
3 of No. 111c	
2 "	125
2 "	126
1 "	126a
1 "	186

B120. Sideboard**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

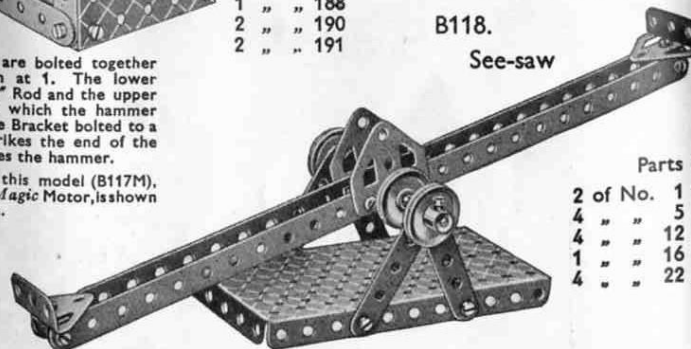
Parts required

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		

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
1 "	37
1 "	38
2 "	48a
1 "	52
1 "	111c
2 "	126
2 "	126a
1 "	176
1 "	187
1 "	188
2 "	190
2 "	191

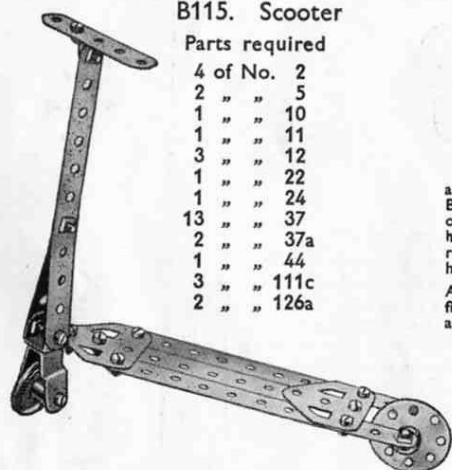
Parts required	3 of No.	22	1 of No.	52
2 of No.	2	1 " "	24	3 " " 90a
5 " "	5	2 " "	35	2 " " 125
8 " "	12	28 " "	37	2 " " 190
2 " "	17	2 " "	37a	2 " " 191

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		

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 "	44
3 "	111c
2 "	126a



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 3 1/2" 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 at the end of this section.

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

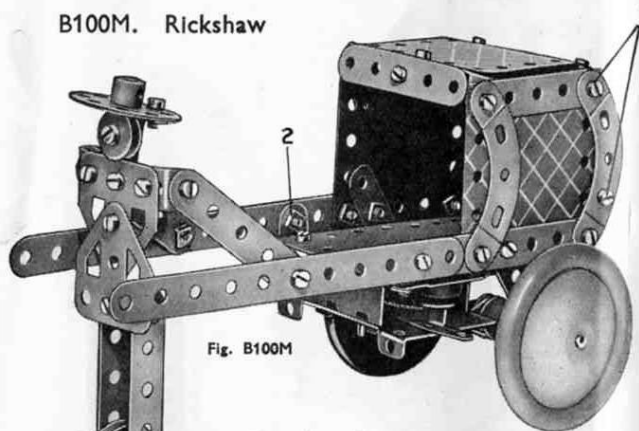
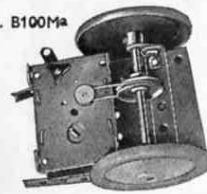


Fig. B100M

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

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.

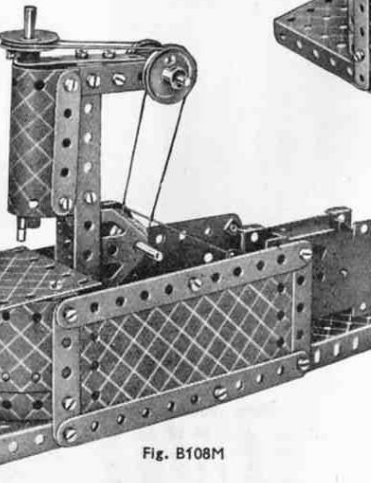


Fig. B108M

Parts required			
6 of No. 2	2	6 of No. 12	
9 " " 5	5	1 " " 15b	
2 " " 10	10	1 " " 17	
2 " " 11	11	1 " " 22	
7 " " 12	12	1 " " 23	
1 " " 15b	15b	2 " " 35	
2 " " 17	17	36 " " 37	
4 " " 22	22	1 " " 37a	
1 " " 23	23	1 " " 40	
2 " " 35	35	1 " " 48a	
6 " " 37	37	1 " " 52	
1 " " 37a	37a	1 " " 54a	
1 " " 40	40	6 " " 111c	
1 " " 48a	48a	2 " " 126	
1 " " 52	52	2 " " 126a	
1 " " 54a	54a	2 " " 189	
6 " " 111c	111c	2 " " 190	
2 " " 126	126	1 " " 191	
2 " " 126a	126a	1 " " 199	
2 " " 189	189		
2 " " 190	190		
1 " " 191	191		
1 " " 199	199		
		Magic Motor	

