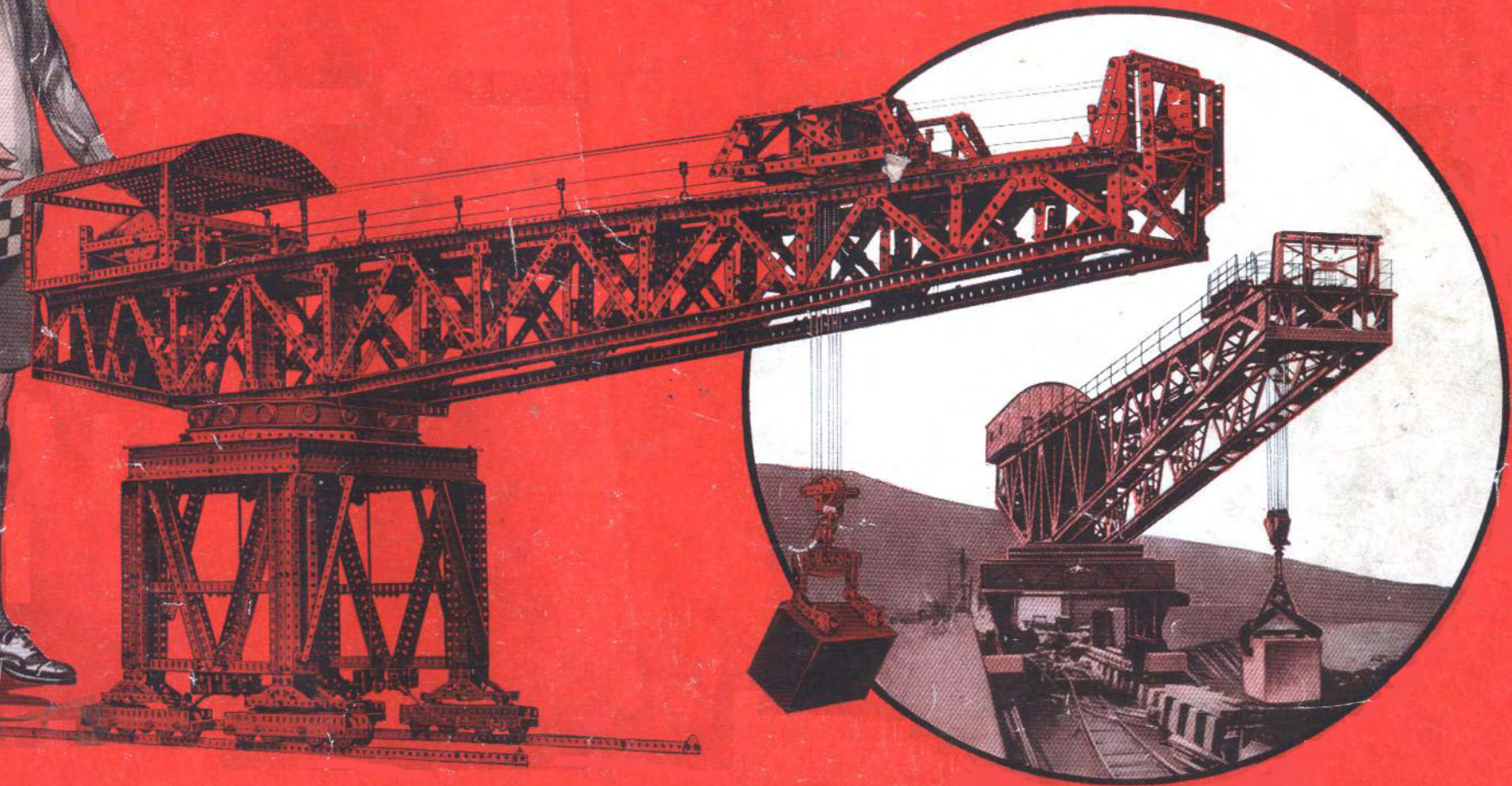


MECCANO

HORNBY'S ORIGINAL SYSTEM — FIRST PATENTED 1901

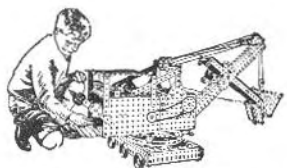
INSTRUCTIONS FOR OUTFITS A to E



35A-E

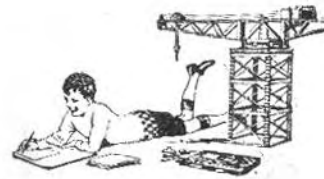
COPYRIGHT BY MECCANO LTD., BINNS ROAD, LIVERPOOL 13

13/735/1.6 (Aus./Ex.)



MECCANO

HORNBY'S ORIGINAL SYSTEM — FIRST PATENTED 1901



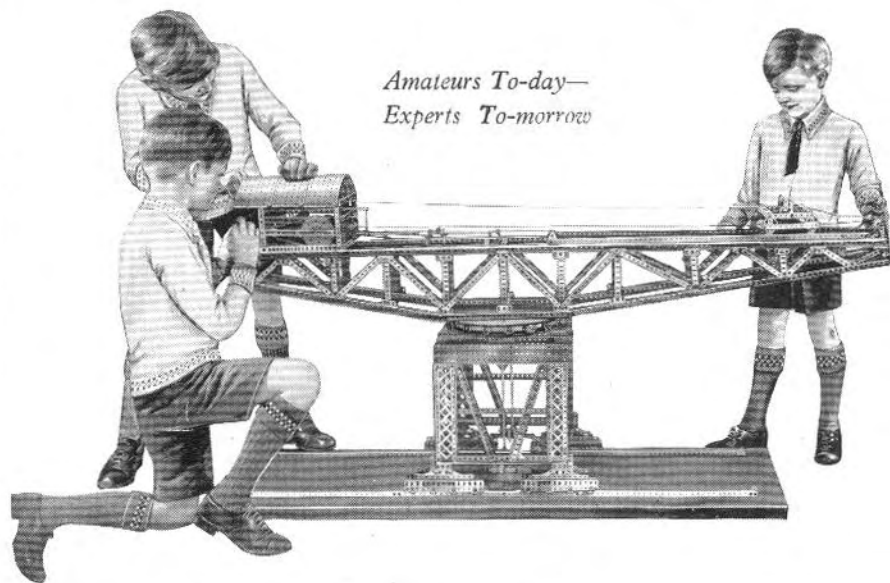
MODEL-BUILDING WITH MECCANO

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.

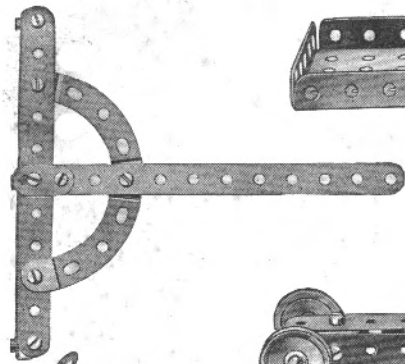
Meccano Clubs are founded and established under the guidance of the Guild Secretary at Headquarters, and at the present time there are active Clubs in nearly 250 towns and villages in the United Kingdom, and more than 100 in countries overseas. Each Club has its Leader, Secretary, Treasurer, and other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

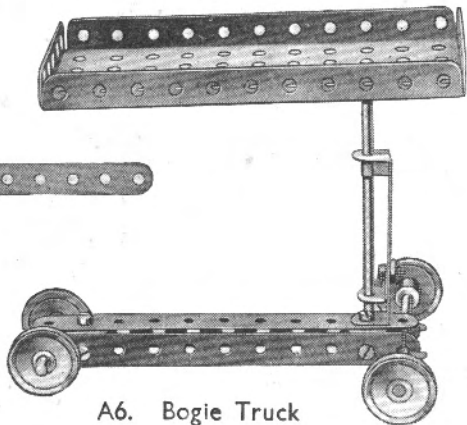
MECCANO SERVICE

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.*

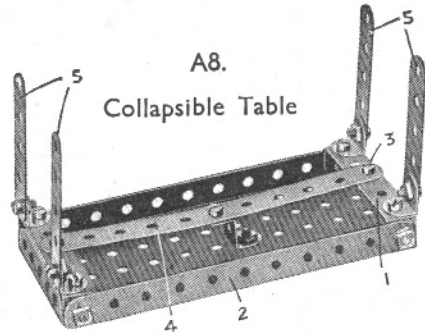
A1. Rake



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.

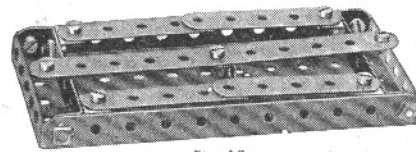
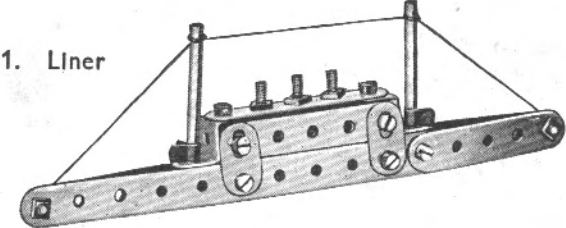
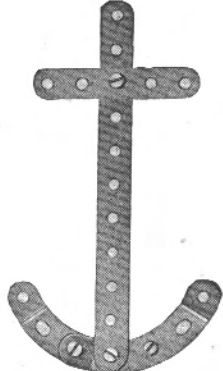


Fig. A8a

A11. Liner



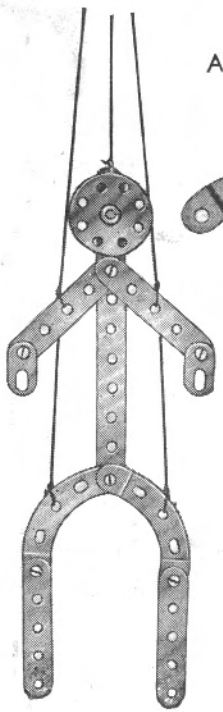
A12. Anchor



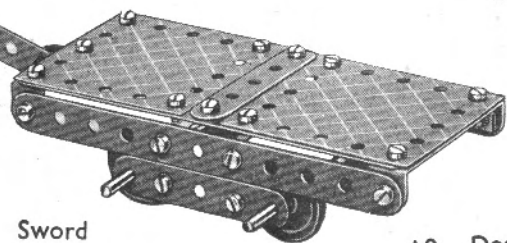
A16. Go-chair



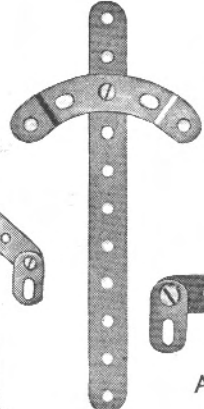
A2. Jumping Jack



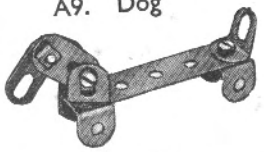
A6. Bogie Truck



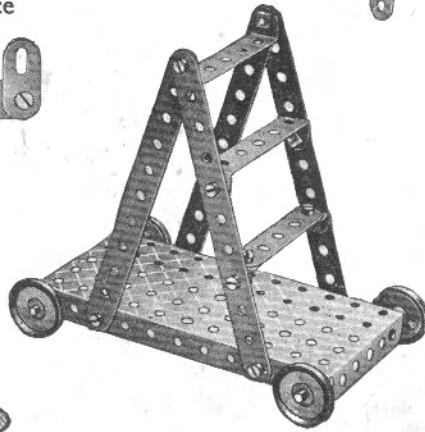
A3. Sword



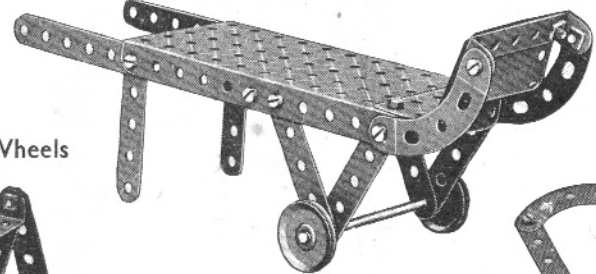
A9. Dog



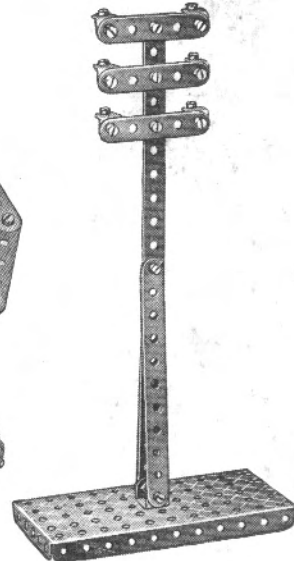
A10. Ladder on Wheels



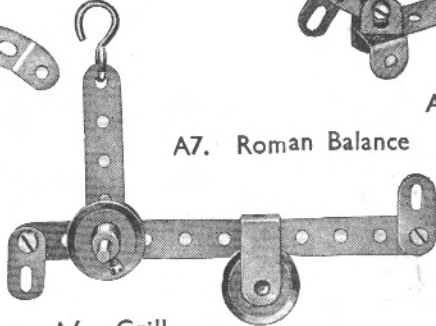
A13. Hand Truck



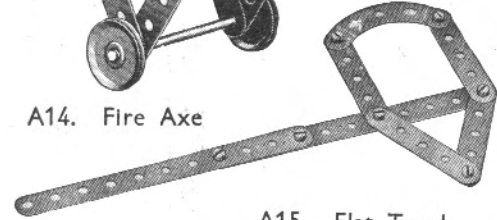
A17. Telegraph Pole



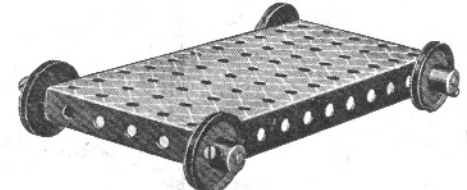
A7. Roman Balance



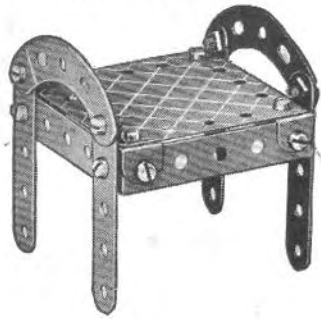
A14. Fire Axe



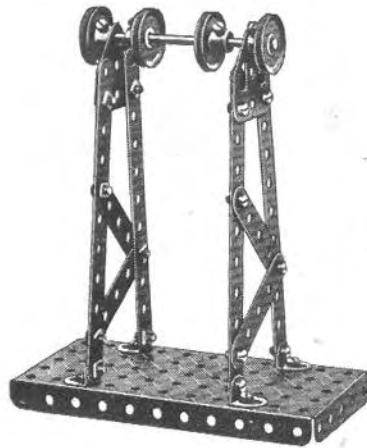
A15. Flat Truck



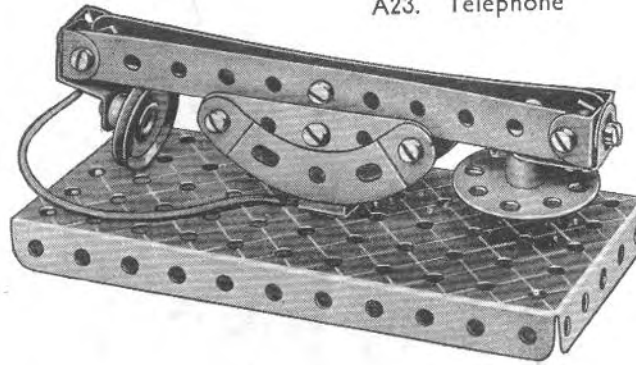
A18. Music Stool



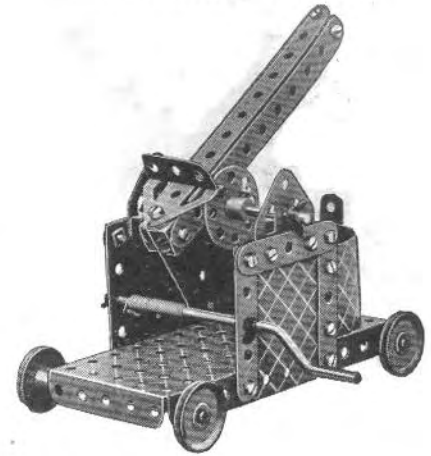
A21. Shafting Standard



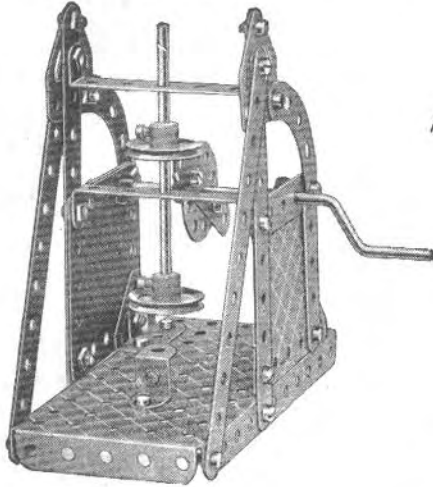
A23. Telephone



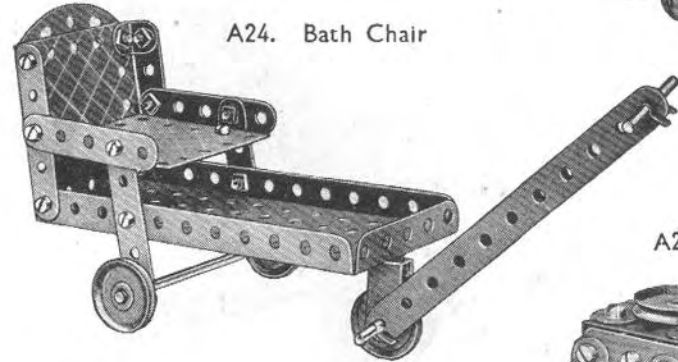
A26. Anti-aircraft Gun



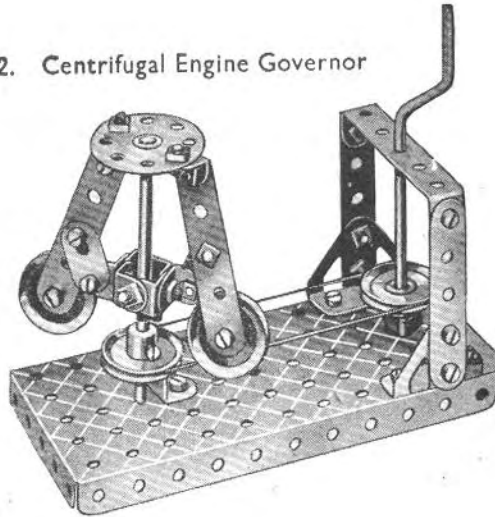
A19. Ore Crusher



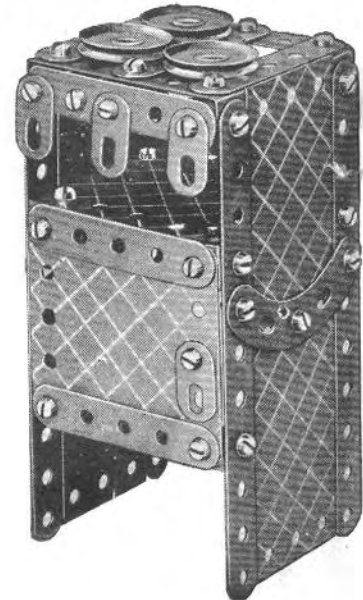
A24. Bath Chair



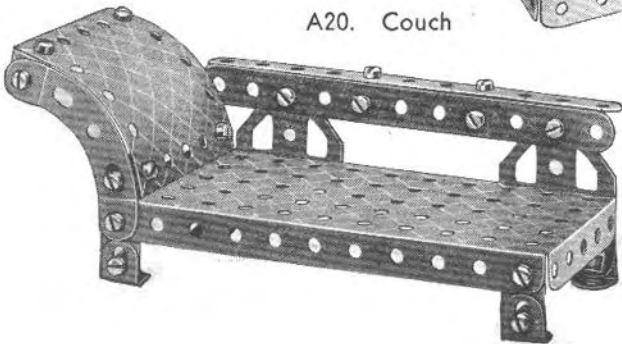
A22. Centrifugal Engine Governor



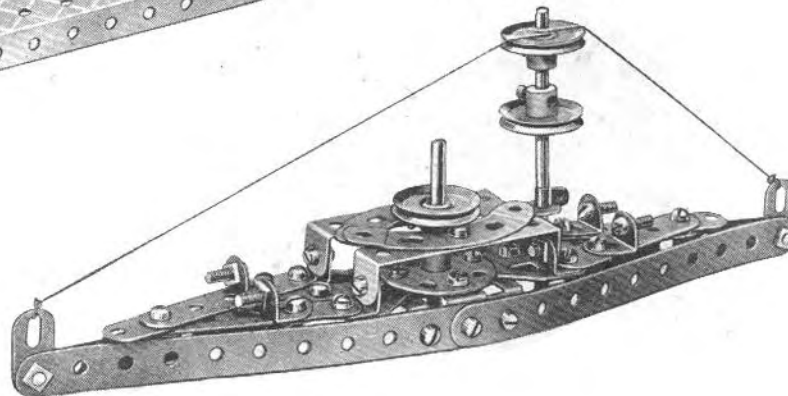
A27. Gas Stove



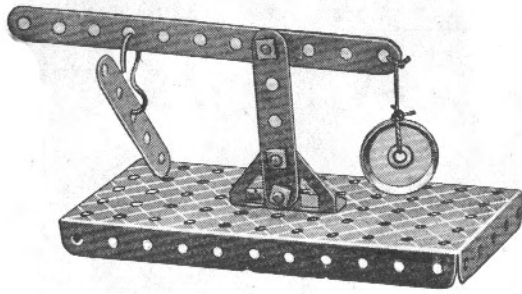
A20. Couch



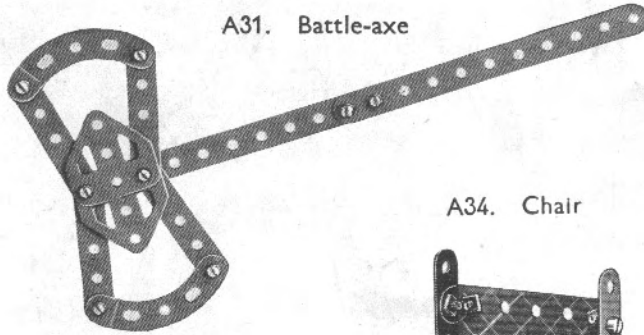
A25. Battleship



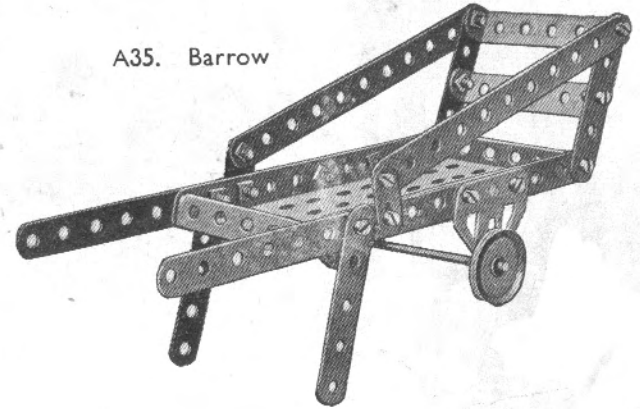
A28. Lever of the First Order



A31. Battle-axe



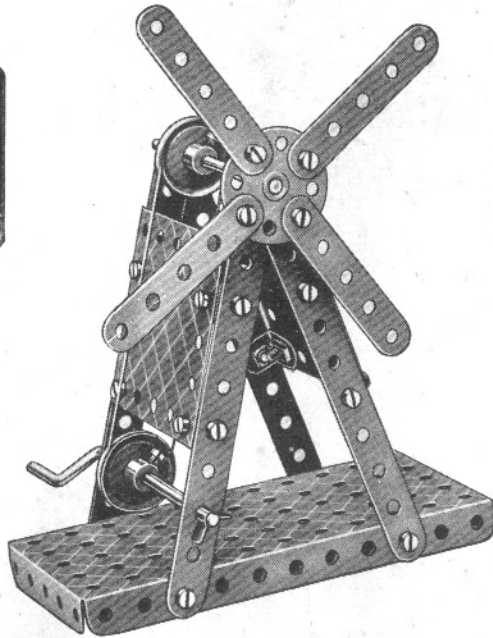
A35. Barrow



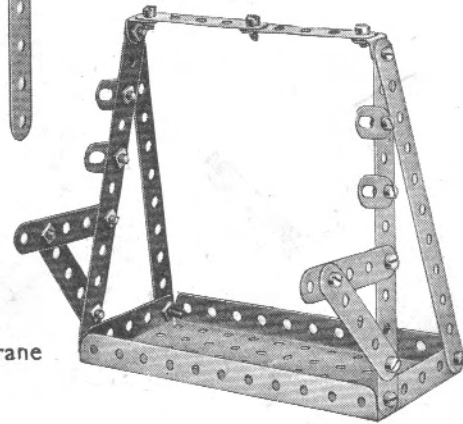
A34. Chair



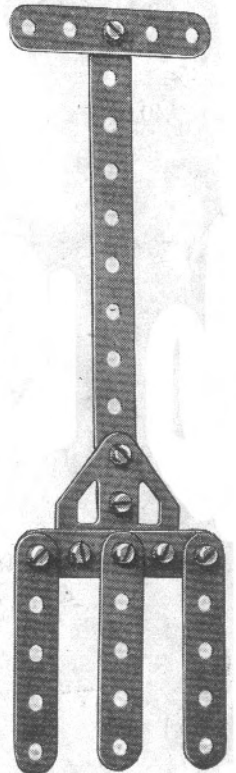
A32. Windmill



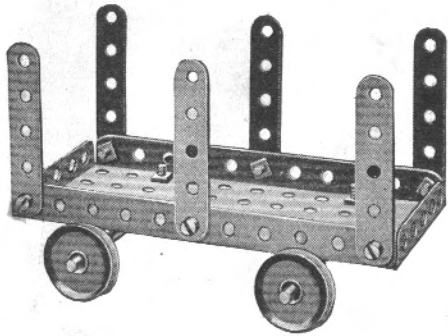
A36. Pen Rack



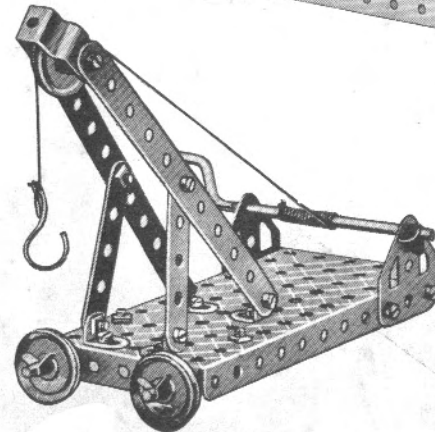
A38. Fork



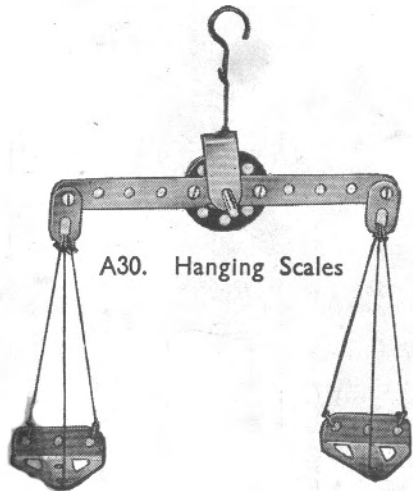
A29. Timber Truck



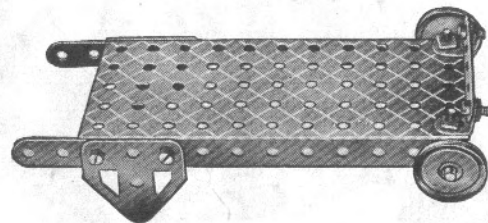
A37. Revolving Crane



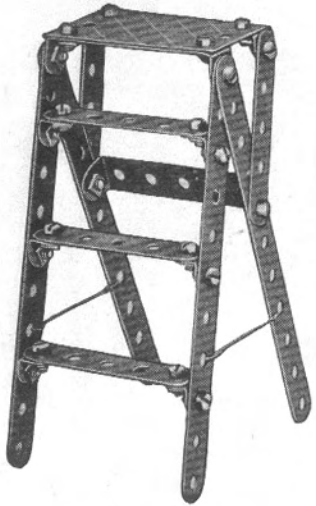
A30. Hanging Scales



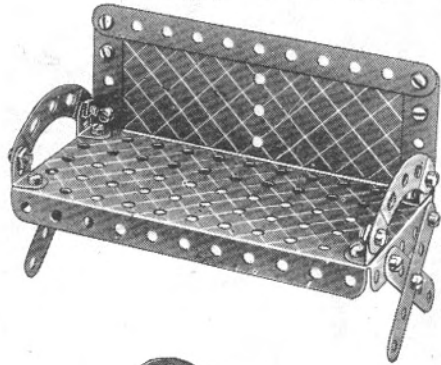
A33. Flat Truck



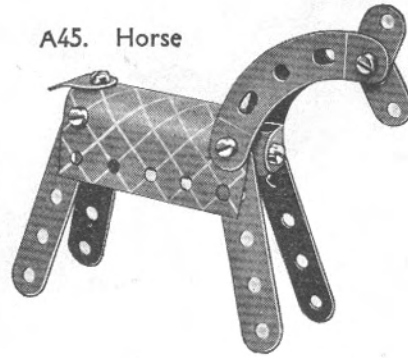
A39. Step Ladder



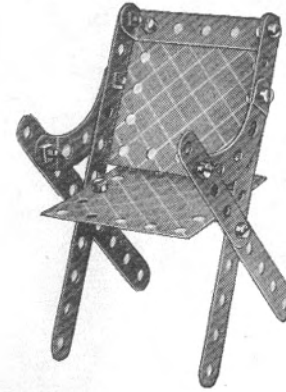
A42. Garden Seat



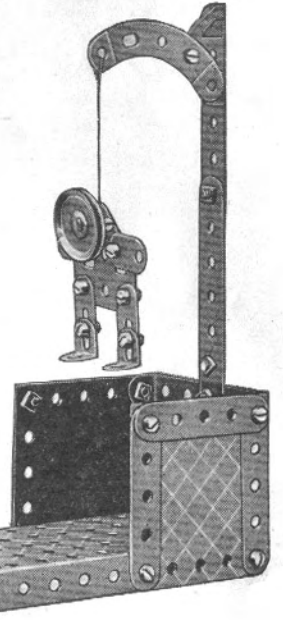
A45. Horse



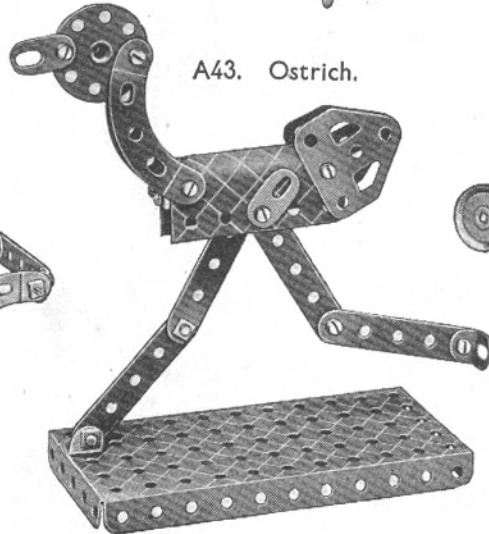
A48. Arm Chair



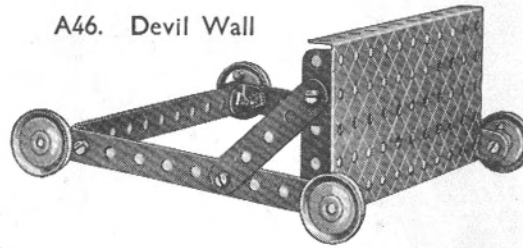
A49. Gallows



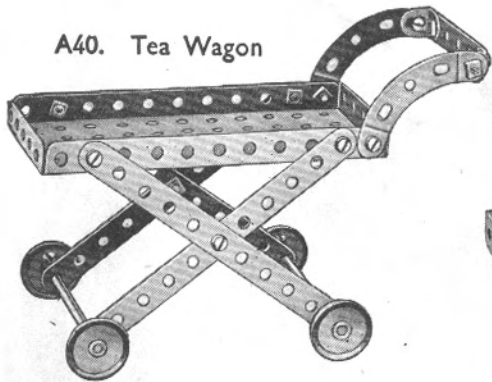
A43. Ostrich



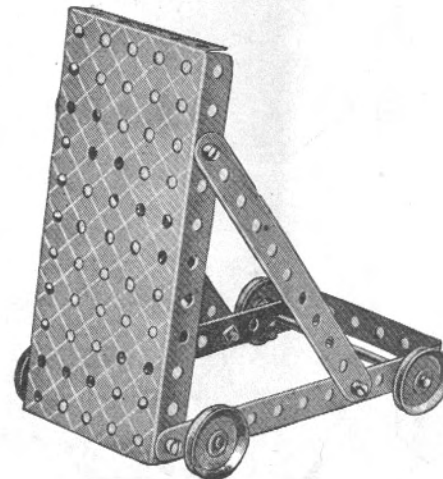
A46. Devil Wall



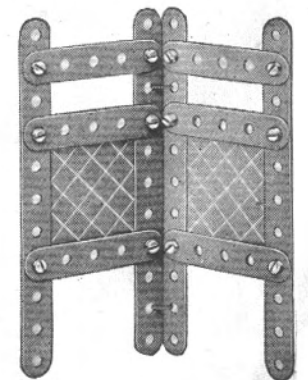
A40. Tea Wagon



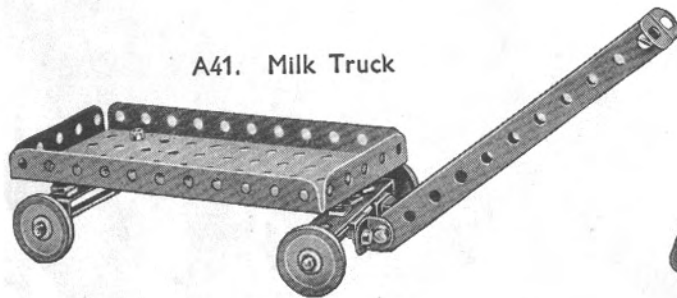
A47. Gravel Sifter



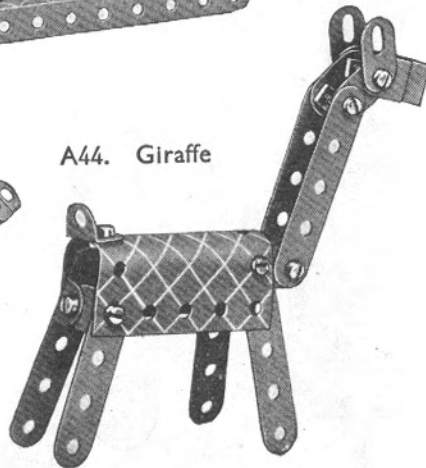
A50. Fire Screen



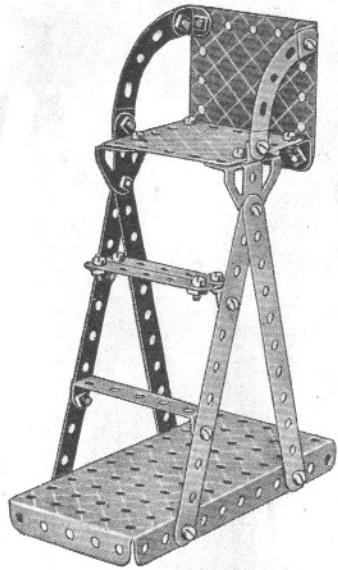
A41. Milk Truck



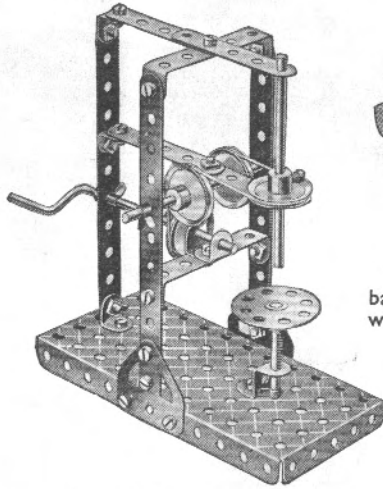
A44. Giraffe



A51. Umpire's Seat

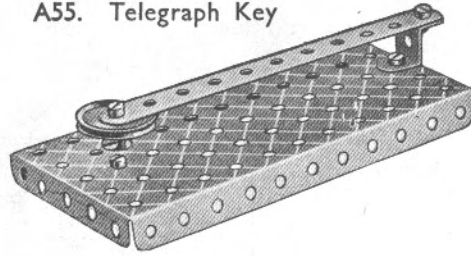


A52. Drilling Machine



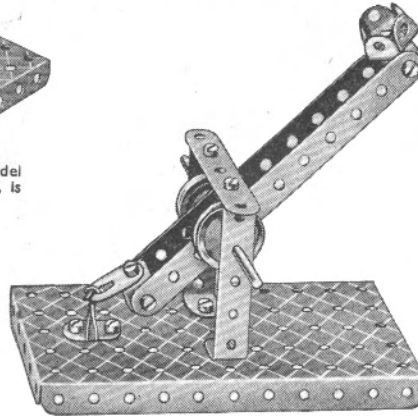
An alternative design of this model (A52M), fitted with the Magic Motor, is shown on page 9.

A55. Telegraph Key

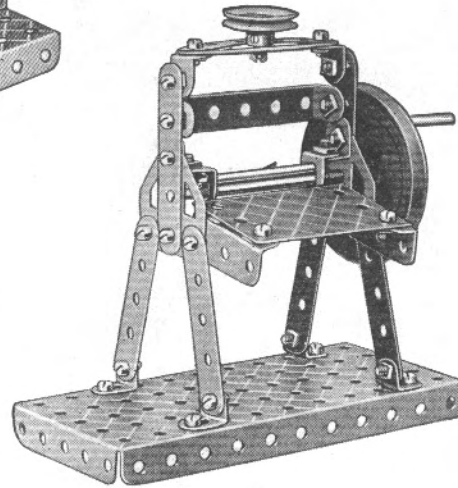


A56. Catapult

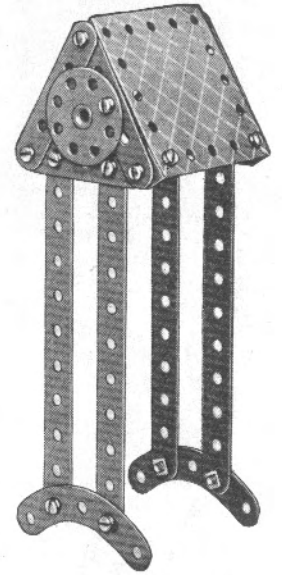
The pivoted arm is connected to the base by means of a short piece of elastic which is not provided in the Outfit.



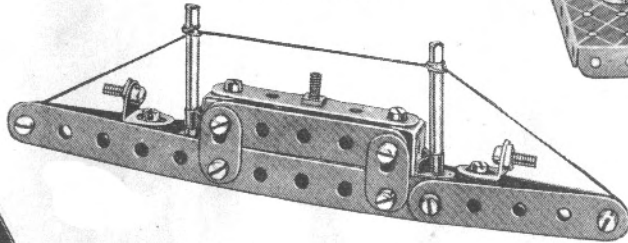
A58. Wringing Machine



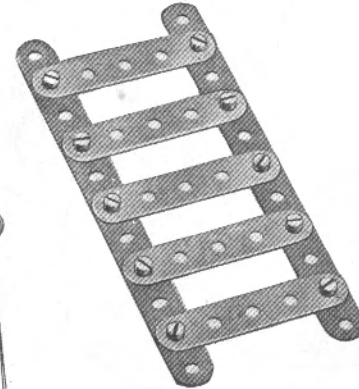
A60. Grandfather Clock



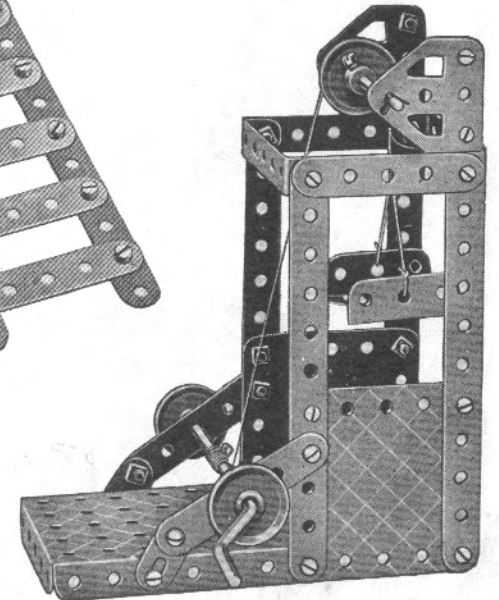
A53. Cruiser



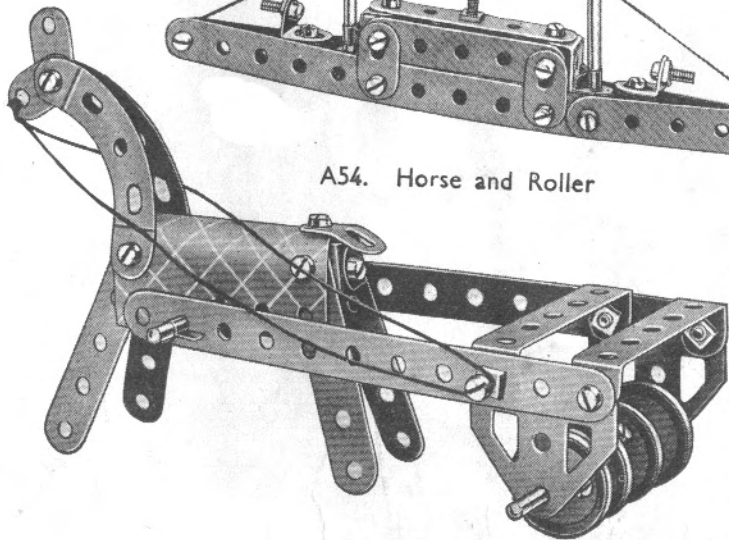
A59. Ladder



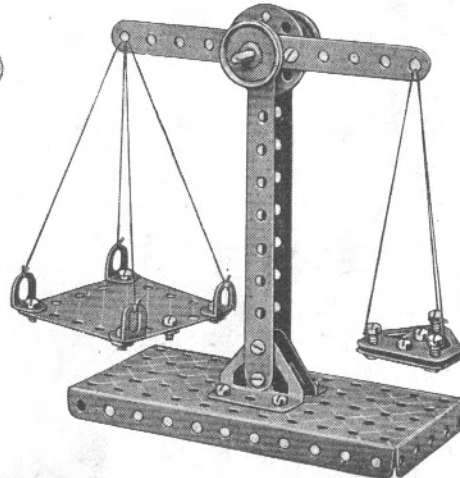
A61. Pit-head Gear



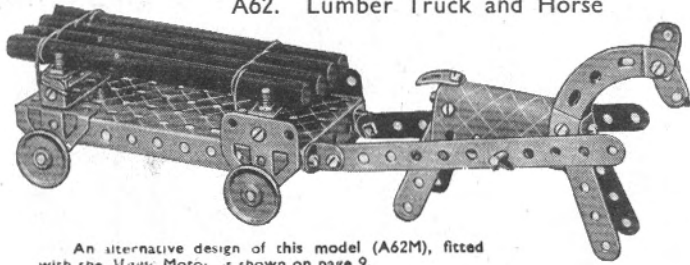
A54. Horse and Roller



A57. Scales

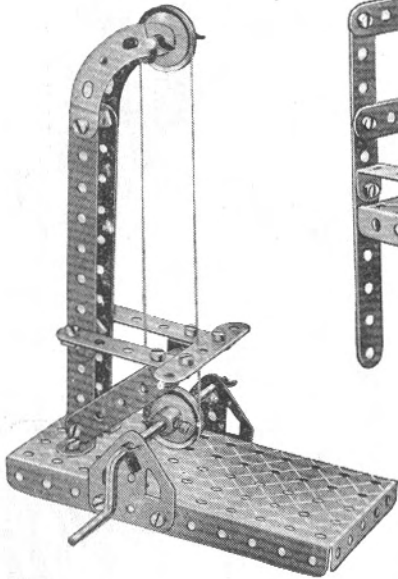


A62. Lumber Truck and Horse

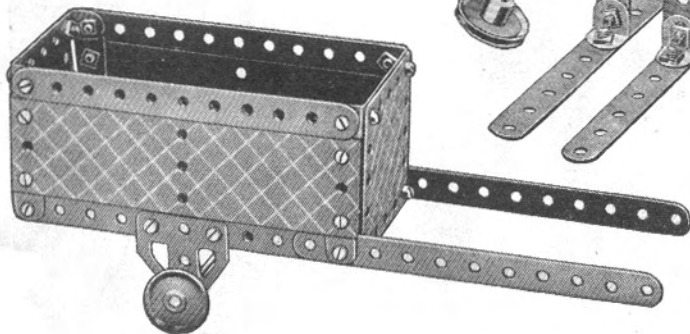


An alternative design of this model (A62M), fitted with the Magic Motor, is shown on page 9.

