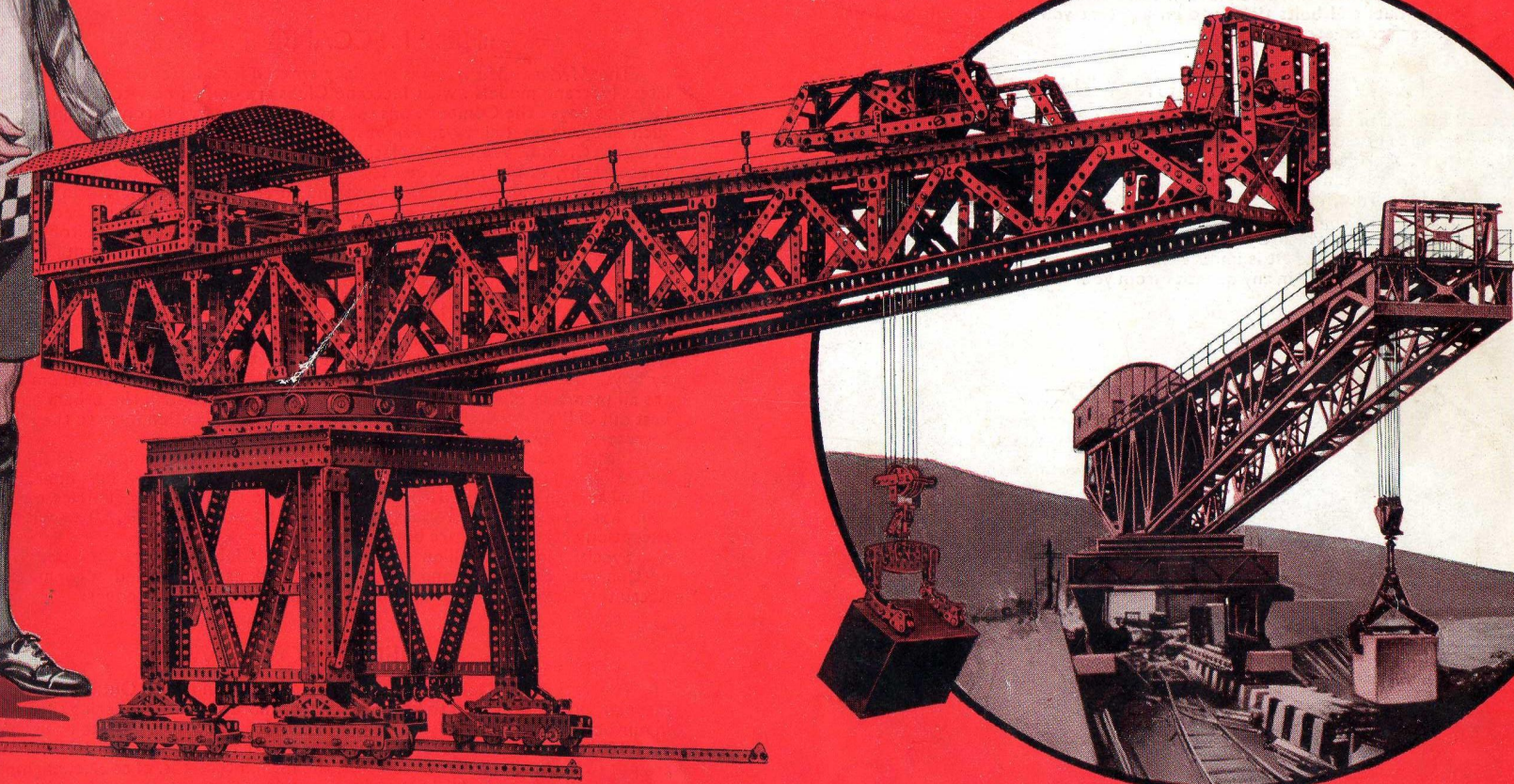


MECCANO

HORNBY'S ORIGINAL SYSTEM — FIRST PATENTED 1901

INSTRUCTIONS FOR OUTFITS A to E

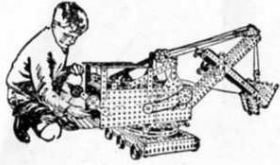
PRICE
1/-



35A-E

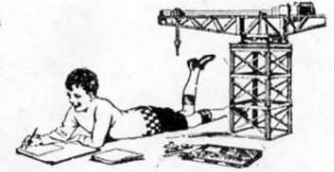
COPYRIGHT BY MECCANO LTD., BINNS ROAD, LIVERPOOL 13

13/725/1.1 (N.Z./S.A.)



MECCANO

HORNBY'S ORIGINAL SYSTEM — FIRST PATENTED 1901



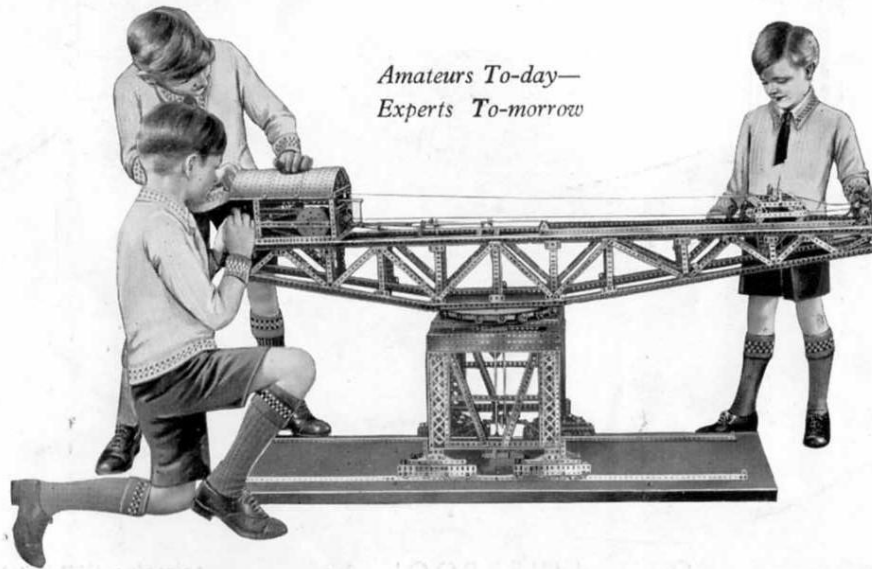
MODEL-BUILDING WITH MECCANO

There is no limit to the number of models that can be built with Meccano—Cranes, Clocks, Motor Cars, Ship Coalers, Machine Tools, Locomotives—in fact everything that interests boys. A screwdriver and spanner, both of which are provided in each Outfit, are the only tools necessary.

Make the simple models first—they will provide hours of fun—and then try to improve them. Every model can be made in a dozen different ways. It is important to screw up all the nuts and bolts tightly to ensure that your models will be strong and firm when they are completed.

HOW TO BUILD UP YOUR OUTFIT

Meccano is sold in ten different Outfits, lettered A to L. All Meccano parts are of the same high quality and finish, but the larger Outfits contain a greater quantity and variety of parts, making possible the construction of more elaborate models. Each Outfit from A upwards can be converted into the one next higher by the purchase of an Accessory Outfit. Thus, Meccano Outfit A can be converted into a B by adding to it an Aa Accessory Outfit. A Ba would then convert it into a C Outfit, and so on. In this way, no matter with which Outfit you commence, you may build it up by degrees until you possess an L Outfit. It is important to remember that Meccano Parts can be bought separately at any time in any quantity from your Meccano dealer.



*Amateurs To-day—
Experts To-morrow*

ELECTRIC LIGHTING OF MECCANO MODELS

It is great fun to illuminate your Meccano models by electric light, and a special Meccano Lighting Set can be obtained from your dealer for this purpose. This consists of two spot lights with plain and coloured imitation glass discs, one stand lamp, two special brackets, and two pea lamps, operated from a 4-volt flashlamp battery (not included in the set). The stand lamp is used for decorative purposes, and the spot lights can be used as car headlamps, floodlights on cranes, and in countless other ways.

THE "MECCANO MAGAZINE"

The *Meccano Magazine* is specially written for Meccano boys. It tells them of the latest Meccano models; what Meccano Clubs are doing; how to correspond with other Meccano boys; the Competitions that are running, etc. It contains splendid articles on such subjects as Railways, Famous Engineers and Inventors, Electricity, Chemistry, Bridges, Cranes, Wonderful Machinery, Aeronautics, Latest Patents, Radio, Stamps, Photography, Books and other topics of interest to boys, including suggestions from Meccano boys for new Meccano parts and correspondence columns in which the Editor replies to his readers' enquiries. 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 from any newsagent.

THE MECCANO GUILD

Every owner of a Meccano Outfit should join the Meccano Guild. This is a world-wide organisation for boys, started at the request of boys, and as far as possible conducted by boys. Its primary object is to bring boys together and to make them feel that they are all members of a great brotherhood, each trying to help the others to get the very best out of life. Write for full particulars and an application form to the Meccano Guild Secretary, Binns Road, Liverpool 13.

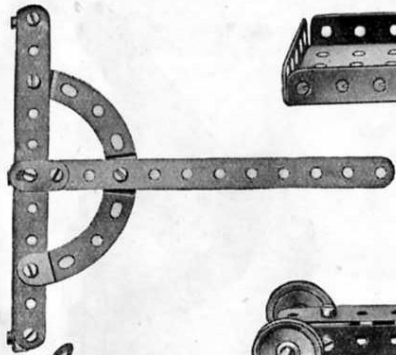
Meccano Clubs are founded and established under the guidance of the Guild Secretary at Headquarters, and at the present time there are active Clubs in nearly 250 towns and villages in the United Kingdom, and more than 100 in countries overseas. Each Club has its Leader, Secretary, Treasurer, and other officials, all of whom, with the exception of the Leader, are boys.

Special Merit Medallions are awarded to Club members for good work in connection with their Club, and Recruiting Medallions are awarded in connection with the Recruiting Campaign, full particulars of which will be sent on request.

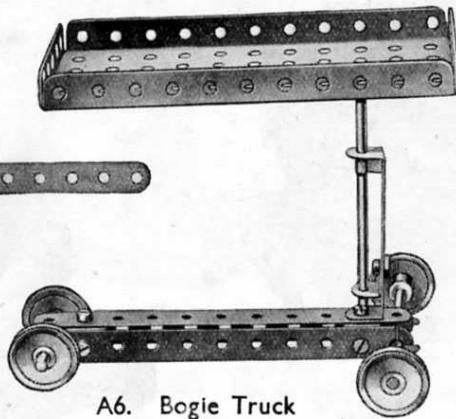
MECCANO SERVICE

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. Although all kinds of queries are put to us on all manner of subjects, the main interest is, of course, engineering. No one has such a wonderful knowledge of engineering matters as that possessed by our staff of experts. 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.

A1. Rake

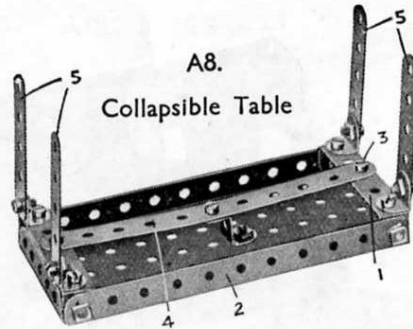


A5. Bed Table



A8.

Collapsible Table



The $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strips 1 are attached to the $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plate 2 by lock-nutted Bolts as in Standard Mechanism No. 1A. The Bolts 3 are secured to the $5\frac{1}{2}''$ Strip 4 and their shanks engage with the centre holes in the $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strips 1, thus maintaining the legs 5 in an upright position. When it is desired to fold up the legs 5, it is only necessary to raise the ends of the Strip 4, thus freeing the Double Angle Strips 1. The table is shown in the folded position in Fig. A8a.

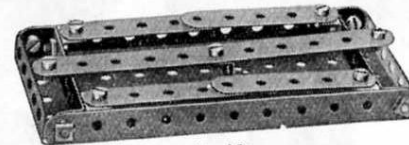
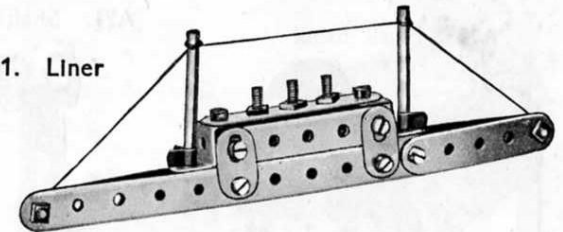
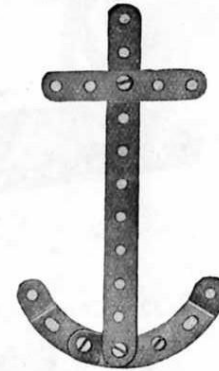


Fig. A8a

A11. Liner



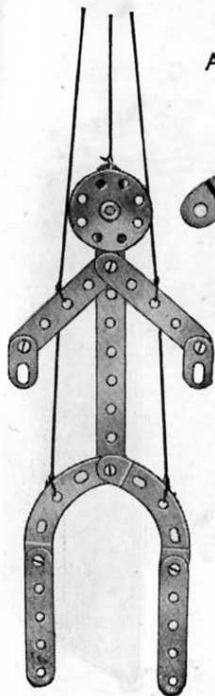
A12. Anchor



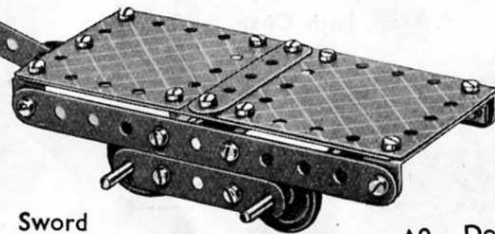
A16. Go-chair



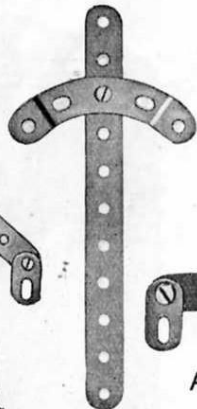
A2. Jumping Jack



A6. Bogie Truck



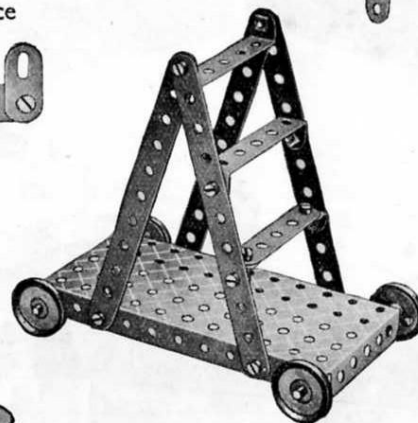
A3. Sword



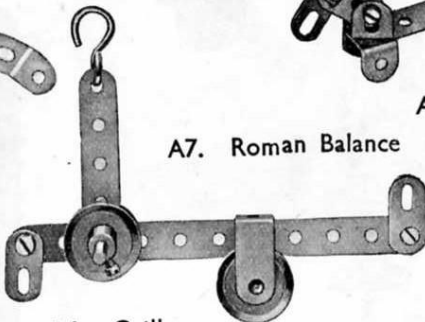
A9. Dog



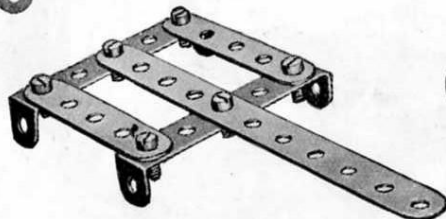
A10. Ladder on Wheels



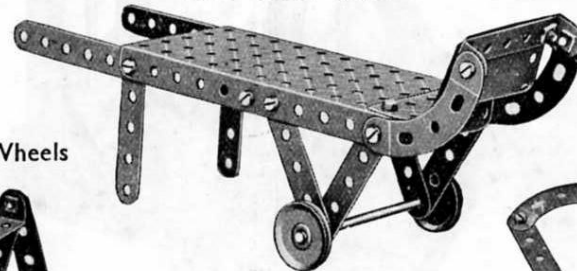
A7. Roman Balance



A4. Grill



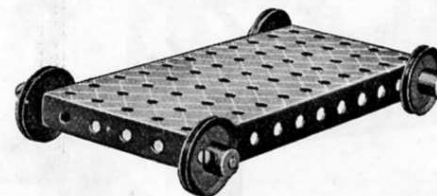
A13. Hand Truck



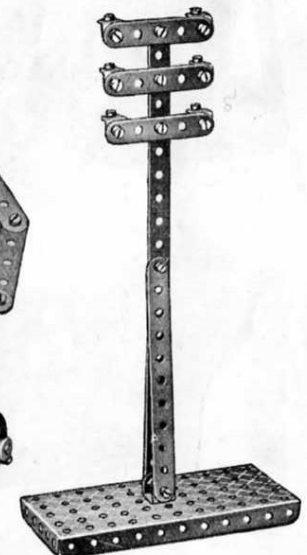
A14. Fire Axe



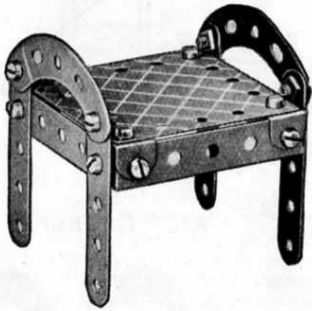
A15. Flat Truck



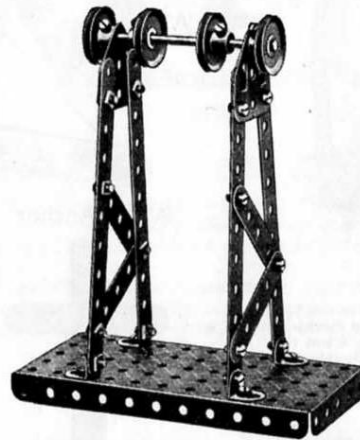
A17. Telegraph Pole



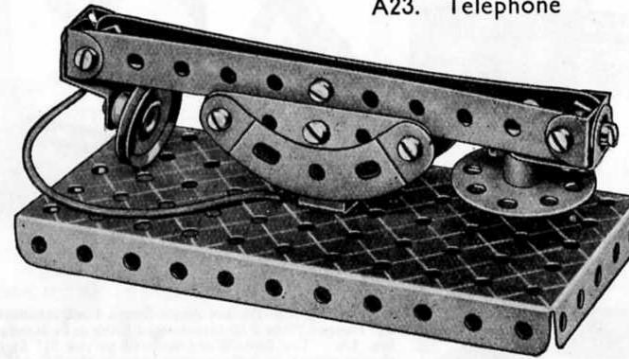
A18. Music Stool



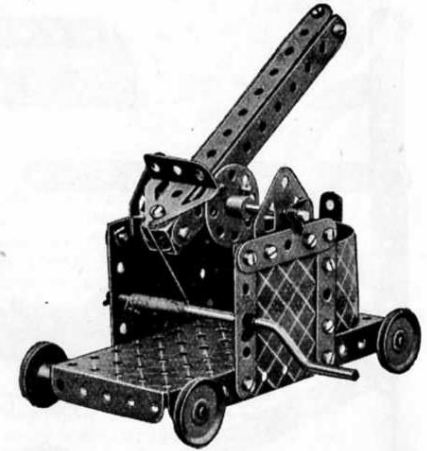
A21. Shafting Standard



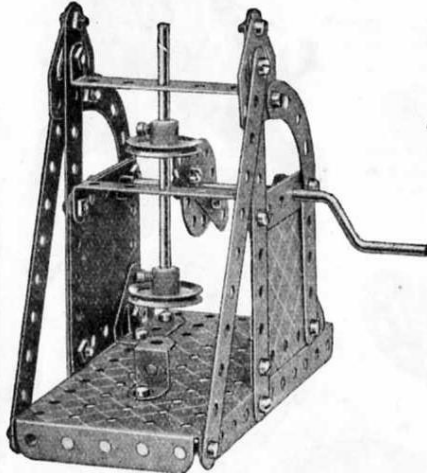
A23. Telephone



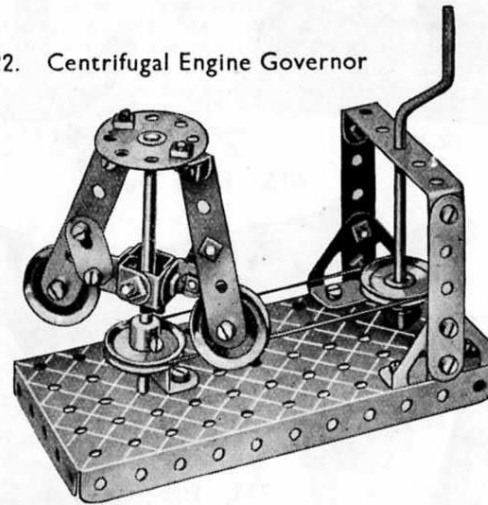
A26. Anti-aircraft Gun



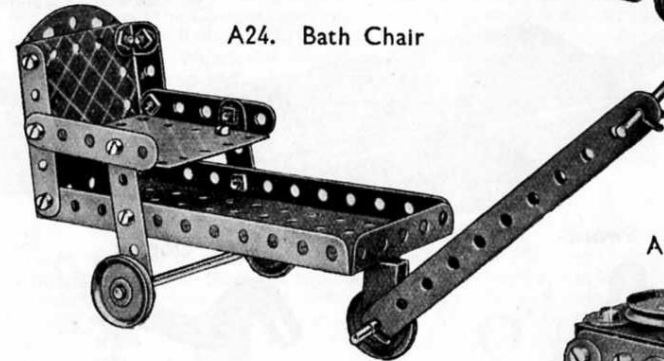
A19. Ore Crusher



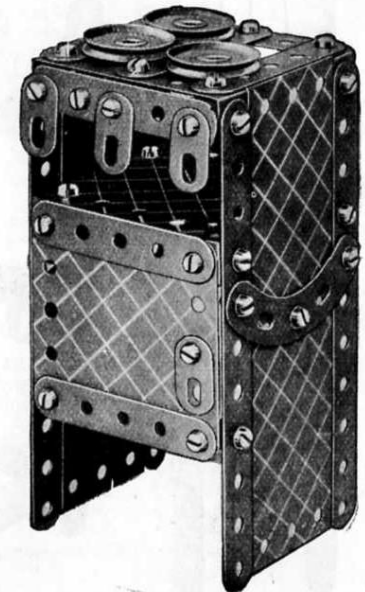
A22. Centrifugal Engine Governor



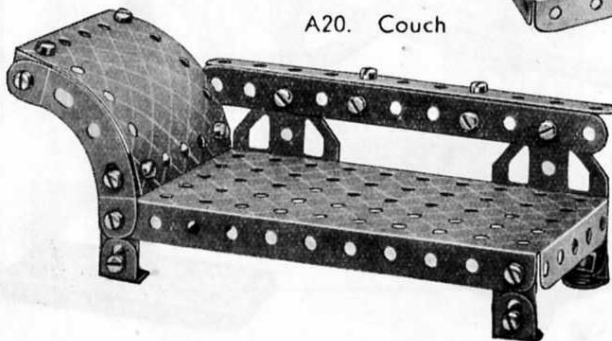
A24. Bath Chair



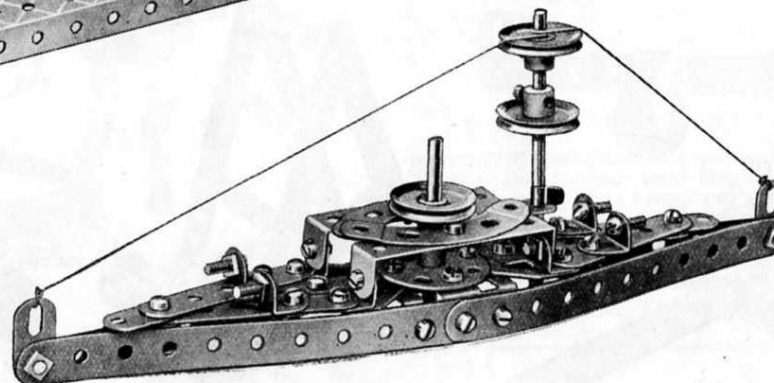
A27. Gas Stove



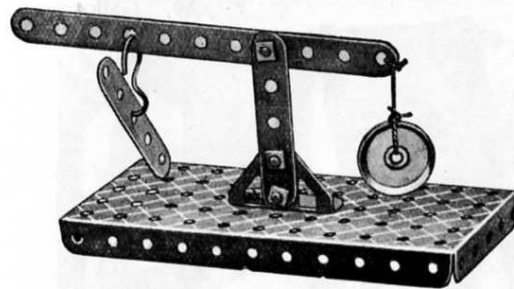
A20. Couch



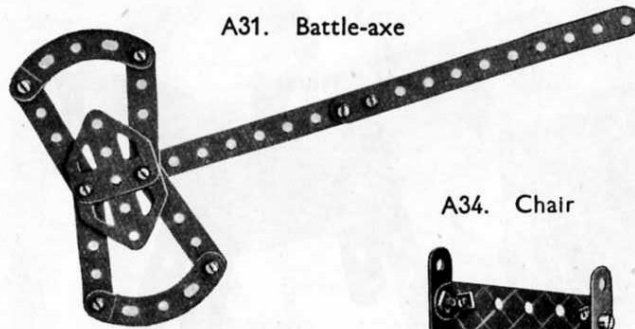
A25. Battleship



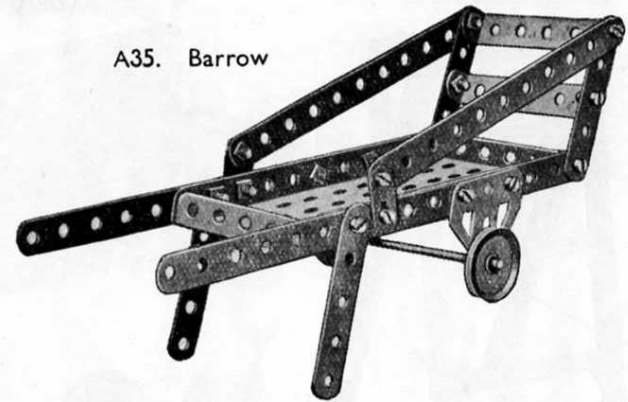
A28. Lever of the First Order



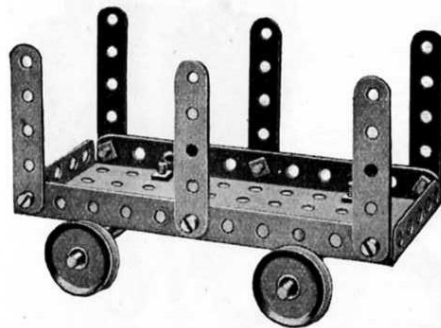
A31. Battle-axe



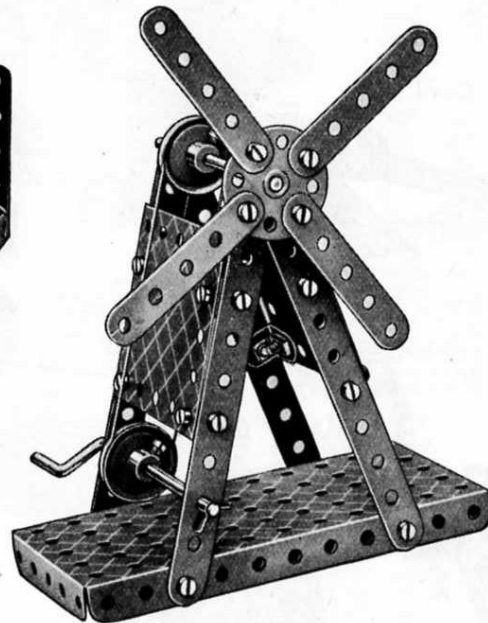
A35. Barrow



A29. Timber Truck



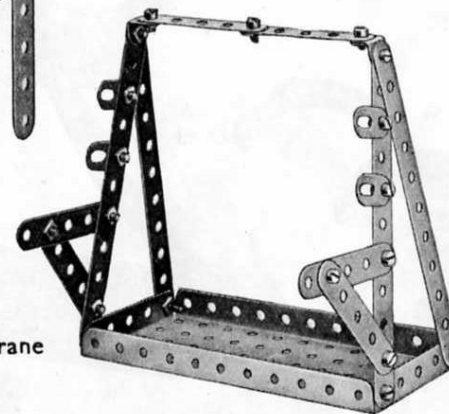
A32. Windmill



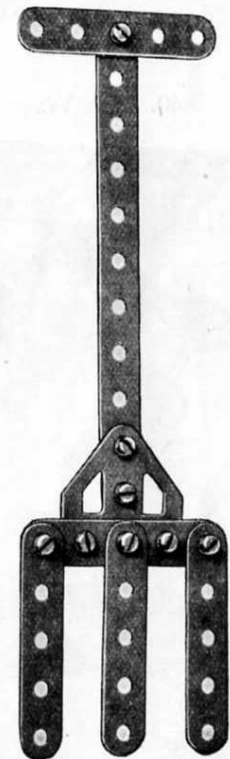
A34. Chair



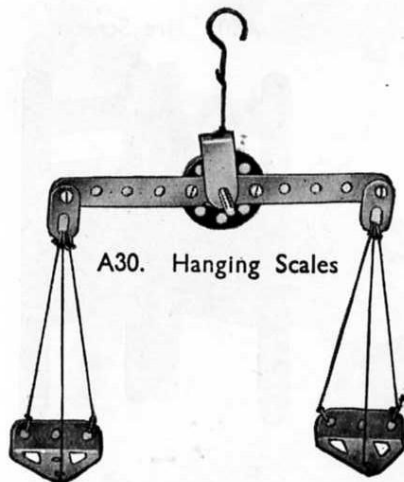
A36. Pen Rack



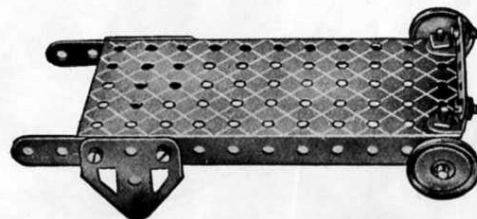
A38. Fork



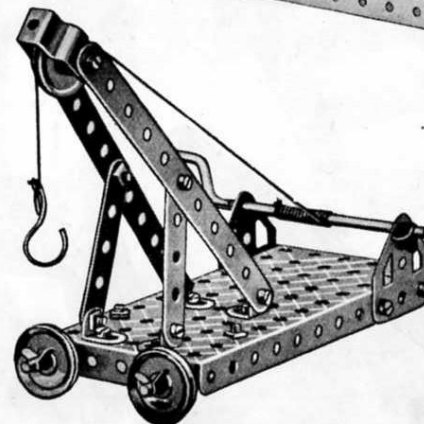
A30. Hanging Scales



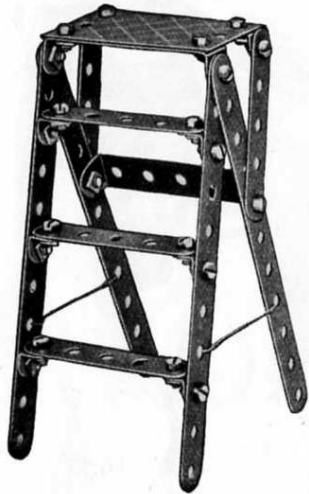
A33. Flat Truck



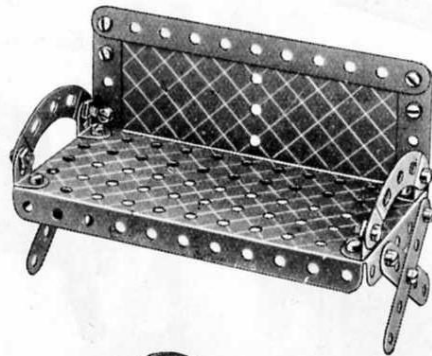
A37. Revolving Crane



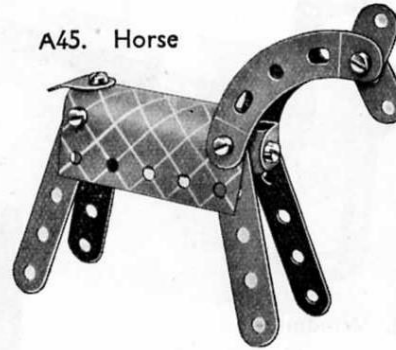
A39. Step Ladder



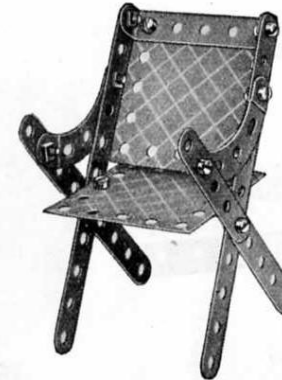
A42. Garden Seat



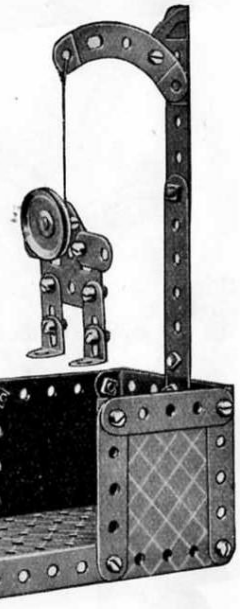
A45. Horse



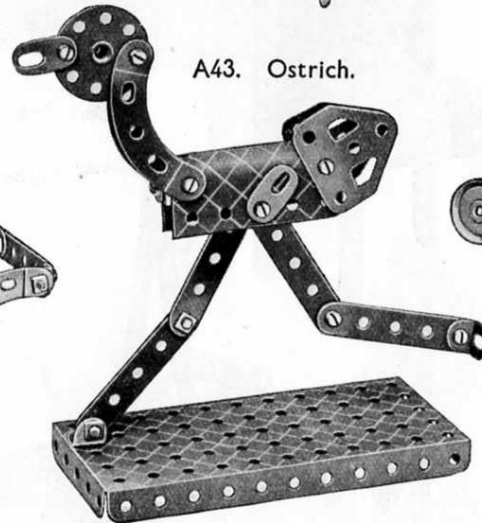
A48. Arm Chair



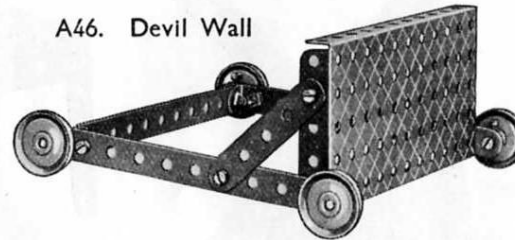
A49. Gallows



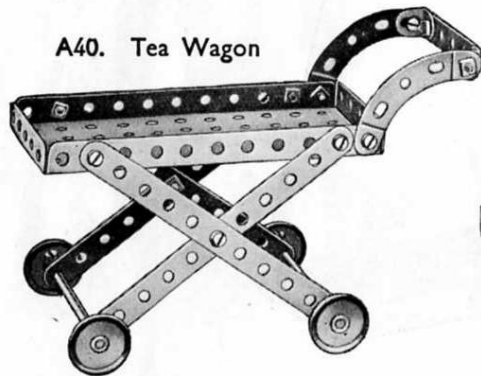
A43. Ostrich.



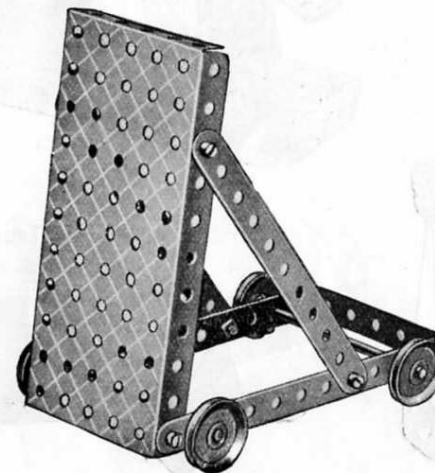
A46. Devil Wall



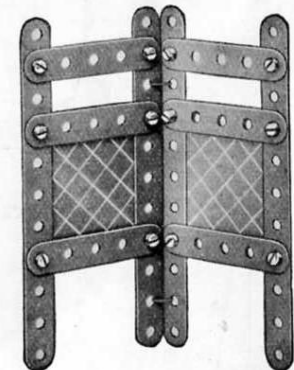
A40. Tea Wagon



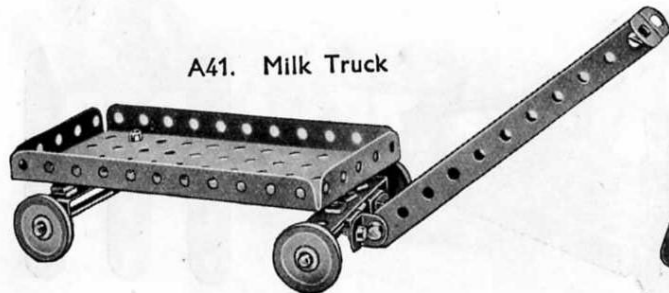
A47. Gravel Sifter



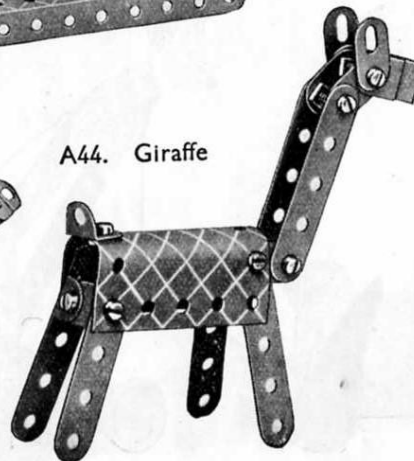
A50. Fire Screen



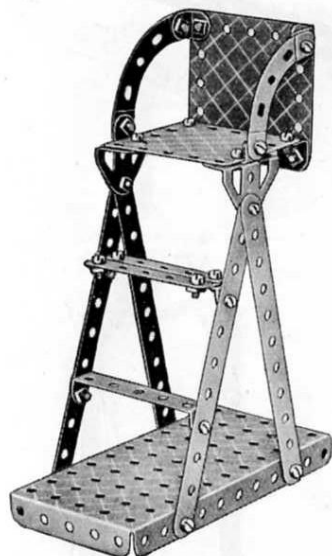
A41. Milk Truck



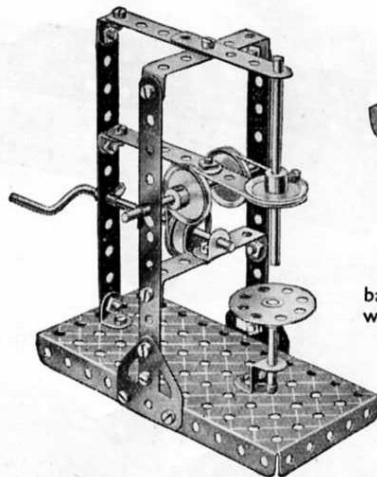
A44. Giraffe



A51. Umpire's Seat

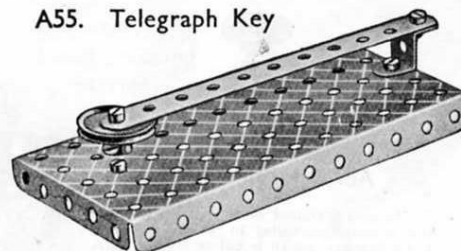


A52. Drilling Machine



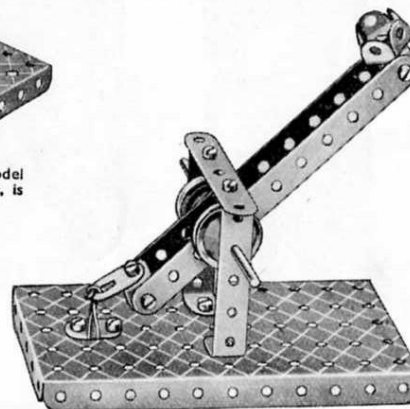
An alternative design of this model (A52M), fitted with the *Magic Motor*, is shown on page 9.

A55. Telegraph Key

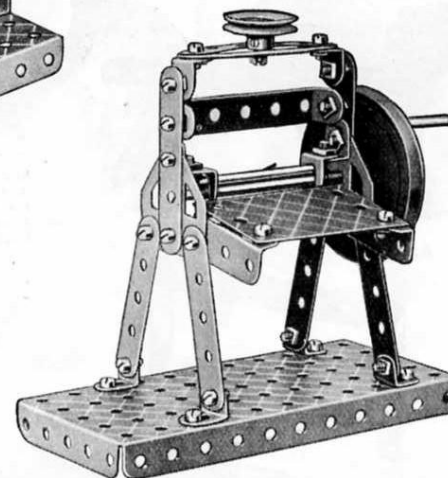


A56. Catapult

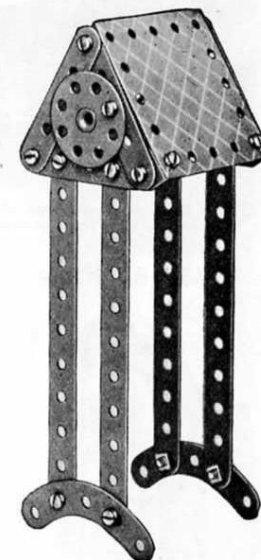
The pivoted arm is connected to the base by means of a short piece of elastic which is not provided in the Outfit.



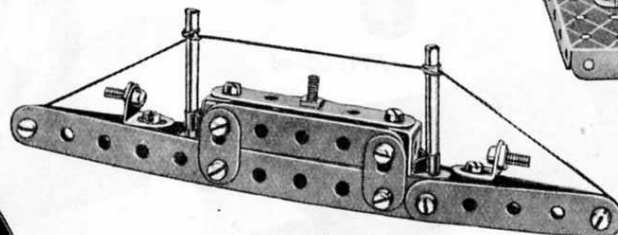
A58. Wringing Machine



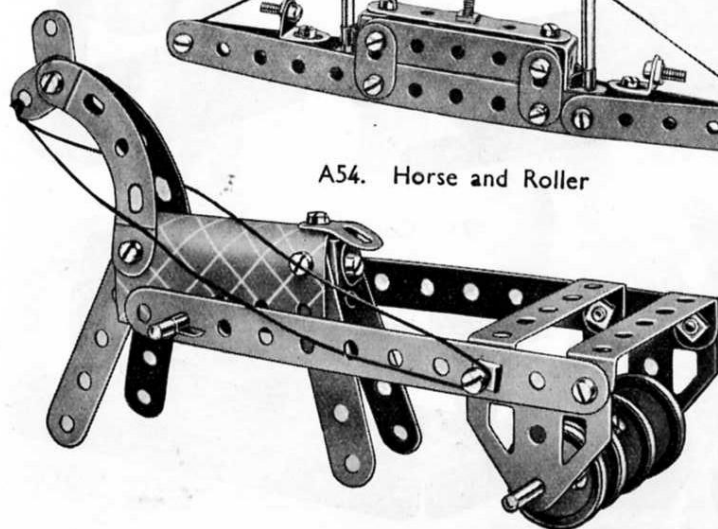
A60. Grandfather Clock



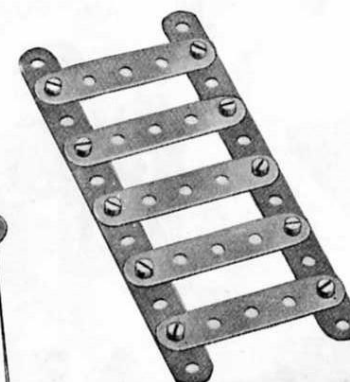
A53. Cruiser



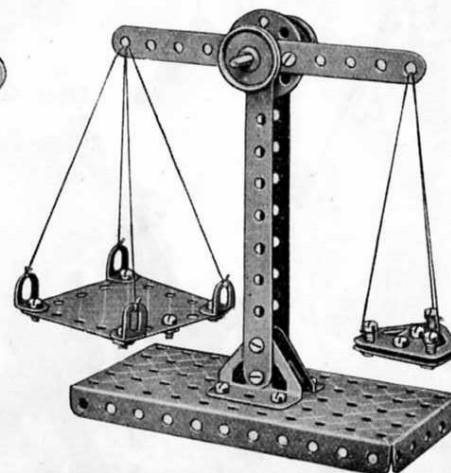
A54. Horse and Roller



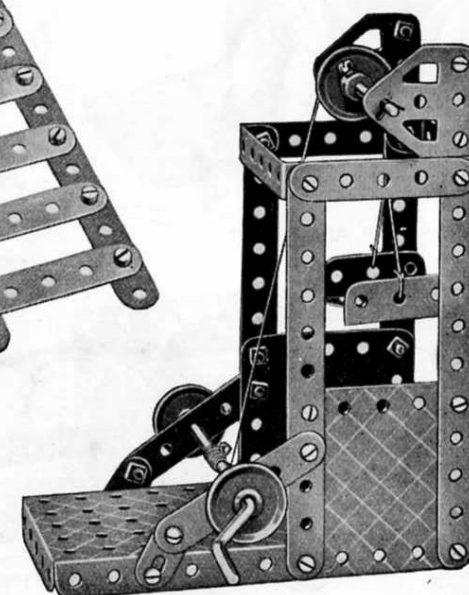
A59. Ladder



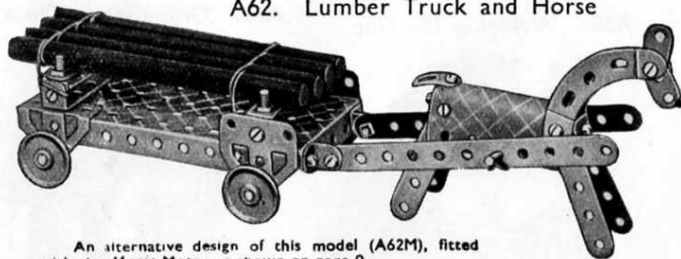
A57. Scales



A61. Pit-head Gear



A62. Lumber Truck and Horse



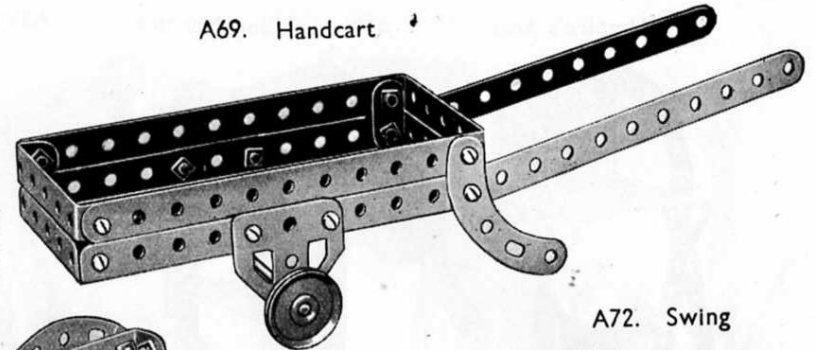
An alternative design of this model (A62M), fitted with the Magic Motor, is shown on page 9.

A67. Magic Plate

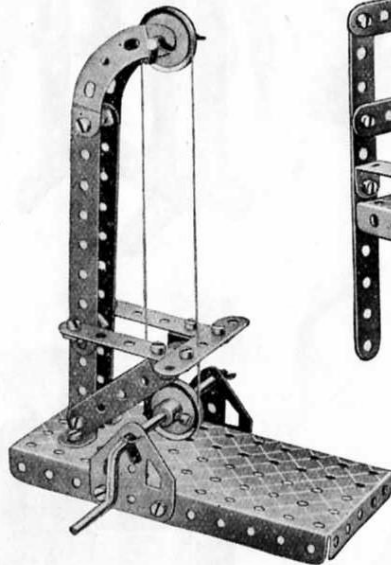
The cord is wound once round a 2" Axle Rod that is journaled in a $\frac{1}{2}$ " Reversed Angle Bracket, which is bolted to the Plate. If the cord is held loosely the Plate will drop, but as soon as the cord is tightened the Plate becomes immovable.



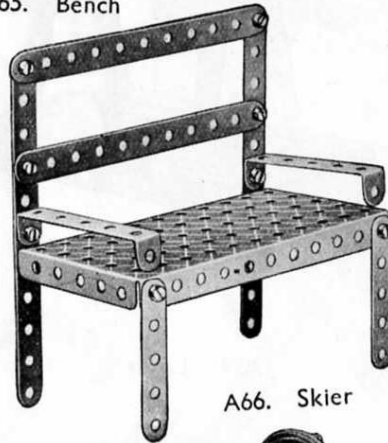
A69. Handcart



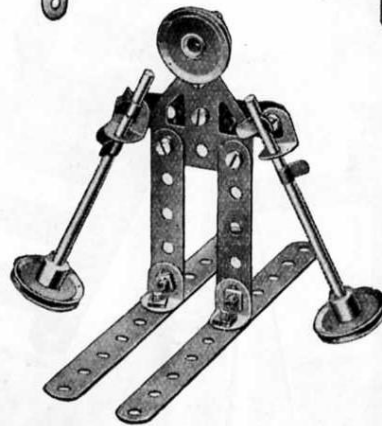
A63. Band Saw



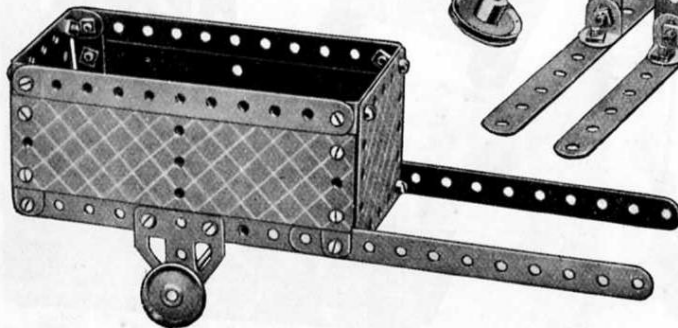
A65. Bench



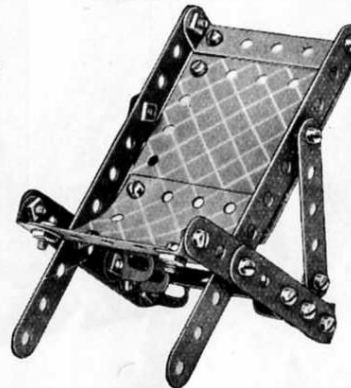
A66. Skier



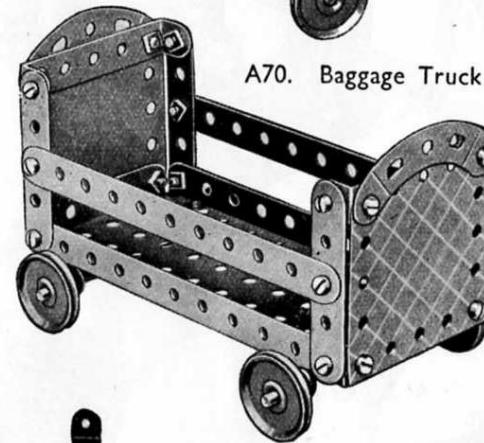
A64. Cart



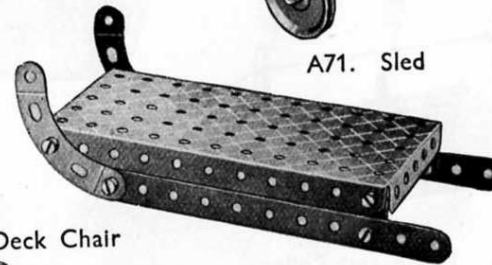
A68. Deck Chair



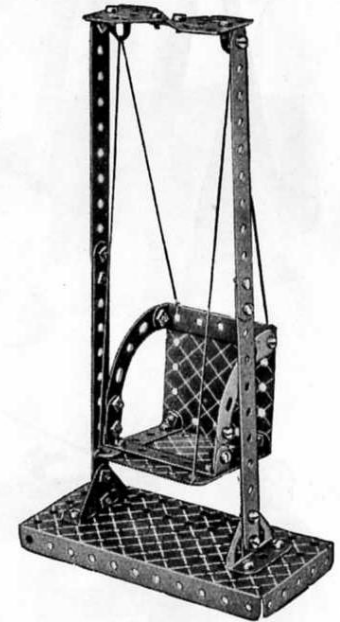
A70. Baggage Truck



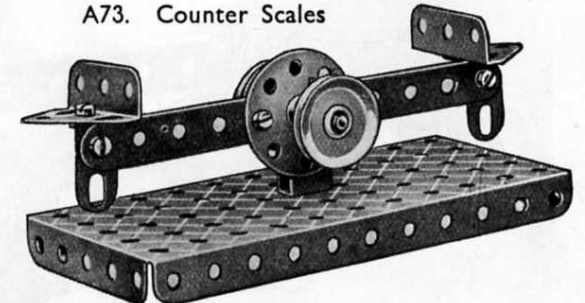
A71. Sled



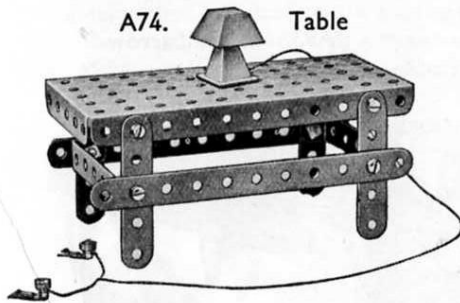
A72. Swing



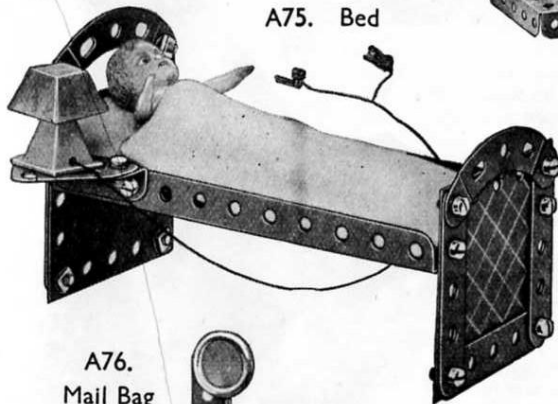
A73. Counter Scales



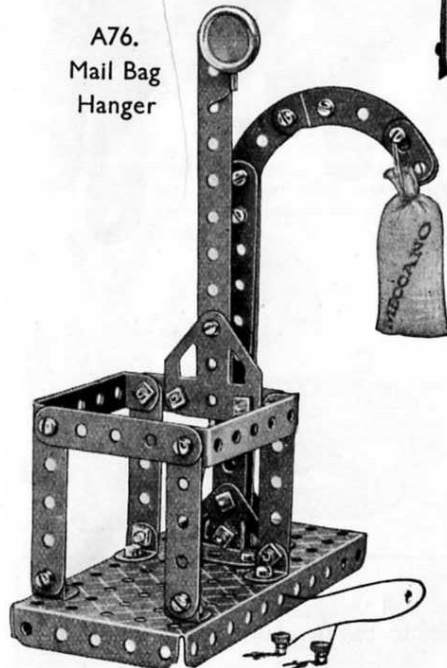
A74. Table



A75. Bed



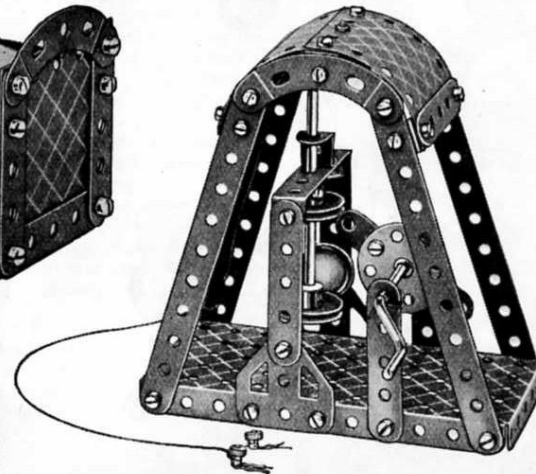
A76. Mail Bag Hanger



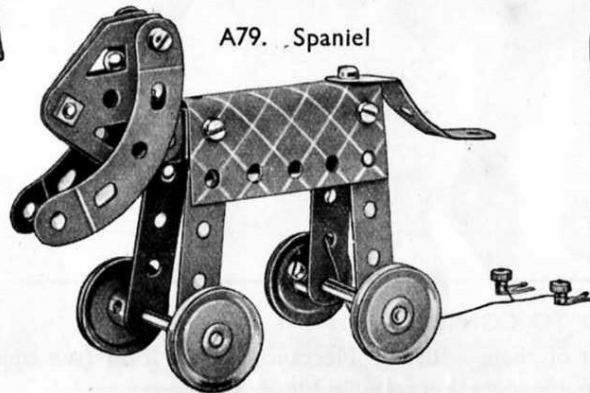
A77. Level Crossing Barrier



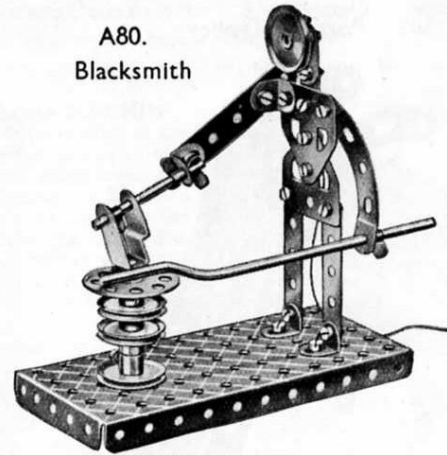
A78. Stamping Mill



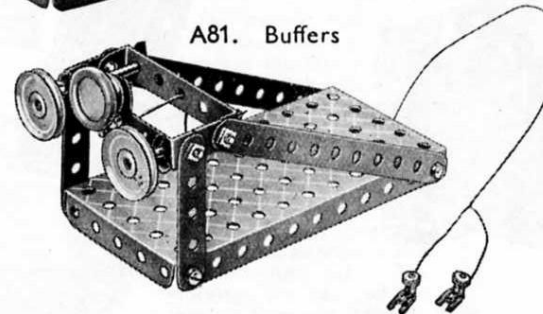
A79. Spaniel



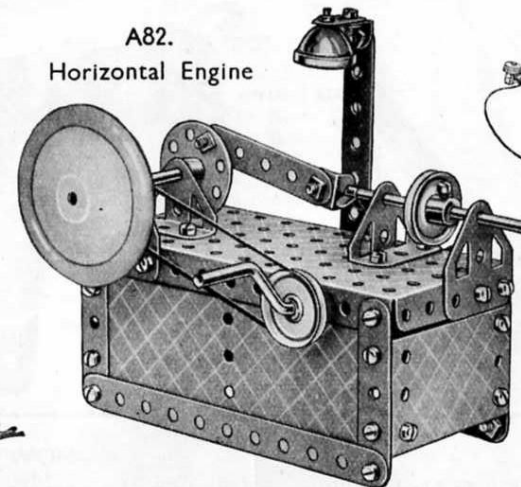
A80. Blacksmith



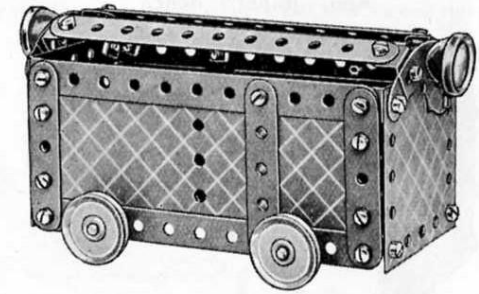
A81. Buffers



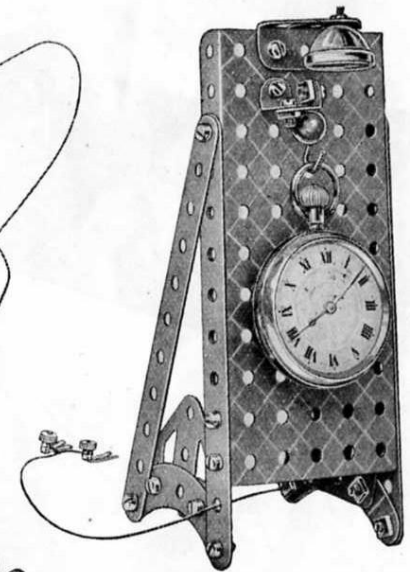
A82. Horizontal Engine



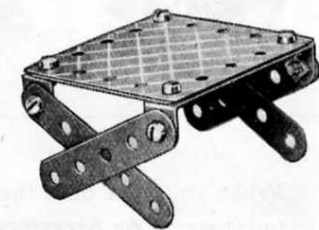
A83. Pullman Car



A84. Watch Stand



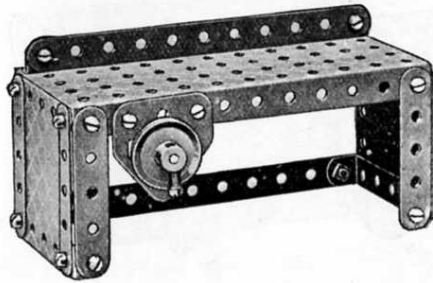
A85. Coffee Table



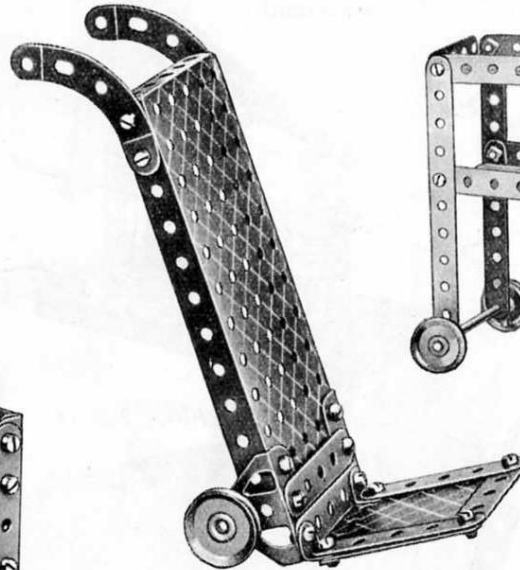
An alternative design of this model (A82M), fitted with the Magic Motor, is shown on page 9.