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	2 of No. 38	
6 " " 5	2 " " 189	1 " " 40	
5 " " 10	1 " " 199	1 " " 44	
1 " " 11		1 " " 48a	
8 " " 12		1 " " 52	
1 " " 15b		1 " " 126a	
2 " " 17		1 " " 176	
1 " " 22		1 " " 199	
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			
		Magic Motor	

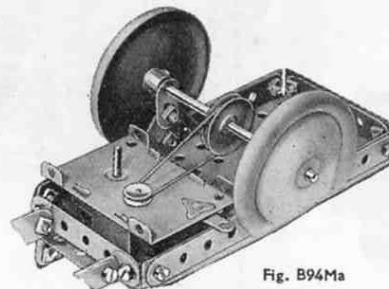


Fig. B94Ma

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.

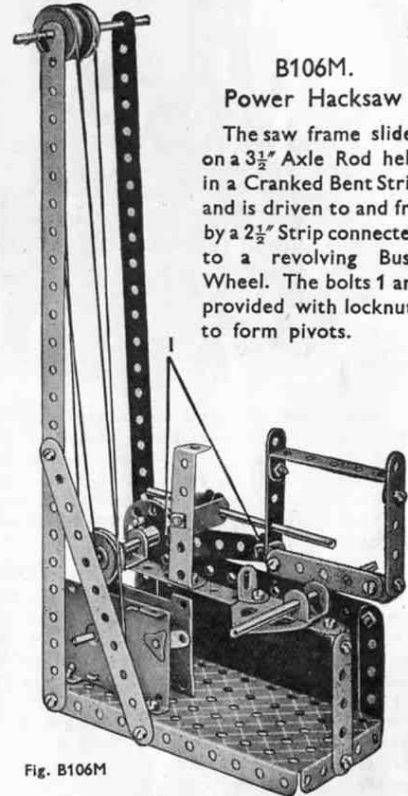
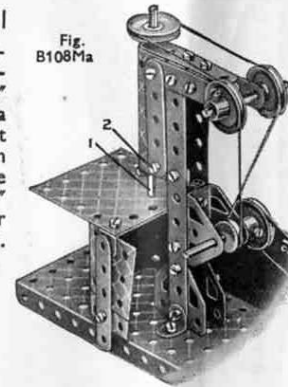


Fig. B106M

Parts required			
2 of No. 1	6 of No. 12	2 of No. 38	
3 " " 2	1 " " 15b	1 " " 40	
2 " " 5	2 " " 16	1 " " 44	
2 " " 11	1 " " 17	1 " " 48a	
	1 " " 22	1 " " 52	
	1 " " 24	1 " " 126a	
	5 " " 35	1 " " 176	
	30 " " 37	1 " " 199	
	2 " " 37a		
		Magic Motor	