A63. Band Saw



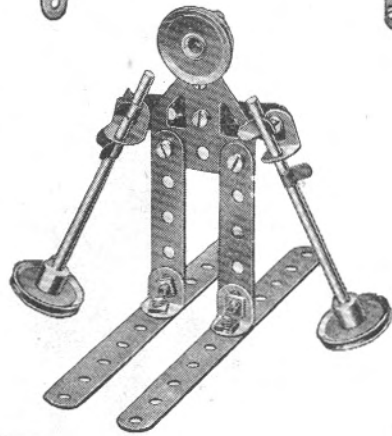
A64. Cart



A65. Bench

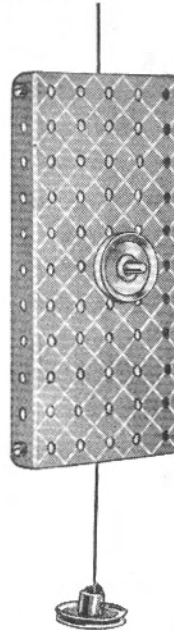


A66. Skier

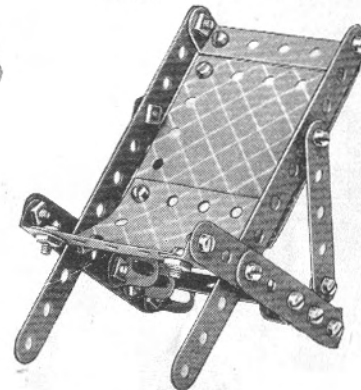


A67. Magic Plate

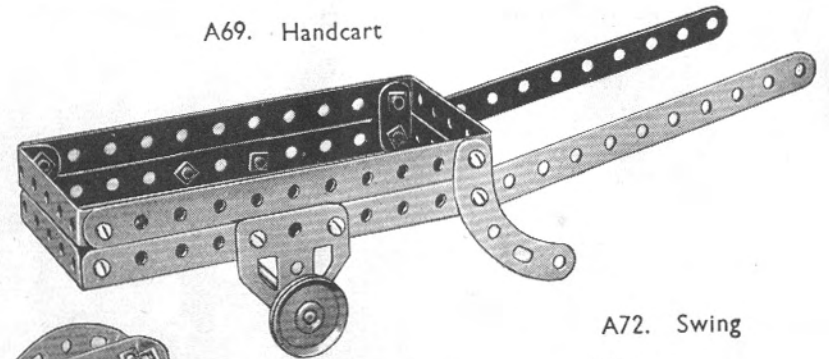
The cord is wound once round a 2" Axle Rod that is journalled in a $\frac{1}{2}$ " Reversed Angle Bracket, which is bolted to the Plate. If the cord is held loosely the Plate will drop, but as soon as the cord is tightened the Plate becomes Immobile.



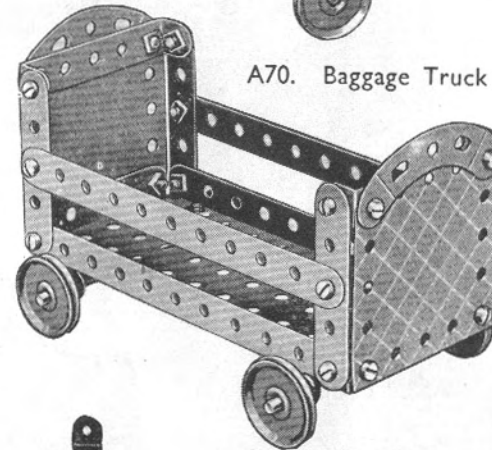
A68. Deck Chair



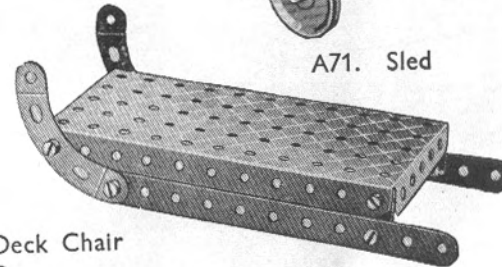
A69. Handcart



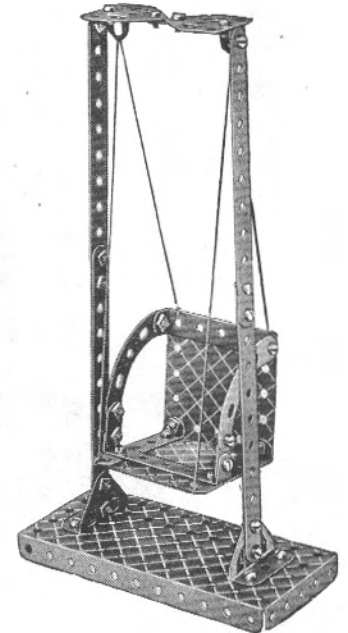
A70. Baggage Truck



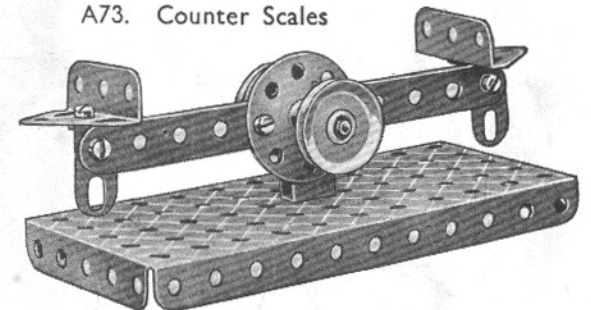
A71. Sled



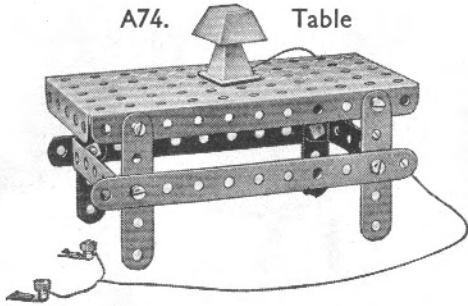
A72. Swing



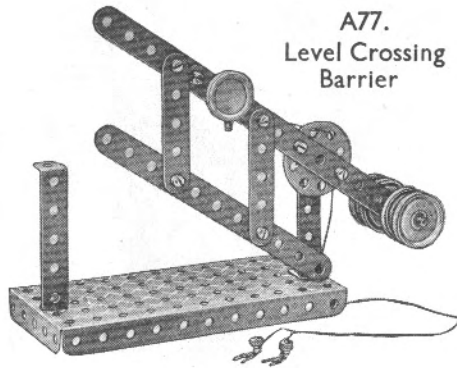
A73. Counter Scales



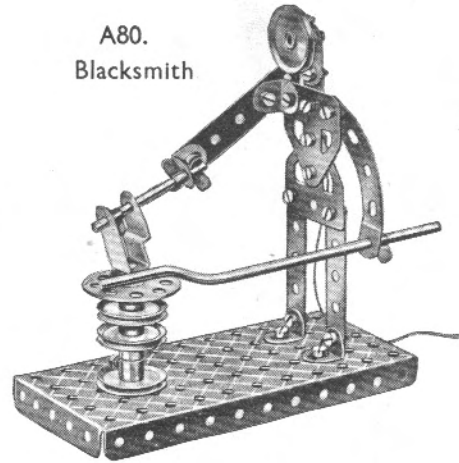
A74. Table



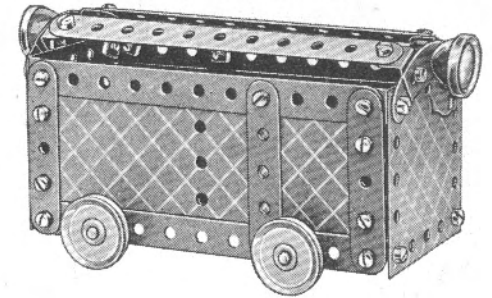
A77. Level Crossing Barrier



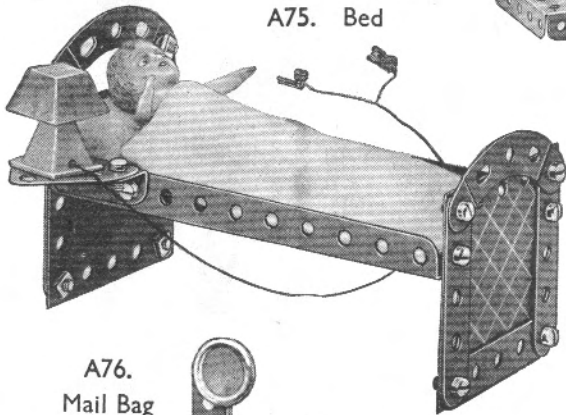
A80. Blacksmith



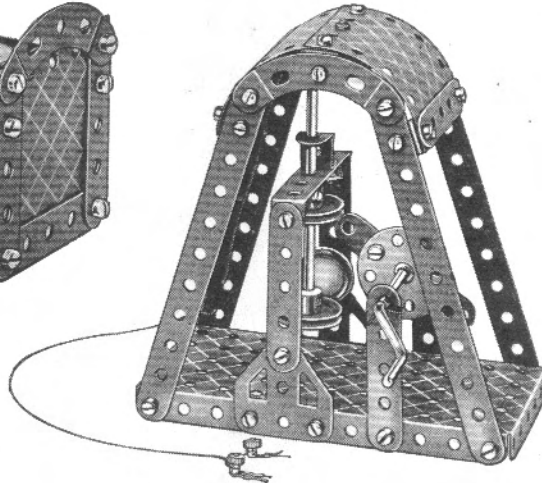
A83. Pullman Car



A75. Bed



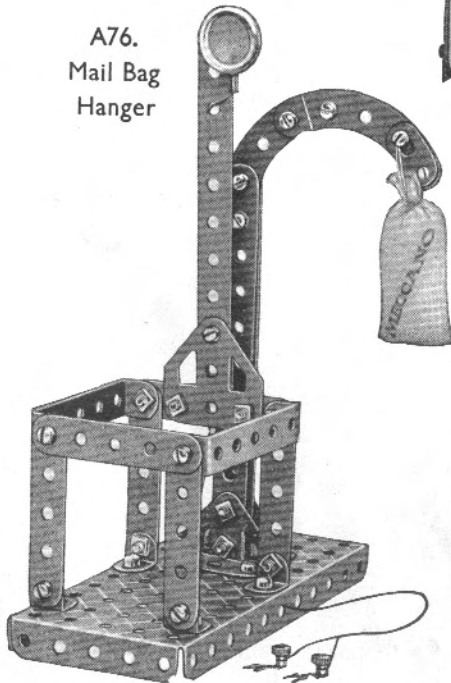
A78. Stamping Mill



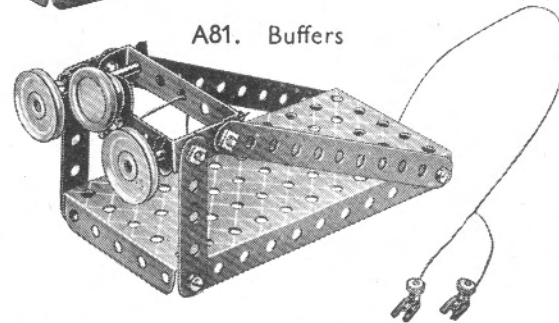
A84. Watch Stand



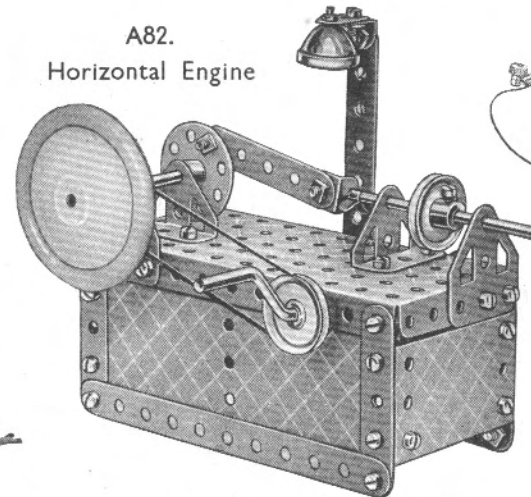
A76. Mail Bag Hanger



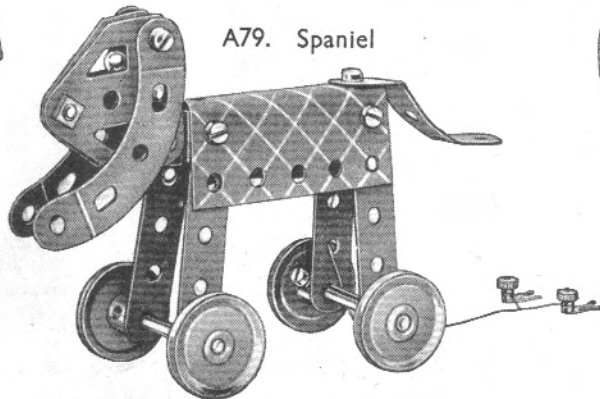
A81. Buffers



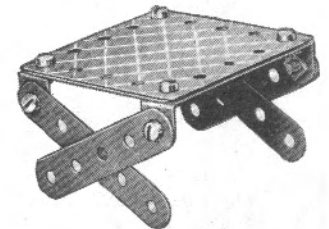
A82. Horizontal Engine



A79. Spaniel



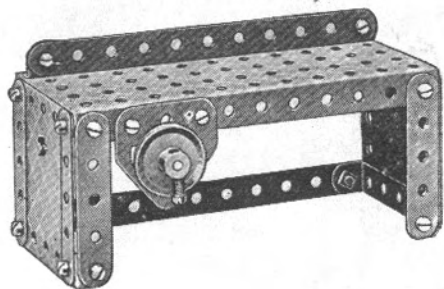
A85. Coffee Table



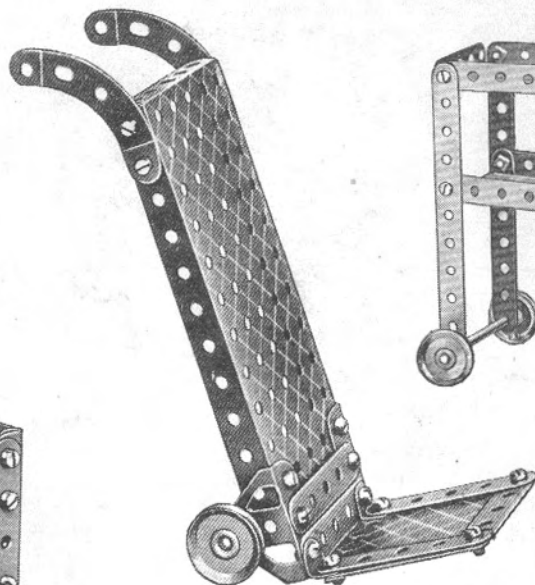
An alternative design of this model (A82M), fitted with the Magic Motor, is shown on page 9.

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

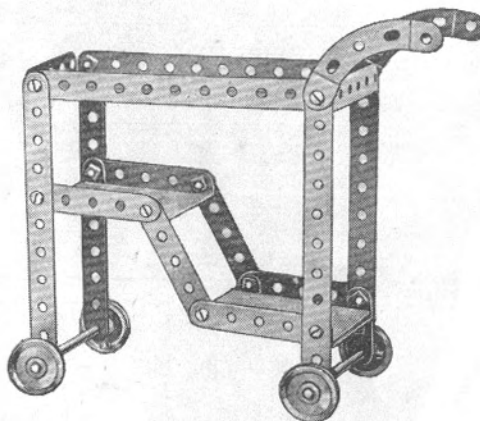
A86. Joiner's Bench



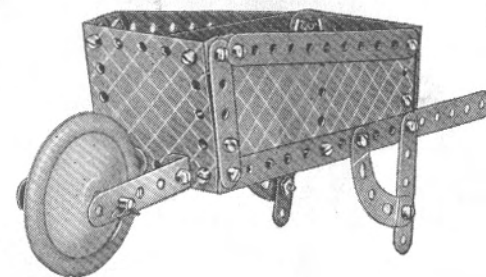
A89. Porter's Trolley



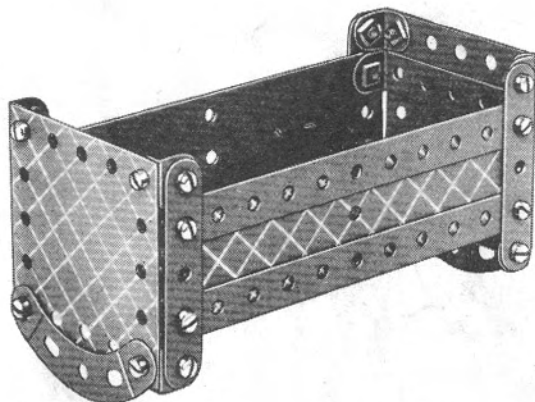
A91. Dinner Wagon



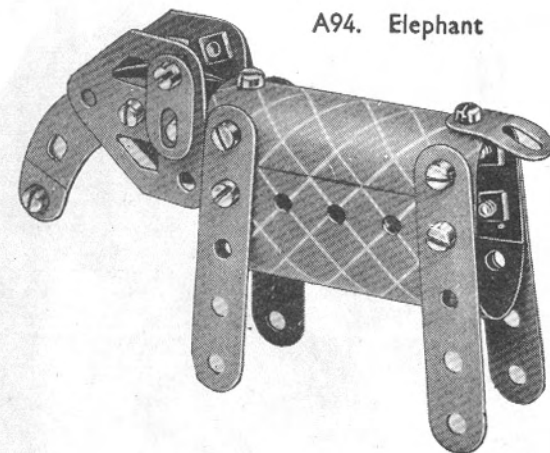
A93. Wheelbarrow



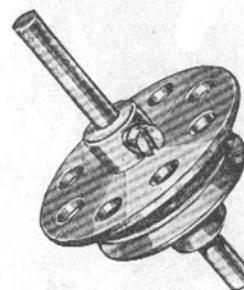
A87. Cot



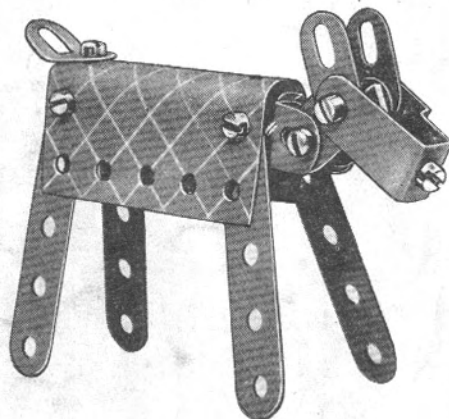
A94. Elephant



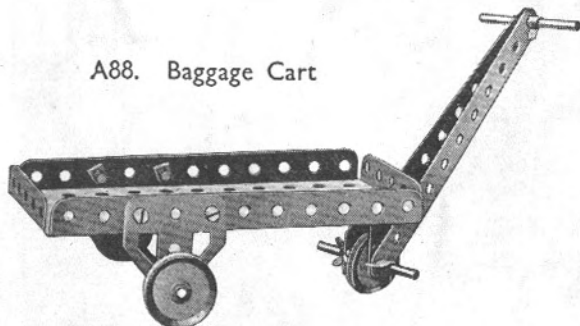
A92. Top



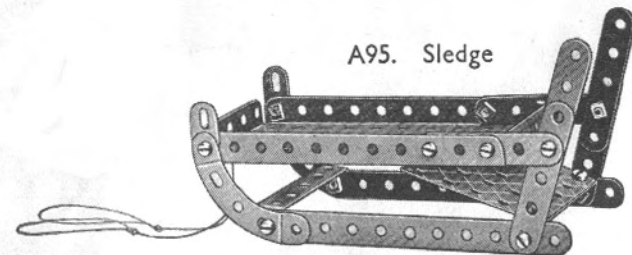
A90. Calf



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

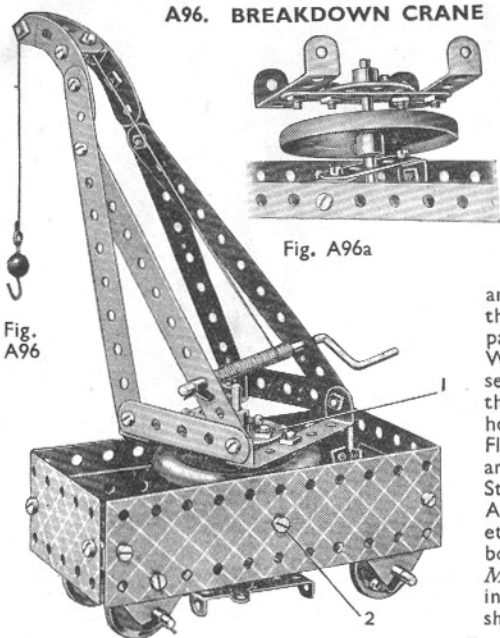


Fig. A96a

Fig. A96

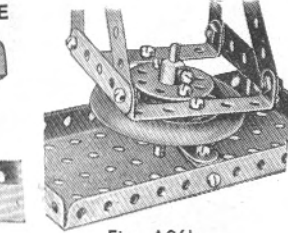


Fig. A96b

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 $5\frac{1}{2}$ " \times $2\frac{1}{2}$ " 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.

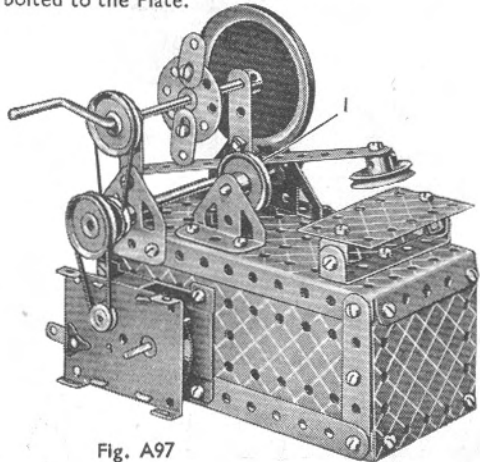


Fig. A97

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 $2\frac{1}{2}$ " \times $\frac{1}{2}$ " Double Angle Strip 2. A Spring Clip retains the free Pulley 3 in place.

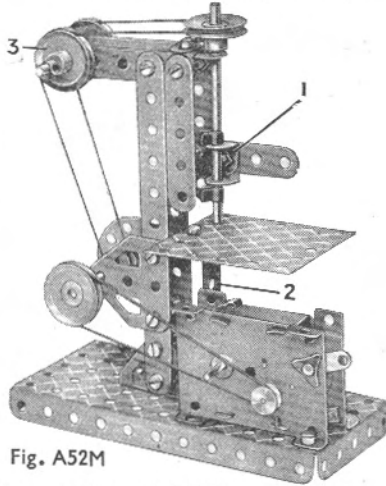


Fig. A52M

A82M. HORIZONTAL ENGINE

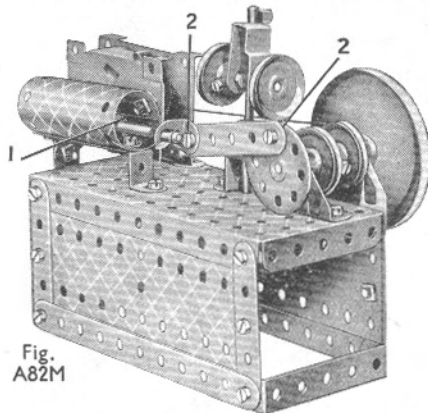


Fig. A82M

The cylinder is composed of a $2\frac{1}{2}$ " \times $2\frac{1}{2}$ " Flexible Plate and a $2\frac{3}{4}$ " \times $1\frac{1}{2}$ " 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 locknutted to form pivots.

A62M. LUMBER TRUCK AND HORSE

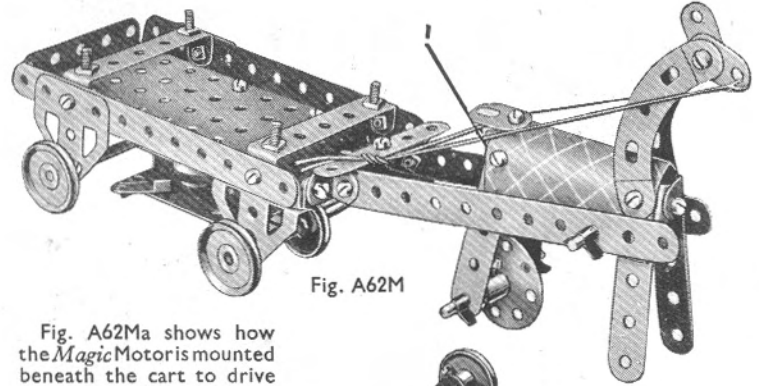


Fig. A62M

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.

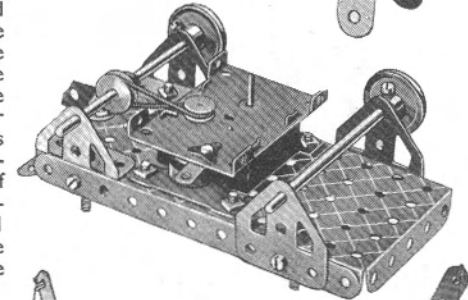


Fig. A62Ma

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.

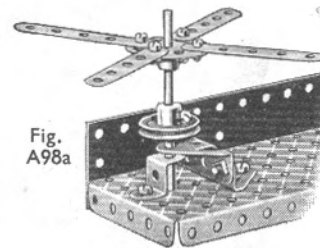


Fig. A98a

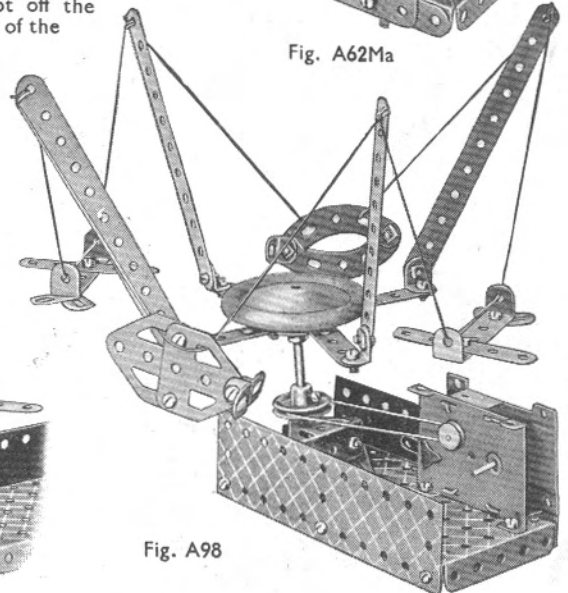
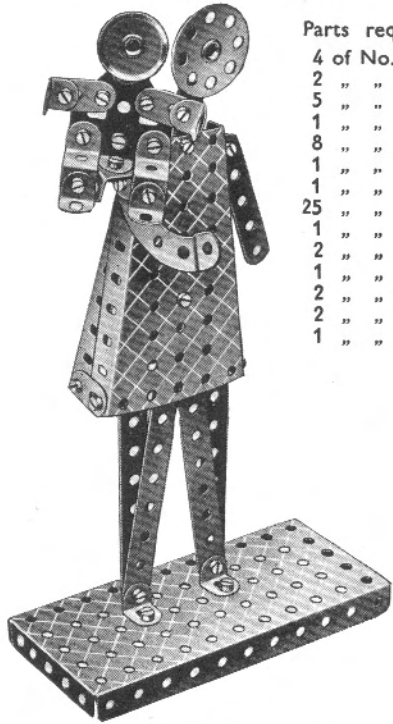


Fig. A98

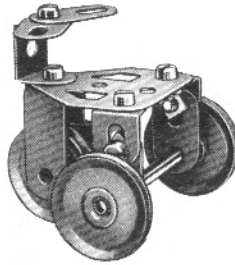
B1. Man and Boy



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

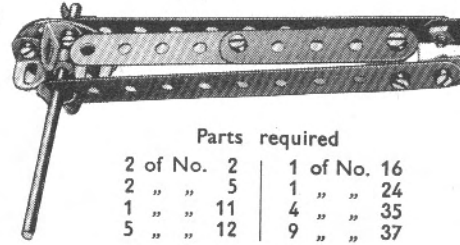
B4. Tricycle



Parts required

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

B7. Rattle



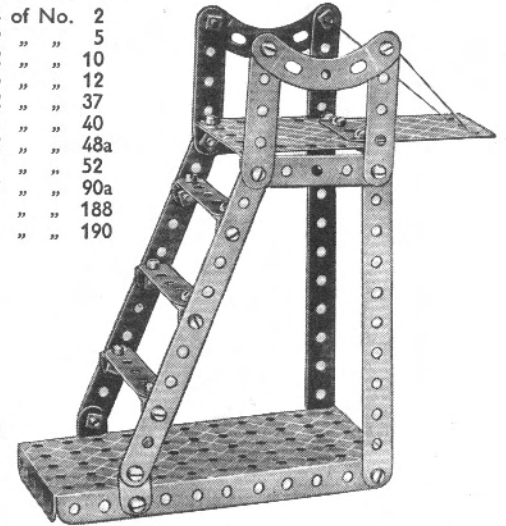
Parts required

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

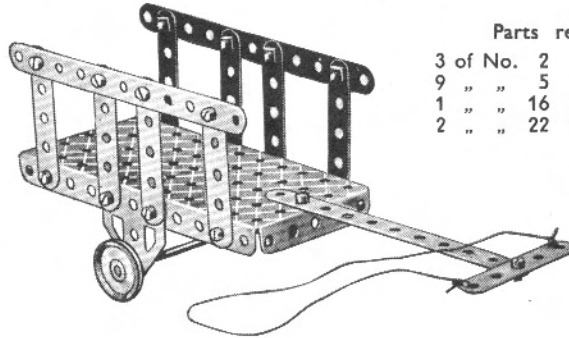
Parts required

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



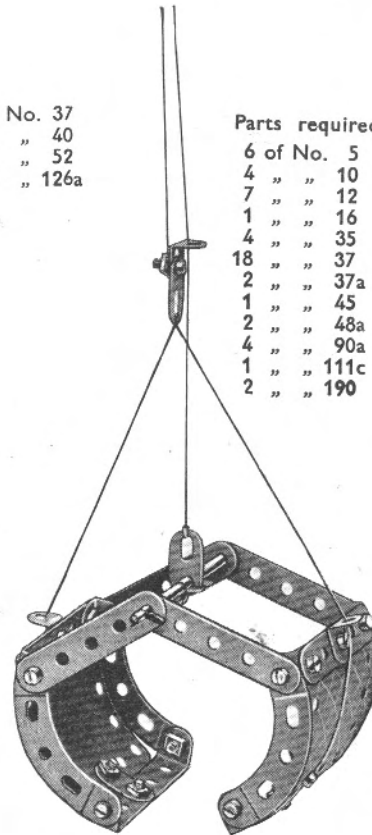
B5. Bullock Cart



Parts required

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

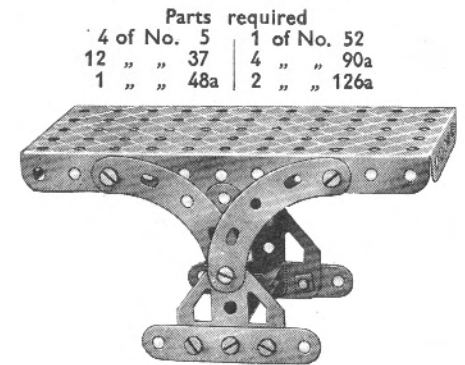
B8. Crane Grab



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



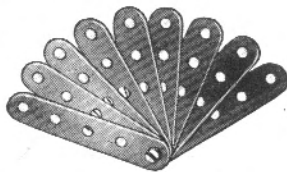
Parts required

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

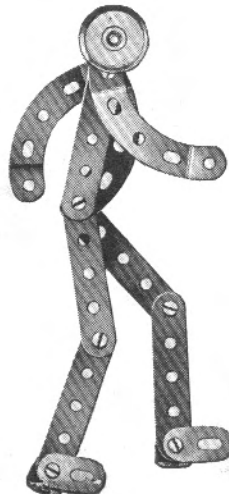
B2. Fan

Parts required

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



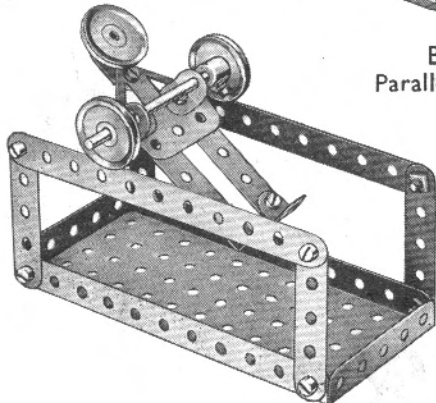
B6. Walking Man



Parts required

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

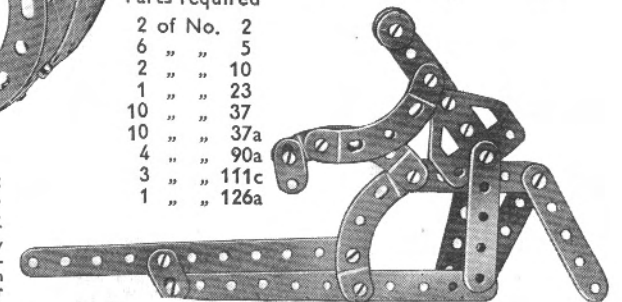
B3. Parallel Bars



Parts required

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

B11. Bucking Broncho

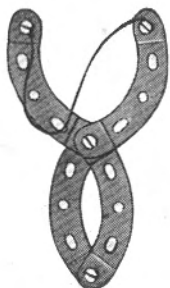


Parts required

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

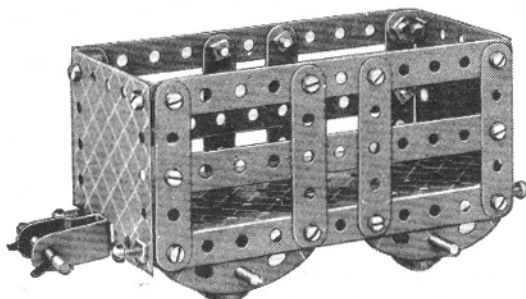
The $\frac{3}{8}$ " Bolts used for connecting the $5\frac{1}{2}$ " Strips, the horse's legs, and the rider's legs and arms, are all locknutted. The lower $5\frac{1}{2}$ " Strip should be held rigidly and the upper one jerked forward; the horse will then throw its rider completely over its head.

B12. Catapult



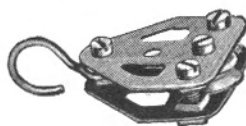
Parts required
4 of No. 37
4 " " 90a
A short length
of elastic

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

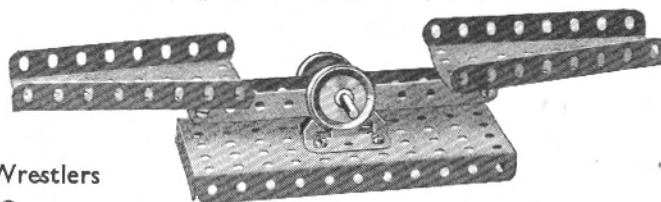
B18. Single Sheave Pulley Block



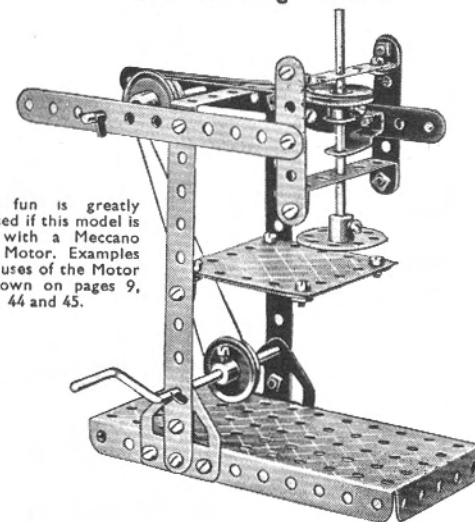
Parts required
1 of No. 23
11 " " 37a
1 " " 57c
4 " " 111c
2 " " 126a

B19. Scales

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



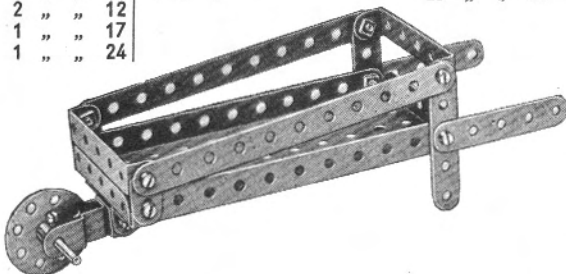
B21. Drilling Machine



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

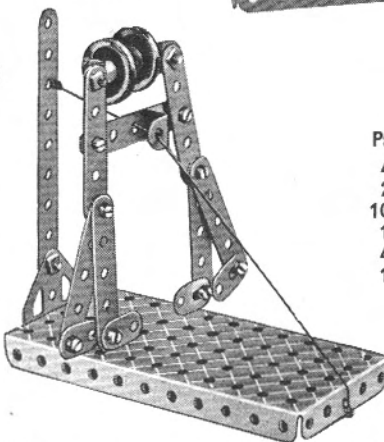
B13. Coster's Barrow

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



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



B20. Card Table

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

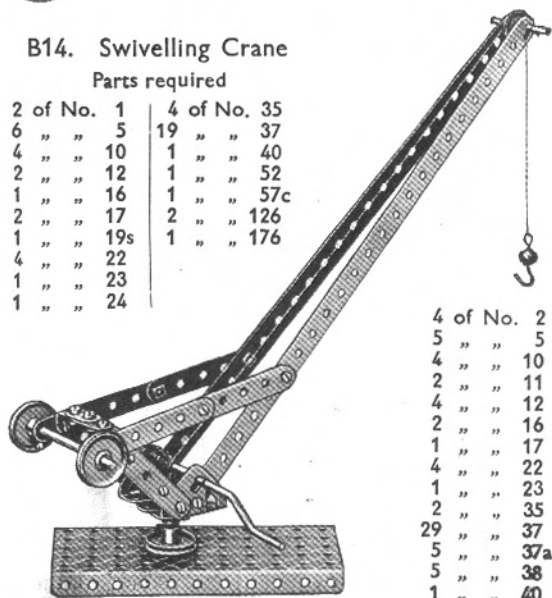


Parts required

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

B14. Swivelling Crane

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

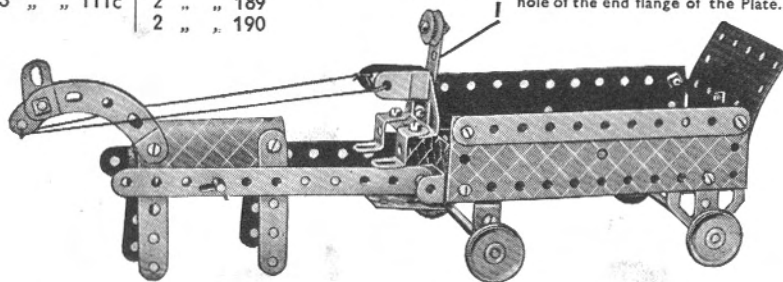


Parts required

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

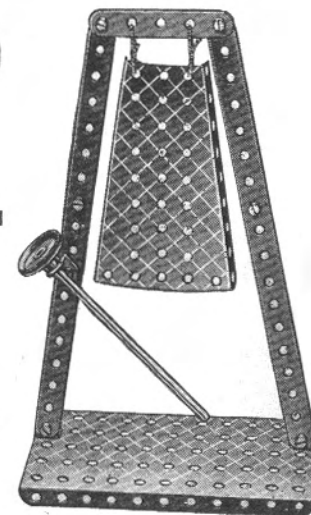
B17. Hay Cart

The fun is greatly increased if this model is fitted with a Meccano Magic Motor. The method of incorporating this motor is shown on page 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 2½" Strip 1 forming the driver's body is bolted to the centre hole of the end flange of the Plate.

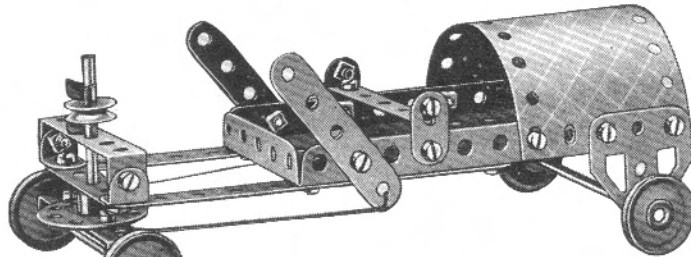


Parts required
4 of No. 2
1 " " 5
3 " " 12
1 " " 16
1 " " 22
9 " " 37
1 " " 40
1 " " 52
1 " " 54a

B22. Gong



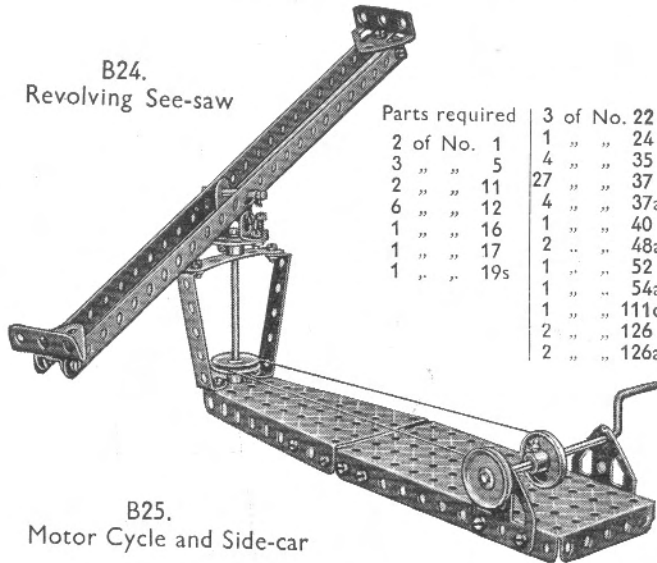
B23. Coaster



Parts required

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

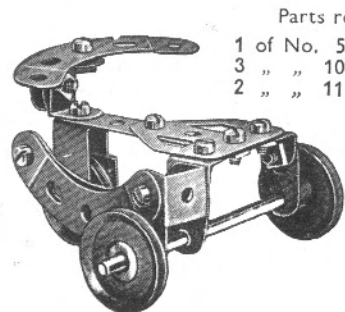
B24. Revolving See-saw



Parts required

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

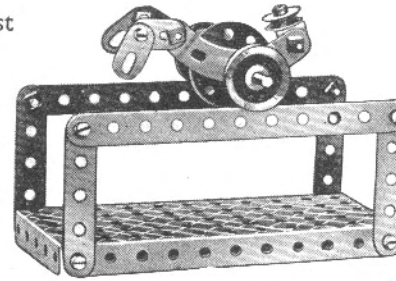
B25. Motor Cycle and Side-car



Parts required

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

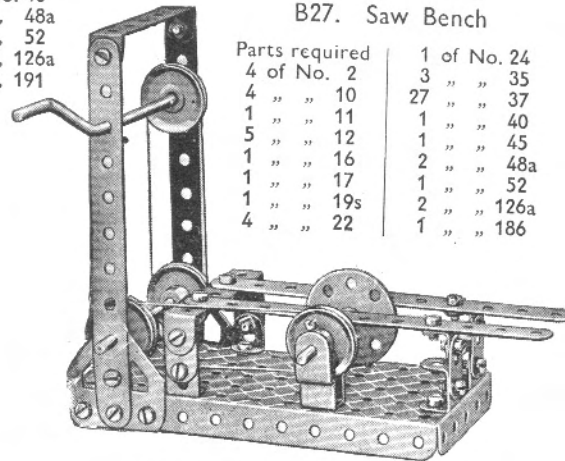
B26. Gymnast



Parts required

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

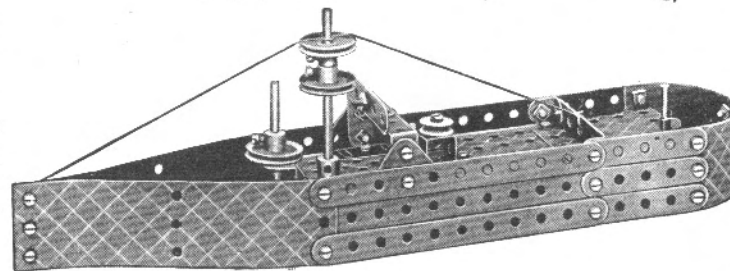
B27. Saw Bench



Parts required

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

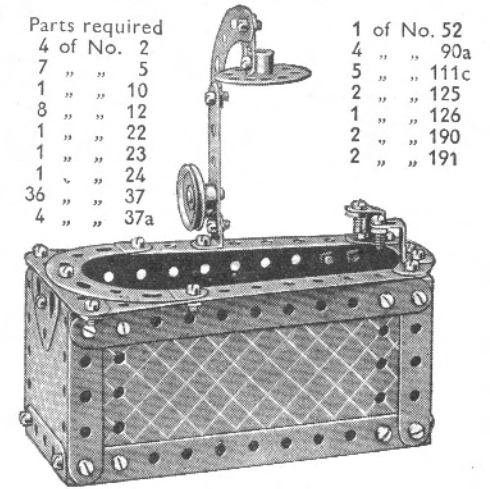
B28. Battleship



Parts required

4 of No. 2	1 of No. 23	1 of No. 52
9 " " 5	1 " " 24	4 " " 111c
4 " " 10	5 " " 35	2 " " 125
1 " " 11	36 " " 37	2 " " 126
5 " " 12	4 " " 37a	2 " " 188
1 " " 16	1 " " 40	2 " " 189
2 " " 17	2 " " 48a	1 " " 190
3 " " 22		

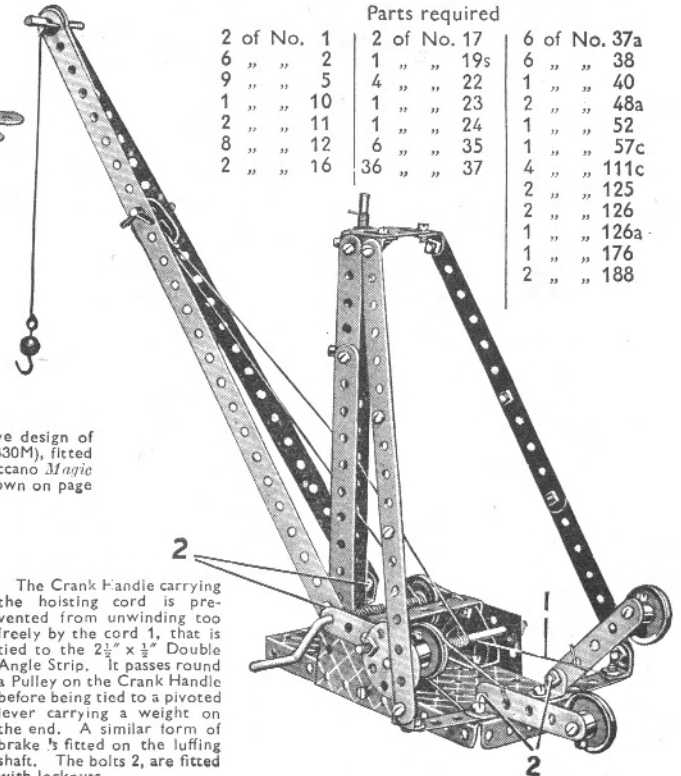
B29. Bath with Shower



Parts required

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

B30. Derrick Crane



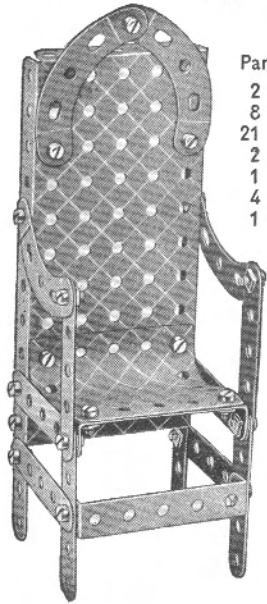
Parts required

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

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

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

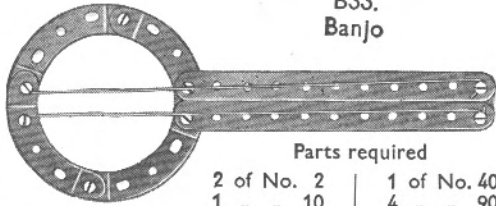
B31. Arm Chair



Parts required

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

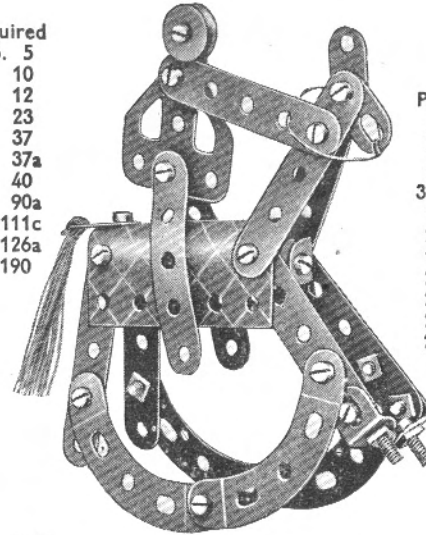
B33. Banjo



Parts required

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

B36. Rocking Horse



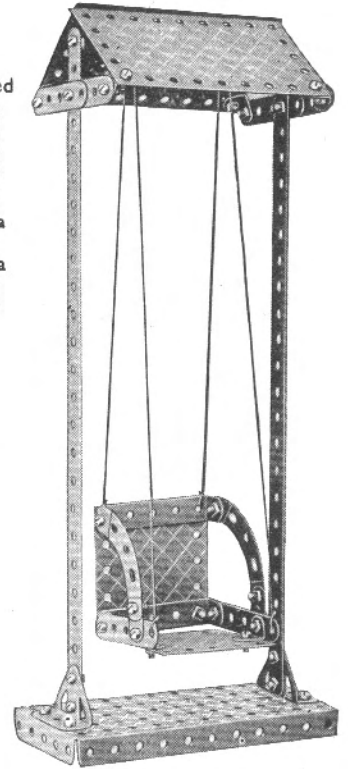
Parts required

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

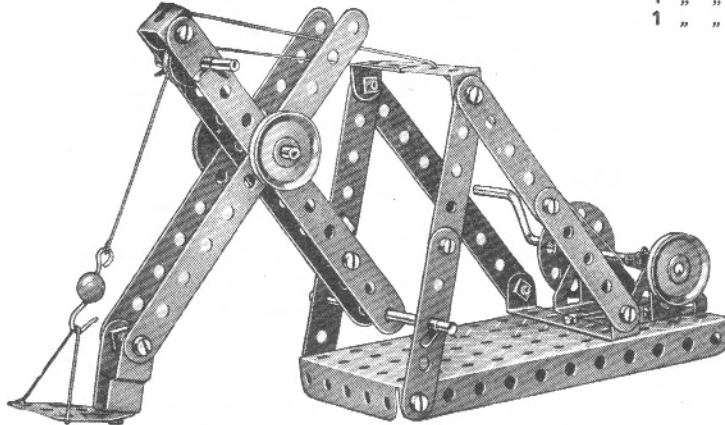
Parts required

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



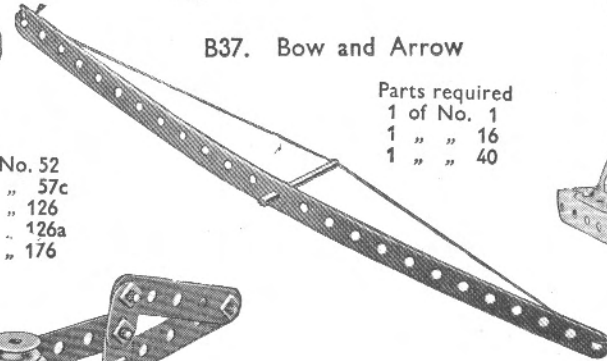
B34. Mechanical Shovel



Parts required

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

B37. Bow and Arrow



Parts required

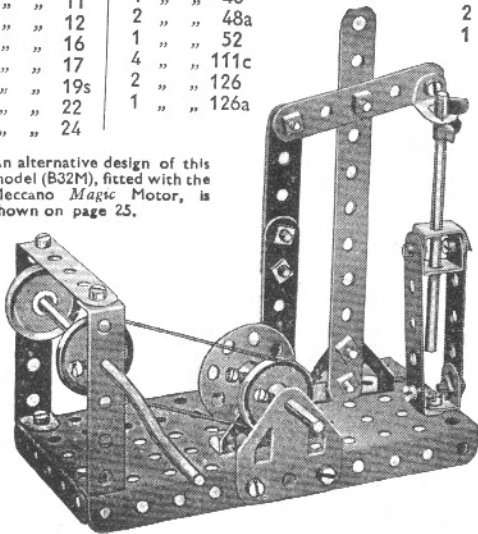
1	of No. 1
1	" " 16
1	" " 40

B32. Pump

Parts required

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

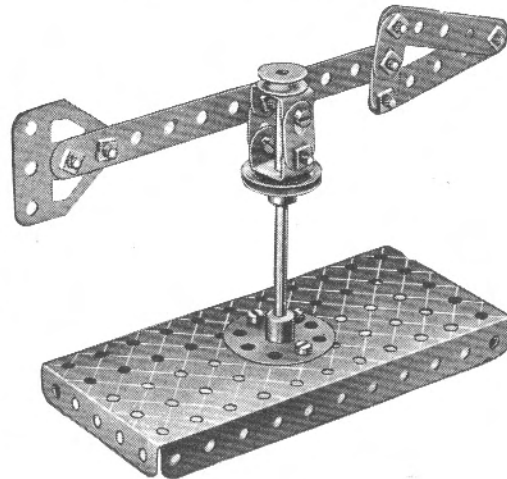
An alternative design of this model (B32M), fitted with the Meccano Magic Motor, is shown on page 25.