This page shows examples of the use of the Meccano Lighting Set, described on page 2 of cover

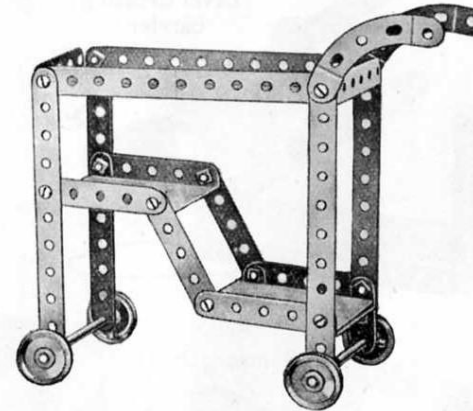
A86. Joiner's Bench



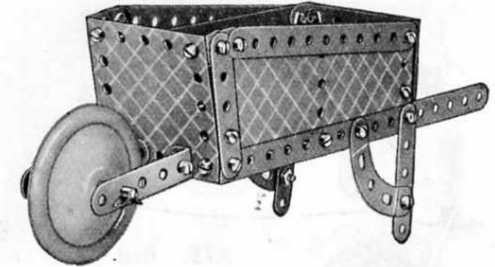
A89. Porter's Trolley



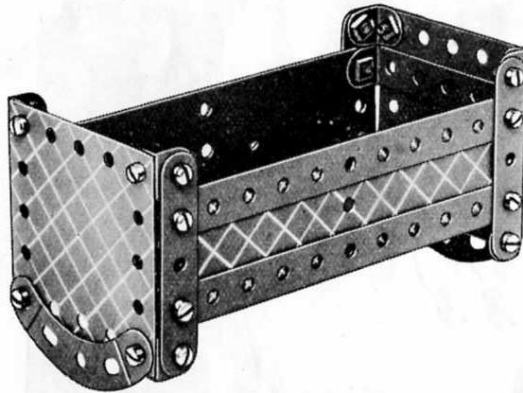
A91. Dinner Wagon



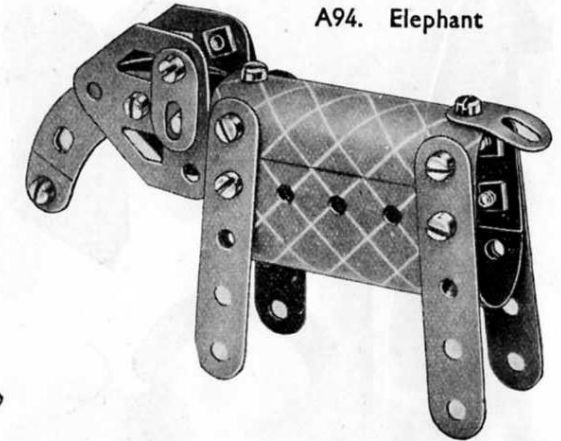
A93. Wheelbarrow



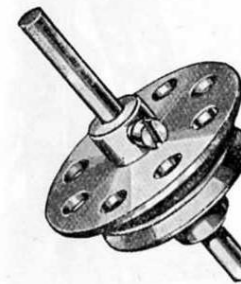
A87. Cot



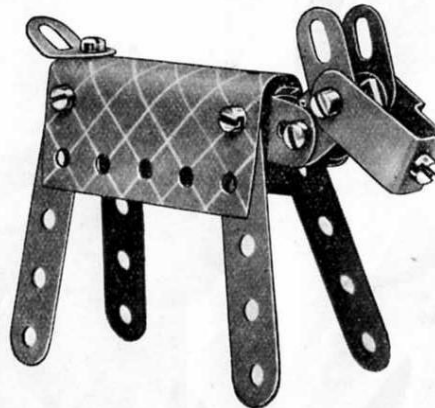
A94. Elephant



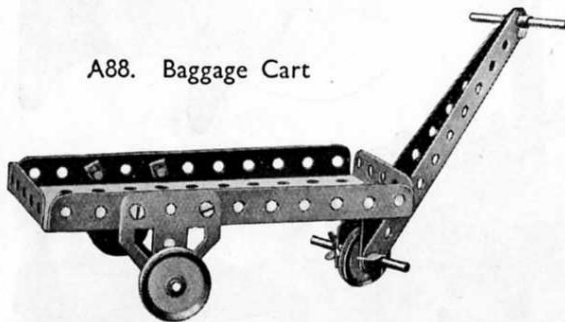
A92. Top



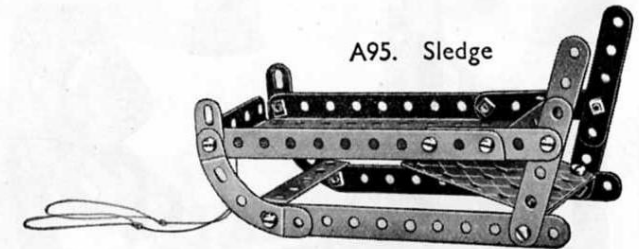
A90. Calf



A88. Baggage Cart



A95. Sledge



HOW TO CONTINUE

When you have built the A Outfit Models illustrated, and fitted a number of them with the Meccano *Magic Motor* (see opposite page), your next step is to purchase an Aa Accessory Outfit. This converts your A Outfit into a B 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 illustrations below show how the new Meccano *Magic Motor* can be fitted without any difficulty to Outfit A Models of various types. Fit the model you have just built with one of these wonderful Motors, and enjoy the fun of watching it work just like the real thing. Models A52M, A62M and A82M are more elaborate variations of Manual models A52, A62 and A82. Try your hand at re-designing other models in a similar manner, and become a real inventor.

A96. BREAKDOWN CRANE

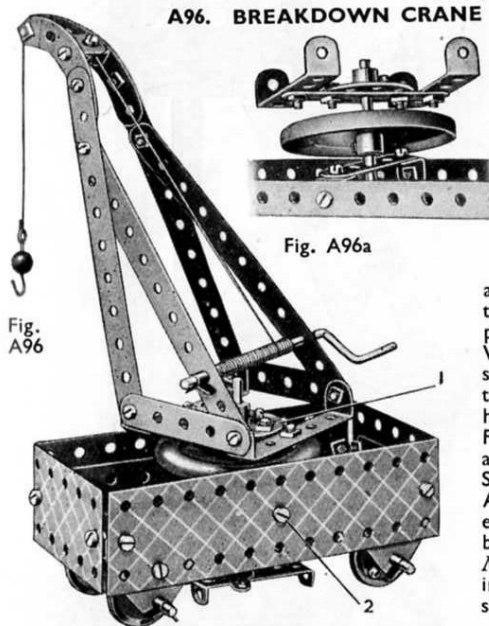


Fig. A96

Fig. A96a

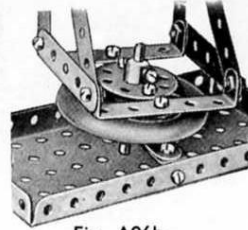


Fig. A96b

The crane swivels on an Axle Rod secured in the Bush Wheel 1 and passed through a Road Wheel before being inserted in a $2\frac{1}{2}$ " Strip and through the centre hole of a $5\frac{1}{2}$ " x $2\frac{1}{2}$ " Flanged Plate. The arrangement of the $2\frac{1}{2}$ " Strip can be seen in Fig. A96a, the Angle Brackets being fixed by the bolts 2 (Fig. A96). The *Magic Motor* is mounted in the same manner as shown in Fig. A62Ma.

A97. TRIP HAMMER

The hammer is pivoted at 1 on two Angle Brackets that are bolted through the slots to the centre hole of the $5\frac{1}{2}$ " Strip. A 2" Axle Rod passes through the Angle Brackets and is supported in Trunnions bolted to the Plate.

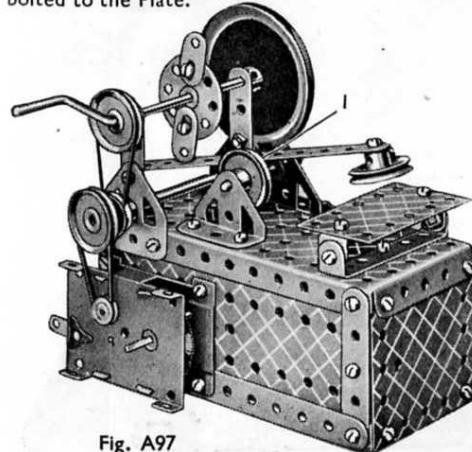


Fig. A97

A52M. DRILLING MACHINE

The drill Rod is journalled at the top in a Flat Bracket bolted to two Angle Brackets, and at its lower end in two Angle Brackets 1 that are bolted to a Strip attached to the vertical member of the drill. The drill table is supported by a $2\frac{1}{2}$ " x $\frac{1}{2}$ " Double Angle Strip 2. A Spring Clip retains the free Pulley 3 in place.

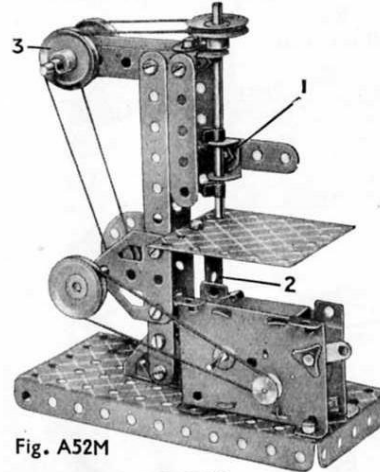


Fig. A52M

A82M. HORIZONTAL ENGINE

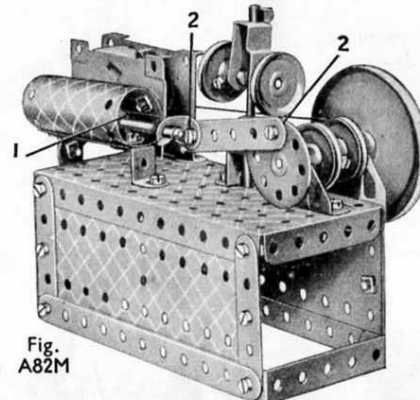


Fig. A82M

The cylinder is composed of a $2\frac{1}{2}$ " x $2\frac{1}{2}$ " Flexible Plate and a $2\frac{1}{2}$ " x $1\frac{1}{2}$ " Flexible Plate, and two Angle Brackets are bolted inside the cylinder to serve as guides for the piston rod. One of the Brackets is seen at 1. The bolts 2 are locknitted to form pivots.

A62M. LUMBER TRUCK AND HORSE

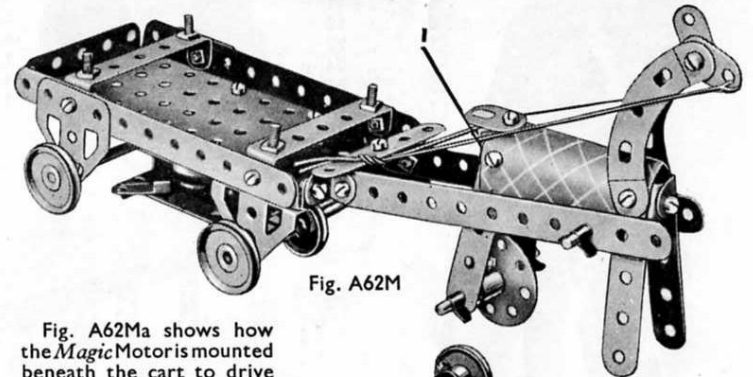


Fig. A62M

Fig. A62Ma shows how the *Magic Motor* is mounted beneath the cart to drive the front Wheels. The Pulley supplied with the Motor is mounted on the front Axle, and the rubber band should be fitted as shown. Two Angle Brackets secure the front legs of the horse, and this construction is duplicated at 1 for the hind legs. The forelegs are kept off the ground by means of the reins.

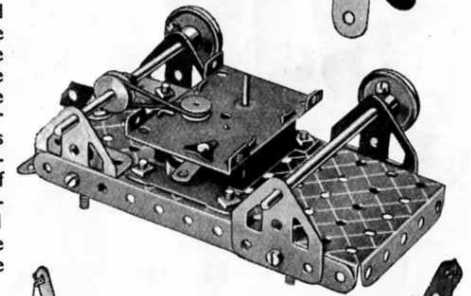


Fig. A62Ma

A98. ROUNDABOUT

Fig. A98a shows how the bearing for the vertical Rod is formed. The Rod is driven from the *Magic Motor* by means of a rubber band passed round the 1" Pulley and round the Motor Pulley as can be seen in Fig. A98.

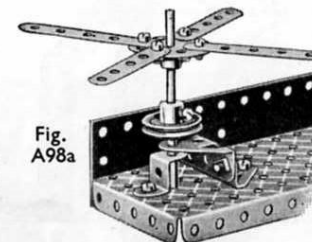


Fig. A98a

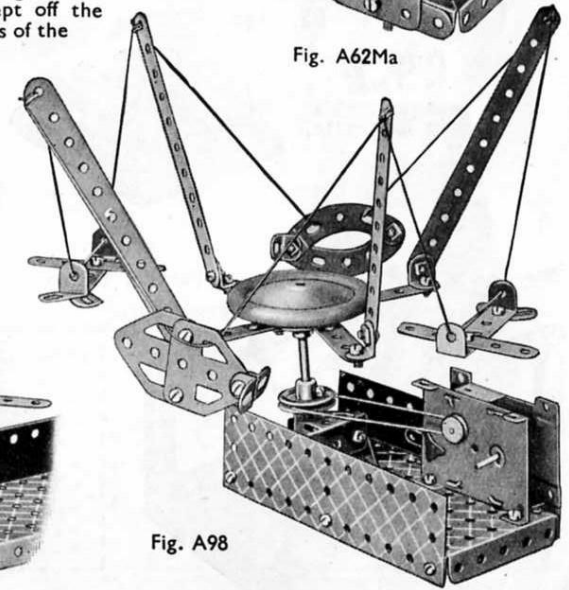


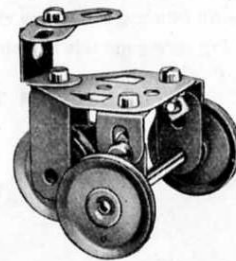
Fig. A98

B1. Man and Boy



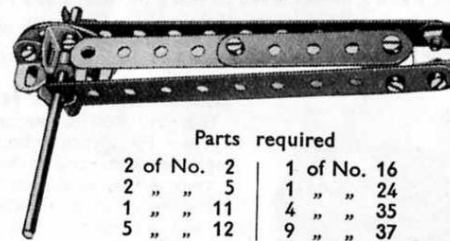
Parts required	
4 of No. 2	
2 " " 5	
5 " " 10	
1 " " 11	
8 " " 12	
1 " " 22	
1 " " 24	
25 " " 34	
1 " " 52	
2 " " 54a	
1 " " 90a	
2 " " 111c	
2 " " 125	
1 " " 126a	

B4. Tricycle



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

B7. Rattle

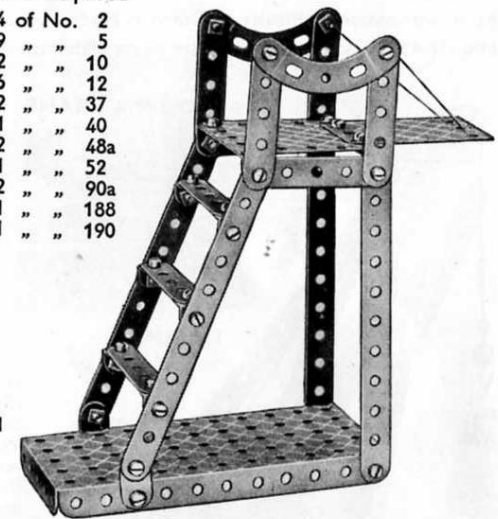


Parts required	
2 of No. 2	1 of No. 16
2 " " 5	1 " " 24
1 " " 11	4 " " 35
5 " " 12	9 " " 37

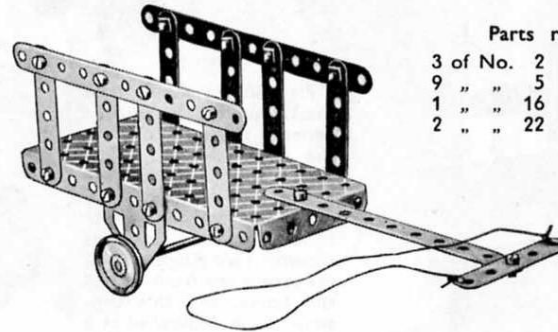
Parts required

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

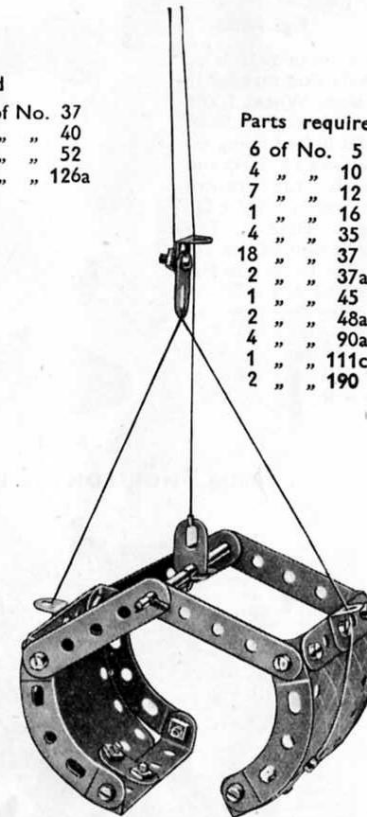


B5. Bullock Cart



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

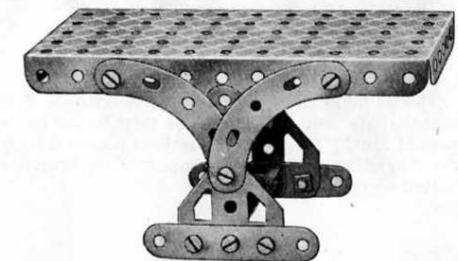
B8. Crane Grab



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

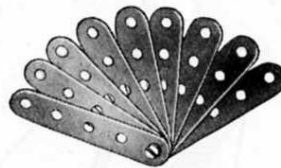
B10. Drafting Table

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

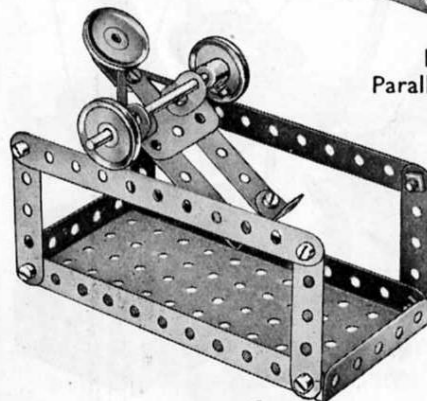


B2. Fan

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	

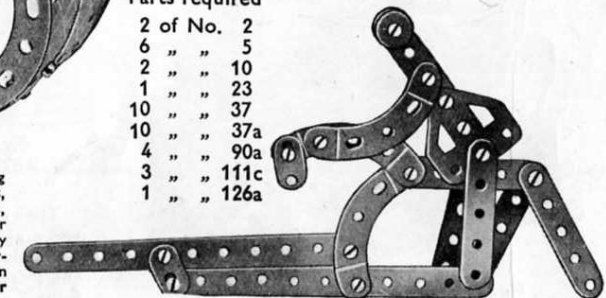
B6. Walking Man



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

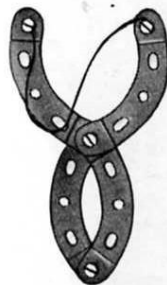
The $\frac{3}{8}$ " Bolts used for connecting the $\frac{5}{16}$ " Strips, the horse's legs, and the rider's legs and arms, are all locknutted. The lower $\frac{5}{16}$ " Strip should be held rigidly and the upper one jerked forward; the horse will then throw its rider completely over its head.

B11. Bucking Broncho



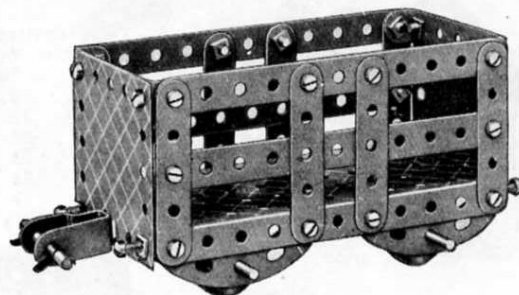
Parts required	
2 of No. 2	
6 " " 5	
2 " " 10	
1 " " 23	
10 " " 37	
10 " " 37a	
4 " " 90a	
3 " " 111c	
1 " " 126a	

B12. Catapult



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

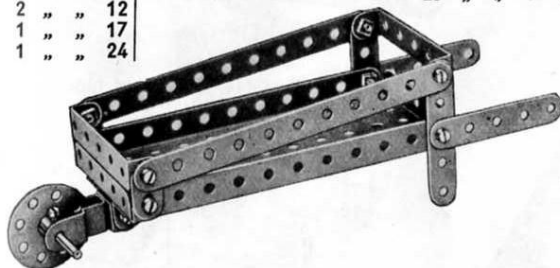
B15. Cattle Truck



Parts required	
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

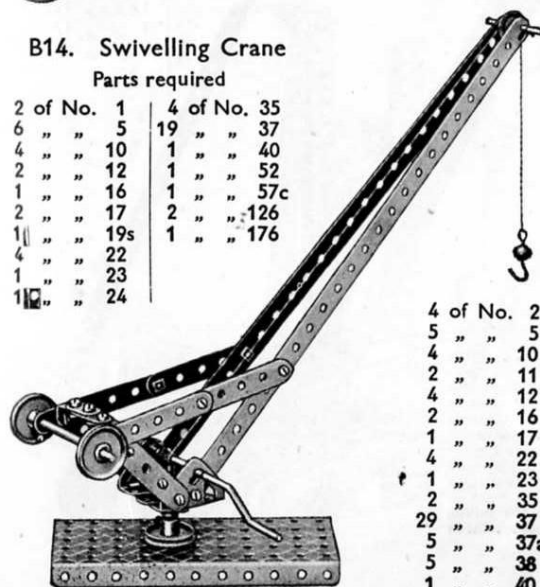
B13. Coster's Barrow

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

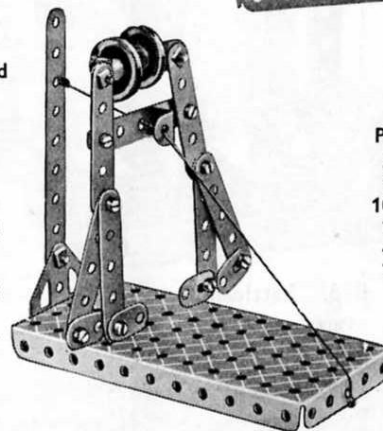
Parts required	
2 of No. 1	4 of No. 35
6 " " 5	19 " " 37
4 " " 10	1 " " 40
2 " " 12	1 " " 52
1 " " 16	1 " " 57c
2 " " 17	2 " " 126
1 " " 19s	1 " " 176
4 " " 22	
1 " " 23	
1 " " 24	



Parts required	
4 of No. 2	
5 " " 5	
4 " " 10	
2 " " 11	
4 " " 12	
2 " " 16	
1 " " 17	
4 " " 22	
1 " " 23	
2 " " 35	
29 " " 37	
5 " " 37a	
5 " " 38	
1 " " 40	

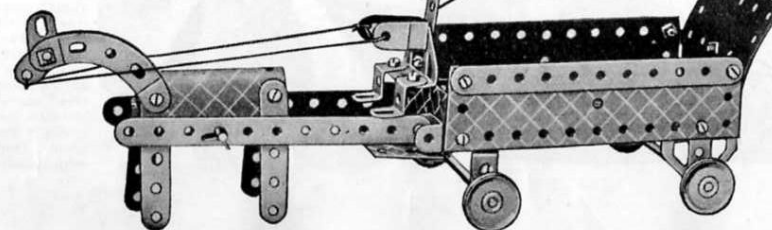
B16. Wrestlers

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

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



The fun is greatly increased if this model is fitted with a Meccano Magic Motor. The method of incorporating this motor is shown on page 9 (Model A62M). If the Motor is fitted, a Bush Wheel should be mounted on a 2" Rod fitted between the hind legs of the horse. The 2 1/2" Strip 1 forming the driver's body is bolted to the centre hole of the end flange of the Plate.

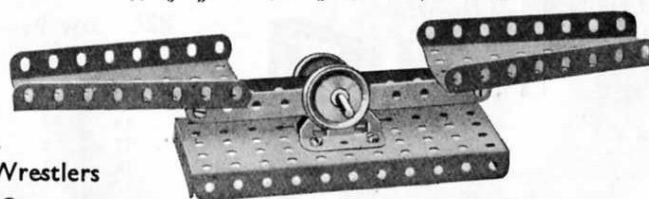
B18. Single Sheave Pulley Block



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

B19. Scales

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



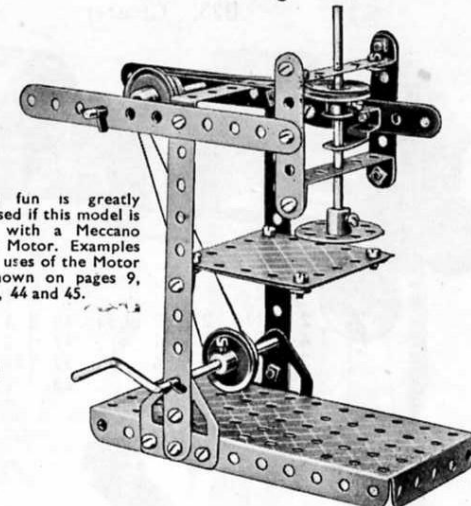
B20. Card Table

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



B17. Hay Cart

B21. Drilling Machine

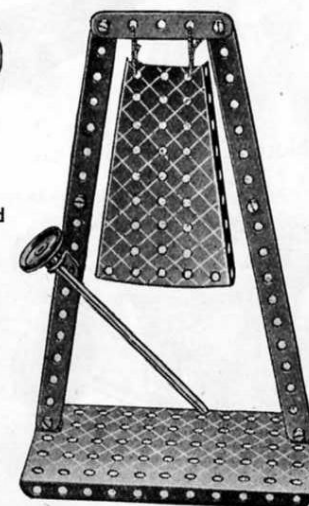


The fun is greatly increased if this model is fitted with a Meccano Magic Motor. Examples of the uses of the Motor are shown on pages 9, 24, 25, 44 and 45.

Parts required

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

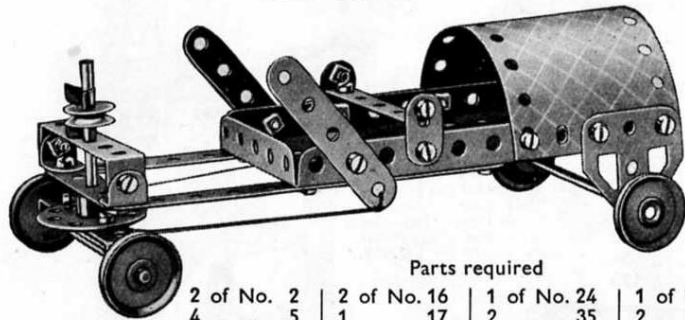
B22. Gong



Parts required

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

B23. Coaster



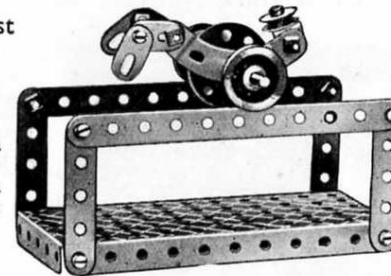
Parts required

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

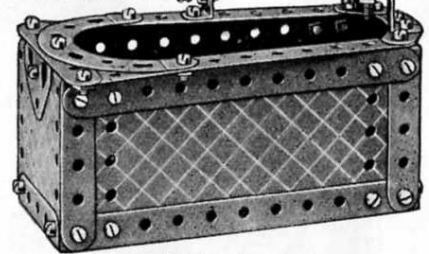
2 of No. 2	1 of No. 24
4 " " 5	13 " " 37
4 " " 10	1 " " 37a
1 " " 12	1 " " 52
1 " " 16	1 " " 90a
2 " " 22	1 " " 111c
1 " " 23	



B29. Bath with Shower

Parts required

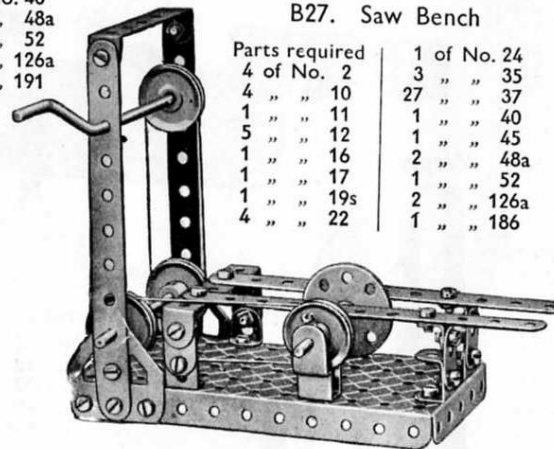
4 of No. 2	1 of No. 52
7 " " 5	4 " " 90a
1 " " 10	5 " " 111c
8 " " 12	2 " " 125
1 " " 22	1 " " 126
1 " " 23	2 " " 190
1 " " 24	2 " " 191
36 " " 37	
4 " " 37a	



B27. Saw Bench

Parts required

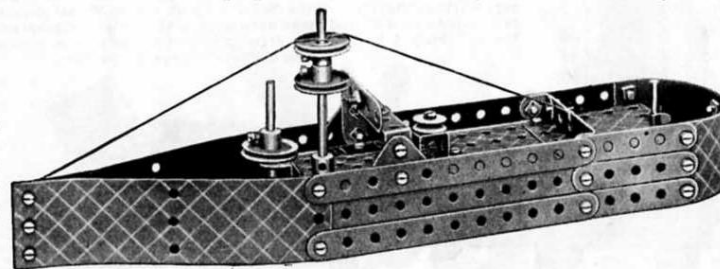
4 of No. 2	1 of No. 24
4 " " 10	3 " " 35
1 " " 11	27 " " 37
5 " " 12	1 " " 40
1 " " 16	1 " " 45
1 " " 17	2 " " 48a
1 " " 19s	1 " " 52
4 " " 22	2 " " 126a
	1 " " 186



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		

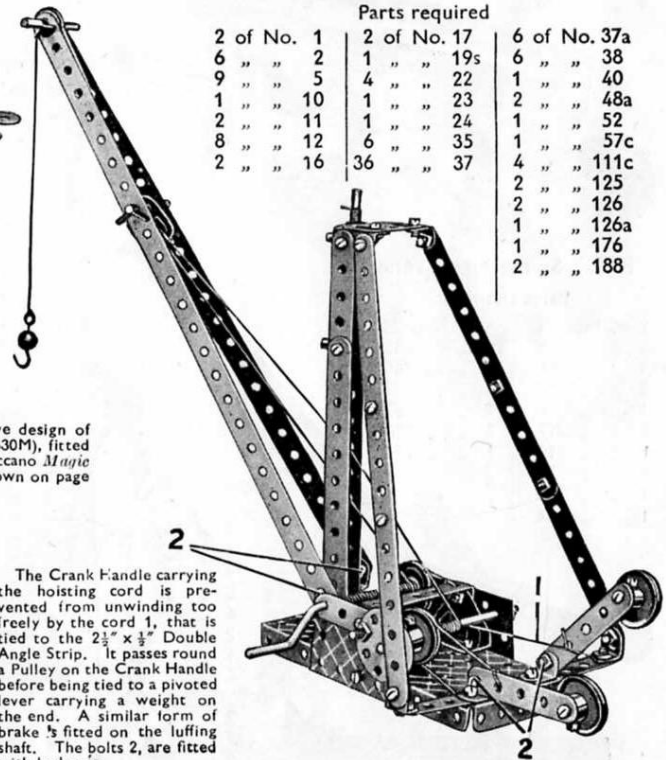


An alternative design of this model (B30M), fitted with the Meccano *Magic* Motor, is shown on page 25.

B30. Derrick Crane

Parts required

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

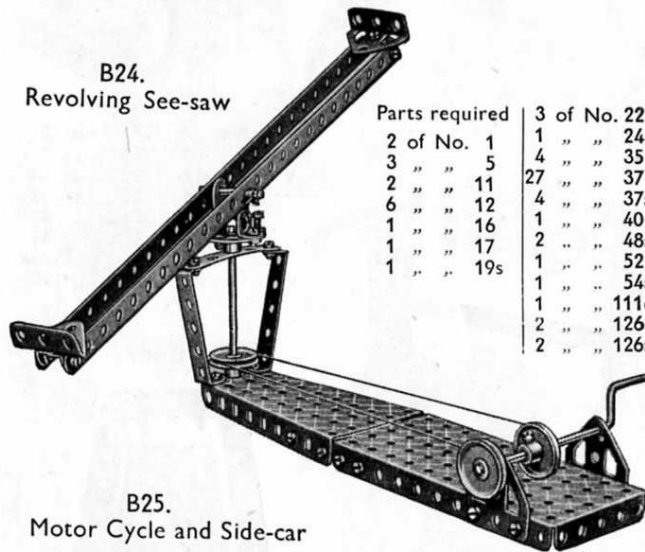


The Crank Handle carrying the hoisting cord is prevented from unwinding too freely by the cord 1, that is tied to the $2\frac{1}{2} \times \frac{1}{2}$ " Double Angle Strip. It passes round a Pulley on the Crank Handle before being tied to a pivoted lever carrying a weight on the end. A similar form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

B24. Revolving See-saw

Parts required

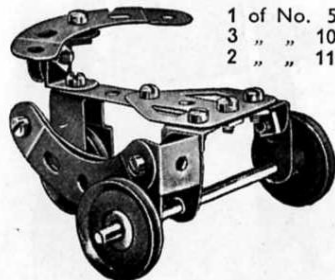
3 of No. 22
1 " " 24
4 " " 35
27 " " 37
4 " " 37a
1 " " 40
2 " " 48a
1 " " 52
1 " " 54a
1 " " 111c
2 " " 126
2 " " 126a



B25. Motor Cycle and Side-car

Parts required

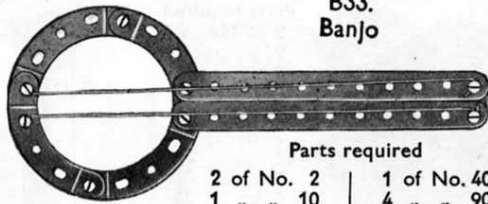
1 of No. 5	2 of No. 12
3 " " 10	1 " " 16
2 " " 11	3 " " 22
	1 " " 23
	10 " " 37
	2 " " 37a
	1 " " 44
	3 " " 90a
	2 " " 111c
	1 " " 126a



B31. Arm Chair



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

B33.
Banjo

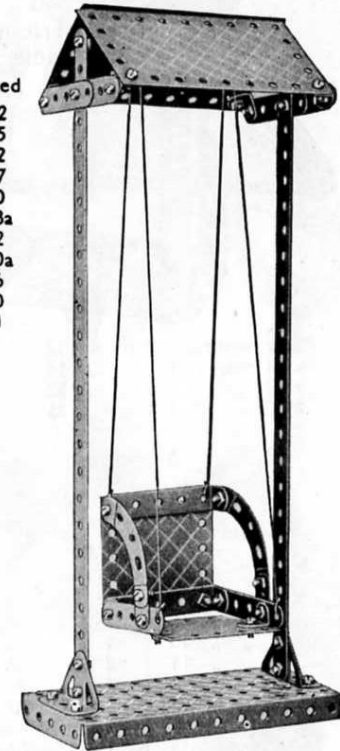
Parts required	
2 of No. 2	1 of No. 40
1 " " 10	4 " " 90a
8 " " 37	

B36.
Rocking Horse

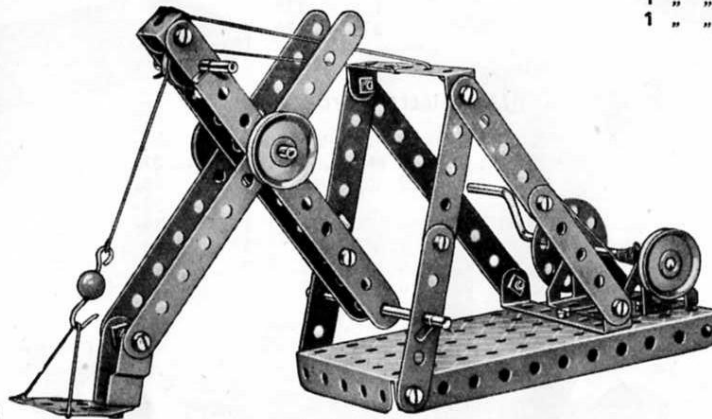
Parts required	
9 of No. 5	
4 " " 10	
6 " " 12	
1 " " 23	
17 " " 37	
8 " " 37a	
1 " " 40	
4 " " 90a	
5 " " 111c	
1 " " 126a	
1 " " 190	

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	

B38. Swing

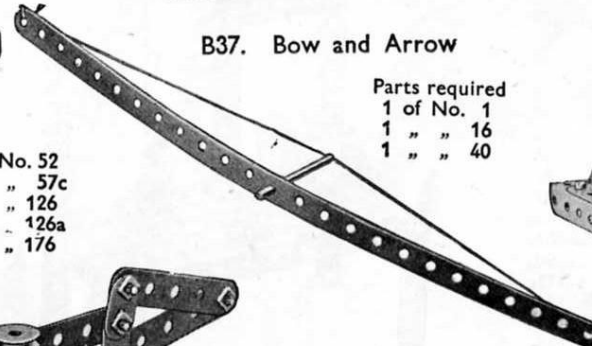


B34. Mechanical Shovel



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

B37. Bow and Arrow

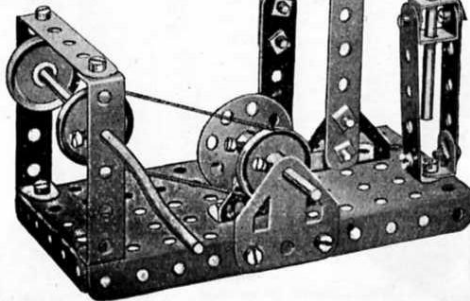


Parts required	
1 of No. 1	
1 " " 16	
1 " " 40	

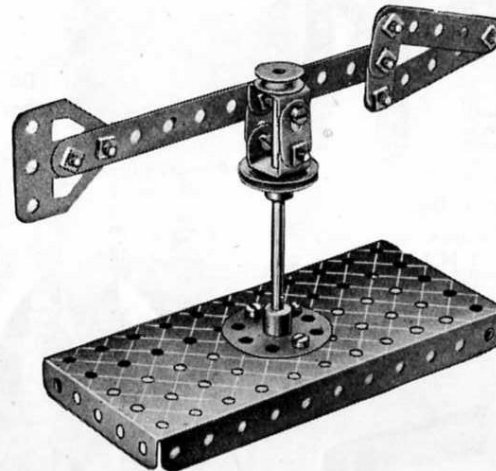
B32. Pump

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

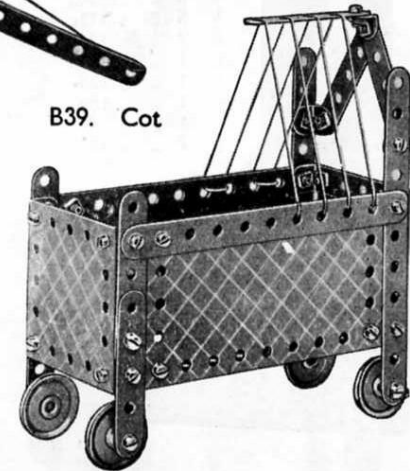
An alternative design of this model (B32M), fitted with the Meccano Magic Motor, is shown on page 25.

B35
Weather
Vane

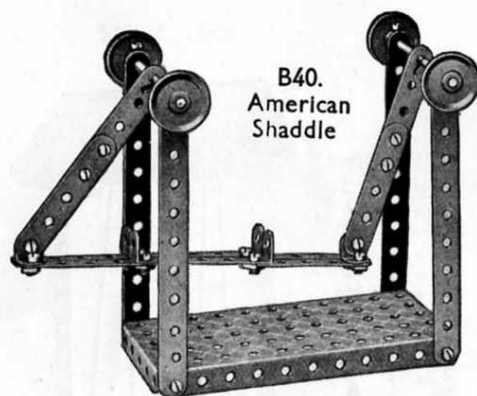
Parts required	
1 of No. 2	
2 " " 5	
4 " " 10	
2 " " 11	
1 " " 16	
1 " " 22	
1 " " 23	
1 " " 24	
12 " " 37	
1 " " 52	
1 " " 126a	



B39. Cot



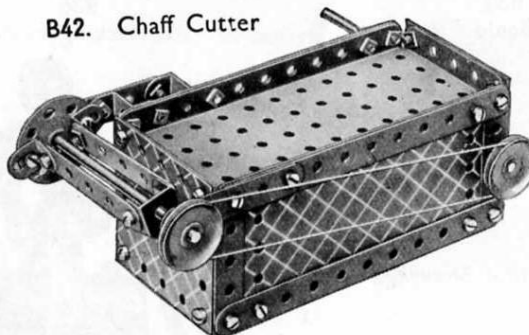
Parts required	
4 of No. 2	
7 " " 5	
3 " " 12	
4 " " 22	
30 " " 37	
1 " " 40	
2 " " 48a	
1 " " 52	
4 " " 111c	
2 " " 190	
2 " " 191	



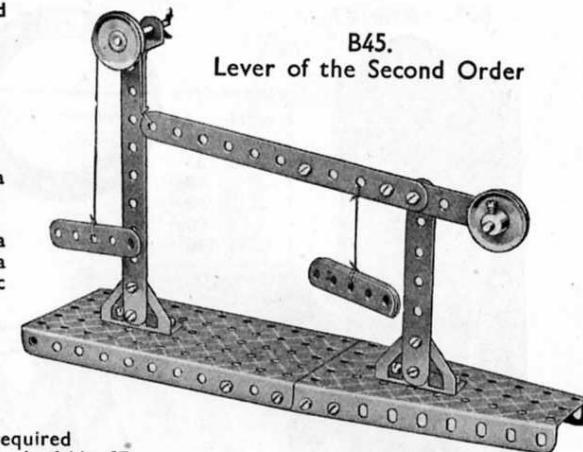
B40.
American
Shackle

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	



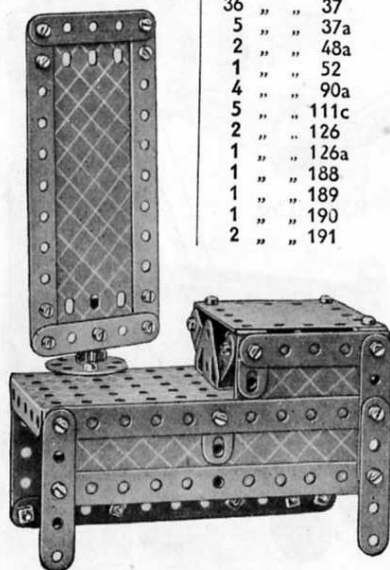
B45.
Lever of the Second Order

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

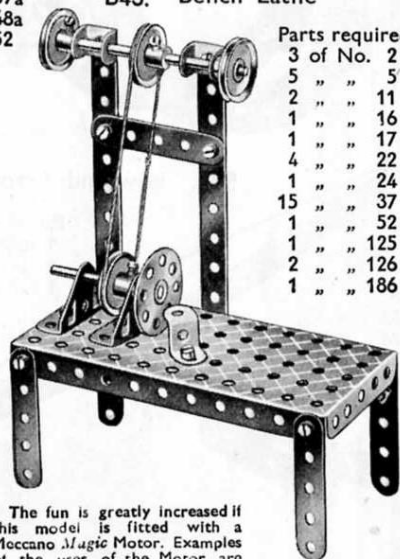
B41.
Modern Dressing Table

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

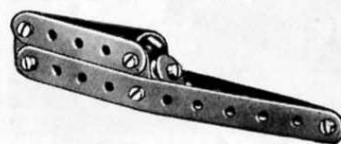


Parts required	
3 of No. 2	
5 " " 5	
2 " " 11	
1 " " 16	
1 " " 17	
4 " " 22	
1 " " 24	
15 " " 37	
1 " " 52	
1 " " 125	
2 " " 126	
1 " " 186	

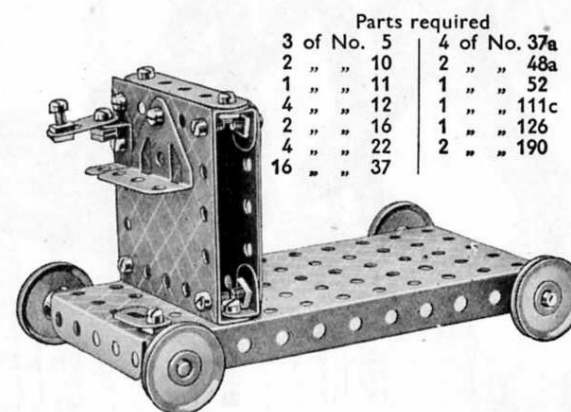
The fun is greatly increased if this model is fitted with a Meccano Magic Motor. Examples of the uses of the Motor are shown on pages 9, 24, 25, 44 and 45.

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



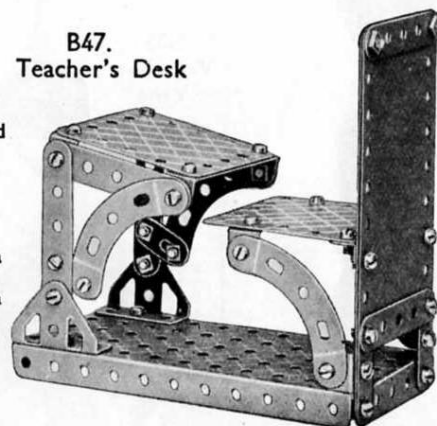
B46. Electric Trolley



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	

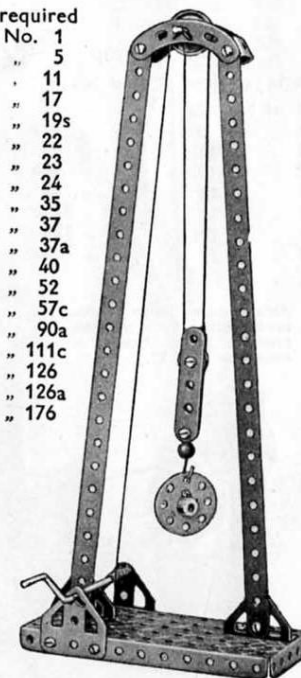
B47.
Teacher's Desk

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	

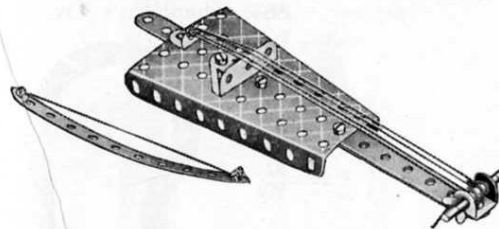


B48. Pulley Block

Parts required	
2 of No. 1	
2 " " 5	
1 " " 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	



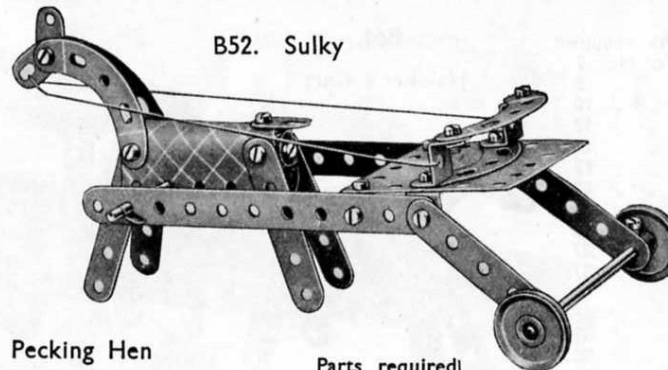
B49. Violin and Bow



Parts required

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

B52. Sulky



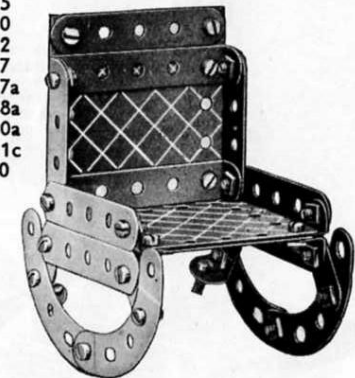
Parts required

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

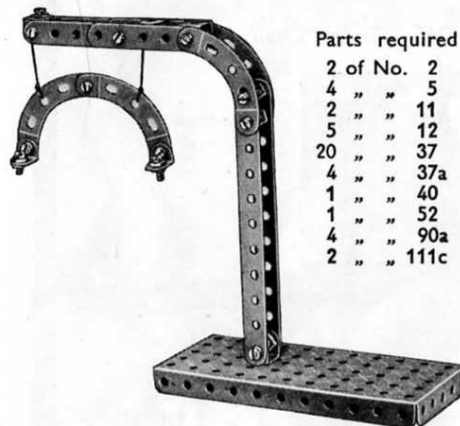
B56. Rocking Chair

Parts required

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



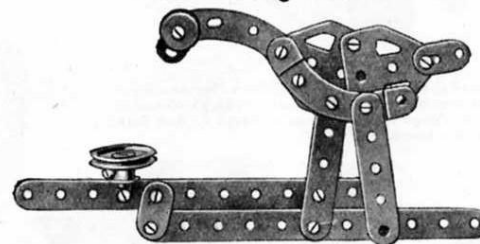
B50. Loading Gauge



Parts required

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

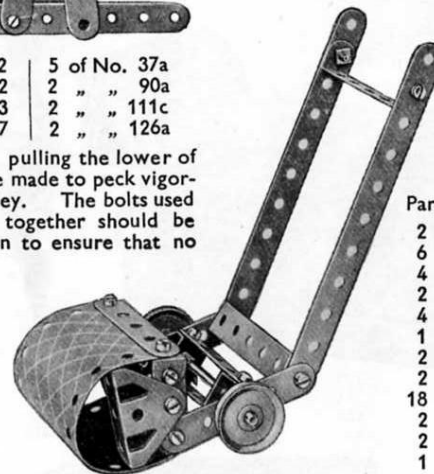
B53. Pecking Hen



Parts required	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 locknitted, care being taken to ensure that no "side play" is permitted.

B54. Grass Cutter



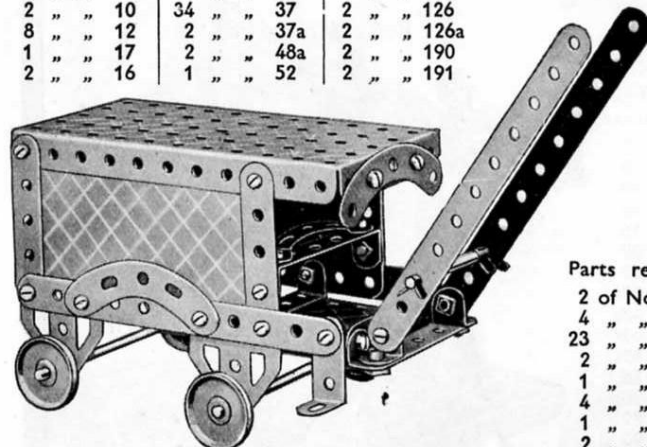
Parts required

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

B51. Bread Van

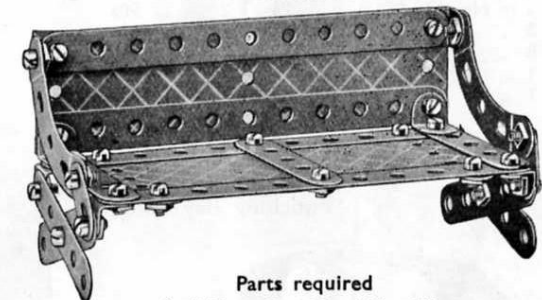
Parts required

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



An alternative design of this model (B51M), fitted with the Meccano Magic Motor, is shown on page 25.

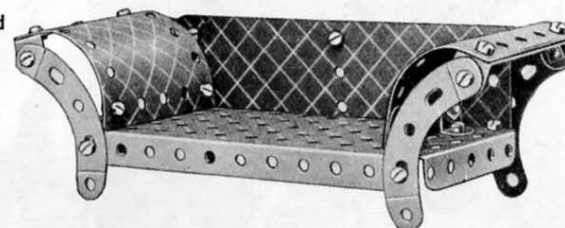
B57. Station Seat



Parts required

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

B55. Couch



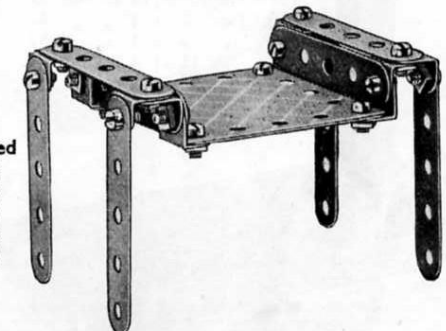
Parts required

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

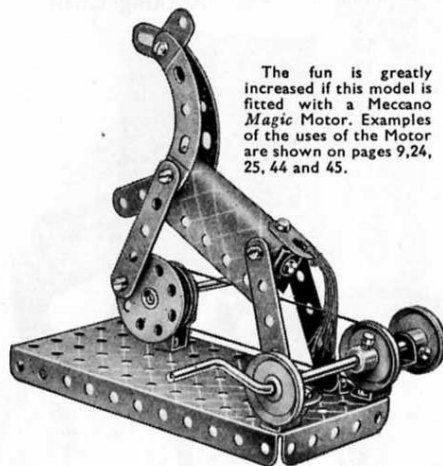
Parts required

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

B58. Stool for Dressing Table

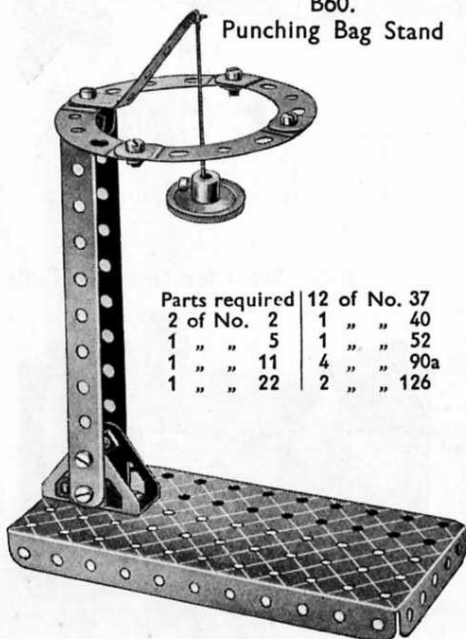


B59. Prancing Horse



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

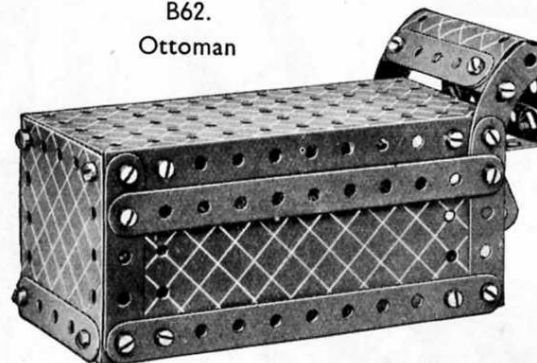
B60. Punching Bag Stand



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

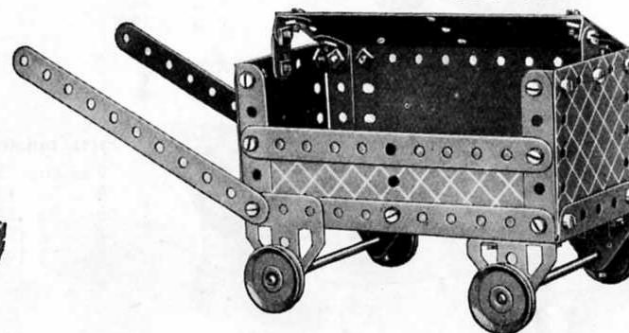
Parts required
4 of No. 2
8 " " 5
4 " " 10
8 " " 12
2 " " 16
1 " " 17
4 " " 22
1 " " 23
4 " " 35
35 " " 37
4 " " 37a
1 " " 40
2 " " 48a
1 " " 52
2 " " 90a
2 " " 111c
2 " " 125
2 " " 126
2 " " 126a
1 " " 190
1 " " 191

B62. Ottoman



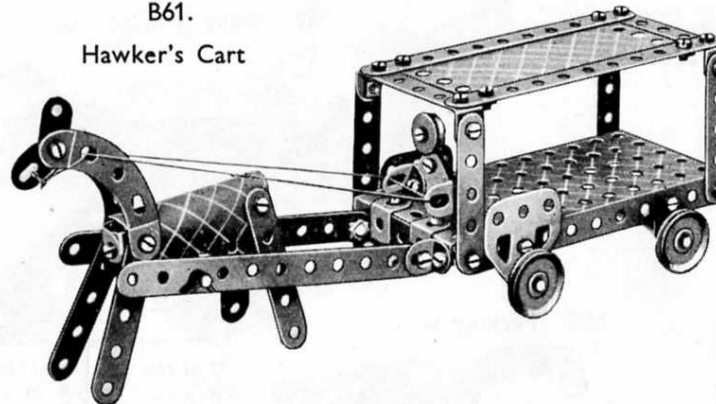
Parts required
4 of No. 2
7 " " 5
2 " " 10
2 " " 11
4 " " 12
34 " " 37
1 " " 48a
1 " " 52
2 " " 90a
2 " " 190
2 " " 191

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

B61. Hawker's Cart

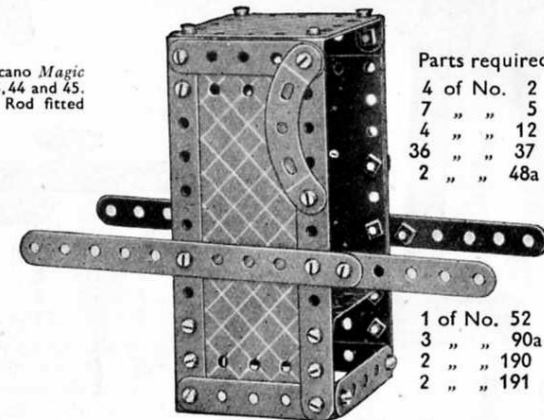


B64. Shepherd's Crook

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



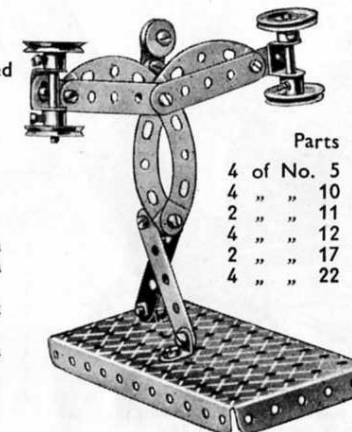
B65. Sedan Chair



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

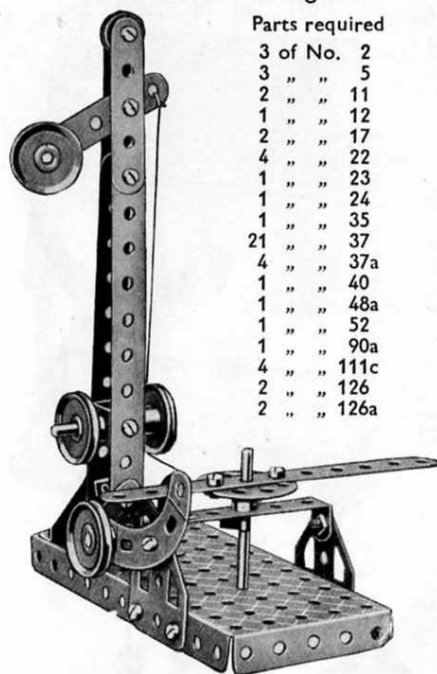
1 of No. 52
3 " " 90a
2 " " 190
2 " " 191

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

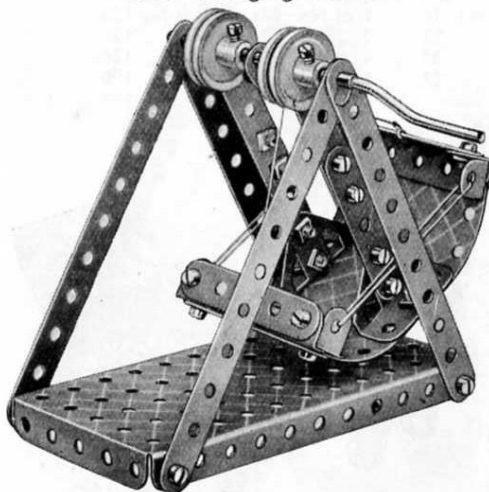


Parts required

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

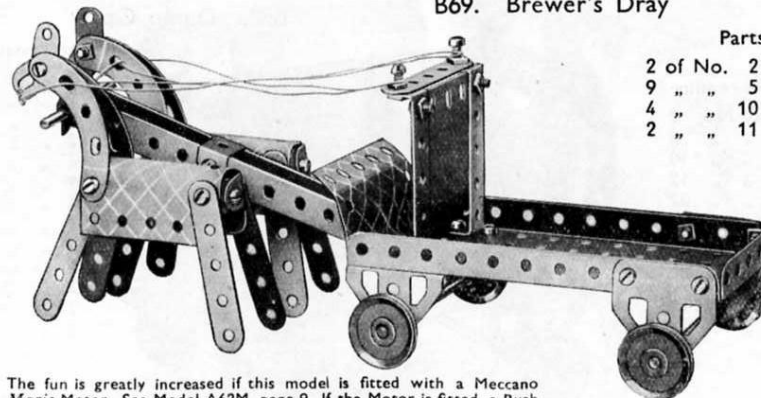
B68. Swinging Boat



Parts required

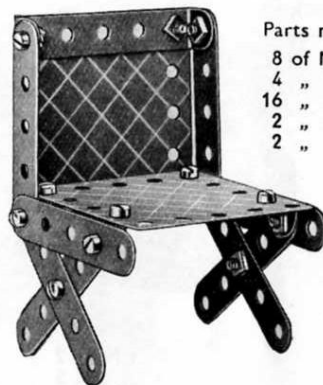
4 of No.	2
8 "	5
1 "	10
4 "	12
1 "	19s
4 "	22
6 "	35
22 "	37
4 "	37a
1 "	40
2 "	48a
1 "	52
2 "	126
1 "	191

B69. Brewer's Dray



The fun is greatly increased if this model is fitted with a Meccano Magic Motor. See Model A62M, page 9. If the Motor is fitted, a Bush Wheel should be mounted on a 2in. Rod fitted between the inner hind legs of the two horses.