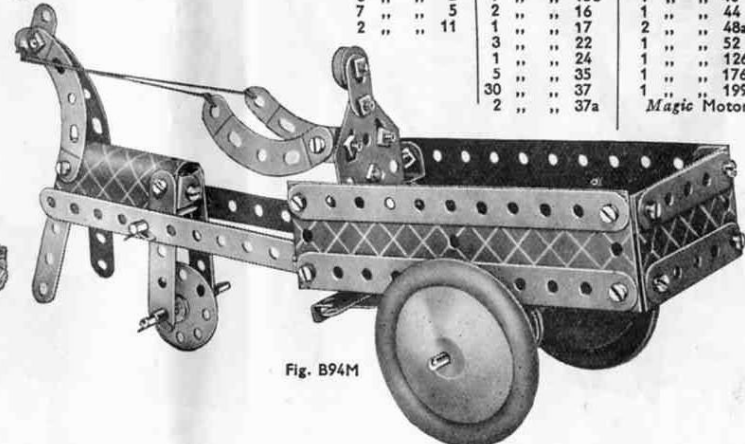


Fig. B94M

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

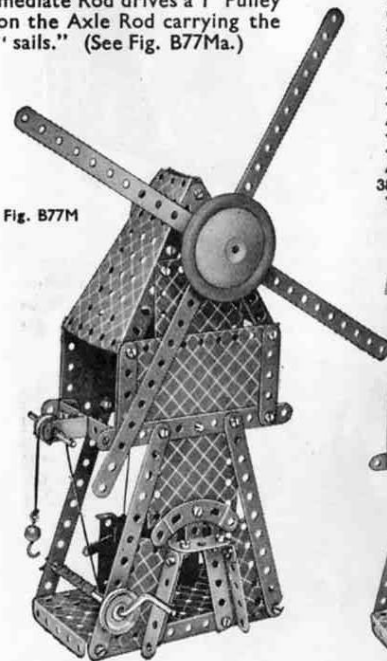


Fig. B77M

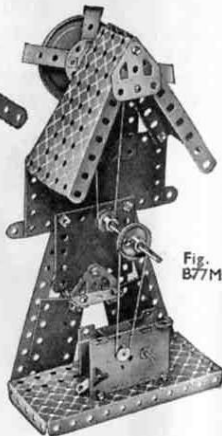
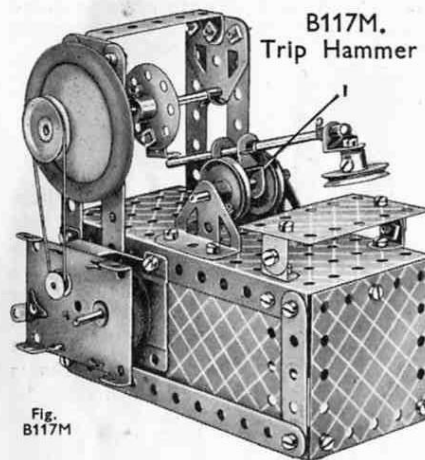


Fig. B77Ma

Parts required			
2 of No. 1	1 of No. 44	2 of No. 38	
6 " " 2	2 " " 48a	1 " " 40	
8 " " 5	1 " " 52	1 " " 44	
4 " " 12	2 " " 54a	1 " " 48a	
1 " " 15b	1 " " 57c	1 " " 52	
1 " " 16	1 " " 90a	1 " " 126a	
1 " " 17	2 " " 126	1 " " 176	
1 " " 19s	2 " " 126a	1 " " 187	
4 " " 22	1 " " 176	2 " " 188	
1 " " 23	1 " " 187	2 " " 190	
1 " " 24	2 " " 188	2 " " 191	
4 " " 35	2 " " 190	2 " " 191	
38 " " 37	2 " " 191		
1 " " 40	2 " " 191		
		Magic Motor	

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
<i>Magic Motor</i>	

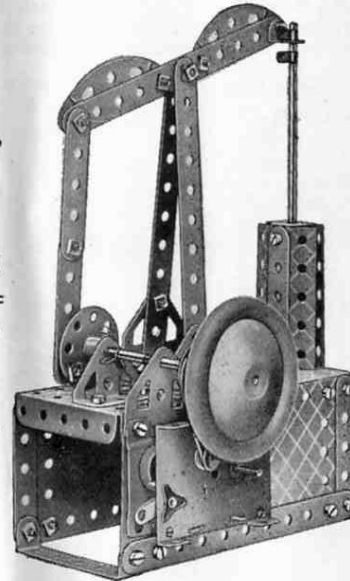


Fig. B32M

B32M. Pump

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

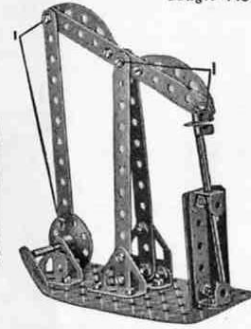


Fig. B32Ma

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 locknutted to form pivots.

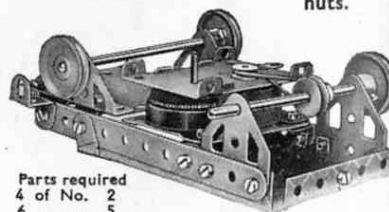


Fig. B51Ma

Parts required	
4 of No. 2	2
6 " " 5	5
3 " " 10	10
1 " " 11	11
8 " " 12	12
2 " " 16	16
2 " " 17	17
4 " " 22	22
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
1 " " 190	190
2 " " 191	191
1 " " 199	199
<i>Magic Motor</i>	

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

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.