B35. Weather Vane

Parts required

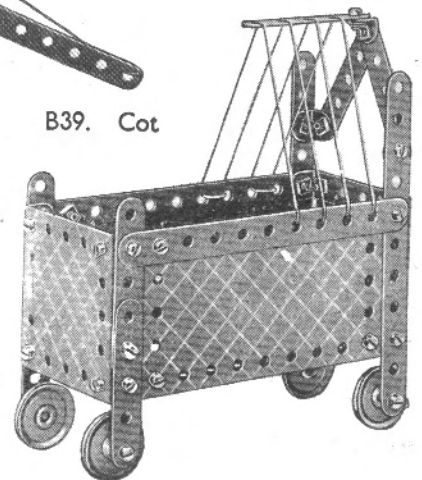
1	of No. 2
2	" " 5
4	" " 10
2	" " 11
1	" " 16
1	" " 22
1	" " 23
1	" " 24
12	" " 37
1	" " 52
1	" " 126a

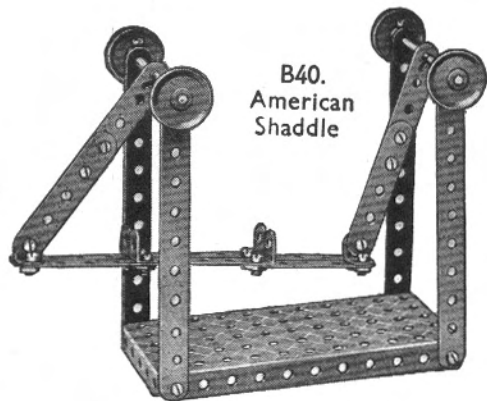


B39. Cot

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

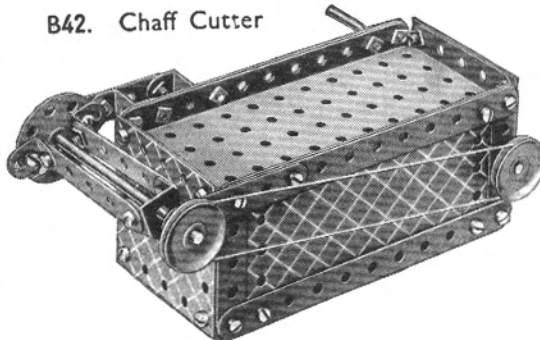




B40.
American
Shackle

Parts required

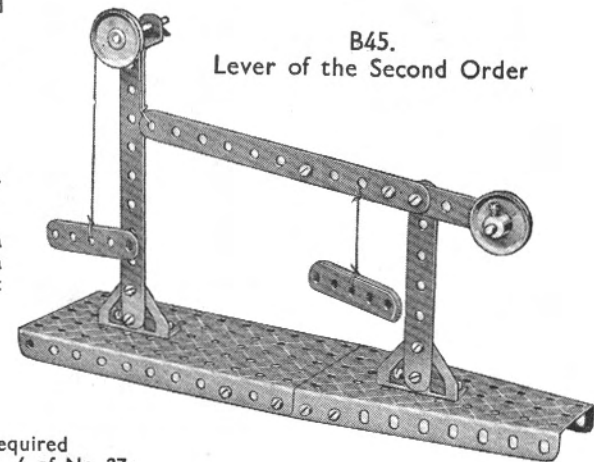
4	of No. 2
8	" " 5
1	" " 11
6	" " 12
1	" " 16
1	" " 19s
2	" " 22
1	" " 24
2	" " 35
33	" " 37
1	" " 40
1	" " 52
2	" " 125
2	" " 190
2	" " 191



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

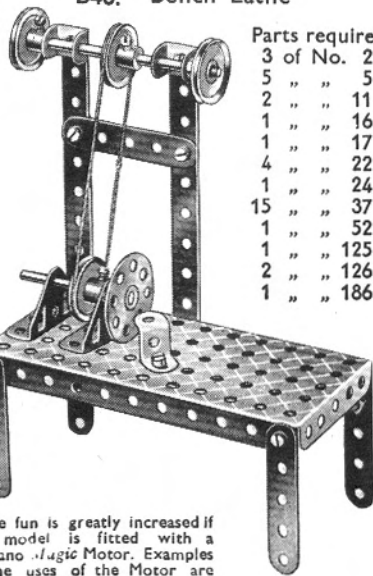


B45.
Lever of the Second Order

Parts required

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

B41.
Modern Dressing Table



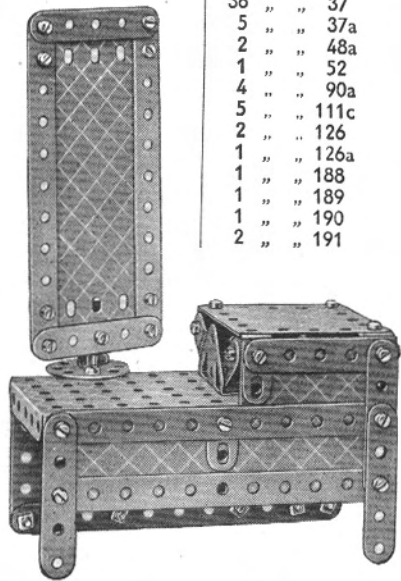
B43. Bench Lathe

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

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

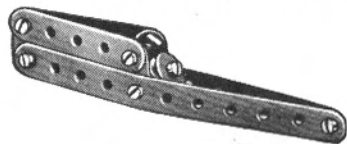


The fun is greatly increased if this model is fitted with a Meccano Magic Motor. Examples of the uses of the Motor are shown on pages 9, 24, 25, 44 and 45.

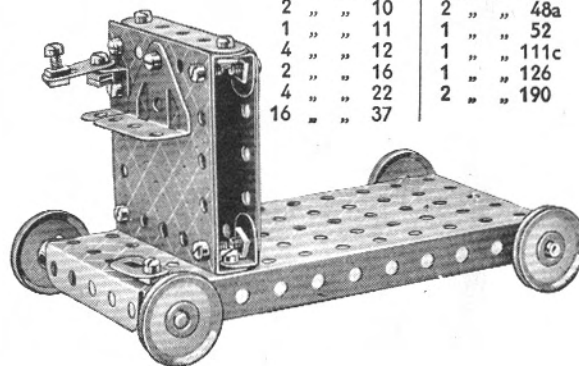
B44. Motor Boat

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



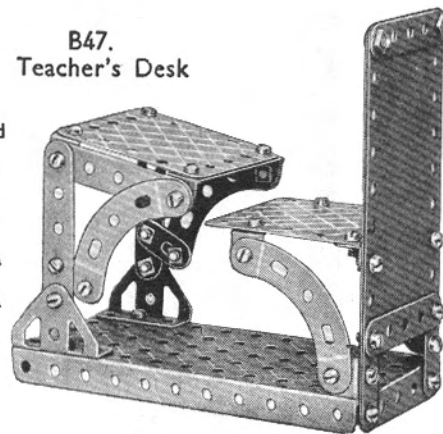
Parts required

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

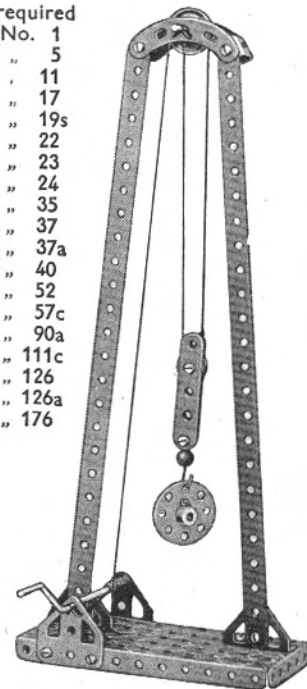
2	of No. 2
9	" " 5
2	" " 10
6	" " 12
34	" " 37
2	" " 48a
1	" " 52
4	" " 90a
2	" " 126
2	" " 190
1	" " 191



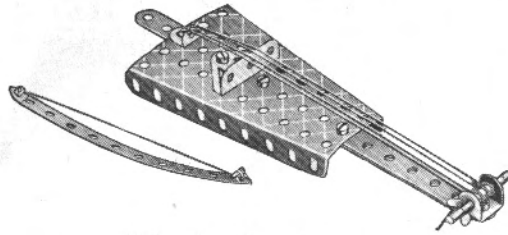
B48. Pulley Block

Parts required

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



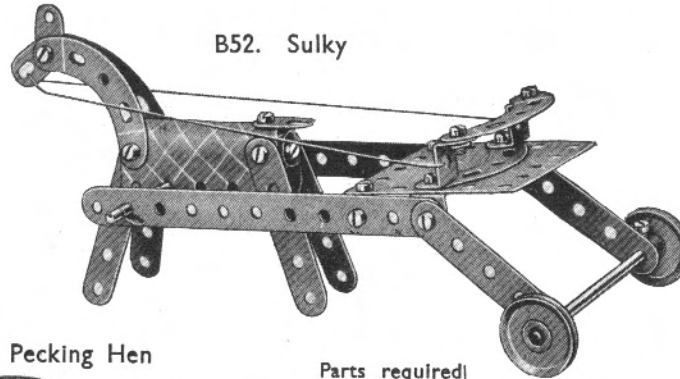
B49. Violin and Bow



Parts required

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

B52. Sulky



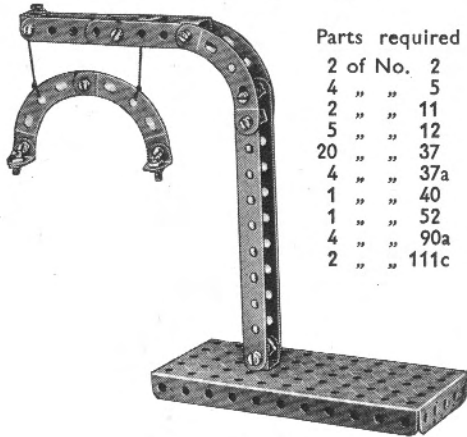
Parts required

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

B56. Rocking Chair



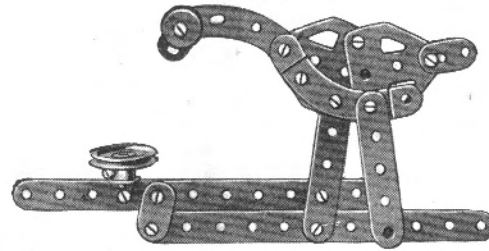
B50. Loading Gauge



Parts required

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

B53. Pecking Hen



Parts required

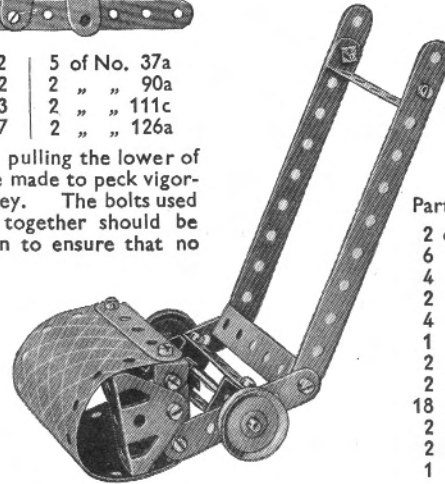
2	of No. 2	2	of No. 22	1	of No. 48a
6	" " 5	4	" " 35	4	" " 90a
3	" " 10	17	" " 37	1	" " 111c
6	" " 12	1	" " 37a	2	" " 125
2	" " 16	1	" " 40	2	" " 190

B54. Grass Cutter

Parts required

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

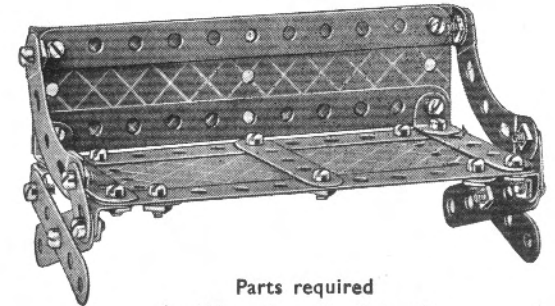
By alternately pushing and pulling the lower of the 5½" Strips, the hen can be made to peck vigorously at the "bowl," a 1" Pulley. The bolts used for securing the 5½" Strips together should be locknutted, care being taken to ensure that no "side play" is permitted.



Parts required

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

B57. Station Seat



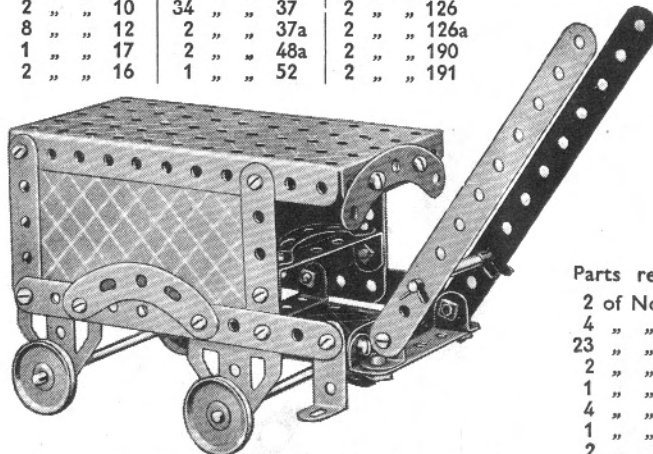
Parts required

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

B51. Bread Van

Parts required

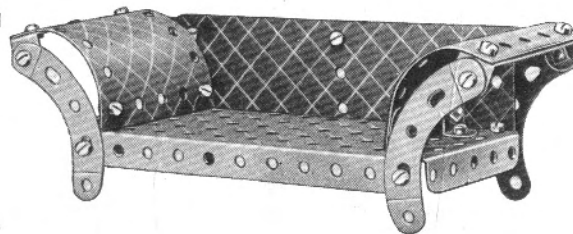
4	of No. 2	4	of No. 22	4	of No. 90a
8	" " 5	4	" " 35	1	" " 125
2	" " 10	34	" " 37	2	" " 126
8	" " 12	2	" " 37a	2	" " 126a
1	" " 17	2	" " 48a	2	" " 190
2	" " 16	1	" " 52	2	" " 191



B55. Couch

Parts required

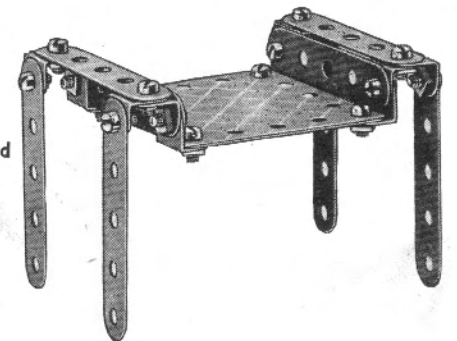
2	of No. 2
4	" " 12
23	" " 37
2	" " 48a
1	" " 52
4	" " 90a
1	" " 189
2	" " 190



Parts required

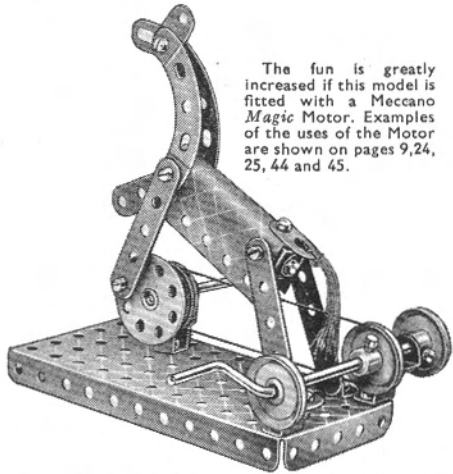
9	of No. 5
8	" " 12
16	" " 37
2	" " 125
1	" " 190

B58. Stool for Dressing Table



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

B59. Prancing Horse



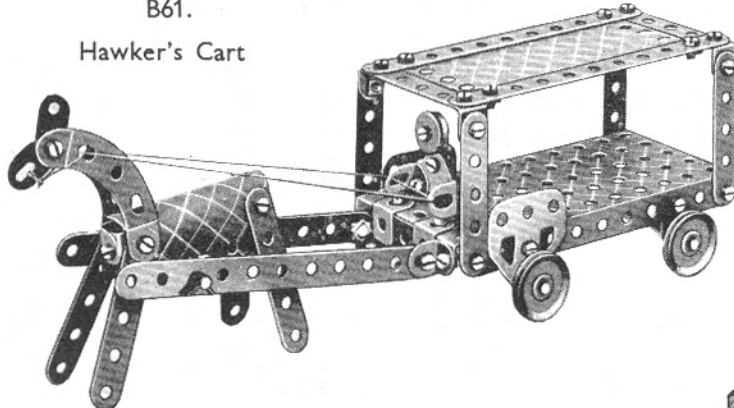
The fun is greatly increased if this model is fitted with a Meccano Magic Motor. Examples of the uses of the Motor are shown on pages 9, 24, 25, 44 and 45.

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

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

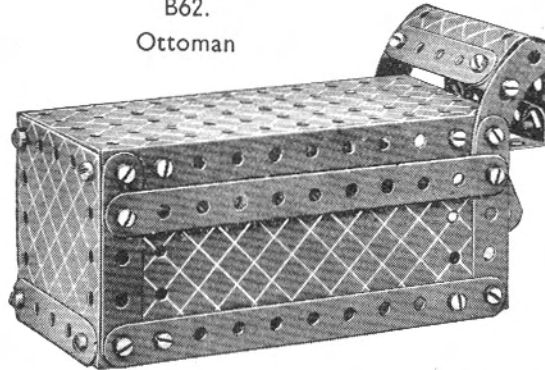
B61.

Hawker's Cart



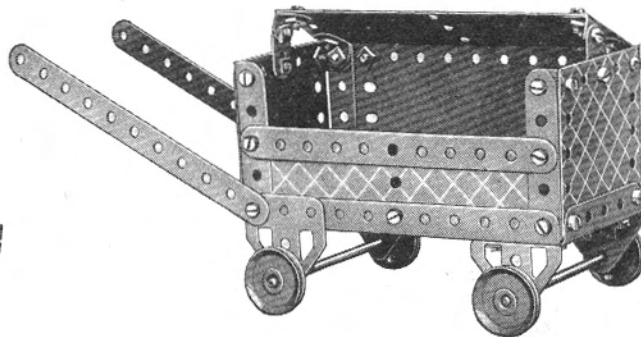
The fun is greatly increased if this model is fitted with a Meccano Magic Motor. For examples of the uses of the Motor see pages 9, 24, 25, 44 and 45. If the Motor is fitted, a Bush Wheel should be mounted on a 2" Rod fitted between the hind legs of the horse.

B62. Ottoman



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

B63. Ash Cart



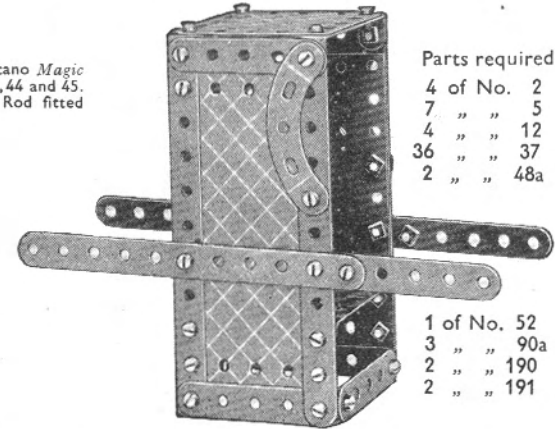
Parts required	4 of No. 2
4 " " 5	2 " " 10
4 " " 12	2 " " 16
4 " " 22	4 " " 37
2 " " 37a	2 " " 48a
2 " " 52	1 " " 111c
2 " " 126	2 " " 126a
2 " " 189	2 " " 190
1 " " 191	

B64. Shepherd's Crook



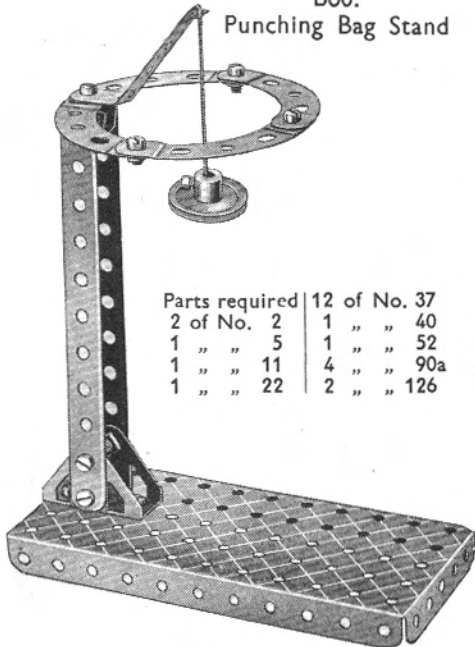
Parts required	2 of No. 1
7 " " 37	4 " " 90a

B65. Sedan Chair



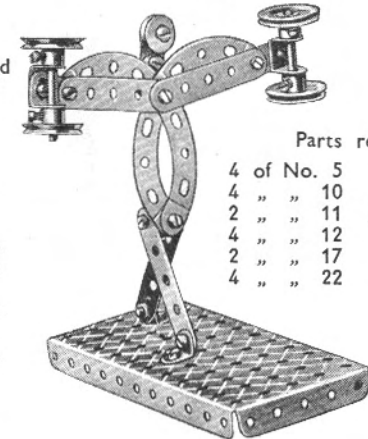
Parts required	4 of No. 2
7 " " 5	4 " " 12
36 " " 37	2 " " 48a
1 of No. 52	3 " " 90a
2 " " 190	2 " " 191

B60. Punching Bag Stand



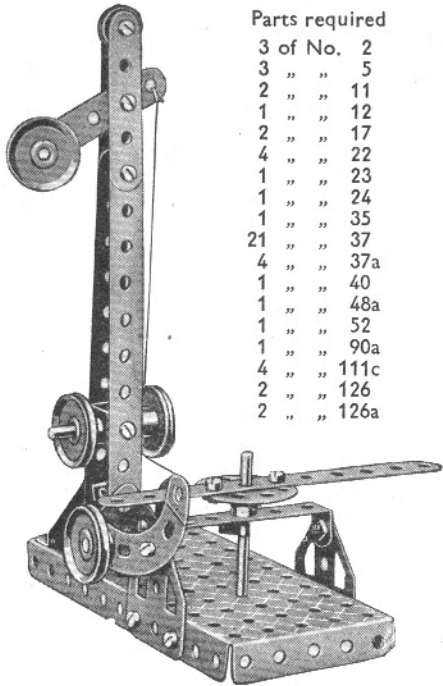
Parts required	12 of No. 37
2 of No. 2	1 " " 40
1 " " 5	1 " " 52
1 " " 11	4 " " 90a
1 " " 22	2 " " 126

B66. Strong Man



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

B67. Automatic Signals

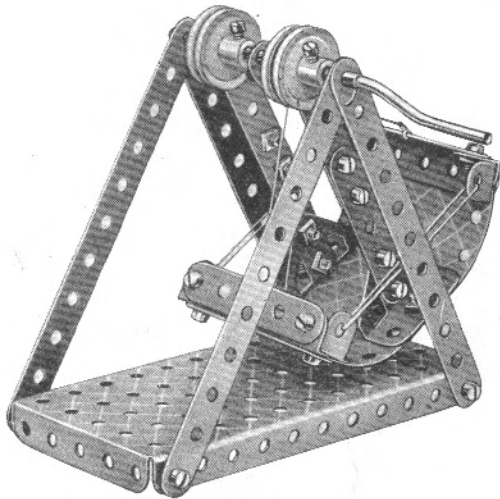


Parts required

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 locknutted 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.

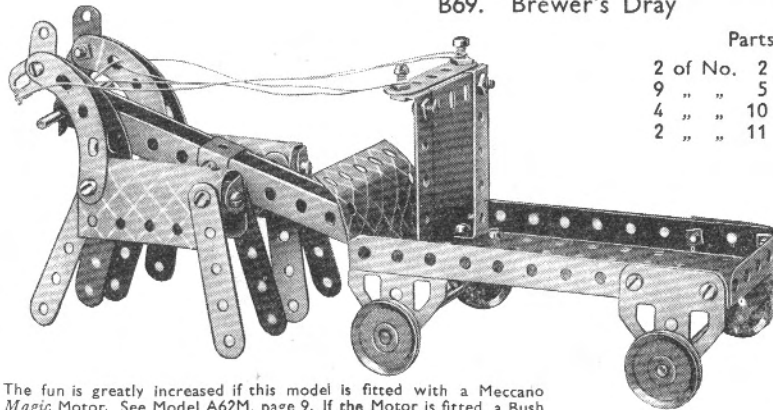
B68. Swinging Boat



Parts required

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

B69. Brewer's Dray

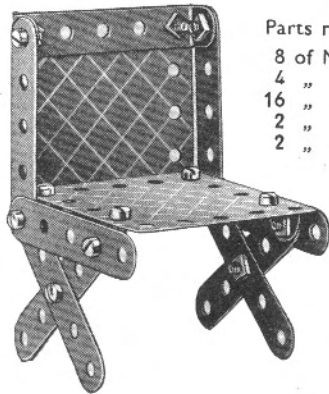


Parts required

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

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

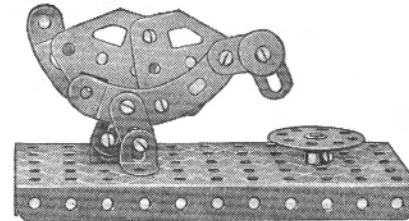
B70. Chair



Parts required

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

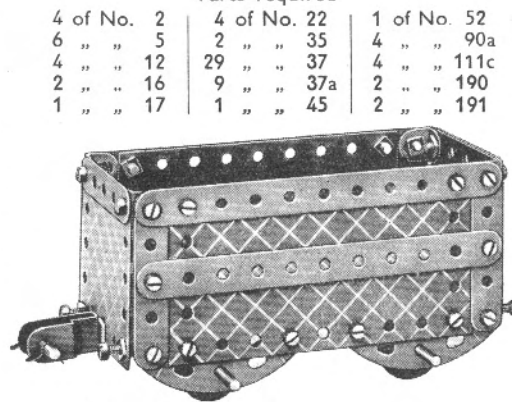
B71. Goose



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

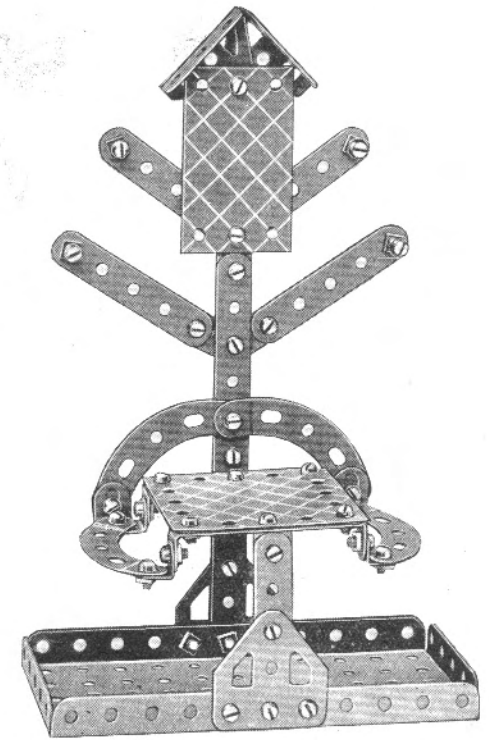
B72. Cattle Truck



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

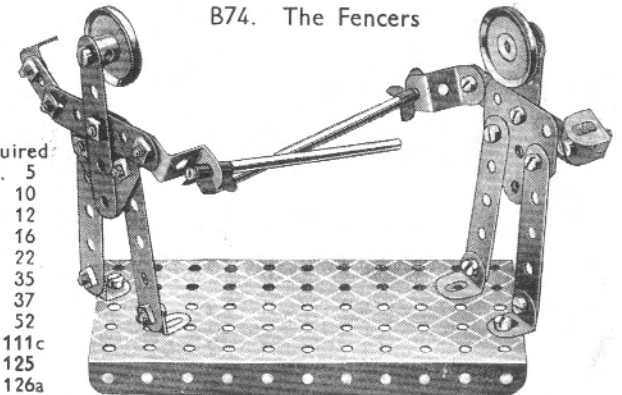
B73. Hat Rack



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			

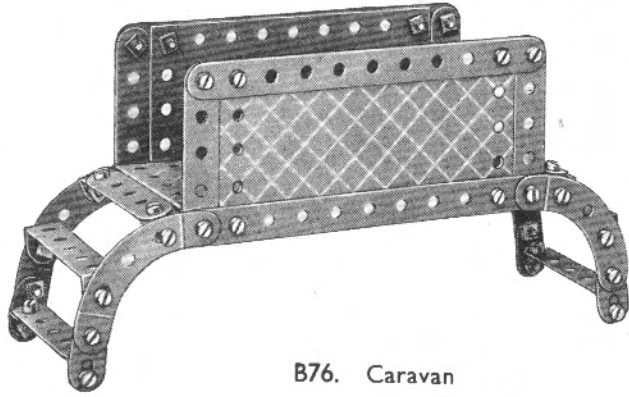
B74. The Fencers



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

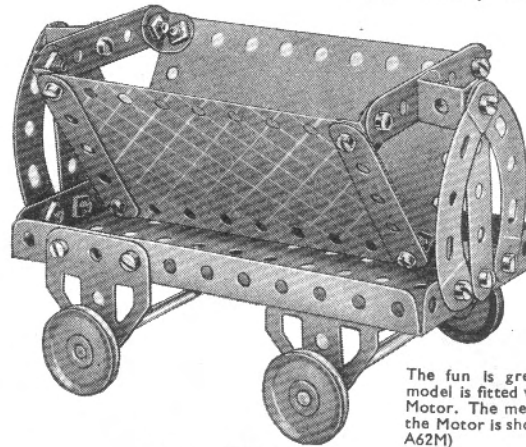
B75. Footbridge



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

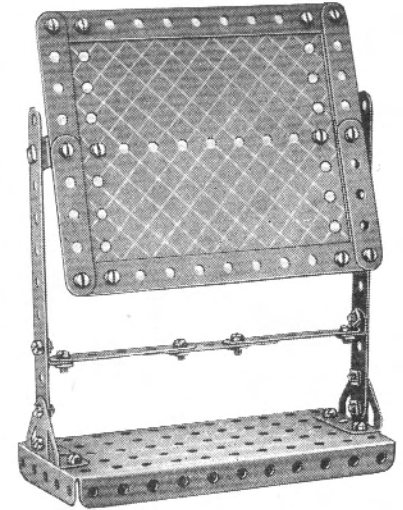
B78. Dump Car



Parts required

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

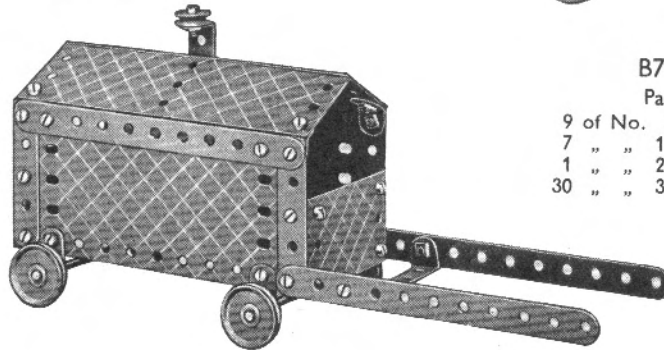
B81. School Blackboard



Parts required

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

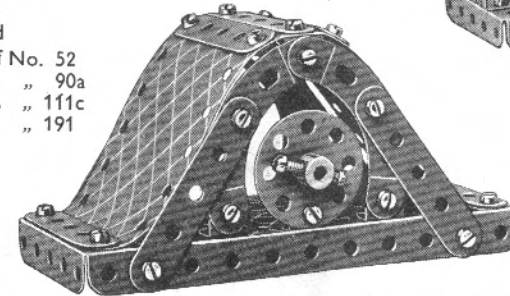
B76. Caravan



Parts required

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

B79. Clock

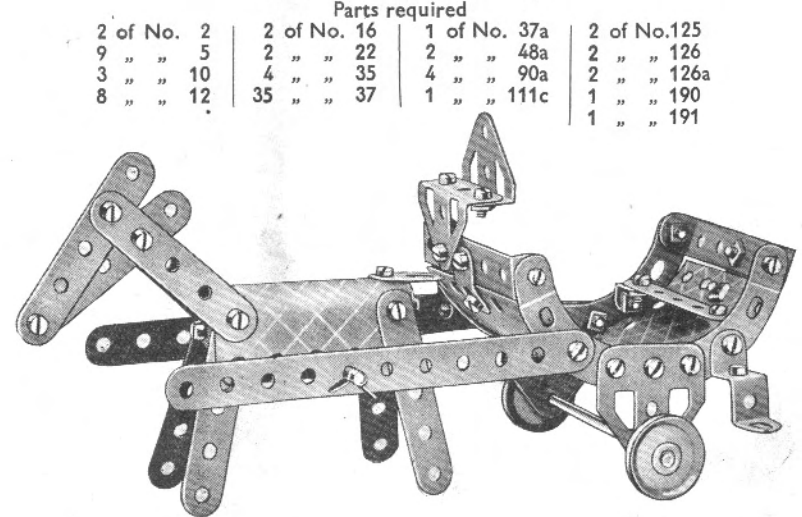


Parts required

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

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)

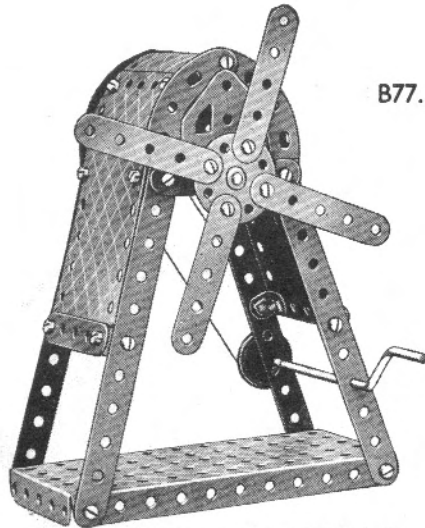
B82. Two-wheeled Trap



Parts required

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

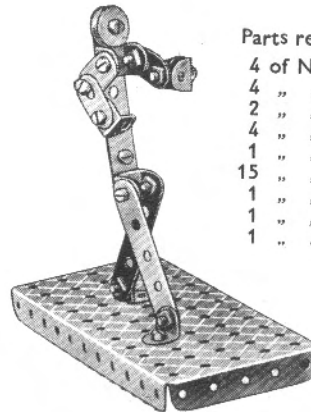
B77. Windmill



Parts required

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

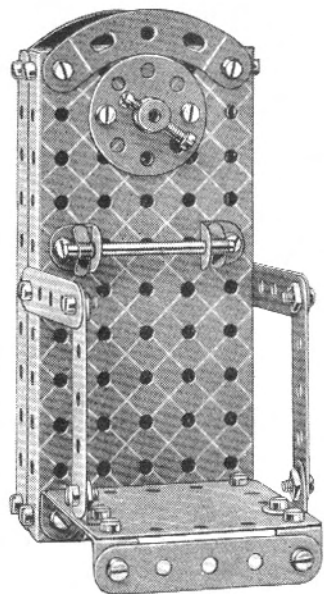
B80. Boxer



Parts required

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

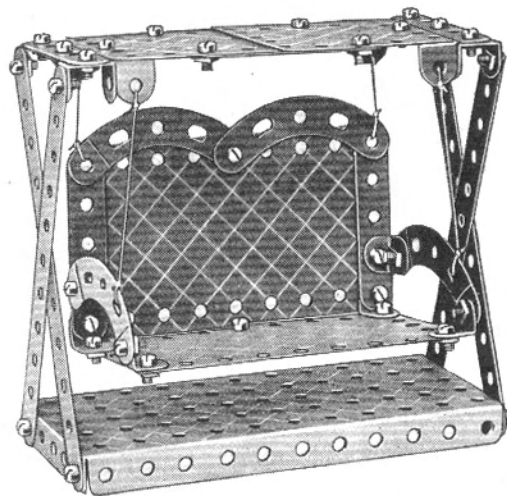
An alternative design of this model (B77M), fitted with the Meccano Magic Motor, is shown on page 24.



B83.
Weighing
Machine

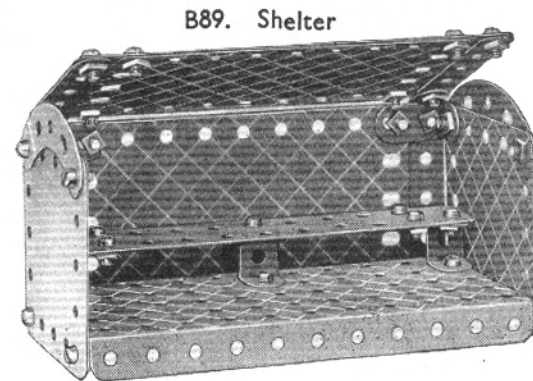
Parts required

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



B86.
Swinging
Garden Seat
Parts required

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

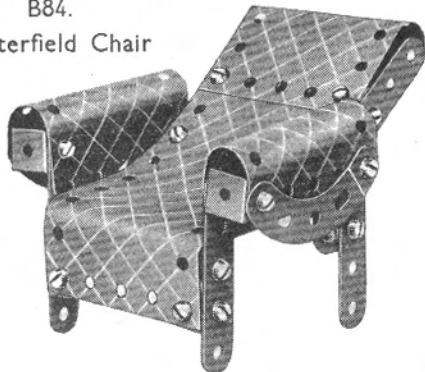


B89. Shelter

Parts required

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

B84.
Chesterfield Chair



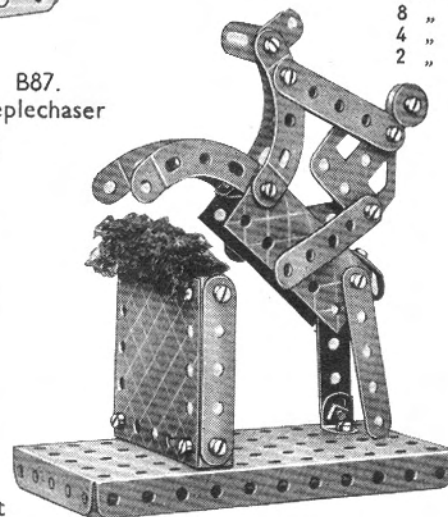
Parts required

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

B87.
Steeplechaser

Parts required

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

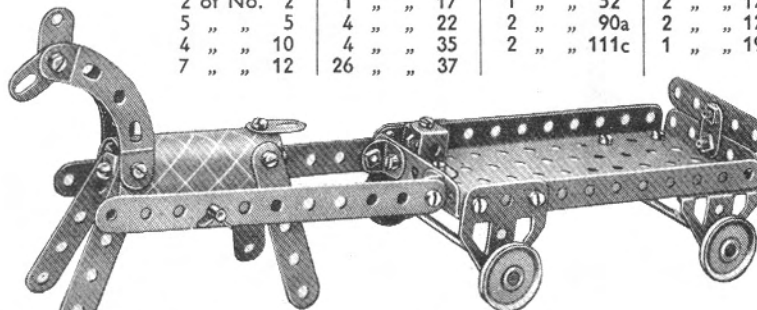


B88.

Horse and Cart

Parts required

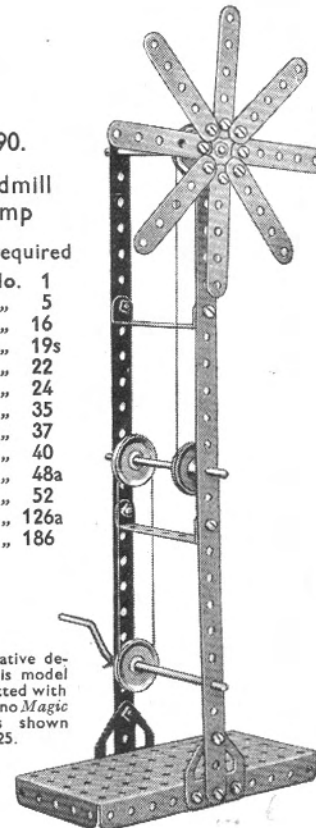
2 of No. 16	2 of No. 37a	1 of No.125
2 of No. 2	1 " " 17	1 " " 126
5 " " 5	4 " " 22	2 " " 48a
4 " " 10	4 " " 35	2 " " 126a
7 " " 12	26 " " 37	1 " " 190



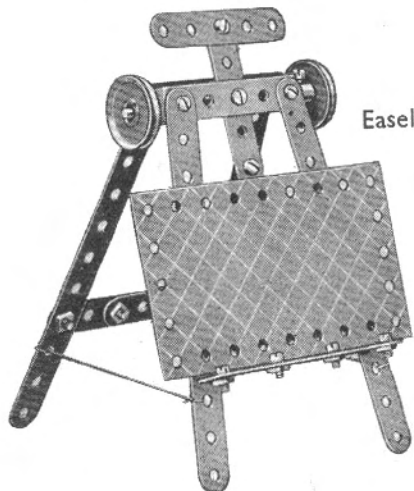
B89.
Windmill
Pump

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.