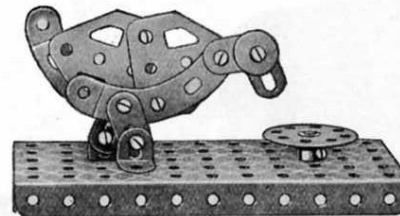
B70. Chair



Parts required

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

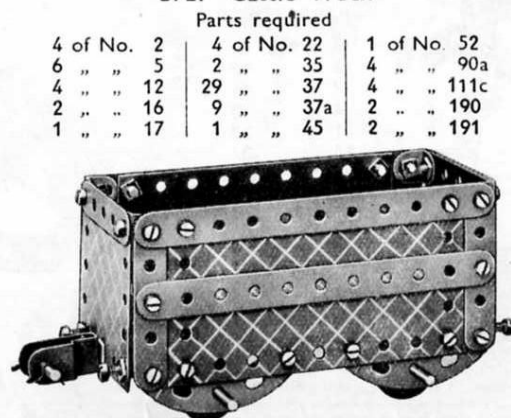
B71. Goose



Parts required

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

B72. Cattle Truck



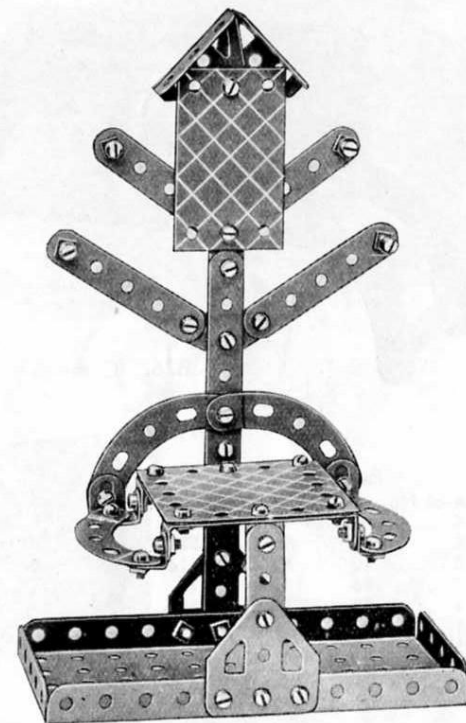
Parts required

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

Parts required

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

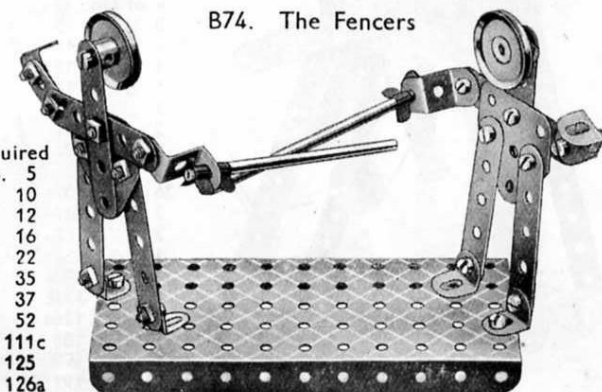
B73. Hat Rack



Parts required

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

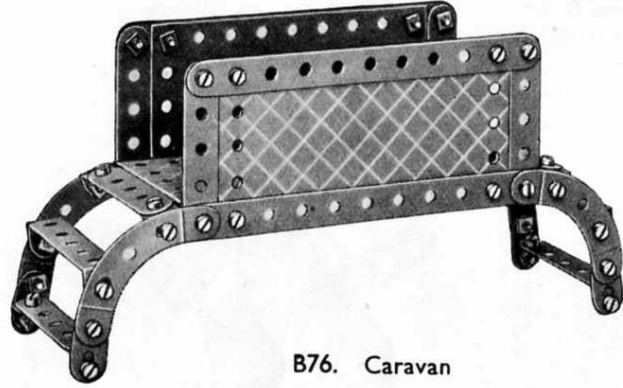
B74. The Fencers



Parts required

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

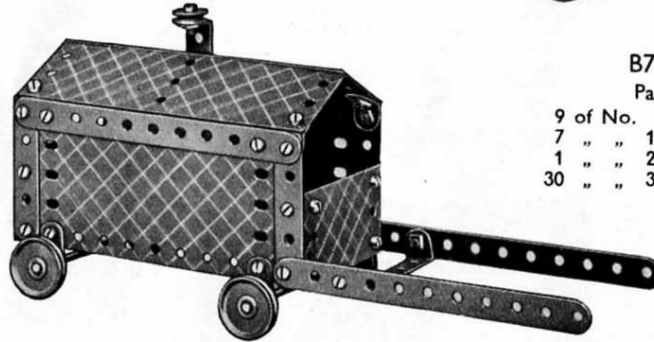
B75. Footbridge



Parts required

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

B76. Caravan



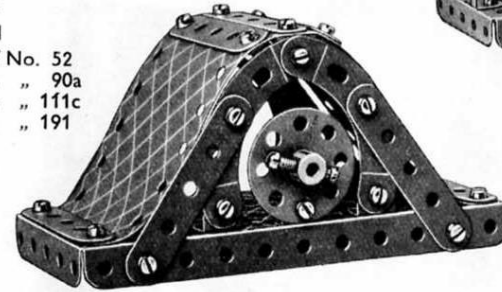
Parts required

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

B79. Clock

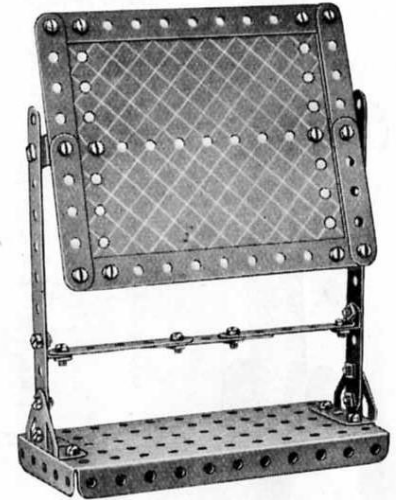
Parts required

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. The method of incorporating the Motor is shown on page 9 (Model A62M)

B81. School Blackboard



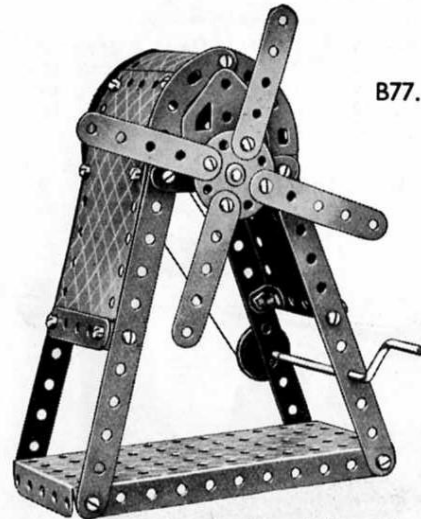
Parts required

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

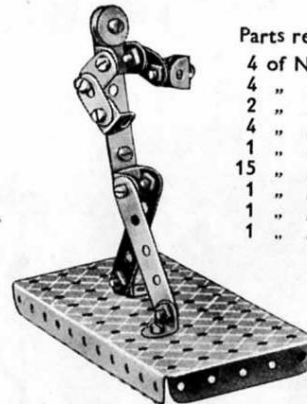


Parts required

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

An alternative design of this model (B77M), fitted with the Meccano Magic Motor, is shown on page 24.

B80. Boxer



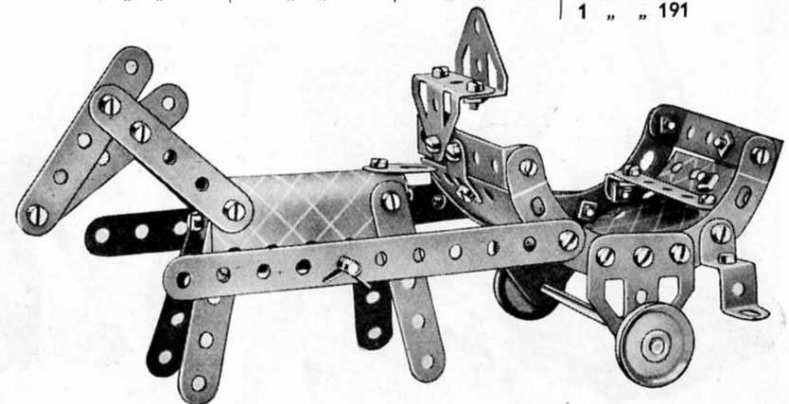
Parts required

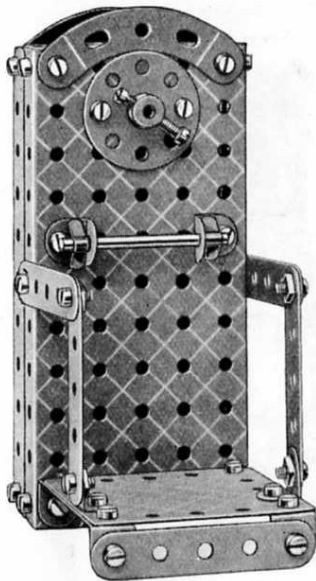
4 of No. 5
4 " " 10
2 " " 11
4 " " 12
1 " " 23
15 " " 37
1 " " 37a
1 " " 52
1 " " 111c

B82. Two-wheeled Trap

Parts required

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

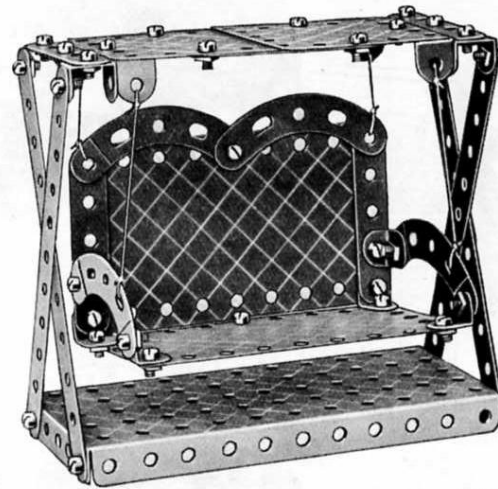




B83.
Weighing
Machine

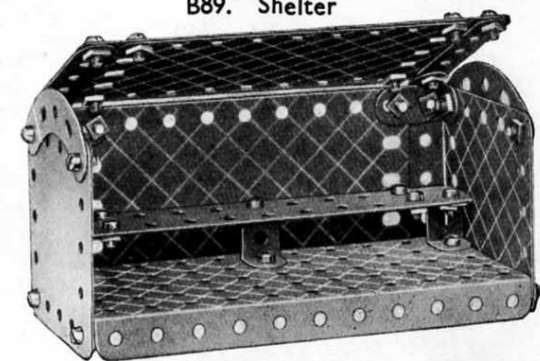
Parts required

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



B86.
Swinging
Garden Seat
Parts required

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



B89. Shelter

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

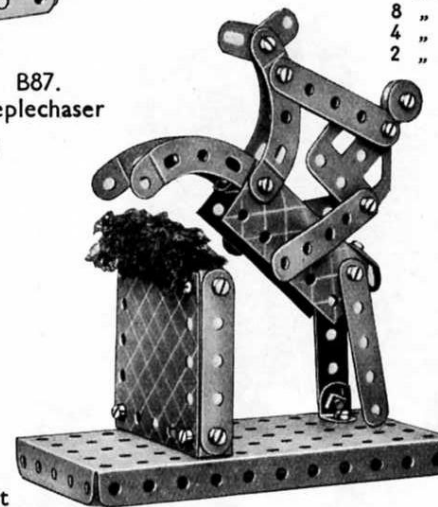
B84.
Chesterfield Chair



Parts required

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

B87.
Steeplechaser



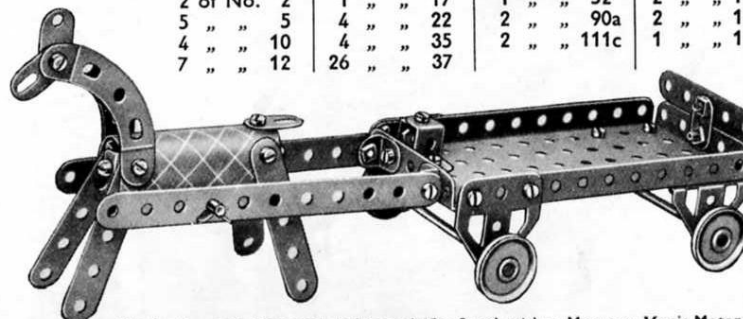
Parts required

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

B88.

Horse and Cart

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

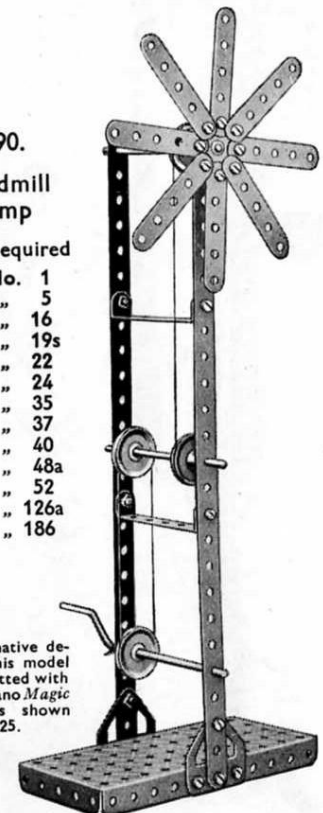


The fun is greatly increased if this model is fitted with a Meccano Magic Motor. The method of incorporating the Motor is shown on page 9 (A62M). If the Motor is fitted, a Bush Wheel should be mounted on a 2" Rod fitted between the hind legs of the horse.

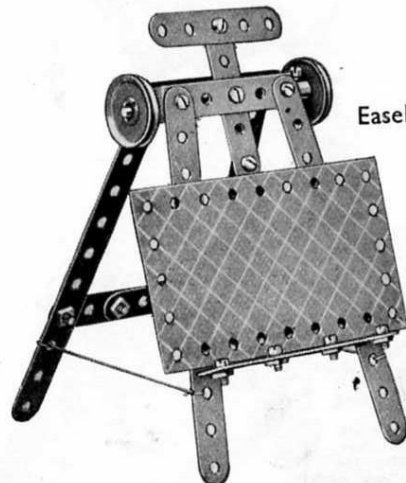
B90.
Windmill
Pump

Parts required

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



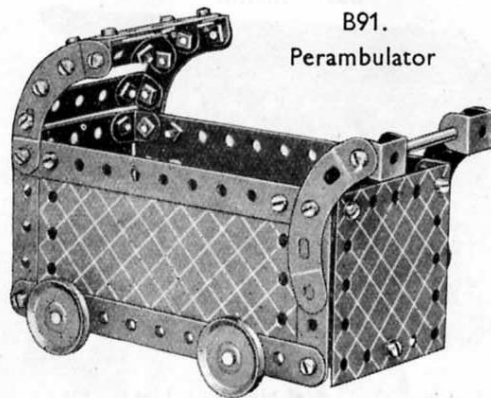
An alternative design of this model (B90M), fitted with the Meccano Magic Motor, is shown on page 25.



B85.
Easel and Board

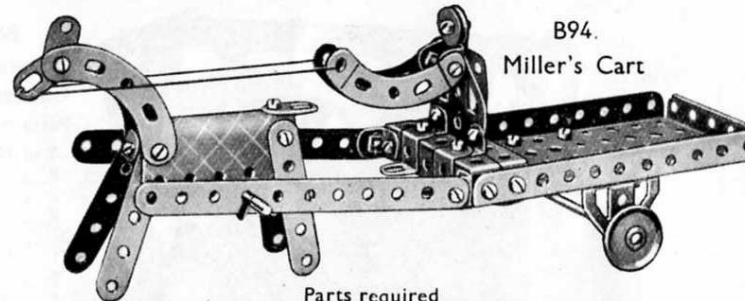
Parts required

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



B91.
Perambulator

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

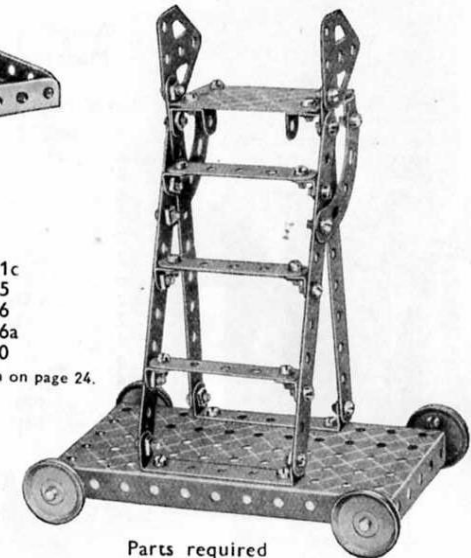


B94.
Miller's Cart

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

An alternative design of this model (B94M), fitted with the Meccano Magic Motor, is shown on page 24.

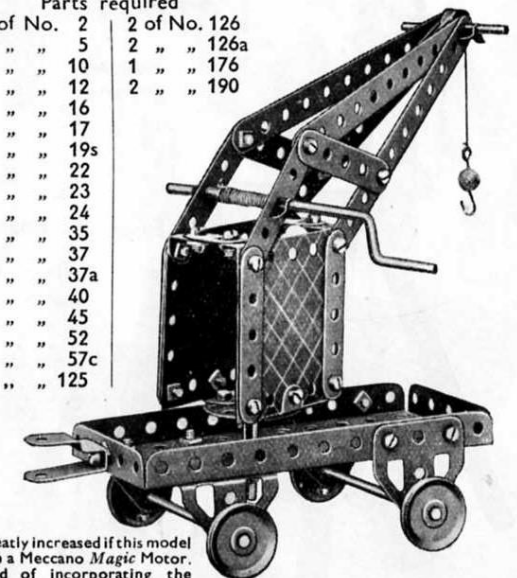
B97. Step Ladder on Wheels



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

B98. Breakdown Crane

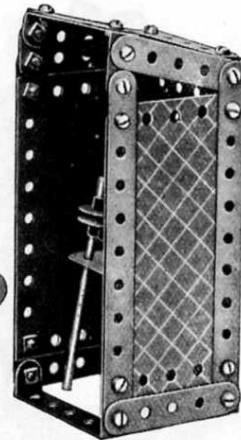
Parts required	
4 of No. 2	2 of No. 126
8 " " 5	2 " " 126a
3 " " 10	1 " " 176
8 " " 12	2 " " 190
2 " " 16	
2 " " 17	
1 " " 19s	
4 " " 22	
1 " " 23	
1 " " 24	
5 " " 35	
32 " " 37	
1 " " 37a	
1 " " 40	
1 " " 45	
1 " " 52	
1 " " 57c	
1 " " 125	



The fun is greatly increased if this model is fitted with a Meccano Magic Motor. The method of incorporating the Motor is shown on page 9. (Model A62M)

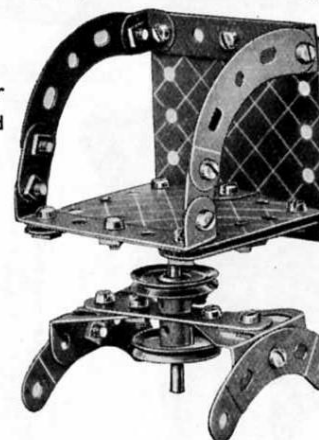
B92.
Watchman's Hut and Fire

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

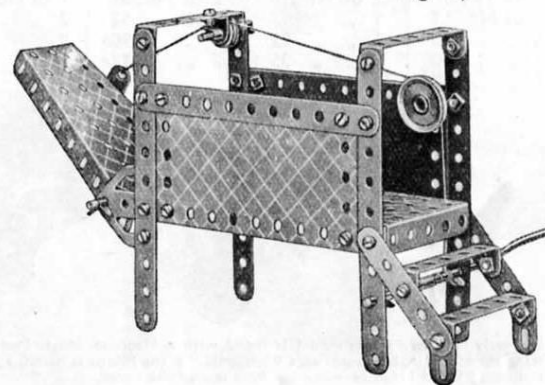


B95.
Revolving
Office Chair

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



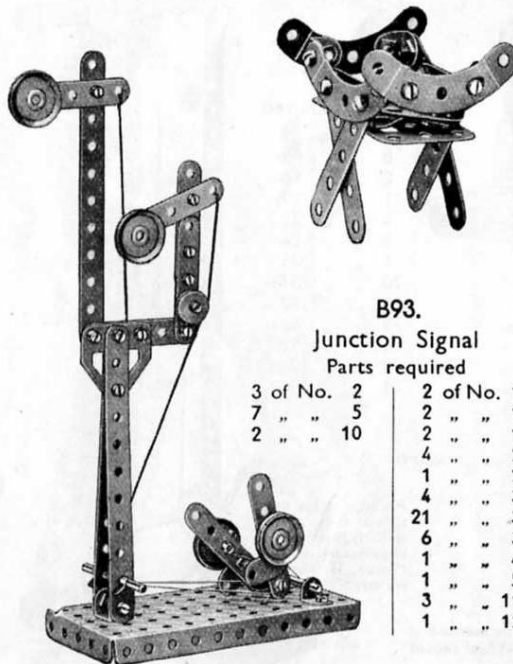
B96. Gangway



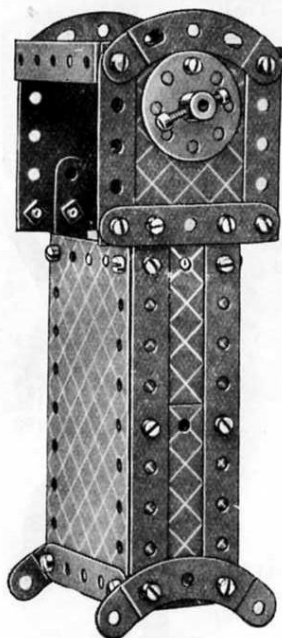
Parts required	
6 of No. 2	
4 " " 5	
3 " " 10	
5 " " 12	
1 " " 16	
1 " " 17	
1 " " 19s	
1 " " 22	
1 " " 23	
6 " " 35	
32 " " 37	
1 " " 37a	
1 " " 40	
2 " " 48a	
1 " " 52	
1 " " 54a	
1 " " 111c	
2 " " 126a	
1 " " 176	
2 " " 191	

B93.
Junction Signal

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



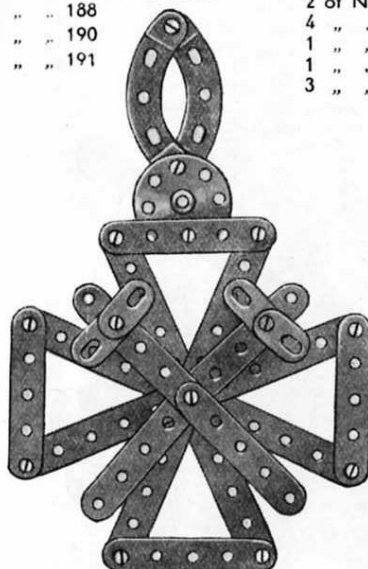
B99. Grandfather Clock



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

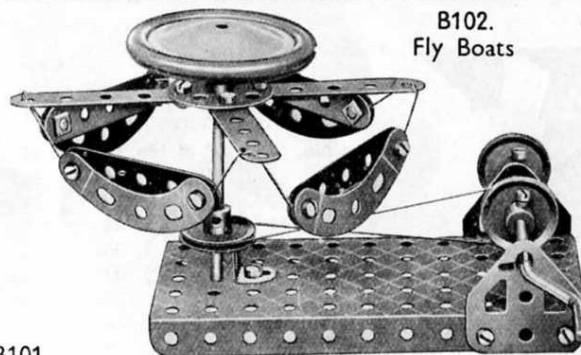


Parts required

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 24.

B102. Fly Boats



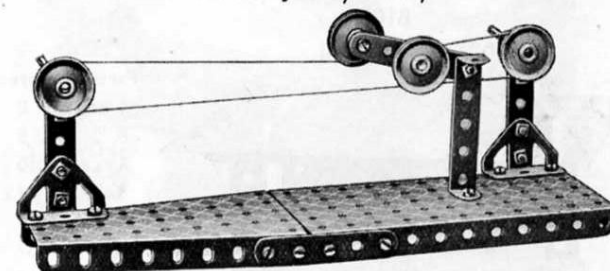
Parts required

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

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

B105. Jockey Pulley



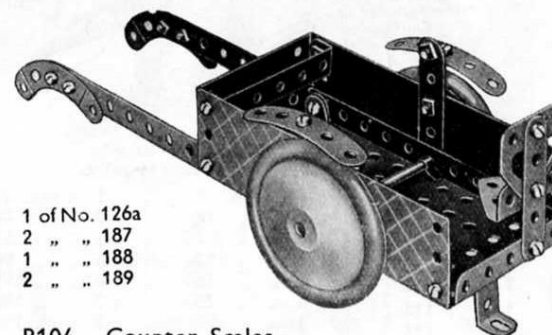
B106. Power Hack Saw

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 locknotted. A Cranked Bent Strip 2 carries a 3 1/2" Rod on which the saw frame slides. An alternative design of this model (B106M) fitted with the Meccano Magic Motor, is shown on page 24.

Parts required

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

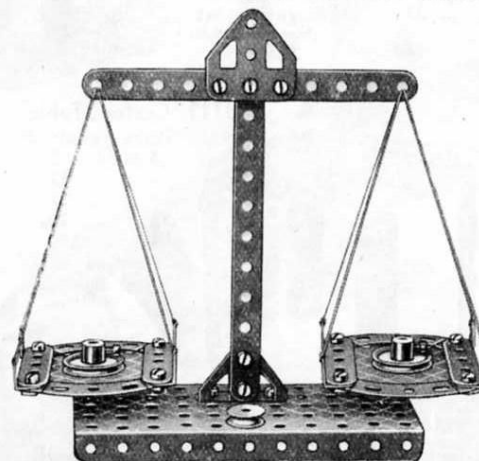
B103. Milk Float



Parts required

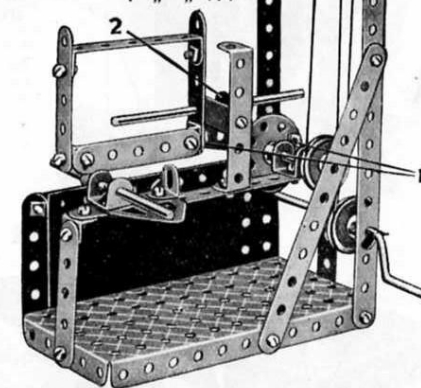
2 of No. 2	2
6 " " 5	5
5 " " 12	12
1 " " 15b	15b
26 " " 37	37
2 " " 48a	48a
1 " " 52	52
2 " " 90a	90a
1 " " 125	125
1 " " 126	126
1 of No. 126a	126a
2 " " 187	187
1 " " 188	188
2 " " 189	189

B104. Counter Scales



Parts required

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



B107.
Coffee Stall



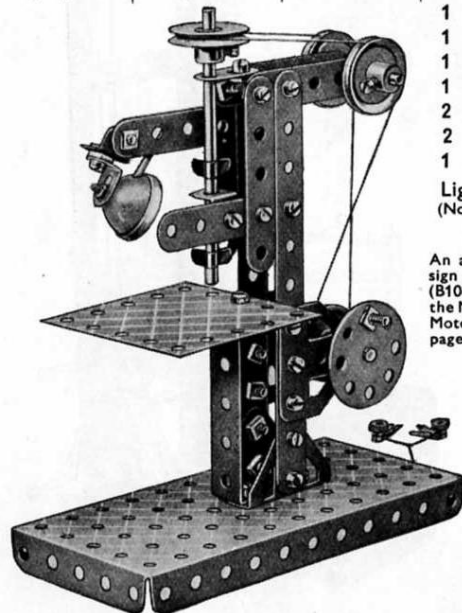
Parts required

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

Lighting Set
(Not included in
Outfit).

B108.
Sensitive Drill

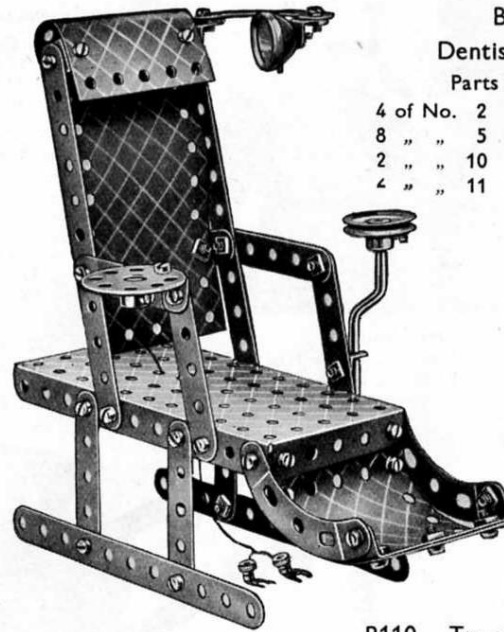
2 of No. 2	2 of No. 11	2 of No. 17
6 " " 5	3 " " 12	4 " " 22
2 " " 10	1 " " 16	1 " " 24



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

Lighting Set
(Not included in
Outfit).

An alternative design of this model (B108M), fitted with the Meccano Magic Motor, is shown on page 24.



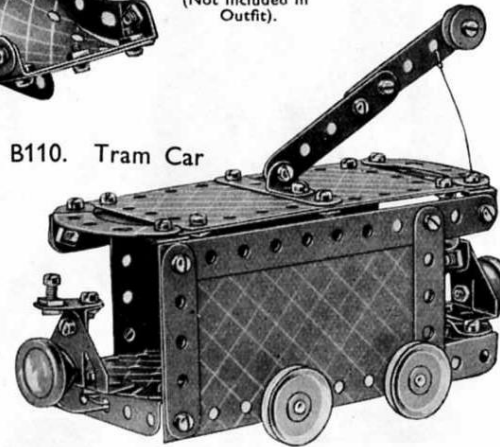
B109.
Dentist's Chair

Parts required

4 of No. 2	7 of No. 12
8 " " 5	1 " " 19s
2 " " 10	1 " " 22
4 " " 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 in Outfit).

B111. Coffee Table

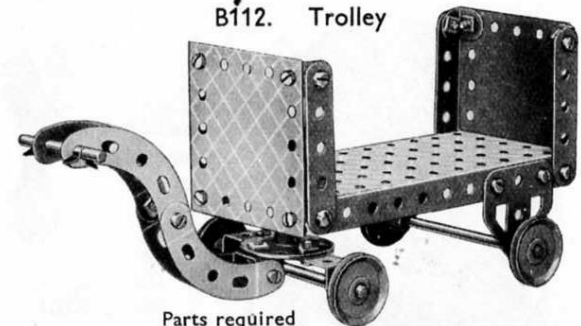
Parts required

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

Lighting Set
(Not included in
Outfit).



B112. Trolley



Parts required

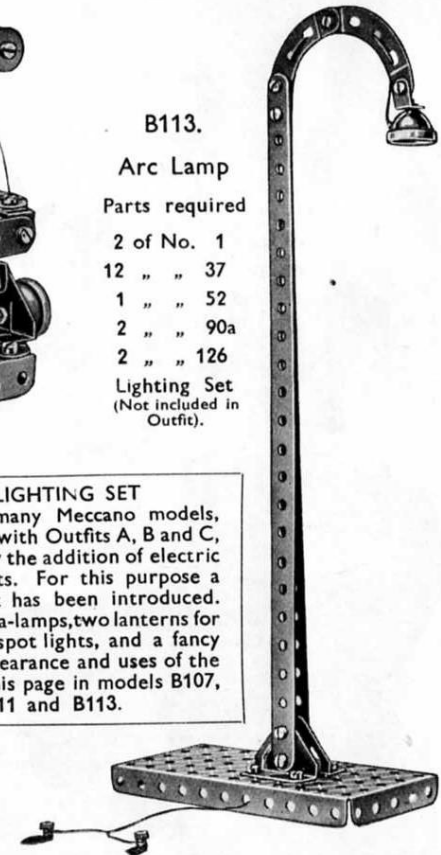
4 of No. 5	4 of No. 22	1 of No. 52
1 " " 11	1 " " 24	4 " " 90a
4 " " 12	3 " " 35	2 " " 125
2 " " 16	28 " " 37	2 " " 126a
2 " " 17	1 " " 48a	2 " " 190

B113.
Arc Lamp

Parts required

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

Lighting Set
(Not included in
Outfit).



MECCANO LIGHTING SET

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

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

B114. Dressing Table



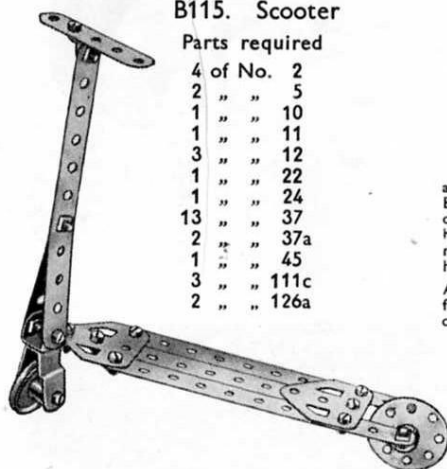
Parts required

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

B115. Scooter

Parts required

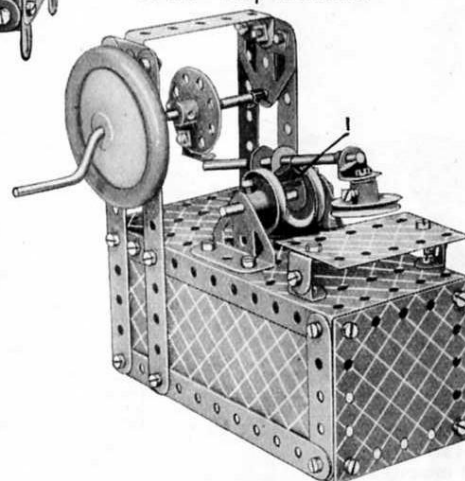
4 of No. 2
2 " " 5
1 " " 10
1 " " 11
3 " " 12
1 " " 22
1 " " 24
13 " " 37
2 " " 37a
1 " " 45
3 " " 111c
2 " " 126a



Parts required

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

B117. Trip Hammer



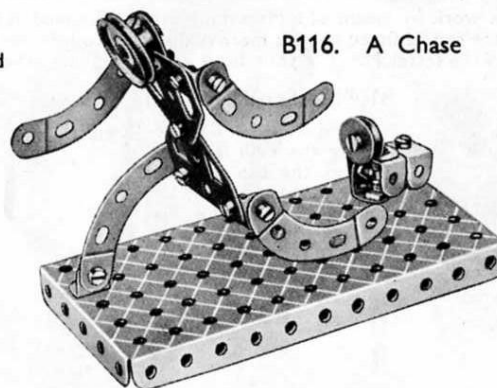
Two Double Brackets are bolted together at right angles as shown at 1. The lower Bracket pivots about a 2" Rod and the upper one carries a 3½" Rod to which the hammer head is fitted. An Angle Bracket bolted to a rotating Bush Wheel strikes the end of the hammer Rod and operates the hammer.

An alternative design of this model (B117M), fitted with the Meccano Magic Motor, is shown on page 25.

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

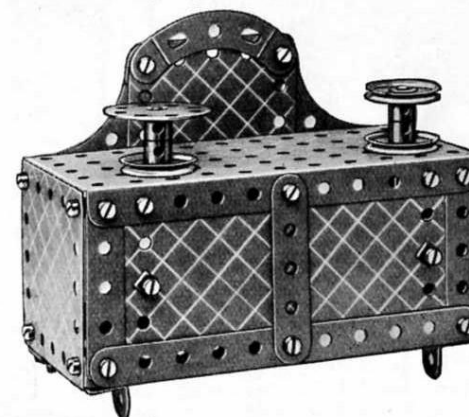
B116. A Chase



Parts required

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

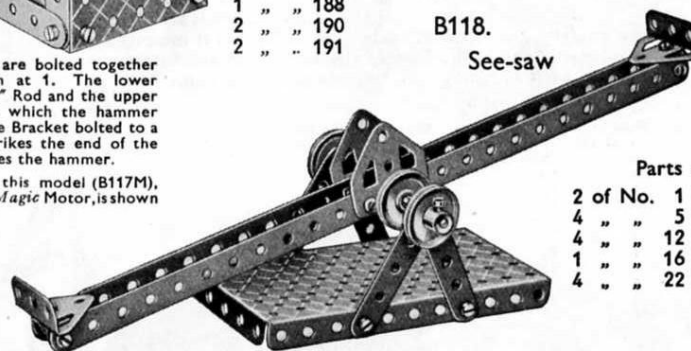
B120. Sideboard



Parts required

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

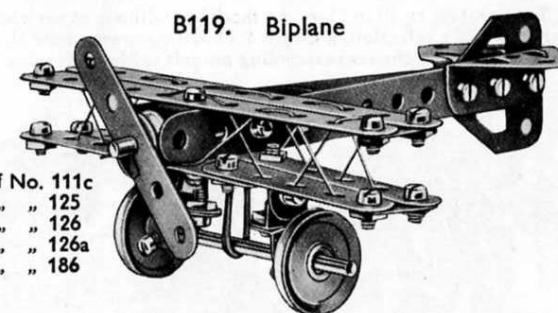
B118. See-saw



Parts required

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

B119. Biplane



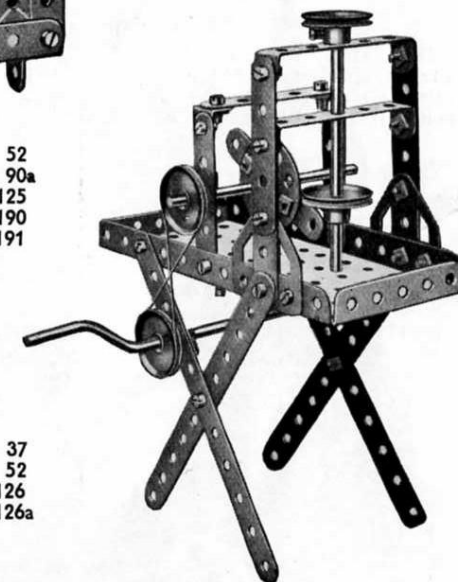
3 of No. 111c

2 " " 125
2 " " 126
1 " " 126a
1 " " 186

B121. Stamping Machine

Parts required

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



HOW TO CONTINUE

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

Outfit B Models fitted with the Magic Motor

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 opposite 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

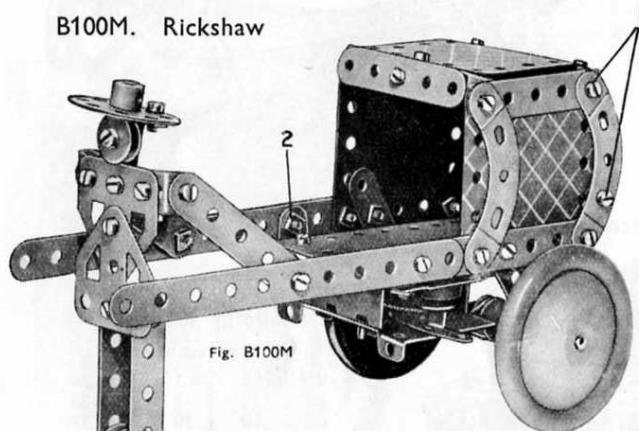


Fig. B100M

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	

B108M. Sensitive Drill

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

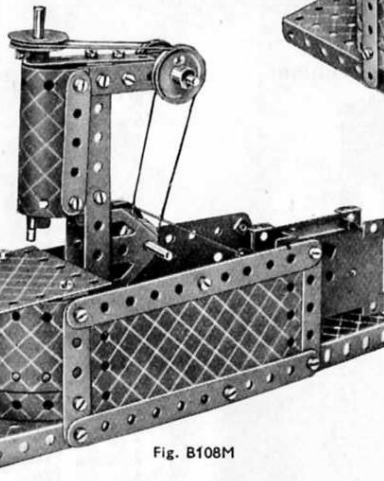


Fig. B108M

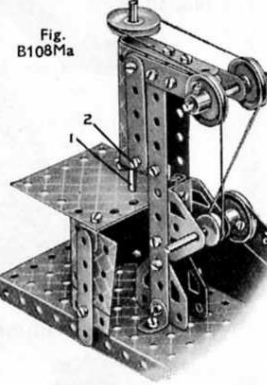


Fig. B108Ma

Parts required

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

B77M. Windmill

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

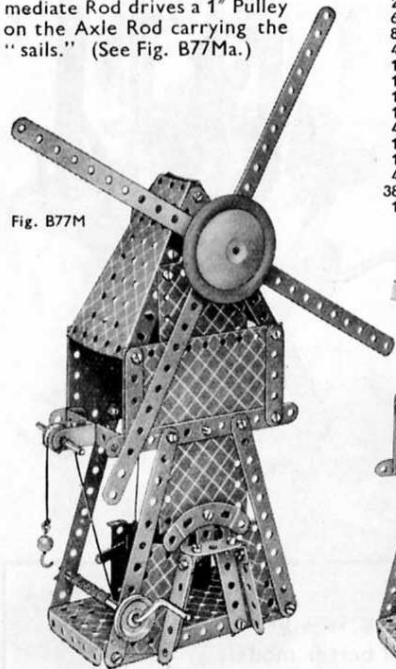
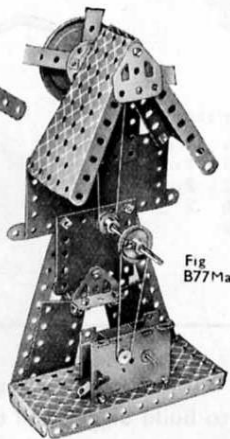


Fig. B77M

Parts required

2 of No. 1	1 of No. 44
6 " " 2	1 " " 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	

Fig. B77Ma



B94M. Miller's Cart

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

Parts required

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

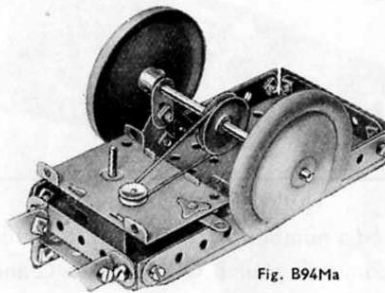


Fig. B94Ma

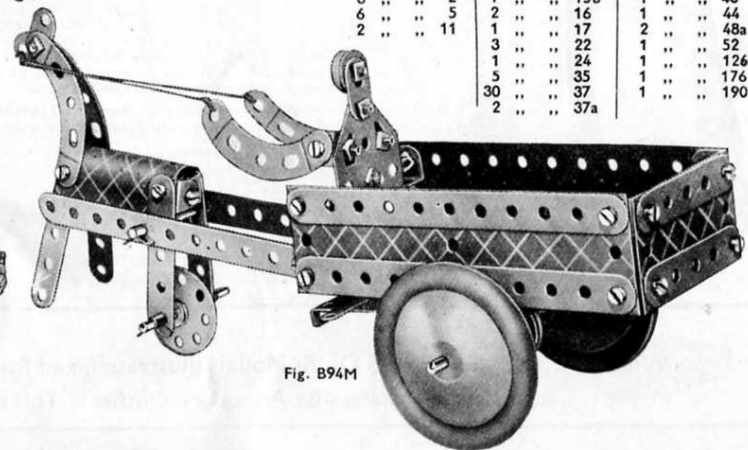


Fig. B94M

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.

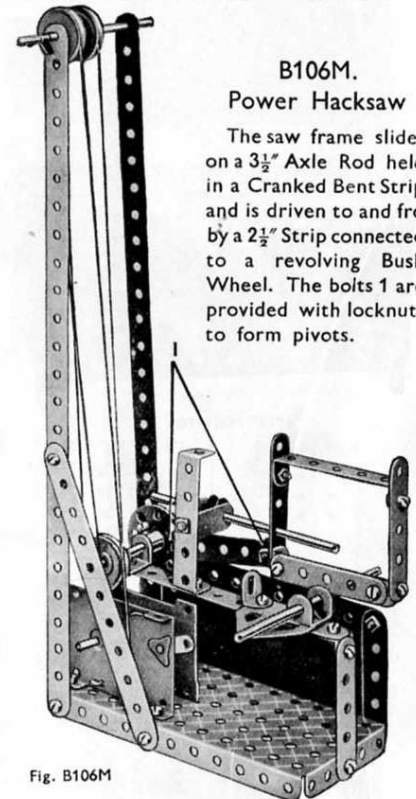


Fig. B106M

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	2 " " 17	1 " " 48a
	3 " " 22	1 " " 52
	1 " " 24	1 " " 126
	5 " " 35	1 " " 176
	30 " " 37	1 " " 190
	2 " " 37a	

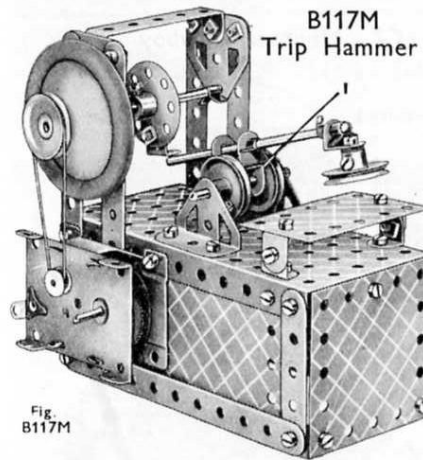


Fig. B117M

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.

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

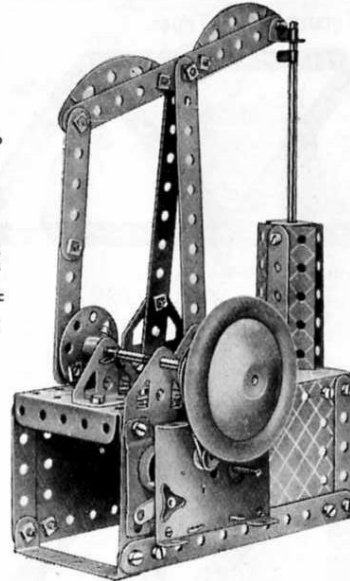


Fig. B32M

B32M. Pump

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

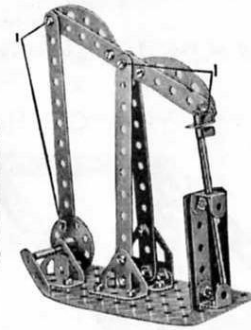


Fig. B32Ma

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 locknuted to form pivots.

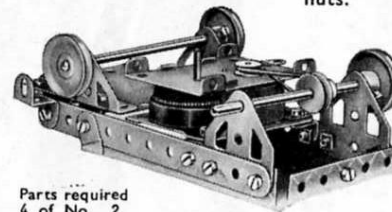


Fig. B51Ma

Parts required	
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

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

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.

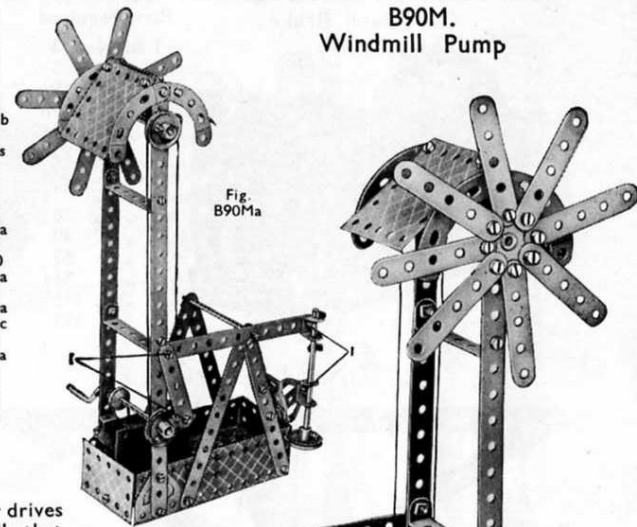


Fig. B90Ma

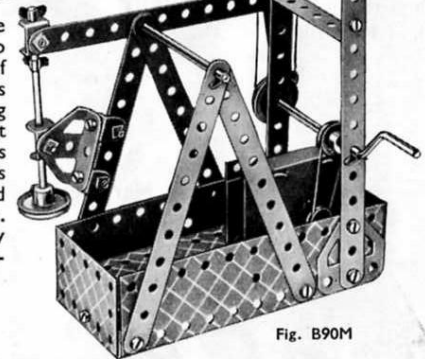


Fig. B90M

B30M. Derrick Crane

Fig. B30Ma shows the method of mounting the jib on the base Plate. The bolts 1 form pivots and are each locknuted. 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.

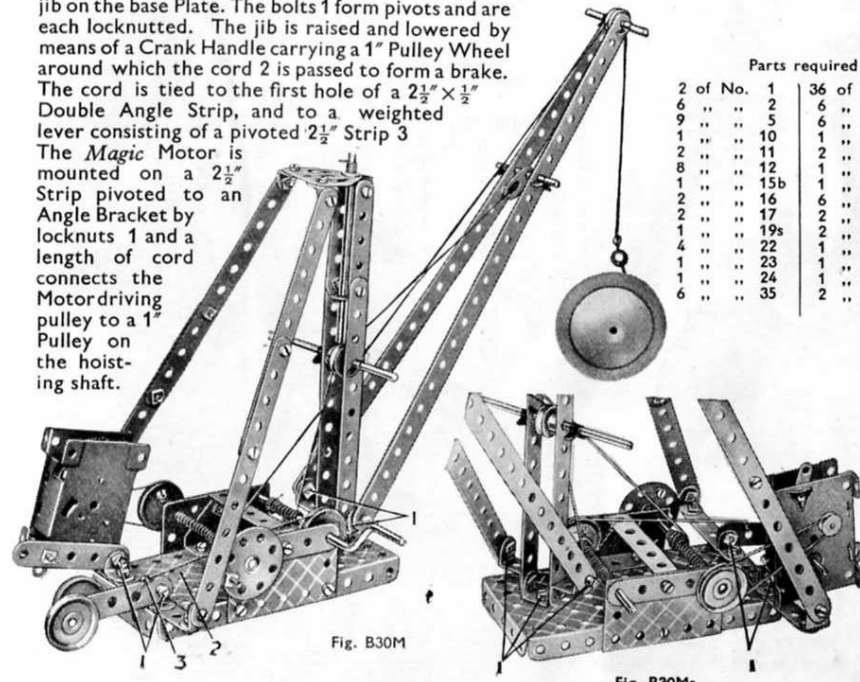


Fig. B30M

Parts required	
2 of No.	1
6 " "	2
9 " "	5
1 " "	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
1 " "	38
1 " "	40
1 " "	48a
1 " "	52
1 " "	57c
6 " "	111c
1 " "	125
2 " "	126
2 " "	126a
1 " "	176
1 " "	187
2 " "	188

Fig. B30Ma

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.

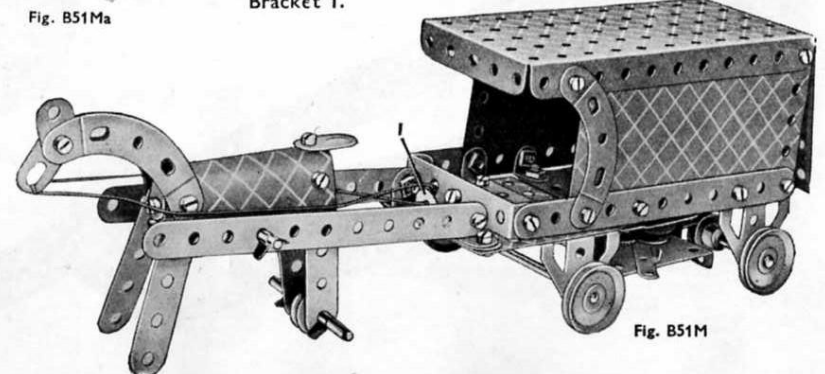
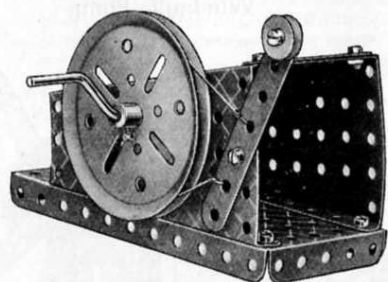


Fig. B51M

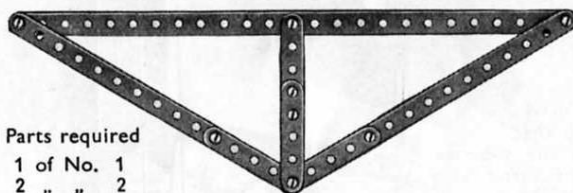
C1. Band Brake



Parts required

1	of No.	3
2	"	5
1	"	19s
1	"	19b
1	"	22
1	"	23
9	"	37
2	"	37a
3	"	38
1	"	40
1	"	52
2	"	54a
1	"	111c
1	"	191

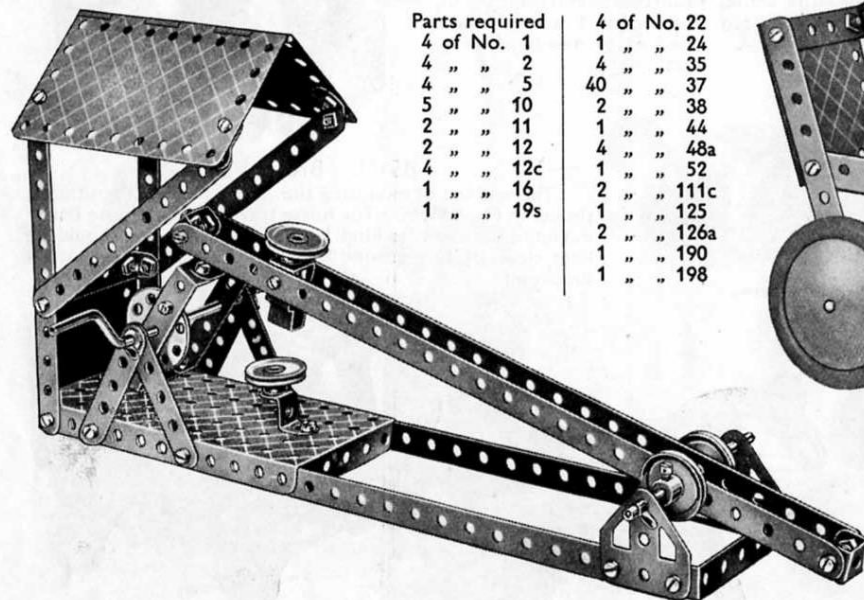
C2. Triangulated Truss



Parts required

1	of No.	1
2	"	2
4	"	5
8	"	37

C3. Helve Hammer

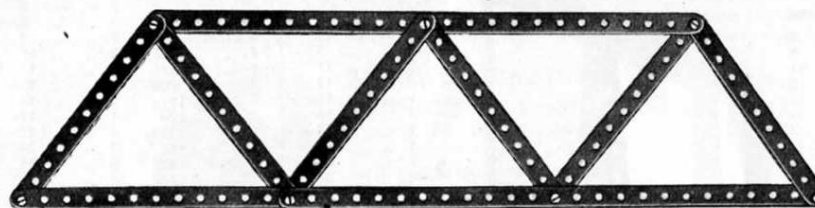


Parts required

4	of No.	1
4	"	2
4	"	5
5	"	10
2	"	11
2	"	12
4	"	12c
1	"	16
1	"	19s

4	of No.	22
1	"	24
4	"	35
40	"	37
2	"	38
1	"	44
4	"	48a
1	"	52
2	"	111c
1	"	125
2	"	126a
1	"	190
1	"	198

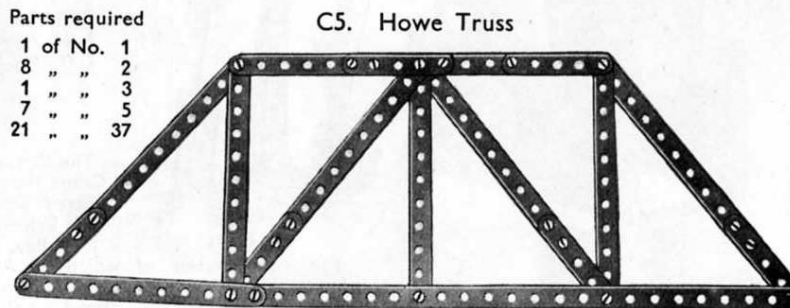
C4. Compound Triangulated Truss



Parts required

3 of No. 1 | 6 of No. 2 | 7 of No. 37

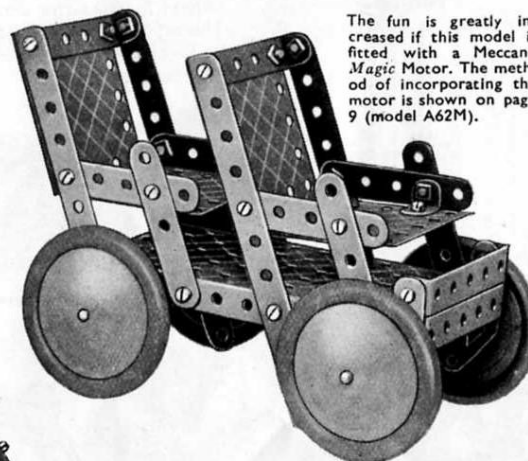
C5. Howe Truss



Parts required

1	of No.	1
8	"	2
1	"	3
7	"	5
21	"	37

C6. Tandem Car



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 9 (model A62M).

Parts required

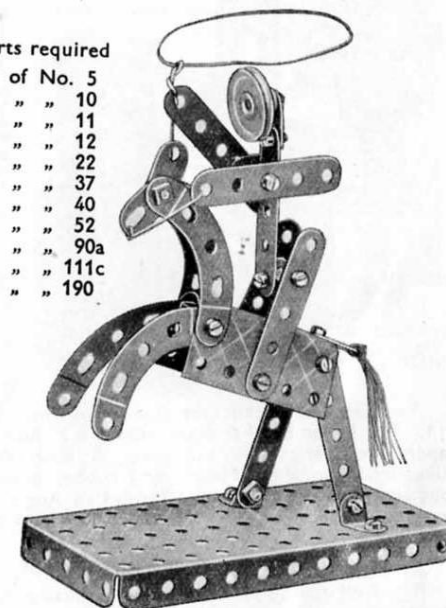
4	of No.	2
8	"	5
4	"	12
2	"	15b
34	"	37

4	of No.	48a
1	"	52
2	"	126a
4	"	187
4	"	190

C7. Mounted Cowboy

Parts required

7	of No.	5
4	"	10
2	"	11
7	"	12
1	"	22
22	"	37
1	"	40
1	"	52
4	"	90a
1	"	111c
1	"	190



C8. Bath Chair

Parts required

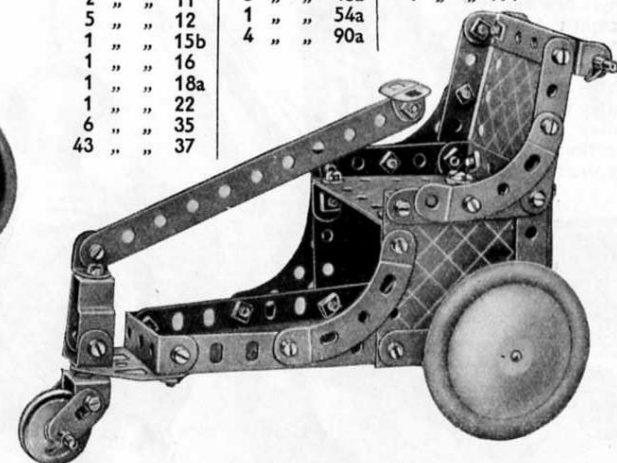
1	of No.	2
9	"	5
4	"	10
2	"	11
5	"	12
1	"	15b
1	"	16
1	"	18a
1	"	22
6	"	35
43	"	37

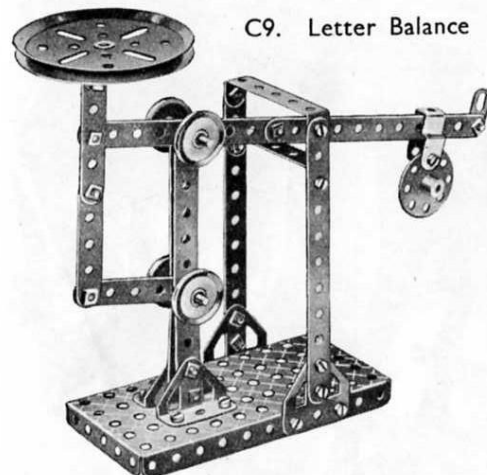
4 of No. 37a

8	"	38
1	"	44
1	"	48
5	"	48a
1	"	54a
4	"	90a

1 of No. 111c

1	"	126a
2	"	187
3	"	190
1	"	191



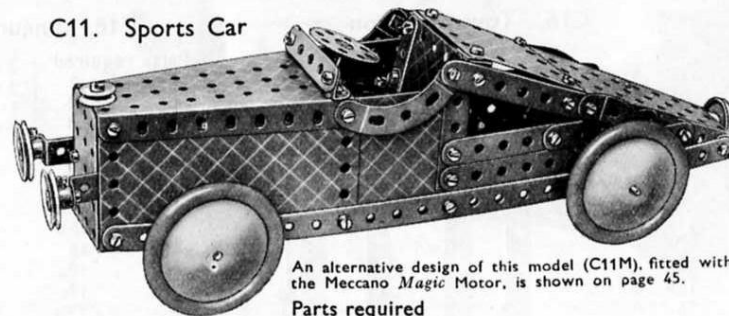


C9. Letter Balance

Parts required

6 of No. 2
4 " " 5
1 " " 10
1 " " 12
2 " " 18a
1 " " 19b
4 " " 22
1 " " 24
2 " " 35
26 " " 37
4 " " 37a
2 " " 38
1 " " 44
2 " " 48a
1 " " 52
2 " " 111c
2 " " 126
2 " " 126a

C11. Sports Car



An alternative design of this model (C11M), fitted with the Meccano Magic Motor, is shown on page 45.