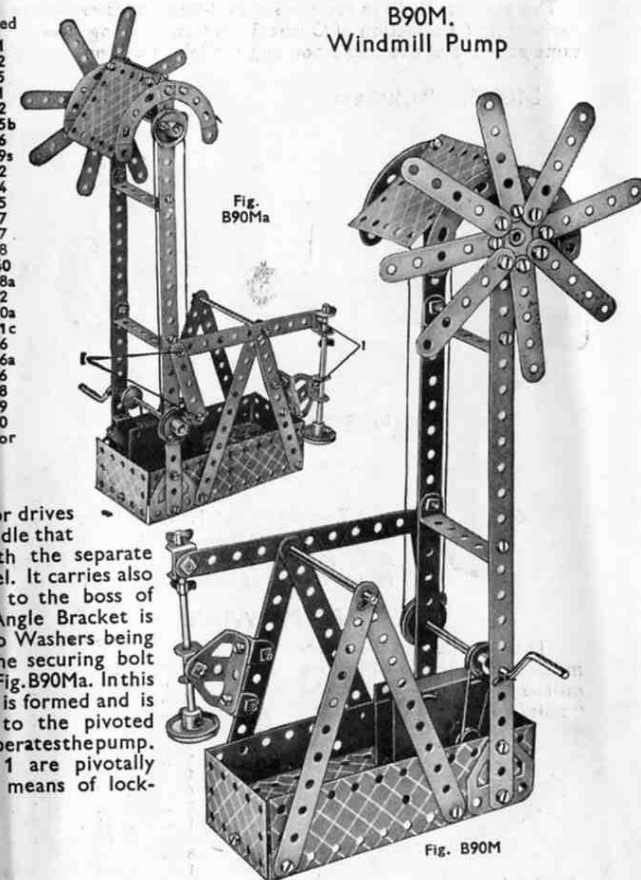


Fig. B90M

B51M. Bread Van

The method of mounting the *Magic Motor* in position is shown in Fig. B51Ma. The horse travels on a $\frac{1}{2}$ " 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.

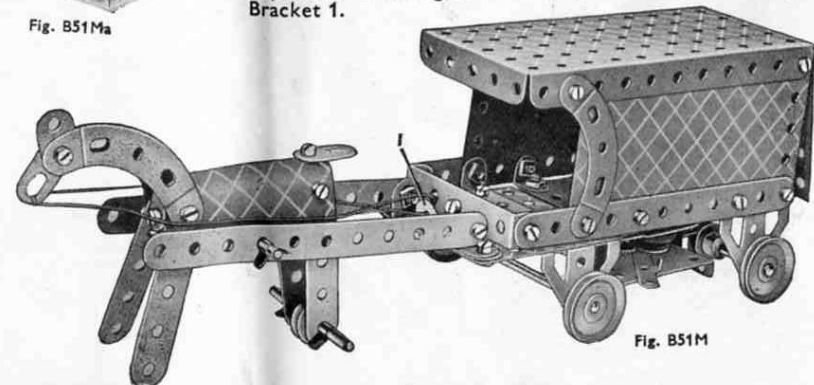


Fig. B51M

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.

B30M. Derrick Crane

Fig. B30Ma shows the method of mounting the jib on the base Plate. The bolts 1 form pivots and each is locknutted. 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 $2\frac{1}{2}" \times \frac{1}{2}"$ Double Angle Strip, and to a weighted lever consisting of a pivoted $2\frac{1}{2}"$ Strip 3. The *Magic Motor* is mounted on a $2\frac{1}{2}"$ 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.