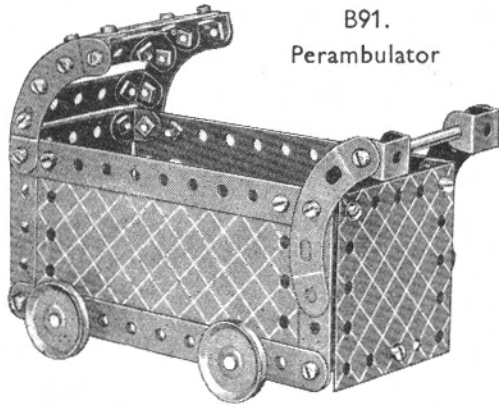


B85.
Easel and Board

Parts required

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

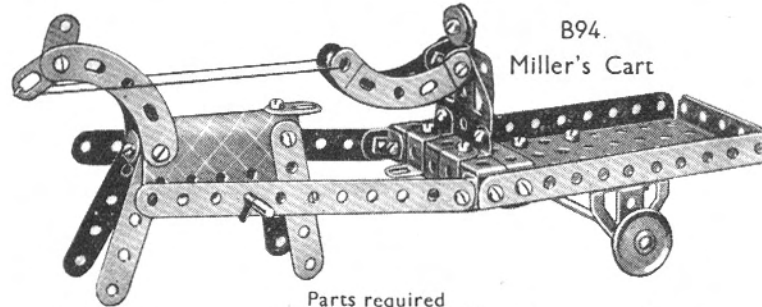
The fun is greatly increased if this model is fitted with a Meccano Magic Motor. The method of incorporating the Motor is shown on page 9 (A62M). If the Motor is fitted, a Bush Wheel should be mounted on a 2" Rod fitted between the hind legs of the horse.



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



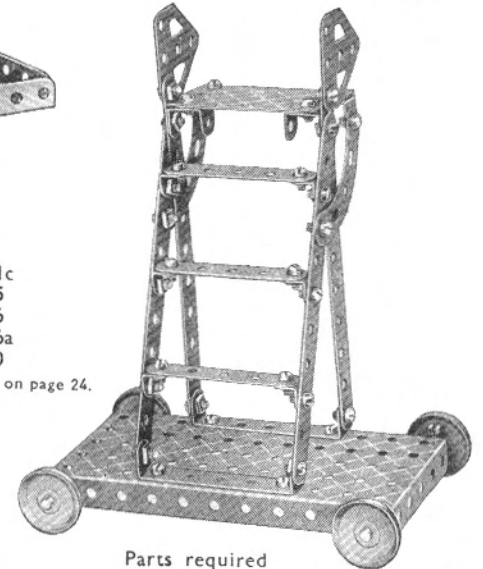
B94.
Miller's Cart

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



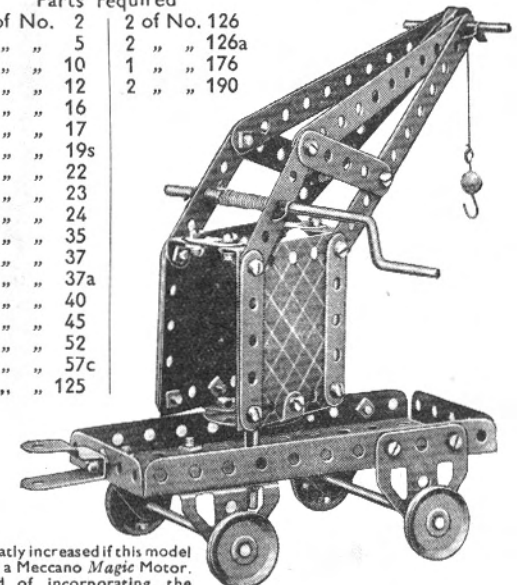
Parts required

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		

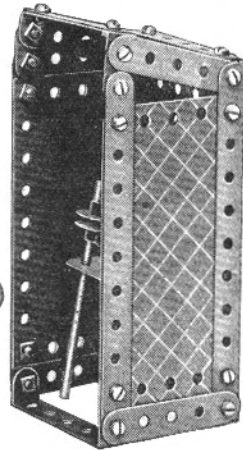
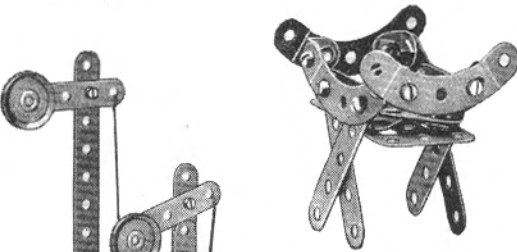


The funis greatly increased if this model is fitted with a Meccano Magic Motor. The method of incorporating the Motor is shown on page 9. (Model A62M)

B92.
Watchman's Hut and Fire

Parts required

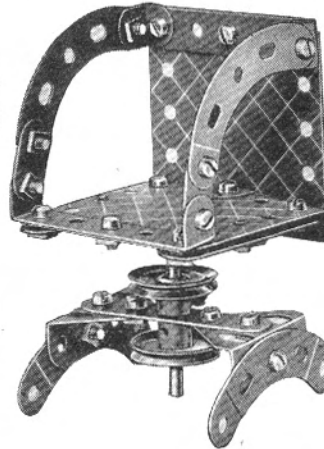
2 of No.	2	2 of No.	35	3 of No.	111c
9 " "	5	34 " "	37	2 " "	126
2 " "	10	3 " "	37a	2 " "	126a
6 " "	12	2 " "	48a	1 " "	188
1 " "	16	1 " "	52	1 " "	190
1 " "	23	4 " "	90a	2 " "	191



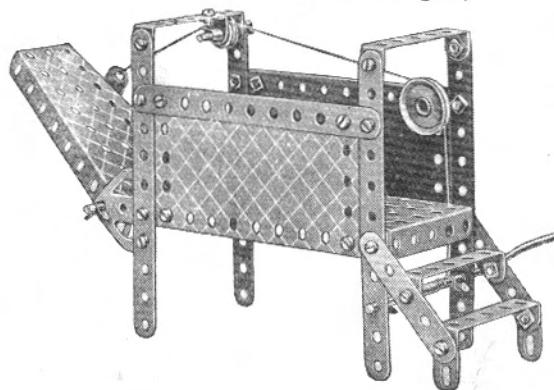
B95.
Revolving Office Chair

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



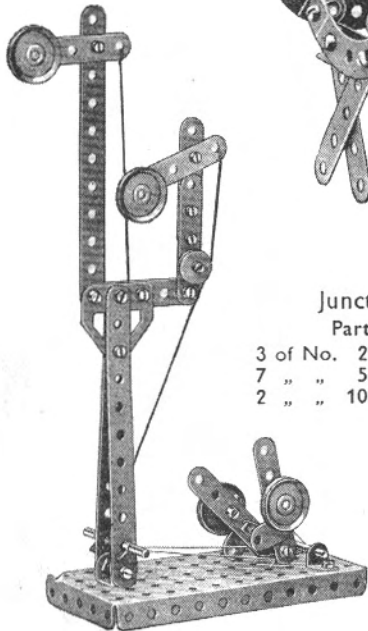
Parts required

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

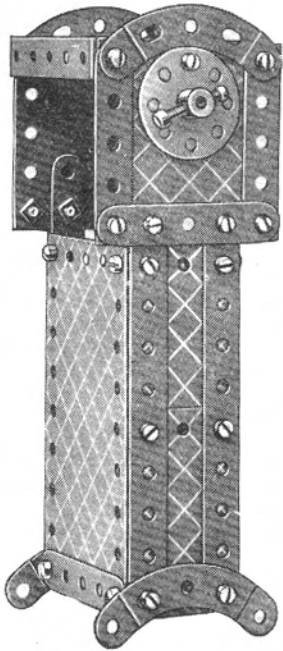
B93.
Junction Signal

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



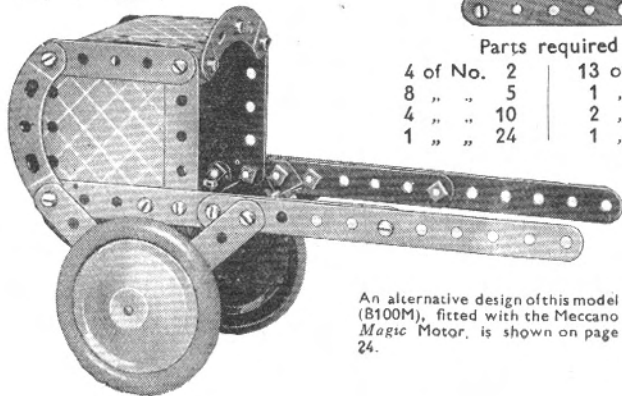
Parts required

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

B100. Rickshaw

Parts required

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

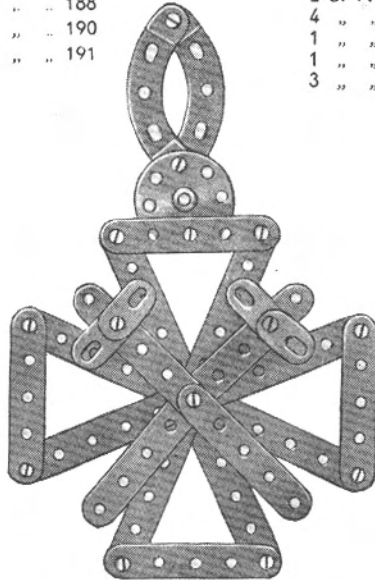


Parts required

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.

B101. Medal



Parts required

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

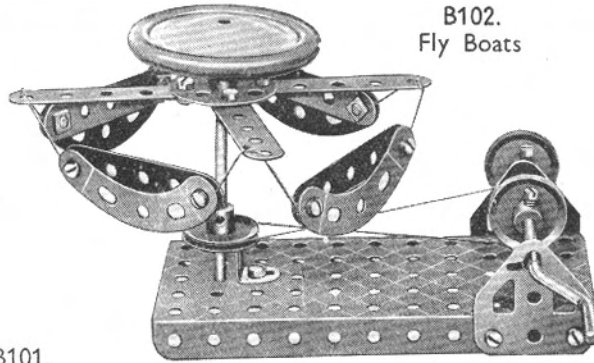
Parts required

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

Parts required

1	of No. 126a
2	" " 187
1	" " 188
2	" " 189

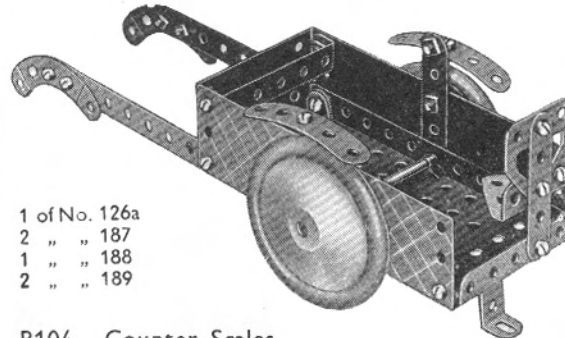
B102. Fly Boats



Parts required

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

B103. Milk Float

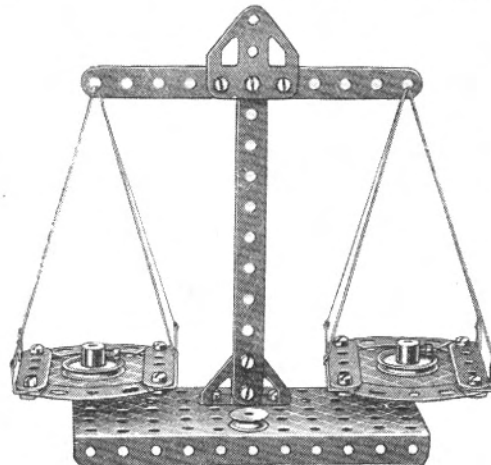


Parts required

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

(B106M) fitted with the Meccano Magic Motor, is shown on page 24

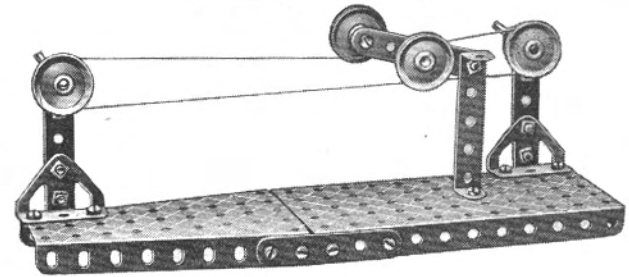
B104. Counter Scales



Parts required

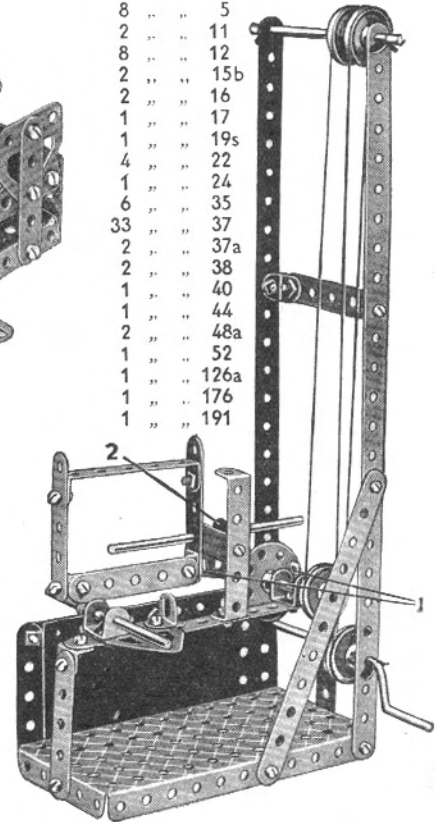
2	of No. 2
4	" " 5
8	" " 12
2	" " 22
1	" " 23
14	" " 37
2	" " 37a
1	" " 40
1	" " 52
4	" " 90a
1	" " 111c
1	" " 126
1	" " 126a
2	" " 190

B105. Jockey Pulley

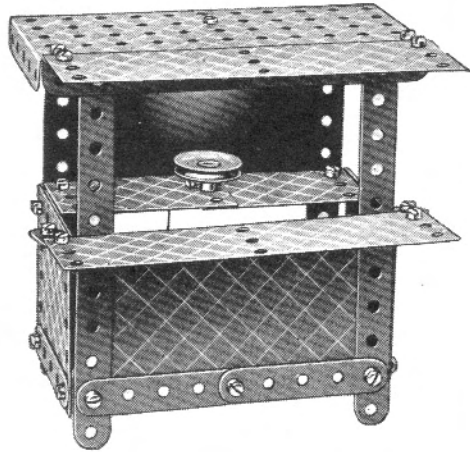


B106. Power Hack Saw

The Crank Handle drives an overhead shaft through 1" 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 are locknutted. 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



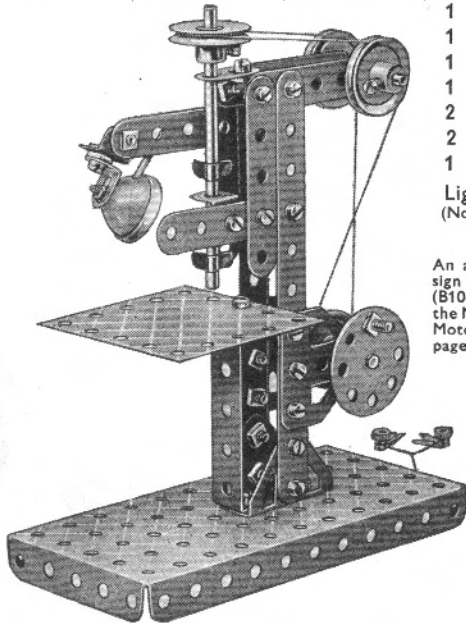
B107.
Coffee Stall



- Parts required
- 4 of No. 2
 - 8 " " 5
 - 4 " " 10
 - 8 " " 12
 - 1 " " 22
 - 35 " " 37
 - 2 " " 48a
 - 1 " " 52
 - 1 " " 111c
 - 2 " " 188
 - 2 " " 189
 - 2 " " 190
 - 2 " " 191
- Lighting Set
(Not included in Outfit).

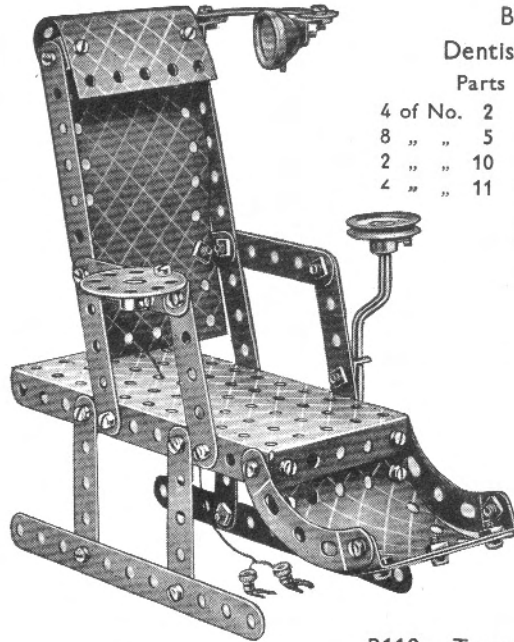
B108.
Sensitive Drill

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



- Parts required
- 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).

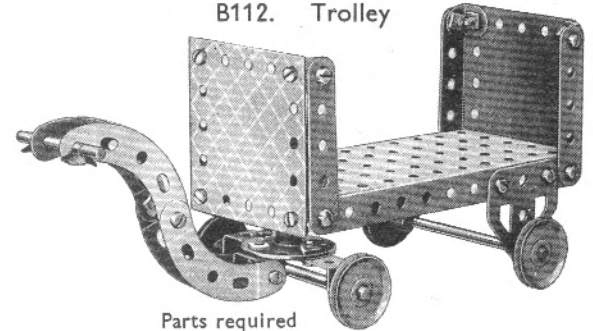
An alternative design of this model (B108M), fitted with the Meccano Magic Motor, is shown on page 24.



B109.
Dentist's Chair

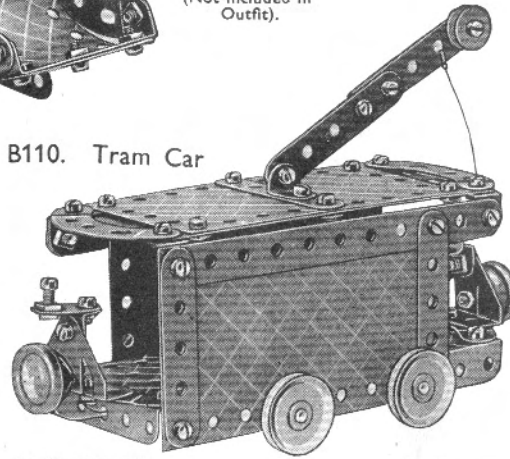
- Parts required
- | | |
|------------|-------------|
| 4 of No. 2 | 7 of No. 12 |
| 8 " " 5 | 1 " " 19s |
| 2 " " 10 | 1 " " 22 |
| 4 " " 11 | 1 " " 24 |
| | 3 " " 35 |
| | 36 " " 37 |
| | 6 " " 37a |
| | 1 " " 48a |
| | 1 " " 52 |
| | 3 " " 90a |
| | 4 " " 111c |
| | 1 " " 126a |
| | 2 " " 190 |
| | 1 " " 191 |
- Lighting Set
(Not included in Outfit).

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 |

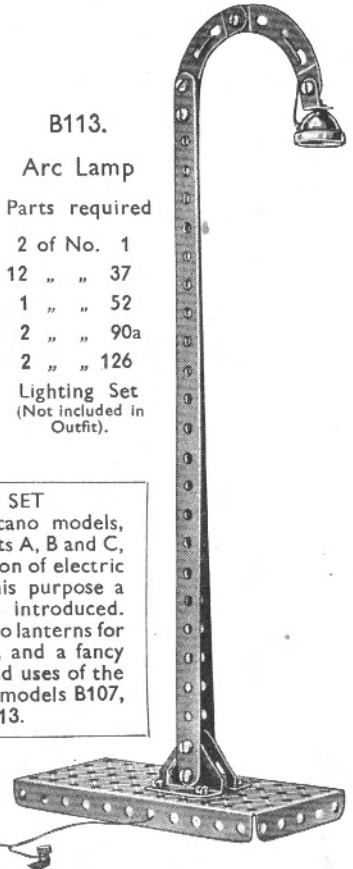
B110. Tram Car



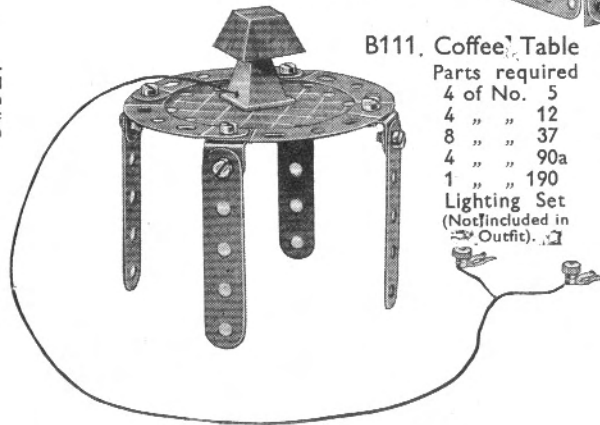
- Parts required
- | | |
|------------|-------------|
| 4 of No. 2 | 1 of No. 40 |
| 2 " " 10 | 2 " " 48a |
| 2 " " 11 | 1 " " 52 |
| 3 " " 12 | 4 " " 90a |
| 2 " " 16 | 3 " " 111c |
| 4 " " 22 | 2 " " 126 |
| 1 " " 23 | 2 " " 190 |
| 34 " " 37 | 2 " " 191 |
| 6 " " 37a | |
- Lighting Set
(Not included in Outfit).

B113.

- Arc Lamp
- Parts required
- 2 of No. 1
 - 12 " " 37
 - 1 " " 52
 - 2 " " 90a
 - 2 " " 126
- Lighting Set
(Not included in Outfit).



B111. Coffee Table



- Parts required
- 4 of No. 5
 - 4 " " 12
 - 8 " " 37
 - 4 " " 90a
 - 1 " " 190
- Lighting Set
(Not included in Outfit).

MECCANO LIGHTING SET

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

B114. Dressing Table



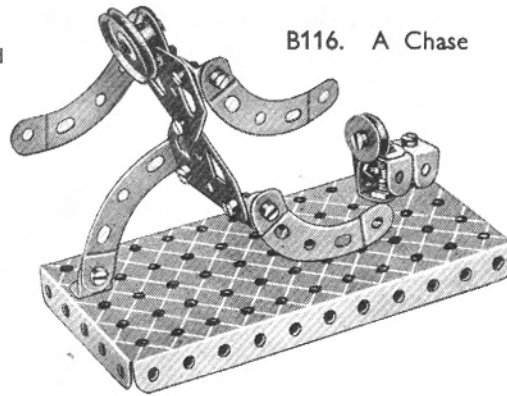
Parts required

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

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		

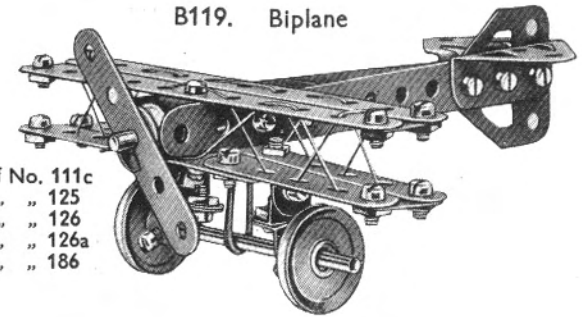
B116. A Chase



Parts required

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

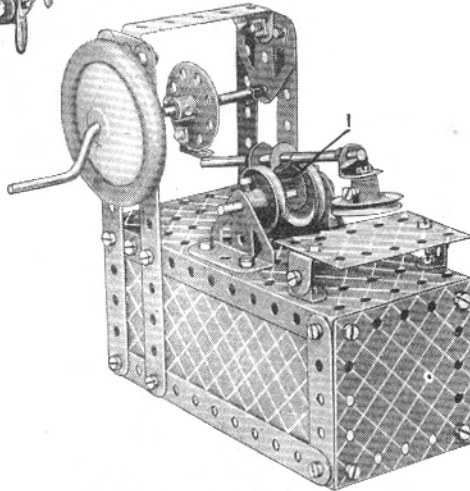
B119. Biplane



3 of No. 111c

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

B117. Trip Hammer



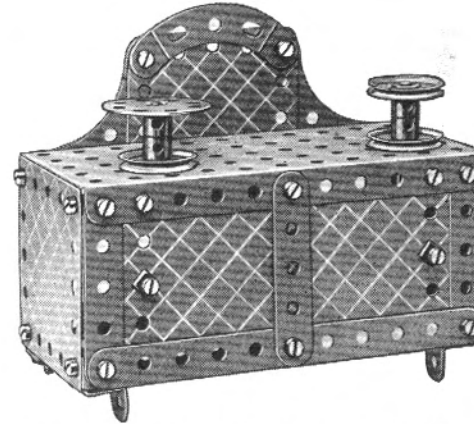
Parts required

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

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

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

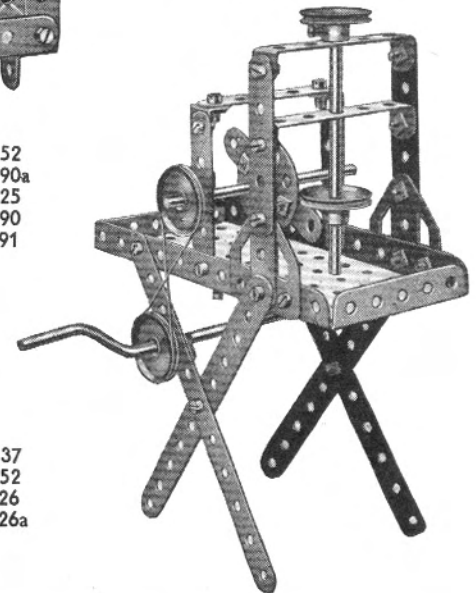
B120. Sideboard



Parts required

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

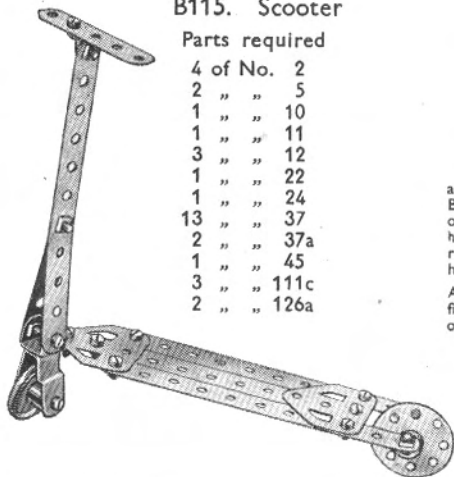
B121. Stamping Machine



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

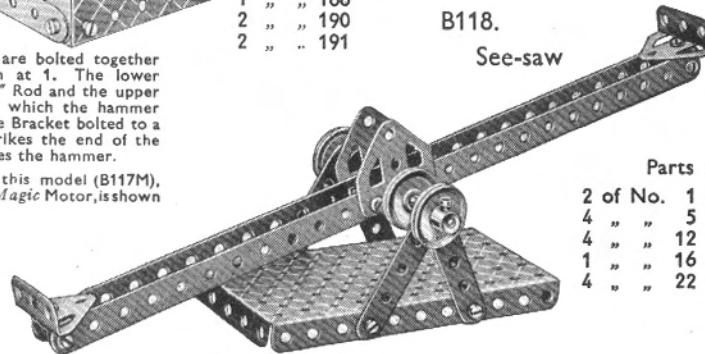
B115. Scooter



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

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		

HOW TO CONTINUE

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

The greatest thrill in Meccano model-building is experienced when a model is set to work by means of a Meccano Motor. The models featured on this and the 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

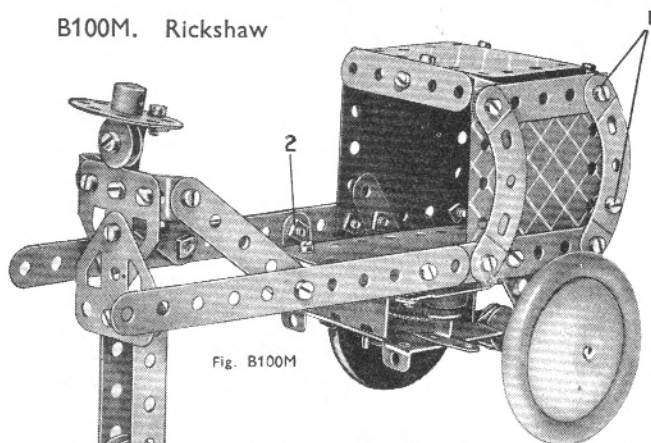
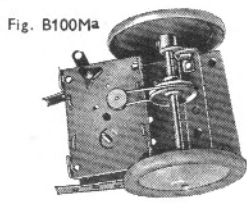


Fig. B100M

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.



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

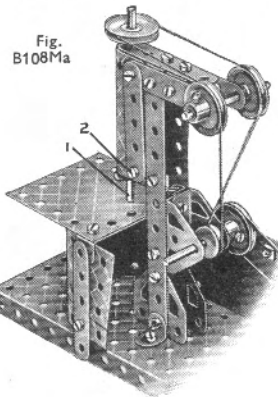


Fig. B108Ma

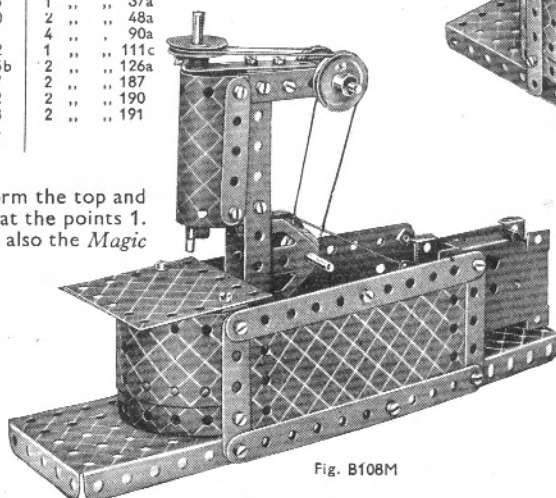


Fig. B108M

Parts required

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

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.

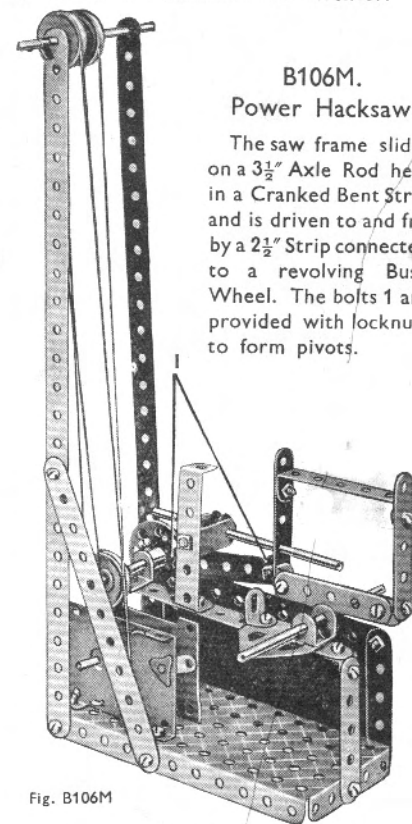


Fig. B106M

Parts required

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

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.)

Parts required

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

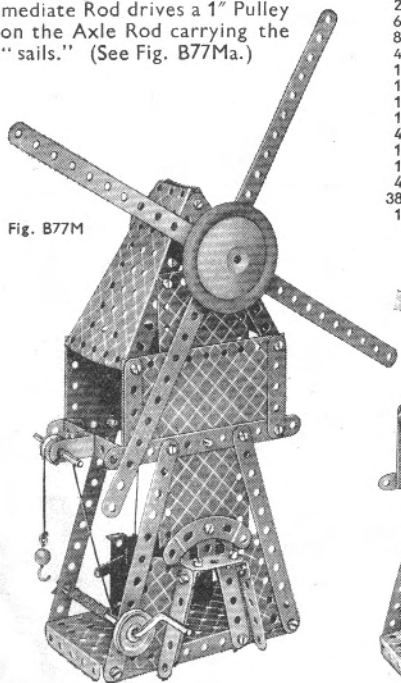


Fig. B77M

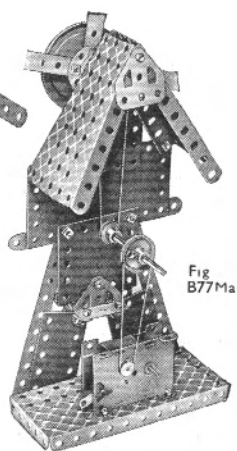


Fig. B77Ma

Parts required

6 of No. 2	1 of No. 188
6 " " 5	2 " " 189
5 " " 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	

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.

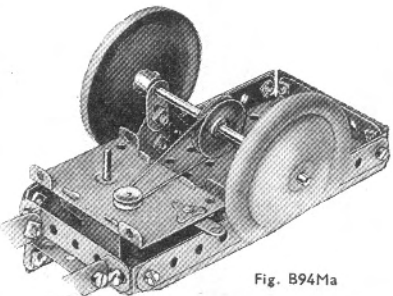


Fig. B94Ma

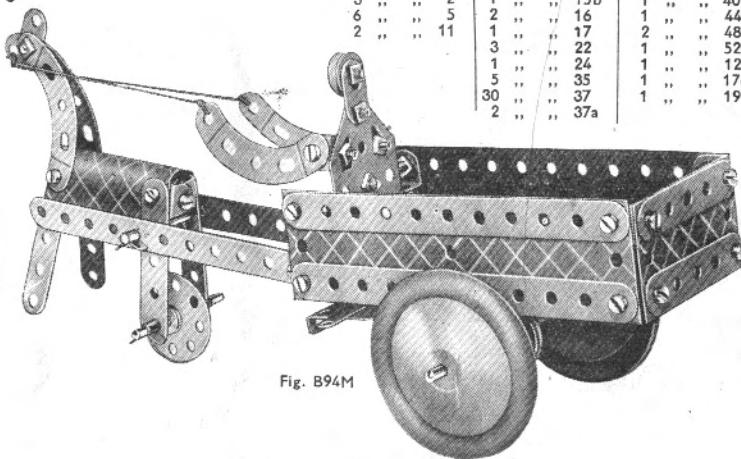
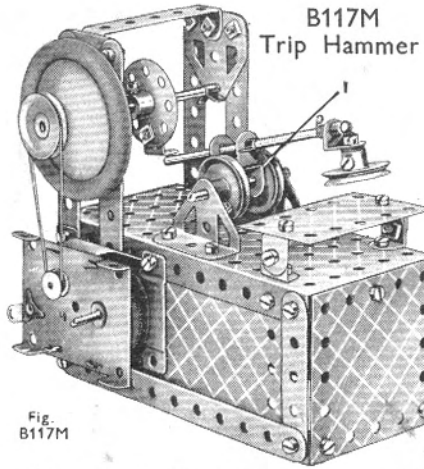


Fig. B94M



B117M
Trip Hammer

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

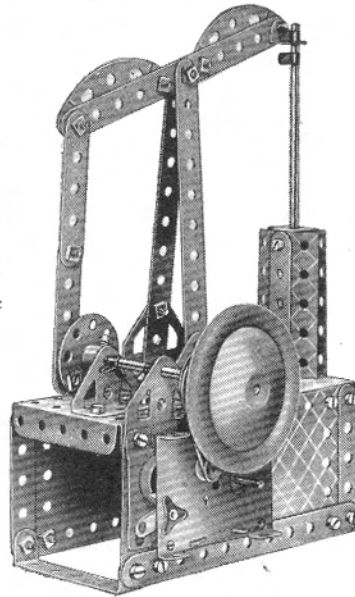


Fig. B32M

B32M. Pump

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

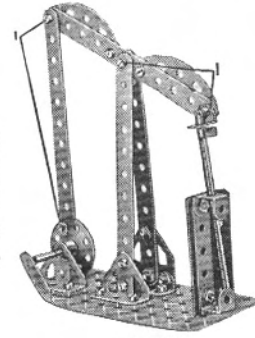


Fig. B32Ma

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

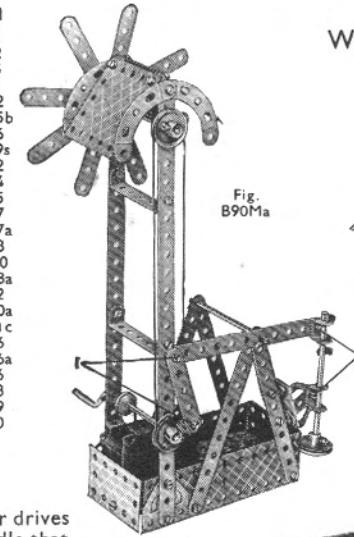
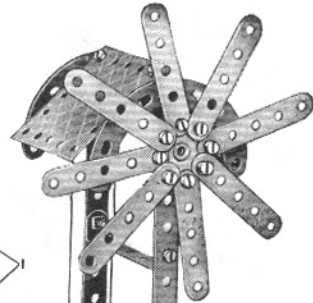


Fig. B90Ma

B90M.
Windmill Pump



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

B30M. Derrick Crane

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

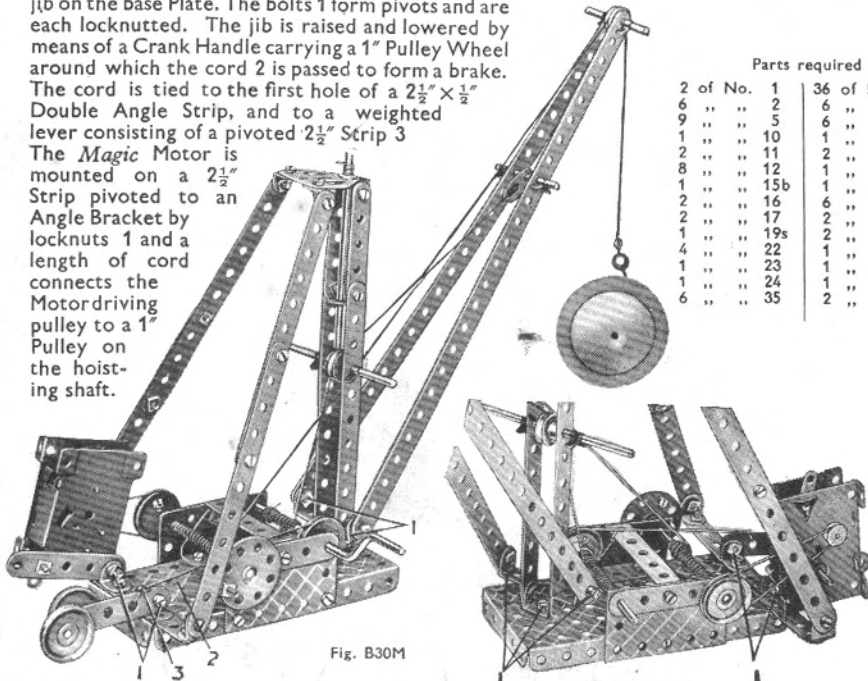


Fig. B30M

Parts required

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

Fig. B30Ma

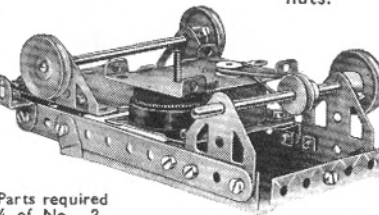


Fig. B51Ma

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

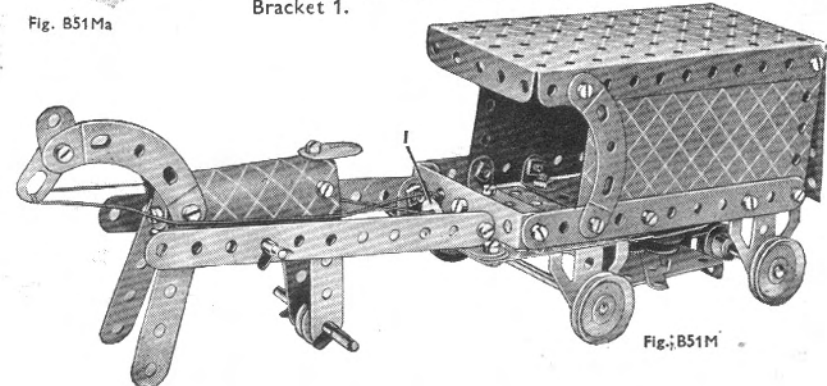


Fig. B51M

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

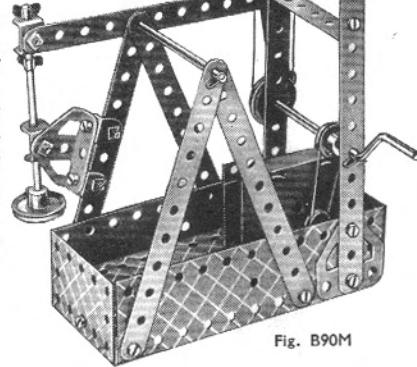
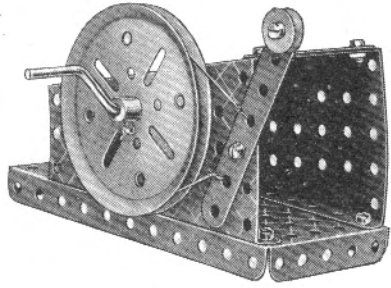


Fig. B90M

B51M. Bread Van

The method of mounting the Magic Motor in position is shown in Fig. B51Ma. The horse travels on a 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.

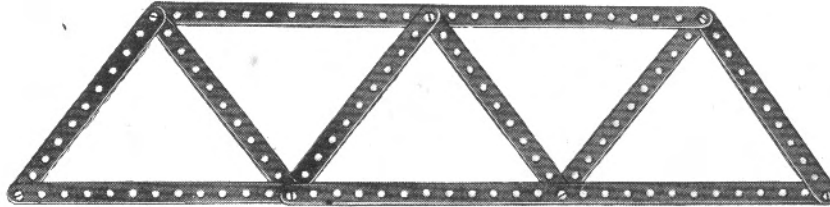
C1. Band Brake



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

C4. Compound Triangulated Truss



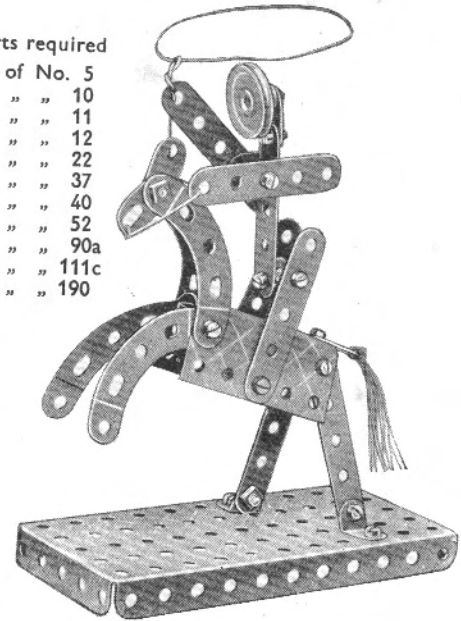
Parts required

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

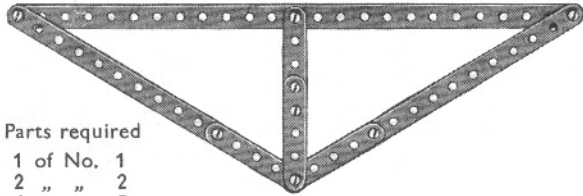
C7. Mounted Cowboy

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



C2. Triangulated Truss



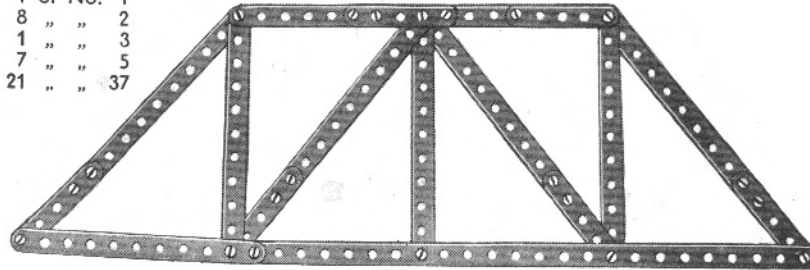
Parts required

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

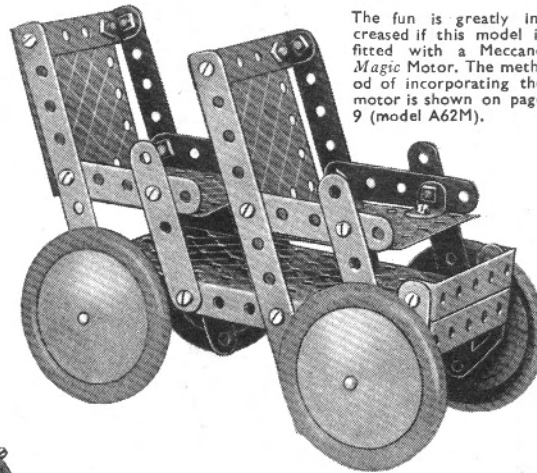
Parts required

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

C5. Howe Truss



C6. Tandem Car

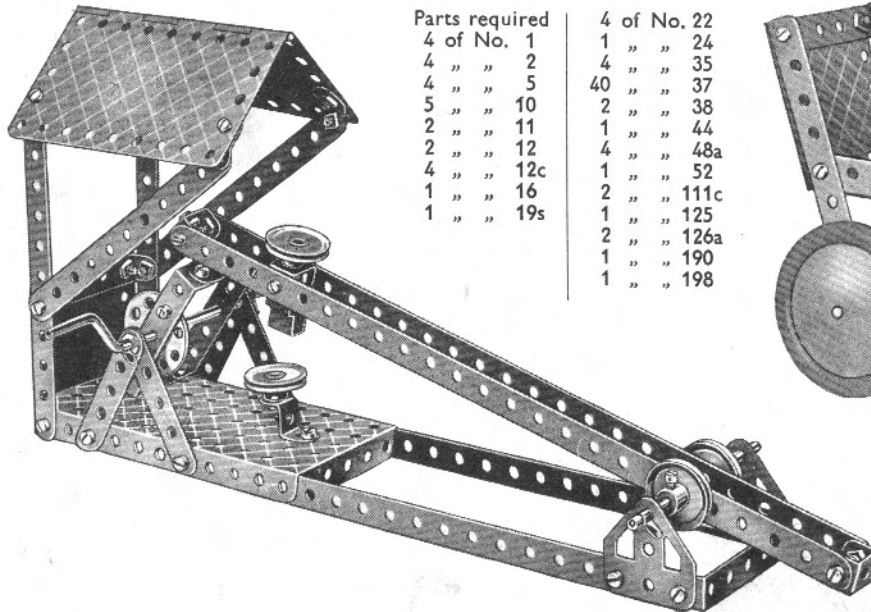


The fun is greatly increased if this model is fitted with a Meccano Magic Motor. The method of incorporating the motor is shown on page 9 (model A62M).