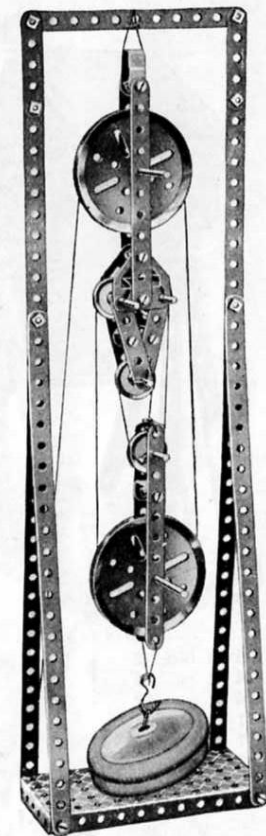
Parts required

2 of No. 1	4 of No. 22	1 of No. 48	4 of No. 111c
4 " " 2	1 " " 23	2 " " 48a	2 " " 125
9 " " 5	1 " " 24	1 " " 51	2 " " 126a
2 " " 10	2 " " 35	1 " " 52	4 " " 187
8 " " 12	55 " " 37	2 " " 54a	4 " " 190
2 " " 15b	1 " " 37a	4 " " 90a	2 " " 191
1 " " 16	2 " " 38		

C13.
Pulley Block.
5:1

Parts required

4 of No. 1
7 " " 2
6 " " 5
2 " " 11
2 " " 12
2 " " 16
2 " " 17
2 " " 18a
2 " " 19b
4 " " 22
6 " " 35
24 " " 37
2 " " 38
1 " " 40
1 " " 44
1 " " 52
1 " " 57c
2 " " 126a
2 " " 187

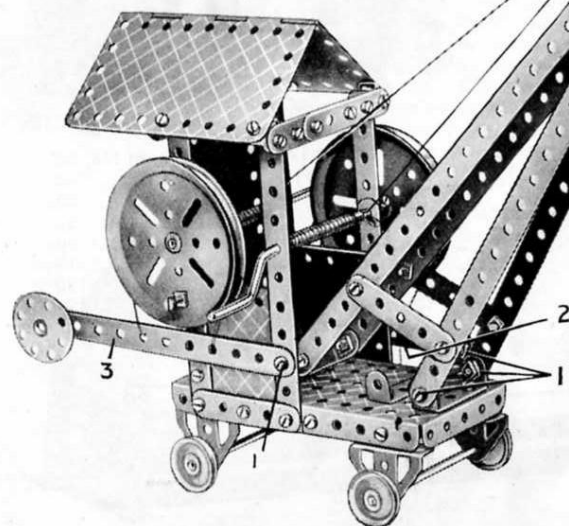


C10. Travelling Crane

Parts required

4 of No. 1	4 of No. 22	1 of No. 111a
5 " " 2	1 " " 23	1 " " 111c
9 " " 5	1 " " 24	2 " " 125
1 " " 11	4 " " 35	2 " " 126
8 " " 12	55 " " 37	2 " " 126a
1 " " 15b	6 " " 37a	1 " " 176
2 " " 16	1 " " 48	2 " " 190
1 " " 18a	3 " " 48a	1 " " 191
1 " " 19s	1 " " 52	1 " " 197
2 " " 19b	1 " " 57c	

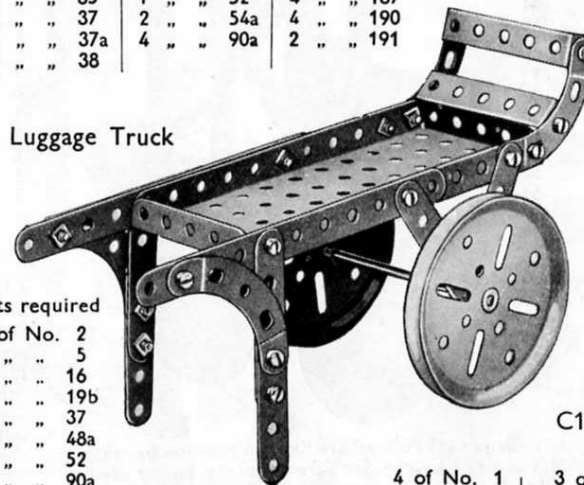
The bolts 1 are locknotted to form pivots for the jib and for the two brake levers 2 and 3.



C12. Luggage Truck

Parts required

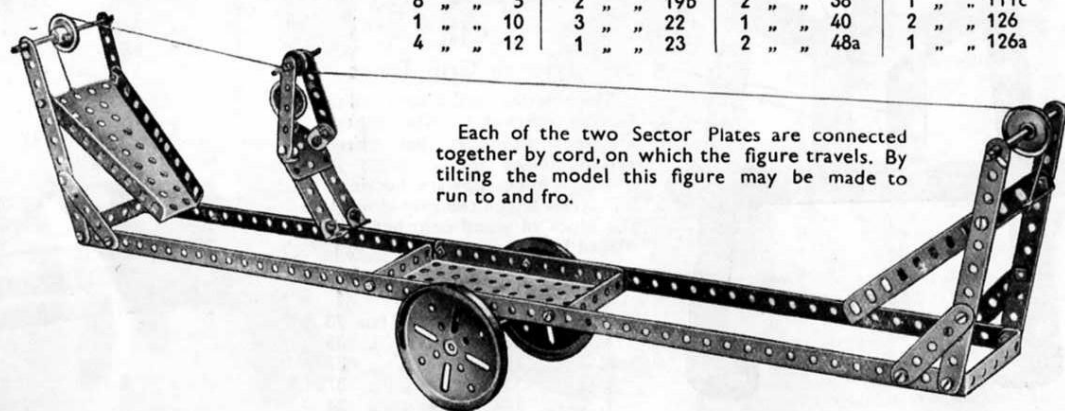
2 of No. 2
8 " " 5
1 " " 16
2 " " 19b
18 " " 37
2 " " 48a
1 " " 52
4 " " 90a



C14. Aerial Flight

Parts required

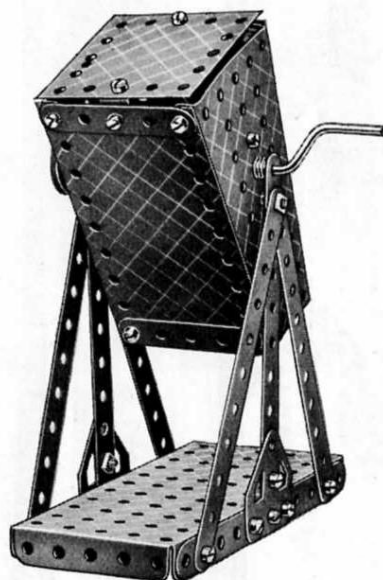
4 of No. 1	3 of No. 16	6 of No. 35	1 of No. 52
4 " " 2	1 " " 18a	33 " " 37	2 " " 54a
8 " " 5	2 " " 19b	2 " " 38	1 " " 111c
1 " " 10	3 " " 22	1 " " 40	2 " " 126
4 " " 12	1 " " 23	2 " " 48a	1 " " 126a



Each of the two Sector Plates are connected together by cord, on which the figure travels. By tilting the model this figure may be made to run to and fro.

Loops of cord are tied to the brake levers and are passed round 3" Pulleys on the hoisting and luffing shafts to form band brakes. The lower ends of the upper pair of 12½" Strips forming the jib are held apart by two ½" Reversed Angle Brackets bolted together.

C15. Butter Churn



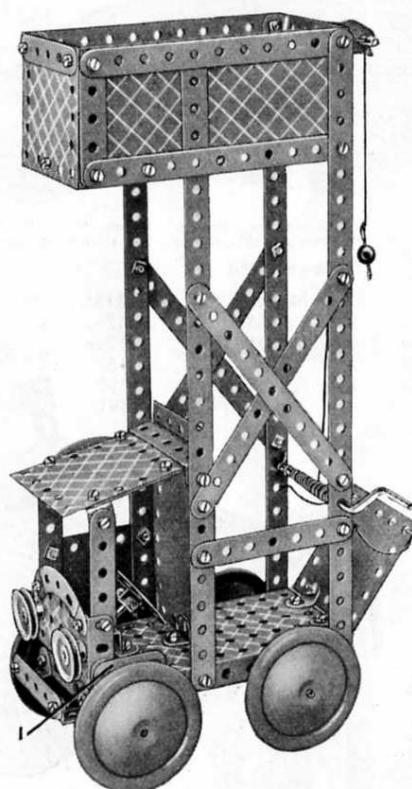
Parts required

4 of No. 1	
8 " " 2	
1 " " 3	
9 " " 5	
2 " " 11	
7 " " 12	
2 " " 12c	
1 " " 15b	
1 " " 16	
2 " " 18a	
1 " " 19s	
2 " " 22	
1 " " 23	
1 " " 24	
6 " " 35	
61 " " 37	
3 " " 38	
1 " " 40	
1 " " 44	
6 " " 48a	
1 " " 51	
1 " " 52	
1 " " 57c	
2 " " 90a	
2 " " 111c	
1 " " 125	
2 " " 126	
2 " " 126a	
4 " " 187	
4 " " 190	
1 " " 191	
2 " " 192	

Parts required

8 of No. 2	1 of No. 48a
4 " " 5	1 " " 51
4 " " 12	1 " " 52
1 " " 22	2 " " 54a
1 " " 24	2 " " 126a
32 " " 37	1 " " 190
8 " " 38	2 " " 191

C16. Tower Wagon



The headlamps (1" Pulleys) are fixed in position by means of $\frac{3}{8}$ " Bolts secured by the Set Screws in the bosses of the Pulleys. The front axle is carried in Flat Trunnions 1 bolted by their centre holes to the Flanged Plate.

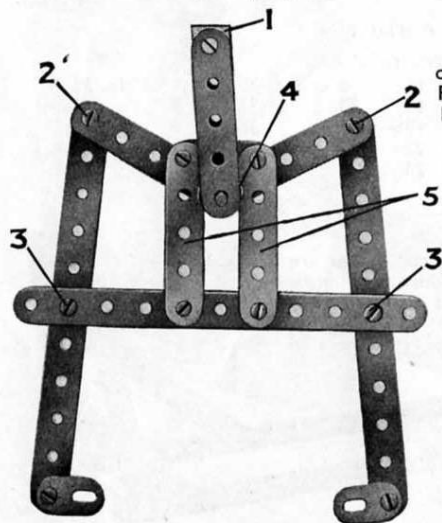
C17.

Friction Grip Tong

The hoisting cord is attached to the Double Bracket 1. The joints 2, 3 are locknotted, so that when the grip is raised the $\frac{1}{2}$ " loose Pulley Wheel 4 slides upward between the $2\frac{1}{2}$ " Strips 5, and the grip closes upon the block of wood or other material placed between its jaws.

Parts required

3 of No. 2	1 of No. 23
5 " " 5	2 " " 35
4 " " 10	12 " " 37
1 " " 11	4 " " 37a
1 " " 18a	4 " " 38



C18. Pneumatic Hammer

Parts required

2 of No. 1	3 of No. 190
8 " " 2	2 " " 191
1 " " 3	1 " " 198
9 " " 5	
5 " " 10	
4 " " 12	
3 " " 12c	
2 " " 15b	
1 " " 16	
2 " " 18a	
1 " " 19s	
1 " " 19b	
4 " " 22	
1 " " 23	
1 " " 24	
6 " " 35	
52 " " 37	
2 " " 37a	
1 " " 40	
1 " " 44	
6 " " 48a	
1 " " 51	
1 " " 52	
4 " " 90a	
1 " " 111c	
1 " " 125	
2 " " 126a	
1 " " 176	

A 3" Pulley Wheel is driven from a 1" Pulley on the Crank Handle and is fitted to a Rod journalled in a $2\frac{1}{2}$ " Strip and Double Bent Strip 2 that are bolted to a $2\frac{1}{2} \times 2\frac{1}{2}$ " Flexible Plate. A Bush Wheel is fitted on the other end of the Rod and a $2\frac{1}{2}$ " Strip is pivoted on the bolt 1 fixed by two nuts locked against opposite sides of the Bush Wheel. Cord is tied to the $2\frac{1}{2}$ " Strip, passes over guide Pulleys, and is tied to an Anchoring Spring on the upper end of the hammer Rod.

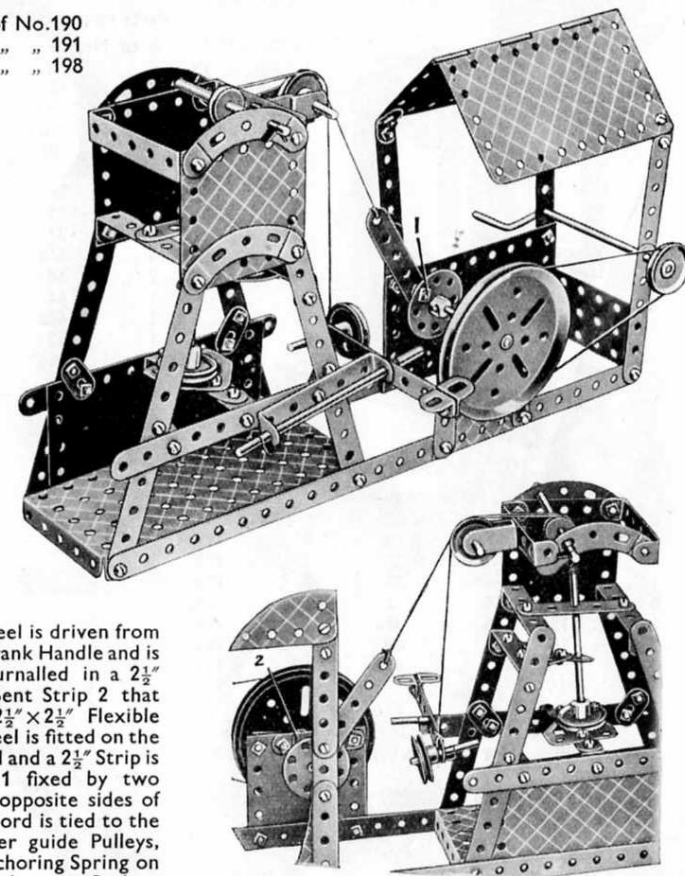
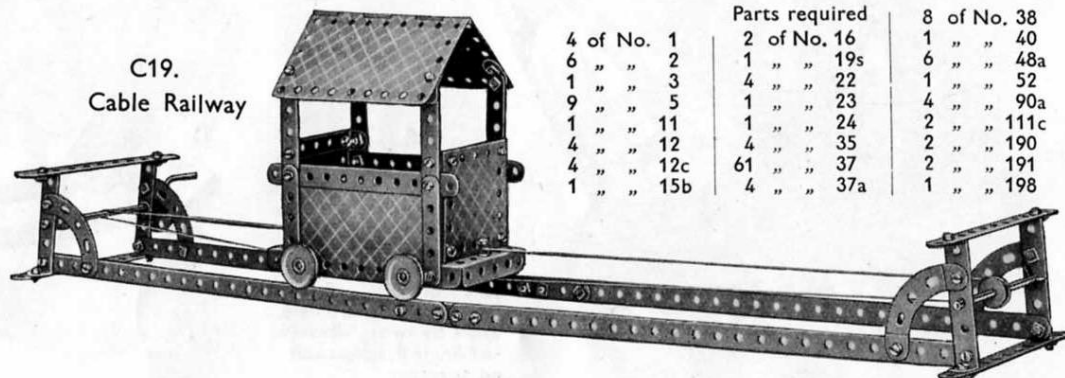


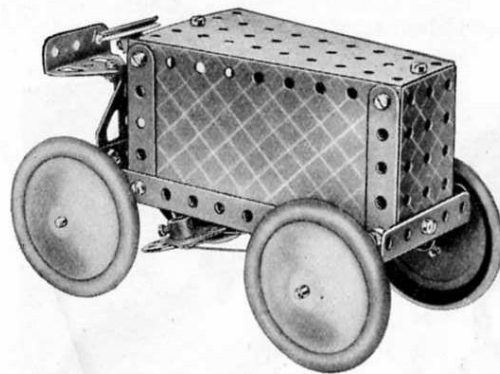
Fig. C18a

C19.
Cable Railway

Parts required

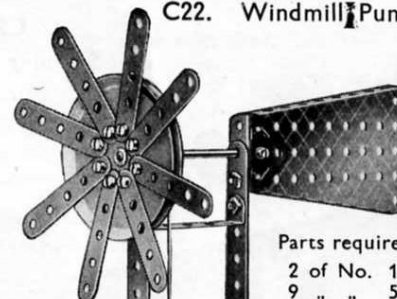
4 of No. 1	2 of No. 16	8 of No. 38
6 " " 2	1 " " 19s	1 " " 40
1 " " 3	4 " " 22	6 " " 48a
9 " " 5	1 " " 23	1 " " 52
1 " " 11	1 " " 24	4 " " 90a
4 " " 12	4 " " 35	2 " " 111c
4 " " 12c	61 " " 37	2 " " 190
1 " " 15b	4 " " 37a	2 " " 191
		1 " " 198

C20. Motor Tractor



Parts required	
4 of No. 5	
1 " " 10	
2 " " 12	
2 " " 15b	
1 " " 16	
1 " " 22	
1 " " 24	
1 " " 35	
18 " " 37	
2 " " 37a	
1 " " 40	
3 " " 48a	
1 " " 51	
1 " " 52	
1 " " 54a	
1 " " 111c	
1 " " 126	
1 " " 126a	
4 " " 187	
1 " " 191	

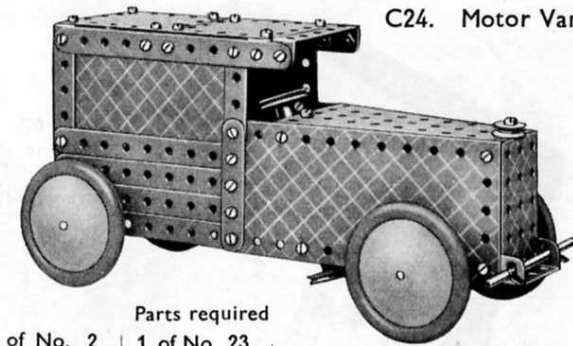
C22. Windmill Pump



Parts required	
2 of No. 1	
9 " " 5	
2 " " 10	
3 " " 12	
3 " " 16	
1 " " 19s	
1 " " 19b	
4 " " 22	
1 " " 24	
4 " " 35	
26 " " 37	
4 " " 37a	
1 " " 40	
2 " " 48a	
1 " " 52	
1 " " 54a	
2 " " 111c	
1 " " 126	
2 " " 126a	

An alternative design of this model (C22M), fitted with the Meccano Magic Motor, is shown on page 45.

C24. Motor Van

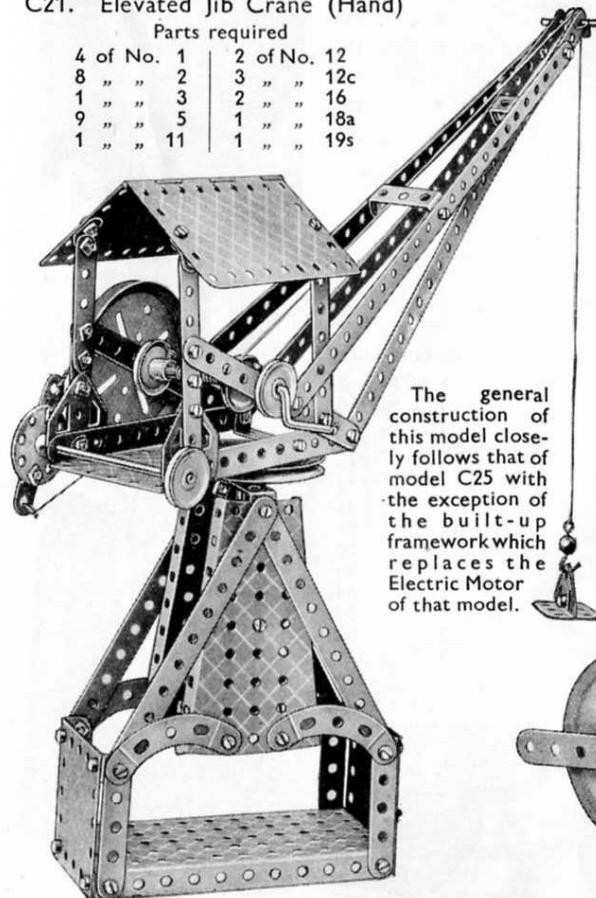


Parts required	
8 of No. 2	1 of No. 23
1 " " 3	4 " " 35
9 " " 5	51 " " 37
1 " " 10	3 " " 37a
4 " " 12	1 " " 38
2 " " 15b	6 " " 48a
2 " " 16	1 " " 51
2 " " 22	1 " " 52
	2 of No. 54a
	3 " " 111c
	4 " " 187
	4 " " 190
	2 " " 191
	2 " " 192

C21. Elevated Jib Crane (Hand)

Parts required

4 of No. 1	2 of No. 12
8 " " 2	3 " " 12c
1 " " 3	2 " " 16
9 " " 5	1 " " 18a
1 " " 11	1 " " 19s



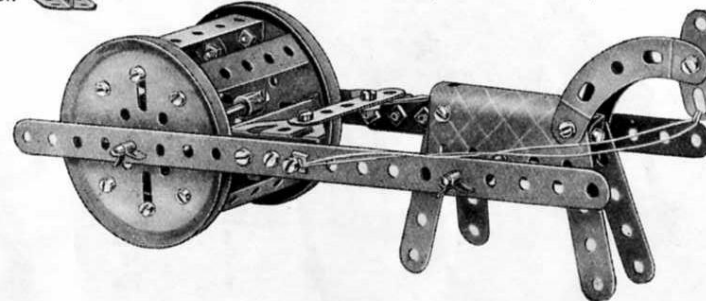
The general construction of this model closely follows that of model C25 with the exception of the built-up framework which replaces the Electric Motor of that model.

Parts required for C21 (continued)

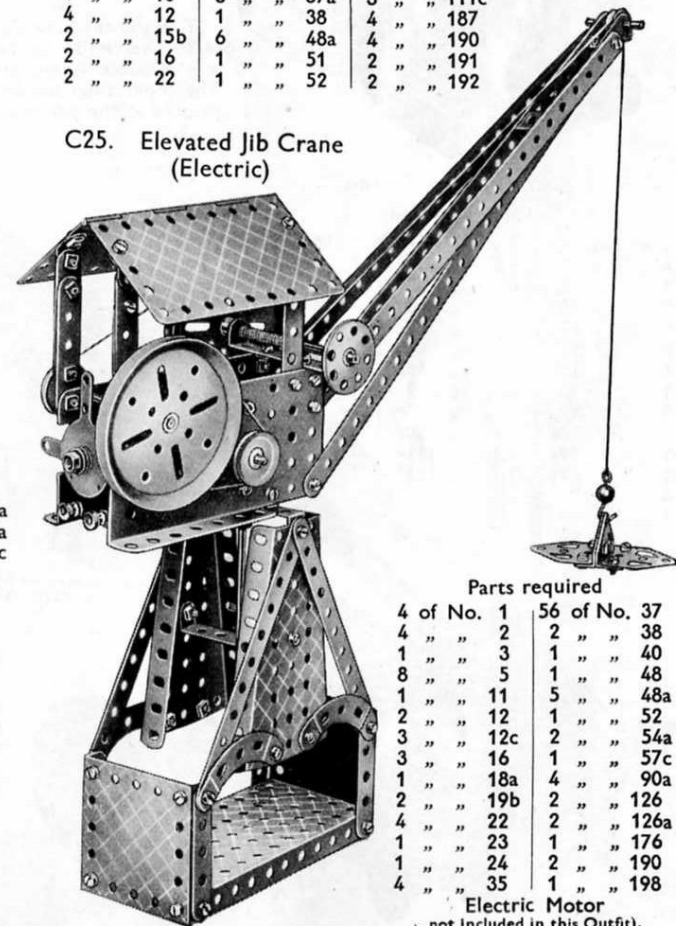
2 of No. 19b	
4 " " 22	
1 " " 23	
1 " " 24	
4 " " 35	
56 " " 37	
2 " " 37a	
4 " " 38	
1 " " 40	
1 " " 48	
6 " " 48a	
1 " " 52	
2 " " 54a	
1 " " 57c	
4 " " 90a	
2 " " 111c	
2 " " 126	
2 " " 126a	
1 " " 176	
2 " " 190	
1 " " 191	
1 " " 198	

C23. Field Roller

Parts required	
4 of No. 2	1 of No. 16
7 " " 5	2 " " 19b
2 " " 10	6 " " 35
8 " " 12	34 " " 37
1 " " 15b	2 " " 37a
	1 " " 40
	6 of No. 48a
	2 " " 90a
	1 " " 111c
	2 " " 126
	1 " " 190

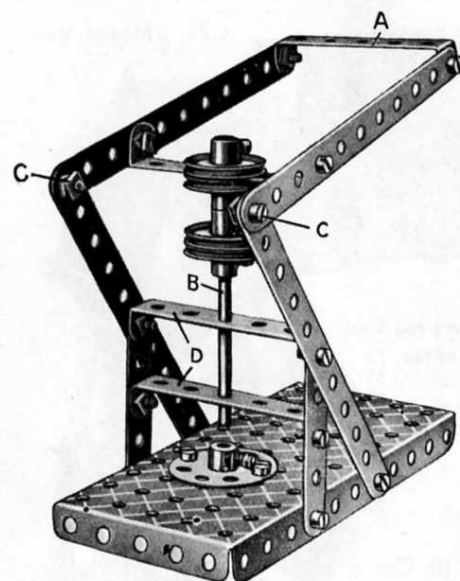


C25. Elevated Jib Crane (Electric)



Parts required	
4 of No. 1	56 of No. 37
4 " " 2	2 " " 38
1 " " 3	1 " " 40
8 " " 5	1 " " 48
1 " " 11	5 " " 48a
2 " " 12	1 " " 52
3 " " 12c	2 " " 54a
3 " " 16	1 " " 57c
1 " " 18a	4 " " 90a
2 " " 19b	2 " " 126
4 " " 22	2 " " 126a
1 " " 23	1 " " 176
1 " " 24	2 " " 190
4 " " 35	1 " " 198

Electric Motor
not included in this Outfit.

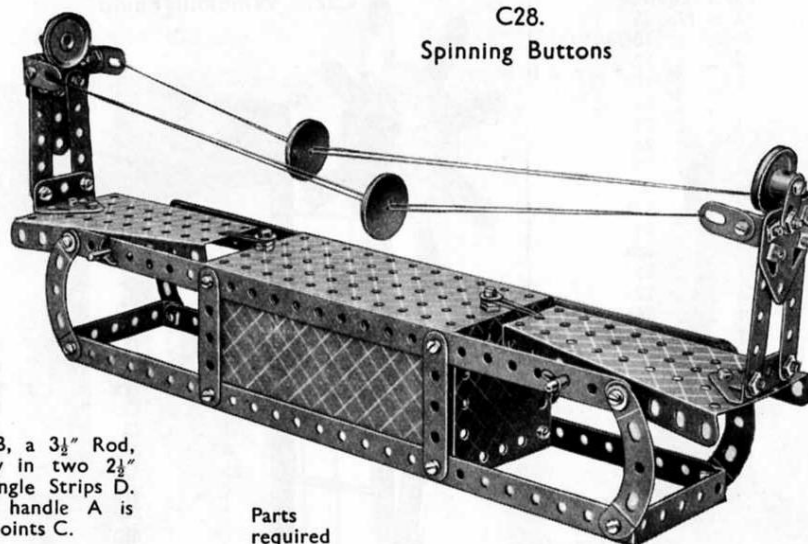


C26.
Punching
Machine

Parts required

4 of No. 2
2 " " 5
1 " " 16
4 " " 22
1 " " 24
16 " " 37
4 " " 37a
4 " " 48a
1 " " 52

The punch B, a $3\frac{1}{2}$ " Rod, slides vertically in two $2\frac{1}{2}$ " x $\frac{1}{2}$ " Double Angle Strips D. The operating handle A is pivoted at the points C.



C28.
Spinning Buttons

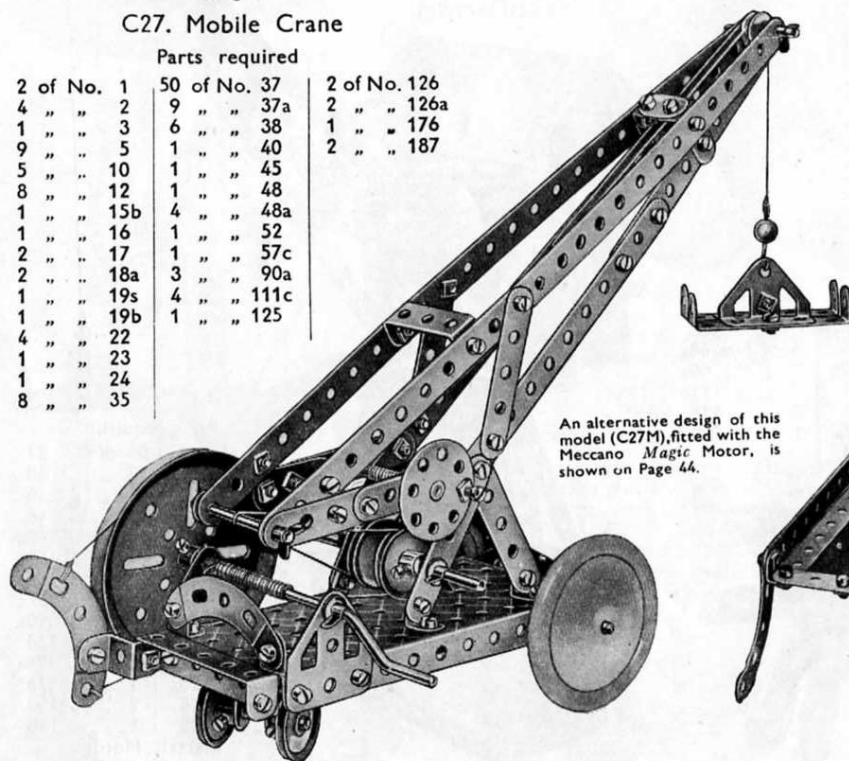
Parts
required

4 of No. 1	47 of No. 37	4 of No. 90a
9 " " 5	6 " " 37a	4 " " 111c
5 " " 10	6 " " 38	2 " " 126
4 " " 12	4 " " 48a	2 " " 126a
2 " " 16	1 " " 52	2 " " 190
2 " " 22	2 " " 54a	2 " " 192
4 " " 35		

C27. Mobile Crane

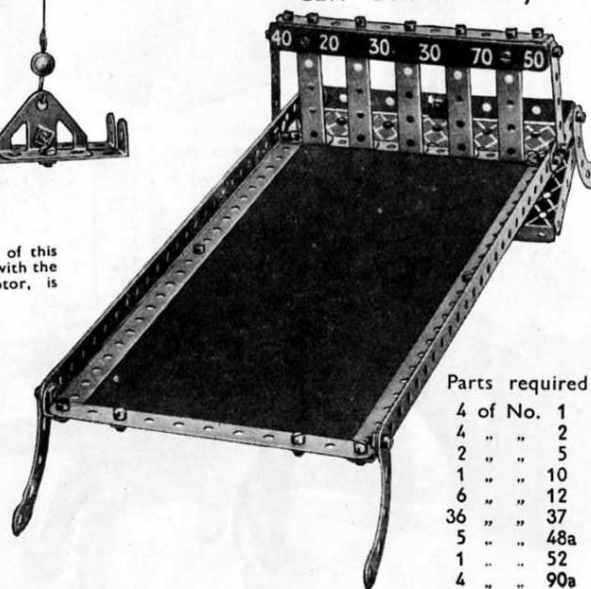
Parts required

2 of No. 1	50 of No. 37	2 of No. 126
4 " " 2	9 " " 37a	2 " " 126a
1 " " 3	6 " " 38	1 " " 176
9 " " 5	1 " " 40	2 " " 187
5 " " 10	1 " " 45	
8 " " 12	1 " " 48	
1 " " 15b	4 " " 48a	
1 " " 16	1 " " 52	
2 " " 17	1 " " 57c	
2 " " 18a	3 " " 90a	
1 " " 19s	4 " " 111c	
1 " " 19b	1 " " 125	
4 " " 22		
1 " " 23		
1 " " 24		
8 " " 35		



An alternative design of this model (C27M), fitted with the Meccano Magic Motor, is shown on Page 44.

C29. Box Ball Alley



Parts required

4 of No. 1
4 " " 2
2 " " 5
1 " " 10
6 " " 12
36 " " 37
5 " " 48a
1 " " 52
4 " " 90a

C30.
Gramophone

Parts required

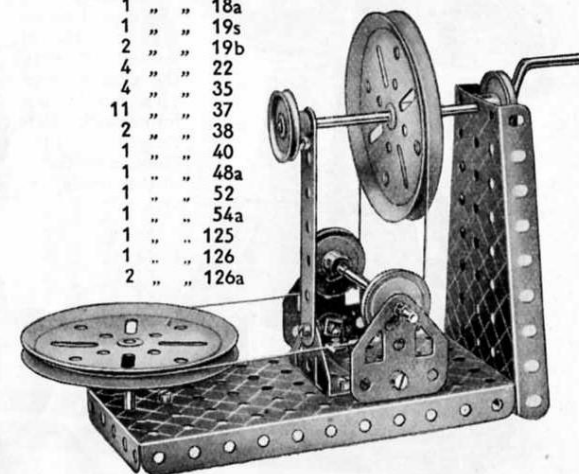
4 of No. 2
5 " " 5
2 " " 10
4 " " 12
1 " " 23
1 " " 24
29 " " 37
5 " " 37a
5 " " 48a
1 " " 52
4 " " 111c
2 " " 126a
2 " " 190
2 " " 191



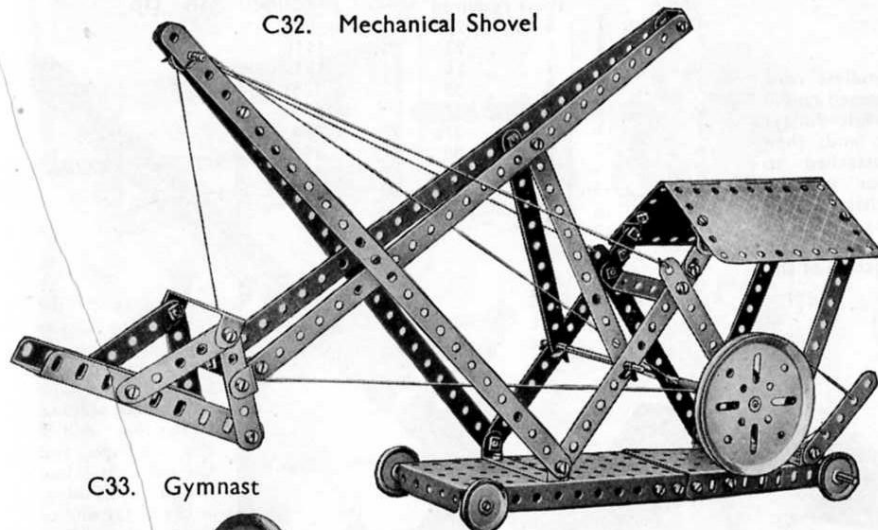
C31.
Belt Gear

Parts required

1 of No. 3
1 " " 16
1 " " 18a
1 " " 19s
2 " " 19b
4 " " 22
4 " " 35
11 " " 37
2 " " 38
1 " " 40
1 " " 48a
1 " " 52
1 " " 54a
1 " " 125
1 " " 126
2 " " 126a



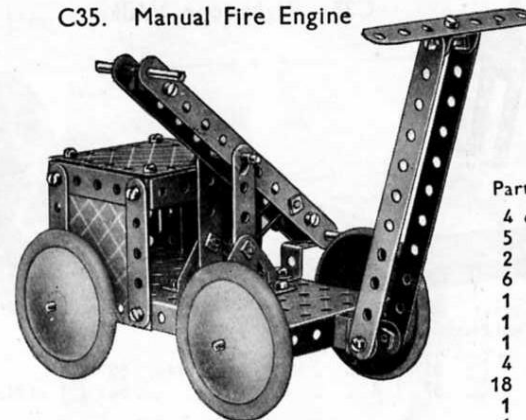
C32. Mechanical Shovel



Parts required

4 of No. 1
8 " " 2
7 " " 5
2 " " 10
2 " " 11
4 " " 12c
3 " " 16
1 " " 18a
1 " " 19s
1 " " 19b
4 " " 22
1 " " 23
1 " " 24
6 " " 35
46 " " 37
5 " " 37a
1 " " 40
1 " " 48
6 " " 48a
1 " " 52
2 " " 54a
2 " " 111c
2 " " 176
1 " " 198

C35. Manual Fire Engine



Parts required

4 of No. 2	1 of No. 18a	1 of No. 52
1 " " 3	6 " " 35	2 " " 111c
8 " " 5	34 " " 37	1 " " 125
2 " " 11	6 " " 37a	2 " " 126
6 " " 12	1 " " 38	1 " " 186
2 " " 15b	1 " " 45	4 " " 187
2 " " 17	2 " " 48a	4 " " 190

C36. Telescopic Mast

Parts required

4 of No. 1
5 " " 5
2 " " 11
6 " " 12
1 " " 18a
1 " " 19s
1 " " 22
4 " " 35
18 " " 37
1 " " 38
1 " " 40
1 " " 52
2 " " 126a
1 " " 176

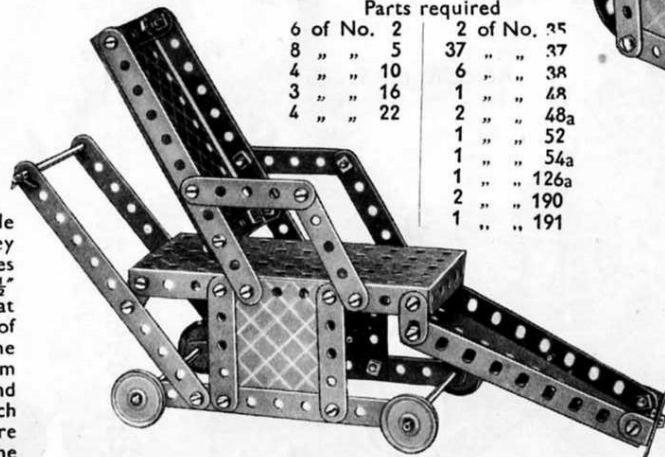
C33. Gymnast

Parts required

2 of No. 1
8 " " 2
8 " " 5
1 " " 10
4 " " 12
1 " " 15b
1 " " 19s
1 " " 19b
2 " " 22
1 " " 24
2 " " 35
36 " " 37
2 " " 37a
2 " " 38
1 " " 40
2 " " 48a
1 " " 52
2 " " 90a
1 " " 111c
2 " " 126a
2 " " 190
2 " " 192

The digging arm is carried on two pivotally attached $5\frac{1}{2}$ " Strips in order to give the bucket a direct vertical movement. The cord from the bucket is passed over the jib-head Pulley and wound round a Crank Handle, its other end also being tied to the bucket. The Crank Handle is controlled by the band brake shown in the photograph.

C34. Invalid Chair

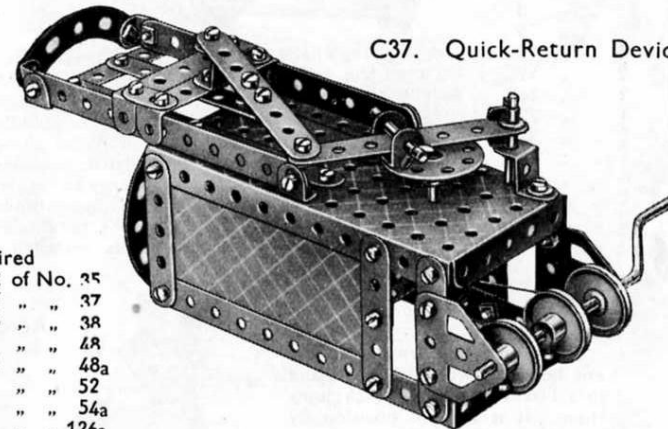


Parts required

6 of No. 2	2 of No. 35
8 " " 5	37 " " 37
4 " " 10	6 " " 38
3 " " 16	1 " " 48
4 " " 22	2 " " 48a
	1 " " 52
	1 " " 54a
	1 " " 126a
	2 " " 190
	1 " " 191

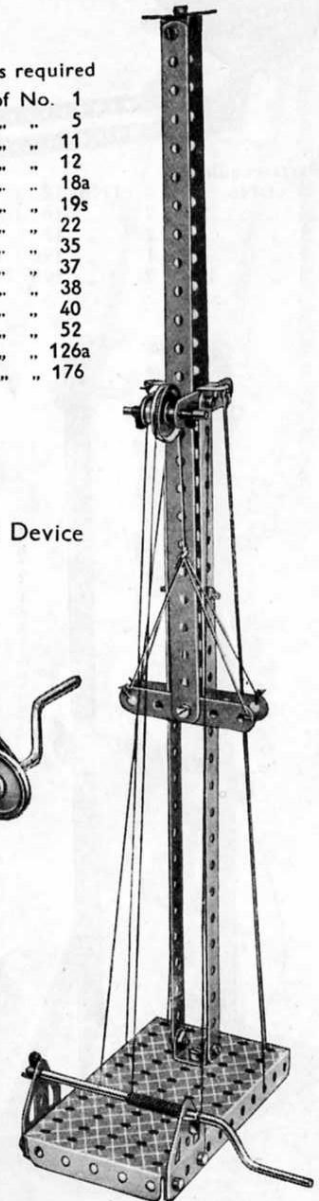
A Crank Handle carries a 1" Pulley Wheel 2 that drives a 3" Pulley on a $3\frac{1}{2}$ " Rod journalled at the top of a pair of $12\frac{1}{2}$ " Strips. The gymnast hangs from the Axle Rod, and the bolts 1 on which the arms pivot are each locked to the body by two nuts.

C37. Quick-Return Device

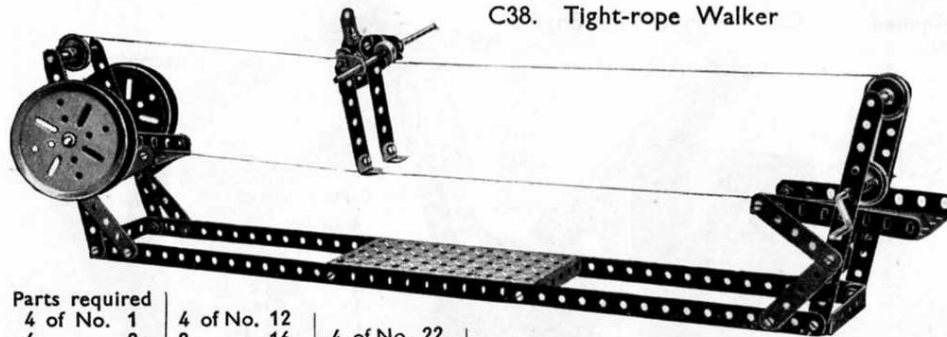


Parts required

6 of No. 2	46 of No. 37
1 " " 3	4 " " 37a
8 " " 5	4 " " 38
2 " " 10	6 " " 48a
2 " " 11	1 " " 52
4 " " 12	3 " " 90a
2 " " 17	1 " " 111c
1 " " 18a	1 " " 125
1 " " 19s	2 " " 126a
4 " " 22	1 " " 186
1 " " 24	1 " " 190
6 " " 35	2 " " 191



C38. Tight-rope Walker



Parts required									
4 of No. 1	4 of No. 12	4 of No. 22	6 of No. 38	1 of No. 52	1 of No. 126a				
4 " " 2	2 " " 16	1 " " 23	1 " " 40	2 " " 54 1					
1 " " 3	2 " " 17	8 " " 35	2 " " 48a						
9 " " 5	1 " " 19s	32 " " 37							
3 " " 10	2 " " 19b								

The endless cord is first passed round four 1" fast Pulleys the two ends then being attached to one foot of the figure that is supported by a $\frac{1}{2}$ " Pulley running along the upper section of the cord.

4 of No. 1	7 " " 2	1 " " 3	9 " " 5	5 " " 10	2 " " 11	6 " " 12	2 " " 12c	1 " " 15b	2 " " 16	2 " " 17	1 " " 18a	1 " " 19s	2 " " 19b
------------	---------	---------	---------	----------	----------	----------	-----------	-----------	----------	----------	-----------	-----------	-----------

Parts required			
4 of No. 22	1 " " 23	1 " " 24	8 " " 35
1 " " 23	1 " " 24	1 " " 25	66 " " 37
1 " " 24	1 " " 25	1 " " 26a	5 " " 37a
1 " " 26a	1 " " 27	1 " " 28	3 " " 38
1 " " 27	1 " " 28	1 " " 29	1 " " 40
1 " " 28	1 " " 29	1 " " 30	5 " " 48a
1 " " 29	1 " " 30	1 " " 31	1 " " 52

C42. Extended Ash Tip

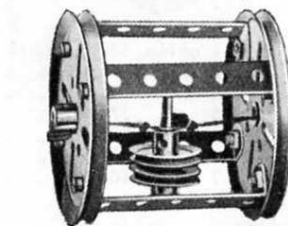
4 of No. 90a	3 " " 111c	2 " " 125	2 " " 126a	1 " " 176	3 " " 190	2 " " 192	1 " " 198
--------------	------------	-----------	------------	-----------	-----------	-----------	-----------

The cord for racking the bucket carriage is passed twice round the Crank Handle. One end is then secured to the inner end of the carriage and the other is taken round a $\frac{1}{2}$ " Pulley, at the outer end of the rails, after which it is secured to the carriage.

C39. Guillotine

Parts required

2 of No. 1	1 " " 3	9 " " 5	2 " " 10	2 " " 11	1 " " 16	1 " " 22	2 " " 35	24 " " 37	6 " " 38	1 " " 40	3 " " 48a	1 " " 52
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C40. Cum Bak

Parts required

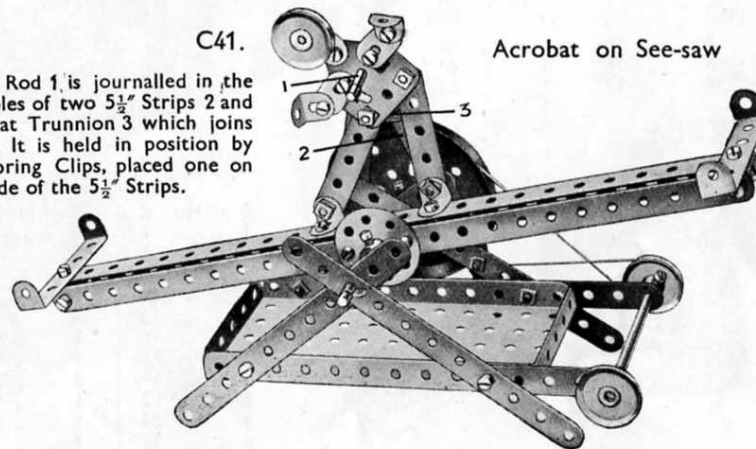
1 of No. 18a	2 " " 19b	2 " " 22	1 " " 35	8 " " 37	4 " " 48a	1 " " 186
--------------	-----------	----------	----------	----------	-----------	-----------

A Driving Band is doubled and stretched between the centres of the 3" Pulley Wheels. A weight, consisting of two 1" fast Pulley Wheels and a $1\frac{1}{2}$ " Rod, is suspended from it in the middle of the drum. When the Cum Bak is rolled along any smooth level surface, the elastic becomes twisted and stores up sufficient energy to return the drum to its starting point. If the mechanism is concealed by a thin cardboard covering, the model will cause much amusement by its mystifying behaviour

C41.

Acrobat on See-saw

A 1" Rod 1 is journaled in the end holes of two $5\frac{1}{2}$ " Strips 2 and in a Flat Trunnion 3 which joins them. It is held in position by two Spring Clips, placed one on each side of the $5\frac{1}{2}$ " Strips.



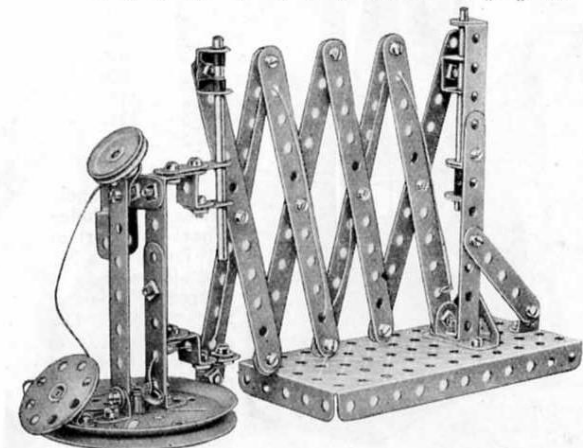
Parts required

3 of No. 1	6 " " 2	4 " " 5	3 " " 10	2 " " 11	4 " " 12	2 " " 16	1 " " 18a	1 " " 19b	3 " " 22	1 " " 24	5 " " 35	25 " " 37	4 " " 37a	2 " " 38	1 " " 40	2 " " 48a	1 " " 52	1 " " 111c	1 " " 126a
------------	---------	---------	----------	----------	----------	----------	-----------	-----------	----------	----------	----------	-----------	-----------	----------	----------	-----------	----------	------------	------------

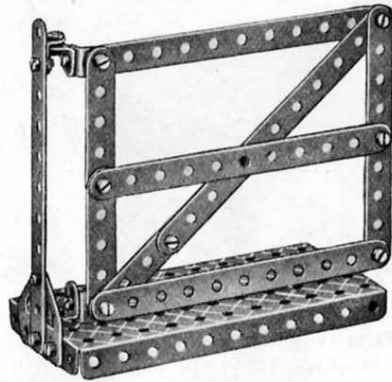
C43. Telephone

Parts required

8 of No. 2	1 of No. 19b	1 of No. 40
1 " " 3	1 " " 22	1 " " 44
4 " " 5	1 " " 24	5 " " 48a
5 " " 10	4 " " 35	1 " " 52
2 " " 11	37 " " 37	4 " " 111c
8 " " 12	20 " " 37a	2 " " 125
2 " " 16	4 " " 38	1 " " 126



C44. Gate



Parts required

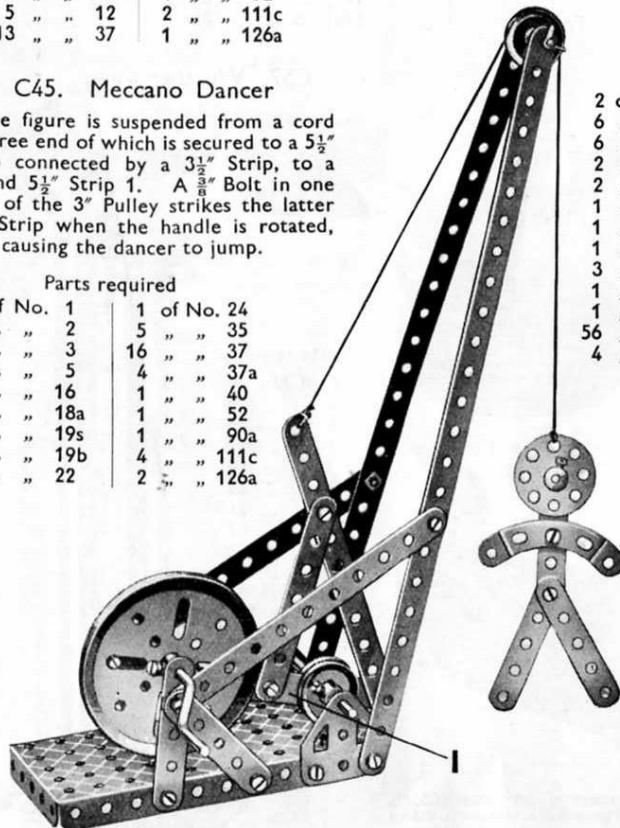
5 of No. 2	4 of No. 37a
5 " " 5	1 " " 52
5 " " 12	2 " " 111c
13 " " 37	1 " " 126a

C45. Meccano Dancer

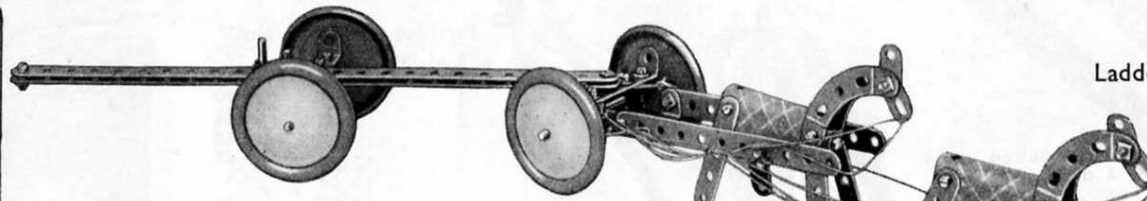
The figure is suspended from a cord the free end of which is secured to a $5\frac{1}{2}$ " Strip connected by a $3\frac{1}{2}$ " Strip, to a second $5\frac{1}{2}$ " Strip 1. A $\frac{3}{8}$ " Bolt in one hole of the 3" Pulley strikes the latter $5\frac{1}{2}$ " Strip when the handle is rotated, thus causing the dancer to jump.

Parts required

2 of No. 1	1 of No. 24
4 " " 2	5 " " 35
1 " " 3	16 " " 37
7 " " 5	4 " " 37a
1 " " 16	1 " " 40
1 " " 18a	1 " " 52
1 " " 19s	1 " " 90a
1 " " 19b	4 " " 111c
3 " " 22	2 " " 126a

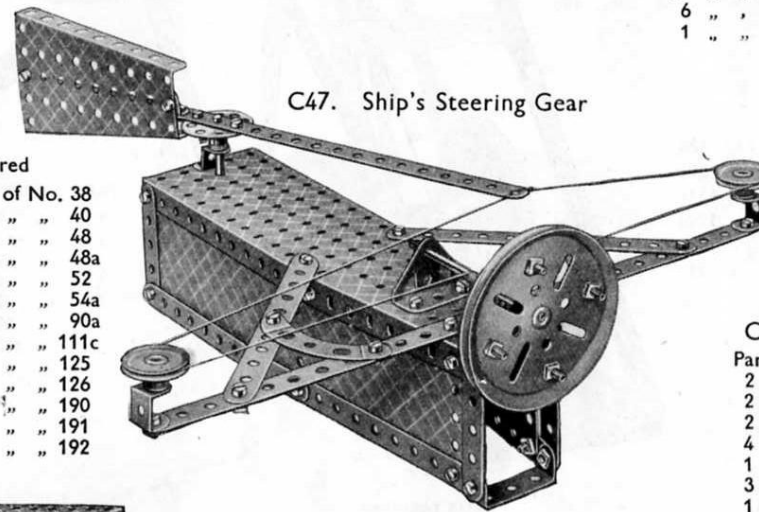


C46. Timber Drag



Parts required	8 of No. 12	3 of No. 37a	2 of No. 111c
2 of No. 1	2 " " 15b	8 " " 38	2 " " 126
2 " " 2	2 " " 17	1 " " 40	2 " " 126a
8 " " 5	2 " " 18a	1 " " 48	4 " " 187
4 " " 10	8 " " 35	3 " " 48a	2 " " 190
2 " " 11	27 " " 37	4 " " 90a	

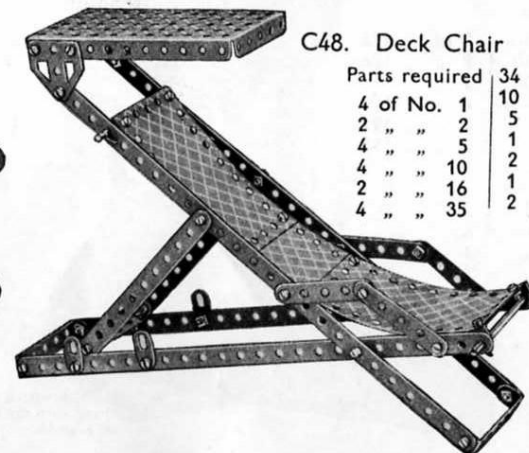
C47. Ship's Steering Gear



Parts required

2 of No. 1	5 of No. 38
6 " " 2	1 " " 40
6 " " 5	1 " " 48
2 " " 11	1 " " 48a
2 " " 12	1 " " 52
1 " " 16	2 " " 54a
1 " " 18a	2 " " 90a
1 " " 19b	6 " " 111c
3 " " 22	1 " " 125
1 " " 24	2 " " 126
1 " " 35	1 " " 190
56 " " 37	2 " " 191
4 " " 37a	2 " " 192

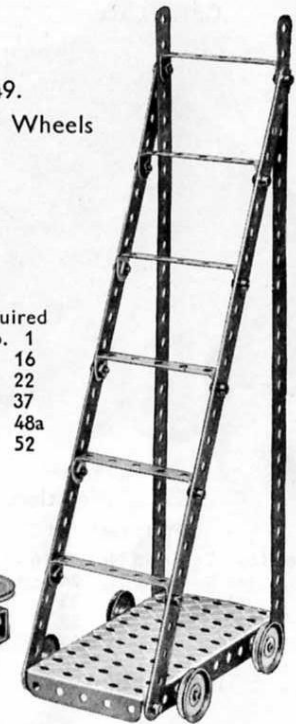
C48. Deck Chair



Parts required	34 of No. 37
4 of No. 1	10 " " 37a
2 " " 2	5 " " 48a
4 " " 5	1 " " 52
4 " " 10	2 " " 126a
2 " " 16	1 " " 190
4 " " 35	2 " " 191

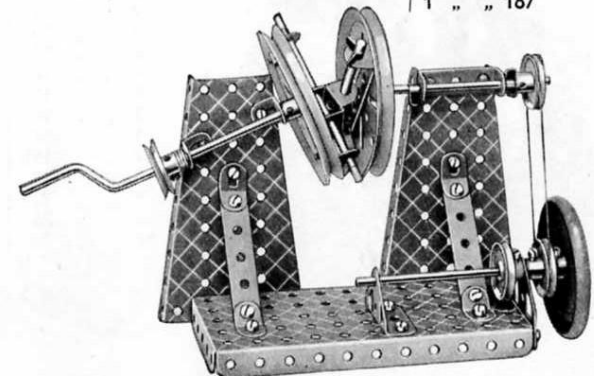
C49. Ladder on Wheels

Parts required	4 of No. 1
2 " " 16	
4 " " 22	
16 " " 37	
6 " " 48a	
1 " " 52	

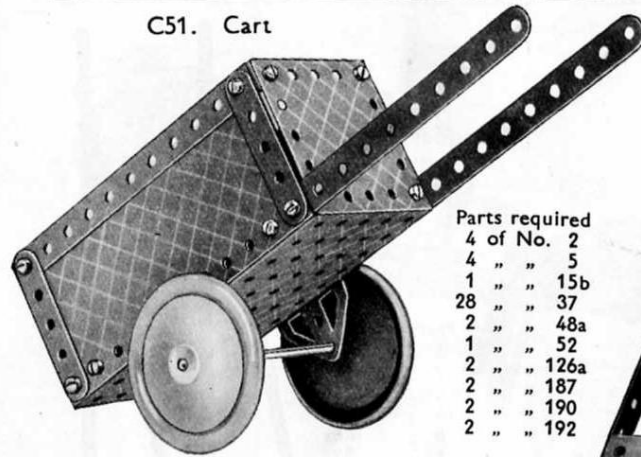


C50. Hooke's Coupling

Parts required	6 of No. 35
2 of No. 5	24 " " 37
2 " " 11	3 " " 38
2 " " 12	1 " " 40
4 " " 12c	1 " " 48
1 " " 15b	2 " " 48a
3 " " 16	1 " " 52
1 " " 19s	2 " " 54a
2 " " 19b	1 " " 126
4 " " 22	1 " " 126a
	1 " " 187



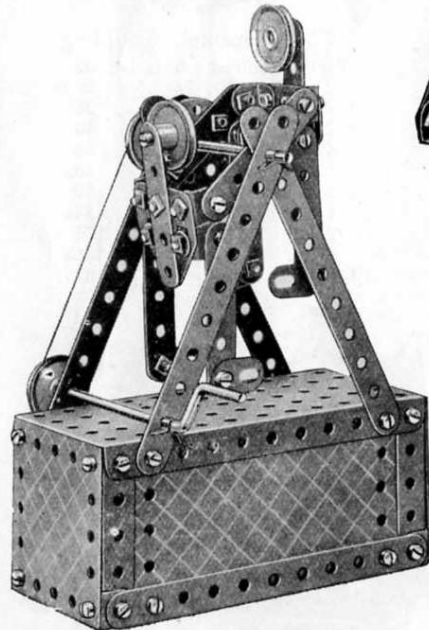
C51. Cart



Parts required	
4 of No. 2	
4 " " 5	
1 " " 15b	
28 " " 37	
2 " " 48a	
1 " " 52	
2 " " 126a	
2 " " 187	
2 " " 190	
2 " " 192	

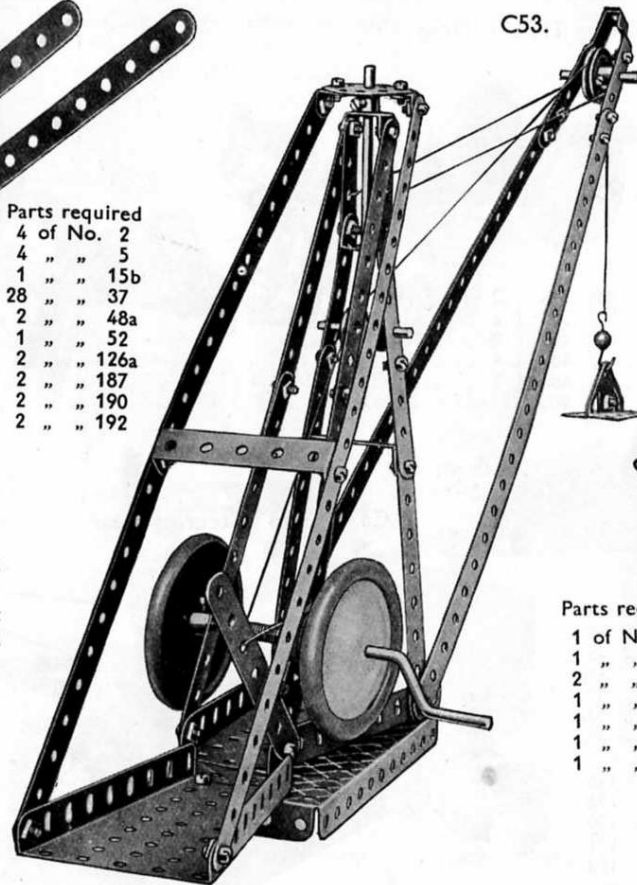
C52. Wrestlers

Parts required		
6 of No. 2	4 of No. 22	6 of No. 48a
8 " " 5	1 " " 24	1 " " 52
4 " " 10	2 " " 35	6 " " 111c
8 " " 12	44 " " 37	2 " " 126a
1 " " 16	12 " " 37a	
1 " " 19s	6 " " 38	2 " " 190
	1 " " 40	2 " " 191



C53.