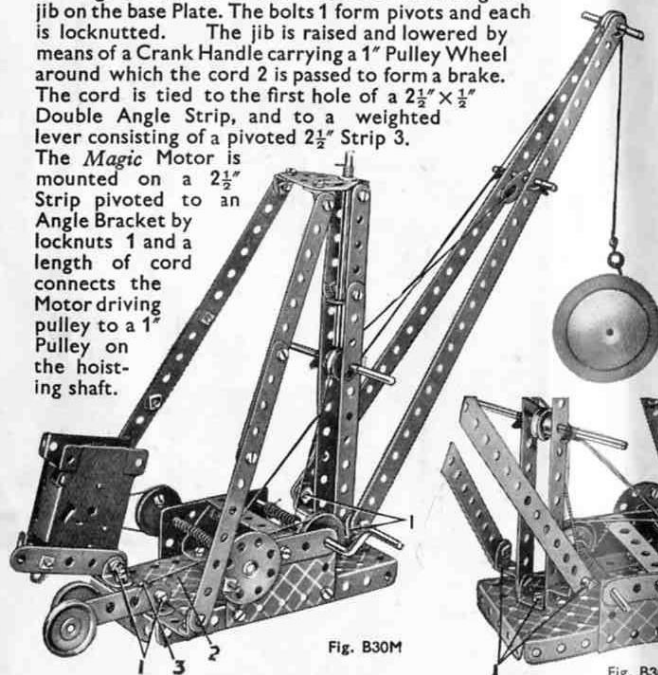


Fig. B30M

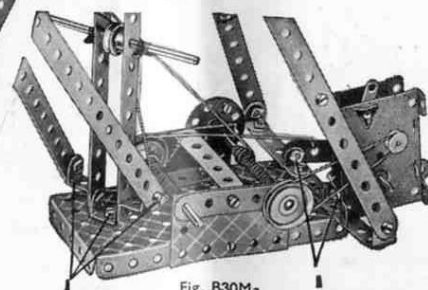


Fig. B30Ma

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

LIST OF MECCANO PARTS

No.	Description.	No.	Description.	No.	Description.	No.	Description.	No.	Description.	
1	Perforated Strips, 12 $\frac{1}{2}$ "	30	Bevel Gears, $\frac{3}{4}$ ", 26 teeth	79	Screwed Rods, 8"	124	Reversed Angle Brackets, 1"	168a	Ball Races, flanged disc	
1a	" " " 9"	30a	" " " 1 $\frac{1}{2}$ ", 16 " (Can only be	79a	" " " 6"	125	" " " " " "	168b	" " " toothed	
1b	" " " 7"	30c	" " " 1 $\frac{1}{2}$ ", 48 " (used together)	80	" " " 5"	126	Trunnions " " " " "	168c	" " " Casing, complete with balls	
2	" " " 5"	31	Gear Wheels, 1", 38 teeth	80a	" " " 4 $\frac{1}{2}$ "	126a	Flat Trunnions " " " " "	169	Digger Buckets	
2a	" " " 4"	32	Worms " " " " "	80b	" " " 4"	127	Simple Bell Cranks " " " " "	170	Eccentrics, $\frac{1}{4}$ " throw	
3	" " " 3"	34	Spanners " " " " "	81	" " " 2"	128	Boss Bell Cranks " " " " "	171	Socket Couplings	
4	" " " 3"	34b	Box Spanners " " " " "	82	" " " 1"	129	Rack Segments, 3" diam.	172	Pendulum Connections	
5	" " " 2 $\frac{1}{2}$ "	35	Spring Clips " " " " "	89	5 $\frac{1}{2}$ " Curved Strips, 10" radius	130	Eccentrics, Triple Throw	173	Rail Adaptors	
6	" " " 2"	36	Screwdrivers " " " " "	89a	3" " " cranked, 1 $\frac{1}{2}$ "	131	Dredger Buckets	174	Grease Cups	
6a	" " " 1"	36a	" " Extra Long	89b	4" " " radius, 4 to circle	132	Flywheels, 2 $\frac{1}{2}$ " diam.	175	Flexible Coupling Units	
7	Angle Girders, 24 $\frac{1}{2}$ "	36b	" " Special	90	2 $\frac{1}{2}$ " Curved Strips, cranked, 4 $\frac{1}{2}$ "	133	Corner Brackets, 1 $\frac{1}{2}$ "	176	Anchoring Springs for Cord	
7a	" " " 18"	37	Nuts and Bolts, 7/32"	90a	2 $\frac{1}{2}$ " " " radius, 8 to circle	133a	" " " " "	177	Shafting Standards, large	
8	" " " 12 $\frac{1}{2}$ "	37a	Nuts " " " " "	90b	2 $\frac{1}{2}$ " " " cranked, 1 $\frac{1}{2}$ "	134	Crank Shanks, 1" stroke	178	" " small	
8a	" " " 9"	37b	Bolts, 7/32" " " " "	94	Sprocket Chain, 40" lengths	135	Theodolite Protractors	179	Rod Sockets	
8b	" " " 7"	38	Washers " " " " "	95	" " " Wheels, 36 teeth, 2" diam.	136	Handrail Supports	180	Toothed Gear Rings, 3 $\frac{1}{2}$ " diam.	
9	" " " 5"	40	Hanks of Cord " " " " "	95a	" " " 28 " 1 $\frac{1}{2}$ "	136a	" " " Couplings	(133 external teeth; 95 internal		
9a	" " " 4"	41	Propeller Blades " " " " "	95b	" " " 56 " 3"	137	Wheel Flanges	teeth)		
9b	" " " 3"	43	Springs " " " " "	96	" " " 18 " 1"	138	Ships' Funnels			
9c	" " " 3"	44	Cranked Bent Strips	96a	" " " 14 " 1"	*138a-z	" " " Raked	181	Bobbins	
9d	" " " 2 $\frac{1}{2}$ "	45	Double " " " " "	97	Braced Girders, 3 $\frac{1}{2}$ " long	139	Flanged Brackets (right)	182	Insulating Bushes, 6BA	
9e	" " " 2"	46	Double Angle Strips, 2" x 1"	97a	" " " 3"	139a	" " (left)	182a	Insulating Washers, 6BA	
9f	" " " 1"	47	" " " 2" x 1 $\frac{1}{2}$ "	98	" " " 3"	140	Universal Couplings	183	Lamp Holders	
10	Flat Brackets	47a	" " " 3" x 1 $\frac{1}{2}$ "	98a	" " " 2 $\frac{1}{2}$ "	141	Wire Lines (for suspending clock	184a	Lamps, 2 $\frac{1}{2}$ volt	
11	Double Brackets	48	" " " 1" x 1 $\frac{1}{2}$ "	99	" " " 12 $\frac{1}{2}$ "	weights)	142	Rubber Rings, 3" rim	184b	" " 3 $\frac{1}{2}$ " "
12	Angle Brackets, 1" x 1"	48a	" " " 2" x 1 $\frac{1}{2}$ "	99a	" " " 9"	142a	Motor Tyres (to fit 2" diam. rims)	184c	" " 6 " "	
12a	" " " 1" x 1"	48b	" " " 3" x 1 $\frac{1}{2}$ "	99b	" " " 7"	142b	" " " 3" " "	184d	" " 10 " "	
12b	" " " 1" x 1"	48c	" " " 4" x 1 $\frac{1}{2}$ "	100	" " " 5"	142c	" " " 1" " "	184e	" " 20 " "	
12c	Obtuse Angle Brackets, 1 $\frac{1}{2}$ " x 1 $\frac{1}{2}$ "	48d	" " " 5" x 1 $\frac{1}{2}$ "	100a	" " " 4"	142d	" " " 1 $\frac{1}{2}$ " " "	185	Steering Wheels, 1 $\frac{1}{2}$ " diam.	
13	Axle Rods, 11 $\frac{1}{2}$ "	50a	Eye Pieces, with boss	101	Healds, for looms	143	Circular Girders, 5 $\frac{1}{2}$ " diam.	186	Driving Bands	
13a	" " " 8"	51	Flanged Plates, 2 $\frac{1}{2}$ " x 1 $\frac{1}{2}$ "	102	Single Bent Strips	144	Dog Clutches	187	Road Wheels	
14	" " " 6 $\frac{1}{2}$ "	52	" " " 5" x 2 $\frac{1}{2}$ "	103	Flat Girders, 5 $\frac{1}{2}$ " long	145	Circular Strips, 7 $\frac{1}{2}$ " diam overall	188	Flexible Plates, 2 $\frac{1}{2}$ " x 1 $\frac{1}{2}$ "	
15	" " " 5"	52a	Flat Plates, 5 $\frac{1}{2}$ " x 3 $\frac{1}{2}$ "	103a	" " " 9 $\frac{1}{2}$ "	146	" " " Plates, 6" " "	189	" " " 5" x 1 $\frac{1}{2}$ "	
15a	" " " 4"	53	Perforated Flanged Plates, 3 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "	103b	" " " 12 $\frac{1}{2}$ "	146a	" " " 4" " "	190	" " " 2" x 2"	