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

C3. Helve Hammer



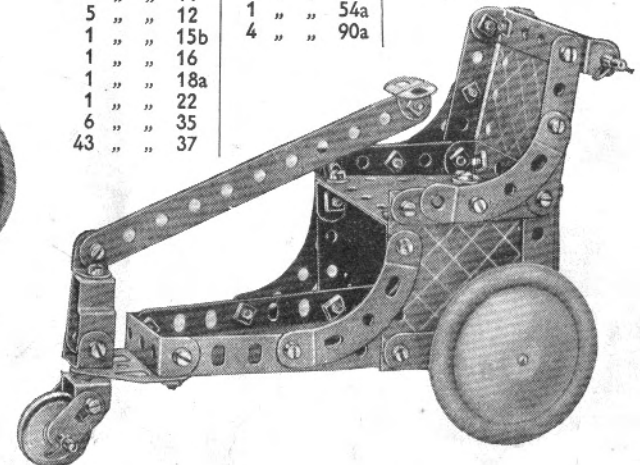
Parts required

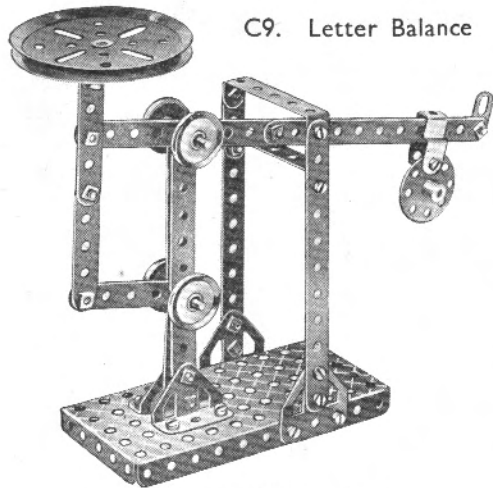
- 4 of No. 1
- 4 " " 2
- 4 " " 5
- 5 " " 10
- 2 " " 11
- 2 " " 12
- 4 " " 12c
- 1 " " 16
- 1 " " 19s
- 4 of No. 22
- 1 " " 24
- 4 " " 35
- 40 " " 37
- 2 " " 38
- 1 " " 44
- 4 " " 48a
- 1 " " 52
- 2 " " 111c
- 1 " " 125
- 2 " " 126a
- 1 " " 190
- 1 " " 198

C8. Bath Chair

Parts required

- 1 of No. 2
- 9 " " 5
- 4 " " 10
- 2 " " 11
- 5 " " 12
- 1 " " 12b
- 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

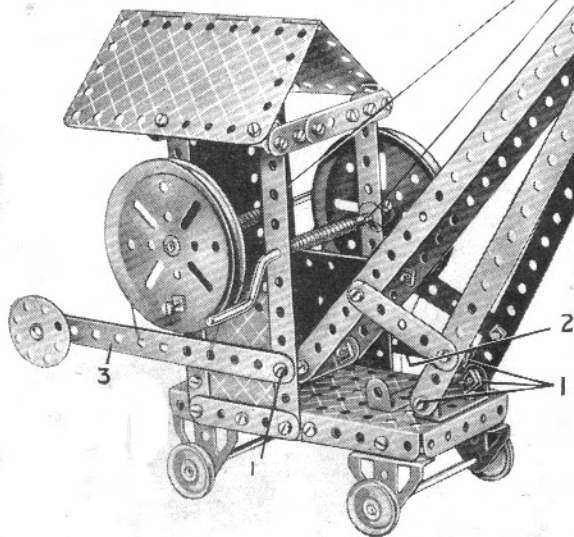
6 of No.	2
4 " "	5
1 " "	10
1 " "	12
2 " "	18a
1 " "	19b
4 " "	22
1 " "	24
2 " "	35
26 " "	37
4 " "	37a
2 " "	38
1 " "	44
2 " "	48a
1 " "	52
2 " "	111c
2 " "	126
2 " "	126a

C10. Travelling Crane

Parts required

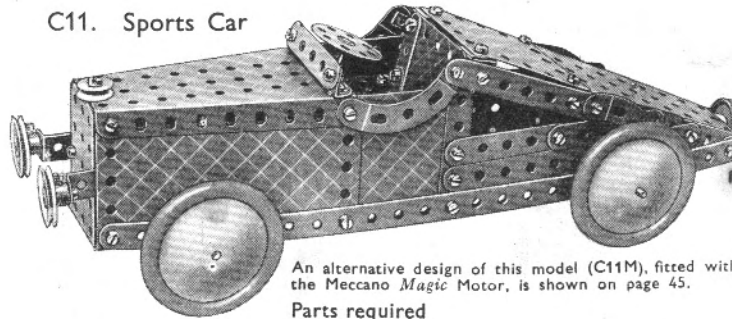
4 of No.	1	4 of No.	22	1 of No.	111a
5 " "	2	1 " "	23	1 " "	111c
9 " "	5	1 " "	24	2 " "	125
1 " "	11	4 " "	35	2 " "	126
8 " "	12	55 " "	37	2 " "	126a
1 " "	15b	6 " "	37a	1 " "	176
2 " "	16	1 " "	48	2 " "	190
1 " "	18a	3 " "	48a	1 " "	191
1 " "	19s	1 " "	52	1 " "	197
2 " "	19b	1 " "	57c		

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



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 12 1/2" Strips forming the jib are held apart by two 1/2" Reversed Angle Brackets bolted together.

C11. Sports Car

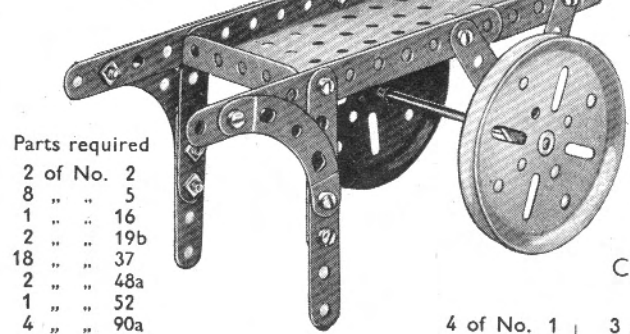


An alternative design of this model (C11M), fitted with the Meccano Magic Motor, is shown on page 45.

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
4 " "	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				

C12. Luggage Truck



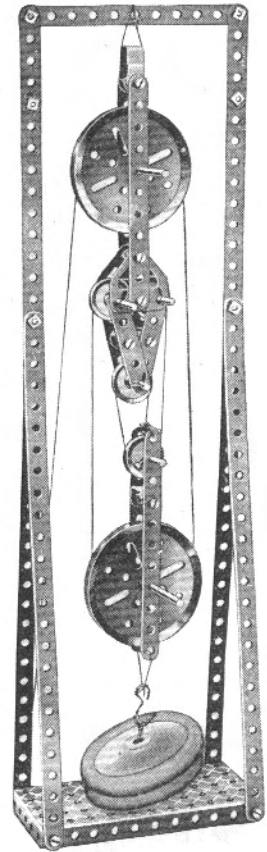
Parts required

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

C13. Pulley Block, 5:1

Parts required

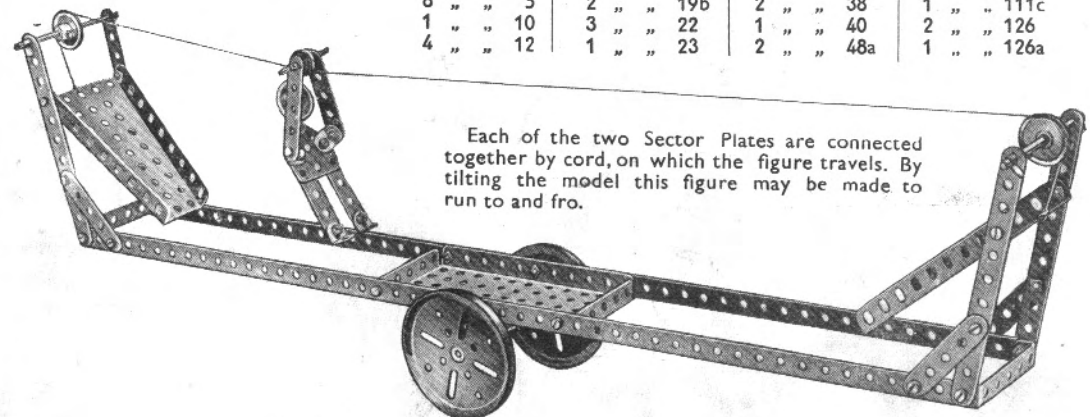
4 of No.	1
7 " "	2
6 " "	5
2 " "	11
2 " "	12
2 " "	16
2 " "	17
2 " "	18a
2 " "	19b
4 " "	22
6 " "	35
24 " "	37
2 " "	38
1 " "	40
1 " "	44
1 " "	52
1 " "	57c
2 " "	126a
2 " "	187



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.

C15. Butter Churn

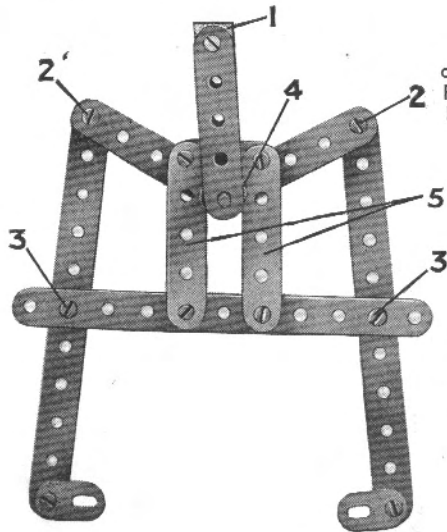


Parts required

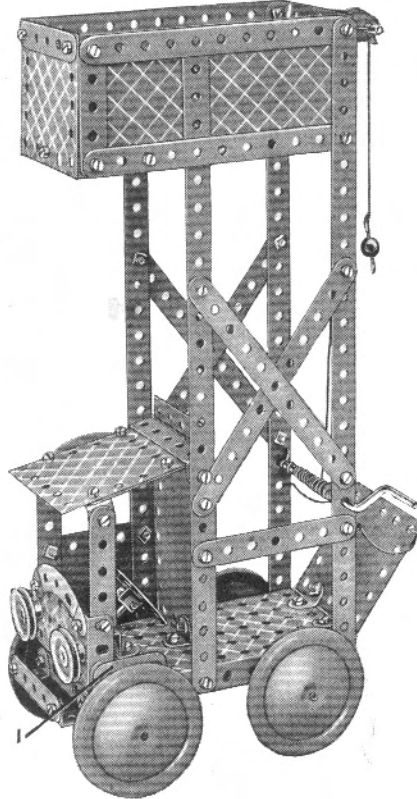
4 of No. 1
8 " " 2
1 " " 3
9 " " 5
2 " " 11
7 " " 12
2 " " 12c
1 " " 15b
1 " " 16
2 " " 18a
1 " " 19s
2 " " 22
1 " " 23
1 " " 24
1 " " 24
6 " " 35
61 " " 37
3 " " 38
1 " " 40
1 " " 44
6 " " 48a
1 " " 51
1 " " 52
1 " " 57c
2 " " 90a
2 " " 111c
1 " " 125
2 " " 126
2 " " 126a
4 " " 187
4 " " 190
1 " " 191
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 $2\frac{1}{2}$ " Strip 5, and the grip closes upon the blocks 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	3 of No. 190
2 of No. 1	2 " " 191
8 " " 2	1 " " 198
1 " " 3	
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.

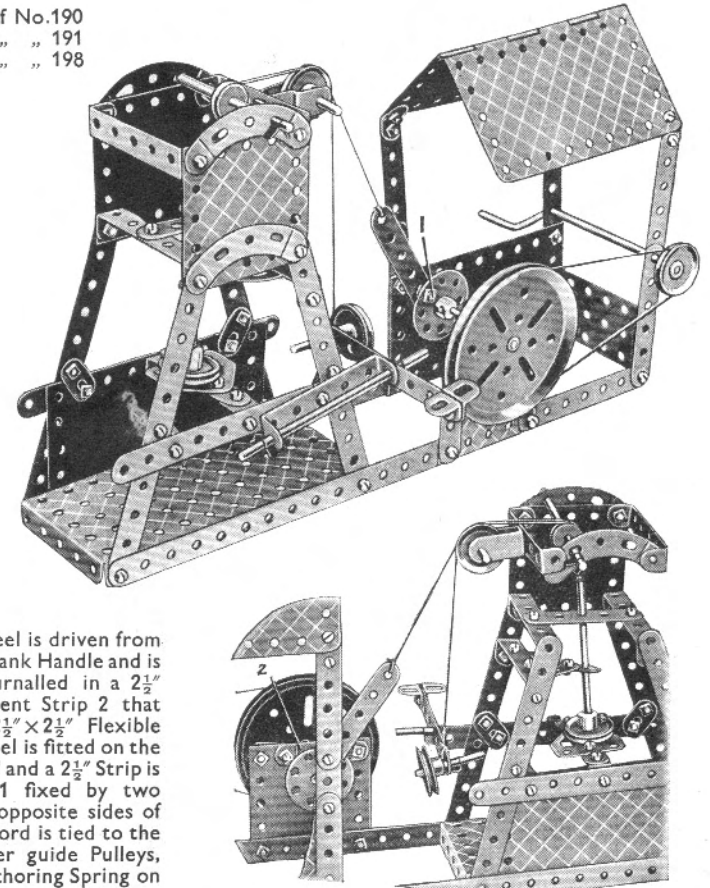
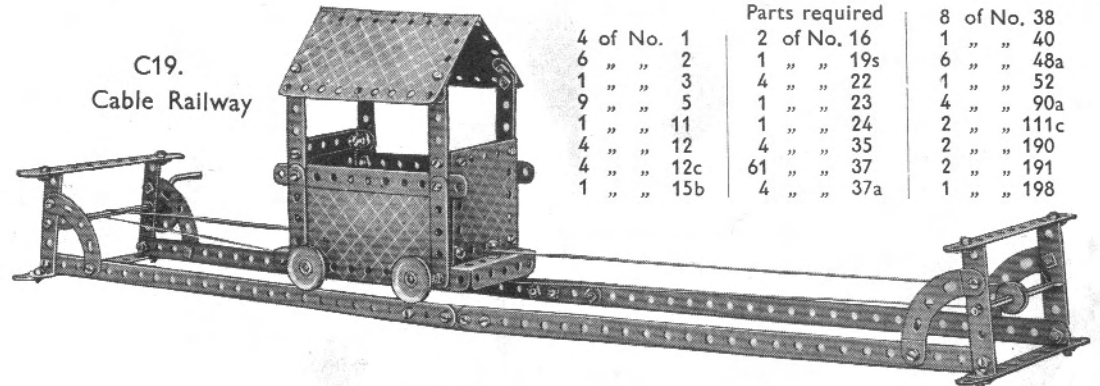


Fig. C18a

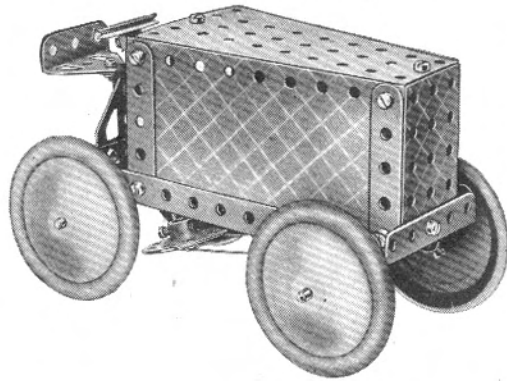
C19. Cable Railway



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



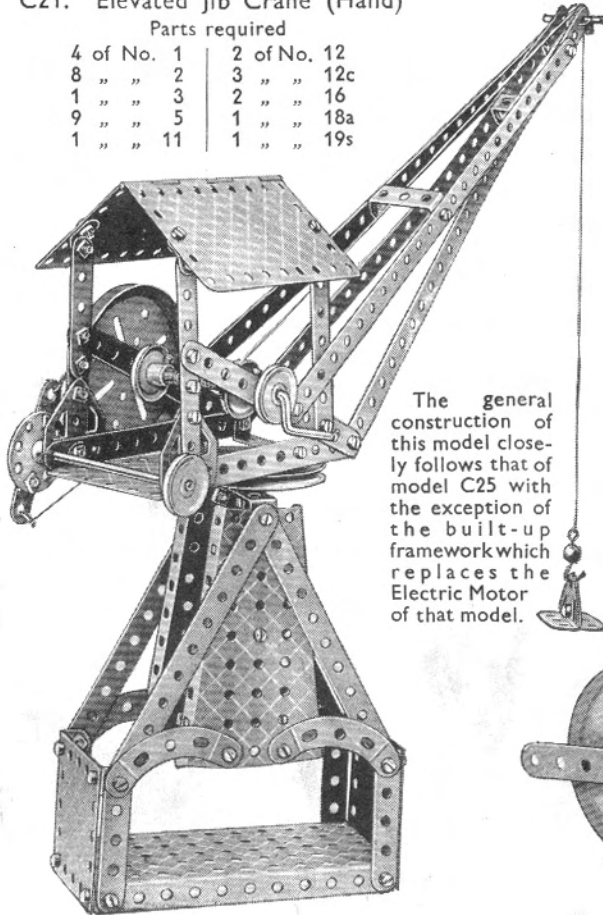
Parts required

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

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

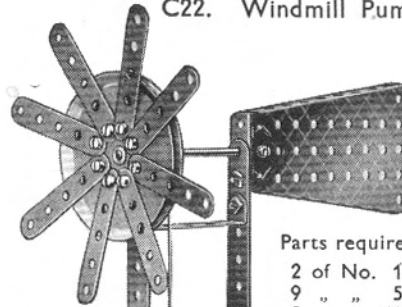


The general construction of this model closely follows that of model C25 with the exception of the built-up framework which replaces the Electric Motor of that model.

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

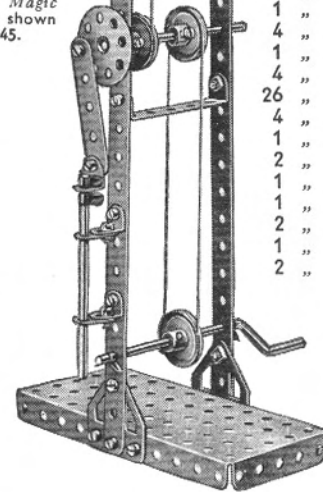
C22. Windmill Pump



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

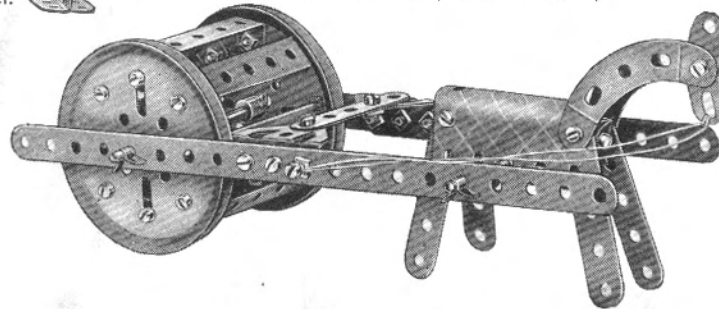
An alternative design of this model (C22M), fitted with the Meccano Magic Motor, is shown on page 45.



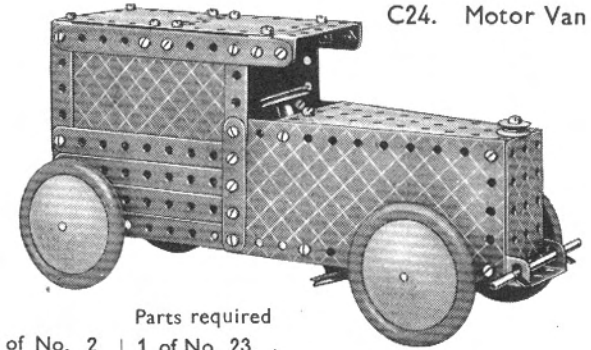
C23. Field Roller

Parts required

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



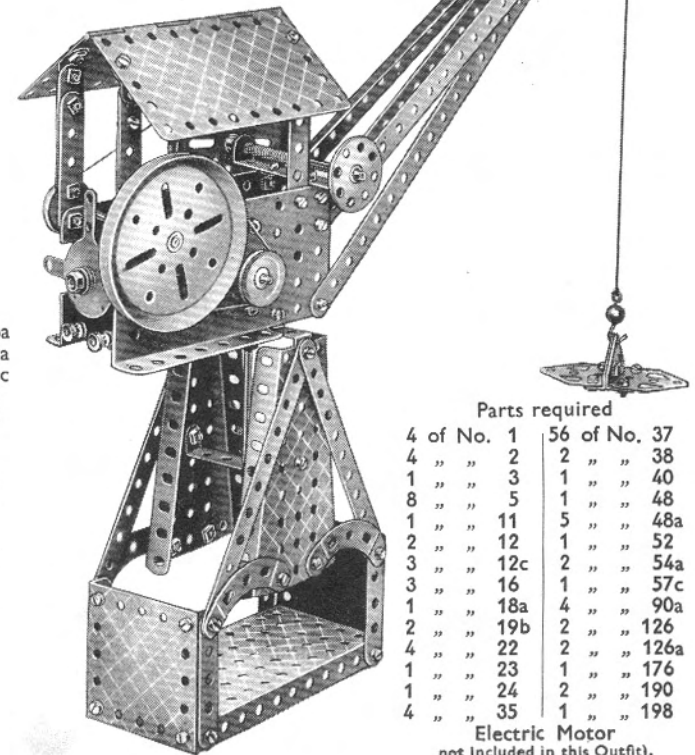
C24. Motor Van



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
3	" " 111c		
4	" " 187		
4	" " 190		
2	" " 191		
2	" " 192		

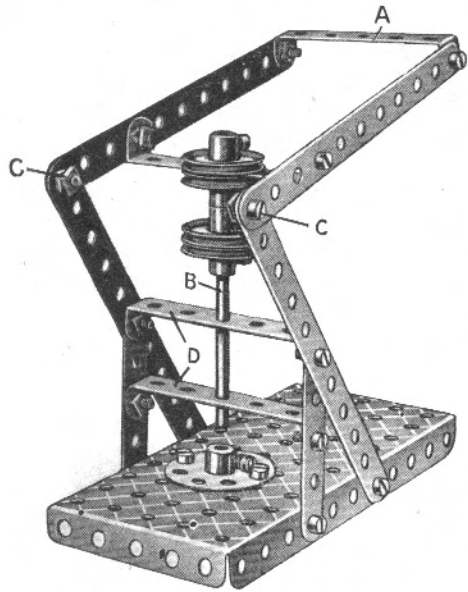
C25. Elevated Jib Crane (Electric)



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

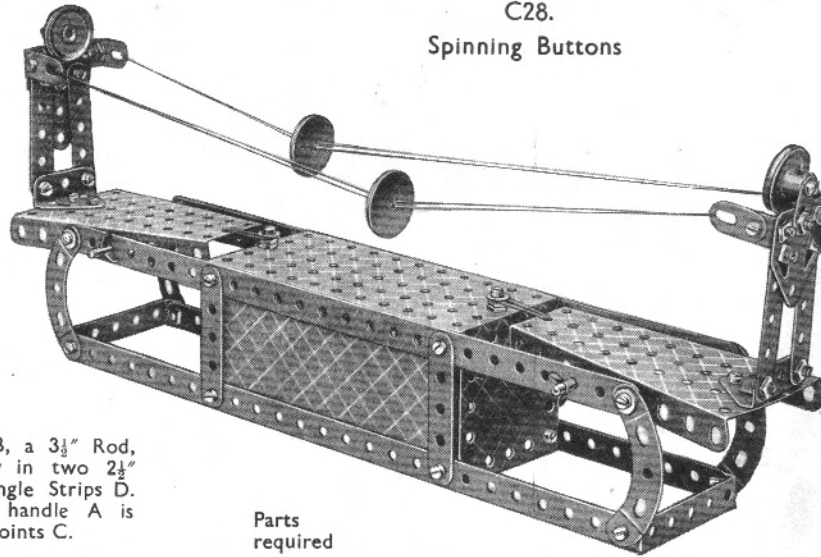
Electric Motor not included in this outfit).



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 3½" Rod, slides vertically in two 2½" x ½" Double Angle Strips D. The operating handle A is pivoted at the points C.



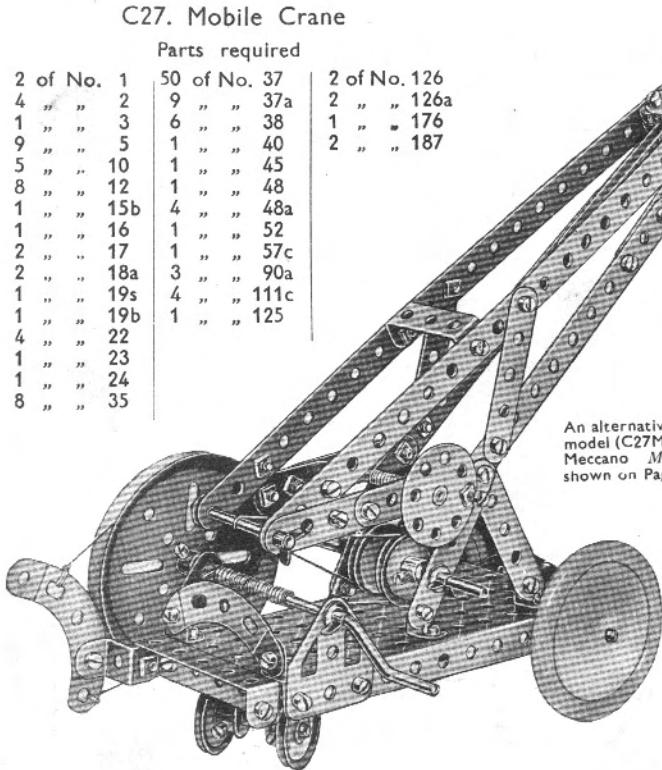
C28.
Spinning Buttons

Parts
required

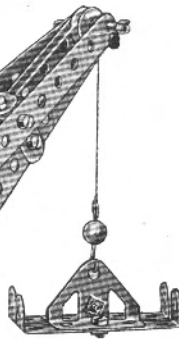
- | | | |
|------------|--------------|--------------|
| 4 of No. 1 | 47 of No. 37 | 4 of No. 90a |
| 9 " " 5 | 6 " " 37a | 4 " " 111c |
| 5 " " 10 | 6 " " 38 | 2 " " 126 |
| 4 " " 12 | 4 " " 48a | 2 " " 126a |
| 2 " " 16 | 1 " " 52 | 2 " " 190 |
| 2 " " 22 | 2 " " 54a | 2 " " 192 |
| 4 " " 35 | | |

C27. Mobile Crane

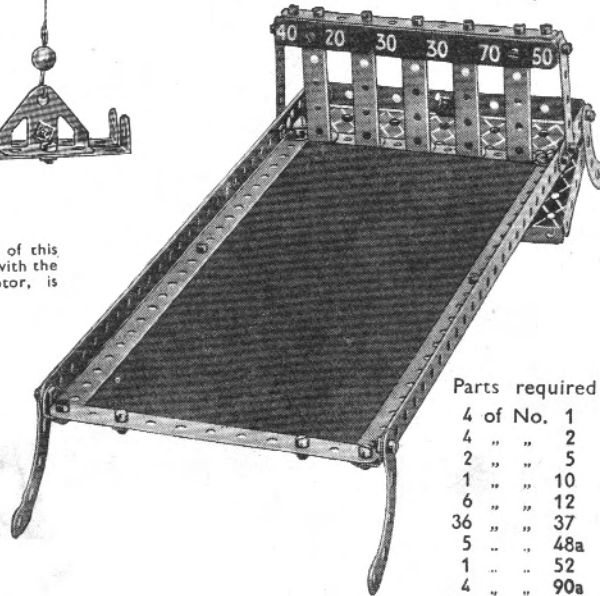
- Parts required
- | | | |
|------------|--------------|--------------|
| 2 of No. 1 | 50 of No. 37 | 2 of No. 126 |
| 4 " " 2 | 9 " " 37a | 2 " " 126a |
| 1 " " 3 | 6 " " 38 | 1 " " 176 |
| 9 " " 5 | 1 " " 40 | 2 " " 187 |
| 5 " " 10 | 1 " " 45 | |
| 8 " " 12 | 1 " " 48 | |
| 1 " " 15b | 4 " " 48a | |
| 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.



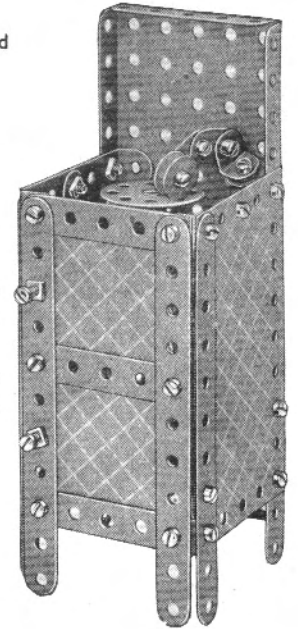
C29. Box Ball Alley



Parts required

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

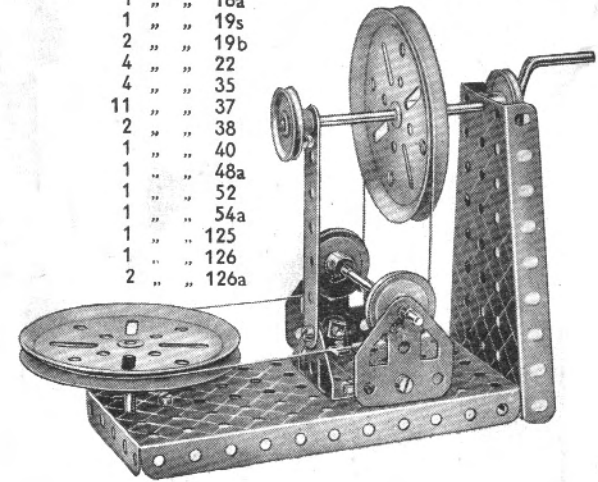
C30.
Gramophone



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

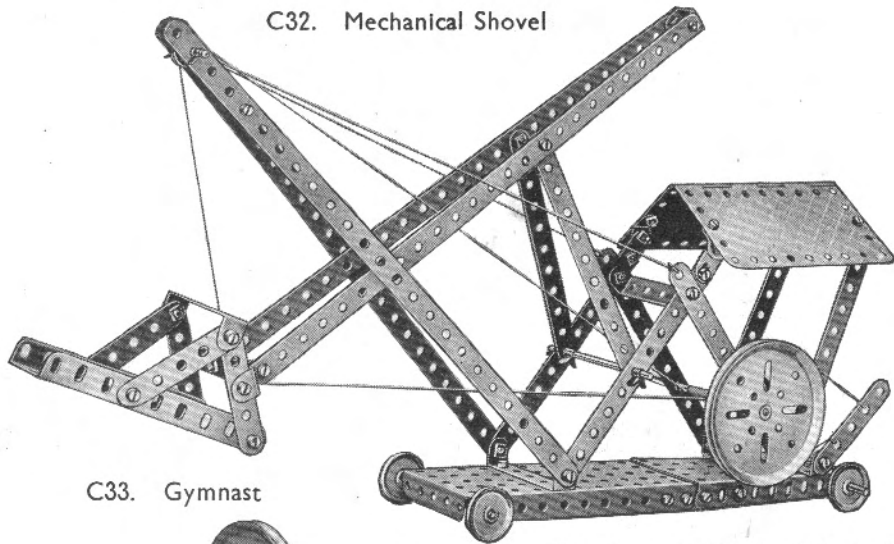
C31.
Belt Gear



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

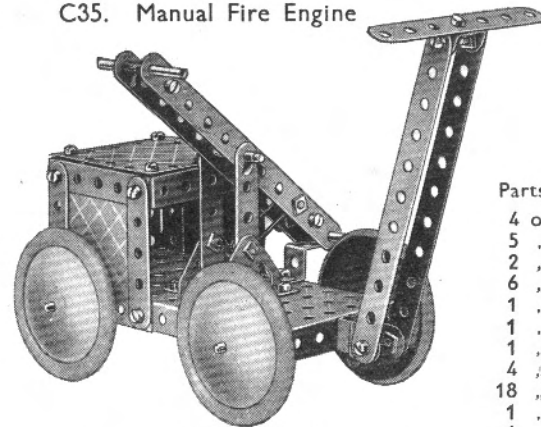
C32. Mechanical Shovel



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
1	" " 176
1	" " 198

C35. Manual Fire Engine



Parts required

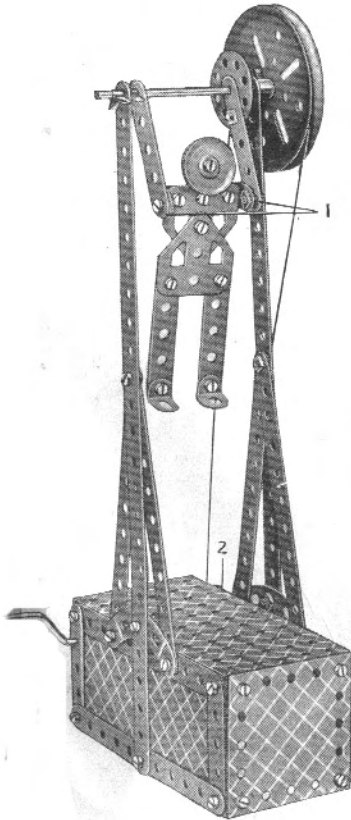
4	of No. 2	1	of No. 18a	1	of No. 52
1	" " 3	6	" " 35	2	" " 111c
8	" " 5	34	" " 37	1	" " 125
2	" " 11	6	" " 37a	2	" " 126
6	" " 12	1	" " 38	1	" " 186
2	" " 15b	1	" " 45	4	" " 187
2	" " 17	2	" " 48a	4	" " 190

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

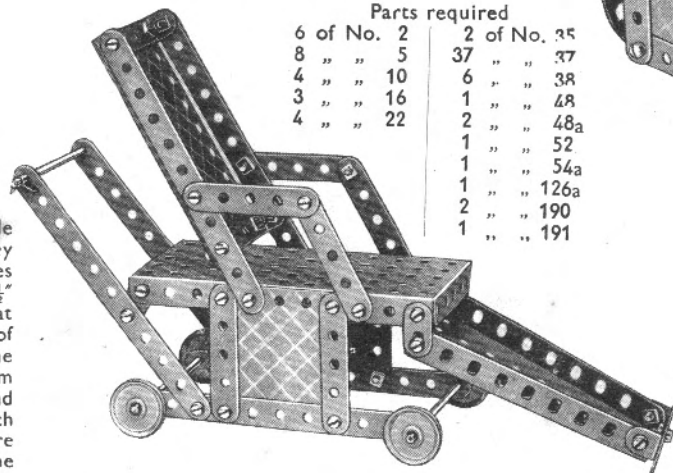


Parts required

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 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.

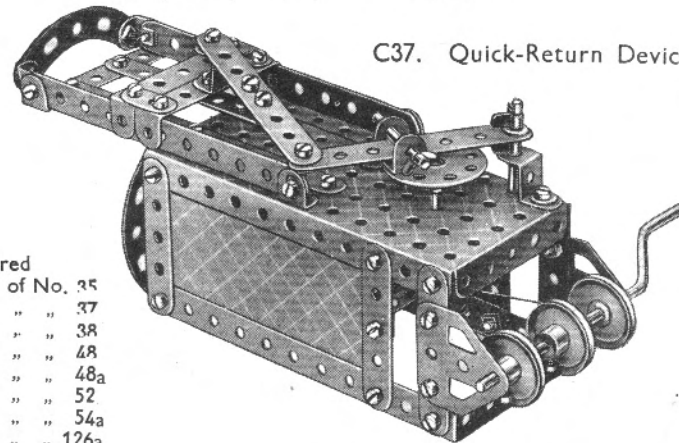
C34. Invalid Chair



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

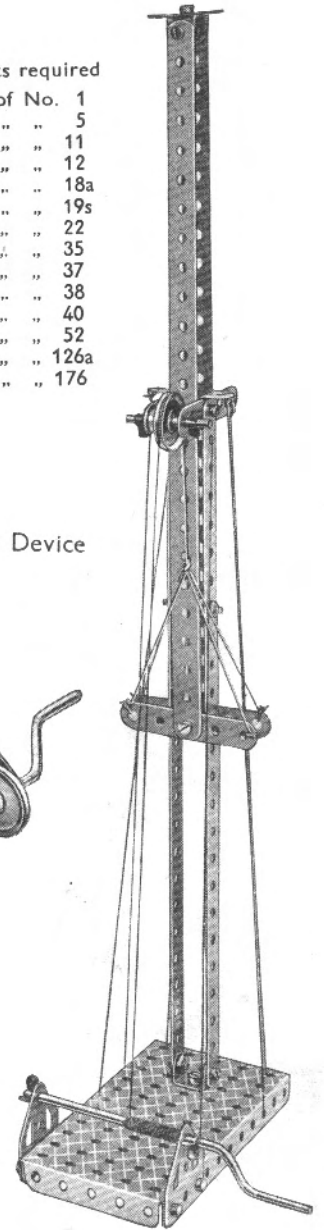
C37. Quick-Return Device



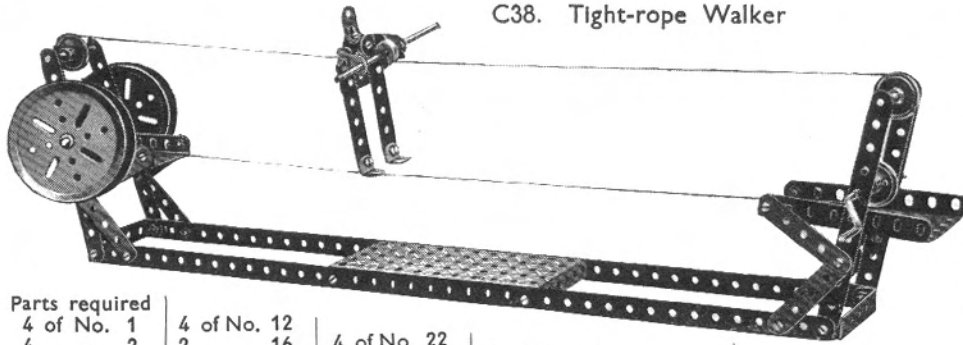
Parts required

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

A Crank Handle carries a 1" Pulley Wheel 2 that drives a 3" Pulley on a 3 1/2" Rod journalled at the top of a pair of 12 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.



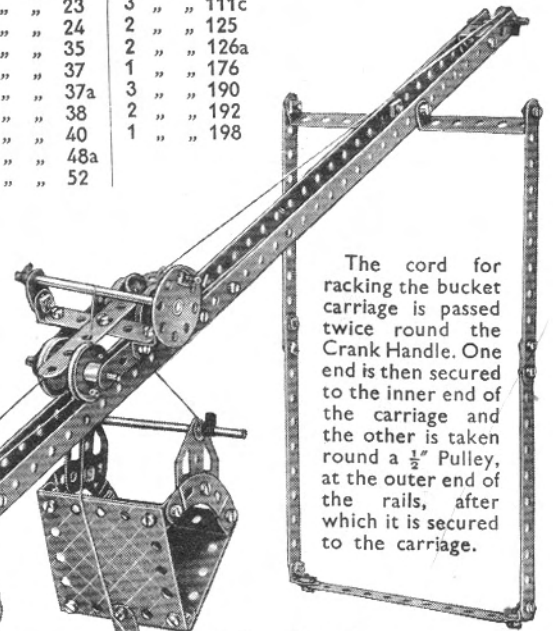
C38. Tight-rope Walker



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 " " 3	2 " " 17	8 " " 35	2 " " 48a		
9 " " 5	1 " " 19s	32 " " 37			
3 " " 10	2 " " 19b				

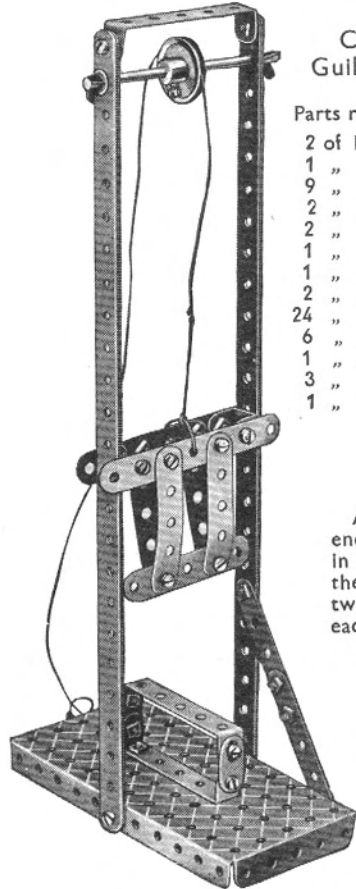
The endless cord is first passed round four 1" fast Pulleys the two ends then being attached to one foot of the figure that is supported by a 1/2" Pulley running along the upper section of the cord.

4 of No. 1	4 of No. 22	4 of No. 90a
7 " " 2	1 " " 23	3 " " 111c
1 " " 3	1 " " 24	2 " " 125
9 " " 5	8 " " 35	2 " " 126a
5 " " 10	66 " " 37	1 " " 176
2 " " 11	5 " " 37a	3 " " 190
6 " " 12	3 " " 38	2 " " 192
2 " " 12c	1 " " 40	1 " " 198
1 " " 16	5 " " 48a	
2 " " 16	1 " " 52	
2 " " 17		
1 " " 18a		
1 " " 19s		
2 " " 19b		

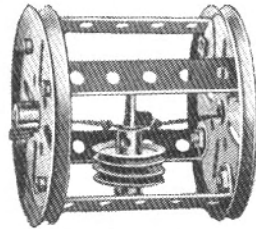


The cord for racking the bucket carriage is passed twice round the Crank Handle. One end is then secured to the inner end of the carriage and the other is taken round a 1/2" Pulley, at the outer end of the rails, after which it is secured to the carriage.

C39. Guillotine



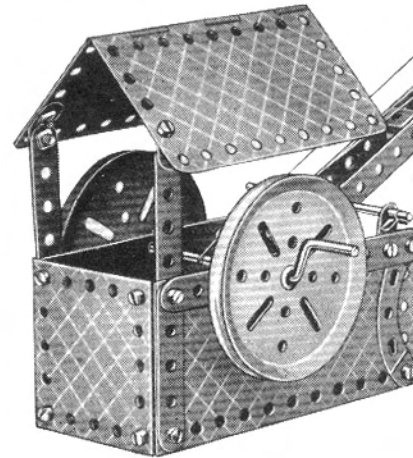
Parts required	
2 of No. 1	
1 " " 3	
9 " " 5	
2 " " 10	
2 " " 11	
1 " " 16	
1 " " 22	
2 " " 35	
24 " " 37	
6 " " 38	
1 " " 40	
3 " " 48a	
1 " " 52	



C40. Cum Bak

Parts required	
1 of No. 18a	
2 " " 19b	
1 " " 22	
2 " " 35	
4 " " 37	
8 " " 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 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

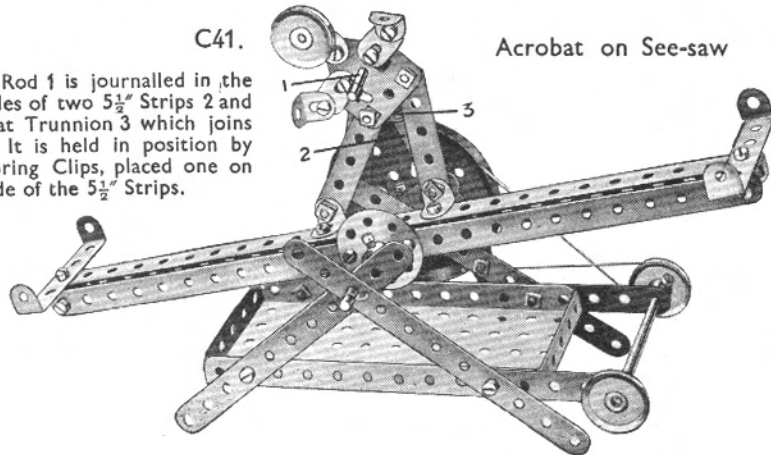


C43. Telephone

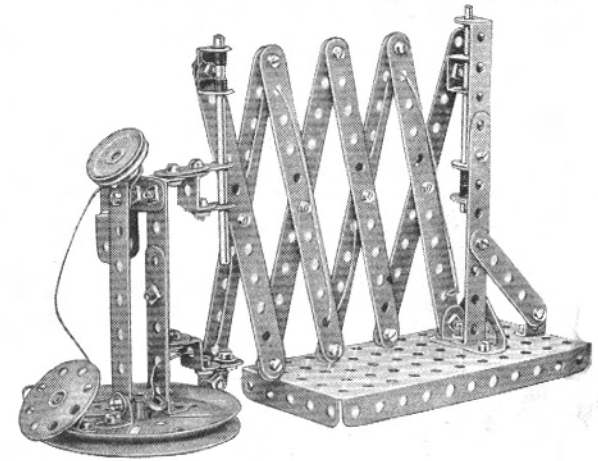
8 of No. 2	1 of No. 19b	1 of No. 40
1 " " 3	1 " " 22	1 " " 44
4 " " 5	1 " " 24	5 " " 48a
5 " " 10	4 " " 35	1 " " 52
2 " " 11	37 " " 37	4 " " 111c
8 " " 12	20 " " 37a	2 " " 125
2 " " 16	4 " " 38	1 " " 126

C41. Acrobat on See-saw

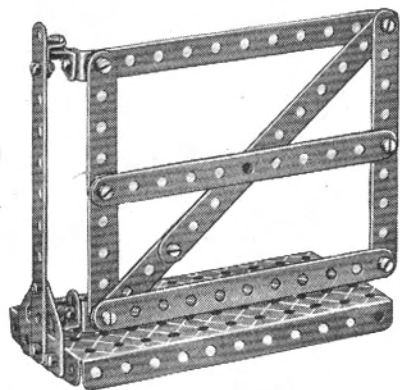
A 1" Rod 1 is journaled in the end holes of two 5 1/2" Strips 2 and in a Flat Trunnion 3 which joins them. It is held in position by two Spring Clips, placed one on each side of the 5 1/2" Strips.