Jib Crane

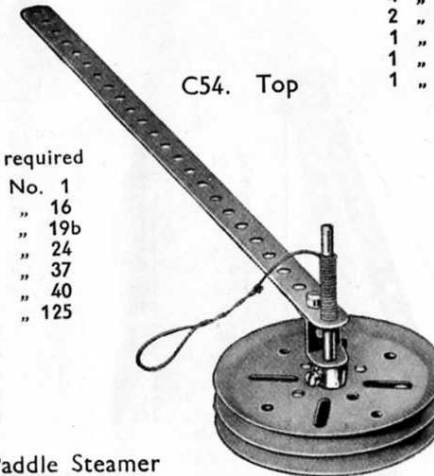


Parts required		32 o. No. 37
4 of No. 1	2 " " 37a	
8 " " 2	3 " " 38	
1 " " 3	1 " " 40	
2 " " 5	1 " " 44	
2 " " 11	1 " " 48	
2 " " 12	1 " " 48a	
1 " " 16	1 " " 52	
1 " " 17	2 " " 54a	
2 " " 18a	1 " " 57c	
1 " " 19s	1 " " 111c	
4 " " 22	2 " " 126	
1 " " 23	1 " " 176	
1 " " 24	2 " " 187	
3 " " 35		

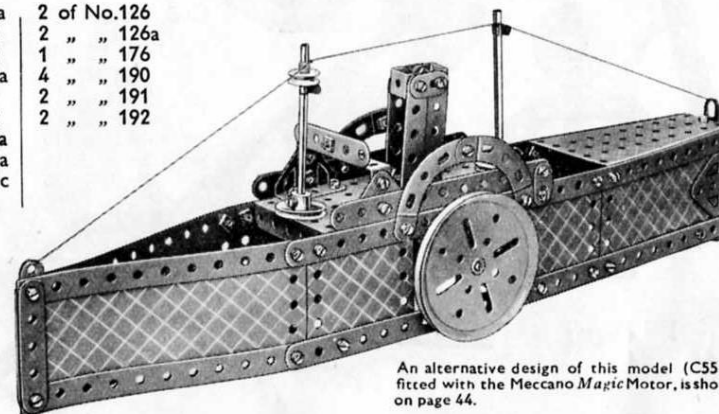
Parts required

1 of No. 1	
1 " " 16	
2 " " 19b	
1 " " 24	
1 " " 37	
1 " " 40	
1 " " 125	

C54. Top

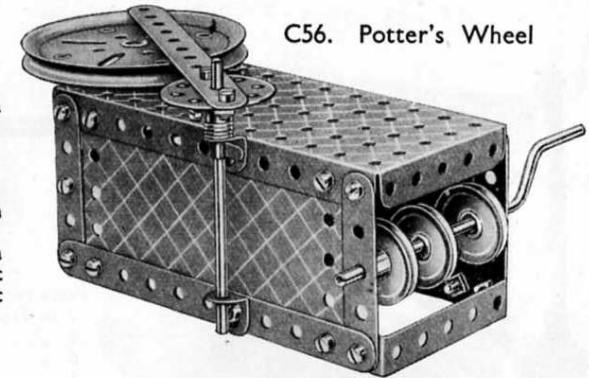


C55. Paddle Steamer



An alternative design of this model (C55M), fitted with the Meccano Magic Motor, is shown on page 44.

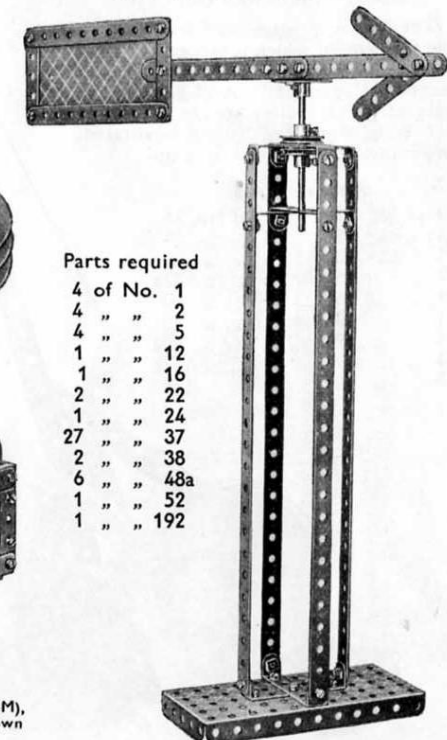
C56. Potter's Wheel



Parts required

3 of No. 2	1 of No. 19b	1 of No. 40
4 " " 5	4 " " 22	2 " " 48a
2 " " 12	1 " " 24	1 " " 52
1 " " 16	1 " " 35	2 " " 191
1 " " 17	22 " " 37	
1 " " 19s	5 " " 38	

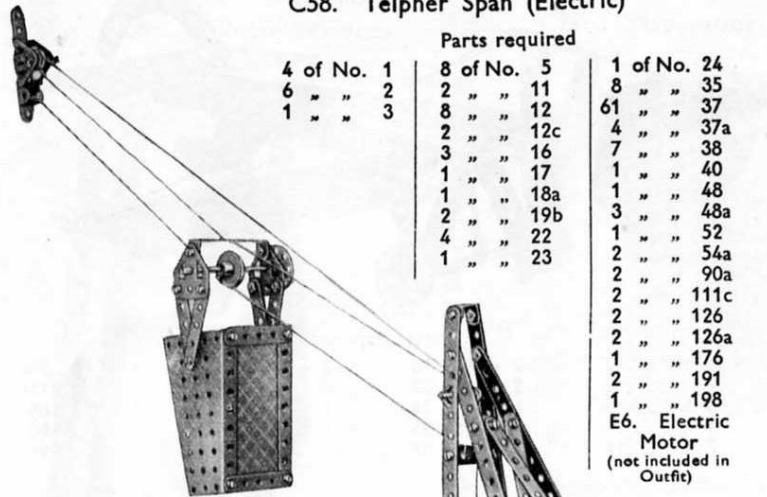
C57. Weather Vane



Parts required

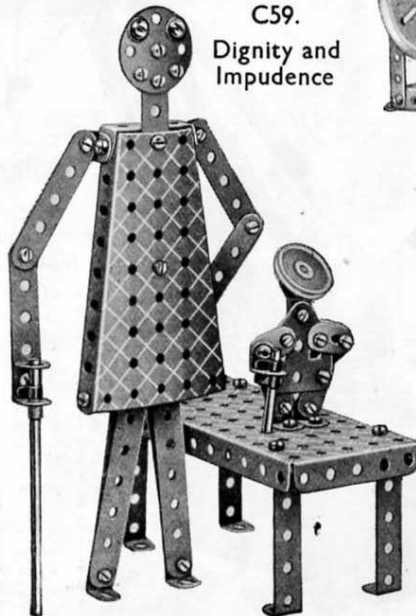
4 of No. 1	
4 " " 2	
4 " " 5	
1 " " 12	
1 " " 16	
2 " " 22	
1 " " 24	
27 " " 37	
2 " " 38	
6 " " 48a	
1 " " 52	
1 " " 192	

C58. Telpher Span (Electric)

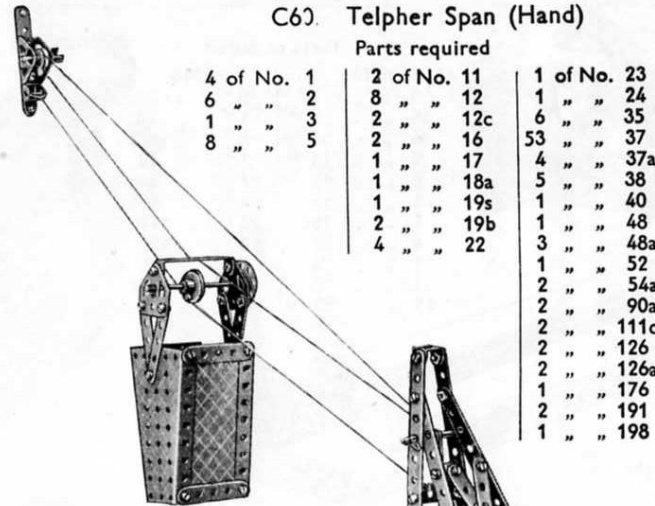


A 3" Pulley, driven from a 1" Pulley on the armature shaft, rotates a second 1" Pulley that in turn operates the 3" Pulley driving the winding shaft.

C59. Dignity and Impudence

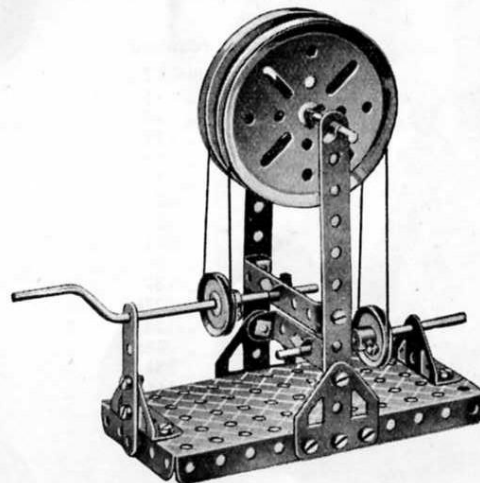


C60. Telpher Span (Hand)

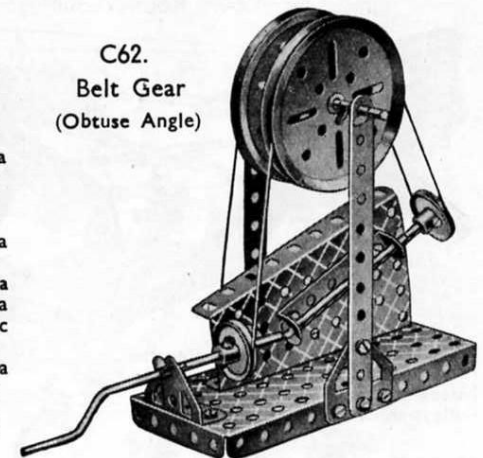


A 3" Pulley on the Crank Handle is connected by a cord to a similar Pulley on the winding shaft that is also fitted with a 1" Pulley carrying the operating cord

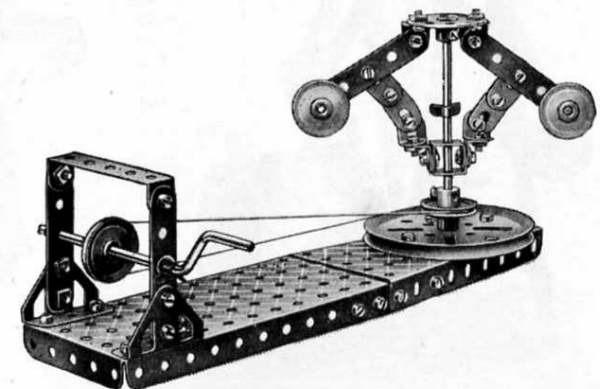
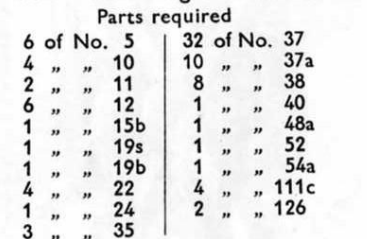
C61. Belt Gear (Shafts not in Line)



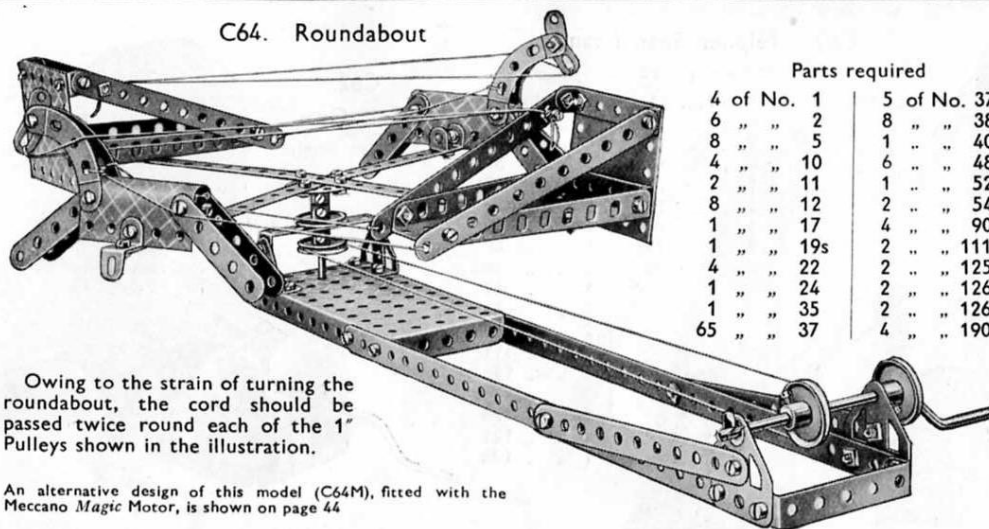
C62. Belt Gear (Obtuse Angle)



C63. Centrifugal Governor



C64. Roundabout



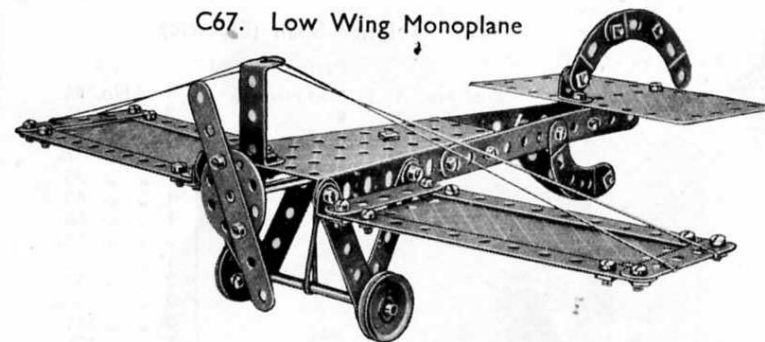
Owing to the strain of turning the roundabout, the cord should be passed twice round each of the 1" Pulleys shown in the illustration.

An alternative design of this model (C64M), fitted with the Meccano Magic Motor, is shown on page 44

Parts required

4 of No. 1	5 of No. 37a
6 " " 2	8 " " 38
8 " " 5	1 " " 40
4 " " 10	6 " " 48a
2 " " 11	1 " " 52
8 " " 12	2 " " 54a
1 " " 17	4 " " 90a
1 " " 19s	2 " " 111c
4 " " 22	2 " " 125
1 " " 24	2 " " 126
1 " " 35	2 " " 126a
65 " " 37	4 " " 190

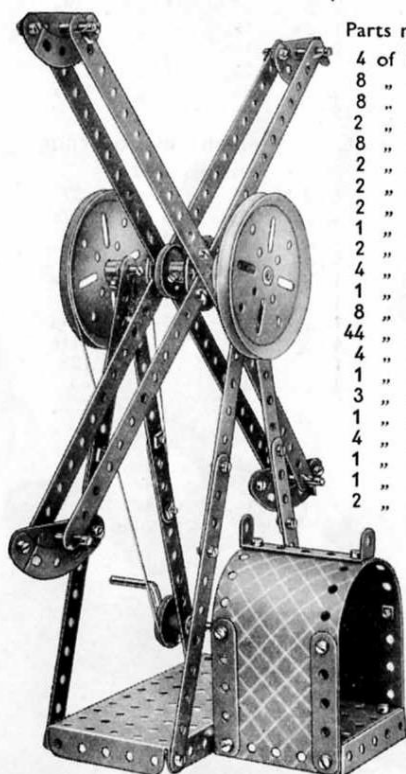
C67. Low Wing Monoplane



Parts required

6 of No. 2	2 of No. 16	2 of No. 37a	4 of No. 90a
1 " " 3	2 " " 22	8 " " 38	2 " " 111c
8 " " 5	1 " " 24	1 " " 40	1 " " 186
1 " " 11	1 " " 35	1 " " 48	2 " " 190
7 " " 12	36 " " 37	1 " " 54a	2 " " 191

C65. Fly Boats

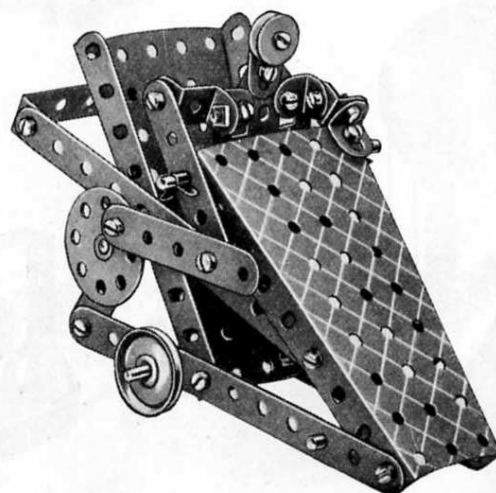


Parts required

4 of No. 1
8 " " 2
8 " " 5
2 " " 10
8 " " 12
2 " " 16
2 " " 17
2 " " 18a
1 " " 19s
2 " " 19b
4 " " 22
1 " " 24
8 " " 35
44 " " 37
4 " " 38
1 " " 40
3 " " 48a
1 " " 52
4 " " 90a
1 " " 176
1 " " 190
2 " " 191

C66. The Invalid

When wheeled along the table the "invalid" appears to push himself energetically along. His neck is a Flat Bracket : his right (or propelling) arm consists of one Angle Bracket and one $\frac{1}{2}$ " Reversed Angle Bracket, and his left arm—the hand of which is bolted loosely to the chair—is formed by three Angle Brackets. The chair is composed principally of two Sector Plates and four $5\frac{1}{2}$ " Strips, and it runs on three 1" Pulley Wheels—one in front and two at the back. One of these, not shown, is connected by means of a Driving Band to a third 1" Pulley Wheel, the shaft of which carries also a Bush Wheel. As will be seen, a $2\frac{1}{2}$ " Strip is pivoted at one end to this Bush Wheel and at the other end to a second $2\frac{1}{2}$ " Strip which, rocking about an axle journalled through its centre hole is again pivoted to the invalid's hands.



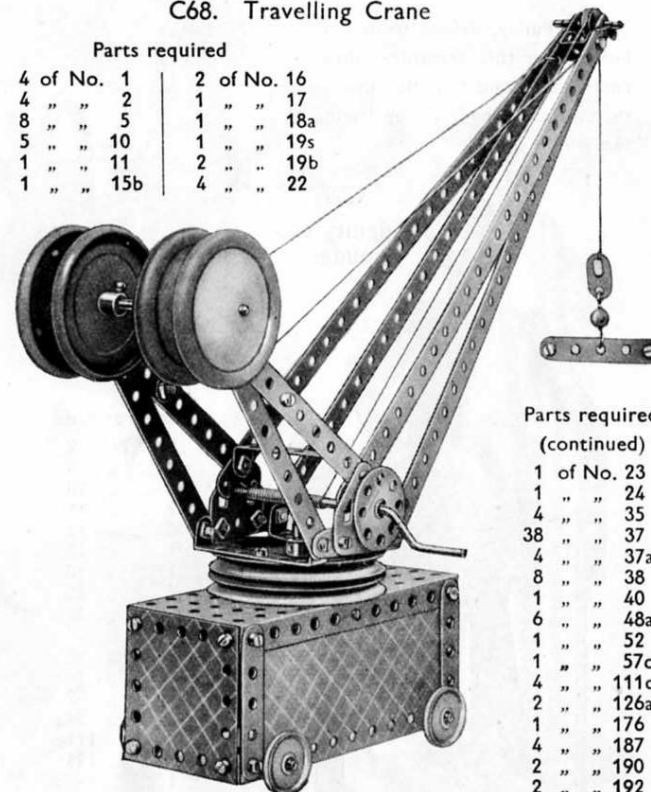
Parts required

4 of No. 2
4 " " 5
1 " " 10
4 " " 12
3 " " 16
1 " " 17
4 " " 22
1 " " 23
1 " " 24
4 " " 35
22 " " 37
5 " " 37a
4 " " 38
1 " " 48a
2 " " 54a
1 " " 111c
1 " " 125
1 " " 126a
1 " " 186

C68. Travelling Crane

Parts required

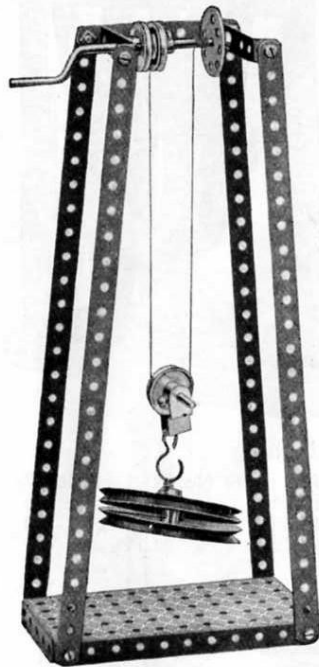
4 of No. 1	2 of No. 16
4 " " 2	1 " " 17
8 " " 5	1 " " 18a
5 " " 10	1 " " 19s
1 " " 11	2 " " 19b
1 " " 15b	4 " " 22

Parts required
(continued)

1 of No. 23
1 " " 24
4 " " 35
38 " " 37
4 " " 37a
8 " " 38
1 " " 40
6 " " 48a
1 " " 52
1 " " 57c
4 " " 111c
2 " " 126a
1 " " 176
4 " " 187
2 " " 190
2 " " 192

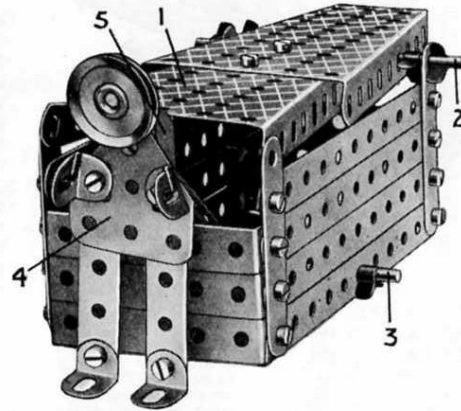
An alternative design of this model (C65M), fitted with the Meccano Magic Motor, is shown on page 45

C69. Chinese Windlass



Parts required		
4 of No. 1		
1 " " 3		
1 " " 18a		
1 " " 19s		
2 " " 19b		
3 " " 22		
1 " " 23		
1 " " 24		
8 " " 37		
1 " " 40		
1 " " 45		
2 " " 48a		
1 " " 52		
1 " " 57c		
1 " " 176		

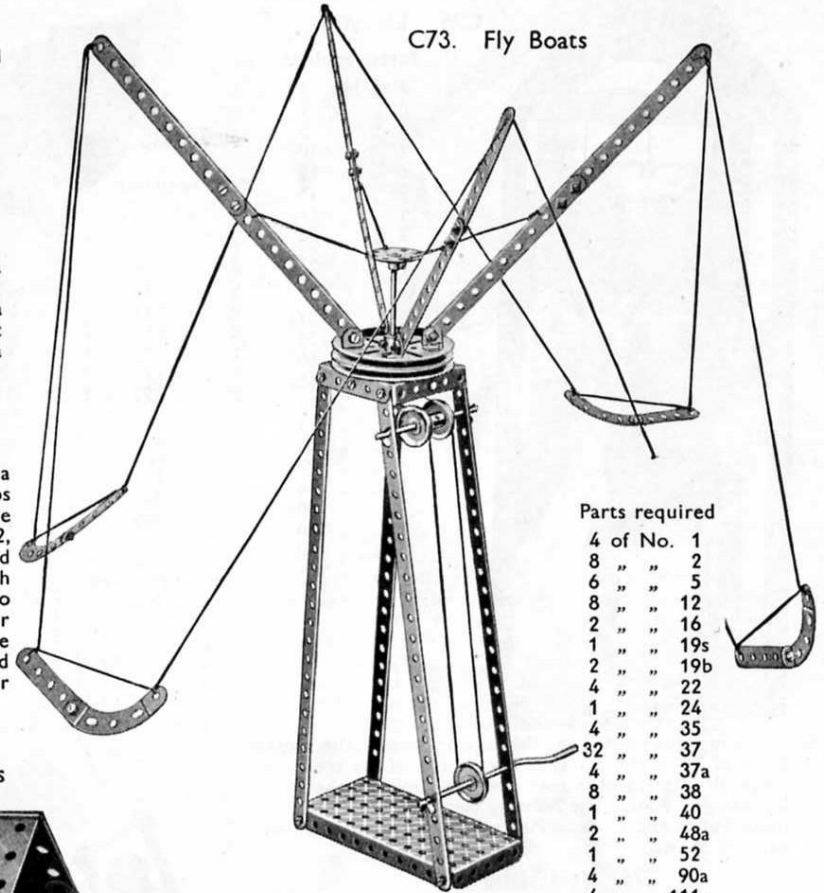
C71. Disappearing Meccanitian



The bottom of the box-like portion of the model consists of a $5\frac{1}{2} \times 2\frac{1}{2}$ " Flanged Plate; three $5\frac{1}{2}$ " Strips bolted to upright $2\frac{1}{2}$ " Strips form each side and each end consists of two $2\frac{1}{2} \times \frac{1}{2}$ " Double Angle Strips. The lid 1, which is mounted pivotally on an Axle Rod 2, consists of two Sector Plates bolted together. Elastic bands are tied to the sides of these Plates and connected to Rod 3 passed through the bottom of the box. The "Meccanitian" 4 also is connected to this Rod by pieces of elastic. On pressing the end of the rear Sector Plate the lid opens sufficiently to allow the figure to be drawn inside and then snaps back into place. A Cranked Bent Strip 5 is bolted at the back of the figure and rests against the edge of the Sector Plate.

Parts required		
6 of No. 2		
6 " " 5		
1 " " 10		
4 " " 12		
2 " " 16		
1 " " 22		
6 " " 35		
23 " " 37		
1 " " 45		
6 " " 48a		
1 " " 52		
2 " " 54a		
1 " " 111c		
1 " " 126a		
Four short lengths of elastic		

C73. Fly Boats

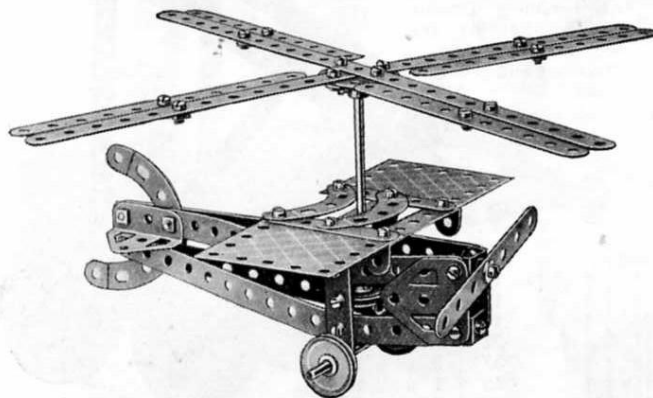


Parts required		
4 of No. 1		
8 " " 2		
6 " " 5		
8 " " 12		
2 " " 16		
1 " " 19s		
2 " " 19b		
4 " " 22		
1 " " 24		
4 " " 35		
32 " " 37		
4 " " 37a		
8 " " 38		
1 " " 40		
2 " " 48a		
1 " " 52		
4 " " 90a		
4 " " 111c		

C70. Autogiro

Parts required

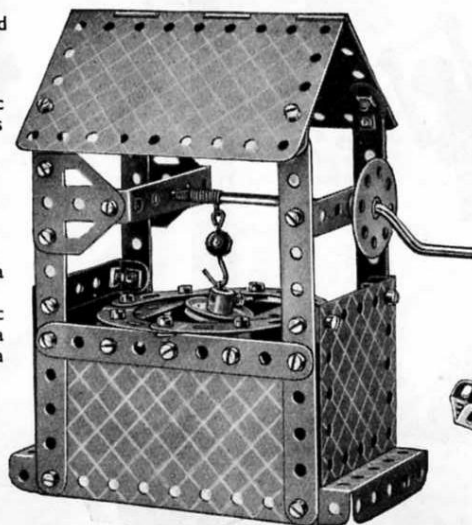
2 of No. 1	2 of No. 11	33 of No. 37	4 of No. 90a
8 " " 2	2 " " 12	3 " " 37a	2 " " 111c
1 " " 3	2 " " 16	7 " " 38	2 " " 126
9 " " 5	4 " " 22	1 " " 48	2 " " 126a
5 " " 10	1 " " 24	1 " " 48a	2 " " 190



C72. Well Windlass

Parts required

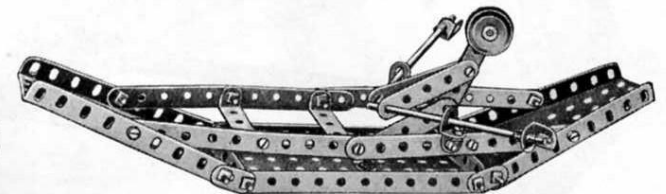
4 of No. 2	
4 " " 5	
4 " " 12c	
1 " " 19s	
1 " " 22	
1 " " 24	
1 " " 35	
46 " " 37	
1 " " 38	
1 " " 40	
6 " " 48a	
1 " " 52	
1 " " 57c	
4 " " 90a	
2 " " 126a	
1 " " 176	
2 " " 190	
2 " " 191	
1 " " 198	



C74. Rowing Boat

Parts required

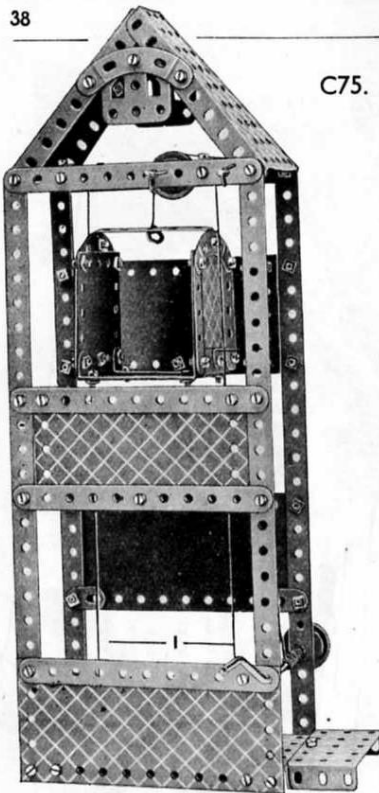
4 of No. 2	2 of No. 16	3 of No. 48a
4 " " 5	1 " " 22	1 " " 52
4 " " 10	6 " " 35	2 " " 54a
7 " " 12	25 " " 37	1 " " 111c



C75. Elevator

Parts required

4 of No. 1	
8 " " 2	
8 " " 5	
2 " " 10	
6 " " 12	
2 " " 16	
1 " " 19s	
2 " " 22	
1 " " 23	
6 " " 35	
63 " " 37	
2 " " 37a	
8 " " 38	
1 " " 40	
3 " " 48a	
1 " " 51	
1 " " 52	
2 " " 54a	
4 " " 90a	
1 " " 126	
2 " " 126a	
1 " " 176	
3 " " 190	
2 " " 191	
2 " " 192	

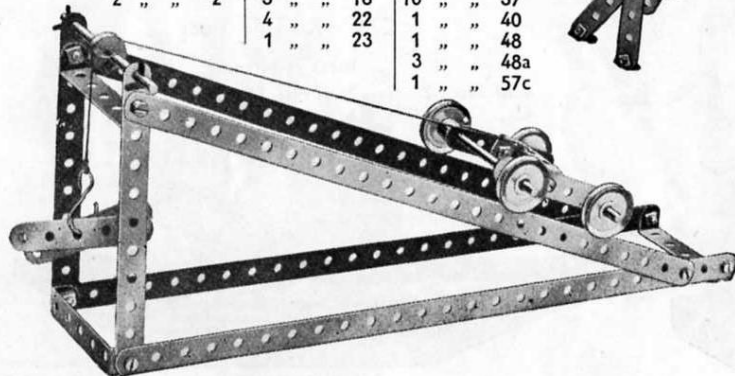


The guide cords 1 for the cage are tied to the centre holes of $2\frac{1}{2}$ " Strips attached to the top of the model by Angle Brackets, and in corresponding holes in the $5\frac{1}{2}$ " x $2\frac{1}{2}$ " Flanged Plate. The hoisting cord is passed over a $\frac{1}{2}$ " loose Pulley and 1" fixed Pulley before being tied to the cage as shown.

C76. Inclined Plane

Parts required

4 of No. 1	2 of No. 5	3 of No. 35
2 " " 2	3 " " 16	10 " " 37
	4 " " 22	1 " " 40
	1 " " 23	1 " " 48
		3 " " 48a
		1 " " 57c



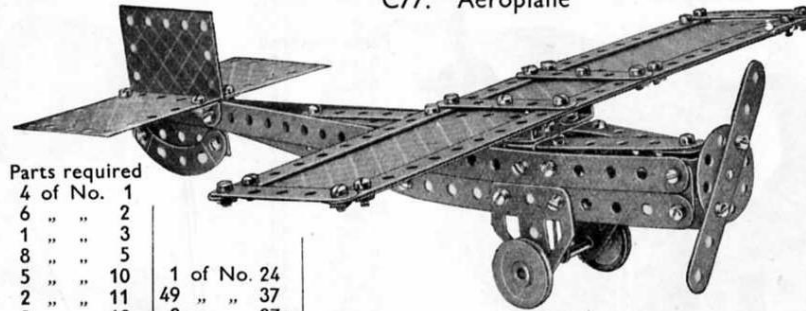
C77. Aeroplane

Parts required

4 of No. 1	
6 " " 2	
1 " " 3	
8 " " 5	
5 " " 10	
2 " " 11	
8 " " 12	
1 " " 15b	
1 " " 17	
2 " " 22	

1 of No. 24	
49 " " 37	
2 " " 37a	
1 " " 48	
2 " " 90a	
2 " " 111c	

2 of No. 125	1 of No. 186
2 " " 126a	4 " " 190
1 " " 176	2 " " 191



An alternative design of this model (C77M), fitted with the Meccano Magic Motor, is illustrated on page 45.

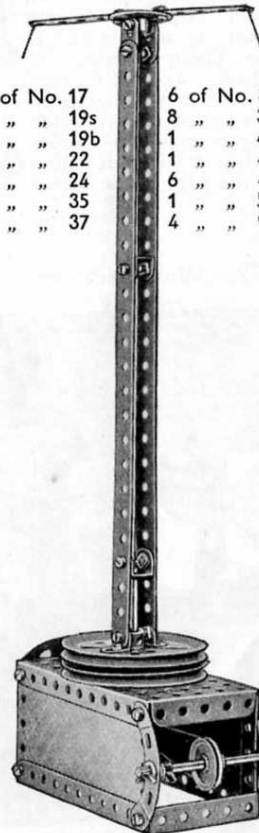
C78. Revolving Gymnasts

Parts required

2 of No. 1	2 of No. 17
3 " " 2	1 " " 19s
8 " " 5	2 " " 19b
4 " " 10	4 " " 22
2 " " 11	1 " " 24
8 " " 12	7 " " 35
1 " " 16	40 " " 37



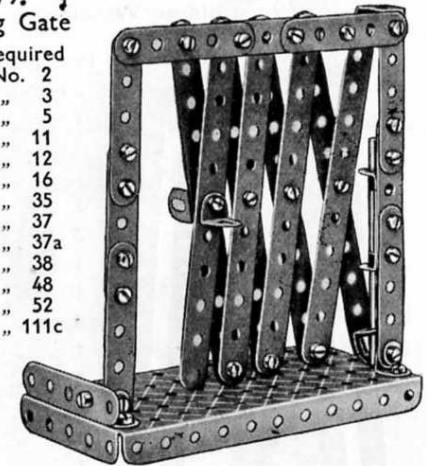
6 of No. 37a	4 of No. 111c
8 " " 38	1 " " 125
1 " " 40	2 " " 126a
1 " " 48	1 " " 186
6 " " 48a	1 " " 190
1 " " 52	2 " " 192
4 " " 90a	



C79. Sliding Gate

Parts required

8 of No. 2	
1 " " 3	
9 " " 5	
1 " " 11	
6 " " 12	
1 " " 16	
2 " " 35	
30 " " 37	
14 " " 37a	
5 " " 38	
1 " " 48	
1 " " 52	
1 " " 111c	



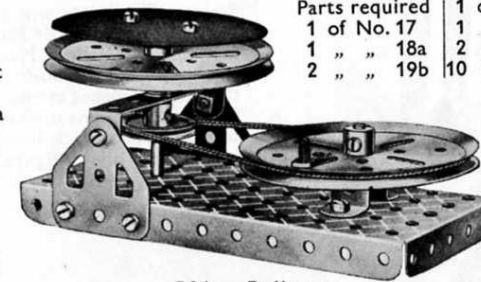
C80. Rotary Linisher

Parts required

1 of No. 17	1 of No. 22
1 " " 18a	1 " " 24
2 " " 19b	2 " " 35
	10 " " 37

1 of No. 37a	1 of No. 38
2 " " 40	1 " " 48a
1 " " 52	1 " " 111c
2 " " 125	1 " " 126a

Disc of Emery Cloth (not included in Outfit)



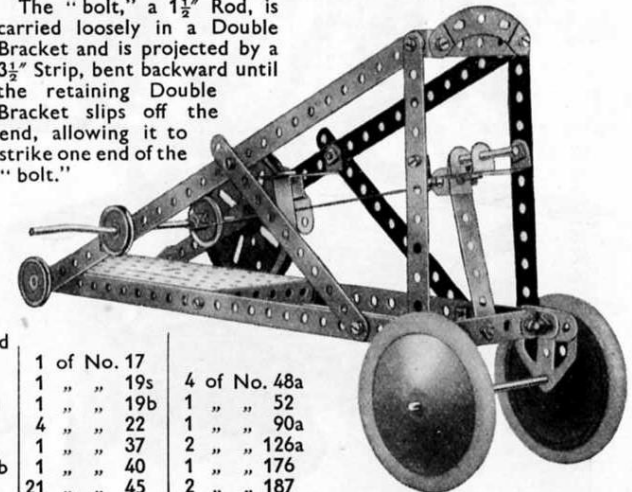
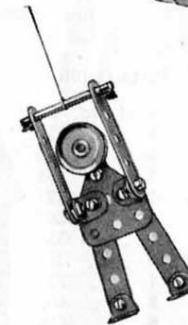
C81. Ballista

The "bolt," a $1\frac{1}{2}$ " Rod, is carried loosely in a Double Bracket and is projected by a $3\frac{1}{2}$ " Strip, bent backward until the retaining Double Bracket slips off the end, allowing it to strike one end of the "bolt."

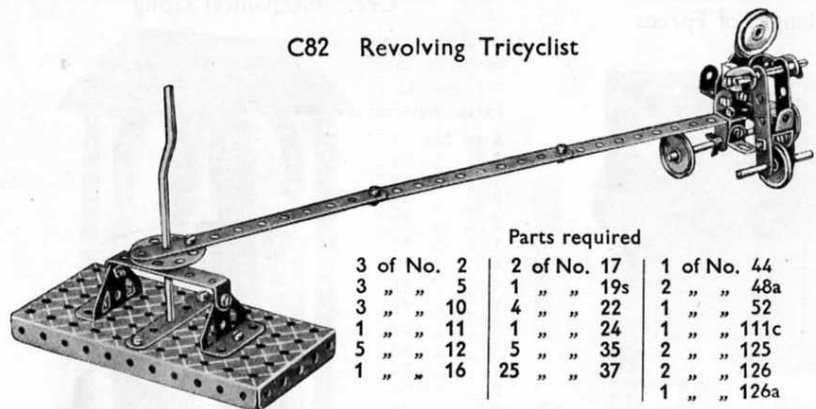
Parts required

4 of No. 1	1 of No. 17
4 " " 2	1 " " 19s
1 " " 3	1 " " 19b
2 " " 11	4 " " 22
2 " " 12	1 " " 37
1 " " 15b	1 " " 40
1 " " 16	21 " " 45

4 of No. 48a	1 " " 52
1 " " 90a	2 " " 126a
2 " " 176	1 " " 187

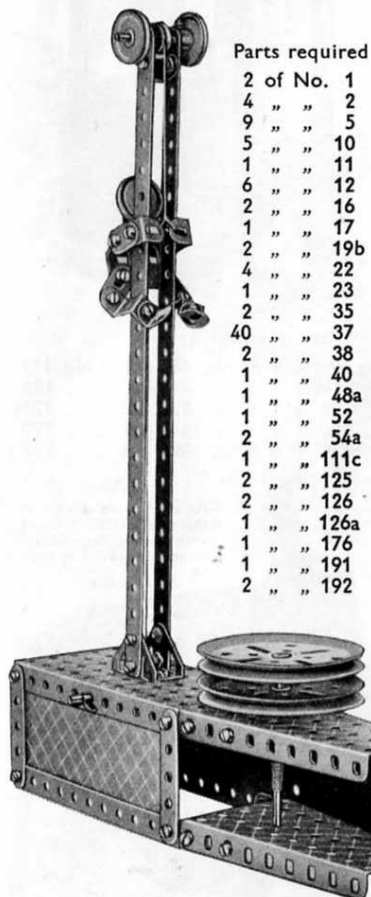


C82 Revolving Tricyclist



Parts required		Parts required		Parts required	
3 of No.	2	2 of No.	17	1 of No.	44
3 "	5	1 "	19s	2 "	48a
3 "	10	4 "	22	1 "	52
1 "	11	1 "	24	1 "	111c
5 "	12	5 "	35	2 "	125
1 "	16	25 "	37	2 "	126
				1 "	126a

C83. Man Climbing Pole



Parts required	
2 of No.	1
4 "	2
9 "	5
5 "	10
1 "	11
6 "	12
2 "	16
1 "	17
2 "	19b
4 "	22
1 "	23
2 "	35
40 "	37
2 "	38
1 "	40
1 "	48a
1 "	52
2 "	54a
1 "	111c
2 "	125
2 "	126
1 "	126a
1 "	176
1 "	191
2 "	192

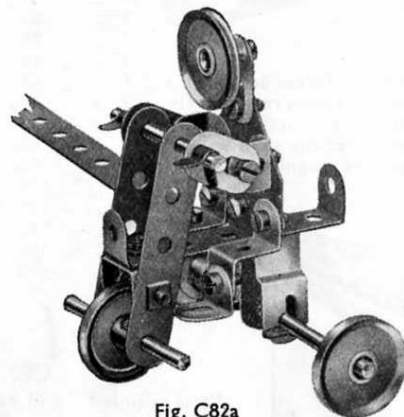
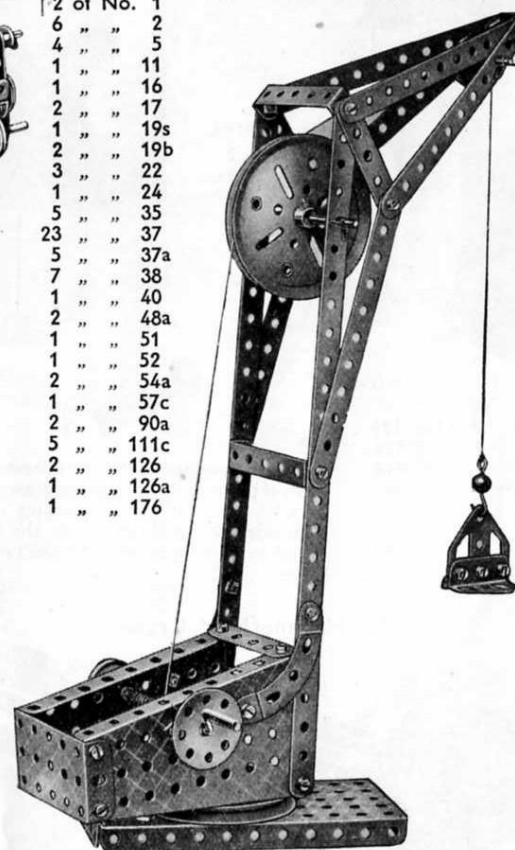


Fig. C82a

Parts required

2 of No.	1
6 "	2
4 "	5
1 "	11
1 "	16
2 "	17
1 "	19s
2 "	19b
3 "	22
1 "	24
5 "	35
23 "	37
5 "	37a
7 "	38
1 "	40
2 "	48a
1 "	51
1 "	52
2 "	54a
1 "	57c
2 "	90a
5 "	111c
2 "	126
1 "	126a
1 "	176

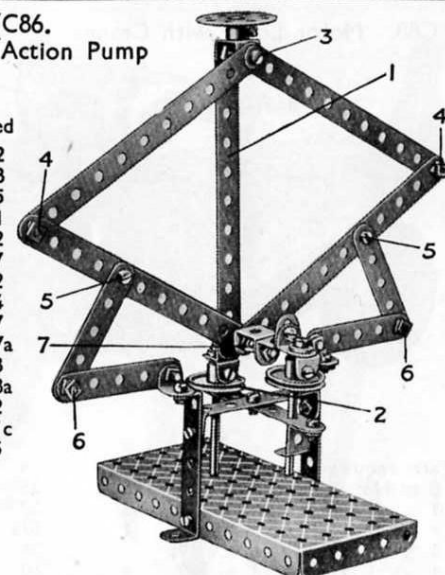
C84. Warehouse Crane



C86. Double Action Pump

Parts required

5 of No.	2
1 "	3
4 "	5
2 "	11
2 "	12
2 "	17
1 "	22
24 "	37
9 "	37a
7 "	38
3 "	48a
1 "	52
3 "	111c
2 "	125



The $5\frac{1}{2}$ " Strip 1 is attached to the 1" Pulley Wheel 2 by means of two Angle Brackets, through the lower one of which passes the Set-Screw that secures the Pulley to its 2" Rod. Two Washers are placed beneath the head of the bolt joining the Angle Brackets in order to prevent its shank from binding on the boss of the Pulley 2. The joints 3, 4, 5, 6, 7, are all locknuted, the remainder of the joints being quite rigid. When the Strip 1 descends, together with the first pump, the incidental distortion of the parallelogram 3, 4, 7, 4 causes the second pump to rise. Similarly, when the first pump rises, the second descends.

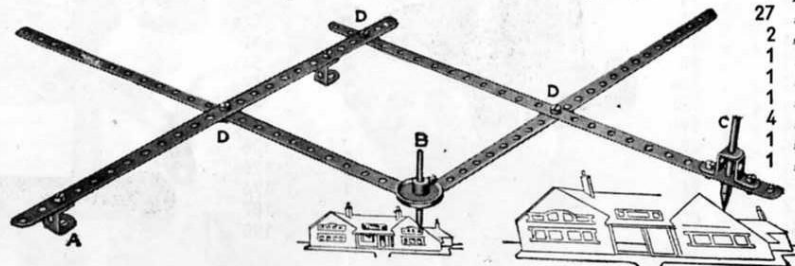
C85. Pantograph

The apparatus is fixed at the point A. If an enlarged sketch is to be made the point B is traced round the outlines, the writing point C reproducing the sketch on a large scale. When a reduced drawing is to be made, the point C traces the outline, whilst the point B reproduces the sketch on a smaller scale. The degree of enlargement or reduction varies according to the position in which point C is fixed on the perforated arm.

The Bolts at D are fitted with locknuts to allow free movement of the $12\frac{1}{2}$ " Strips.

Parts required

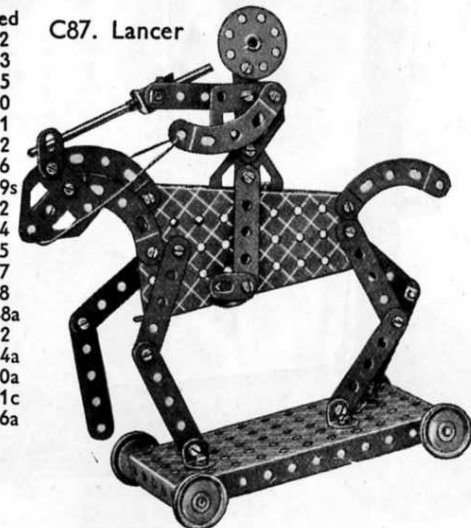
4 of No.	1
2 "	11
2 "	18a
1 "	22
2 "	35
4 "	37
3 "	37a
3 "	111c
2 "	125



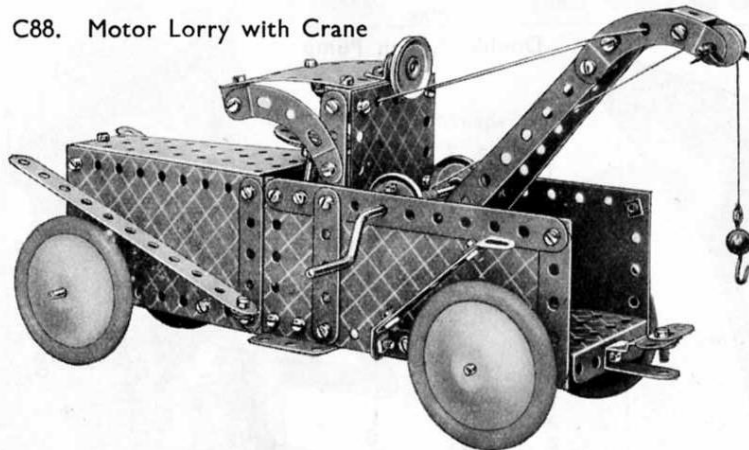
C87. Lancer

Parts required

1 of No.	2
1 "	3
9 "	5
2 "	10
2 "	11
5 "	12
2 "	16
1 "	19s
4 "	22
1 "	24
1 "	35
27 "	37
2 "	38
1 "	48a
1 "	52
1 "	54a
4 "	90a
1 "	111c
1 "	126a



C88. Motor Lorry with Crane



Parts required

2	of No. 2
2	" " 18a
4	" " 22
1	" " 23
2	" " 35
8	" " 37
1	" " 40
4	" " 48a
1	" " 52
2	" " 125

Parts required	4 of No. 12c	1 of No. 24	5 of No. 48a	2 of No. 126
8 of No. 2	2 " " 15b	4 " " 35	1 " " 51	2 " " 126a
1 " " 3	1 " " 16	66 " " 37	1 " " 52	1 " " 176
9 " " 5	2 " " 17	1 " " 37a	2 " " 54a	4 " " 187
4 " " 10	1 " " 19s	2 " " 38	1 " " 57c	3 " " 190
1 " " 11	4 " " 22	1 " " 40	4 " " 90a	2 " " 191
7 " " 12	1 " " 23	1 " " 44	2 " " 111c	1 " " 192

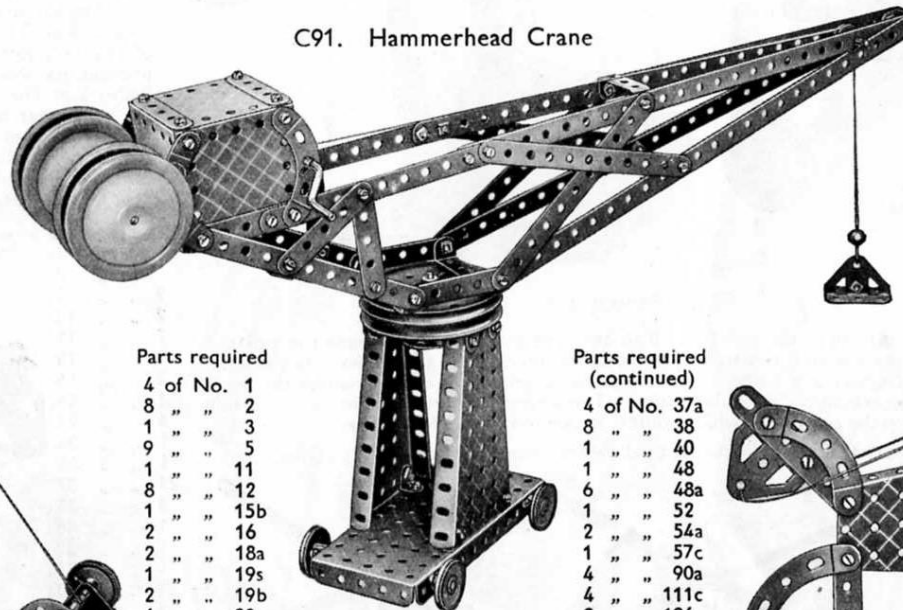
C89.

Pile Driver

Parts required

2	of No. 1
2	" " 2
9	" " 5
5	" " 10
2	" " 11
7	" " 12
1	" " 17
1	" " 19s
4	" " 22
1	" " 24
2	" " 35
36	" " 37
1	" " 37a
1	" " 38
1	" " 40
2	" " 48a
1	" " 52
1	" " 54a
1	" " 111c
2	" " 125
2	" " 126
2	" " 126a
1	" " 176

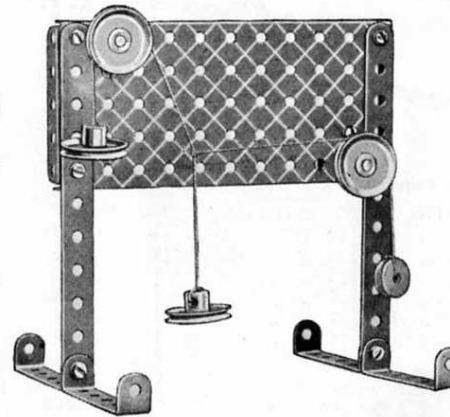
C91. Hammerhead Crane



Parts required

8	of No. 1
4	" " 2
1	" " 3
9	" " 5
1	" " 11
8	" " 12
1	" " 15b
2	" " 16
2	" " 18a
2	" " 19s
2	" " 19b
4	" " 22
1	" " 23
1	" " 24
4	" " 35
51	" " 37

C90. Triangle of Forces



The suspended weights represent three forces acting on a central point. If a triangle is drawn with its sides respectively parallel to the three converging cords, i.e., parallel to the directions of the three forces, the lengths of the sides will be found to be proportional to the respective magnitudes of the forces.

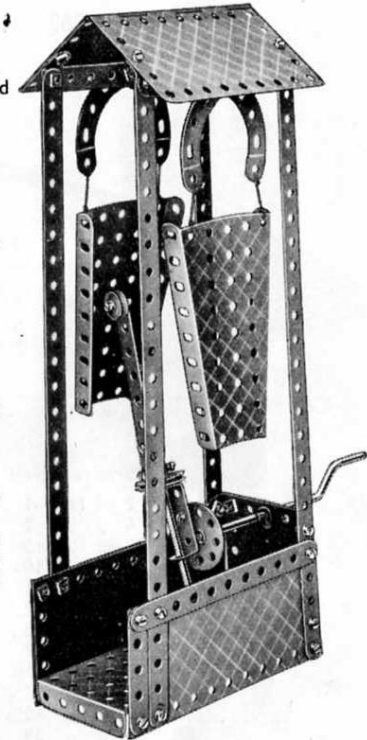
Parts required (continued)

4	of No. 37a
8	" " 38
1	" " 40
1	" " 48
6	" " 48a
1	" " 52
2	" " 54a
1	" " 57c
4	" " 90a
4	" " 111c
2	" " 126
2	" " 126a
1	" " 176
4	" " 187
4	" " 190

C92. Mechanical Gong

Parts required

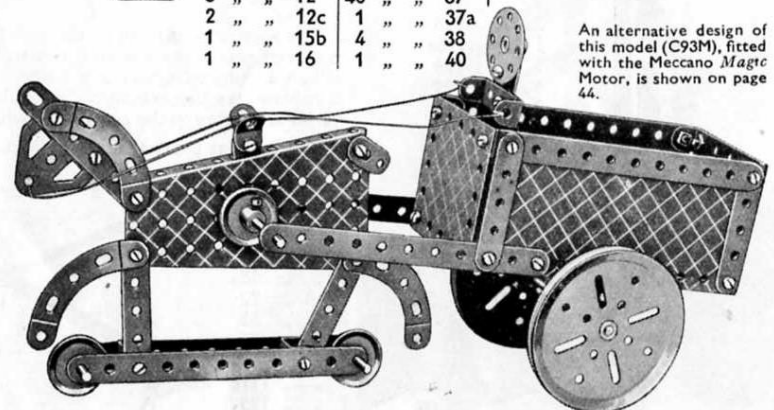
4	of No. 1
2	" " 2
1	" " 3
7	" " 5
2	" " 10
1	" " 12
4	" " 12c
1	" " 16
1	" " 19s
2	" " 22
1	" " 23
1	" " 24
2	" " 35
39	" " 37
2	" " 37a
7	" " 38
1	" " 40
1	" " 48
2	" " 48a
1	" " 52
2	" " 54a
4	" " 90a
1	" " 111c
1	" " 126
1	" " 190
2	" " 192
1	" " 198



C93. Horse and Cart

Parts required	2 of No. 18a	1 of No. 48	1 of No. 111c
6 of No. 2	2 " " 19b	2 " " 48a	2 " " 126
9 " " 5	4 " " 22	1 " " 52	2 " " 126a
3 " " 10	1 " " 24	1 " " 54a	2 " " 190
2 " " 11	2 " " 35	3 " " 90	2 " " 192
3 " " 12	40 " " 37		
2 " " 12c	1 " " 37a		
1 " " 15b	4 " " 38		
1 " " 16	1 " " 40		

An alternative design of this model (C93M), fitted with the Meccano Magic Motor, is shown on page 44.

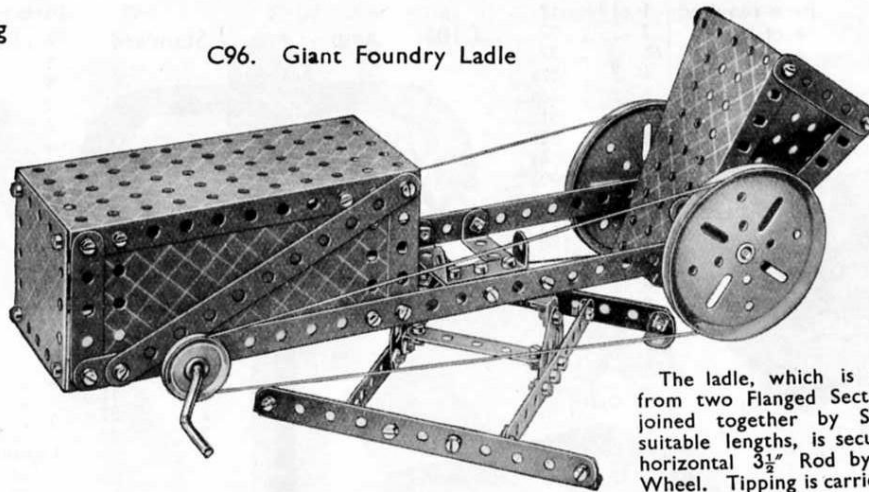


C94. Boy on Swing

Parts required

4	of No.	1
6	" "	2
2	" "	5
5	" "	10
8	" "	12
2	" "	16
1	" "	17
4	" "	22
1	" "	24
8	" "	35
33	" "	37
2	" "	38
1	" "	40
1	" "	48a
1	" "	52
1	" "	54a
2	" "	111c
2	" "	125
2	" "	126a

C96. Giant Foundry Ladle

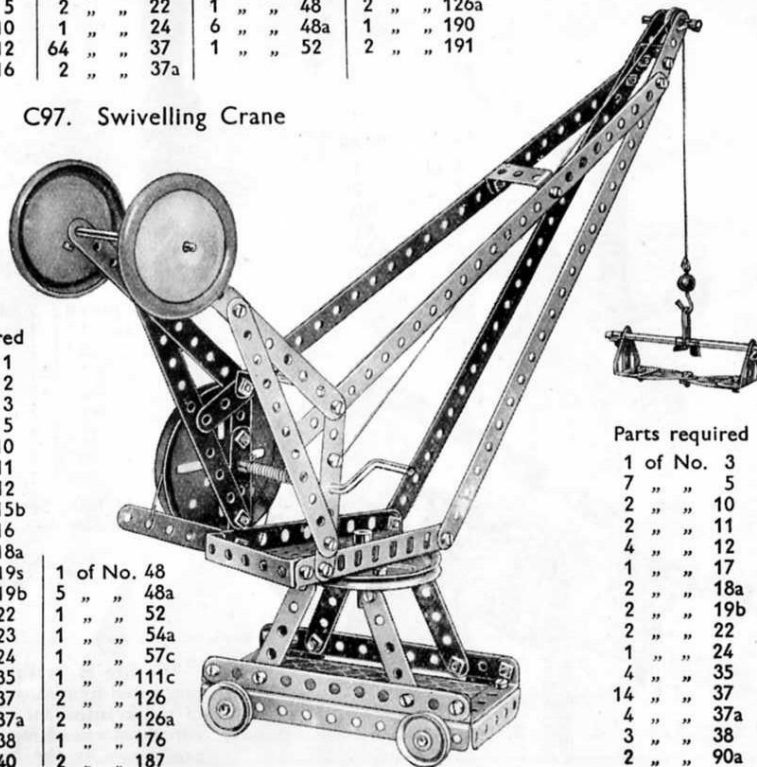


The ladle, which is built up from two Flanged Sector Plates joined together by Strips of suitable lengths, is secured to a horizontal $3\frac{1}{2}$ " Rod by a Bush Wheel. Tipping is carried out by two cords as shown.