15b	" " " 4"	53a	Flat Plates, 4 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "	103c	" " " 4"	147	Pawls, with Pivot Bolt and nuts	191	" " " 4" x 2"	
16	" " " 3 $\frac{1}{2}$ "	54a	Flanged Sector Plates, 4 $\frac{1}{2}$ " long	103d	" " " 3 $\frac{1}{2}$ "	147a	Pawls " " " " "	192	" " " 5" x 2 $\frac{1}{2}$ "	
16a	" " " 2 $\frac{1}{2}$ "	55	Perforated Strips, slotted, 5 $\frac{1}{2}$ " long	103e	" " " 3"	147b	Pivot Bolts with 2 nuts	193	Strip Plates, 2 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "	
16b	" " " 3"	55a	" " " 2 $\frac{1}{2}$ " long	103f	" " " 2 $\frac{1}{2}$ "	147c	Pawls without boss	194	" " " 3" x 2 $\frac{1}{2}$ "	
17	" " " 2"	57	Hooks " " " " "	103g	" " " 2"	148	Ratchet Wheels	195	" " " 5" x 2 $\frac{1}{2}$ "	
18a	" " " 1 $\frac{1}{2}$ "	57a	" " Scientific	103h	" " " 1 $\frac{1}{2}$ "	149	Collecting Shoes for Electric Locos	196	" " " 9 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "	
18b	" " " 1"	57b	" " Loadid, large	103k	" " " 7 $\frac{1}{2}$ "	150	Crane Grabs	197	" " " 12 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "	
19	Crank Handles, large, 5"	57c	" " small	104	Shuttles, for looms	151	Pulley Blocks, Single Sheave	198	Hinged Flat Plates, 4 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "	
19a	" " small, 3 $\frac{1}{2}$ "	58	Spring Cord	105	Reed Hooks, for looms	152	" " " Two	199	Curved Plates, U Section, 9, 33" radius	
19b	" " " "	58a	Coupling Screws for Spring Cord	106	Wood Rollers	153	" " " Three	200	" " " 1 $\frac{1}{2}$ " radius	
20	Flanged Wheels, 1 $\frac{1}{2}$ " diam.	58b	Hooks for Spring Cord	106a	Sand Rollers	154a	Corner Angle Brackets, $\frac{1}{2}$ " (right	201	Lamps with Flex, 3 $\frac{1}{2}$ -volt	
20b	" " " "	59	Collars with Grub Screws	107	Tables for designing machines	hand)	154b	Corner Angle Brackets, $\frac{1}{2}$ " (left hand)	202	Angle Brackets (for Headlamps)
	Pulley Wheels	61	Windmill Sails	108	Architraves	155	Rubber Rings (for 1" Pulleys)	203	Headlamps	
19b	3" dia., with centre boss & set-screw	62	Cranks " " " " "	109	Face Plates, 2 $\frac{1}{2}$ " diam.	156	Pointers (with boss), 2 $\frac{1}{2}$ " overall	203a	Headlamp Rims	
19c	6" " " " " "	62a	Threaded Cranks	110	Rack Strips, 3 $\frac{1}{2}$ "	157	Fans, 2" diam. " " " " "	203b	Headlamp Bodies	
20a	2" " " " " "	62b	Double Arm Cranks	110a	" " " 6 $\frac{1}{2}$ "	158	Signal Arms, Home " " " " "	204	Headlamp Nuts	
21	1 $\frac{1}{2}$ " " " " " "	63	Couplings " " " " "	111	Bolts, " " " " "	158a	" " " Distant " " " " "	205	" " " Glasses (Green, Plain or	
22	1" " " " " "	63a	Octagonal Couplings	111a	" " " " " " "	160	Channel Bearings, 1 $\frac{1}{2}$ " x 1 $\frac{1}{2}$ " x $\frac{1}{2}$ "	Red)		
23a	" " " " " "	63b	Strip Couplings	111c	" " " " " " "	161	Girder Brackets, 2" x 1" x $\frac{1}{2}$ "	206	Lampshades	
23a	" " " " " "	63c	Threaded Couplings	113	Girder Frames	162	Boilers, complete with ends	207	Lamp Bases	
23b	" " " " " "	64	Bosses " " " " "	114	Hinges	162a	" " " ends	207a	Lamps with Standard and Flex	
24	Bush Wheels	65	Centre Forks	115	Threaded Pins	162b	" " " without ends	208	Battery Tags and Studs	
25	Pinion Wheels, " " " " "	66	Weights, 50 grammes	116	Fork Pieces, large	163	Sleeve Pieces	203a	Washers for Battery Studs	
25a	" " " " " "	67	" " 25	116a	" " " small	164	Chimney Adaptors	210	Nuts	
25b	" " " " " "	68	Wood screws, " " " " "	117	Steel Balls, $\frac{3}{4}$ " diam.	164	" " " " "	211a	Helical Gears $\frac{1}{2}$ " (Can only be	
26	" " " " " "	69	Set Screws " " " " "	118	Hub Discs, 5 $\frac{1}{2}$ "	165	Swivel Bearings	211b	" " " 1 $\frac{1}{2}$ " (used together)	
26a	" " " " " "	69a	Grub Screws, 5/32"	120	Buffers	166	End " " " " "			
26b	" " " " " "	69b	" " " 7/32"	120a	Spring Buffers	167	Geared Roller Bearings			
	Gear Wheels	70	Flat Plates, 5 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "	120b	Compression Springs	167a	Roller Races, geared, 192 teeth			
27	50 teeth to gear with 1" pinion	72	" " " 2 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "	121	Train Couplings	167b	Ring Frames for Rollers			
27a	57 " " " " " "	73	" " " 3" x 1 $\frac{1}{2}$ "	122	Miniature Loaded Sacks	167c	Pinions for Roller Bearings, 16 teeth			
27b	133 " " " " (3 $\frac{1}{2}$ " diam.)	76	Triangular Plates, 2 $\frac{1}{2}$ "	123	Cone Pulley	168	Ball Bearings, 4" diam.			
27c	95 " " " " (2 $\frac{1}{2}$ " diam.)	77	" " " 1"							
28	Contrate Wheels, 1 $\frac{1}{2}$ " diam.	78	Screwed Rods, 11 $\frac{1}{2}$ "							
29	" " " " " "									