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	



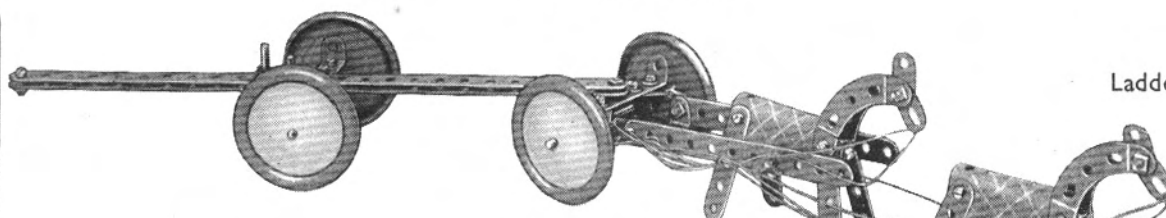
C44. Gate



Parts required

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

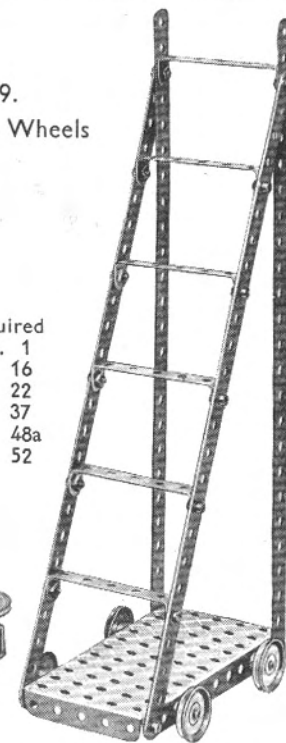
C46. Timber Drag



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	

C49.

Ladder on Wheels



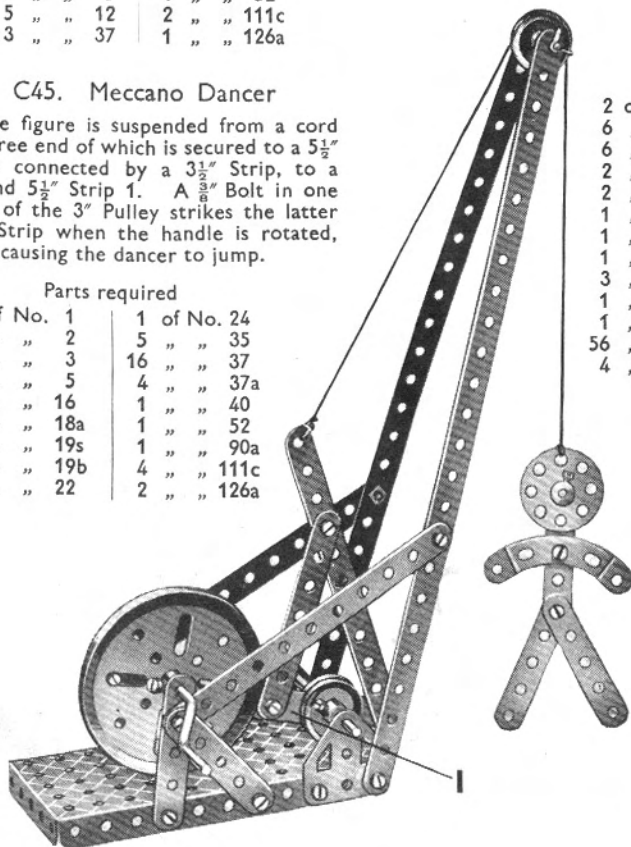
Parts required	4 of No. 1
2 " " 16	
4 " " 22	
16 " " 37	
6 " " 48a	
1 " " 52	

C45. Meccano Dancer

The figure is suspended from a cord the free end of which is secured to a 5½" Strip connected by a 3½" Strip, to a second 5½" Strip 1. A ⅜" Bolt in one hole of the 3" Pulley strikes the latter 5½" Strip when the handle is rotated, thus causing the dancer to jump.

Parts required

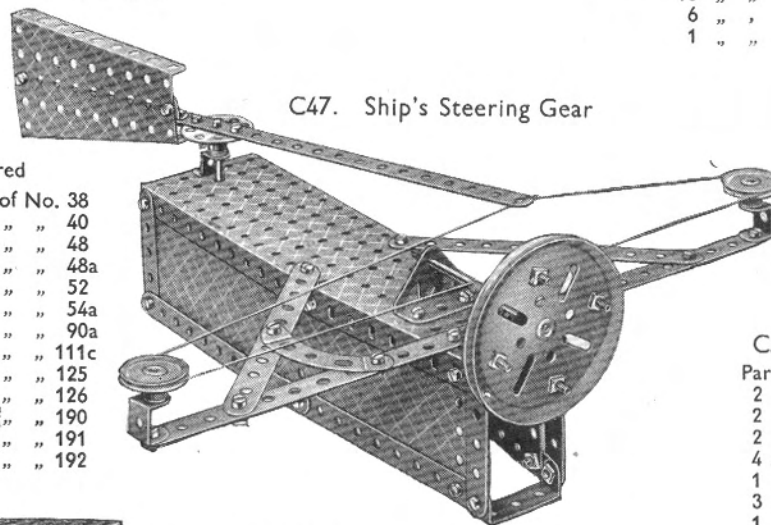
2 of No. 1	1 of No. 24
4 " " 2	5 " " 35
1 " " 3	16 " " 37
7 " " 5	4 " " 37a
1 " " 16	1 " " 40
1 " " 18a	1 " " 52
1 " " 19s	1 " " 90a
1 " " 19b	4 " " 111c
3 " " 22	2 " " 126a



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

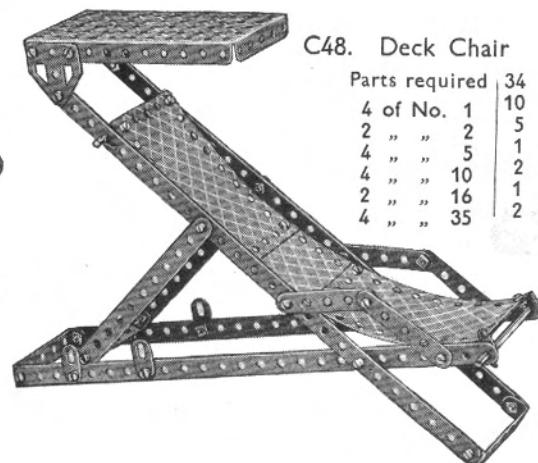
C47. Ship's Steering Gear



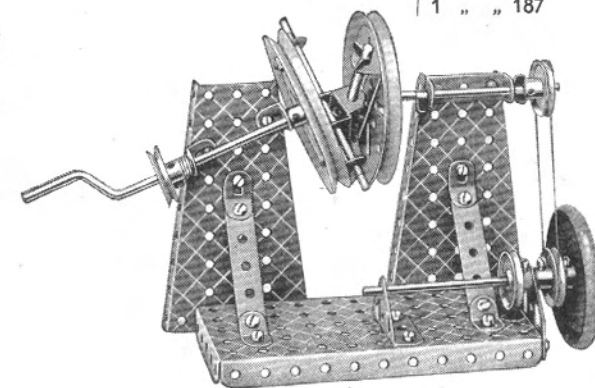
C50. Hooke's Coupling

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

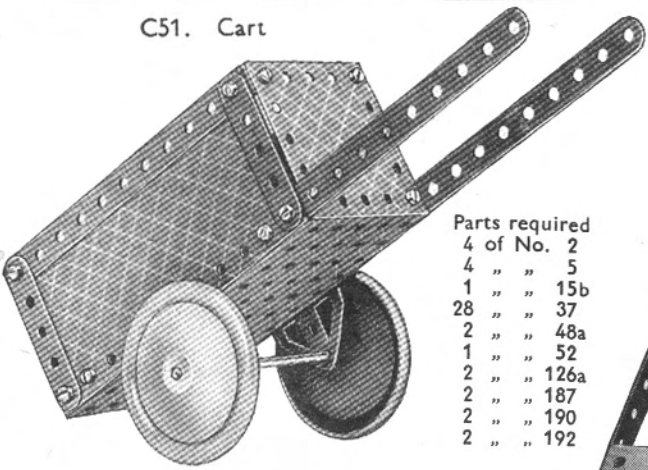
C48. Deck Chair



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



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

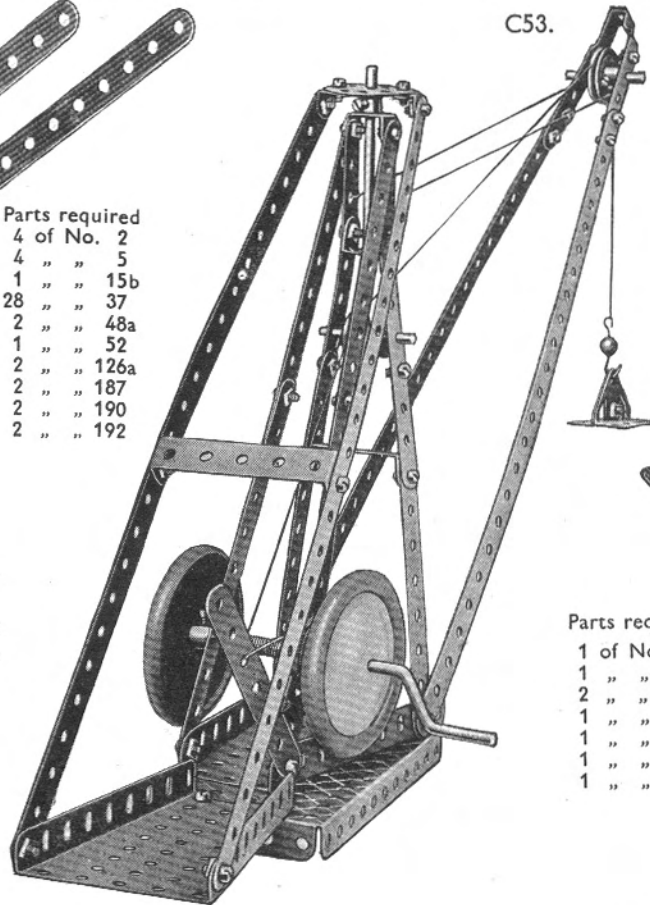
6 of No. 2	4 of No. 22	6 of No. 48a
8 " " 5	1 " " 24	1 " " 52
4 " " 10	2 " " 35	6 " " 111c
8 " " 12	44 " " 37	2 " " 126a
1 " " 16	12 " " 37a	2 " " 190
1 " " 19s	6 " " 38	2 " " 191
	1 " " 40	



Parts required

4 of No. 1	2 of No. 37a	2 of No.126
6 " " 2	1 " " 40	2 " " 126a
9 " " 5	1 " " 48	1 " " 176
5 " " 10	3 " " 48a	4 " " 190
2 " " 11	1 " " 51	2 " " 191
4 " " 12	1 " " 52	2 " " 192
1 " " 15b	1 " " 54a	
2 " " 16	4 " " 90a	
1 " " 17	2 " " 111c	
2 " " 19b		
3 " " 22		
1 " " 23		
6 " " 35		
58 " " 37		

C53. Jib Crane



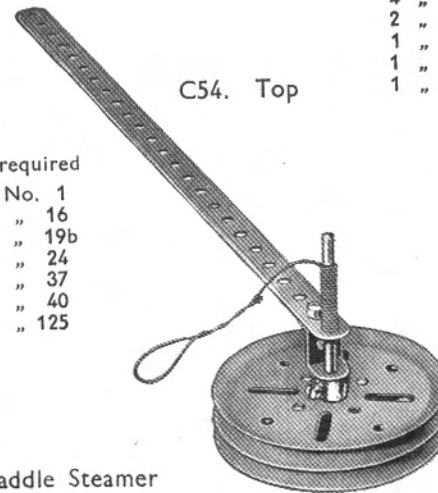
Parts required

4 of No. 1	32 o. No.37
8 " " 2	2 " " 37a
1 " " 3	3 " " 38
2 " " 5	1 " " 40
2 " " 11	1 " " 44
2 " " 12	1 " " 48
1 " " 16	1 " " 48a
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	

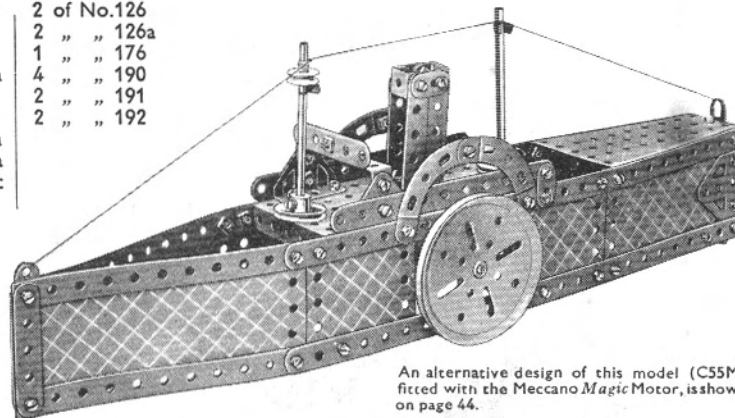
C54. Top

Parts required

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

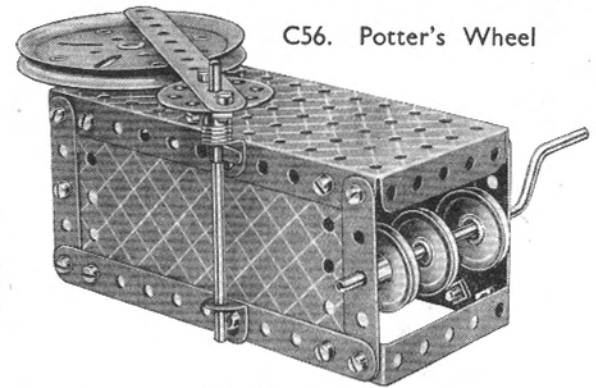


C55. Paddle Steamer



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

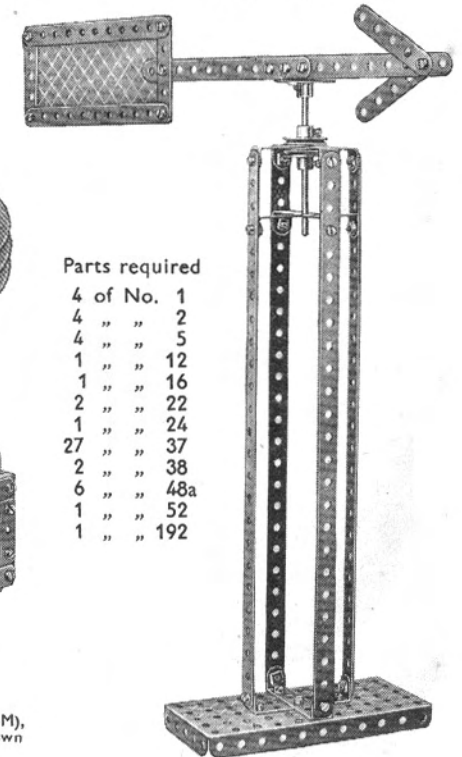
C56. Potter's Wheel



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	

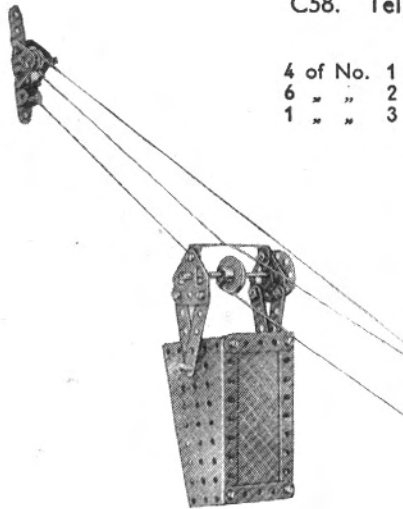
C57. Weather Vane



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)



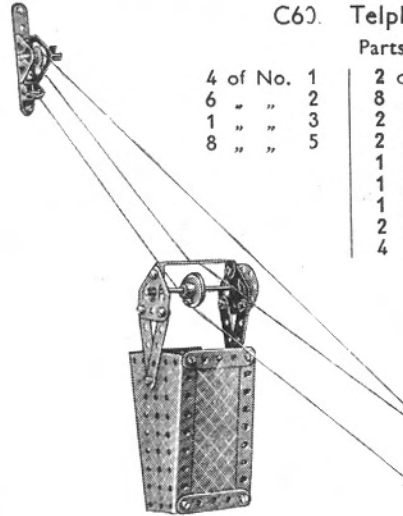
4 of No.	1
6 " "	2
1 " "	3

Parts required

8 of No.	5	1 of No.	24
2 " "	11	8 " "	35
8 " "	12	61 " "	37
2 " "	12c	4 " "	37a
3 " "	16	7 " "	38
1 " "	17	1 " "	40
1 " "	18a	1 " "	48
2 " "	19b	3 " "	48a
4 " "	22	1 " "	52
1 " "	23	2 " "	54a
		2 " "	90a
		2 " "	111c
		2 " "	126
		2 " "	126a
		1 " "	176
		2 " "	191
		1 " "	198
		E6. Electric	
		Motor	
		(not included in	
		Outfit)	

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.

C60. Telpher Span (Hand)

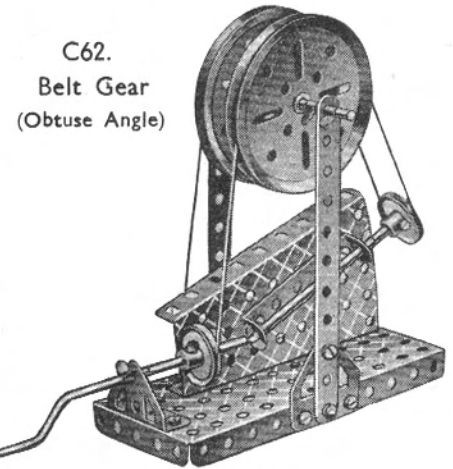


4 of No.	1
6 " "	2
1 " "	3
8 " "	5

Parts required

2 of No.	11	1 of No.	23
8 " "	12	1 " "	24
2 " "	12c	6 " "	35
2 " "	16	53 " "	37
1 " "	17	4 " "	37a
1 " "	18a	5 " "	38
1 " "	19s	1 " "	40
2 " "	19b	1 " "	48
4 " "	22	3 " "	48a
		1 " "	52
		2 " "	54a
		2 " "	90a
		2 " "	111c
		2 " "	126
		2 " "	126a
		1 " "	176
		2 " "	191
		1 " "	198

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

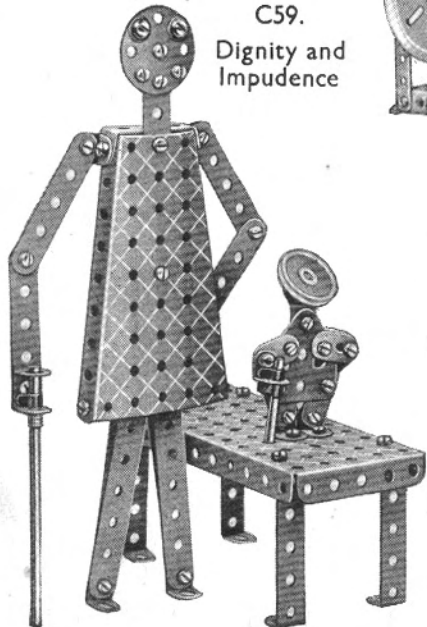


C62. Belt Gear (Obtuse Angle)

Parts required

2 of No.	2	2 of No.	38
1 " "	12	1 " "	40
2 " "	16	1 " "	48a
1 " "	19s	1 " "	52
2 " "	19b	1 " "	54a
2 " "	22	1 " "	126
8 " "	35	2 " "	126a
15 " "	37		

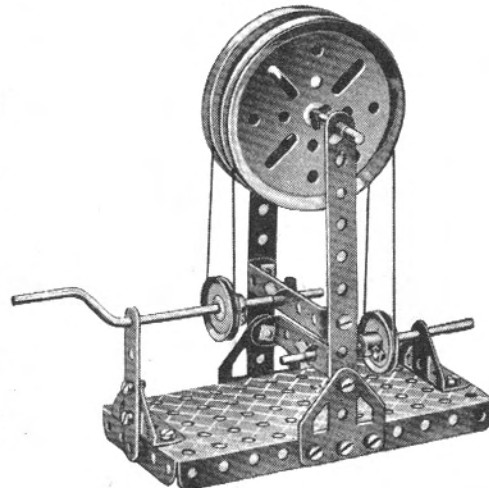
C59. Dignity and Impudence



Parts required

5 of No.	2
3 " "	5
5 " "	10
2 " "	11
8 " "	12
1 " "	16
2 " "	17
1 " "	22
4 " "	35
31 " "	37
1 " "	48
4 " "	48a
2 " "	52
2 " "	54a
2 " "	111c
2 " "	125
1 " "	126a

C61. Belt Gear (Shafts not in Line)



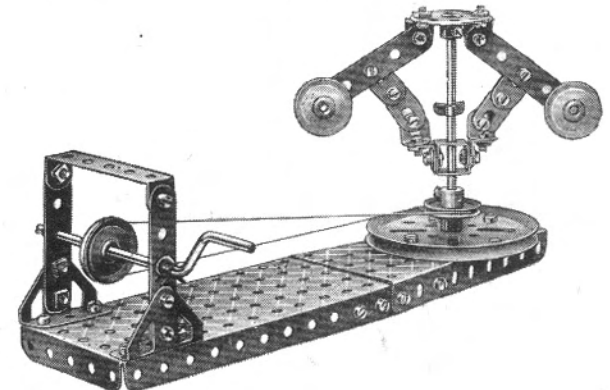
Parts required

2 of No.	2
1 " "	5
2 " "	16
1 " "	19s
2 " "	19b
2 " "	22
8 " "	35
16 " "	37
1 " "	40
2 " "	48a
1 " "	52
2 " "	126
2 " "	126a

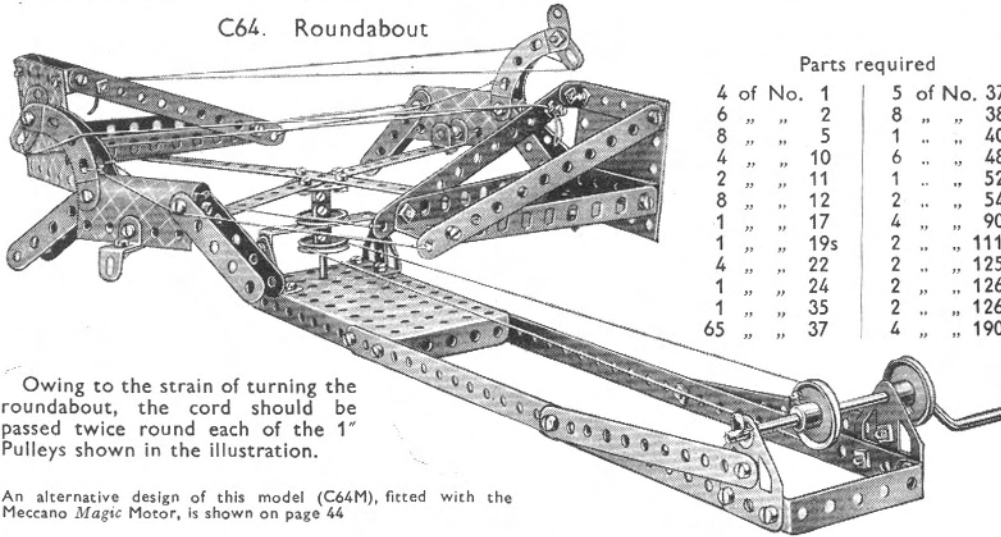
C63. Centrifugal Governor

Parts required

6 of No.	5	32 of No.	37
4 " "	10	10 " "	37a
2 " "	11	8 " "	38
6 " "	12	1 " "	40
1 " "	15b	1 " "	48a
1 " "	19s	1 " "	52
1 " "	19b	1 " "	54a
4 " "	22	4 " "	111c
1 " "	24	2 " "	126
3 " "	35		



C64. Roundabout



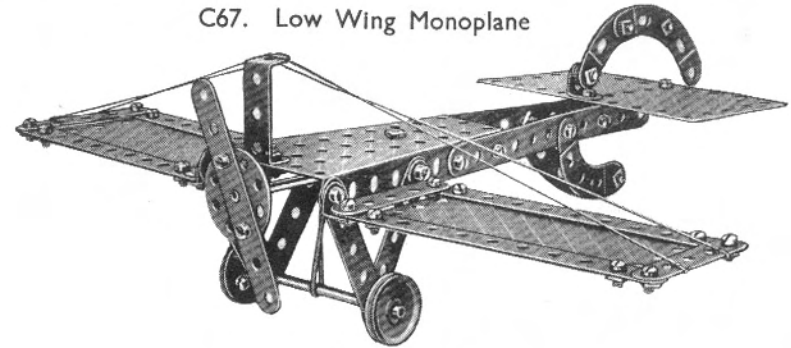
Owing to the strain of turning the roundabout, the cord should be passed twice round each of the 1" Pulleys shown in the illustration.

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

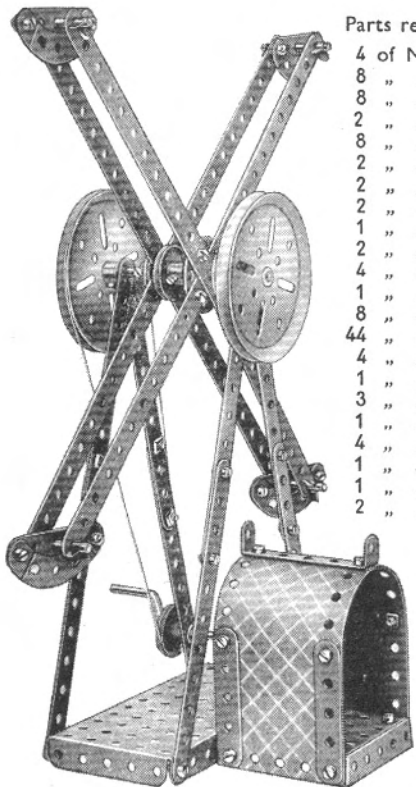
C67. Low Wing Monoplane



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

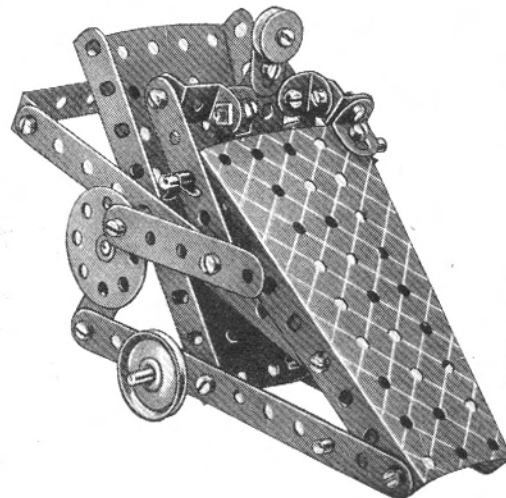


Parts required

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.



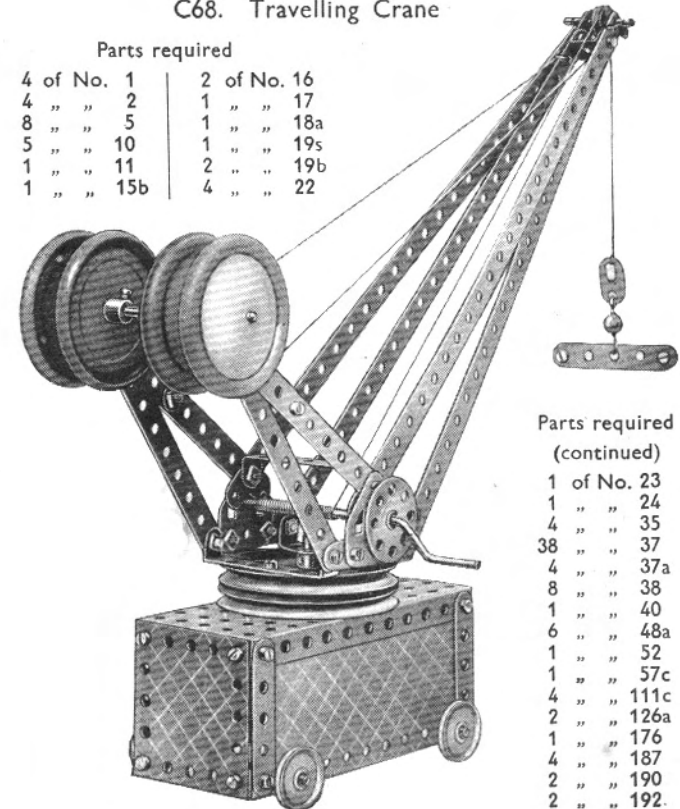
Parts required

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

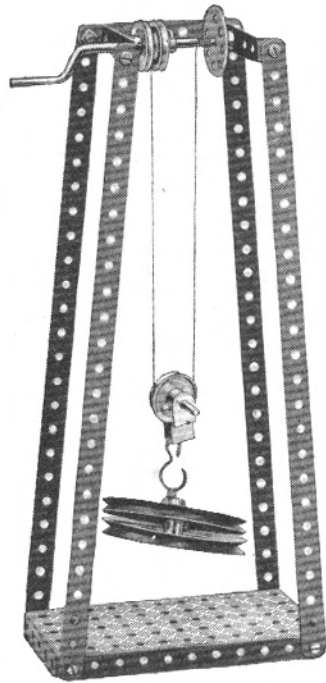
4 of No. 1	2 of No. 16
4 " " 2	1 " " 17
8 " " 5	1 " " 18a
5 " " 10	1 " " 19s
1 " " 11	2 " " 19b
1 " " 15b	4 " " 22

Parts required
(continued)

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

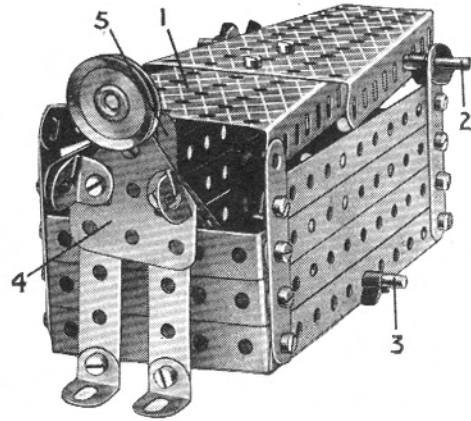
An alternative design of this model (C65M), fitted with the Meccano Magic Motor, is shown on page 45

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

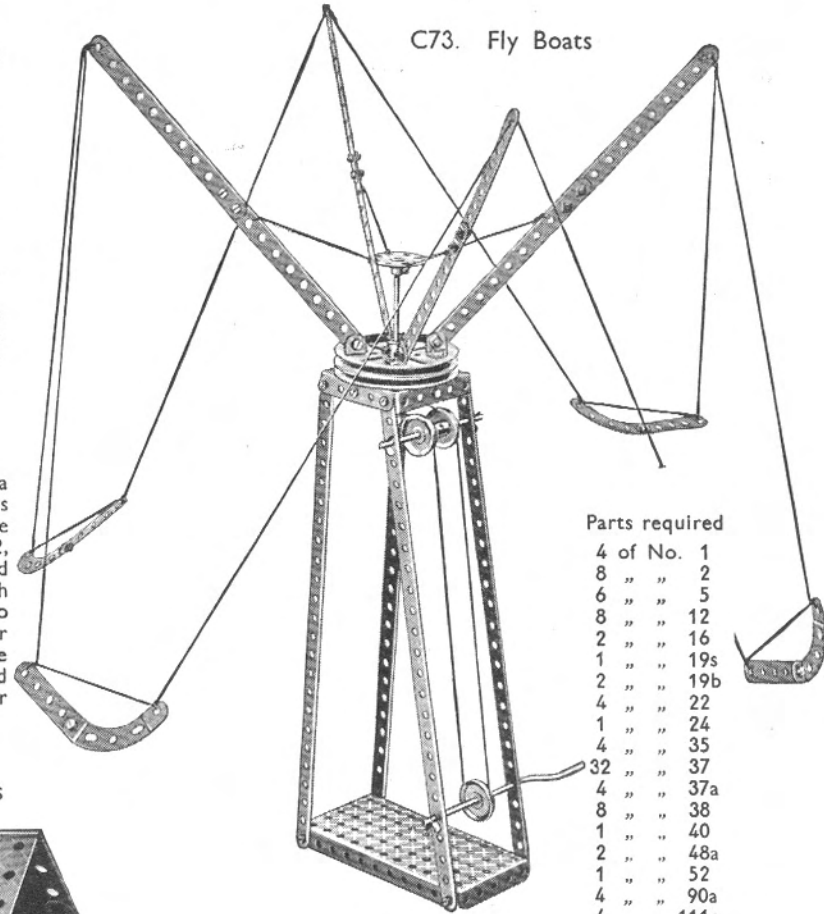
C71. Disappearing Meccanitian



- 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

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.

C73. Fly Boats

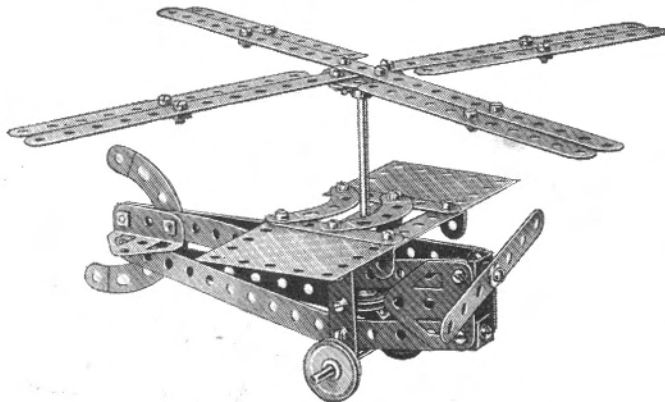


- Parts required
- 4 of No. 1
 - 8 " " 2
 - 6 " " 5
 - 8 " " 12
 - 2 " " 16
 - 1 " " 19s
 - 2 " " 19b
 - 4 " " 22
 - 1 " " 24
 - 4 " " 35
 - 32 " " 37
 - 4 " " 37a
 - 8 " " 38
 - 1 " " 40
 - 2 " " 48a
 - 1 " " 52
 - 4 " " 90a
 - 4 " " 111c

C70. Autogiro

Parts required

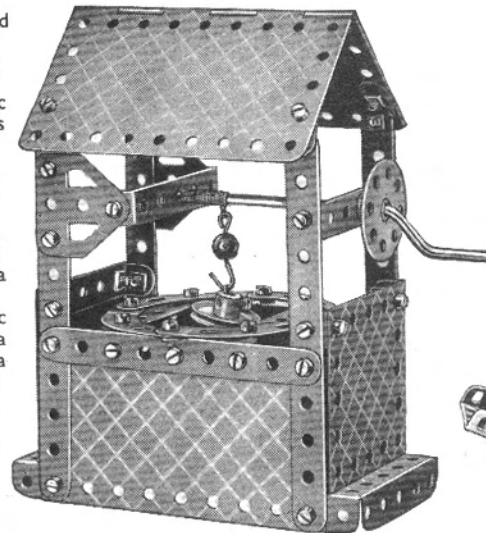
- | | | | |
|------------|-------------|--------------|--------------|
| 2 of No. 1 | 2 of No. 11 | 33 of No. 37 | 4 of No. 90a |
| 8 " " 2 | 2 " " 12 | 3 " " 37a | 2 " " 111c |
| 1 " " 3 | 2 " " 16 | 7 " " 38 | 2 " " 126 |
| 9 " " 5 | 4 " " 22 | 1 " " 48 | 2 " " 126a |
| 5 " " 10 | 1 " " 24 | 1 " "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



C72. Well Windlass

Parts required

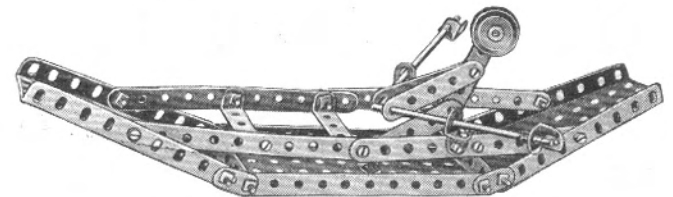
- 4 of No. 2
- 4 " " 5
- 4 " " 12c
- 1 " " 19s
- 1 " " 22
- 1 " " 24
- 1 " " 35
- 46 " " 37
- 1 " " 38
- 1 " " 40
- 6 " " 48a
- 1 " " 52
- 1 " " 57c
- 4 " " 90a
- 2 " " 126a
- 1 " " 176
- 2 " " 190
- 2 " " 191
- 1 " " 198



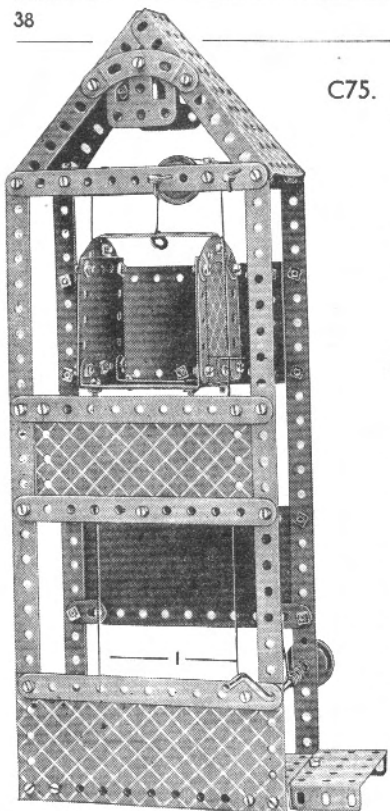
C74. Rowing Boat

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

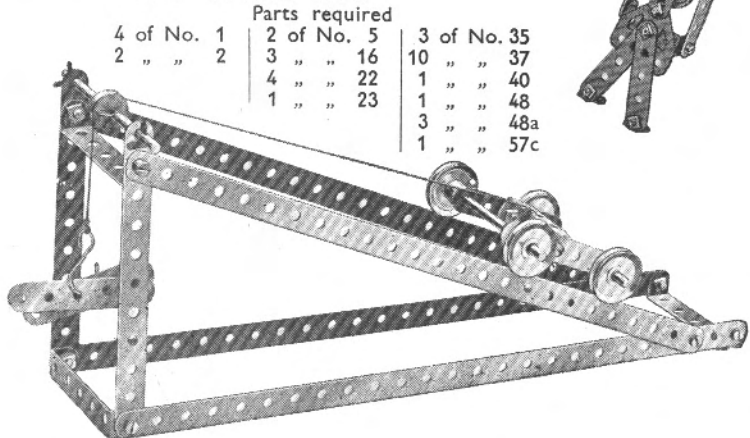


Parts required

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 2½" Strips attached to the top of the model by Angle Brackets, and in corresponding holes in the 5½" × 2½" Flanged Plate. The hoisting cord is passed over a ½" loose Pulley and 1" fixed Pulley before being tied to the cage as shown.

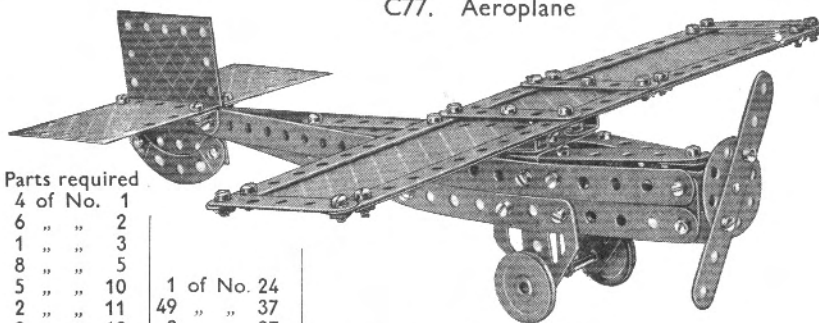
C76. Inclined Plane



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

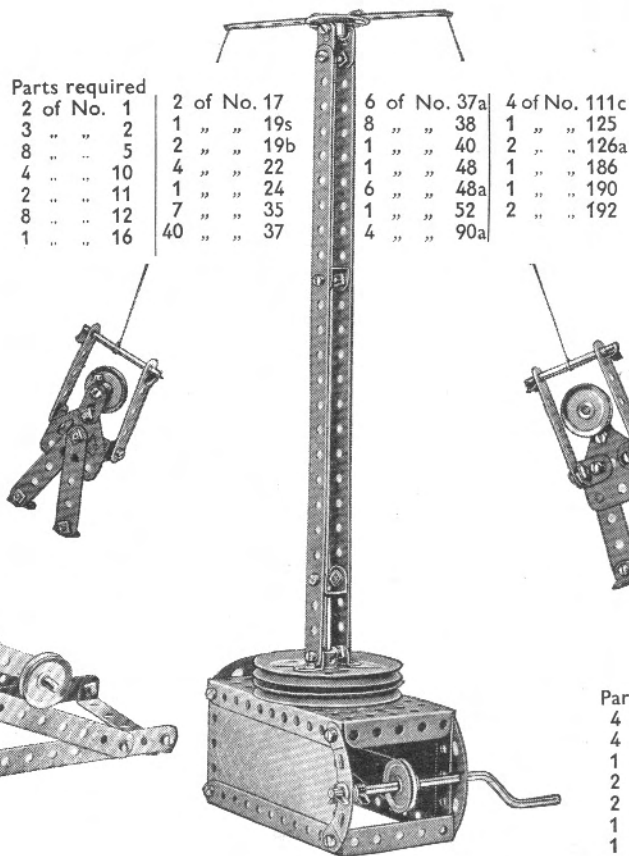


Parts required

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	2	of No. 125	1	of No. 186
49	" " 37	2	" " 126a	4	" " 190
2	" " 37a	1	" " 176	2	" " 191
2	" " 48				
2	" " 90a				
2	" " 111c				

C78. Revolving Gymnasts



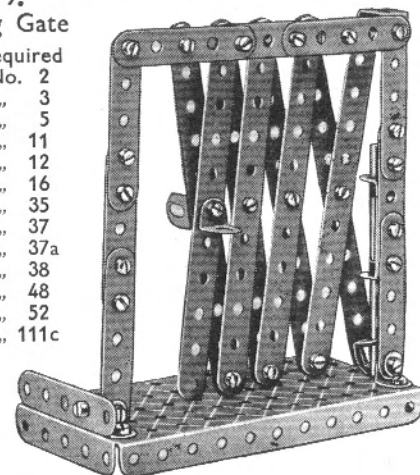
Parts required

2	of No. 1	2	of No. 17	6	of No. 37a	4	of No. 111c
3	" " 2	1	" " 19s	8	" " 38	1	" " 125
8	" " 5	2	" " 19b	1	" " 40	2	" " 126a
4	" " 10	4	" " 22	1	" " 48	1	" " 186
2	" " 11	1	" " 24	6	" " 48a	1	" " 190
8	" " 12	7	" " 35	1	" " 52	2	" " 192
1	" " 16	40	" " 37	4	" " 90a		

C79. Sliding Gate

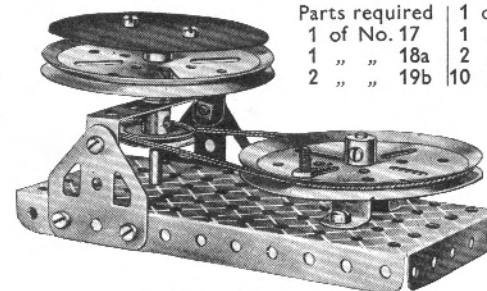
Parts required

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



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

C80. Rotary Linisher



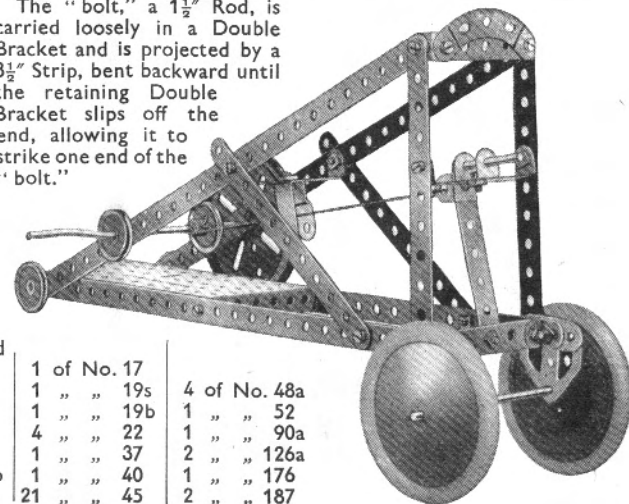
Parts required

1	of No. 17	1	of No. 22	1	of No. 37a
1	" " 18a	2	" " 35	2	" " 38
2	" " 19b	10	" " 37	1	" " 40
				1	" " 48a
				1	" " 52
				1	" " 111c
				2	" " 125
				1	" " 126a

Disc of Emery Cloth (not included in Outfit)

C81. Ballista

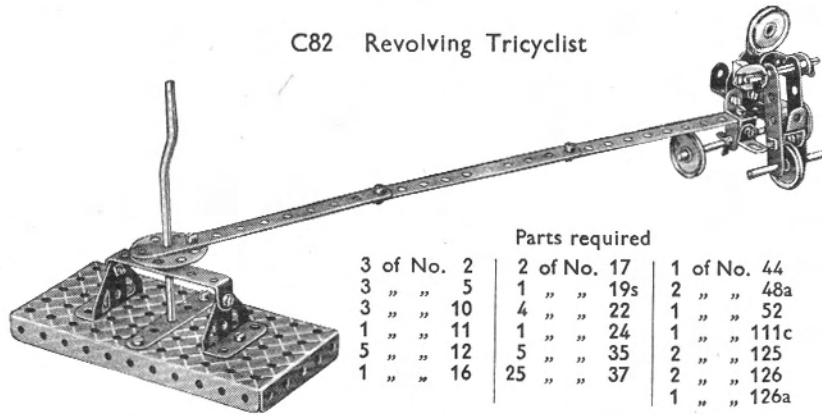
The "bolt," a 1½" Rod, is carried loosely in a Double Bracket and is projected by a 3½" Strip, bent backward until the retaining Double Bracket slips off the end, allowing it to strike one end of the "bolt."