Parts required

2	of No.	1	1	of No.	19s	5	of No.	38	2	of No.	54a
6	" "	2	2	" "	19b	1	" "	40	1	" "	111c
9	" "	5	2	" "	22	1	" "	48	2	" "	126a
2	" "	10	1	" "	24	6	" "	48a	1	" "	190
8	" "	12	64	" "	37	1	" "	52	2	" "	191
1	" "	16	2	" "	37a						

C97. Swivelling Crane



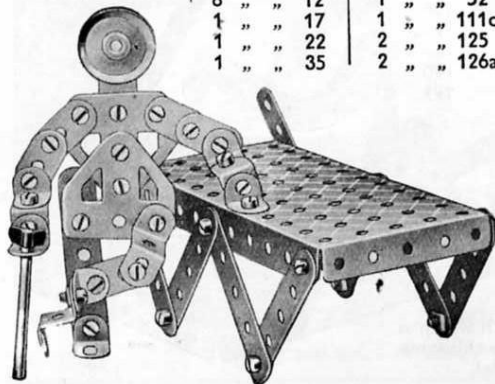
Parts required

4	of No.	1
4	" "	2
4	" "	5
2	" "	11
1	" "	16
1	" "	19s
2	" "	19b
4	" "	22
4	" "	35
20	" "	37
20	" "	37a
8	" "	38
1	" "	40
2	" "	48a
1	" "	52
4	" "	90a
6	" "	111c

C95. King Meccano

Parts required

1	of No.	3	5	of No.	10	30	of No.	37
9	" "	5	8	" "	12	1	" "	52
			1	" "	17	1	" "	111c
			1	" "	22	2	" "	125
			1	" "	35	2	" "	126a



Parts required

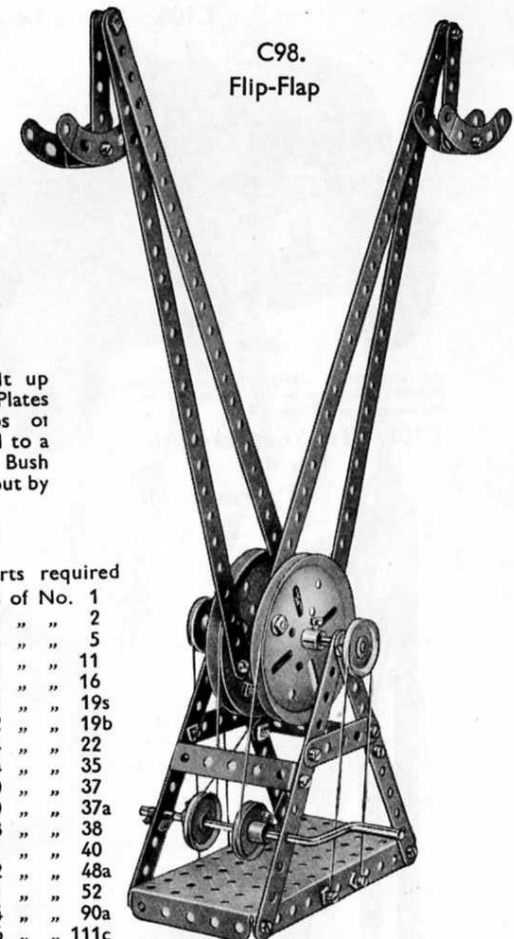
4	of No.	1
8	" "	2
1	" "	3
8	" "	5
1	" "	10
1	" "	11
4	" "	12
1	" "	15b
3	" "	16
2	" "	18a
1	" "	19s
2	" "	19b
4	" "	22
1	" "	23
1	" "	24
6	" "	35
46	" "	37
2	" "	37a
6	" "	38
1	" "	40

1	of No.	48
5	" "	48a
1	" "	52
1	" "	54a
1	" "	57c
1	" "	111c
2	" "	126
2	" "	126a
1	" "	176
2	" "	187

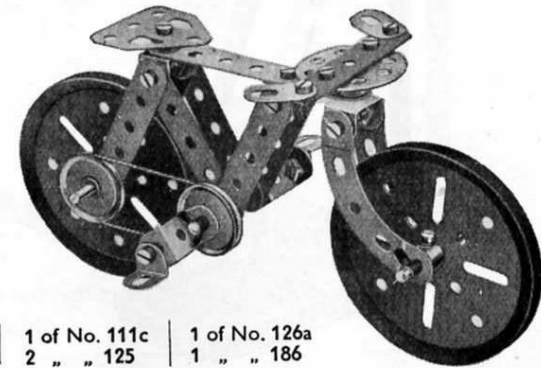
Parts required

1	of No.	3
7	" "	5
2	" "	10
2	" "	11
4	" "	12
1	" "	17
2	" "	18a
2	" "	19b
2	" "	22
1	" "	24
4	" "	35
14	" "	37
4	" "	37a
3	" "	38
2	" "	90a

C98. Flip-Flap

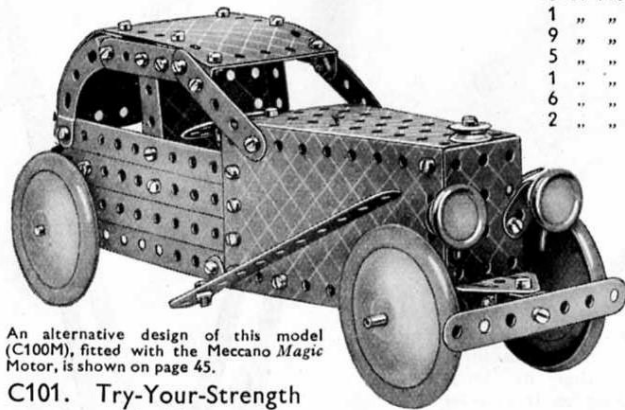


C99. Bicycle



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

C100. Sports Coupé

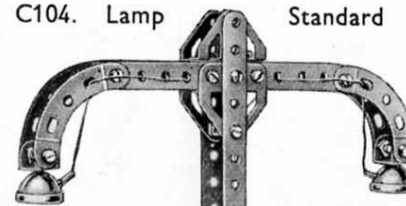


An alternative design of this model (C100M), fitted with the Meccano Magic Motor, is shown on page 45.

Parts required	
8 of No. 2	
1 " " 3	
9 " " 5	
5 " " 10	
1 " " 11	
6 " " 12	
2 " " 15b	

1 of No. 17	
2 " " 22	
66 " " 37	
4 " " 37a	
6 " " 48a	
1 " " 51	
1 " " 52	
2 " " 54a	
2 " " 90a	
6 " " 111c	
1 " " 125	
1 " " 126	
2 " " 126a	
4 " " 187	
2 " " 190	
2 " " 191	
1 " " 192	
Lighting Set (not included in Outfit)	

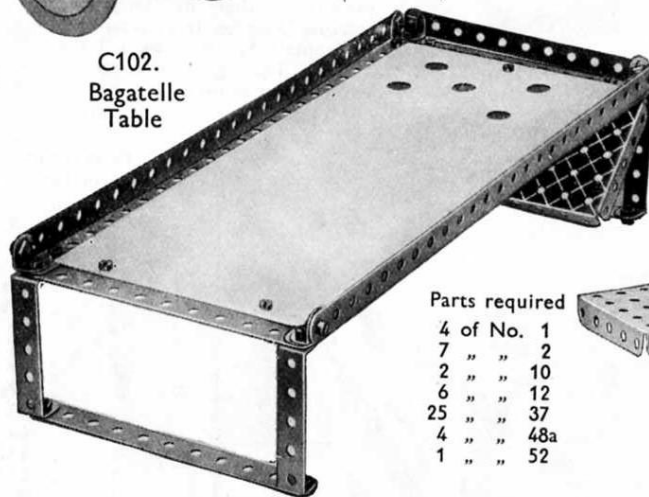
C104. Lamp



Standard	
Parts required	
2 of No. 1	
2 " " 2	
2 " " 11	
4 " " 12	
2 " " 22	
2 " " 37	
1 " " 52	
4 " " 90a	
2 " " 111c	
2 " " 125	
2 " " 126	
2 " " 126a	
Lighting Set (not included in Outfit)	

Parts required	
4 of No. 1	
7 " " 2	
2 " " 10	
6 " " 12	
25 " " 37	
4 " " 48a	
1 " " 52	

C102. Bagatelle Table

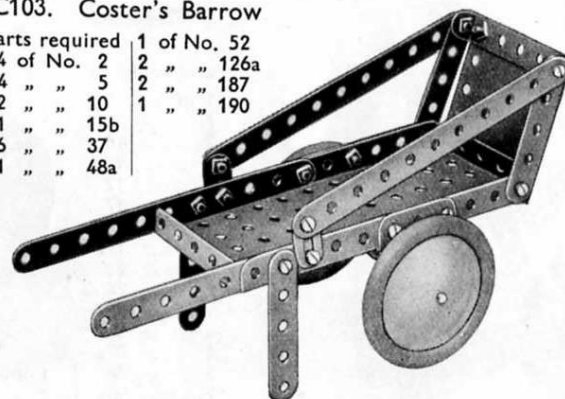


Parts required	
4 of No. 1	
1 " " 2	
6 " " 12	
1 " " 18a	
3 " " 22	
1 " " 23	
2 " " 35	
17 " " 37	
1 " " 52	
1 " " 111c	
2 " " 126	
1 " " 126a	

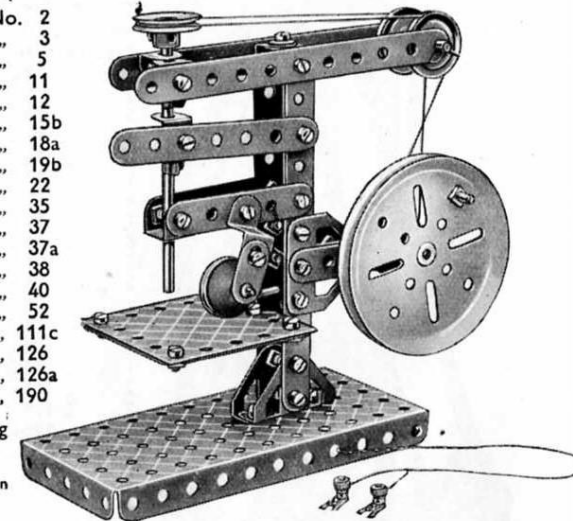
C103. Coster's Barrow

Parts required	
4 of No. 2	
4 " " 5	
2 " " 10	
1 " " 15b	
16 " " 37	
1 " " 48a	

1 of No. 52	
2 " " 126a	
2 " " 187	
1 " " 190	



C105. Drill



Parts required	
4 of No. 2	
1 " " 3	
9 " " 5	
2 " " 11	
8 " " 12	
1 " " 15b	
2 " " 18a	
1 " " 19b	
4 " " 22	
5 " " 35	
33 " " 37	
3 " " 37a	
5 " " 38	
1 " " 40	
1 " " 52	
2 " " 111c	
2 " " 126	
2 " " 126a	
1 " " 190	

Lighting Set (not included in Outfit)

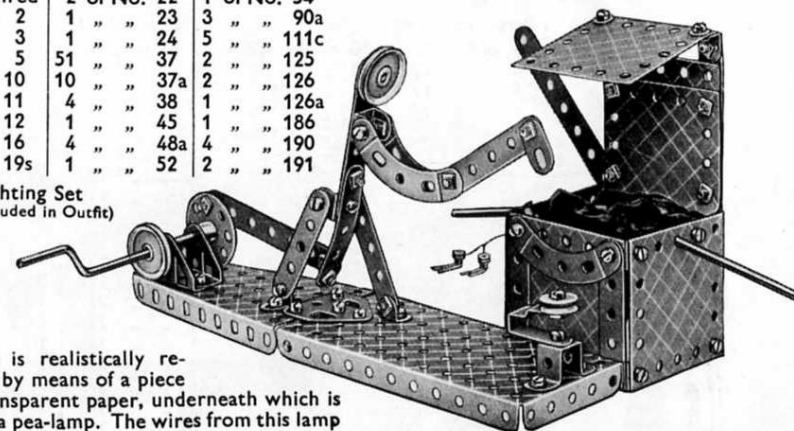
MECCANO LIGHTING SET

The appearance of many Meccano models, especially those built with Outfits A, B and C, can be vastly improved by the addition of suitably disposed lights. For this purpose a special set of lighting equipment 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 in models C100, C104, C105 and C106

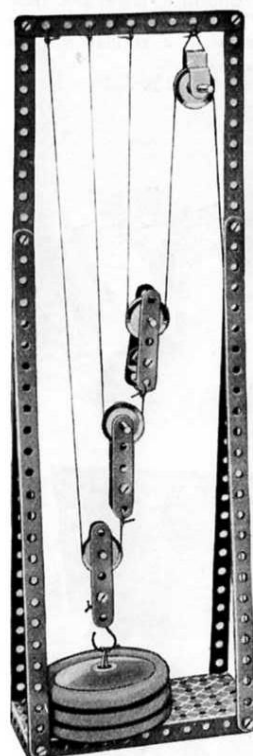
C106. Blacksmith

Parts required	
3 of No. 2	
1 " " 3	
7 " " 5	
2 " " 10	
7 " " 11	
2 " " 12	
2 " " 16	
1 " " 19s	

Lighting Set (not included in Outfit)



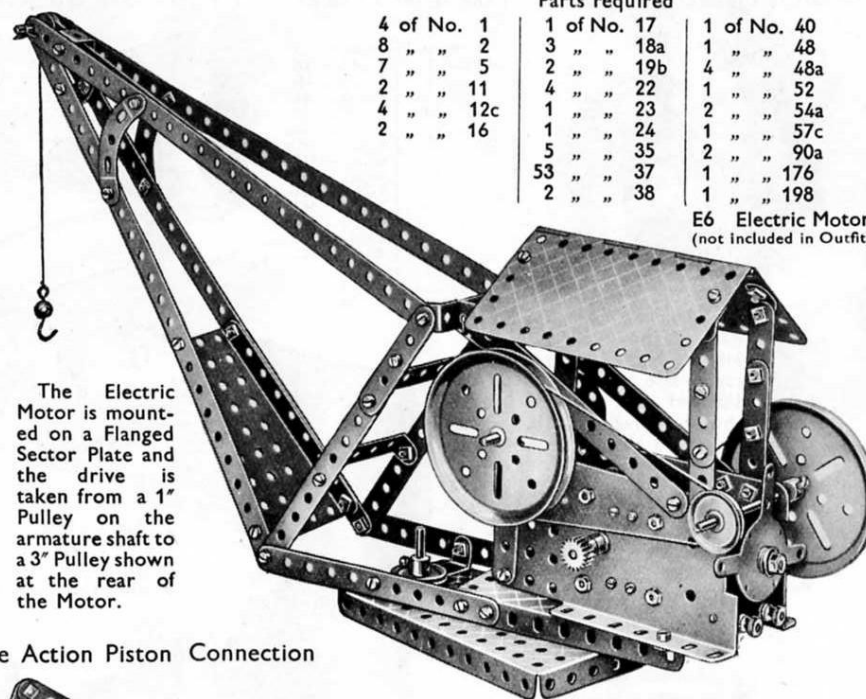
The fire is realistically represented by means of a piece of red transparent paper, underneath which is concealed a pea-lamp. The wires from this lamp are shown at the back of the model.



C107.
Pulley Block
8:1

Parts required

4 of No.	1
3 "	2
6 "	5
2 "	11
2 "	12
2 "	17
2 "	18a
4 "	22
15 "	37
2 "	38
1 "	40
1 "	45
1 "	52
1 "	57c
3 "	187



The Electric Motor is mounted on a Flanged Sector Plate and the drive is taken from a 1" Pulley on the armature shaft to a 3" Pulley shown at the rear of the Motor.

C109. Swivelling Jib Crane (Electric)

Parts required

4 of No.	1	1 of No.	17	1 of No.	40
8 "	2	3 "	18a	1 "	48
7 "	5	2 "	19b	4 "	48a
2 "	11	4 "	22	1 "	52
4 "	12c	1 "	23	2 "	54a
2 "	16	1 "	24	1 "	57c
		5 "	35	2 "	90a
		53 "	37	1 "	176
		2 "	38	1 "	198

E6 Electric Motor
(not included in Outfit)

C110.
Overhead
Crane

Parts required

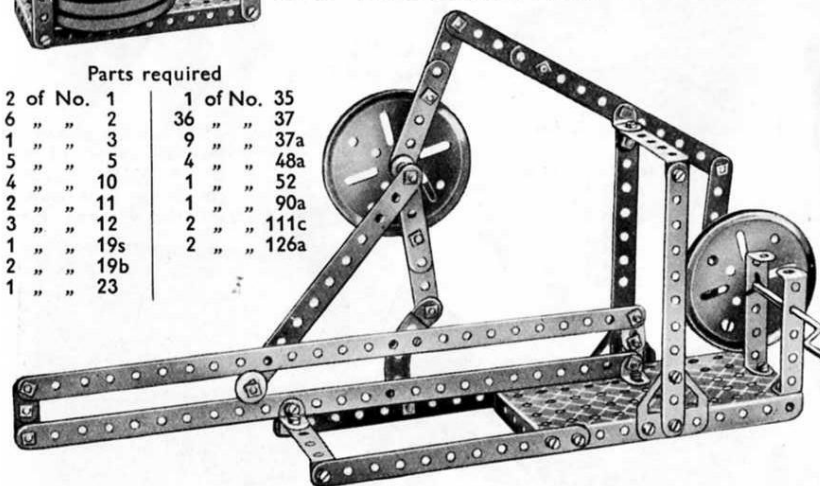
4 of No.	1
4 "	2
8 "	5
2 "	10
8 "	12
2 "	16
1 "	18a
1 "	19s
4 "	22
1 "	23
4 "	35
48 "	37
2 "	37a
1 "	40
6 "	48a
1 "	57c
4 "	90a
1 "	111c
2 "	126a
1 "	176
2 "	191



C108. Double Action Piston Connection

Parts required

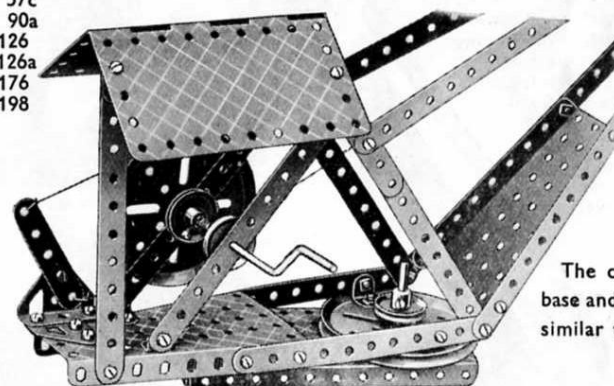
2 of No.	1	1 of No.	35
6 "	2	36 "	37
1 "	3	9 "	37a
5 "	5	4 "	48a
4 "	10	1 "	52
2 "	11	1 "	90a
3 "	12	2 "	111c
1 "	19s	2 "	126a
2 "	19b		
1 "	23		



Parts required

4 of No.	1	1 of No.	57c
7 "	2	2 "	90a
3 "	5	1 "	126
2 "	11	1 "	126a
4 "	12	1 "	176
3 "	12c	1 "	198
1 "	17		
1 "	18a		
1 "	19s		
2 "	19b		
4 "	22		
1 "	23		
2 "	35		
36 "	37		
1 "	38		
1 "	40		
1 "	48		
1 "	48a		
1 "	52		
2 "	54a		

C111. Swivelling Jib Crane
(Hand)



The construction of the base and jib of this model is similar to model C109

HOW TO CONTINUE

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

Outfit C Models fitted with Meccano Magic Motor

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 opposite 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 letter M added. Try your hand at re-designing other models in a similar manner.

C55M. Paddle Steamer

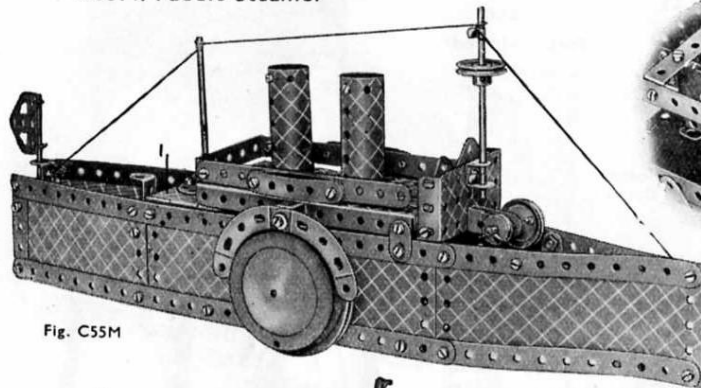
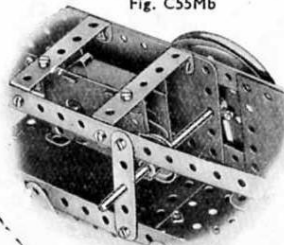


Fig. C55M

Fig. C55Mb



The Plate 1 forming part of the deck is a Hinged Flat Plate that forms also part of the side of the ship as shown in Fig. C55Mb.

Parts required		Parts required	
4 of No. 1	1 of No. 40	1 of No. 48a	
6 " " 2	1 " " 51	1 " " 52	
8 " " 5	1 " " 54a	2 " " 90a	
4 " " 10	2 " " 111c	2 " " 125	
2 " " 11	4 " " 126	2 " " 187	
8 " " 12	6 " " 191	2 " " 192	
1 " " 15b	2 " " 199	2 " " 199	
1 " " 22	2 " " 199	2 " " 199	
1 " " 24	2 " " 199	2 " " 199	
66 " " 37	2 " " 199	2 " " 199	
6 " " 37a	2 " " 199	2 " " 199	
5 " " 38	2 " " 199	2 " " 199	

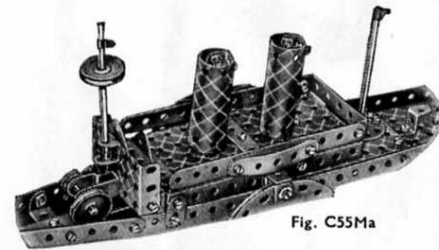


Fig. C55Ma

Parts required		Parts required	
4 of No. 1	2 of No. 16	7 of No. 38	2 of No. 125
7 " " 2	1 " " 17	1 " " 40	2 " " 126
1 " " 3	2 " " 18a	1 " " 44	1 " " 126a
1 " " 5	2 " " 19b	1 " " 48	1 " " 176
2 " " 10	4 " " 22	5 " " 48a	2 " " 187
2 " " 11	1 " " 23	1 " " 51	4 " " 190
2 " " 12	1 " " 24	1 " " 52	2 " " 191
7 " " 12	8 " " 35	1 " " 54a	2 " " 192
4 " " 12c	66 " " 37	4 " " 90a	1 " " 198
2 " " 15b	6 " " 37a	6 " " 111c	

C64M. Roundabout

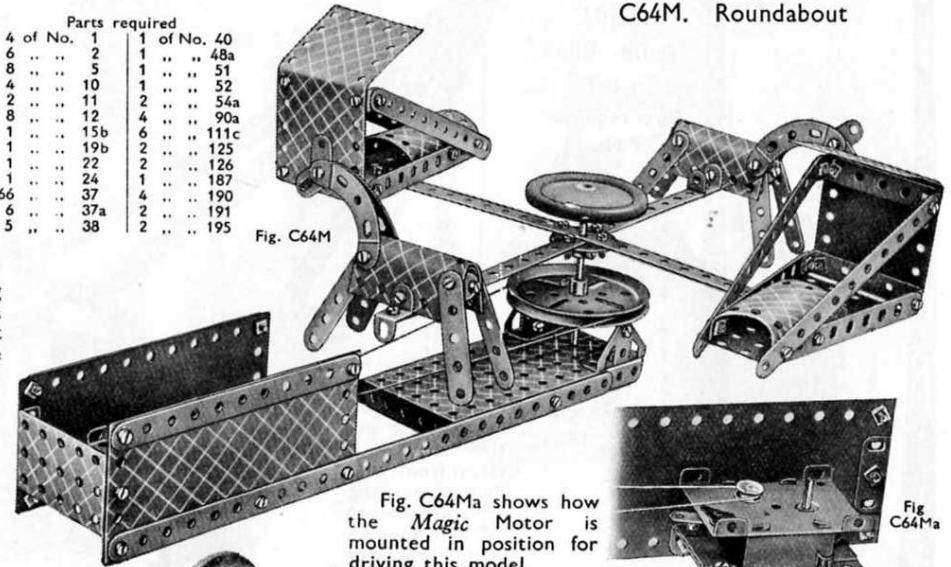


Fig. C64M

Fig. C64Ma shows how the *Magic* Motor is mounted in position for driving this model.

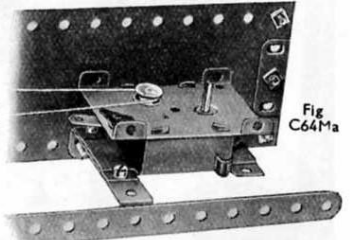


Fig. C64Ma

C27M. Mobile Crane

The jib pivots on two bolts 1, which are each fitted with locknuts. A Crank Handle controls the raising and lowering of the jib and the method of winding the cord round the handle can be seen in Fig. C27Ma. A brake is fitted to the Crank Handle and consists of a pivoted $2\frac{1}{2}$ " Curved Strip to which is tied a loop of cord that passes round the 3" Pulley.

Fig. C27Mb shows how the *Magic* Motor is mounted beneath the crane to drive the one pair of travelling wheels.

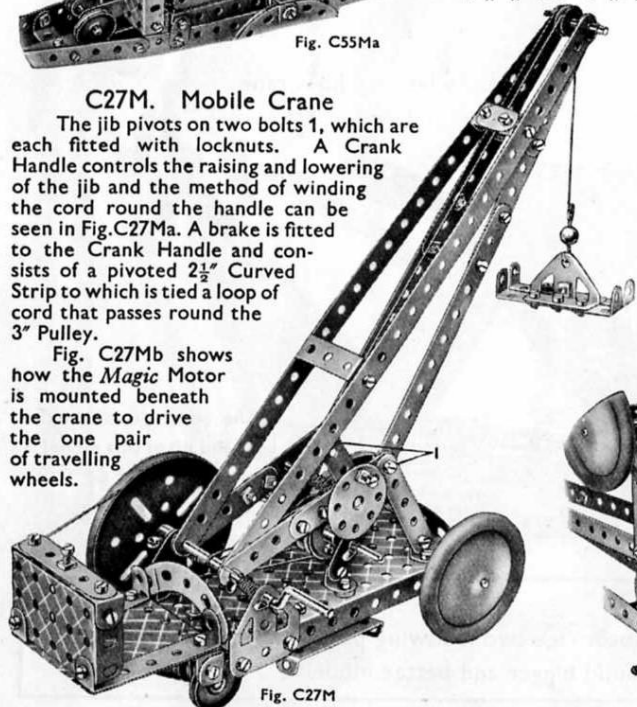


Fig. C27M

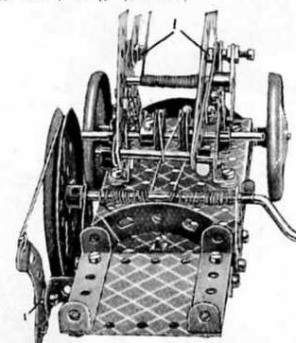


Fig. C27Ma

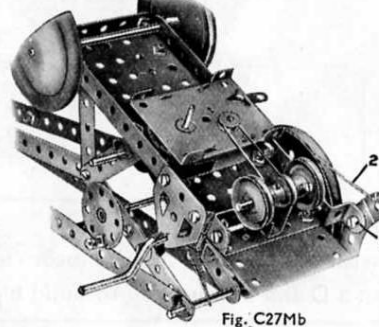


Fig. C27Mb

Parts required

2 of No. 1	1 of No. 24	1 of No. 52
4 " " 2	5 " " 35	1 " " 54a
9 " " 5	42 " " 37	4 " " 90a
3 " " 10	2 " " 38	2 " " 126
2 " " 11	1 " " 40	2 " " 126a
8 " " 12	1 " " 44	2 " " 187
1 " " 15b	2 " " 48	2 " " 190
1 " " 16	1 " " 48a	2 " " 192
1 " " 17	1 " " 48a	2 " " 192
2 " " 18a	1 " " 48a	2 " " 192
1 " " 19b	1 " " 48a	2 " " 192
1 " " 22	1 " " 48a	2 " " 192
4 " " 23	1 " " 48a	2 " " 192
1 " " 24	1 " " 48a	2 " " 192
1 " " 35	1 " " 48a	2 " " 192
58 " " 37	1 " " 48a	2 " " 192
11 " " 37a	1 " " 48a	2 " " 192
8 " " 38	1 " " 48a	2 " " 192
1 " " 40	1 " " 48a	2 " " 192
1 " " 44	1 " " 48a	2 " " 192
1 " " 48	1 " " 48a	2 " " 192
6 " " 48a	1 " " 48a	2 " " 192
1 " " 51	1 " " 48a	2 " " 192
1 " " 52	1 " " 48a	2 " " 192
1 " " 57c	1 " " 48a	2 " " 192
3 " " 90a	1 " " 48a	2 " " 192
5 " " 111c	1 " " 48a	2 " " 192
1 " " 125	1 " " 48a	2 " " 192
2 " " 126	1 " " 48a	2 " " 192
2 " " 126a	1 " " 48a	2 " " 192
1 " " 176	1 " " 48a	2 " " 192
2 " " 187	1 " " 48a	2 " " 192
1 " " 190	1 " " 48a	2 " " 192

C93M. Horse and Cart

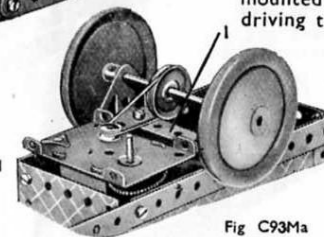


Fig. C93Ma

Parts required		Parts required	
2 of No. 1	1 of No. 24	1 of No. 52	
6 " " 2	5 " " 35	1 " " 54a	
8 " " 5	42 " " 37	4 " " 90a	
3 " " 10	2 " " 38	2 " " 126	
1 " " 11	1 " " 40	2 " " 126a	
1 " " 12	1 " " 44	2 " " 187	
6 " " 16	2 " " 48	2 " " 190	
2 " " 18a	1 " " 48a	2 " " 192	
4 " " 22	1 " " 48a	2 " " 192	

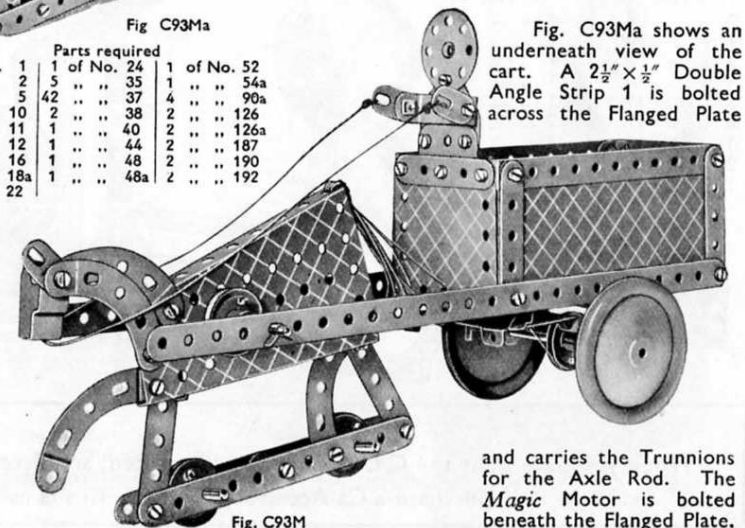


Fig. C93M

Fig. C93Ma shows an underneath view of the cart. A $2\frac{1}{2}$ " \times $\frac{1}{2}$ " Double Angle Strip 1 is bolted across the Flanged Plate

and carries the Trunnions for the Axle Rod. The *Magic* Motor is bolted beneath the Flanged Plate.

C11M. Sports Car

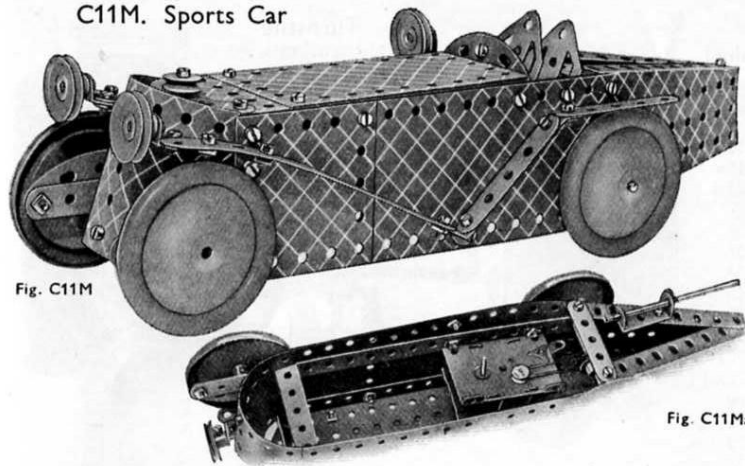


Fig. C11M

Fig. C11Ma

The underneath view of the model shown in Fig. C11Ma shows how the chassis is formed from two 12½" Strips that project beyond the front of the model. The *Magic Motor* is bolted to one Strip and drives the special ½" loose Pulley on the axle of the rear Road Wheels.

C65M. Flyboats

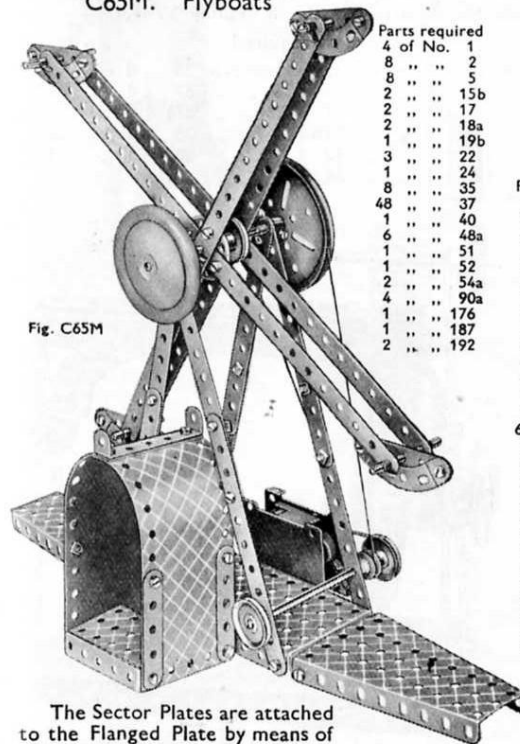


Fig. C65M

Parts required	
4 of No.	1
8 "	2
8 "	5
2 "	15b
17 "	17
22 "	18a
1 "	19b
22 "	22
1 "	24
1 "	35
8 "	37
48 "	40
1 "	48a
6 "	51
1 "	52
2 "	54a
4 "	90a
1 "	176
1 "	187
2 "	192

Parts required	
4 of No.	1
7 "	2
9 "	5
5 "	10
1 "	11
5 "	12
9 "	12c
4 "	15b
1 "	16
2 "	18a
2 "	19b
2 "	22
1 "	24
6 "	35
66 "	37
2 "	37a
2 "	38
1 "	40
3 "	48a
1 "	51
1 "	52
2 "	54a
6 "	111c
2 "	125
2 "	126
2 "	126a
4 "	190
2 "	192
1 "	198

The Sector Plates are attached to the Flanged Plate by means of 2½" x ½" Double Angle Strips.

Parts required	
2 of No.	1
2 "	2
5 "	5
4 "	10
8 "	12
3 "	12c
2 "	15b
3 "	22
1 "	23
1 "	24
2 "	35
56 "	37
8 "	38
1 "	48
1 "	48a
1 "	52
2 "	54a
4 "	90a
6 "	111c
2 "	125
2 "	126a
4 "	187
4 "	190
2 "	191
2 "	192

Parts required	
4 of No.	1
6 "	2
1 "	3
6 "	5
2 "	10
2 "	11
6 "	12
1 "	16
1 "	18a
2 "	22
1 "	23
1 "	24
3 "	35
40 "	37
6 "	37a
2 "	38
1 "	48
1 "	90a
5 "	111c
2 "	125

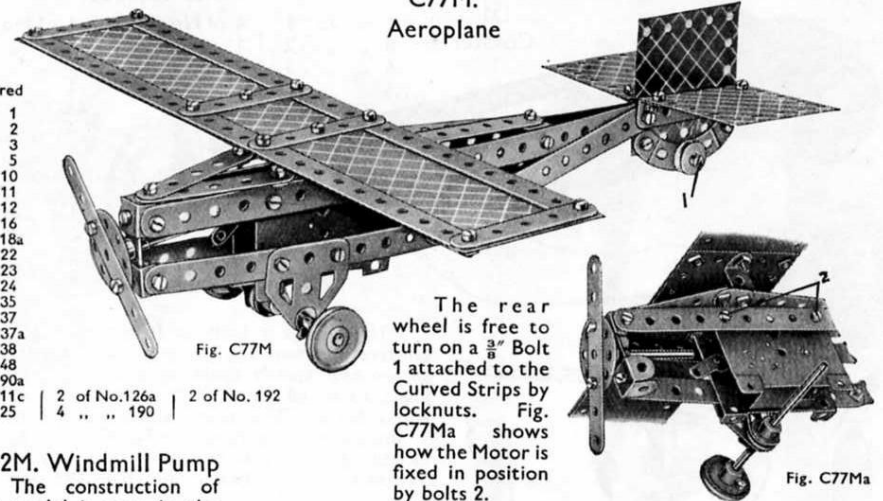


Fig. C77M

Fig. C77Ma

C77M. Aeroplane

The rear wheel is free to turn on a ¾" Bolt 1 attached to the Curved Strips by locknuts. Fig. C77Ma shows how the Motor is fixed in position by bolts 2.

C22M. Windmill Pump

The construction of the model is seen in the sectional view in Fig. C22Ma the *Magic Motor* being shown ready to be mounted in position. The beam operating the pump is pivoted at each end by means of locknutt bolts 2. A 2½" Strip connects one end of the beam to a Bush Wheel and pivots on the bolt 1 that is fixed in place by two nuts. The pump cylinder 3 is attached to the base Plate by Angle Brackets.

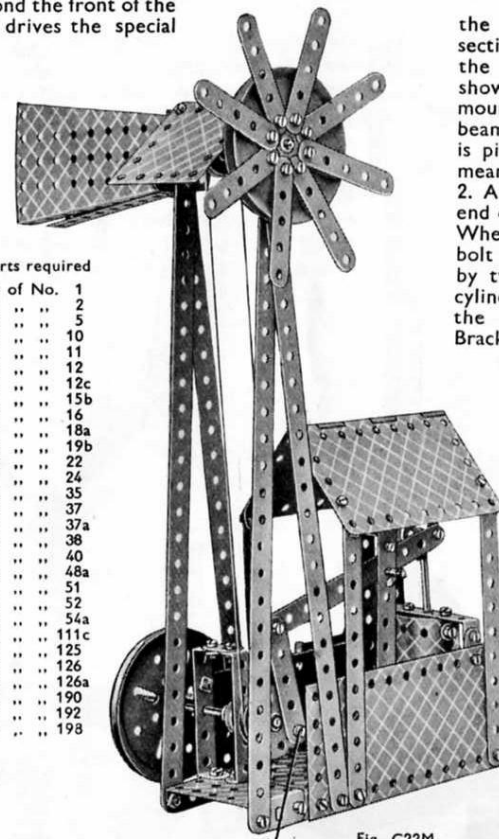


Fig. C22M

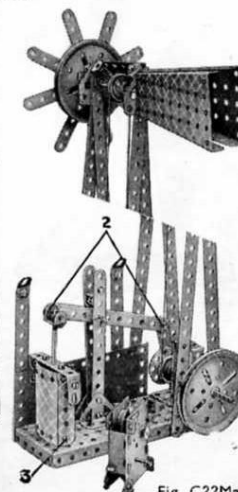
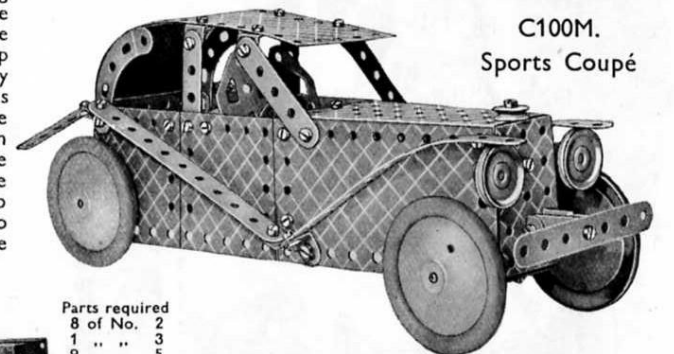


Fig. C22Ma

Parts required	
8 of No.	2
1 "	3
9 "	5
2 "	11
8 "	12
4 "	12c
2 "	15b
1 "	18a
2 "	22
1 "	23
1 "	24
4 "	35
56 "	37
1 "	37a
6 "	38
1 "	44
1 "	48
3 "	48a
1 "	51
1 "	54a
2 "	90a
3 "	111c
1 "	126
2 "	126a
4 "	187
4 "	190
2 "	191
2 "	192

C100M. Sports Coupé



The front Axle Rod is carried in the upturned ends of a 1½" x ½" Double Angle Strip bolted to the lower flange of the 2½" x 1½" Flanged Plate forming the radiator. A dummy steering wheel, represented by a Bush Wheel, is carried on a 1½" Rod passed through the right-hand hole of a Trunnion and held in place by Spring Clips.

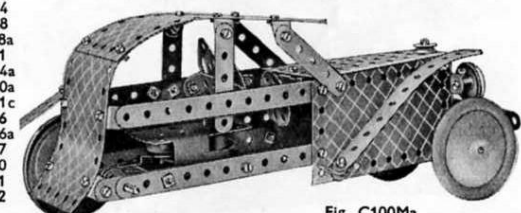
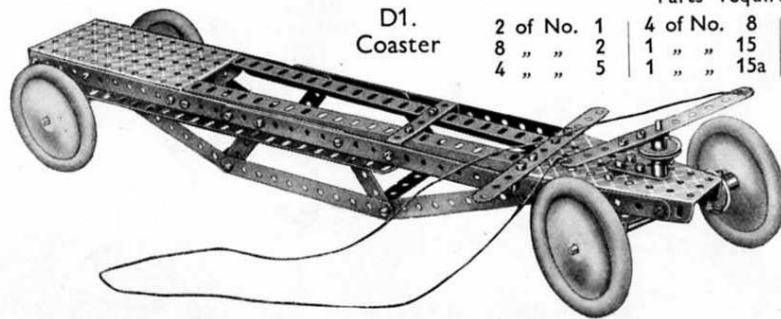


Fig. C100Ma

D1.
Coaster

Parts required			
2 of No. 1	4 of No. 8	1 of No. 17	
8 " " 2	1 " " 15	3 " " 22	
4 " " 5	1 " " 15a	1 " " 23	
		1 " " 24	
		44 " " 37	
		4 " " 38	
		1 " " 48	
		4 " " 48a	
		1 " " 52	
		1 " " 54a	
		2 " " 62	
		2 " " 126	
		4 " " 187	

The chassis is built up from two $12\frac{1}{2}$ " Angle Girders and two $12\frac{1}{2}$ " Strips, joined together as shown and spaced apart by a $5\frac{1}{2} \times 2\frac{1}{2}$ " Flanged Plate, a Flanged Sector Plate and a $2\frac{1}{2} \times \frac{1}{2}$ " Double Angle Strip. The rear axle is carried in two Trunnions and the front axle Fig. D1a in a $2\frac{1}{2} \times \frac{1}{2}$ " Double Angle Strip that is secured by a Bush Wheel to a short Rod mounted in the boss of a Crank.

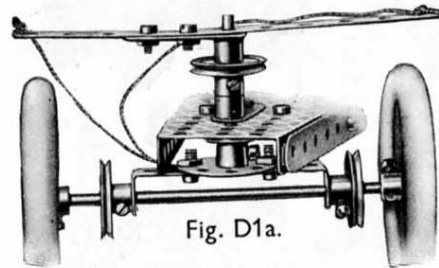
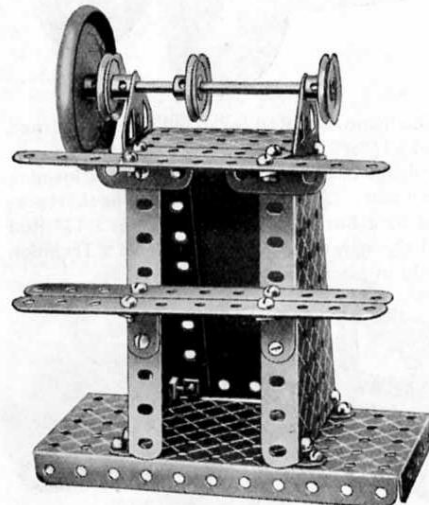


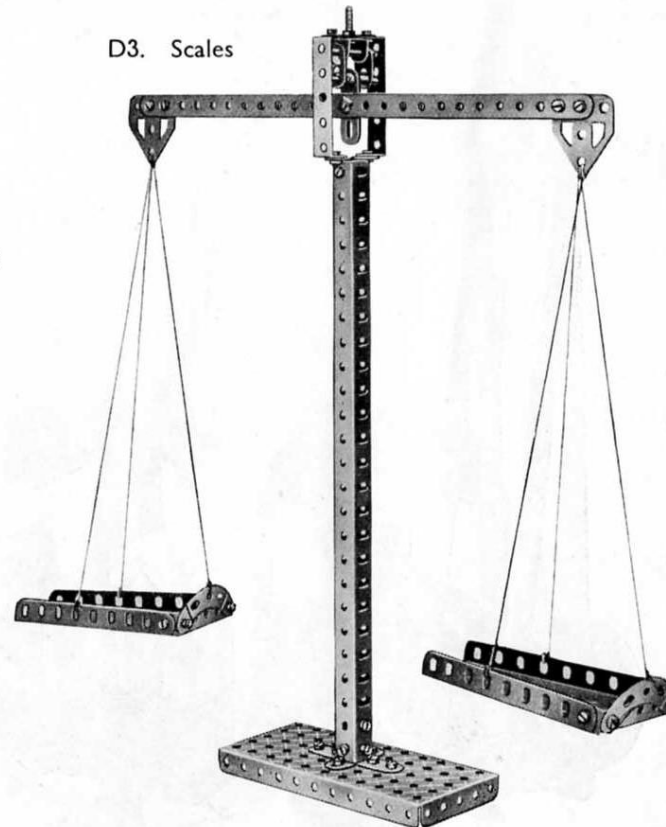
Fig. D1a.

D2. Polishing Spindle

Parts required		
3 of No. 2	3 of No. 22	2 of No. 126
1 " " 5	30 " " 37	2 " " 126a
4 " " 12	1 " " 51	1 " " 187
2 " " 12a	1 " " 52	1 " " 191
1 " " 15b	2 " " 54a	



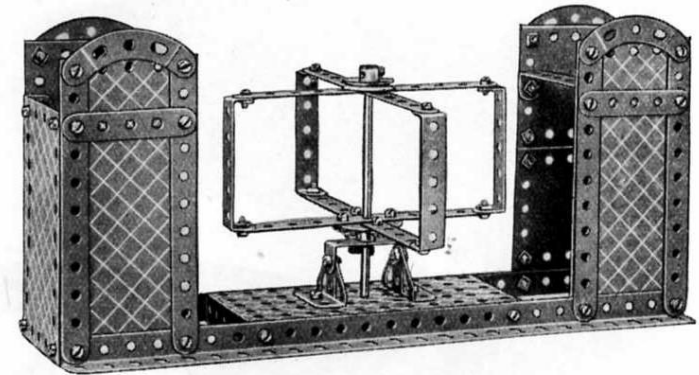
Parts required	
2 of No. 1	
1 " " 6a	
2 " " 8	
2 " " 10	
1 " " 11	
2 " " 12	
2 " " 12a	
2 " " 18a	
2 " " 35	
31 " " 37	
4 " " 38	
1 " " 40	
1 " " 45	
4 " " 48a	
1 " " 52	
2 " " 54a	
2 " " 62	
2 " " 90a	
1 " " 115	
2 " " 126a	



D3. Scales

Parts required	
12 of No. 2	
4 " " 5	
2 " " 8	
4 " " 12	
1 " " 15a	
1 " " 22	
1 " " 24	
1 " " 35	
52 " " 37	
1 " " 38	
1 " " 48	
8 " " 48a	
1 " " 52	
4 " " 90a	
2 " " 126	
4 " " 190	
2 " " 191	
2 " " 195	

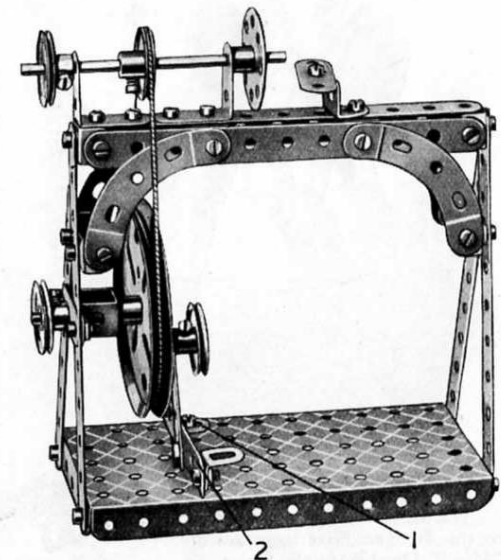
D4. Turnstile

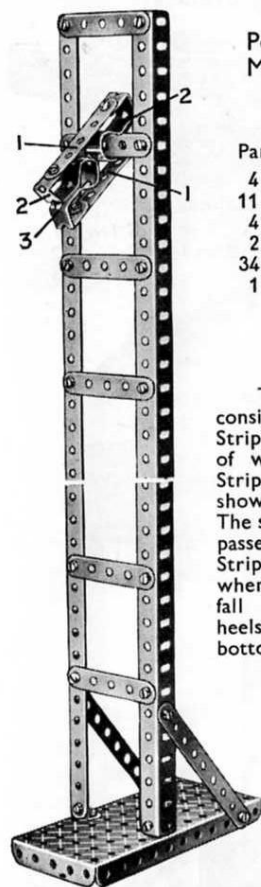


D5. Treadle Lathe

The $2\frac{1}{2}$ " Strip 2, forming the treadle, is attached pivotally by means of a bolt and two nuts to the Angle Bracket 1. One end of a further $2\frac{1}{2}$ " Strip is connected by the same means to the $2\frac{1}{2}$ " Strip 2, and the other end is mounted on a Threaded Pin secured to the 3" Pulley Wheel.

Parts required			
7 of No. 2	2 of No. 12a	1 of No. 35	1 of No. 45
1 " " 3	1 " " 16	34 " " 37	1 " " 52
1 " " 5	1 " " 17	2 " " 37a	4 " " 90a
2 " " 6a	3 " " 19b	4 " " 38	1 " " 115
4 " " 11	4 " " 22	1 " " 40	1 " " 125
6 " " 12	1 " " 24		





D6.

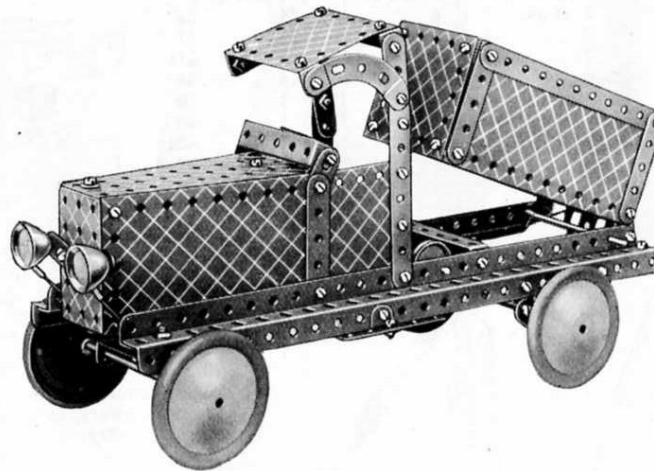
Performing Meccanitian

Parts required

4 of No.	2
11 "	5
4 "	8
2 "	12
34 "	37
1 "	52

The Meccanitian consists of two $2\frac{1}{2}$ " Strips 1 to the ends of which two $5\frac{1}{2}$ " Strips 2, bent as shown, are bolted. The slot 3 should be passed over the top Strip of the ladder, when the device will fall "head over heels" to the bottom.

D8. Tipping Motor Wagon



The steering column is journalled at its upper end in a $\frac{1}{2}$ " Reversed Angle Bracket, and at its lower end in one of the holes of a Flanged Sector Plate. A Bush Wheel on the lower end of the steering column is attached by two short lengths of cord to a $2\frac{1}{2}$ " \times $\frac{1}{2}$ " Double Angle Strip forming the front axle bearing. This bearing is pivotally connected to the underside of the wagon by means of a Double Bent Strip.

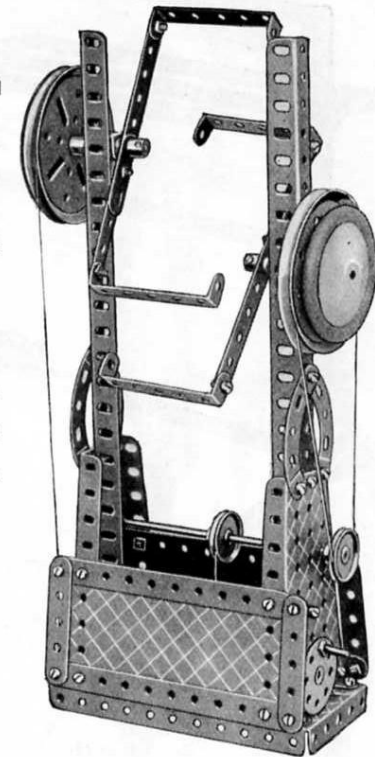
The body of the wagon, when tipping, pivots about two $\frac{3}{8}$ " Bolts that pass through the end holes of the chassis girders and are attached to Flat Brackets on the body. The tipping movement is controlled by a cord attached to the Crank Handle by an Anchoring Spring.

Parts required

2 of No.	2
2 "	3
12 "	5
4 "	8
8 "	10
2 "	12
1 "	15
1 "	15a
1 "	15b
1 "	16
1 "	19s
3 "	22
1 "	24
5 "	35
65 "	37
6 "	37a
7 "	38
1 "	40
1 "	45
8 "	48a
1 "	51
1 "	52
2 "	54a
4 "	90a
2 "	111c
1 "	125
2 "	126a
1 "	176
4 "	187
4 "	190
2 "	191
2 "	192

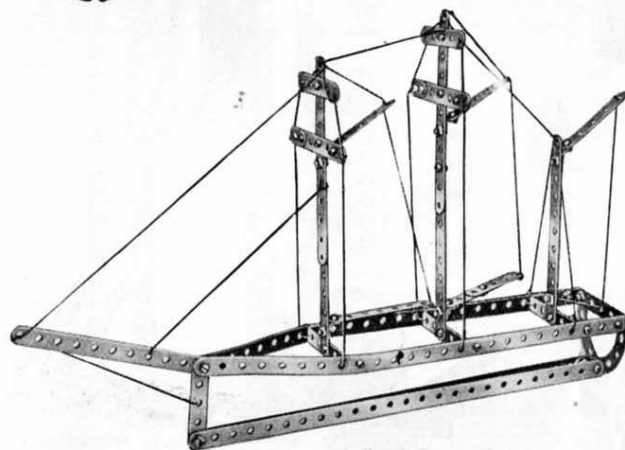
(1 Lighting Set not included in Outfit)

D9. Candy Puller



Parts required

6 of No.	2
4 "	5
2 "	8
4 "	12
2 "	15
2 "	17
2 "	19b
4 "	22
1 "	24
44 "	37
8 "	38
1 "	40
1 "	45
4 "	48a
1 "	52
2 "	54a
2 "	62
4 "	90a
1 "	115
2 "	125
1 "	176
1 "	186
2 "	187
2 "	191

D7.
Square-Topsail Schooner

Parts required

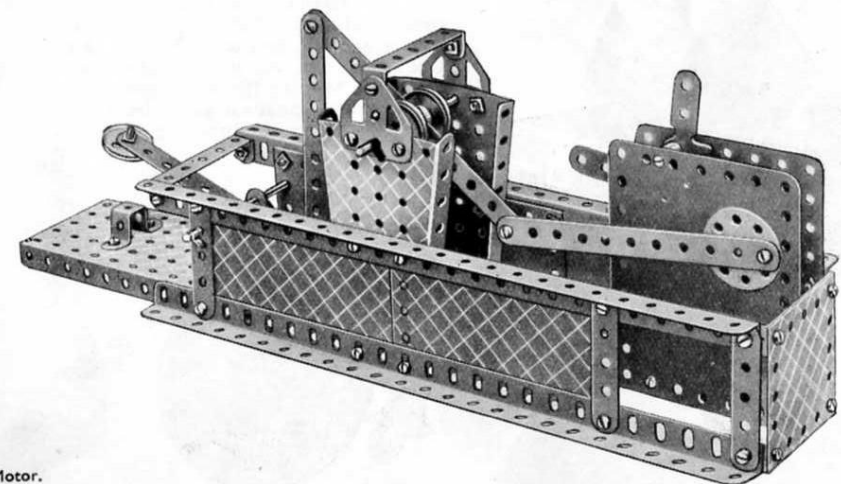
4 of No.	1
6 "	2
1 "	3
10 "	5
4 "	10
1 "	11
5 "	12
41 "	37
1 "	40
4 "	48a
2 "	90a

Parts required

4 of No.	2
5 "	5
4 "	8
1 "	11
1 "	12
2 "	16
2 "	22
1 "	22a
1 "	24
6 "	35
41 "	37
9 "	37a
8 "	38
1 "	45
4 "	48a
1 "	52
2 "	54a
6 "	111c
2 "	126a
2 "	190
2 "	191
2 "	195

No. 2 Clockwork Motor.
(not included in Outfit)

D10. Mechanical Hammer

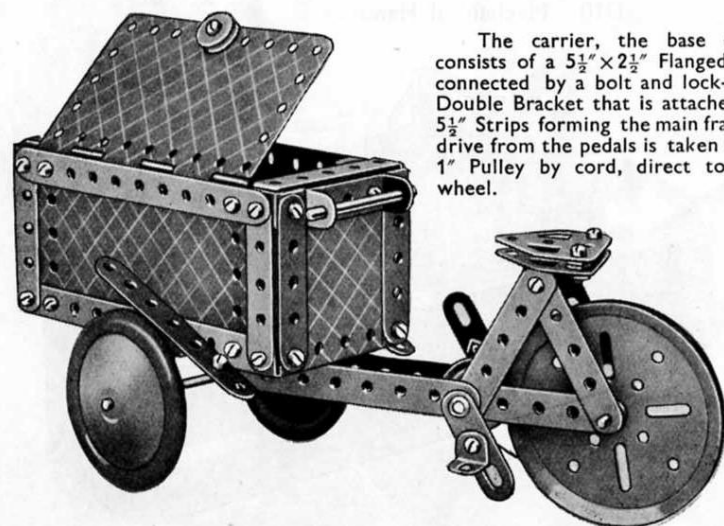


D11.
Towel Horse

Parts required

6 of No. 1
4 " " 2
2 " " 8
4 " " 10
4 " " 12
2 " " 22a
28 " " 37
2 " " 37a
8 " " 38
4 " " 90a
2 " " 111c

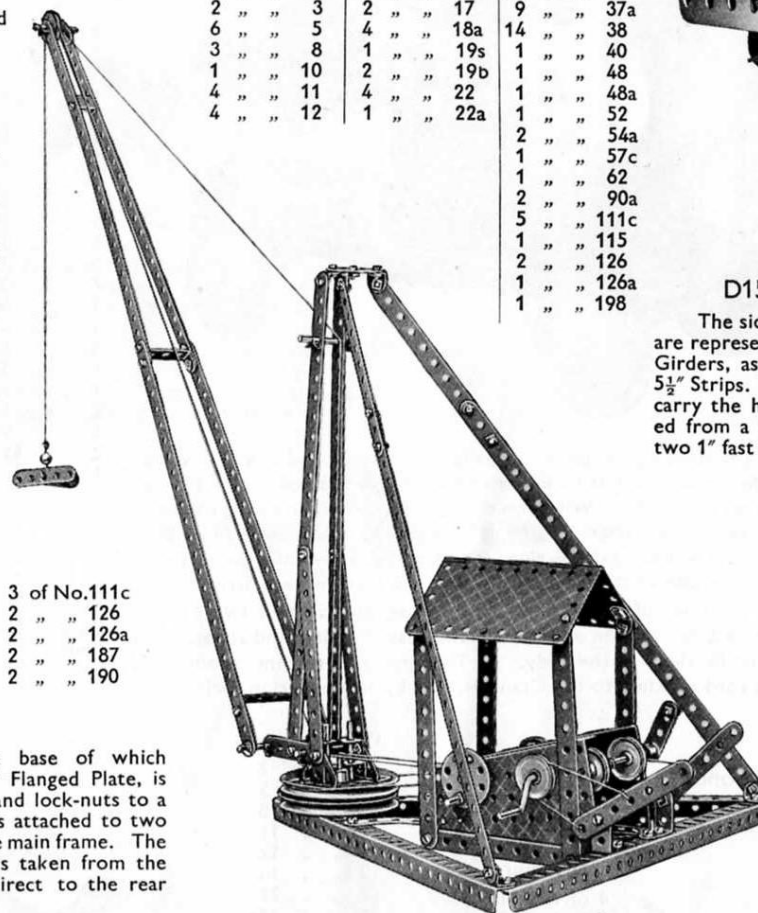
4 of No. 2	1 of No. 15b	1 of No. 23	1 of No. 40	3 of No. 111c
2 " " 3	1 " " 17	4 " " 35	1 " " 48	2 " " 126
12 " " 5	2 " " 18a	40 " " 37	4 " " 48a	2 " " 126a
2 " " 11	1 " " 19b	10 " " 37a	1 " " 52	2 " " 187
6 " " 12	1 " " 22	9 " " 38	2 " " 62	2 " " 190
		1 of No. 191	1 of No. 198	



The carrier, the base of which consists of a $5\frac{1}{2} \times 2\frac{1}{2}$ " Flanged Plate, is connected by a bolt and lock-nuts to a Double Bracket that is attached to two $5\frac{1}{2}$ " Strips forming the main frame. The drive from the pedals is taken from the 1" Pulley by cord, direct to the rear wheel.