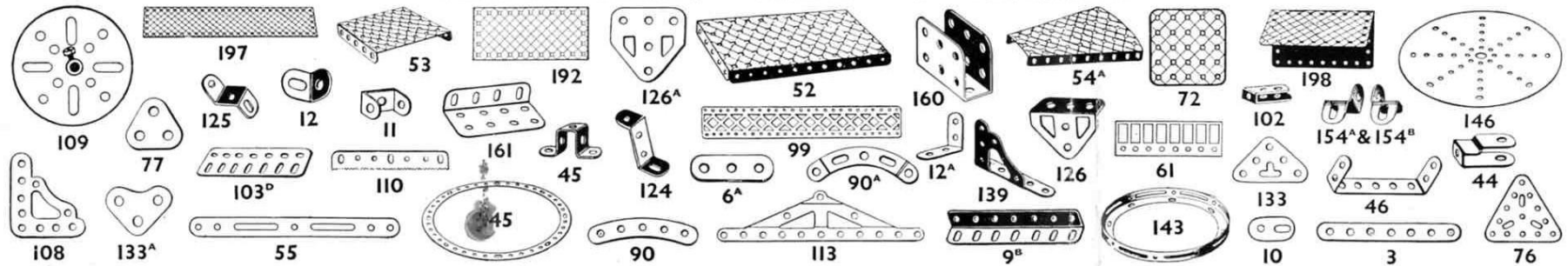
* The series includes 26 Funnels in the correct designs and colours of leading shipping companies.