Parts required

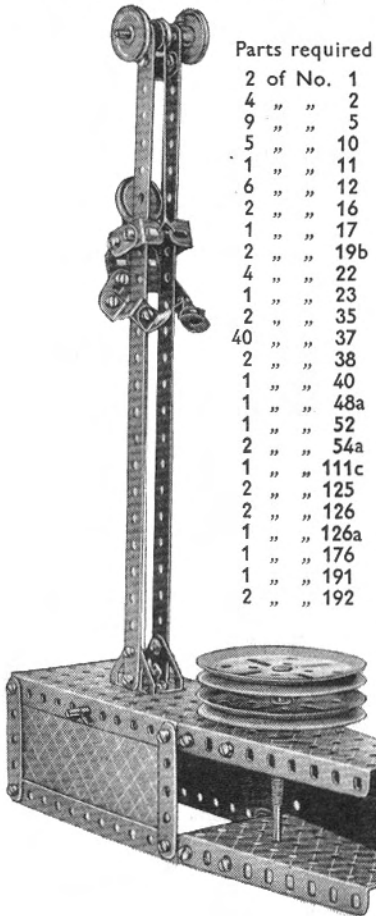
4	of No. 1	1	of No. 17	4	of No. 48a
4	" " 2	1	" " 19s	1	" " 52
1	" " 3	1	" " 19b	1	" " 90a
2	" " 11	4	" " 22	2	" " 126a
2	" " 12	1	" " 37	1	" " 176
1	" " 15b	1	" " 40	2	" " 187
1	" " 16	21	" " 45		

C82 Revolving Tricyclist



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	

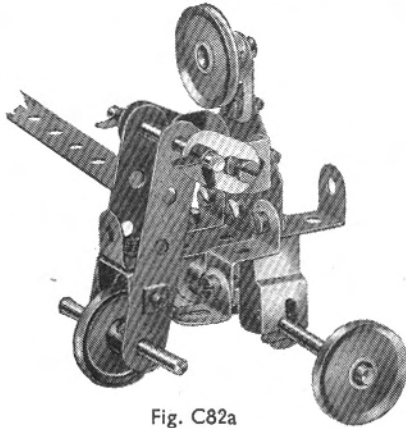
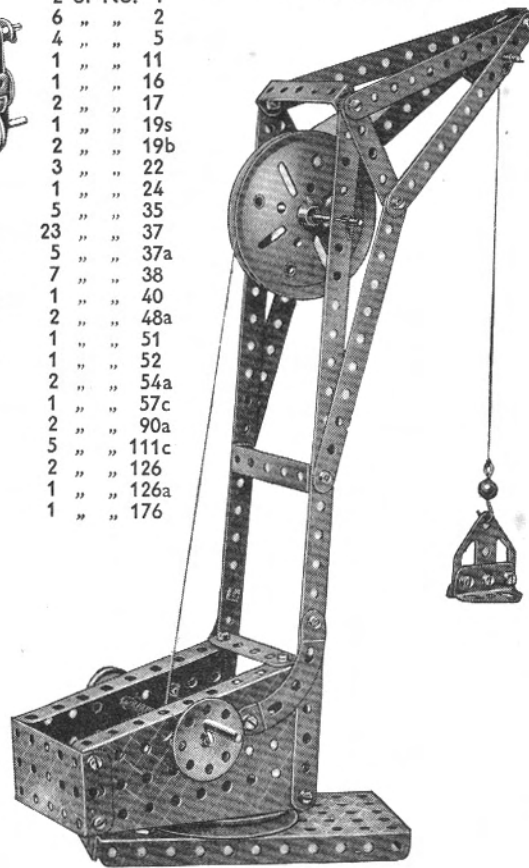


Fig. C82a

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

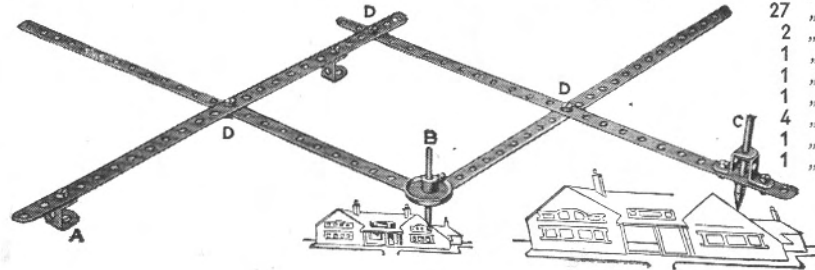


C85. Pantograph

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.

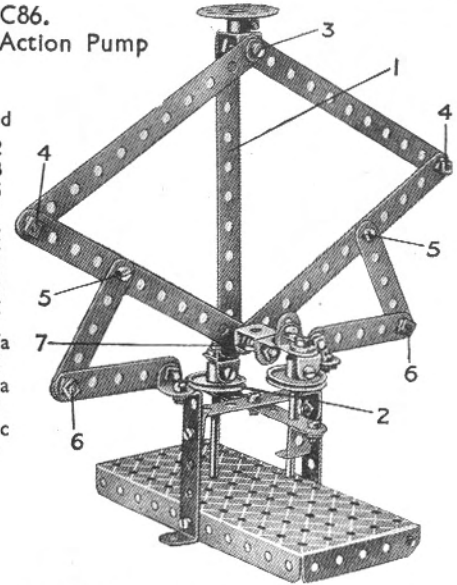
The Bolts at D are fitted with locknuts to allow free movement of the 12½ Strips.

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



C86. Double Action Pump

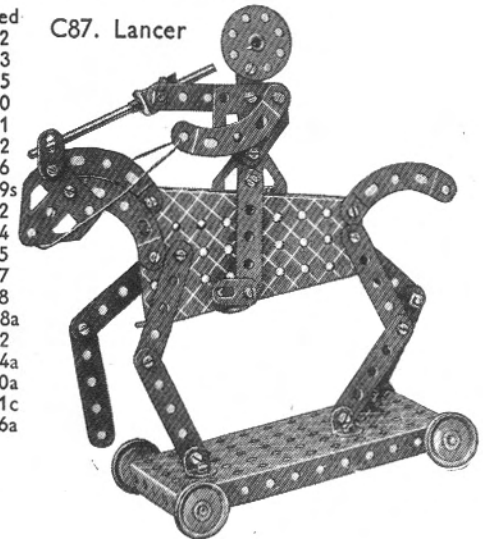
Parts required	
5 of No. 2	
1 " " 3	
4 " " 5	
2 " " 11	
6 " " 12	
2 " " 17	
2 " " 22	
1 " " 24	
24 " " 37	
9 " " 37a	
7 " " 38	
3 " " 48a	
1 " " 52	
3 " " 111c	
2 " " 125	



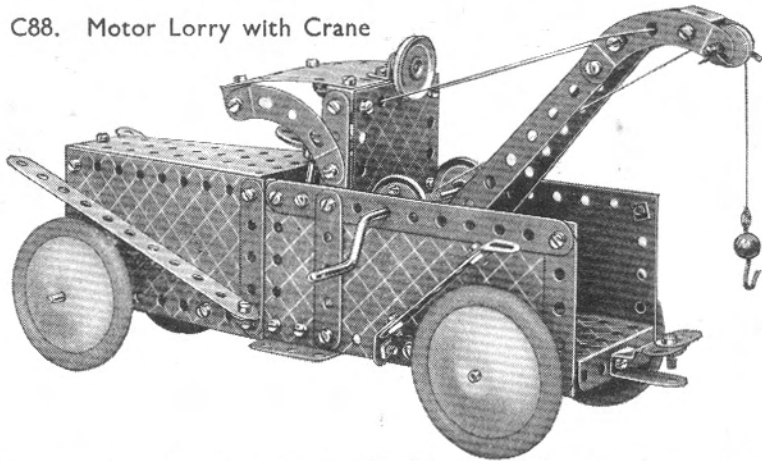
The 5½" Strip 1 is attached to the 1" Pulley Wheel 2 by means of two Angle Brackets, through the lower one of which passes the Set-Screw that secures the Pulley to its 2" Rod. Two Washers are placed beneath the head of the bolt joining the Angle Brackets in order to prevent its shank from binding on 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.

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

C87. Lancer

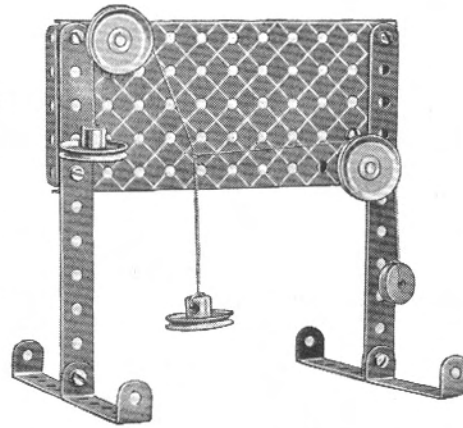


C88. Motor Lorry with Crane



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

C90. Triangle of Forces

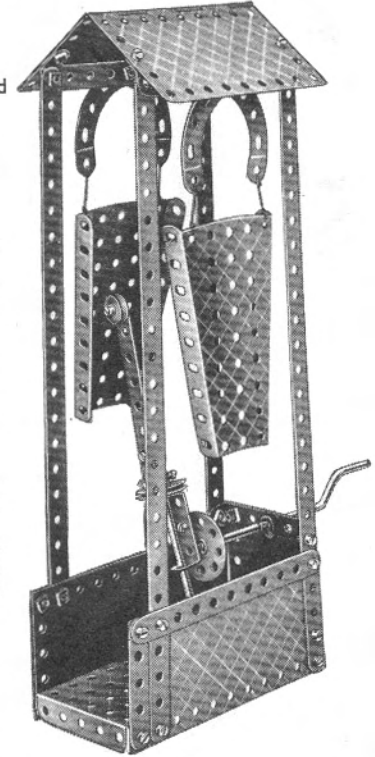


Parts required

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

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.

C92. Mechanical Gong

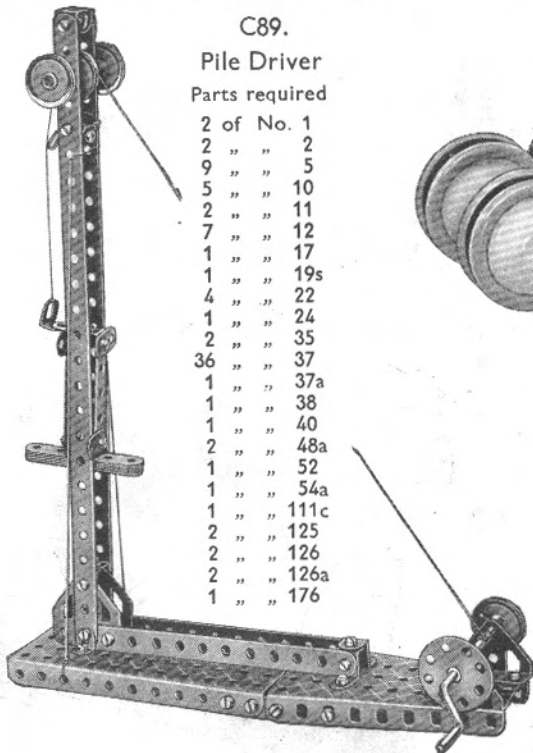


Parts required

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

C89.

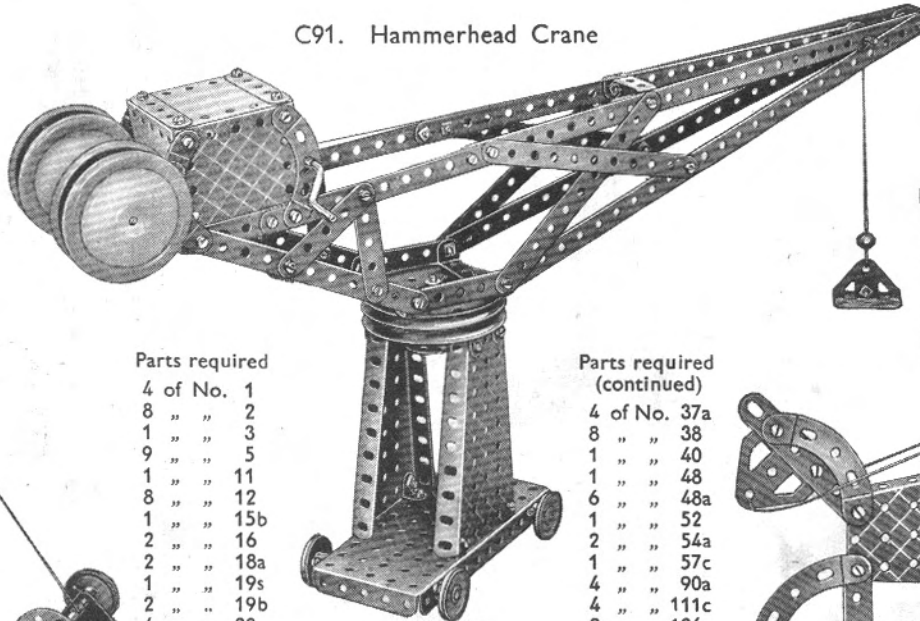
Pile Driver



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



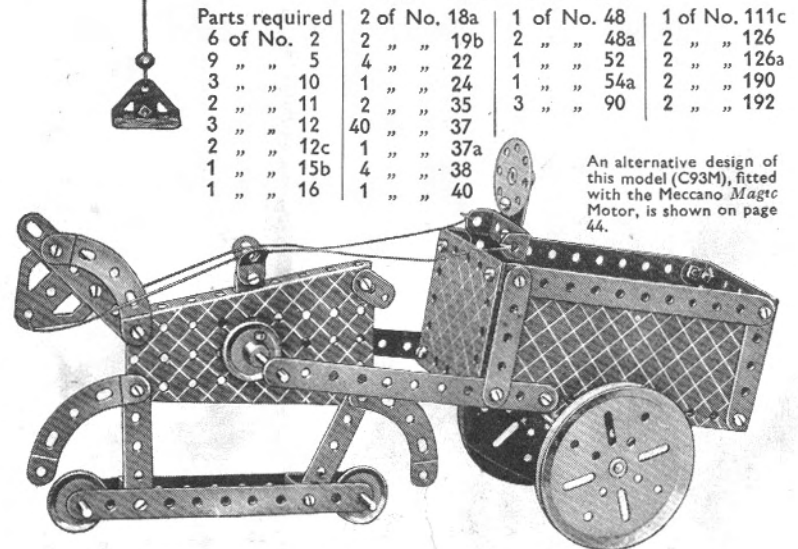
Parts required

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

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

C93. Horse and Cart



Parts required

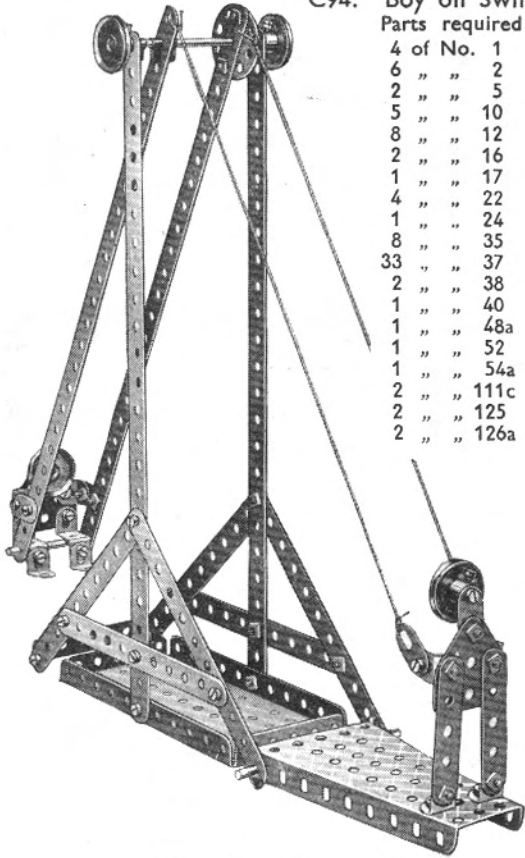
6 of No. 2	2 of No. 18a	1 of No. 48	1 of No. 111c
9 " " 5	4 " " 19b	2 " " 48a	2 " " 126
3 " " 10	1 " " 22	1 " " 52	2 " " 126a
2 " " 11	1 " " 24	1 " " 54a	2 " " 190
3 " " 12	2 " " 35	3 " " 90	2 " " 192
2 " " 12c	40 " " 37		
1 " " 15b	1 " " 37a		
1 " " 16	4 " " 38		
	1 " " 40		

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

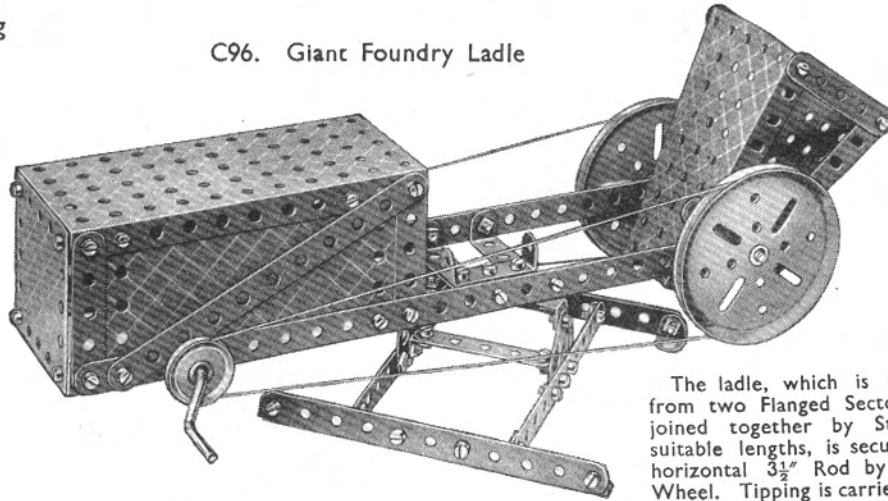
C94. Boy on Swing

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

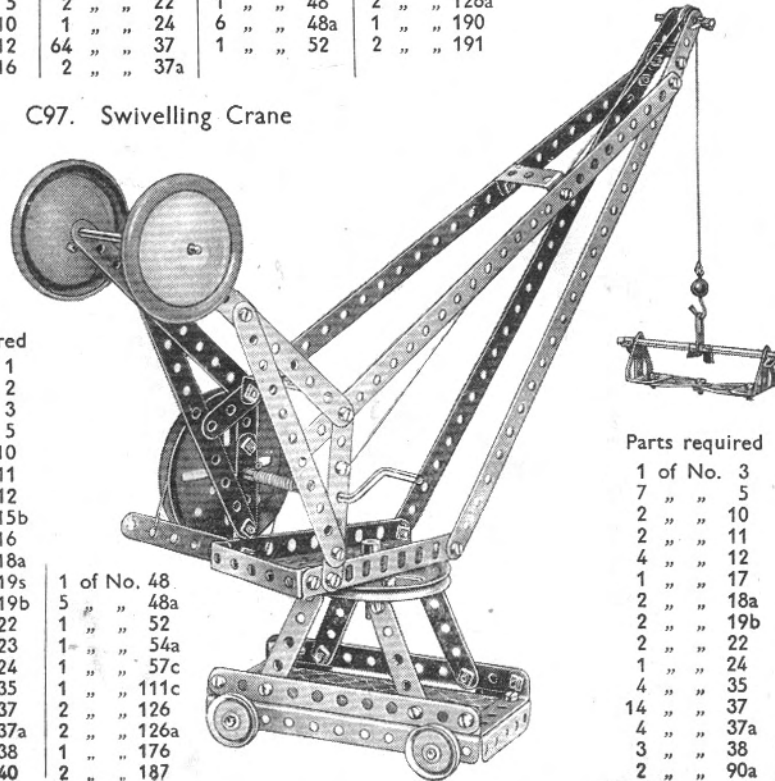


The ladle, which is built up from two Flanged Sector Plates joined together by Strips of suitable lengths, is secured to a horizontal $3\frac{1}{2}$ " Rod by a Bush Wheel. Tipping is carried out by two cords as shown.

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



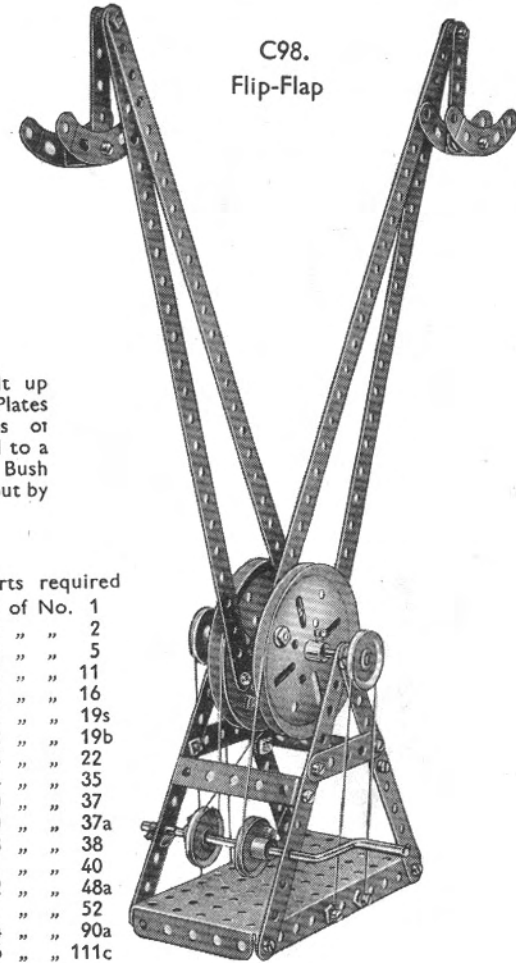
Parts required

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

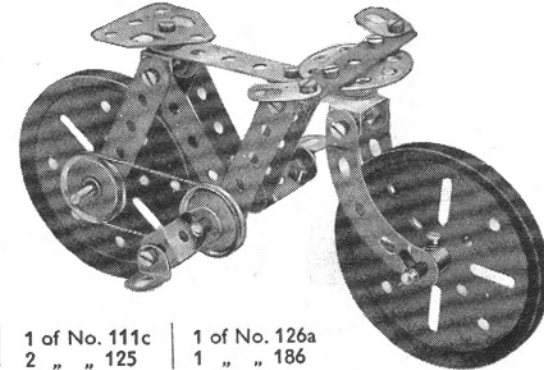
Parts required

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

C98. Flip-Flap



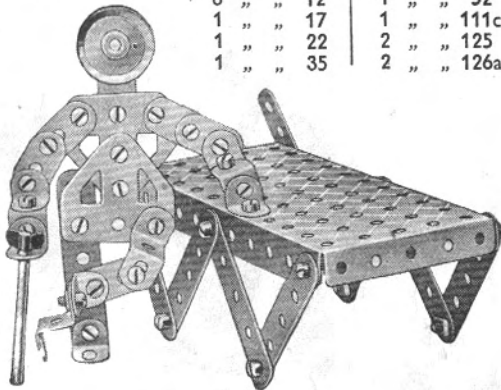
C99. Bicycle



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

C95. King Meccano

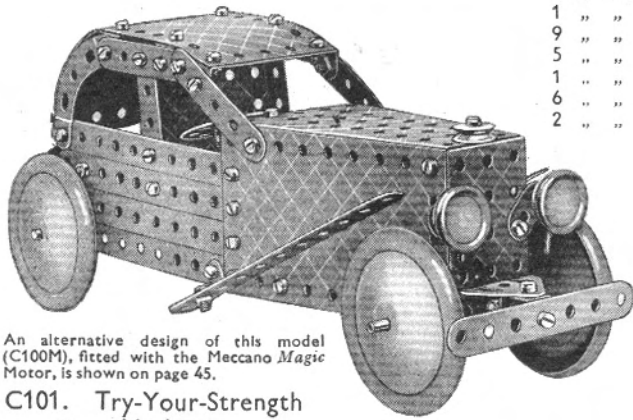
1	of No.	3	Parts required	30	of No.	37		
9	" "	5	5	of No.	10	1	" "	52
			8	" "	12	1	" "	111c
			1	" "	17	2	" "	125
			1	" "	22	2	" "	126a
			1	" "	35	2	" "	126a



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

C100. Sports Coupé

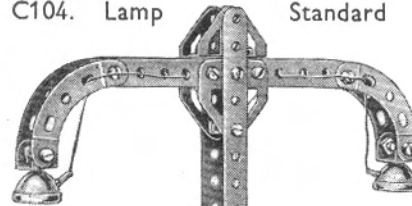


An alternative design of this model (C100M), fitted with the Meccano Magic Motor, is shown on page 45.

Parts required	1 of No.	17
8 of No.	2	22
1 " "	3	66
9 " "	5	37a
5 " "	10	48a
1 " "	11	51
6 " "	12	52
2 " "	15b	54a
		90a
		111c
		125
		126
		126a
		187
		190
		191
		192

Lighting Set
not included in
Outfit)

C104. Lamp Standard



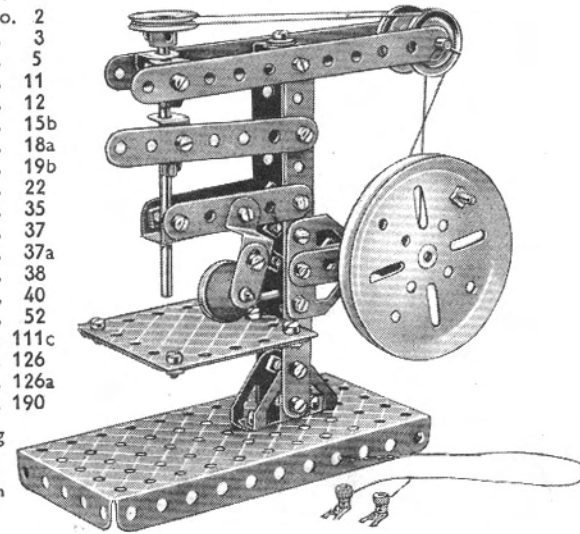
Parts required	2 of No.	1
	2	2
	2	11
	4	12
	2	22
	2	37
	1	52
	4	90a
	2	111c
	2	125
	2	126
	2	126a

Lighting Set
(not included in
Outfit)

Parts required	4 of No.	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
	2	52
	1	111c
	2	126
	2	126a
	1	190

Lighting
Set
(not included in
Outfit)

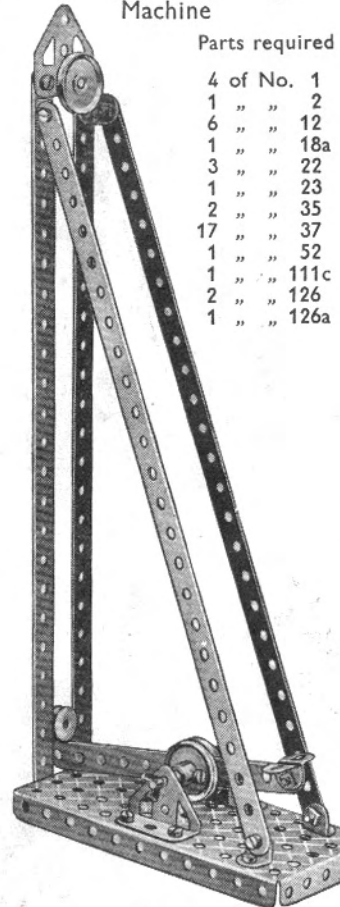
C105. Drill



MECCANO LIGHTING SET

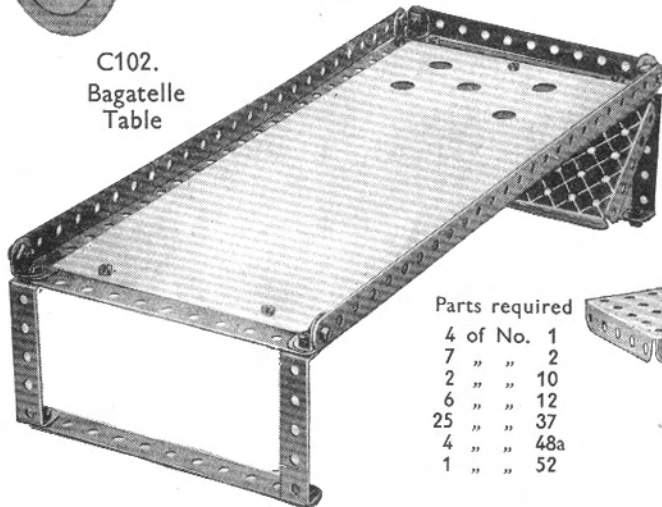
The appearance of many Meccano models, especially those built with Outfits A, B and C, can be vastly improved by the addition of suitably disposed lights. For this purpose a special set of lighting equipment has been introduced. This consists of two pea-lamps, two lanterns for use as headlamps or spot lights, and a fancy stand lamp. The appearance and uses of the parts are shown in models C100, C104, C105 and C106

C101. Try-Your-Strength Machine



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

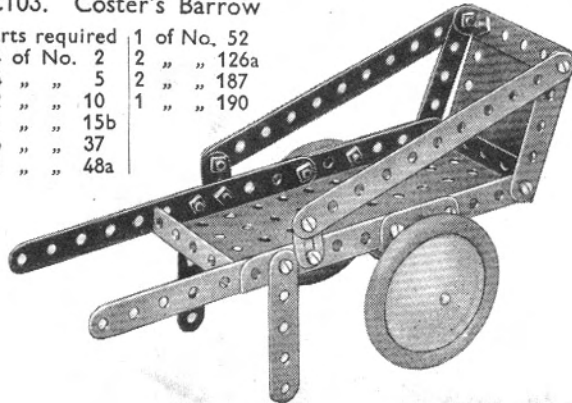
C102. Bagatelle Table



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

C103. Coster's Barrow

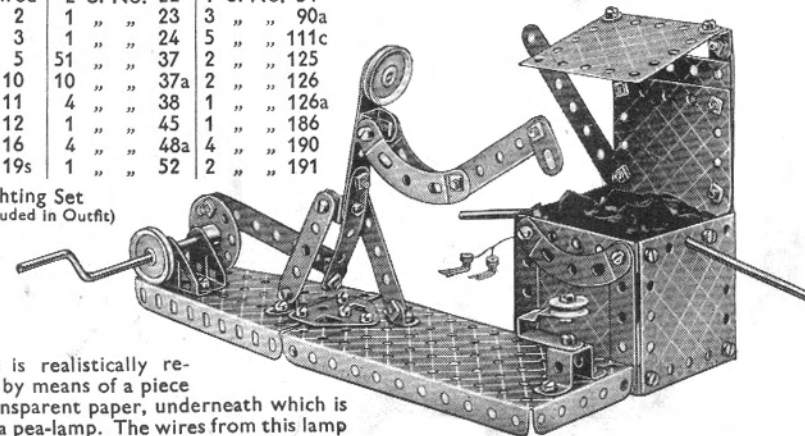
Parts required	1 of No.	52
4 of No.	2	126a
4 " "	5	187
2 " "	10	190
1 " "	15b	
16 " "	37	
1 " "	48a	



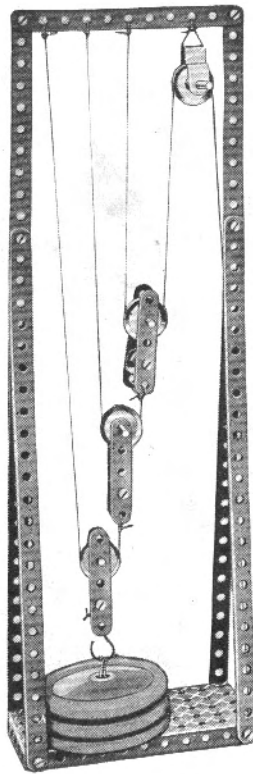
C106. Blacksmith

Parts required	2 of No.	22	1 of No.	54	
3 of No.	2	1	23	3	90a
1 " "	3	1	24	5	111c
7 " "	5	51	37	2	125
2 " "	10	10	37a	2	126
2 " "	11	4	38	1	126a
7 " "	12	1	45	1	186
2 " "	16	4	48a	4	190
1 " "	19s	1	52	2	191

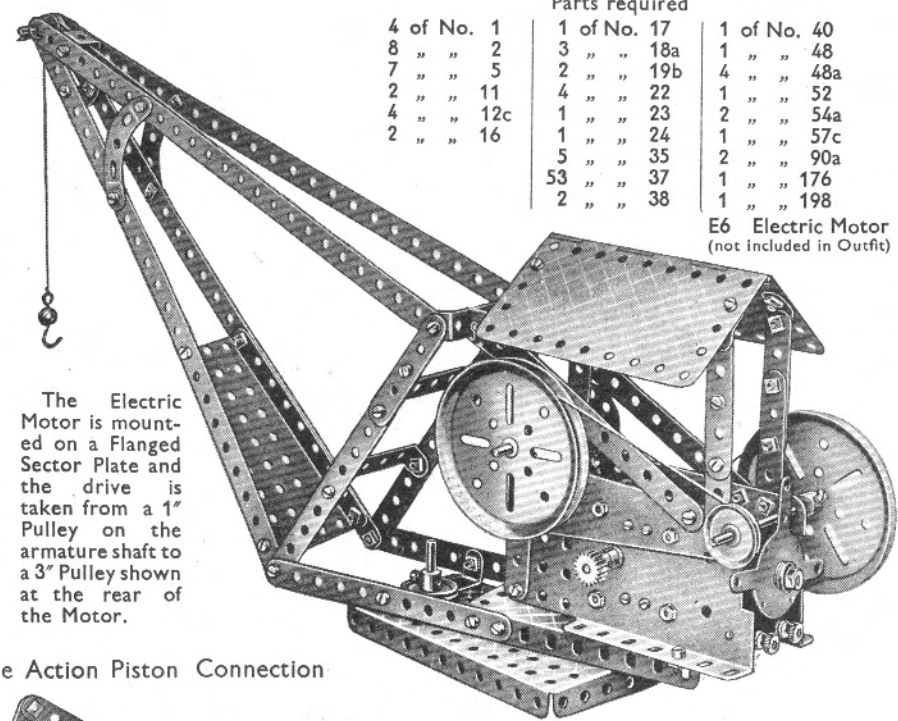
Lighting Set
(not included in Outfit)



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 |

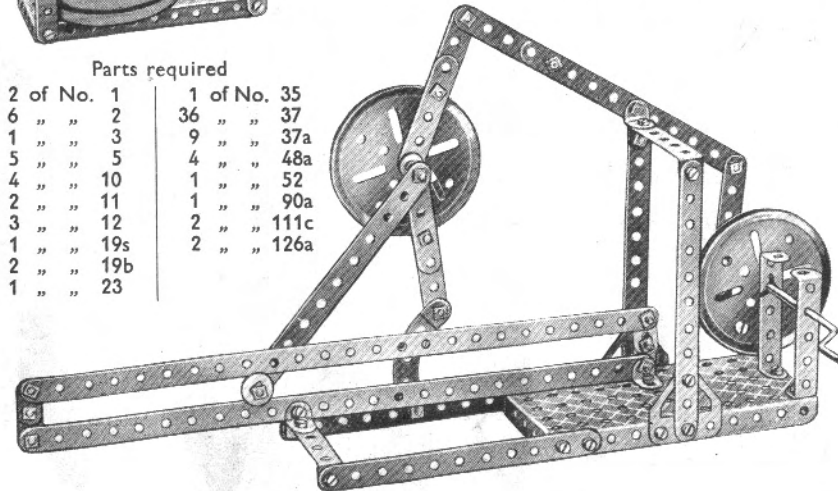


The Electric Motor is mounted on a Flanged Sector Plate and the drive is taken from a 1" Pulley on the armature shaft to a 3" Pulley shown at the rear of the Motor.

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)

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 | | |

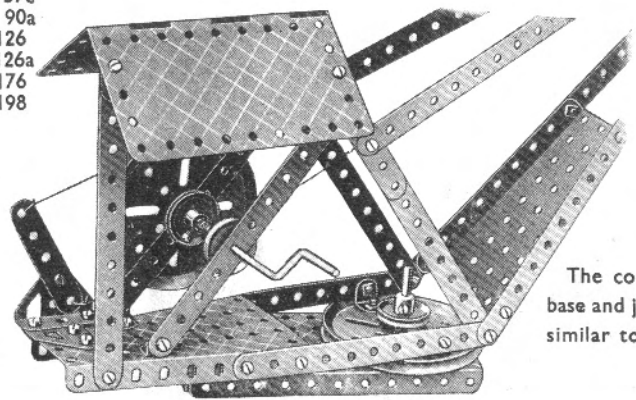
- Parts required
- | | | | |
|----------|-----|----------|------|
| 4 of No. | 1 | 1 of No. | 57c |
| 7 " " | 2 | 2 " " | 90a |
| 3 " " | 5 | 1 " " | 126 |
| 2 " " | 11 | 1 " " | 126a |
| 4 " " | 12 | 1 " " | 176 |
| 3 " " | 12c | 1 " " | 198 |
| 1 " " | 17 | | |
| 1 " " | 18a | | |
| 1 " " | 19s | |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

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 |



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.

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

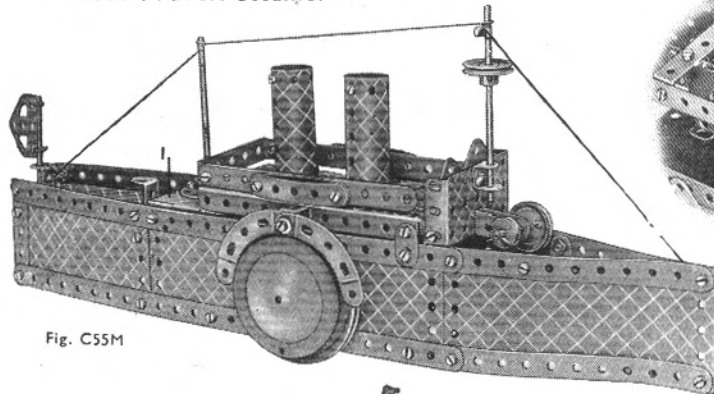
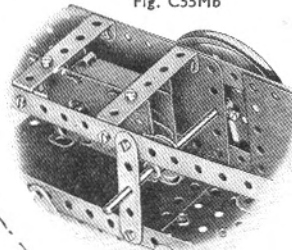


Fig. C55M

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. 40	1 of No. 48a
6 " " 2	1 " " 51	1 " " 51	1 " " 52
8 " " 5	1 " " 52	1 " " 52	2 " " 54a
4 " " 10	2 " " 90a	4 " " 90a	6 " " 111c
2 " " 11	4 " " 125	2 " " 125	2 " " 126
8 " " 12	2 " " 187	2 " " 187	1 " " 190
1 " " 15b	4 " " 190	4 " " 190	2 " " 191
1 " " 19b	2 " " 191	2 " " 191	2 " " 195
1 " " 22			
1 " " 24			
66 " " 37			
6 " " 37a			
5 " " 38			

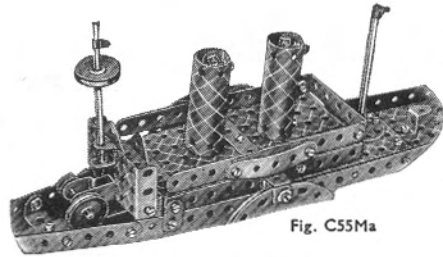


Fig. C55Ma

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

C64M. Roundabout

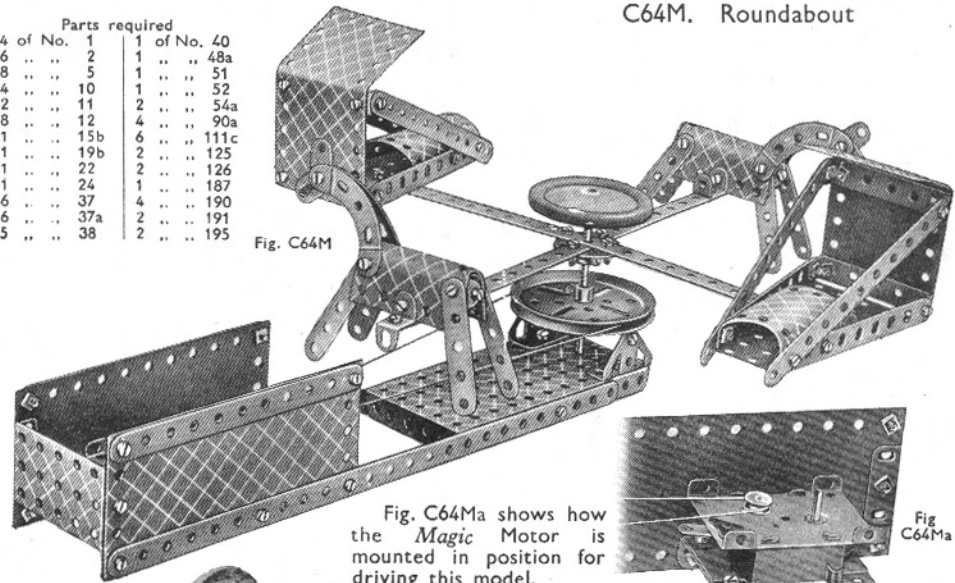


Fig. C64M

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

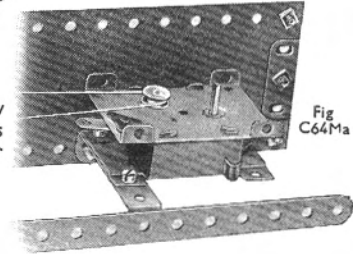


Fig. C64Ma

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 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.