D13. Derrick

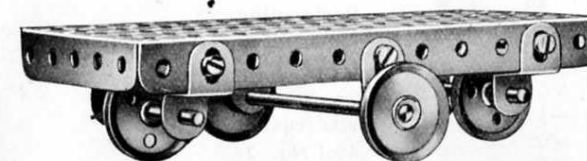
Parts required	2 of No. 12a	1 of No. 24
8 of No. 1	4 " " 12c	11 " " 35
8 " " 2	3 " " 16	56 " " 37
2 " " 3	2 " " 17	9 " " 37a
6 " " 5	4 " " 18a	14 " " 38
3 " " 8	1 " " 19s	1 " " 40
1 " " 10	2 " " 19b	1 " " 48
4 " " 11	4 " " 22	1 " " 48a
4 " " 12	1 " " 22a	1 " " 52
		2 " " 54a
		1 " " 57c
		1 " " 62
		2 " " 90a
		5 " " 111c
		1 " " 115
		2 " " 126
		1 " " 126a
		1 " " 198



The base of this model is built up of three $12\frac{1}{2}$ " Angle Girders fitted with a $5\frac{1}{2} \times 2\frac{1}{2}$ " Flanged Plate held in place at its unsupported end by means of two $2\frac{1}{2}$ " small radius Curved Strips. Two Flanged Sector Plates are secured to this Flanged Plate as shown and these carry the three hoisting, slewing and luffing barrels. Brakes for two of these consist of $3\frac{1}{2}$ " Strips and Cord, the Strips being pivotally attached to the base by means of 1×1 " Angle Brackets.

The roof is represented by a Hinged Plate secured to $5\frac{1}{2}$ " Strips, as uprights, by means of Obtuse Angle Brackets.

D14. Revolving Truck



Parts required

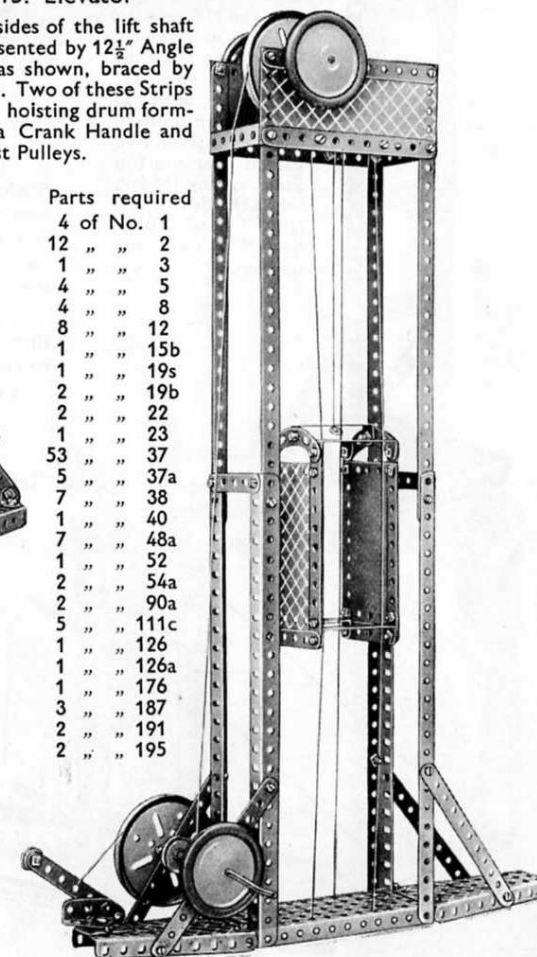
2 of No. 10	2 of No. 22	6 of No. 37
1 " " 16	2 " " 22a	1 " " 52
2 " " 17	4 " " 35	4 " " 125

D15. Elevator

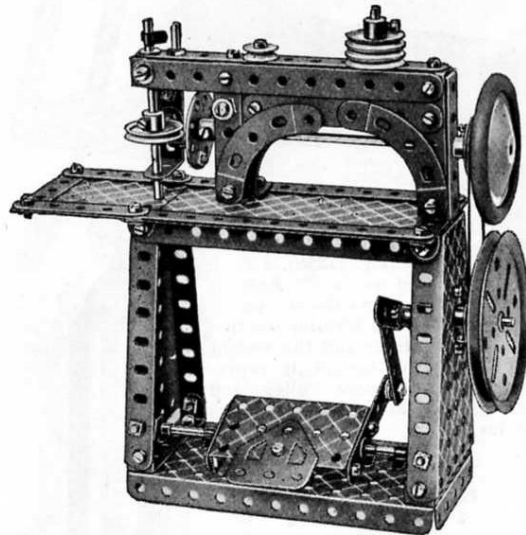
The sides of the lift shaft are represented by $12\frac{1}{2}$ " Angle Girders, as shown, braced by $5\frac{1}{2}$ " Strips. Two of these Strips carry the hoisting drum formed from a Crank Handle and two 1" fast Pulleys.

Parts required

4 of No. 1
12 " " 2
1 " " 3
4 " " 5
4 " " 8
8 " " 12
1 " " 15b
1 " " 19s
2 " " 19b
2 " " 22
1 " " 23
53 " " 37
5 " " 37a
7 " " 38
1 " " 40
7 " " 48a
1 " " 52
2 " " 54a
2 " " 90a
5 " " 111c
1 " " 126
1 " " 126a
1 " " 176
3 " " 187
2 " " 191
2 " " 195



D16. Sewing Machine



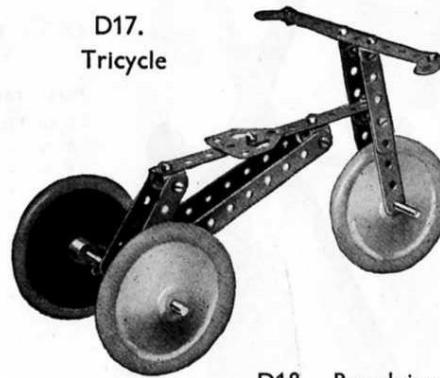
Parts required		
7 of No.	2	
2 "	3	
6 "	5	
1 "	6a	
3 "	10	
1 "	11	
10 "	12	
2 "	12a	
2 "	15	
1 "	16	
1 "	17	
1 "	18a	
1 "	19b	
4 "	22	
2 "	22a	
1 "	23	
1 "	24	
5 "	35	
50 "	37	
8 "	37a	
8 "	38	
1 "	45	
7 "	48a	
1 "	51	
1 "	52	
2 "	54a	
1 "	62	
4 "	90a	
3 "	111c	
1 "	115	
1 "	125	
1 "	126a	
1 "	176	
1 "	186	
1 "	187	
1 "	190	
1 "	195	

The base, a $5\frac{1}{2} \times 2\frac{1}{2}$ " Flanged Plate, carries two $2\frac{1}{2} \times \frac{1}{2}$ " Double Angle Strips, each of which supports a Flanged Sector Plate. The upper ends of these two Plates are coupled together by $5\frac{1}{2}$ " Strips, further Strips and Plates being secured to these by $\frac{1}{2} \times \frac{1}{2}$ " Angle Brackets. The sewing machine frame is built up on two vertical standards, each of which is constructed from two $2\frac{1}{2} \times \frac{1}{2}$ " Double Angle Strips. One of these standards is secured to a transverse $2\frac{1}{2}$ " Strip and the other to a 1×1 " Angle Bracket.

Three $5\frac{1}{2}$ " Strips are now arranged across the top of the two standards as shown, and immediately below these are fitted two $3\frac{1}{2}$ " Strips and two Flat Brackets. Four $2\frac{1}{2}$ " small radius Curved Strips complete the structure. The vertical needle holder is journalled at its upper end in one of the $5\frac{1}{2}$ " Strips mentioned earlier, and its lower end in a 1×1 " Angle Bracket, attached to the machine by a Flat Bracket and $\frac{1}{2}$ " Reversed Angle Bracket.

A 1 " fast Pulley on the needle holder is caused to vibrate by a $\frac{1}{2} \times \frac{1}{2}$ " Angle Bracket secured to a Bush Wheel that is carried on a 5 " Axle Rod. The opposite end of this Rod is fitted with a 1 " fast Pulley and Road Wheel, the 1 " Pulley being connected by a Driving Band to a similar Pulley on the crank shaft. The treadle and its method of operation will be seen clearly from the illustration.

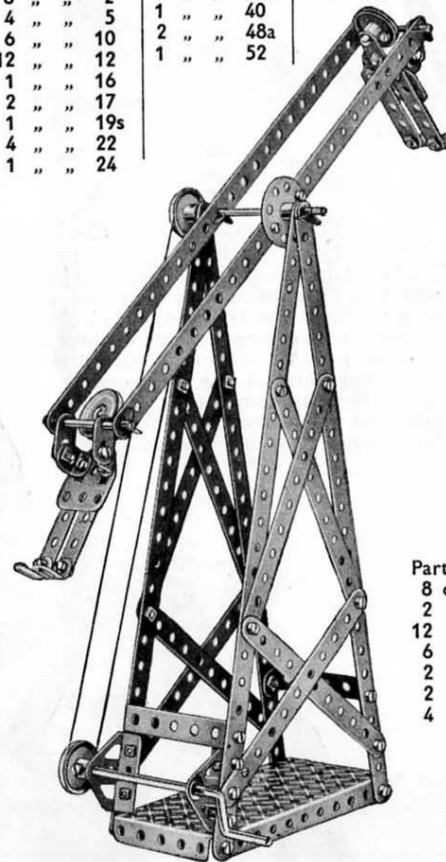
D17. Tricycle



Parts required		
4 of No.	2	
6 "	5	
2 "	10	
3 "	11	
2 "	12	
1 "	16	
1 "	18a	
2 "	35	
15 "	37	
2 "	37a	
1 "	111c	
1 "	126a	
3 "	187	

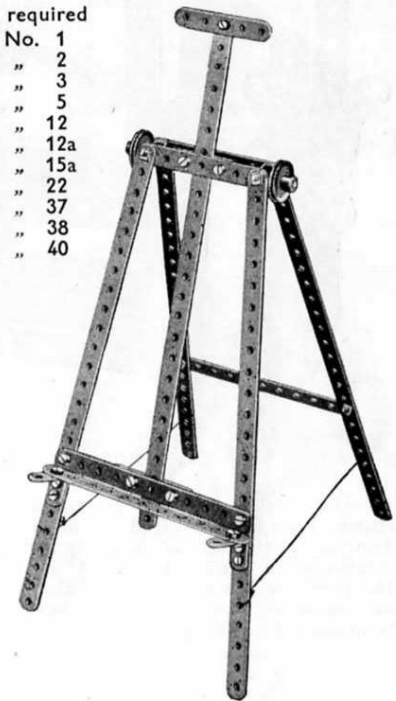
D18. Revolving Meccanitions

Parts required		
8 of No.	35	
42 "	37	
6 of No.	1	
1 "	24	
8 "	2	
4 "	5	
6 "	10	
12 "	12	
1 "	16	
2 "	17	
1 "	19s	
4 "	22	
1 "	24	
2 of No.	111c	
2 "	126	
2 "	126a	



D19. Easel

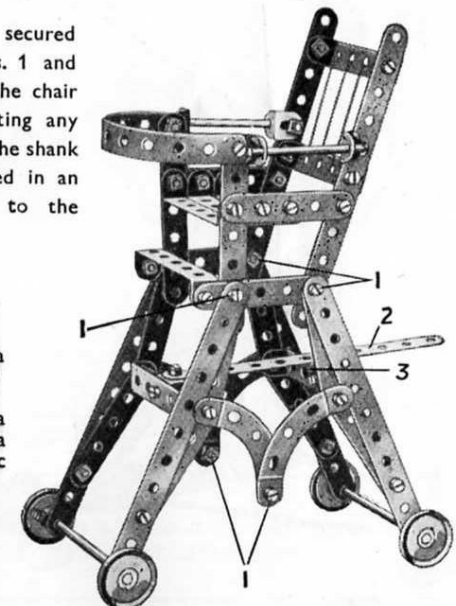
Parts required		
5 of No.	1	
3 "	2	
2 "	3	
3 "	5	
4 "	12	
2 "	12a	
1 "	15a	
2 "	22	
19 "	37	
4 "	38	
1 "	40	

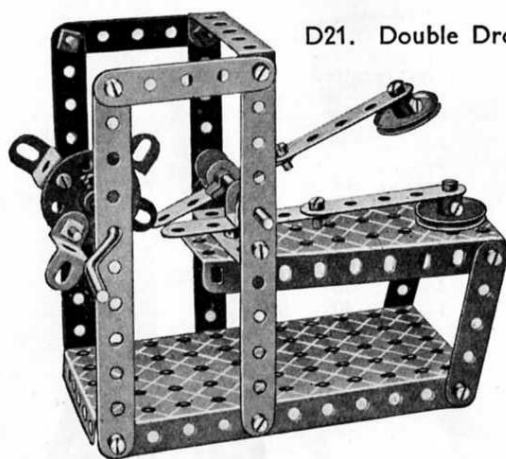


D20. Baby Chair

The Bolts 1 are all secured pivotally (see S.M. Nos. 1 and 1a), and the height of the chair can be adjusted by fitting any hole in the Strip 2 over the shank of a Bolt that is secured in an Angle Bracket bolted to the Double Angle Strip 3.

Parts required		
4 of No.	35	
8 of No.	2	
2 "	3	
12 "	5	
6 "	12	
2 "	16	
2 "	17	
4 "	22	
35 "	37	
2 "	37a	
4 "	38	
1 "	40	
8 "	48a	
4 "	90a	
1 "	111c	





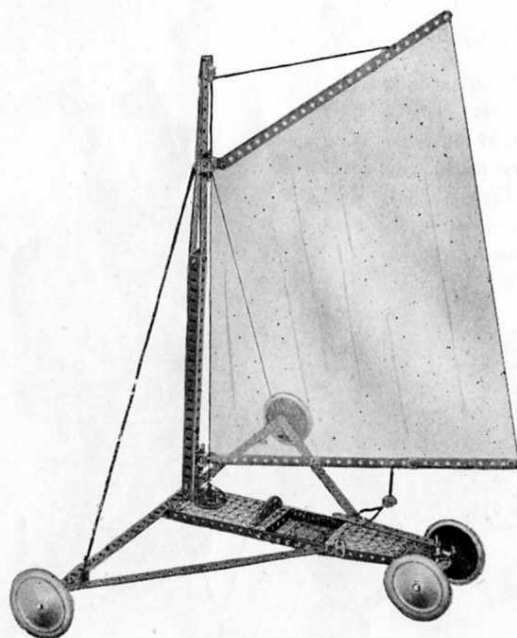
D21. Double Drop Hammer

Parts required

4	of No.	2
8	" "	5
2	" "	11
1	" "	16
1	" "	19s
2	" "	22
1	" "	24
6	" "	35
23	" "	37
2	" "	48a
1	" "	52
1	" "	54a
4	" "	125

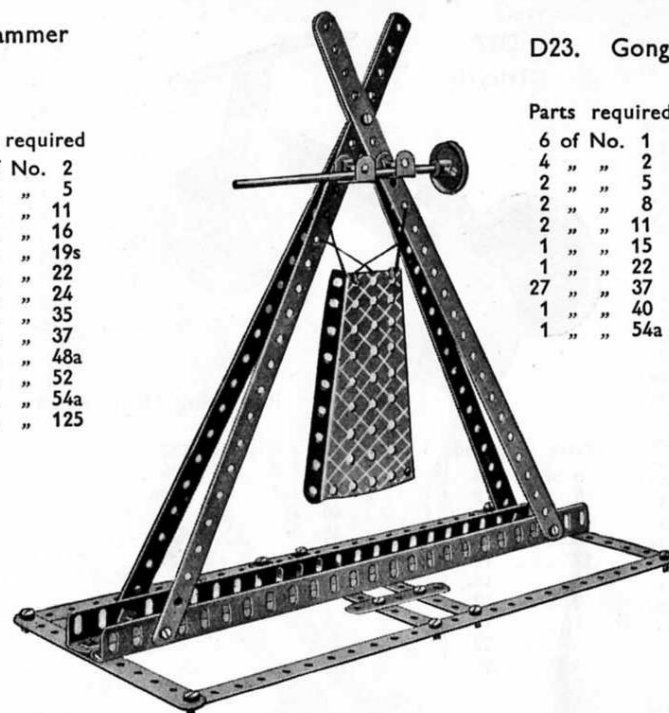
D22. Land Yacht

The chassis of the model is represented by a $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plate and a Flanged Sector Plate, the two parts being joined together as shown by Strips, and the intermediate space filled in by $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strips. The rear axle bearing, a $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip, is secured to its pivot by a Bush Wheel. A Crank and $5\frac{1}{2}''$ Strip form the tiller.



Parts required

8	of No.	1
2	" "	2
1	" "	5
4	" "	8
4	" "	10
4	" "	11
2	" "	12
2	" "	12a
3	" "	16
1	" "	17
2	" "	18a
1	" "	23
1	" "	24
1	" "	35
60	" "	37
9	" "	38
1	" "	40
8	" "	48a
1	" "	52
1	" "	54a
1	" "	62
1	" "	90a
1	" "	115
4	" "	125
1	" "	126
2	" "	126a
4	" "	187



D23. Gong

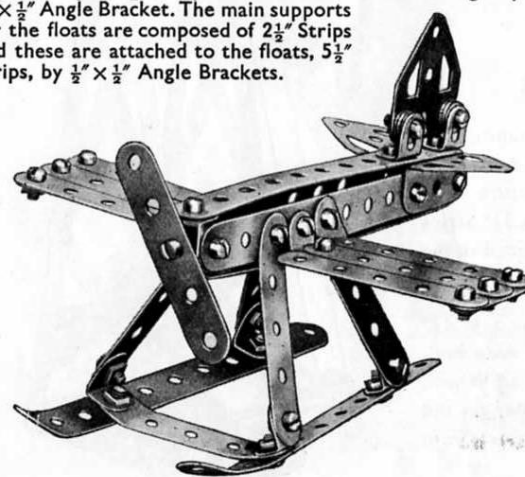
Parts required

6	of No.	1
4	" "	2
2	" "	5
2	" "	8
2	" "	11
1	" "	15
1	" "	22
27	" "	37
1	" "	40
1	" "	54a

D24. Schneider Trophy Seaplane

Four $5\frac{1}{2}''$ Strips held together by means of Double Brackets form the fuselage, the rear end of which is fitted with two Trunnions representing tail planes. The fin is built up from a Flat Trunnion and two $\frac{1}{2}'' \times \frac{1}{2}''$ Angle Brackets.

Each of the wings consists of three $2\frac{1}{2}''$ Strips secured together by a $1\frac{1}{2}''$ Strip and attached to the fuselage by a $\frac{1}{2}'' \times \frac{1}{2}''$ Angle Bracket. The main supports for the floats are composed of $2\frac{1}{2}''$ Strips and these are attached to the floats, $5\frac{1}{2}''$ Strips, by $\frac{1}{2}'' \times \frac{1}{2}''$ Angle Brackets.



Parts required

6	of No.	2
12	" "	5
2	" "	6a
2	" "	11
12	" "	12
34	" "	37
3	" "	37a
6	" "	38
2	" "	111c
2	" "	126
1	" "	126a

D25. "Try-Your-Strength" Machine

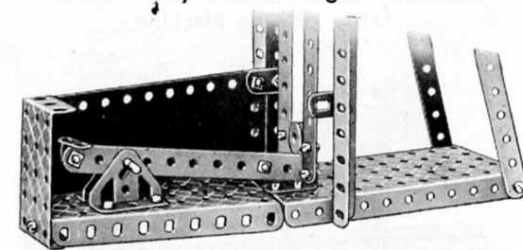


Fig. D25a

The striker (Fig. D25b), a Bush Wheel mounted on a 2" Rod, is allowed to rest at its lower end on one end of the lever forming the link between the striker and the weight (Fig. D25a). The weight is represented by a $\frac{1}{2}''$ loose Pulley, and slides vertically between two lengths of Strips.

Parts required

6	of No.	1	4	of No.	5
6	" "	2	2	" "	6a
1	" "	3	4	" "	8
			4	" "	10
			3	" "	12
			2	" "	12a
			1	" "	17
			1	" "	18a
			1	" "	23
			1	" "	24
			2	" "	35
			66	" "	37
			5	" "	37a
			2	" "	38
			1	" "	45
			1	" "	48a
			1	" "	51
			1	" "	52
			2	" "	54a
			3	" "	90a
			5	" "	111c
			2	" "	126
			1	" "	176
			2	" "	195

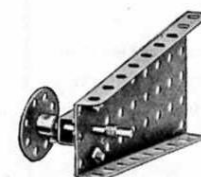
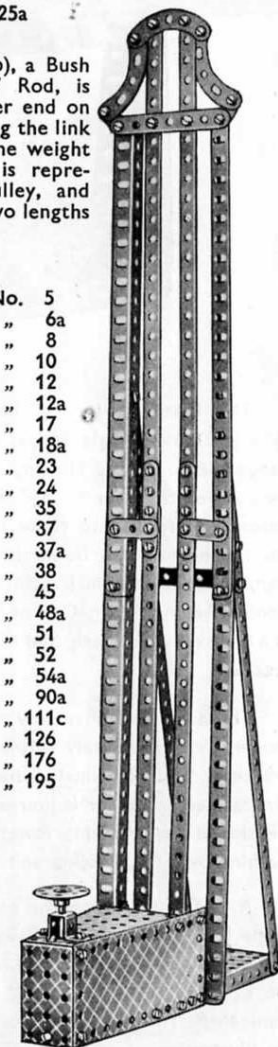
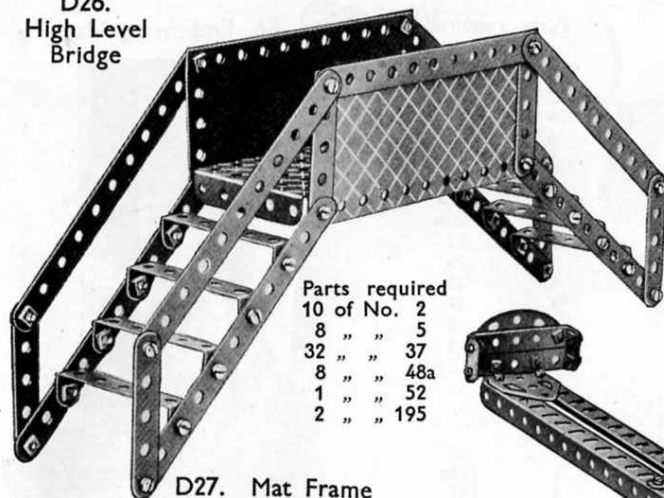


Fig. D25b



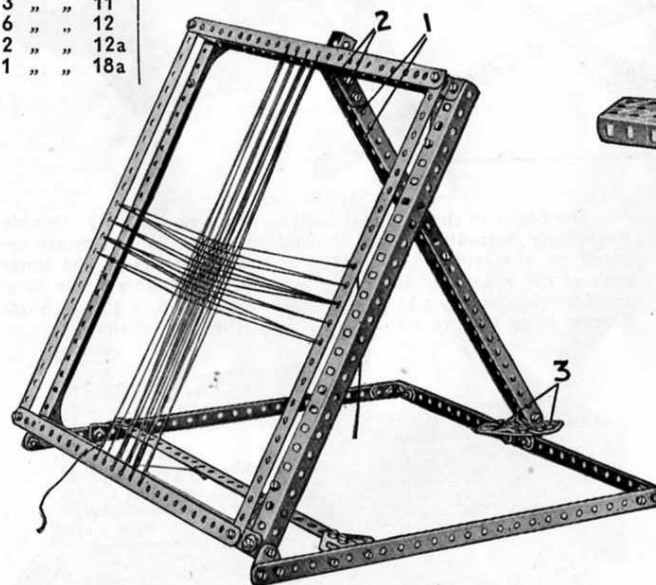
D26.
High Level
Bridge

Parts required
10 of No. 2
8 " " 5
32 " " 37
8 " " 48a
1 " " 52
2 " " 195

Parts required
8 of No. 1
14 " " 2
2 " " 3
2 " " 5
2 " " 6a
4 " " 8
6 " " 12
4 " " 16
2 " " 19b
3 " " 22
1 " " 24
5 " " 35
65 " " 37
6 " " 37a
6 of No. 38
1 " " 40
1 " " 44
8 " " 48a
1 " " 52
2 " " 54a
4 " " 90a
5 " " 111c
2 " " 126a
1 " " 176
3 " " 190
2 " " 191
No. E6.
Electric Motor
(not included in
Outfit).

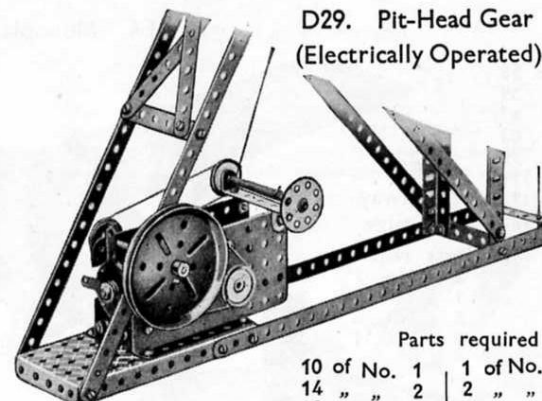
D27. Mat Frame

Parts required
10 of No. 1
4 " " 8
4 " " 10
3 " " 11
6 " " 12
2 " " 12a
1 " " 18a
54 of No. 37
2 " " 37a
2 " " 38
1 " " 45
2 of No. 62
4 " " 90a
2 " " 111c
1 " " 115
4 of No. 125
2 " " 126
2 " " 126a



D27 (continued)

The Strips 1 are hinged to the frame in the following manner. Two Cranks 2 with their bosses facing inward are bolted to the Strips 1 and two Angle Brackets are secured to the frame. A Rod is then pushed through the holes in the Angle Brackets and secured in the bosses of the Cranks. A Double Bracket fastened to the ends of the Strips 1 carries a Threaded Pin, which fits in the holes in the Flat Trunnions 3. By removing this Pin, the frame can be folded flat.

D29. Pit-Head Gear
(Electrically Operated)

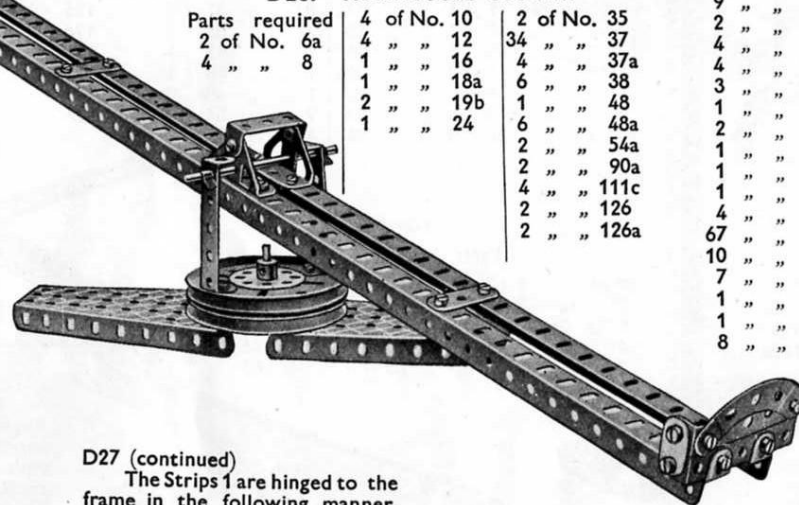
The Motor is carried on a $5\frac{1}{2} \times 2\frac{1}{2}$ Flanged Plate, and supports on its armature shaft a 1" fast Pulley. This is connected by a short length of cord to a 3" Pulley that in turn rotates a second 1" fast Pulley. This is coupled to a third similar Pulley on the hoisting shaft. The head of the model is similar to that of model D30.

D30. Pit-Head Gear
(Hand Operated)

Parts required
10 of No. 1
14 " " 2
2 " " 3
9 " " 5
2 " " 6a
4 " " 8
4 " " 12
3 " " 16
1 " " 19s
2 " " 19b
1 " " 22
1 " " 23
1 " " 24
4 " " 35
67 " " 37
10 " " 37a
7 " " 38
1 " " 40
1 " " 44
8 " " 48a
1 of No. 52
2 " " 54a
2 " " 62
2 " " 90a
6 " " 111c
2 " " 126a
1 " " 176
3 " " 190
2 " " 191
2 " " 195

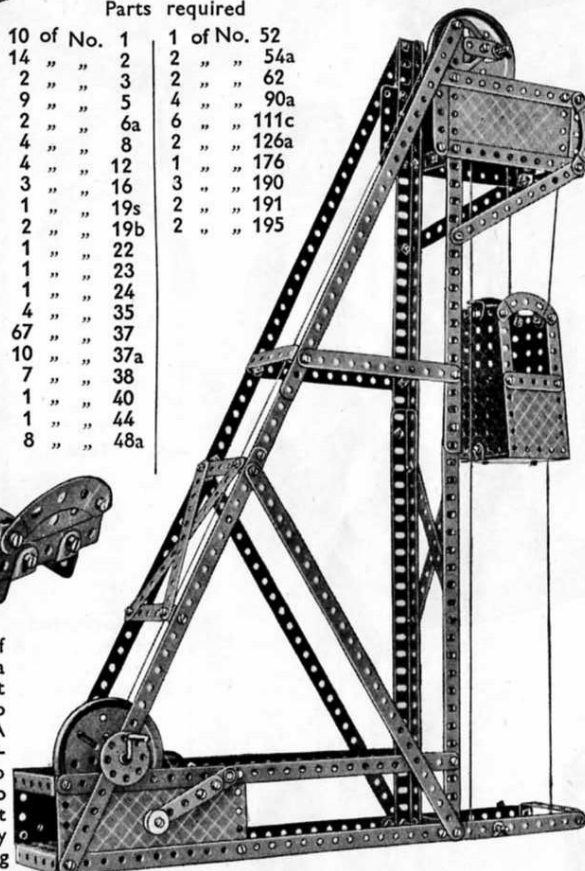
D28. Roundabout See-Saw

Parts required
2 of No. 6a
4 " " 8
4 of No. 10
4 " " 12
1 " " 16
1 " " 18a
2 " " 19b
1 " " 24
2 of No. 35
34 " " 37
4 " " 37a
6 " " 38
1 " " 48
6 " " 48a
2 " " 54a
2 " " 90a
4 " " 111c
2 " " 126
2 " " 126a



D30 (continued)

The rear of the base of this model is fitted with a $5\frac{1}{2} \times 2\frac{1}{2}$ Flanged Plate that carries at its sides two $5\frac{1}{2} \times 2\frac{1}{2}$ Strip Plates. A $12\frac{1}{2}$ Strip secured horizontally to each of these to form a strengthener, also carries the brake that operates on a 3" Pulley mounted on the winding handle.

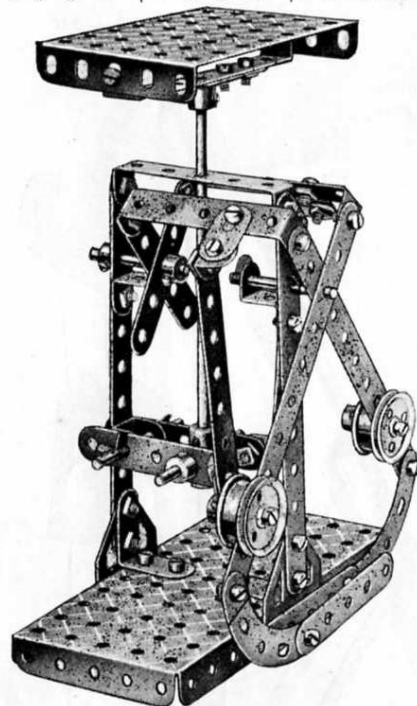


HOW TO CONTINUE

This completes our examples of models that can be made with MECCANO Outfit D (or C and Ca). The next models are a little more advanced, requiring a number of extra parts to construct them. The necessary parts are all contained in a Da Accessory Outfit, which can be obtained from any Meccano Dealer.

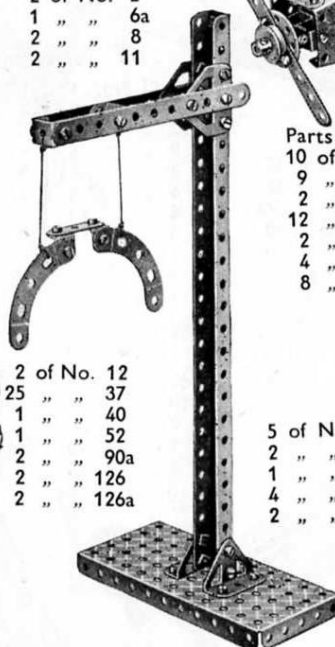
E1. Letter Balance

Parts required		
4 of No. 2	2 of No. 18a	1 of No. 53
2 " " 3	2 " " 20b	4 " " 59
5 " " 5	2 " " 22a	1 " " 62
2 " " 10	4 " " 35	1 " " 63
1 " " 11	37 " " 37	2 " " 90a
4 " " 12	6 " " 37a	2 " " 111
2 " " 12a	2 " " 48a	4 " " 111a
1 " " 15	1 " " 48b	2 " " 125
2 " " 17	1 " " 52	2 " " 126



E2. Railway Gauge

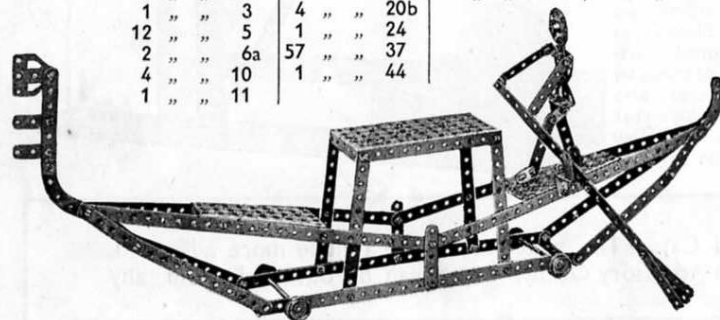
Parts required	
2 of No. 2	
1 " " 6a	
2 " " 8	
2 " " 11	



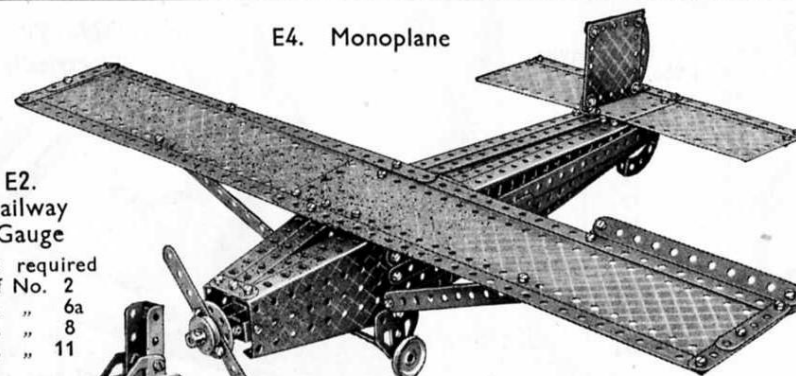
2 of No. 12	
25 " " 37	
1 " " 40	
1 " " 52	
2 " " 90a	
2 " " 126	
2 " " 126a	

E3. Gondola

Parts required		
6 of No. 1	5 of No. 12	2 of No. 48a
10 " " 2	1 " " 12a	1 " " 52
1 " " 3	2 " " 16	2 " " 54a
12 " " 5	4 " " 20b	4 of No. 90a
2 " " 6a	1 " " 24	1 " " 126
4 " " 10	57 " " 37	2 " " 126a
1 " " 11	1 " " 44	



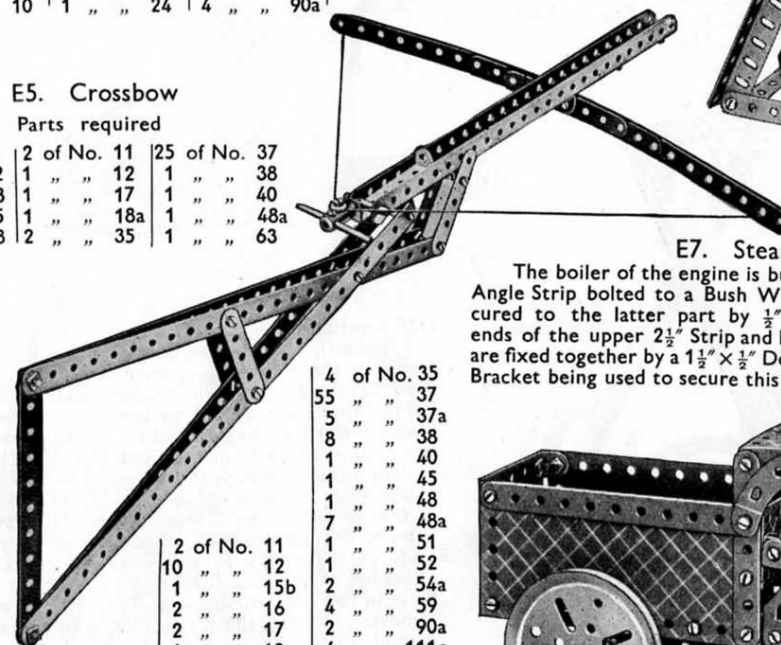
E4. Monoplane



Parts required		6 of No. 12	65 of No. 37	6 of No. 111c
10 of No. 1	4 " " 12c	8 " " 37a	2 " " 125	
9 " " 2	1 " " 13	7 " " 38	2 " " 126a	
2 " " 3	1 " " 16	1 " " 45	1 " " 186	
12 " " 5	2 " " 20b	1 " " 48	1 " " 190	
2 " " 6a	2 " " 22	1 " " 48a	2 " " 195	
4 " " 8	1 " " 23	2 " " 54a	2 " " 197	
8 " " 10	1 " " 24	4 " " 90a		

E5. Crossbow

Parts required		
5 of No. 1	2 of No. 11	25 of No. 37
2 " " 2	1 " " 12	1 " " 38
1 " " 3	1 " " 17	1 " " 40
4 " " 5	1 " " 18a	1 " " 48a
2 " " 8	2 " " 35	1 " " 63

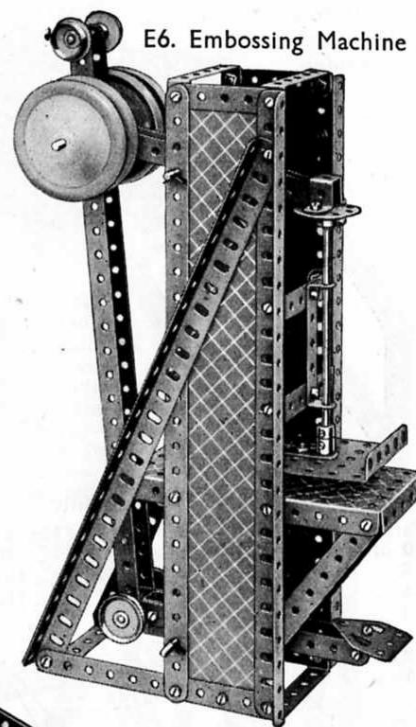


Parts required		2 of No. 11	4 of No. 35
2 of No. 2	4 " " 12	1 " " 37	55 " " 37
2 " " 3	1 " " 15b	1 " " 37a	5 " " 38
11 " " 5	2 " " 16	8 " " 40	1 " " 45
2 " " 6a	2 " " 17	1 " " 48	1 " " 48a
2 " " 10	1 " " 18a	7 " " 48a	1 " " 51
	2 " " 19b	1 " " 52	1 " " 54a
	4 " " 20b	2 " " 59	4 " " 90a
	1 " " 22	2 " " 90a	4 " " 111c
	1 " " 22a	1 " " 125	1 " " 126a
	1 " " 23	2 " " 186	2 " " 187
	1 " " 24	1 " " 190	1 " " 195

Parts required

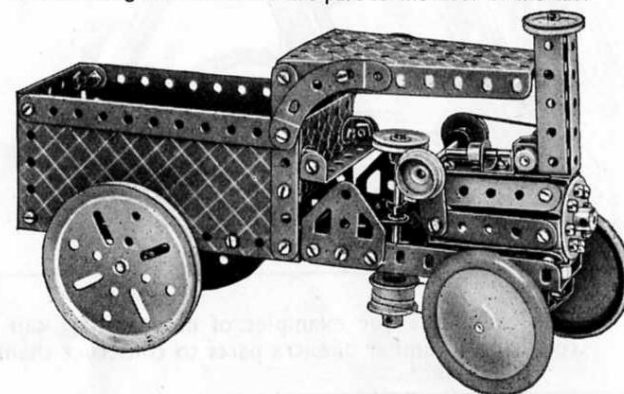
4 of No. 1	
8 " " 2	
2 " " 5	
4 " " 8	
3 " " 11	
1 " " 15	
3 " " 16	
2 " " 18a	
2 " " 20b	
2 " " 22	
1 " " 24	
8 " " 35	
37 " " 37	
6 " " 38	
1 " " 45	
7 " " 48a	
1 " " 52	
1 " " 53	
3 " " 59	
1 " " 62	
4 " " 126a	
4 " " 187	
2 " " 197	

E6. Embossing Machine

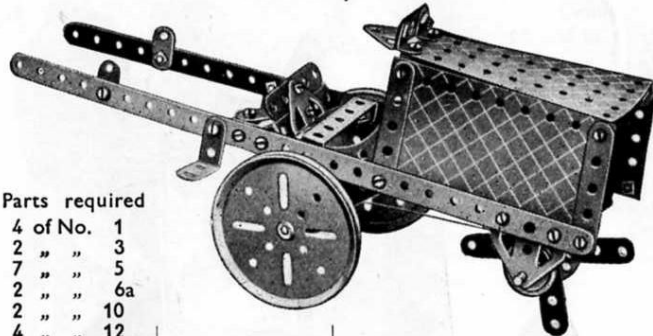


E7. Steam Lorry

The boiler of the engine is built up from one $2\frac{1}{2} \times \frac{1}{2}$ " Double Angle Strip bolted to a Bush Wheel, and seven $2\frac{1}{2}$ " Strips are secured to the latter part by $\frac{1}{2} \times \frac{1}{2}$ " Angle Brackets. The inner ends of the upper $2\frac{1}{2}$ " Strip and lower $2\frac{1}{2} \times \frac{1}{2}$ " Double Angle Strip are fixed together by a $1\frac{1}{2} \times \frac{1}{2}$ " Double Angle Strip, a $\frac{1}{2} \times \frac{1}{2}$ " Angle Bracket being used to secure this part to the floor of the cab.



E8. Hay Tedder



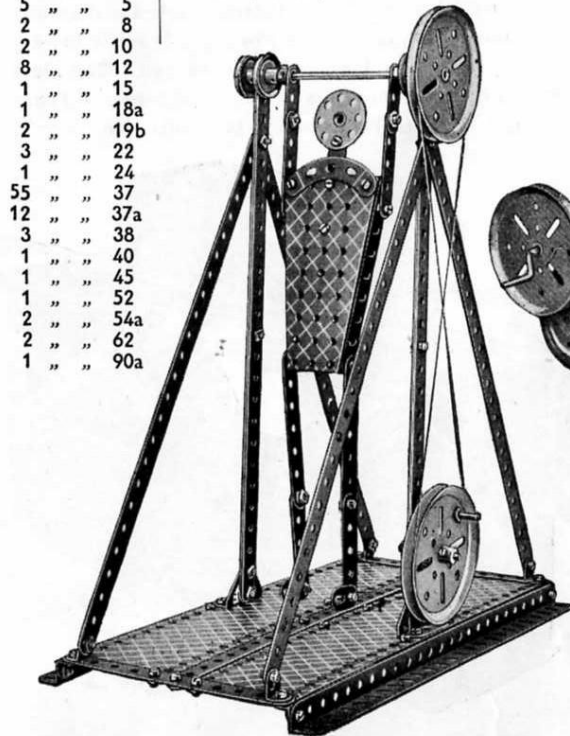
Parts required

4 of No. 1			
2 " " 3			
7 " " 5			
2 " " 6a			
2 " " 10			
4 " " 12			
2 " " 12a	3 of No. 22	1 of No. 40	6 of No. 111c
1 " " 15d	1 " " 24	3 " " 48a	2 " " 126
1 " " 16	30 " " 37	1 " " 54a	2 " " 126a
2 " " 19b	6 " " 37a	4 " " 59	2 " " 191
1 " " 20b	8 " " 38	3 " " 90a	

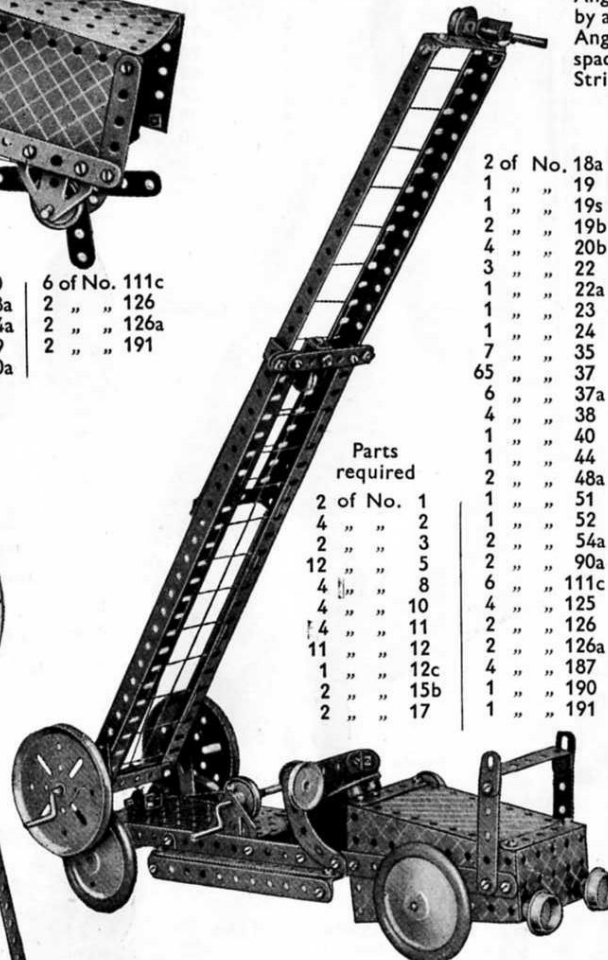
E9. Acrobat

Parts required

9 of No. 1	6 of No. 111c	1 of No. 176
2 " " 2	1 " " 115	2 " " 197
2 " " 3	2 " " 126	
5 " " 5		
2 " " 8		
2 " " 10		
8 " " 12		
1 " " 15		
1 " " 18a		
2 " " 19b		
3 " " 22		
1 " " 24		
55 " " 37		
12 " " 37a		
3 " " 38		
1 " " 40		
1 " " 45		
1 " " 52		
2 " " 54a		
2 " " 62		
1 " " 90a		



E10. Fire Engine

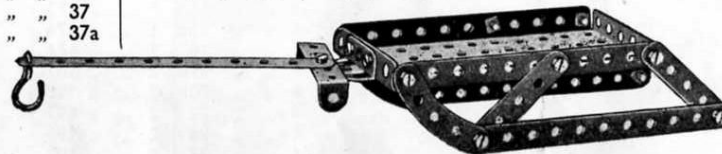


Parts required

2 of No. 1	
4 " " 2	
2 " " 3	
12 " " 5	
4 " " 8	
4 " " 10	
4 " " 11	
11 " " 12	
1 " " 12c	
2 " " 15b	
2 " " 17	

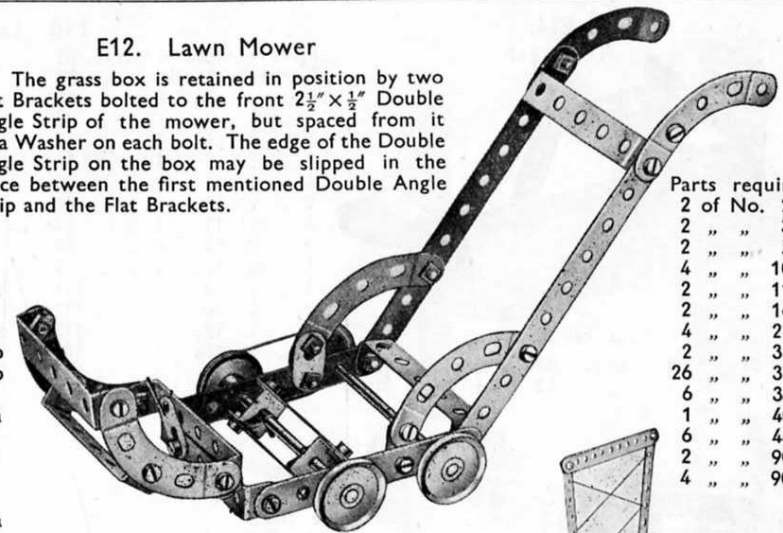
E11. Horse Sleigh

3 of No. 2	1 of No. 48a	2 of No. 90
4 " " 5	1 " " 52	1 " " 111c
1 " " 23	1 " " 57c	1 " " 126
12 " " 37		
2 " " 37a		



E12. Lawn Mower

The grass box is retained in position by two Flat Brackets bolted to the front $2\frac{1}{2} \times \frac{1}{2}$ Double Angle Strip of the mower, but spaced from it by a Washer on each bolt. The edge of the Double Angle Strip on the box may be slipped in the space between the first mentioned Double Angle Strip and the Flat Brackets.



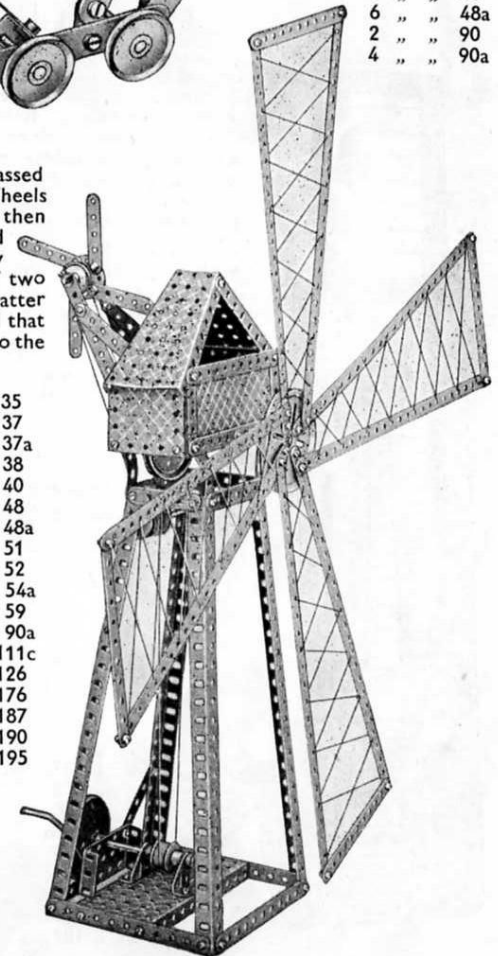
Parts required

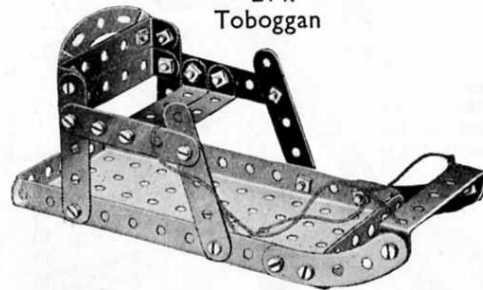
2 of No. 2	
2 " " 3	
2 " " 5	
4 " " 10	
2 " " 11	
2 " " 16	
4 " " 22	
2 " " 35	
26 " " 37	
6 " " 38	
1 " " 40	
6 " " 48a	
2 " " 90	
4 " " 90a	

E13. Windmill

The operating cord is passed twice round the Flanged Wheels at the bottom of the model, then round a 3" Pulley on the Rod carrying the sails, and lastly twice round a second set of two Flanged Wheels. These latter Flanged Wheels rotate a Rod that in turn is connected by cord to the wind vane.

Parts required	7 of No. 35
8 of No. 1	70 " " 37
14 " " 2	4 " " 37a
2 " " 3	9 " " 38
2 " " 4	1 " " 40
12 " " 5	1 " " 48
4 " " 8	2 " " 48a
2 " " 12	1 " " 51
1 " " 15	1 " " 52
1 " " 15b	2 " " 54a
1 " " 16	4 " " 59
1 " " 17	4 " " 90a
1 " " 19	4 " " 111c
2 " " 19b	2 " " 126
4 " " 20b	1 " " 176
2 " " 22	1 " " 187
1 " " 23	2 " " 190
1 " " 24	2 " " 195

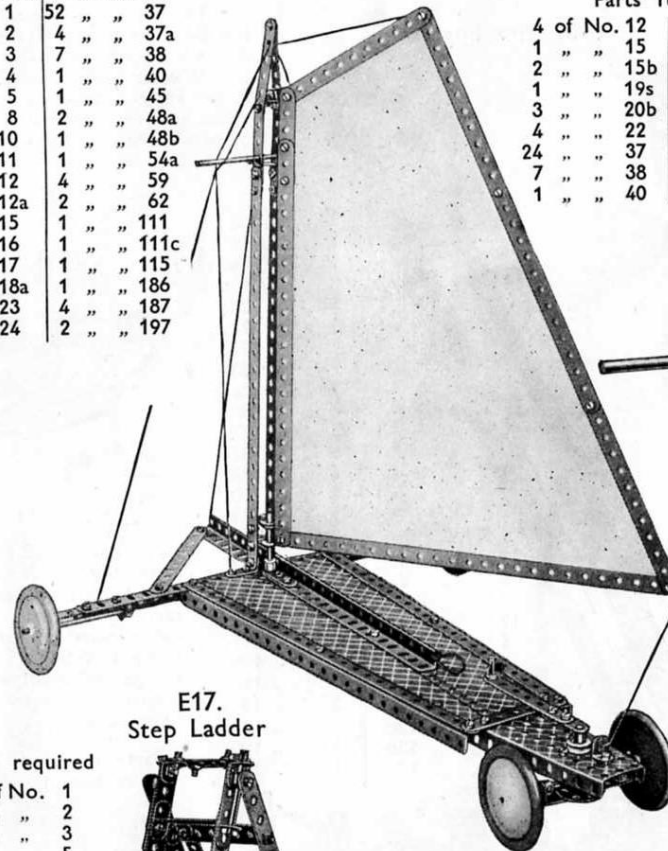


E14.
Toboggan

Parts required		
6 of No. 5	5 of No. 48a	2 of No. 90
22 " " 37	1 " " 52	1 " " 90a
1 " " 40		

E16. Land Yacht

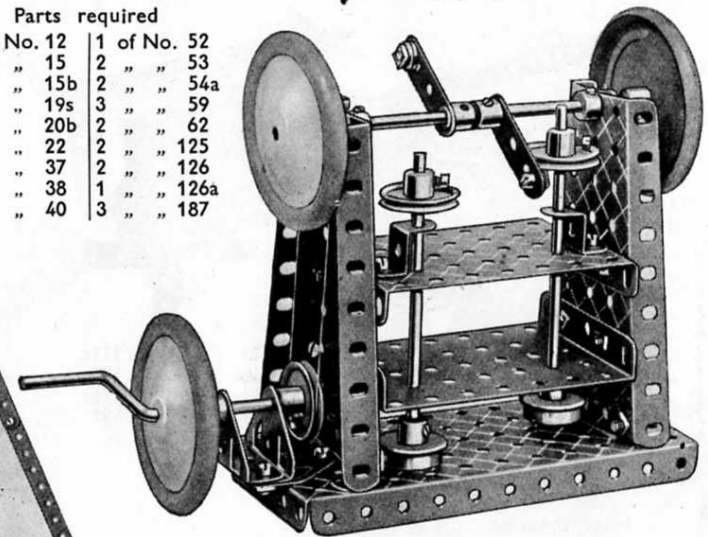
Parts required		
8 of No. 1	4 of No. 35	
5 " " 2	52 " " 37	
2 " " 3	4 " " 37a	
1 " " 4	7 " " 38	
2 " " 5	1 " " 40	
4 " " 8	1 " " 45	
2 " " 10	2 " " 48a	
4 " " 11	1 " " 48b	
6 " " 12	1 " " 54a	
1 " " 12a	4 " " 59	
1 " " 15	2 " " 62	
2 " " 16	1 " " 111	
2 " " 17	1 " " 111c	
2 " " 18a	1 " " 115	
1 " " 23	1 " " 186	
1 " " 24	4 " " 187	
	2 " " 197	



Parts required

Parts required		
4 of No. 12	1 of No. 52	
1 " " 15	2 " " 53	
2 " " 15b	2 " " 54a	
1 " " 19s	3 " " 59	
3 " " 20b	2 " " 62	
4 " " 22	2 " " 125	
24 " " 37	2 " " 126	
7 " " 38	1 " " 126a	
1 " " 40	3 " " 187	

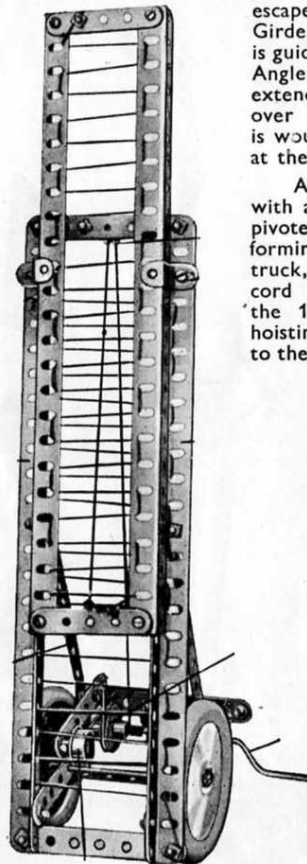
E18. Stamping Mill



E15. Fire Escape

The moving portion of the escape slides on the $12\frac{1}{2}$ " Angle Girders of the fixed ladder and is guided by two $\frac{1}{2}$ " Reversed Angle Brackets. The cord for extending the ladder passes over a $\frac{1}{2}$ " loose Pulley and is wound on the Crank Handle at the base of the model.

A 3" Strip, weighted with a $\frac{3}{8}$ " Flanged Wheel, is pivoted to the $5\frac{1}{2}$ " Strip forming one side of the escape truck, and a short length of cord is passed round the 1" Pulley on the hoisting shaft, and tied to the Strip.

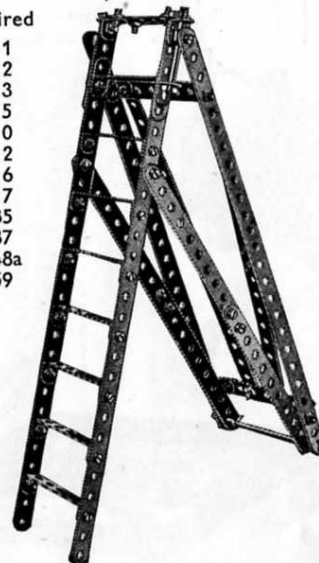


Parts required

4 of No. 2	
3 " " 3	
1 " " 4	
2 " " 5	
4 " " 8	
3 " " 12	
1 " " 16	
1 " " 19s	
1 " " 20b	
1 " " 22	
1 " " 23	
26 " " 37	
6 " " 37a	
5 " " 38	
2 " " 40	
2 " " 48a	
3 " " 59	
5 " " 111c	
2 " " 125	
1 " " 126a	
2 " " 187	

E17. Step Ladder

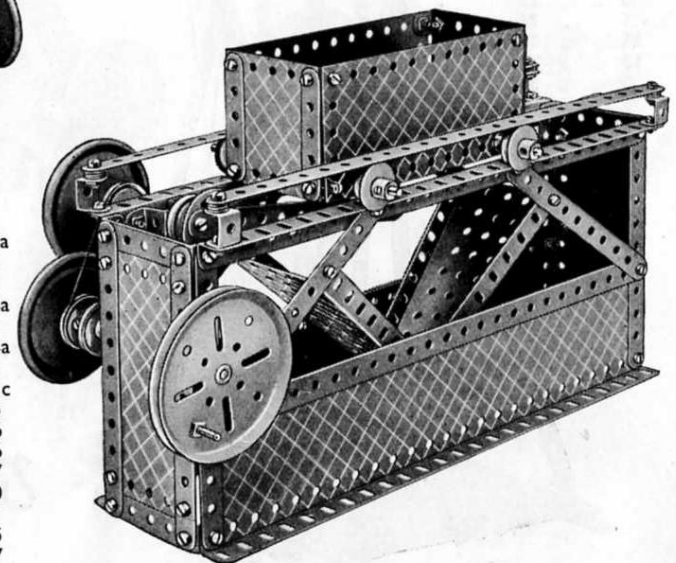
Parts required		
4 of No. 1		
8 " " 2		
2 " " 3		
3 " " 5		
2 " " 10		
10 " " 12		
1 " " 16		
2 " " 17		
10 " " 35		
38 " " 37		
8 " " 48a		
2 " " 59		



Parts required		
4 of No. 1	6 of No. 37a	
13 " " 2	12 " " 38	
4 " " 5	1 " " 45	
4 " " 8	6 " " 48a	
2 " " 10	1 " " 52	
4 " " 11	2 " " 54a	
1 " " 12a	4 " " 59	
2 " " 15	5 " " 111c	
1 " " 15a	1 " " 115	
1 " " 16	1 " " 176	
1 " " 19b	1 " " 186	
4 " " 20b	2 " " 187	
4 " " 22	2 " " 190	
1 " " 24	2 " " 191	
64 " " 37	2 " " 195	
	2 " " 197	

E19. Sifter

The truck is vibrated by a $5\frac{1}{2}$ " Strip attached to the under side of this section of the model by a 1" x 1" Angle Bracket and to a Bush Wheel by a lock-nutted bolt. This Bush Wheel is operated through a Driving Band from a 3" Pulley carrying a Threaded Pin, shown in the illustration.