Your Dealer will be pleased to provide you with a complete Price List.

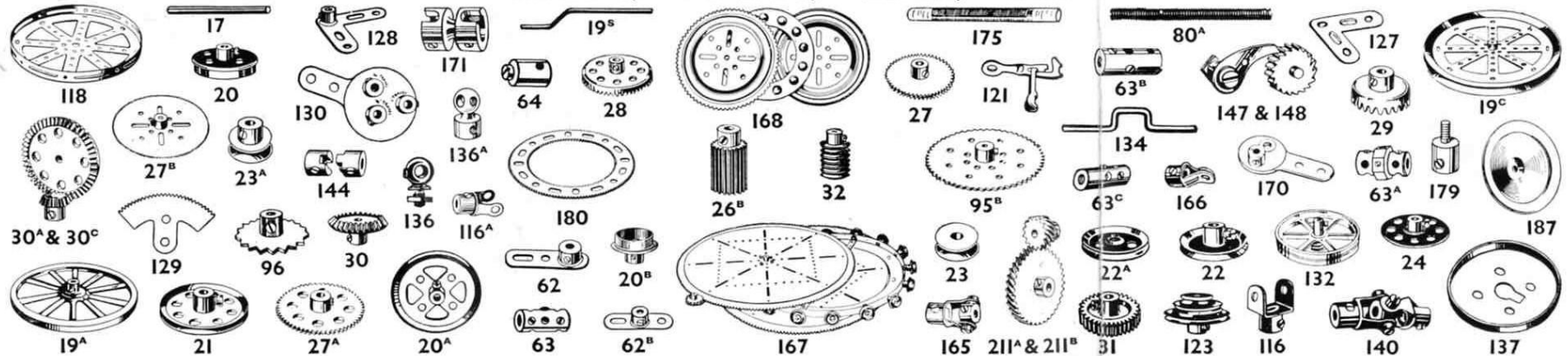
* The series includes 26 Funnels in the correct designs and colours of leading shipping companies.

MECCANO PARTS & ACCESSORIES

PLATES, STRIPS, GIRDERS & BRACKETS



WHEELS, PULLEYS, GEARS, ETC.



MISCELLANEOUS