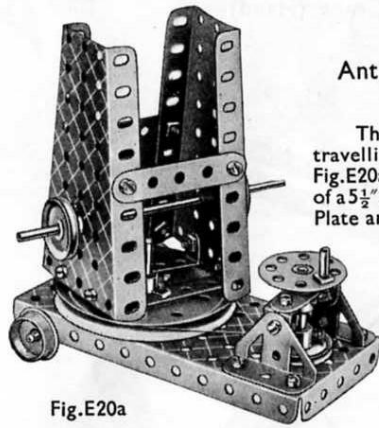


Fig. E20a

E20. Anti Aircraft Gun

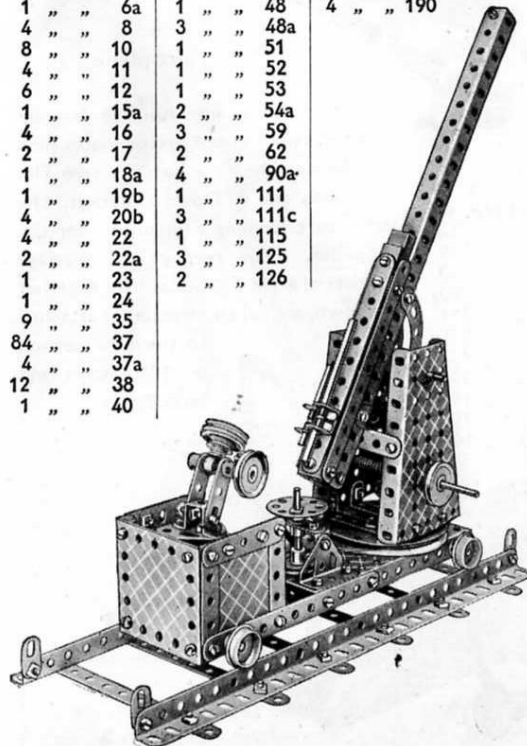
The base of the travelling portion Fig. E20a is composed of a $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plate and a $3\frac{1}{2}'' \times 2\frac{1}{2}''$

Flanged Plate, these two parts being secured together by two $5\frac{1}{2}''$ Strips and two $\frac{1}{2}'' \times \frac{1}{2}''$ Angle Brackets. The

searchlight is pivoted to its platform by a $\frac{3}{8}''$ bolt, lock-nutted in place, and the gun is free to swivel on a 3" Pulley.

Parts required

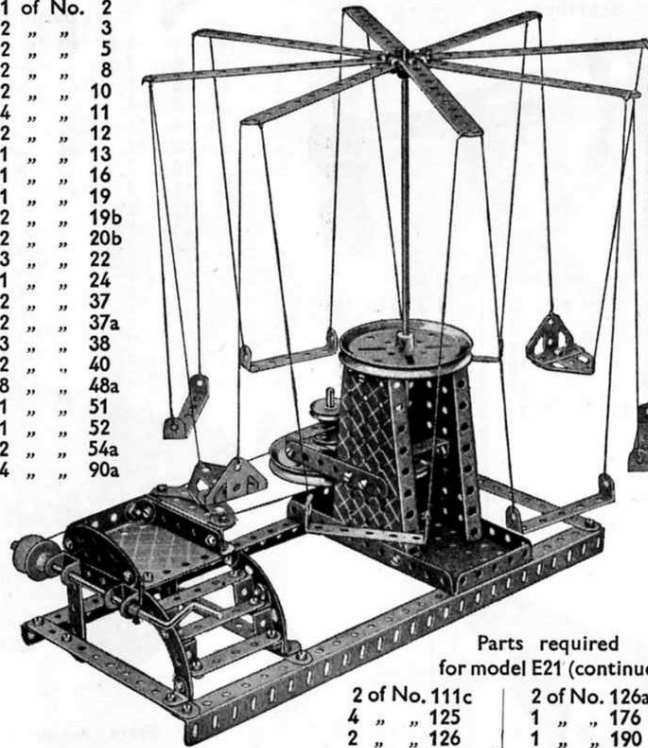
11 of No. 2	1 of No. 44	1 of No. 126a
9 " " 5	1 " " 45	1 " " 176
1 " " 6a	1 " " 48	4 " " 190
4 " " 8	3 " " 48a	
8 " " 10	1 " " 51	
4 " " 11	1 " " 52	
6 " " 12	1 " " 53	
1 " " 15a	2 " " 54a	
4 " " 16	3 " " 59	
2 " " 17	2 " " 62	
1 " " 18a	4 " " 90a	
1 " " 19b	1 " " 111	
4 " " 20b	3 " " 111c	
4 " " 22	1 " " 115	
2 " " 22a	3 " " 125	
1 " " 23	2 " " 126	
1 " " 24		
9 " " 35		
84 " " 37		
4 " " 37a		
12 " " 38		
1 " " 40		



Parts required

11 of No. 2	
2 " " 3	
12 " " 5	
2 " " 8	
2 " " 10	
4 " " 11	
12 " " 12	
1 " " 13	
1 " " 16	
1 " " 19	
2 " " 19b	
2 " " 20b	
3 " " 22	
1 " " 24	
62 " " 37	
2 " " 37a	
3 " " 38	
2 " " 40	
8 " " 48a	
1 " " 51	
1 " " 52	
2 " " 54a	
4 " " 90a	

E21. Roundabout

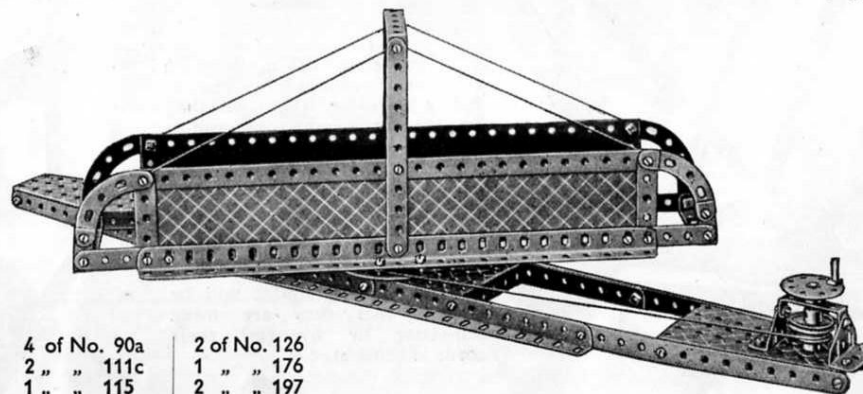


Parts required for model E21 (continued)

2 of No. 111c	2 of No. 126a
4 " " 125	1 " " 176
2 " " 126	1 " " 190

E22. Turntable

The turning section of the model is mounted on a 3" Pulley carried on a 2" Rod that is held in place by a 1" fast Pulley secured below the base of the model. Turning is effected from a $\frac{3}{4}''$ Flanged Wheel and 1" fast Pulley as shown.



Parts required

6 of No. 1	
2 " " 2	
2 " " 3	
8 " " 5	
4 " " 8	
4 " " 10	
1 " " 17	
1 " " 18a	
1 " " 19b	
1 " " 20b	
2 " " 22	
1 " " 24	
54 " " 37	
2 " " 37a	
8 " " 38	
1 " " 40	
1 " " 48	
5 " " 48a	
1 " " 52	
2 " " 54a	

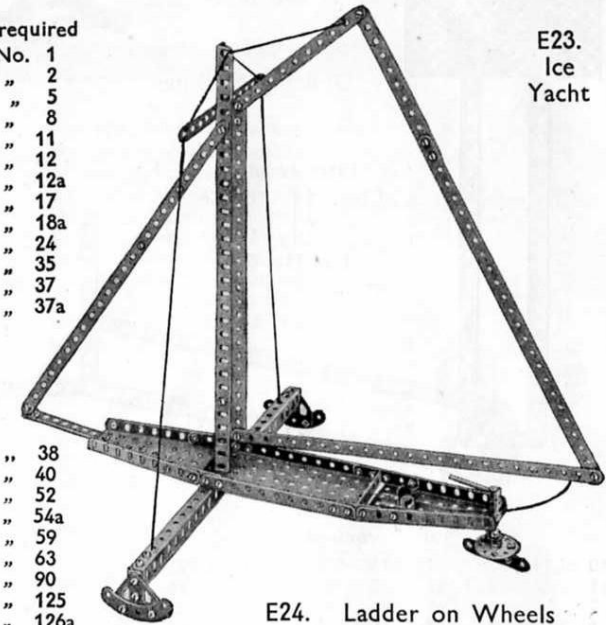
4 of No. 90a	2 of No. 126
2 " " 111c	1 " " 176
1 " " 115	2 " " 197

Parts required

4 of No. 1	
5 " " 2	
5 " " 5	
4 " " 8	
1 " " 11	
3 " " 12	
2 " " 12a	
2 " " 17	
1 " " 18a	
1 " " 24	
2 " " 35	
54 " " 37	
1 " " 37a	

2 " " 38	
1 " " 40	
1 " " 52	
2 " " 54a	
1 " " 59	
1 " " 63	
2 " " 90	
1 " " 125	
2 " " 126a	

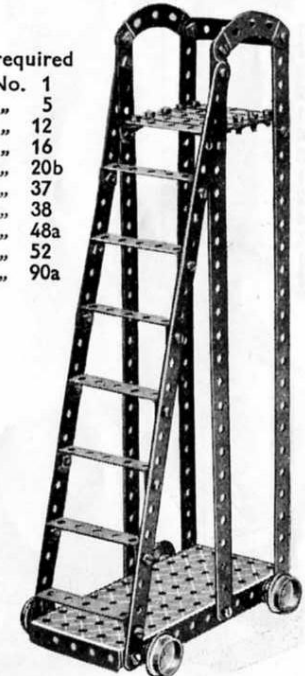
E23. Ice Yacht



E24. Ladder on Wheels

Parts required

6 of No. 1	
7 " " 5	
4 " " 12	
2 " " 16	
4 " " 20b	
40 " " 37	
4 " " 38	
8 " " 48a	
1 " " 52	
4 " " 90a	





E25.
Drafting Machine

Parts required

4 of No. 1	2 of No. 5
3 " " 2	1 " " 24
1 " " 4	15 " " 37
	1 of No. 52



E26.
Scarifier

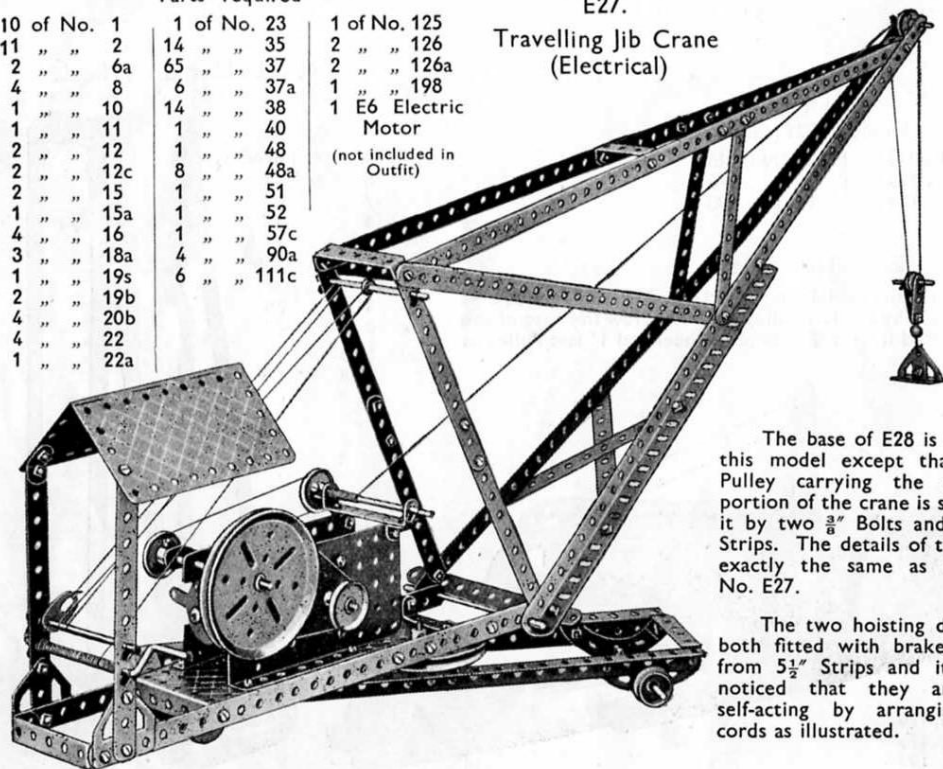
Parts required

7 of No. 2	1 of No. 18a
1 " " 3	2 " " 22
4 " " 5	29 " " 37
1 " " 10	2 " " 38
1 " " 11	2 " " 90
11 " " 12	1 " " 126a

Parts required

10 of No. 1	1 of No. 23	1 of No. 125
11 " " 2	14 " " 35	2 " " 126
2 " " 6a	65 " " 37	2 " " 126a
4 " " 8	6 " " 37a	1 " " 198
1 " " 10	14 " " 38	1 E6 Electric Motor
1 " " 11	1 " " 40	(not included in Outfit)
2 " " 12	1 " " 48	
2 " " 12c	8 " " 48a	
2 " " 15	1 " " 51	
1 " " 15a	1 " " 52	
4 " " 16	1 " " 57c	
3 " " 18a	4 " " 90a	
1 " " 19s	6 " " 111c	
2 " " 19b		
4 " " 20b		
4 " " 22		
1 " " 22a		

E27.
Travelling Jib Crane
(Electrical)



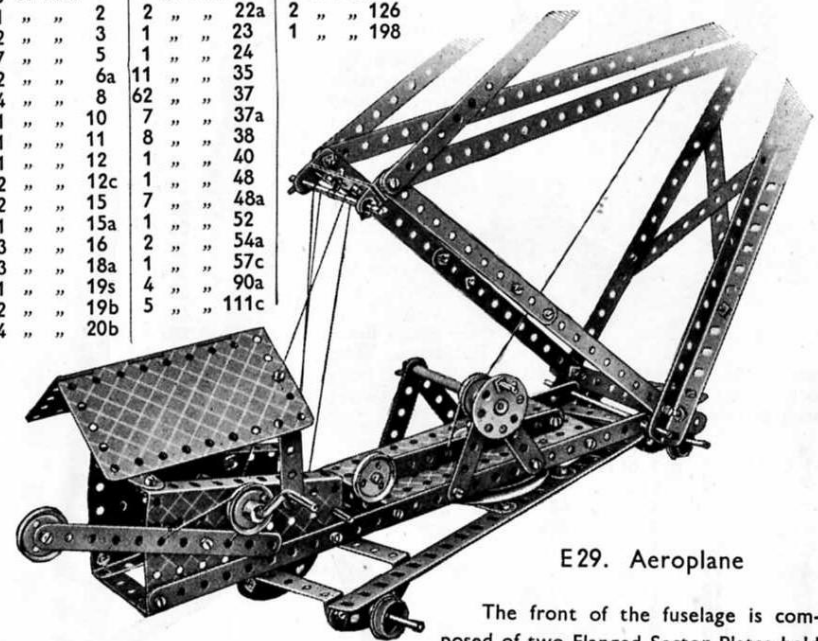
The base of E28 is similar to this model except that the 3" Pulley carrying the swivelling portion of the crane is secured to it by two $\frac{3}{8}$ " Bolts and two $3\frac{1}{2}$ " Strips. The details of the jib are exactly the same as in Model No. E27.

The two hoisting drums are both fitted with brakes formed from $5\frac{1}{2}$ " Strips and it will be noticed that they are made self-acting by arranging their cords as illustrated.

E28. Travelling Jib Crane (Hand)

Parts required

10 of No. 1	4 of No. 22	1 of No. 115
11 " " 2	2 " " 22a	2 " " 126
2 " " 3	1 " " 23	1 " " 198
7 " " 5	1 " " 24	
2 " " 6a	11 " " 35	
4 " " 8	62 " " 37	
1 " " 10	7 " " 37a	
1 " " 11	8 " " 38	
1 " " 12	1 " " 40	
2 " " 12c	1 " " 48	
2 " " 15	7 " " 48a	
1 " " 15a	1 " " 52	
3 " " 16	2 " " 54a	
3 " " 18a	1 " " 57c	
1 " " 19s	4 " " 90a	
2 " " 19b	5 " " 111c	
4 " " 20b		

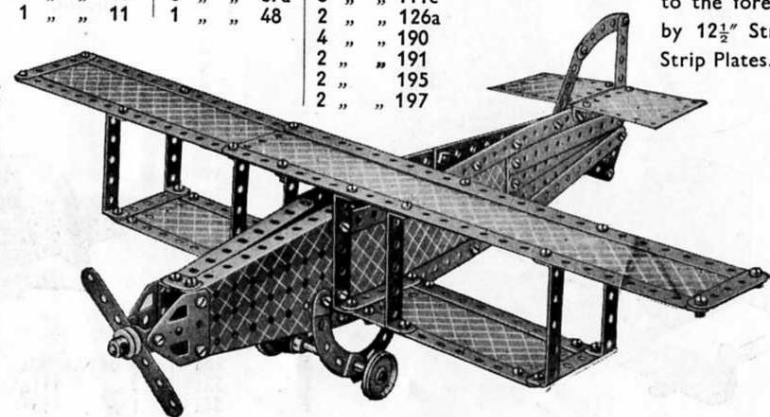


E29. Aeroplane

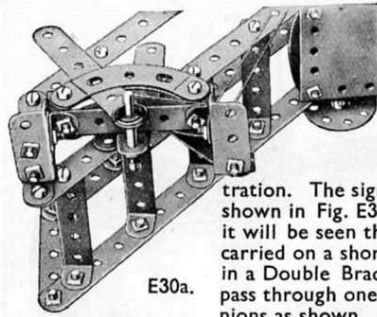
The front of the fuselage is composed of two Flanged Sector Plates held together at the fore part by two Flat Trunnions and a Double Bracket, the latter part forming a mounting for the propeller. The rear of the fuselage consists of eight $5\frac{1}{2}$ " Strips held together as shown, and when complete is attached to the fore section by $12\frac{1}{2}$ " Strips and Strip Plates.

Parts required

6 of No. 1	6 of No. 12	8 of No. 48a
14 " " 2	1 " " 16	2 " " 54a
2 " " 3	2 " " 22	3 " " 59
2 " " 4	1 " " 23	2 " " 90
12 " " 5	2 " " 35	4 " " 90a
1 " " 6a	76 " " 37	1 " " 111
3 " " 10	8 " " 37a	6 " " 111c
1 " " 11	1 " " 48	2 " " 126a
		4 " " 190
		2 " " 191
		2 " " 195
		2 " " 197



These Models can be built with MECCANO Outfit E (or Outfits D and Da)

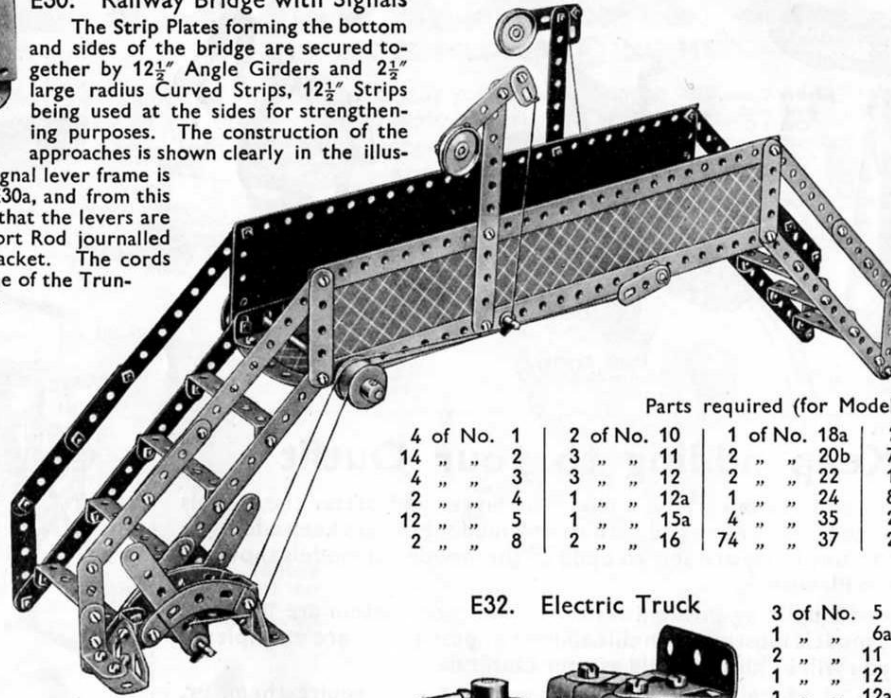


E30a.

E30. Railway Bridge with Signals

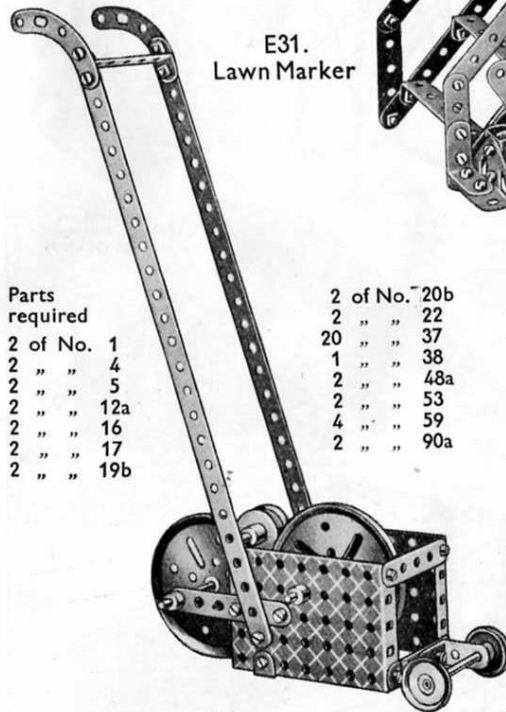
The Strip Plates forming the bottom and sides of the bridge are secured together by 12½" Angle Girders and 21½" large radius Curved Strips, 12½" Strips being used at the sides for strengthening purposes. The construction of the approaches is shown clearly in the illustration.

The signal lever frame is shown in Fig. E30a, and from this it will be seen that the levers are carried on a short Rod journalled in a Double Bracket. The cords pass through one of the Trunnions as shown.



Parts required (for Model E30)

4 of No. 1	2 of No. 10	1 of No. 18a	2 of No. 37a	4 of No. 90a
14 " " 2	3 " " 11	2 " " 20b	7 " " 38	2 " " 111c
4 " " 3	3 " " 12	2 " " 22	1 " " 40	2 " " 126
2 " " 4	1 " " 12a	1 " " 24	8 " " 48a	1 " " 190
12 " " 5	1 " " 15a	4 " " 35	2 " " 62	2 " " 195
2 " " 8	2 " " 16	74 " " 37	2 " " 90	2 " " 197

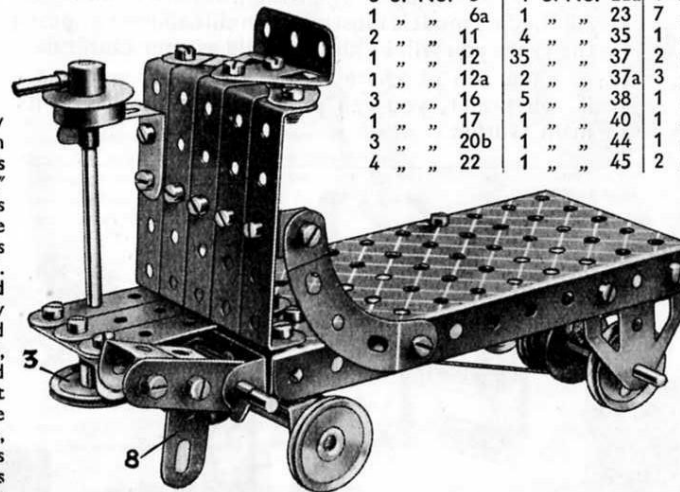
E31.
Lawn Marker

Parts required
2 of No. 1
2 " " 4
2 " " 5
2 " " 12a
2 " " 16
2 " " 17
2 " " 19b

2 of No. 20b
2 " " 22
20 " " 37
1 " " 38
2 " " 48a
2 " " 53
4 " " 59
2 " " 90a

An underneath view of the truck is shown in Fig. E32a. The front axle is journalled in a 1½" x ½" Double Angle Strip that is free to turn on a Double Bent Strip, from which it is spaced by a ½" loose Pulley. A length of cord is wrapped round the 1" Pulley that is secured to the end of the steering column, and is then passed through a Cranked Bent Strip and secured to the Double Angle Strip, mentioned earlier, as shown. The brake cord is attached to the Double Bent Strip, wrapped several times round two ¾" Flanged Wheels, passed through an Angle Bracket, and is finally attached to a Crank. The operating pedal consists of Double Brackets bolted to another Crank that is secured to the same Rod as the first mentioned Crank.

E32. Electric Truck



3 of No. 5	1 of No. 22a	1 of No. 48
1 " " 6a	1 " " 23	7 " " 48a
2 " " 11	4 " " 35	1 " " 52
1 " " 12	35 " " 37	2 " " 62
1 " " 12a	2 " " 37a	3 " " 90a
3 " " 16	5 " " 38	1 " " 111c
1 " " 17	1 " " 40	1 " " 115
3 " " 20b	1 " " 44	1 " " 126
4 " " 22	1 " " 45	2 " " 126a

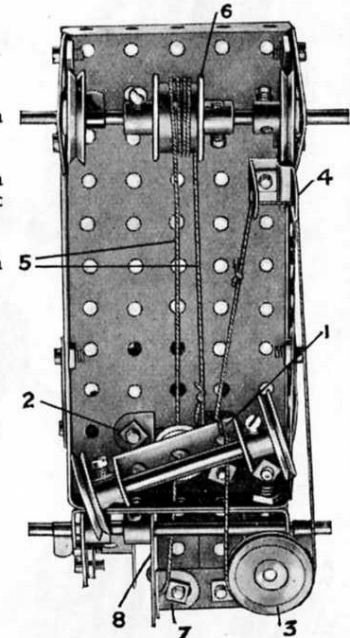
E33. Spinning Top



The drum on which the cord is wound consists of two ¾" Flanged Wheels butted together. While the cord is being pulled, the top is held steadily on some smooth surface by means of the handle shown above. The handle is then lifted off, allowing the top to spin freely.

Parts required

1 of No. 2
1 " " 16
2 " " 19b
2 " " 20b
2 " " 37
1 " " 40
1 " " 62

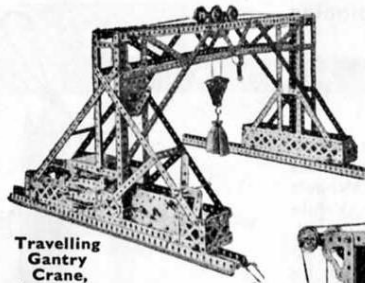


E32a.

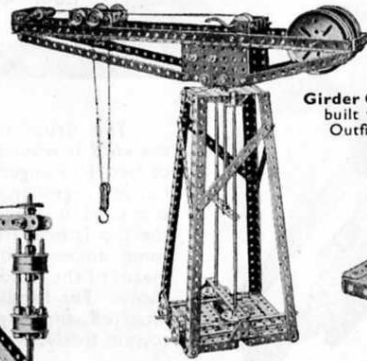
HOW TO CONTINUE

This completes our examples of models that can be made with MECCANO Outfit E (or D and Da). The next models are a little more advanced, requiring a number of extra parts to construct them. The necessary parts are all contained in an Ea Accessory Outfit, which can be obtained from any Meccano dealer.

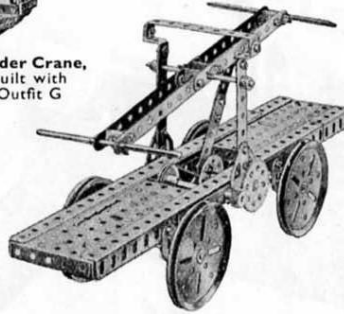
Build Bigger and Better Models



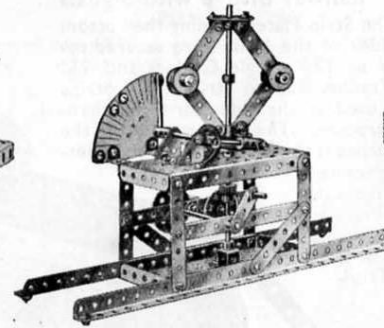
Travelling
Gantry
Crane,
built with
Outfit L



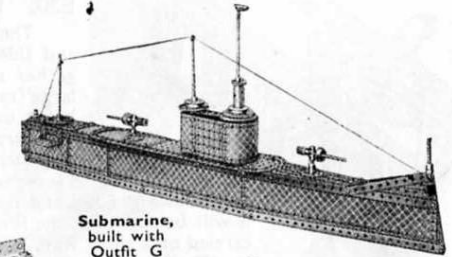
Girder Crane,
built with
Outfit G



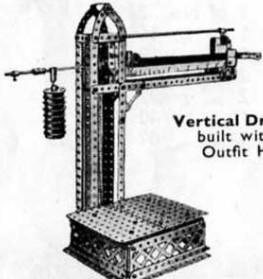
Hand Trolley,
built with Outfit F



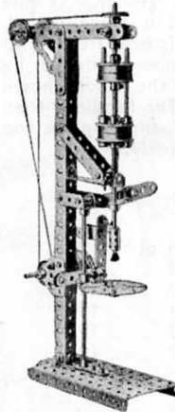
Speed Indicator,
built with Outfit G



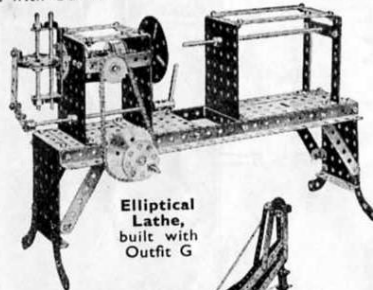
Submarine,
built with
Outfit G



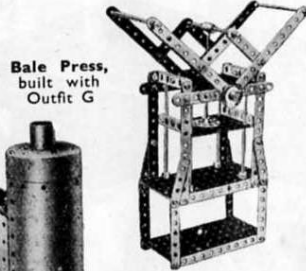
Vertical Drill,
built with
Outfit H



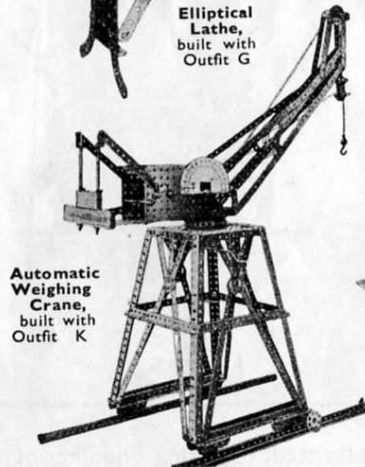
Platform Scales,
built with Outfit K



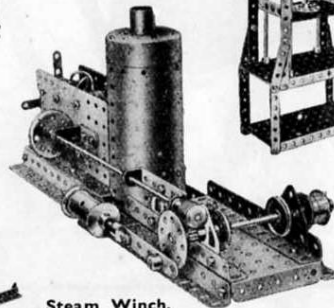
Elliptical
Lathe,
built with
Outfit G



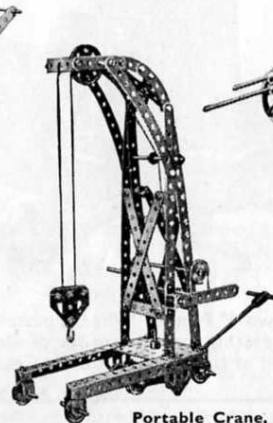
Bale Press,
built with
Outfit G



Automatic
Weighing
Crane,
built with
Outfit K



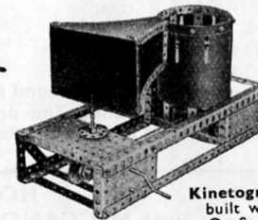
Steam Winch,
built with
Outfit G



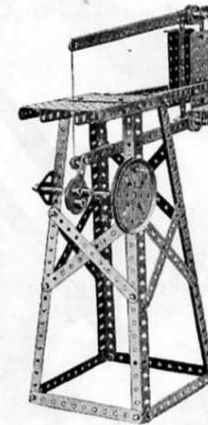
Portable Crane,
built with Outfit K



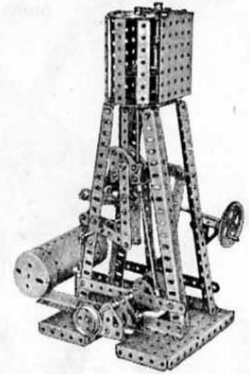
Field Gun
and Carriage,
built with Outfit H



Kinetograph,
built with
Outfit F



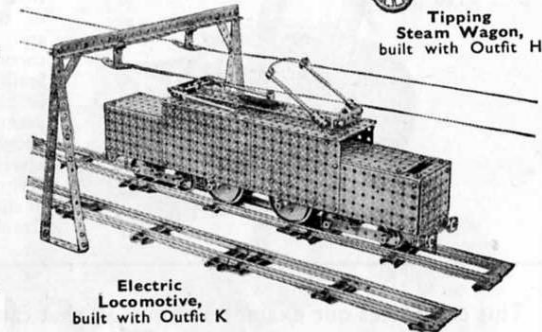
Fret Saw,
built with Outfit H



Vertical
Marine Engine,
built with Outfit H



Tipping
Steam Wagon,
built with Outfit H



Electric
Locomotive,
built with Outfit K

Keep adding to your Outfit

The more Meccano parts you have, the bigger and better the models you are able to build. Keen and enthusiastic model-builders keep adding to their Outfits, until they are able to build all the wonderful models shown in the Meccano Manuals.

The model-building possibilities of the Meccano System are limitless. All the fine models illustrated on this and the opposite page are examples of the types you will be able to build as your Outfit develops.

You can purchase separate Meccano parts as you require them, or, if you prefer, you can purchase Accessory Outfits that connect all the main Outfits.

MECCANO

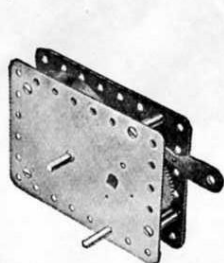
POWER UNITS FOR OPERATING MECCANO MODELS

If you want to obtain the fullest enjoyment from the Meccano hobby you should operate your models by means of one of the Meccano power units described on this page. You push over the control lever of the clockwork or electric motor and immediately your Crane, Motor Car, Ship Coaler or Windmill commences to work in exactly the same manner as its prototype in real life. Each motor is pierced with the standard Meccano equidistant holes.

MECCANO CLOCKWORK MOTORS

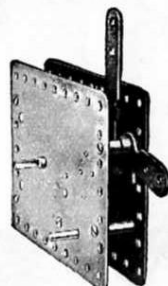
These are the finest Clockwork motors obtainable for model driving. They have exceptional power and length of run and their gears are cut with such precision as to make them perfectly smooth and steady in operation.

Meccano Clockwork Motors are especially suitable for small models built with a limited range of parts. They are extremely simple to operate and have the advantage of being self-contained.



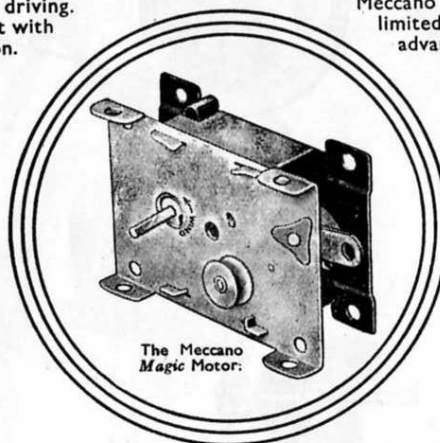
No. 1 Clockwork Motor

An efficient and long-running Motor fitted with a brake lever by means of which it may be started and stopped. It is non-reversing.



No. 1a Clockwork Motor

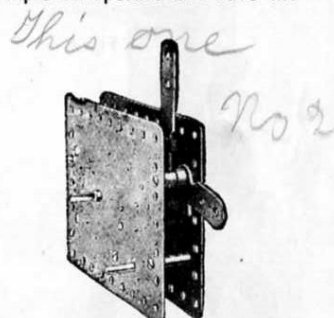
This Motor is more powerful than the No. 1 Motor and is fitted with reversing motion. It has brake and reverse levers.



The Meccano Magic Motor:

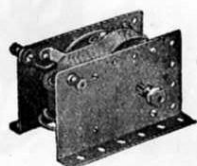
The Meccano Magic Motor

The Meccano Magic Motor is well designed and strongly constructed, and is fitted with a powerful spring giving a long and steady run. It is non-reversing. Each Magic Motor is supplied with a separate $\frac{1}{2}$ " Pulley Wheel and three pairs of driving bands of different lengths. It is capable of driving all the Meccano A and B Outfit models, and many of the lighter models illustrated in the Manuals of the C, D and E Outfits.



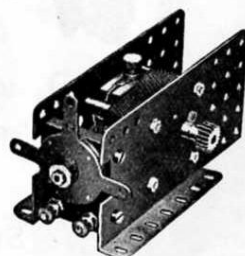
No. 2 Clockwork Motor

This is a Motor of super quality. Brake and reverse levers enable it to be started, stopped or reversed, as required.



No. E1 Electric Motor (6-volt)

This is a highly efficient motor (non-reversing) that will give excellent service. It can be operated through a 9-volt Meccano Transformer from the mains, providing that the supply is alternating current, or from a 6-volt accumulator.

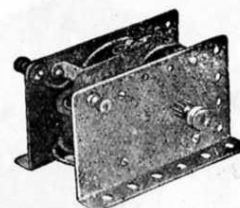


No. E6 Electric Motor (6-volt)

This fine motor is fitted with reversing motion and provided with stopping and starting controls. It can be operated through a 9-volt Meccano Transformer from the mains providing that the supply is alternating current, or from a 6-volt accumulator.

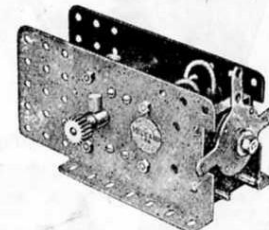
MECCANO ELECTRIC MOTORS

The four Meccano Electric Motors shown here have been designed specially to provide smooth-running power units for the operation of Meccano models. The 6-volt Motors may be operated through a Meccano Transformer direct from the mains, providing that the supply is alternating current, or from a 6-volt accumulator. The 20-volt Motors are operated through a 20-volt Transformer from alternating current supply mains.



No. E120 Electric Motor (20-volt)

The E120 Electric Motor is a very reliable and smooth-running power unit. It is operated through a Meccano 20-volt Transformer from alternating current supply mains. Non-reversing.



No. E20b Electric Motor (20-volt)

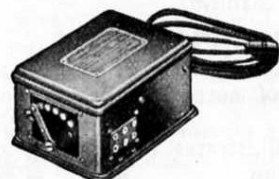
This 20-volt Electric Motor is an extremely efficient power unit, fitted with reversing motion and provided with stopping and starting controls. It is operated through a Meccano 20-volt Transformer from alternating current supply mains.

MECCANO TRANSFORMERS

There are six Transformers in the series, as described below, all of which are available for the following A.C. Supplies:—100/110 volts, 50 cycles; 200/225 volts, 50 cycles; 225/250 volts, 50 cycles. Any of the Transformers can be specially wound for supplies other than these at a small extra charge. When ordering a Transformer the voltage and frequency of the supply must always be stated.

Resistance Controllers

These Controllers enable the speed of Meccano 6-volt and 20-volt Motors and Hornby 6-volt and 20-volt Electric Trains to be regulated as desired.



No. T20a Transformer

No. T20A TRANSFORMER (Output 35 VA at 20 $\frac{1}{2}$ volts) for 20-volt Electric Motors. Has two separate circuits at 20 volts, one controlled by a 5-stud speed regulator; and a third circuit at 3 $\frac{1}{2}$ volts for lighting up to 14 lamps.

No. T6A TRANSFORMER (Output 40 VA at 9 $\frac{1}{3}$ volts) for 6-volt Electric Motors. Has two separate circuits at 9 volts, one controlled by a 5-stud speed regulator; and a third circuit at 3 $\frac{1}{2}$ volts for lighting up to 18 lamps.

No. T20M TRANSFORMER (Output 20 VA at 20 volts) for 20-volt Electric Motors. This is similar to the No. T20 Transformer, but is not fitted with speed regulator.

No. T6M TRANSFORMER (Output 25 VA at 9 volts) for 6-volt Electric Motors. This is similar to the No. T6 Transformer, but is not fitted with speed regulator.

No. T20 TRANSFORMER (Output 20 VA at 20 volts) for 20-volt Electric Motors. Provided with one 20-volt circuit controlled by a 5-stud speed regulator.

No. T6 TRANSFORMER (Output 25 VA at 9 volts) for 6-volt Electric Motors. Provided with one 9-volt circuit controlled by a 5-stud speed regulator.



No. T20 Transformer

Ask your dealer for a complete price list.

A Selection of Meccano Standard Mechanisms

Here are a few simple and interesting movements showing how easily real mechanisms can be reproduced with Meccano.

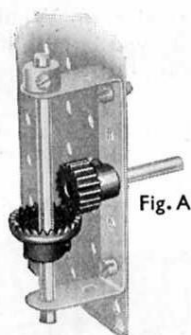


Fig. A

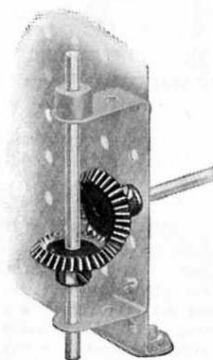


Fig. C

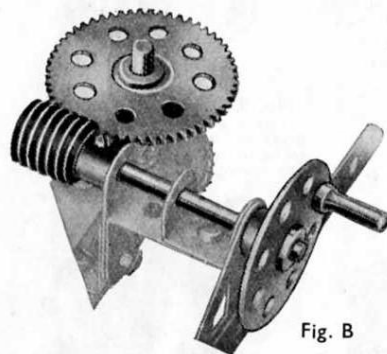


Fig. B

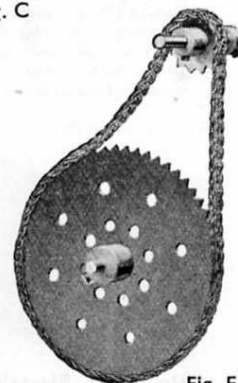


Fig. E

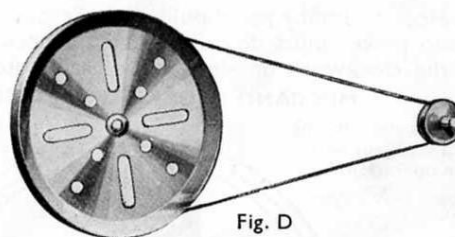


Fig. D

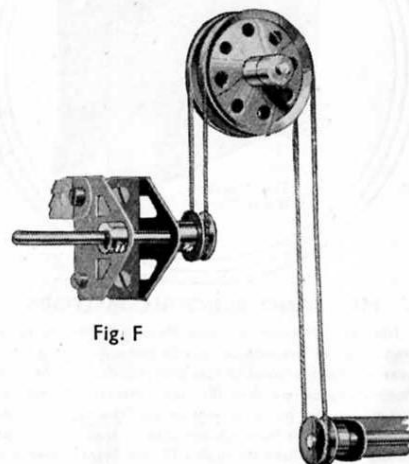


Fig. F

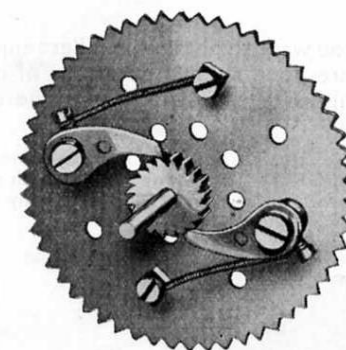


Fig. J

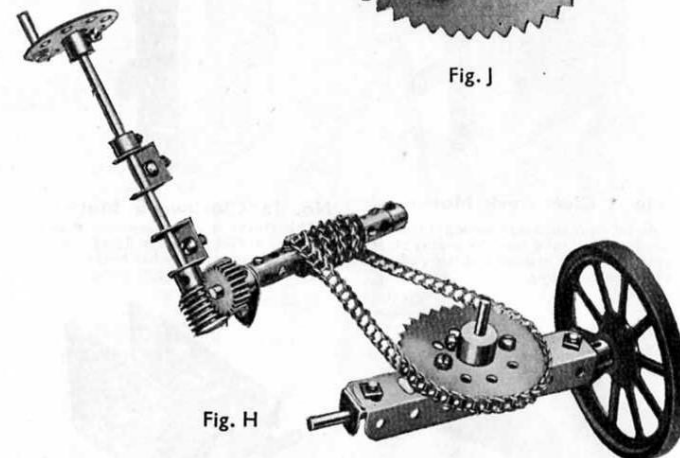


Fig. H

Gears

The Meccano system includes a wide range of Gear Wheels, Bevel Gears, Pinion Wheels, Contrate Wheels and Worm Wheels in various sizes. All manner of interesting movements can be obtained by the use of these gears.

Fig. A shows how a drive can be transmitted from a vertical to a horizontal shaft or vice versa. Fig. B shows a Worm engaged with a Gear Wheel, giving a very great reduction in shaft speed. Fig. C illustrates another right angle drive, obtained by using Meccano Bevel Gears.

Belt and Chain Drives

In Figs. D, E and F we show examples of belt and chain drive. The movements illustrated require no explanation excepting, perhaps, Fig. F, which shows a simple method for transmitting the drive from one shaft to another when they are out of line.

Cords usually take the place of belts in Meccano models but miniature belting can be made from strips of canvas, indiarubber, etc., in which case Flanged Wheels should be used instead of grooved Pulleys.

Steering Gears

The various types of steering mechanism commonly in use on vehicles of all descriptions can readily be reproduced with Meccano.

Fig. H. In this case the road wheels are controlled by an endless Sprocket Chain operated by a worm and pinion mechanism.

Pawl & Ratchet Movement

By means of this type of gear it is possible to construct certain types of automatic brakes and free wheels.

Fig. J. This model illustrates the method of building up a free-wheel unit.

A Selection of Meccano Standard Mechanisms

(continued)

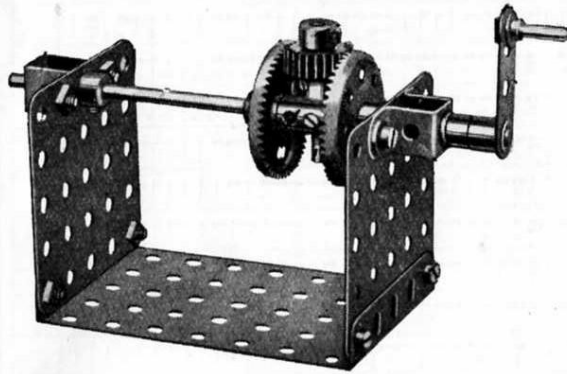


Fig. K

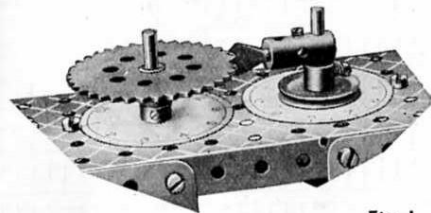


Fig. L

Epicyclic Transmission Gear

This device, Fig. K is designed to provide a gear ratio between two shafts mounted in direct line with one another. Its chief merit lies in the compactness of its construction and lack of external bearings.

Intermittent Rotary Motion

Fig. L shows one device by means of which intermittent rotary motion can be obtained. Such an arrangement is useful in revolution counters, measuring machines, etc. In addition to mechanisms that give true intermittent motion, different types of cams, converting a regular rotary motion into a constant or intermittent reciprocating motion, are described in the S.M. Manual.

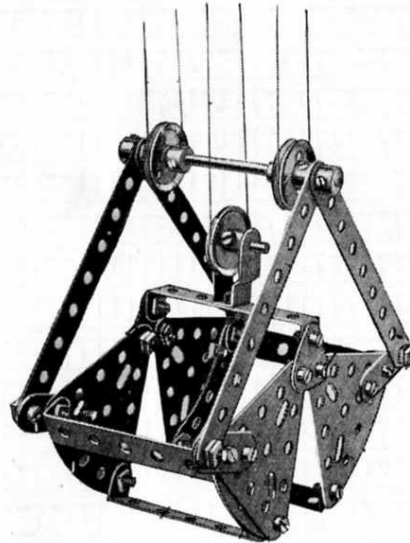


Fig. M

Grabs

A typical example of the many kinds of grab that can be constructed from Meccano is shown in Fig. M. If the grab is fitted to a model crane or ship-coaler, all the movements can be controlled from an operating box built into the frame of the model. The outer sides of the jaws may be filled in with cardboard and the grab can then be used to pick up loads of sand, grain, marbles, etc.

Screw Traverse

Fig. N shows how a Threaded Rod can be applied to a model in order to give a slow, powerful traversing movement. The model illustrated is the slide-rest of a model lathe. The rotary movement of the 1" fast Pulley is transmitted to the tool holder via a short Threaded Rod and a Threaded Boss.

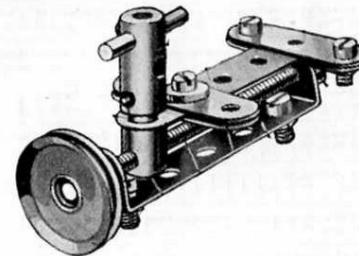


Fig. N

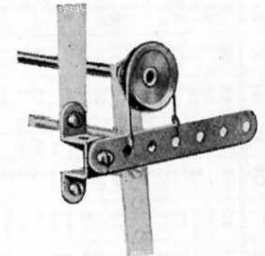


Fig. O

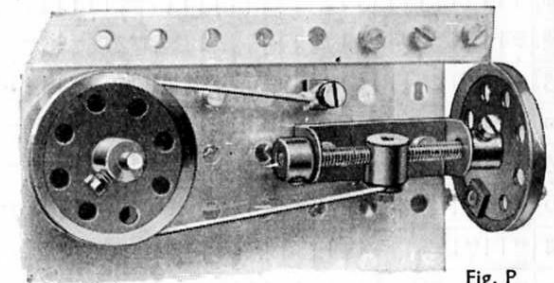


Fig. P

Strap and Lever Brake

This device, Fig. O, will be found very useful as a quick emergency hand-brake. Although it is the simplest of such devices, it is also one of the most valuable.

Strap and Screw Brake

The type of brake shown in Fig. P is used to apply a constant retarding effect to a rotating shaft. It can thus be utilised in a crane to prevent the load from falling back when the winding spindle is released. An advantage of the brake is that the speed of the shaft to which it is applied can be varied as required; the action of the brake cannot vary when once set unless the hand wheel is turned.

[illegible]

No.	Description.	A	Aa	B	Ba	C	Ca	D	Da	E	Es	F	Fa	G	Ga	H	Ha	K	Ka	L
61	Windmill Sails	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
62	Cranks	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
62a	Cranks, Threaded	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
62b	Double Arm Cranks	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
63	Couplings	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
63a	Octagonal	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
63b	Strip	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
63c	Threaded Bosses	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
64	Centre Forks	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
65	Weights, 50-gramme	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
66	Weights, 25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
67	Woodscrews, 3"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
68	Set Screws, 5/32"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
69	Grub Screws, 7/32"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
69a	Perforated Flat Plates, 5 1/2" X 2 1/2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
69b	2 1/2" X 2 1/2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
70	3" X 3"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
72	" Triangular Plates, 1 1/2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
73	"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
76	"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
77	Screwed Rods, 1 1/2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
78	" 8"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
79	" 6"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
79a	" 5"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
80	" 3 1/2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
80a	" 3"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
80b	" 2 1/2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
81	" 2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
82	" 1 1/2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
89	Curved Strips, 5 1/2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
89a	" Cranked	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
89b	" 2 1/2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
90	" 2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
90a	" Cranked	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
94	Sprocket Chain	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95	Sprocket Wheels, 1 1/2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95a	" 3"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95b	" 1 1/2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
96	" 1"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
96a	" 3/4"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
97	Braced Girders, 3 1/2" long	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
97a	" 2 1/2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
98	" 12"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
99	" 9"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
99a	" 7"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
99b	" 5 1/2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
100	" 4"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
100a	Heads for Looms	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
101	Single Bent Strips	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
102	Flat Girders, 5 1/2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
103	" 12"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
103a	" 4 1/2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
103b	" 4"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
103c	" 3 1/2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
103d	" 3"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
103e	" 2 1/2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
103f	" 2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
103g	" 1 1/2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
103h	" 1"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
103i	" 3/4"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
104	Shuttles for Looms	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
105	Reed Hooks	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
106	Rollers for Looms, Wood	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
106a	" Sand	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
107	Tables for Designing Machines	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
108	Architraves	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
109	Face Plates, 2 1/2" diam.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
110	Rack Strips, 3 1/2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
110a	" 6 1/2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
111	Bolts, 1/2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
111a	" 3/8"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
111b	" 1/4"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
111c	" 1/8"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
113	Girder Frames	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
114	Hinges	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
115	Threaded Pins	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
116	Fork Pieces, Large	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
116a	" Small	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
117	Steel Balls, 1/2" diam.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
118	Hub Discs, 5 1/2" diam.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
120	Buffers	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
120a	Spring Buffers	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
120b	Compression Springs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
121	Train Couplings	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
122	Miniature Loaded Sacks	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
123	Cone Pulleys	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
124	Reversed Angle Brackets, 1"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
125	" 1 1/2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
126	Trunnions	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
126a	Flat Trunnions	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
127	Simple Bell Cranks	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
128	Boss Bell Cranks	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
129	Rack Segments, 3" diam.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
130	Triple Throw Eccentrics	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
131	Dredger Buckets	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
132	Flywheels, 2 1/2" diam.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
133	Corner Brackets, 1 1/2"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
133a	" 1"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
134	Crank Shafts, 1" stroke	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
135	Theodolite Protractors	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
136	Handrail Supports	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
136a	" Coupling	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
137	Wheel Flanges	...	...	...	...</											

No.	Description.	A	Ba	C	Ca	D	Da	E	Ea	F	Fa	G	Ga	H	Ha	K	Ka	L
142c	Motor Tyres, 1"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
142d	" " " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
143	Circular Girders, 5½" diam.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
144	Dog Clutches	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
145	Circular Strips, 7" diam.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
146	" " " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
146a	Plates, 6" diam.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
147	" " " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
147a	Pawls with pivot bolt and nuts	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
147b	Pivot Bolt with 2 Nuts	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
147c	Pawl, without Boss	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
148	Ratchet Wheels	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
149	Collector Shoes for Locos	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
150	Crane Grabs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
151	Pulley Blocks, 1 Sheave	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
152	" " " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
153	" " " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
154a	Corner Angle Brackets, ½" R.H.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
154b	" " " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
155	Rubber Rings, ½"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
156	Pointers, 2½", with boss	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
157	Fans 2" diam.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
158a	Signal Arms, Home	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
158b	" " " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
160	Channel Bearings, 1½" X 1" X ½"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
161	Girder Brackets, 2" X 1" X ½"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
162	Boiler with ends, complete	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
162a	Boiler Ends	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
162b	Boilers without Ends	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
163	Sleeve Pieces	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
164	Chimney Adaptors	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
165	Swivel Bearings	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
166	End Bearings	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
167	Geared Roller Bearings	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
167a	Roller Races, Geared, 192 teeth	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
167b	Ring Frames for Rollers	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
167c	Pinions 16-teeth	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
168	Ball Bearings, 4" diam.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
168a	Ball Races, Flanged Disc	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
168b	" " " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
168c	" " " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
169	Ball Castings complete with Balls	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
170	Digger Buckets	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
171	Centricity ½" throw	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
172	Socket Couplings	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
173	Pendulum Connections	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
174	Rail Adaptors	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
175	Grease Cups	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
176	Flexible Coupling Units	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
177	Anchoring Springs for Cord	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
178	Shifting Standard, Large	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
179	" " " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
180	Rod "Socket"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
181	Gear Ring 3½"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
182	Bobbins	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
183	Insulating Bushes	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
184	Lamp Holders	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
184a	Lamps, 2½" volt	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
184b	" " " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
184c	" " " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
184d	" " " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
184e	" " " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
185	Steering Wheel 1½" diam.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
186	Driving Bands	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
187	Road Wheels	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
188	Flexible Plates, 2½" X 1"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
189	" " " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
190	" " " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
191	" " " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
192	" " " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
193	" " " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
194	" " " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
195	" " " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
196	" " " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
197	" " " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
198	Hinged Flat Plates, 4½" X 2½"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
201	Lamps with Flex	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
202	Angle Brackets (for Headlamps)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
203	Headlamps	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
204	Headlamp Nuts	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
205	" " " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
206	Lampshades	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
207	Lamp Bases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
208	Battery Tags and Stud	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
208a	Washers for Battery Stud	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
210	Nuts	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
211a	Helical Gear ½" (Can only be	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
211b	" " " " 1½" used together)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1563	Terminals	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1570	Washers, Insulating	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1575	6 B.A. Screws	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1575	6 B.A. Nuts	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1583	Clockwork Motor No. 2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1583	Electric Motor No. E6 (6 volt)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

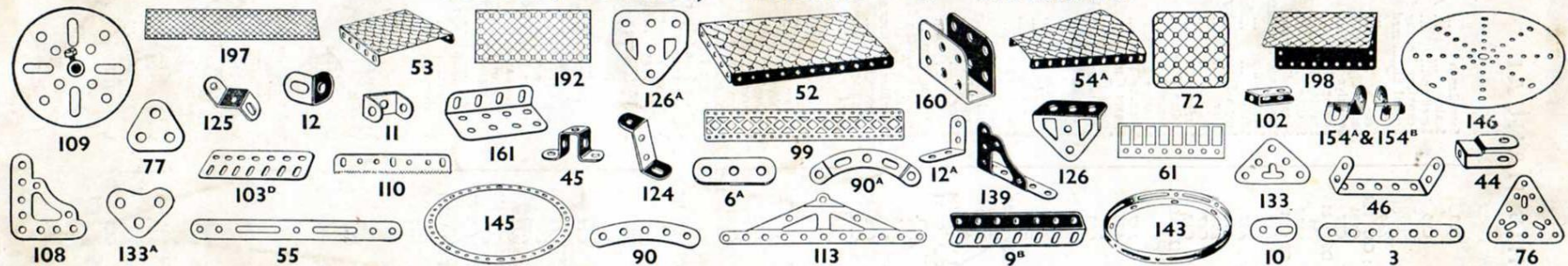
SPECIAL INSTRUCTION LEAFLETS

No.	Description.	No.	Description.
No. 1a—Motor Chassis	No. 14a—New Grandfather Clock	No. 25—Hydraulic Crane	
" 2—High-speed Ship-Coaler	" 16a—New Loom	" 26—Twin-elliptic Harmonograph	
" 5—Drifter	" 17—Planing Machine	" 28—Pontoon Crane	
" 6—Stiff Leg Derrick	" 18—Revolving Crane	" 29—Hammerhead Crane	
" 7—Platform Scales	" 19—Steam Shovel	" 30—Breakdown Crane	
" 9—Bagatelle Table	" 20—Electric Mobile Crane	" 31—Warehouse	
" 10—Log Saw	" 21—Transporter Bridge	" 35—Automatic Grabbing Crane	
" 11a—Horizontal Engine	" 22—Traction Engine	" 36—Electric Derrick Crane	
" 12—Stone-sawing Machine	" 23—Vertical Log Saw	" 37—Howitzer Limber and Tractor	
" 13—Meccanograph	" 24—Travelling Gantry Crane		

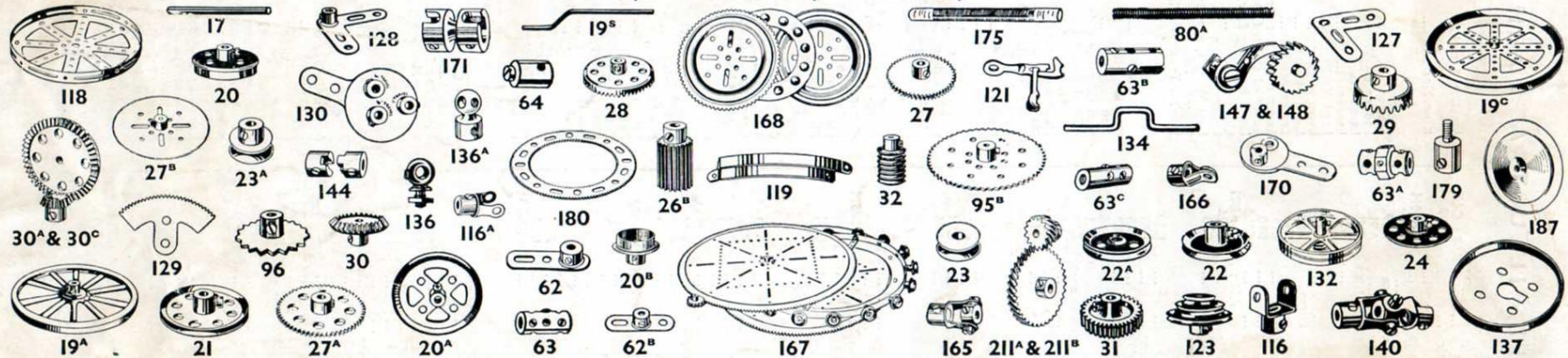
Outfits Ha and K contain Special Instruction Leaflets Nos. 7, 9, 10, 11a, 12 and 37.
 Outfit Ka contains Special Instruction Leaflets Nos. 1a, 2, 5, 6, 13, 14a, 16a, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 28, 29, 30, 31, 35 and 36.
 Outfit L contains a copy of each of the 29 Special Instruction Leaflets listed above.

MECCANO PARTS & ACCESSORIES

PLATES, STRIPS, GIRDERS & BRACKETS



WHEELS, PULLEYS, GEARS, ETC.



MISCELLANEOUS