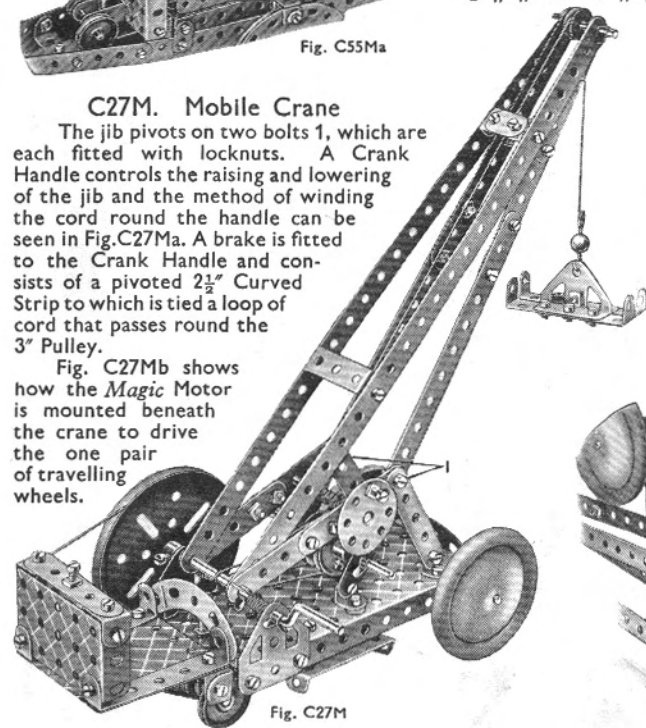


Fig. C27M

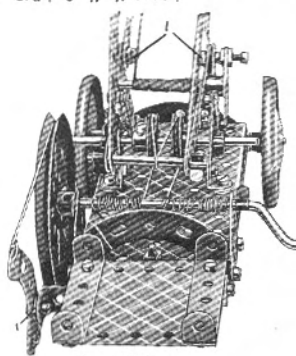


Fig. C27Ma

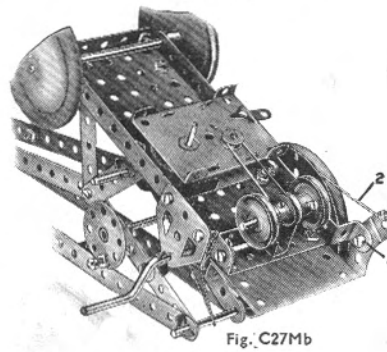


Fig. C27Mb

Parts required

2 of No. 1
4 " " 2
9 " " 5
2 " " 10
2 " " 11
8 " " 12
1 " " 15b
1 " " 16
2 " " 17
2 " " 18a
1 " " 19b
1 " " 22
1 " " 23
1 " " 24
7 " " 35
58 " " 37
11 " " 37a
8 " " 38
1 " " 40
1 " " 44
1 " " 48
6 " " 48a
1 " " 51
1 " " 52
3 " " 57c
1 " " 90a
5 " " 111c
1 " " 125
2 " " 126
2 " " 126a
1 " " 176
2 " " 187
1 " " 190

C93M. Horse and Cart

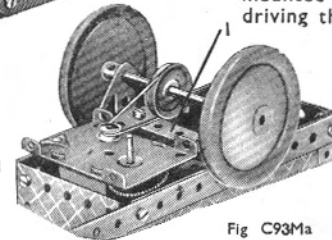


Fig. C93Ma

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	
6 " " 12	1 " " 44	2 " " 187	
2 " " 16	1 " " 48	2 " " 190	
2 " " 18a	1 " " 48a	2 " " 192	
4 " " 22			

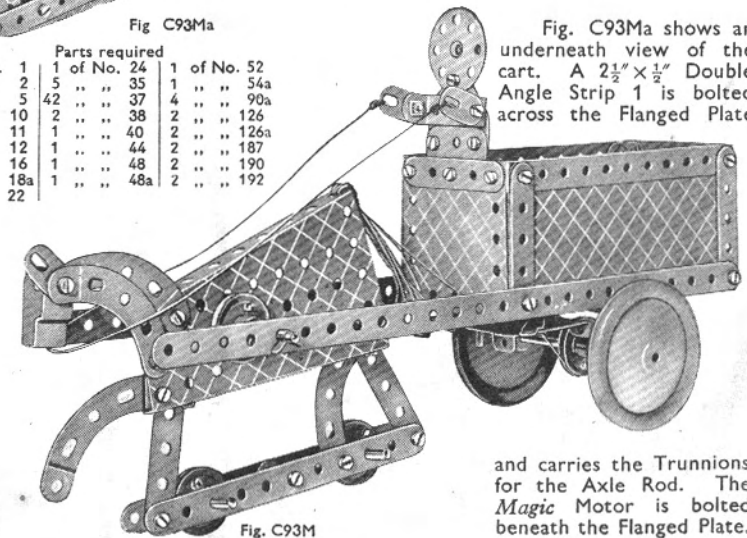


Fig. C93M

Fig. C93Ma shows an underneath view of the cart. A 2 1/2" x 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

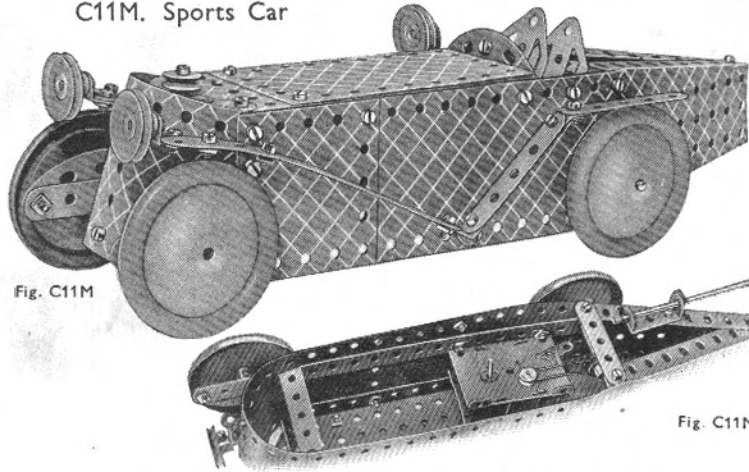


Fig. C11M

Fig. C11Ma

Parts required

2	of No.	1
2	" "	2
4	" "	5
8	" "	10
8	" "	12
3	" "	12c
2	" "	15b
3	" "	22
1	" "	23
1	" "	24
2	" "	35
5	" "	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

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

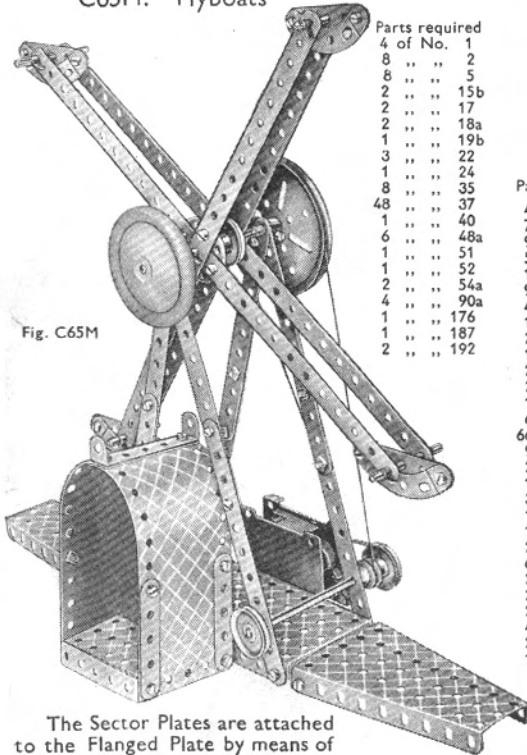


Fig. C65M

Parts required

4	of No.	1
8	" "	2
8	" "	5
2	" "	15b
2	" "	17
2	" "	18a
1	" "	19b
3	" "	22
1	" "	24
8	" "	35
48	" "	37
1	" "	40
6	" "	48a
1	" "	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
9	" "	12
4	" "	12c
1	" "	15b
2	" "	16
1	" "	18a
2	" "	19b
1	" "	22
1	" "	24
6	" "	35
6	" "	37
9	" "	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
2	" "	198

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

C77M. Aeroplane

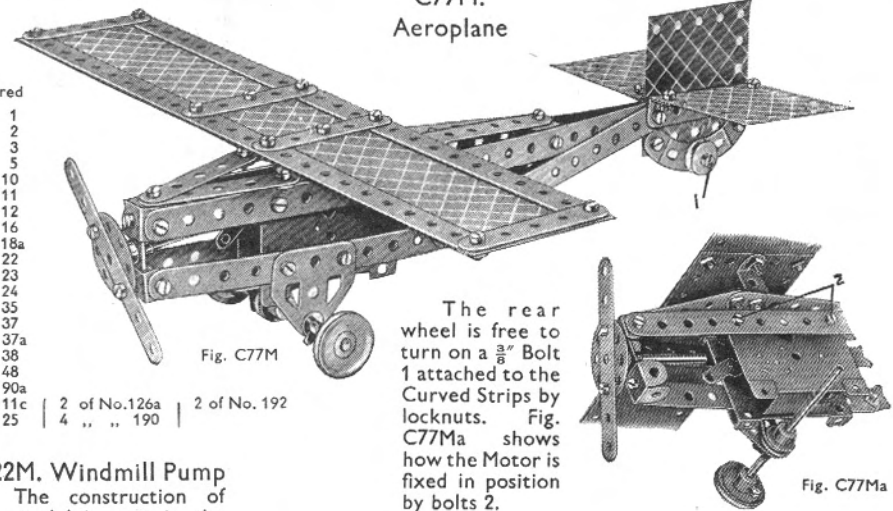


Fig. C77M

Fig. C77Ma

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

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.

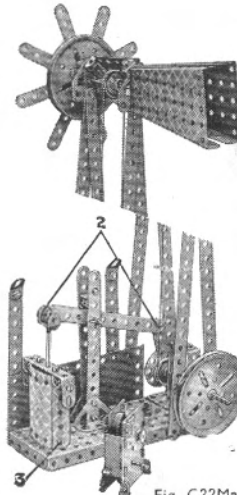


Fig. C22M

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

The rear wheel is free to turn on a ⅜" Bolt 1 attached to the Curved Strips by locknuts. Fig. C77Ma shows how the Motor is fixed in position by bolts 2.

C100M. Sports Coupé

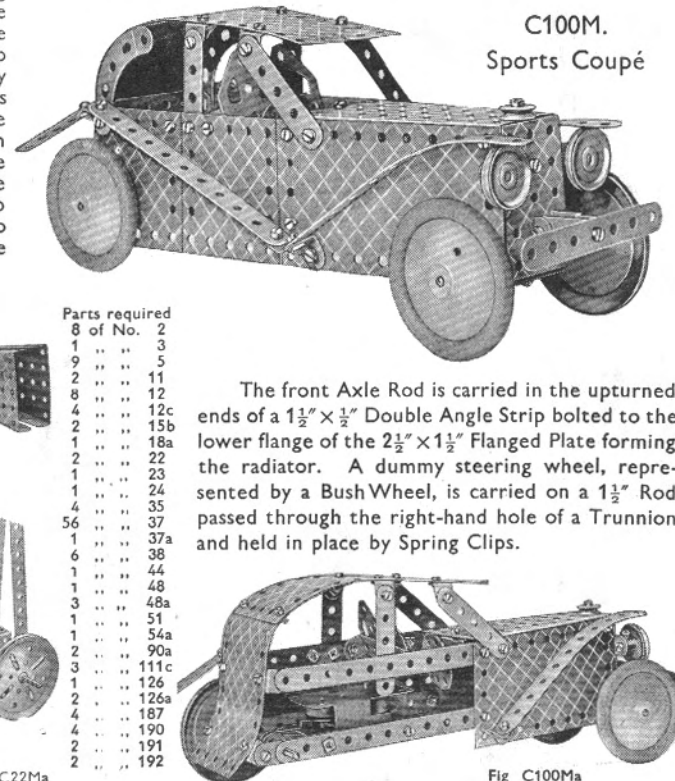
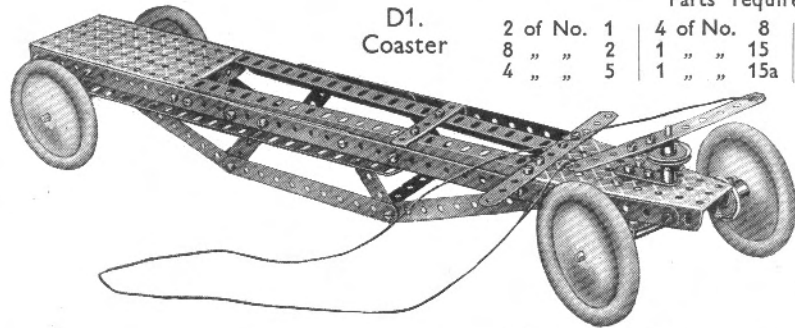


Fig. C100Ma

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 Trunion and held in place by Spring Clips.



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 12½" Angle Girders and two 12½" Strips, joined together as shown and spaced apart by a 5½" x 2½" Flanged Plate, a Flanged Sector Plate and a 2½" x ½" Double Angle Strip. The rear axle is carried in two Trunnions and the front axle Fig. D1a in a 2½" x ½" Double Angle Strip that is secured by a Bush Wheel to a short Rod mounted in the boss of a Crank.

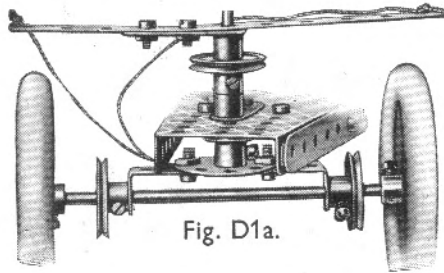
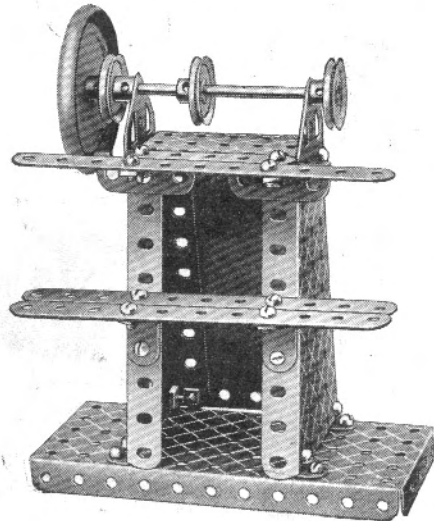


Fig. D1a.

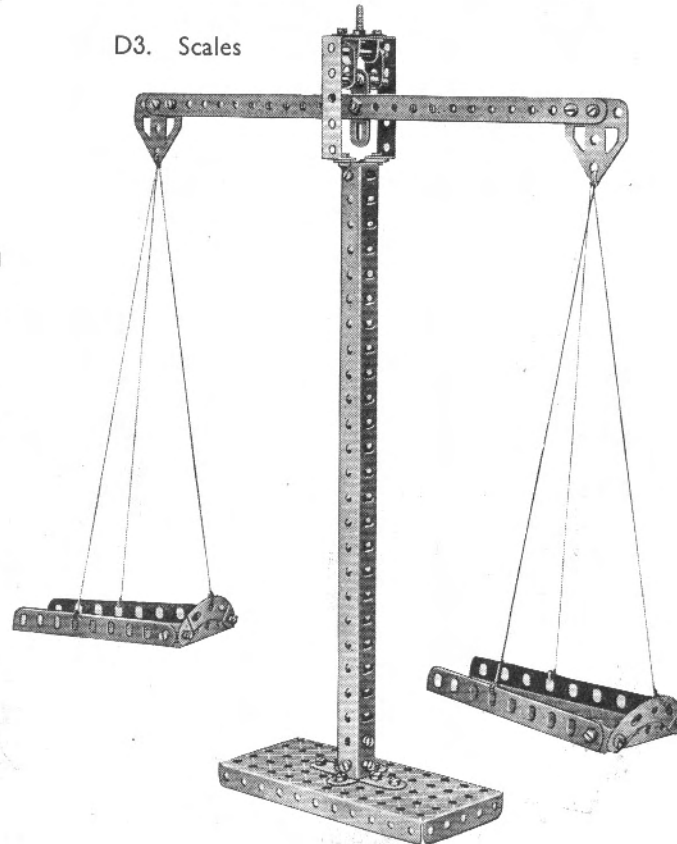
D2. Polishing Spindle

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	



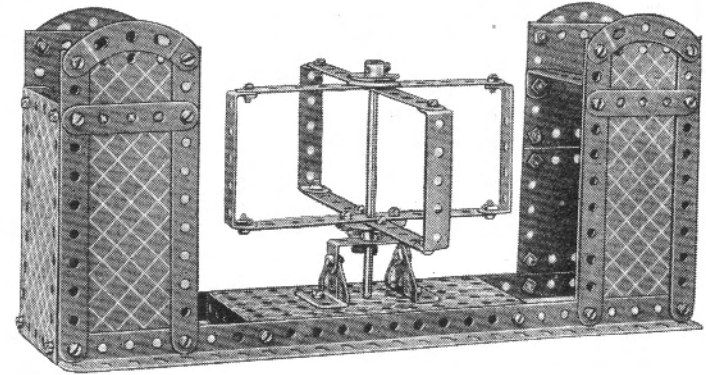
Parts required	
2 of No. 1	
1 " " 6a	
2 " " 8	
2 " " 10	
1 " " 11	
2 " " 12	
2 " " 12a	
2 " " 18a	
2 " " 35	
31 " " 37	
4 " " 38	
1 " " 40	
1 " " 45	
4 " " 48a	
1 " " 52	
2 " " 54a	
2 " " 62	
2 " " 90a	
1 " " 115	
2 " " 126a	

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	

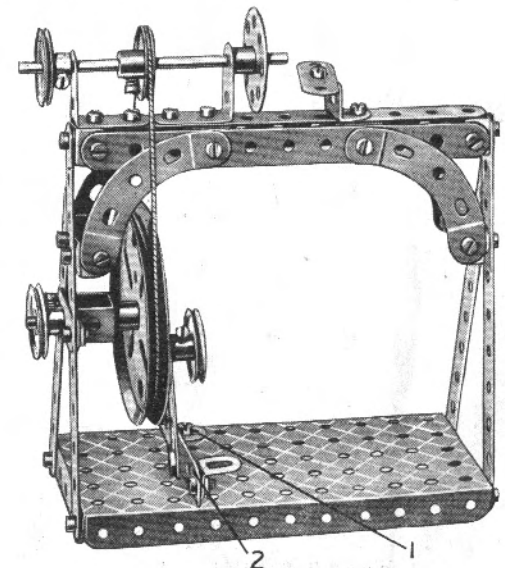
D4. Turnstile

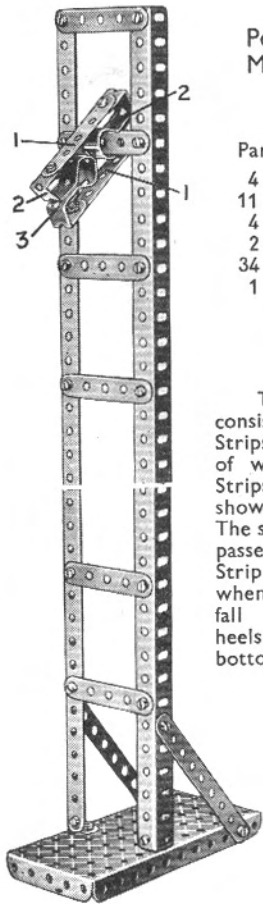


D5. Treadle Lathe

The 2½" 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 2½" Strip is connected by the same means to the 2½" 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		



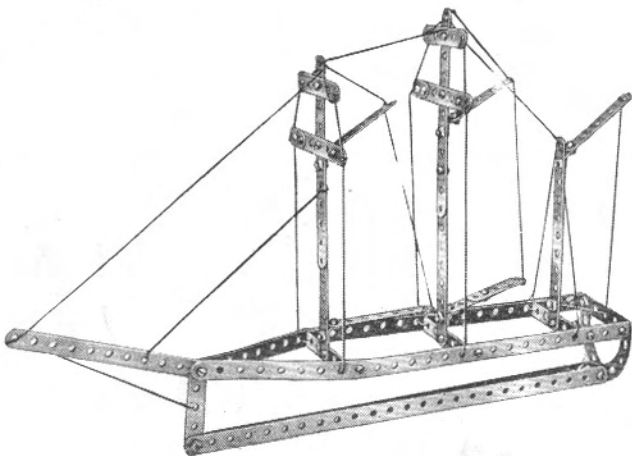


D6.
Performing
Meccanitian

Parts required

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

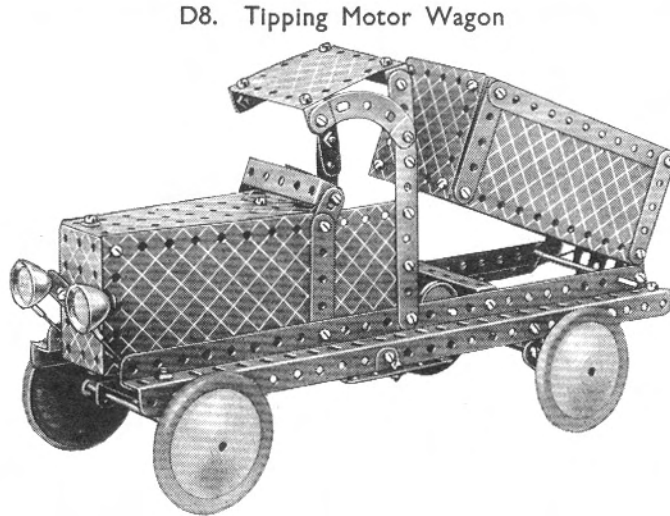
The Meccanitian consists of two 2 1/2" Strips 1 to the ends of which two 5 1/2" Strips 2, bent as shown, are bolted. The slot 3 should be passed over the top Strip of the ladder, when the device will fall "head over heels" to the bottom.



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



D8. Tipping Motor Wagon

The steering column is journalled at its upper end in a 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 1/2" x 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 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
6 " " 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)

Parts required

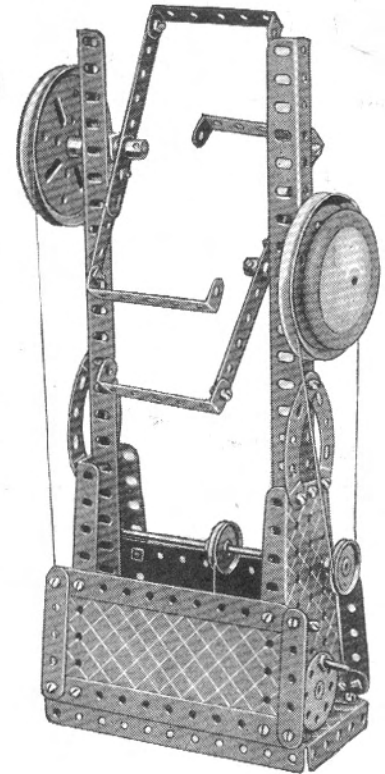
4 of No. 2
5 " " 5
4 " " 8
1 " " 11
1 " " 12
2 " " 16
2 " " 22
1 " " 22a
1 " " 24
6 " " 35
41 " " 37
9 " " 37a
8 " " 38
1 " " 45
4 " " 48a
1 " " 52
2 " " 54a
6 " " 111c
2 " " 126a
2 " " 190
2 " " 191
2 " " 195

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

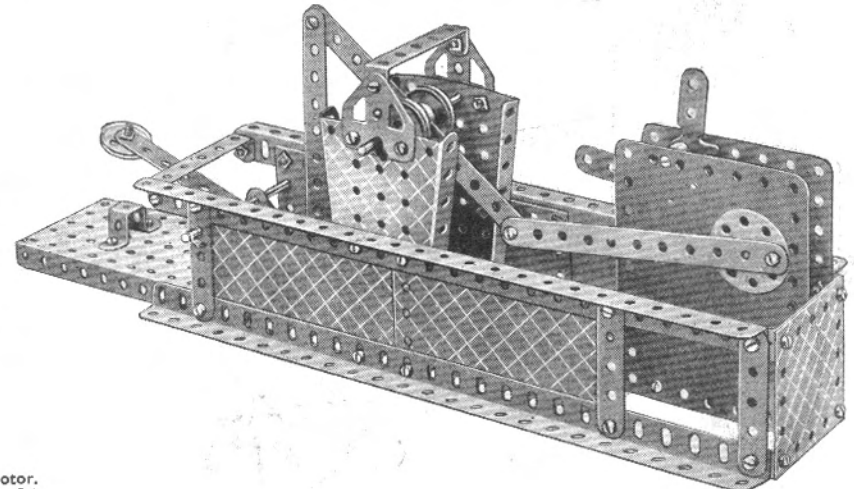
D9. Candy Puller

Parts required

6 of No. 2
4 " " 5
2 " " 8
4 " " 12
2 " " 15
2 " " 17
2 " " 19b
2 " " 22
4 " " 24
1 " " 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



D10. Mechanical Hammer





D11.
Towel Horse

Parts required

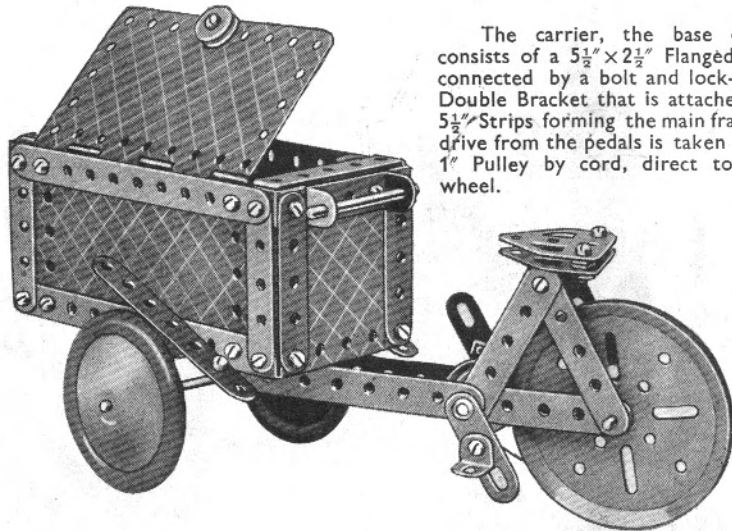
6 of No. 1
4 " " 2
2 " " 8
4 " " 10
4 " " 12
2 " " 22a
28 " " 37
2 " " 37a
8 " " 38
4 " " 90a
2 " " 111c

D12. Carrier Tricycle

Parts required

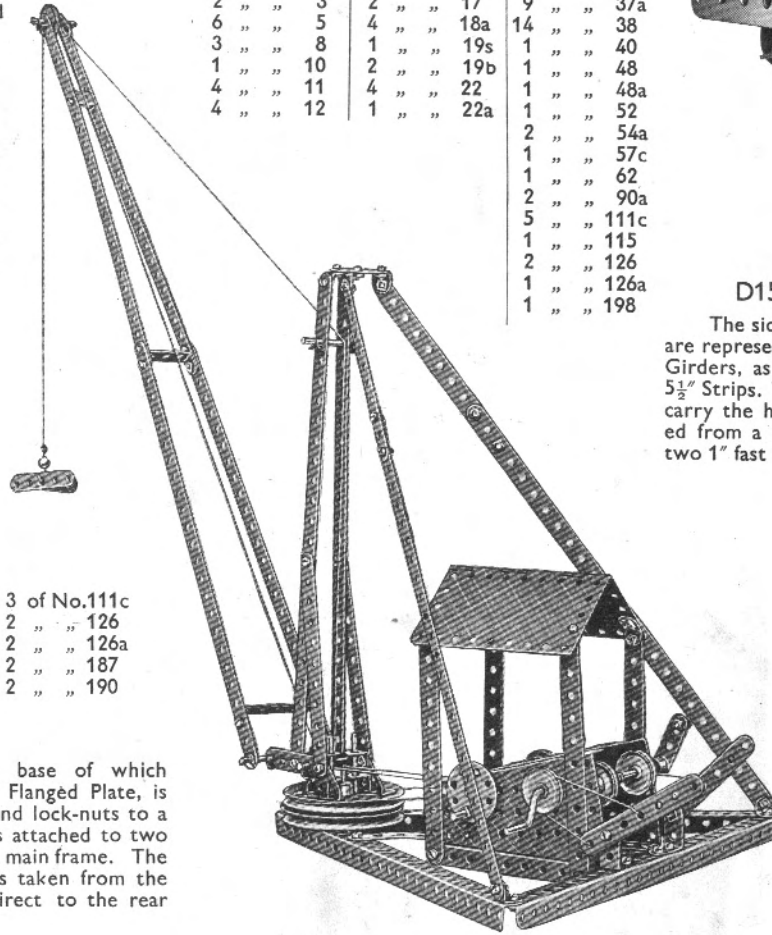
4 of No. 2	1 of No. 15b	1 of No. 23	1 of No. 40	3 of No. 111c
2 " " 3	1 " " 17	4 " " 35	1 " " 48	2 " " 126
12 " " 5	2 " " 18a	40 " " 37	4 " " 48a	2 " " 126a
2 " " 11	1 " " 19b	10 " " 37a	1 " " 52	2 " " 187
6 " " 12	1 " " 22	9 " " 38	2 " " 62	2 " " 190
	1 of No. 191	1 of No. 198		

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

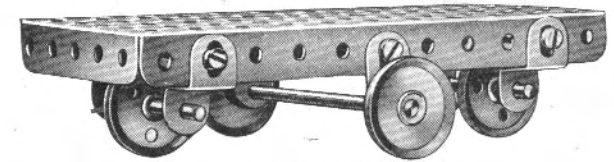
Parts required	2 of No. 12a	1 of No. 24
8 of No. 1	4 " " 12c	11 " " 35
8 " " 2	3 " " 16	56 " " 37
2 " " 3	2 " " 17	9 " " 37a
6 " " 5	4 " " 18a	14 " " 38
3 " " 8	1 " " 19s	1 " " 40
1 " " 10	2 " " 19b	1 " " 48
4 " " 11	4 " " 22	1 " " 48a
4 " " 12	1 " " 22a	1 " " 52



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

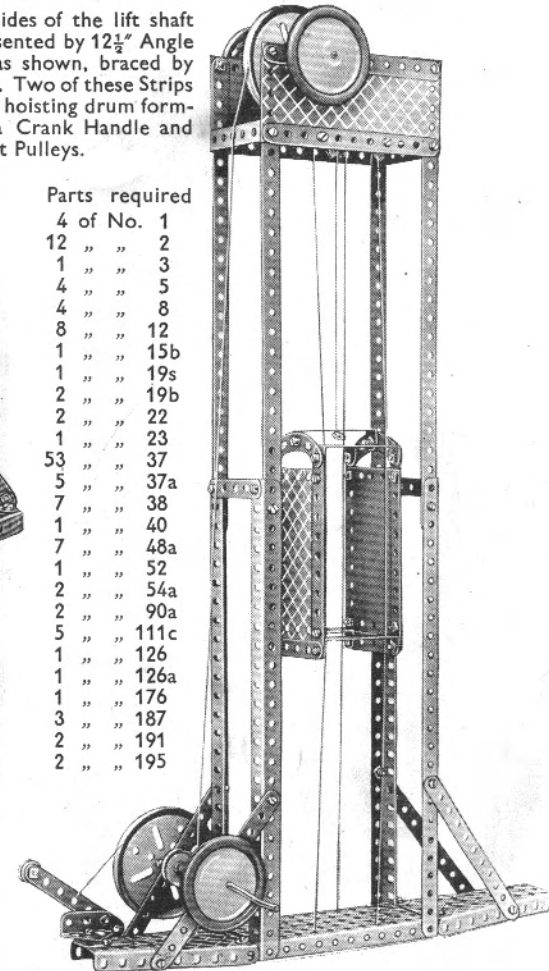
2 of No. 10	2 of No. 22	6 of No. 37
1 " " 16	2 " " 22a	1 " " 52
2 " " 17	4 " " 35	4 " " 125

D15. Elevator

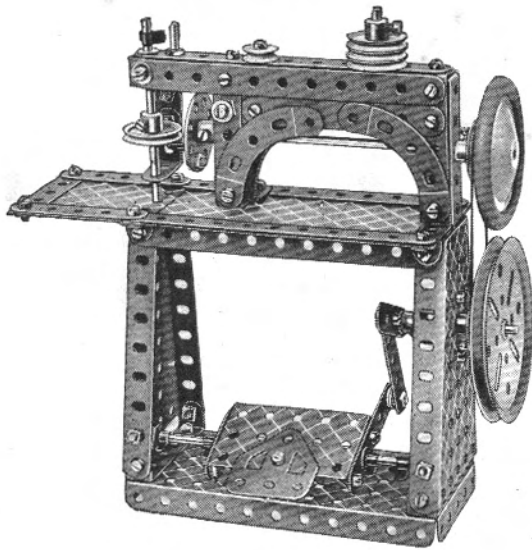
The sides of the lift shaft are represented by $12\frac{1}{2}$ " Angle Girders, as shown, braced by $5\frac{1}{2}$ " Strips. Two of these Strips carry the hoisting drum formed from a Crank Handle and two 1" fast Pulleys.

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



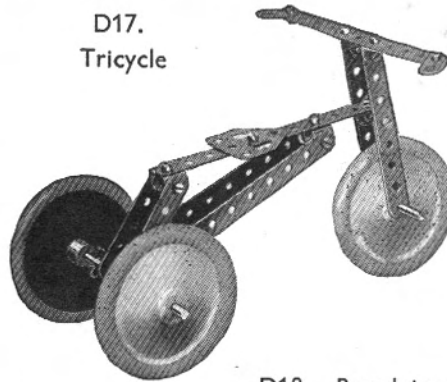
Parts required	
7	of No. 2
2	" " 3
6	" " 5
1	" " 5a
3	" " 10
1	" " 11
10	" " 12
2	" " 12a
2	" " 15
1	" " 16
1	" " 17
1	" " 18a
1	" " 18b
4	" " 22
2	" " 22a
1	" " 23
1	" " 24
5	" " 35
50	" " 37
8	" " 37a
8	" " 38
1	" " 45
7	" " 48a
1	" " 51
1	" " 52
2	" " 54a
1	" " 62
4	" " 90a
3	" " 111c
1	" " 115
1	" " 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 $1'' \times 1''$ 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 $1'' \times 1''$ 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.

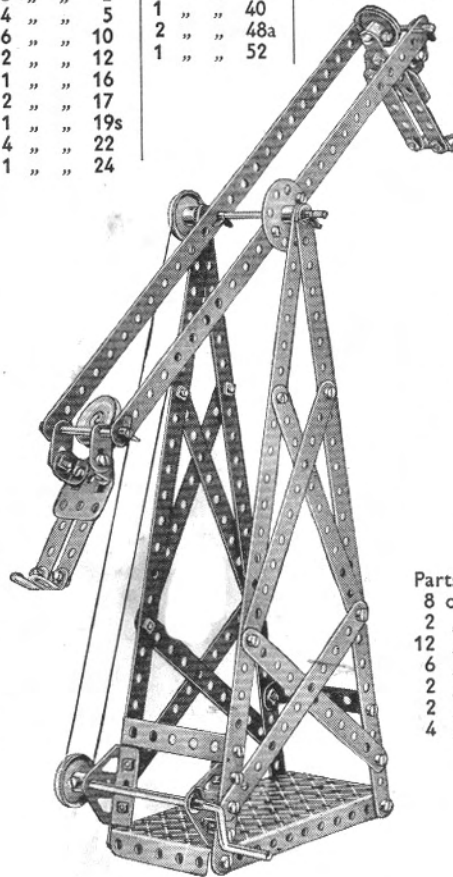
D17. Tricycle



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 Meccanicians

Parts required		8 of No. 35		2 of No. 111c	
6	of No. 1	42	" " 37	2	" " 126
8	" " 2	1	" " 38	2	" " 126a
4	" " 5	1	" " 40		
6	" " 10	2	" " 48a		
12	" " 12	1	" " 52		
1	" " 16				
2	" " 17				
1	" " 19s				
4	" " 22				
1	" " 24				

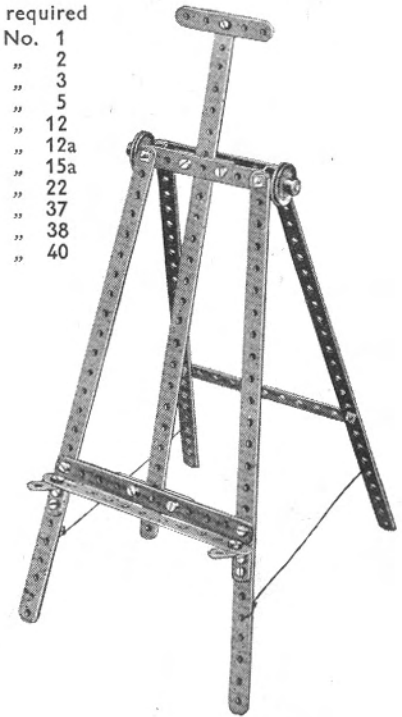


D20. Baby Chair

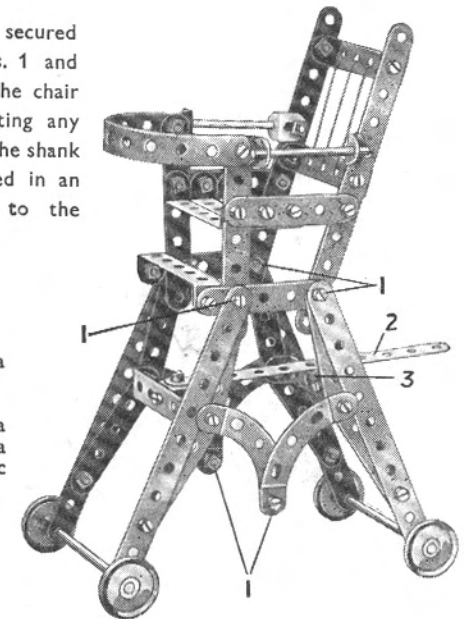
The Bolts 1 are all secured pivotally (see S.M. Nos. 1 and 1a), and the height of the chair can be adjusted by fitting any hole in the Strip 2 over the shank of a Bolt that is secured in an Angle Bracket bolted to the Double Angle Strip 3.

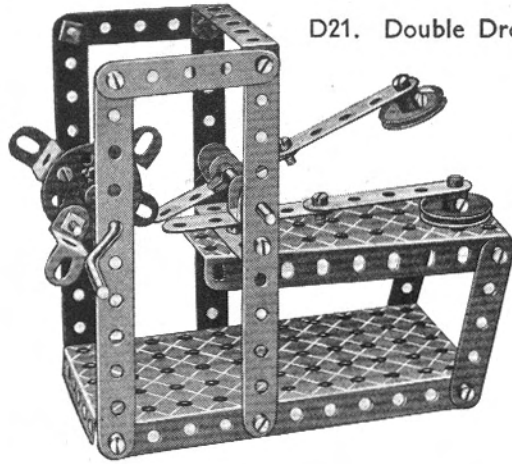
Parts required		4 of No. 35	
8	of No. 2	35	" " 37
2	" " 3	2	" " 37a
12	" " 5	4	" " 38
6	" " 12	1	" " 40
2	" " 16	8	" " 48a
2	" " 17	4	" " 90a
4	" " 22	1	" " 111c

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





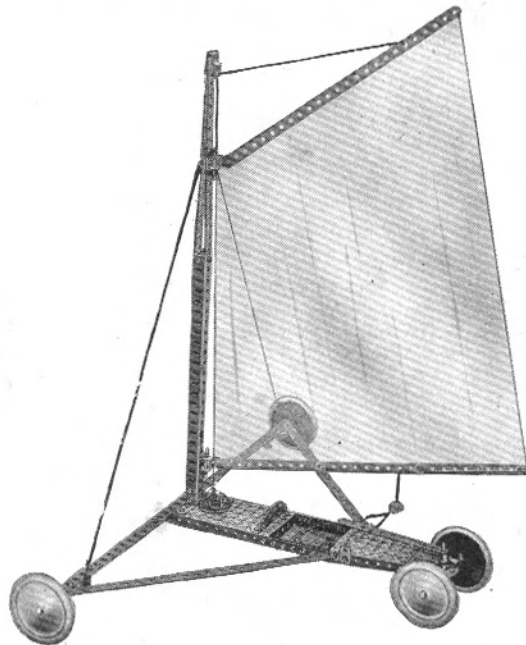
D21. Double Drop Hammer

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

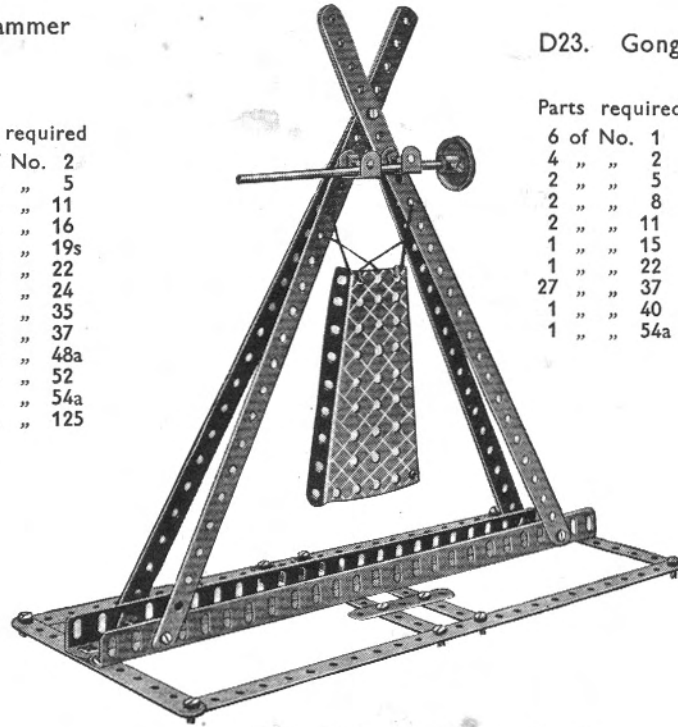
D22. Land Yacht

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
12	" "	35
9	" "	37
1	" "	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

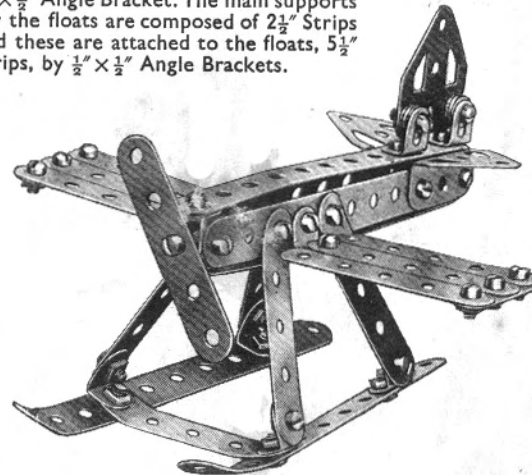
Parts required

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

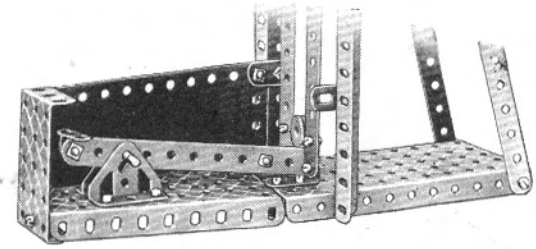


Fig. D25a

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

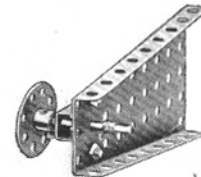
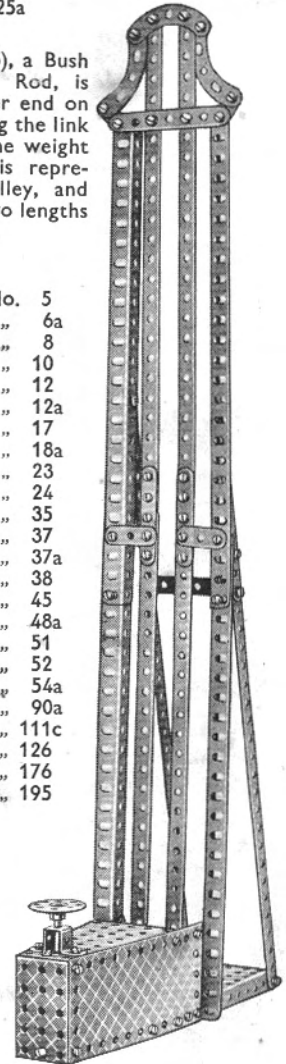
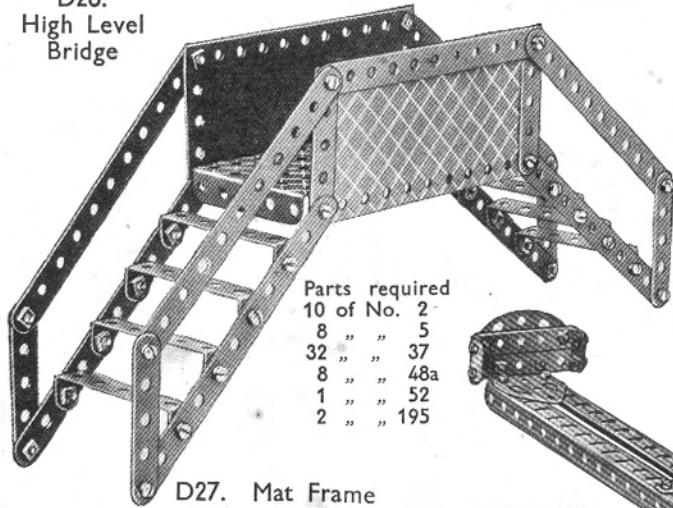


Fig. D25b



D26. High Level Bridge



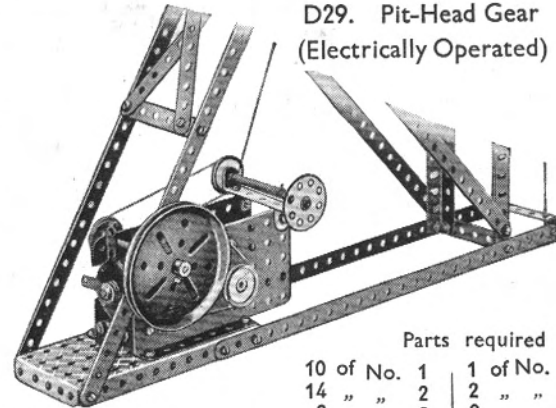
Parts required

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

Parts required

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

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)

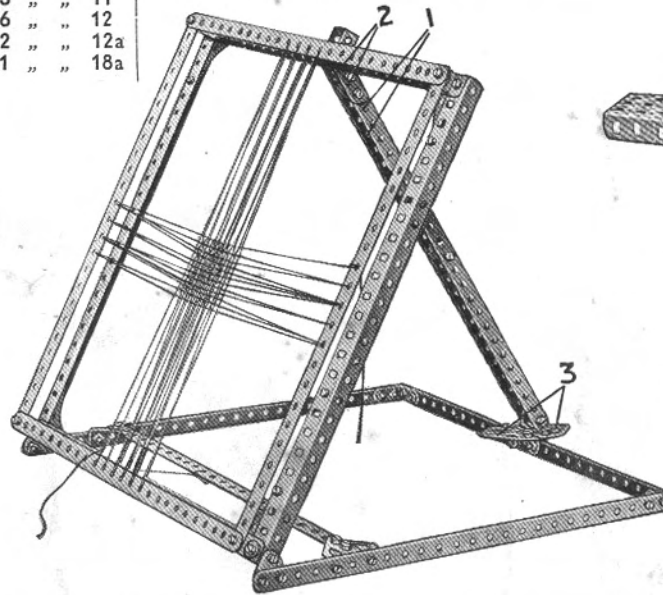
Parts required

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

D27. Mat Frame

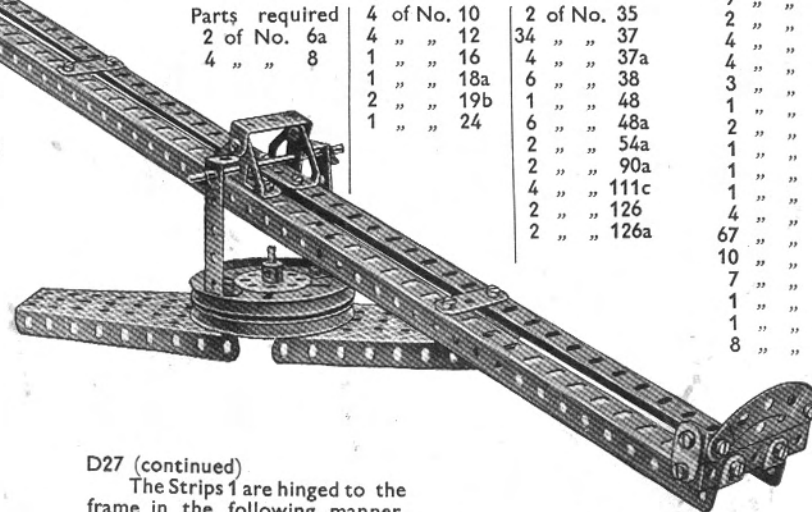
Parts required

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



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.

D28. Roundabout See-Saw



Parts required

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

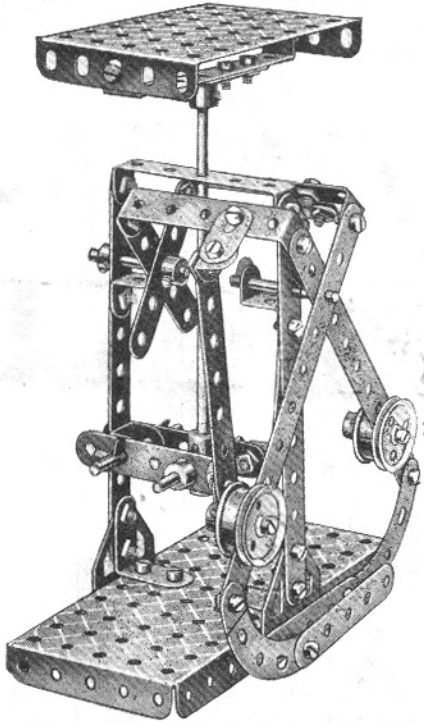
D30 (continued)
The rear of the base of this model is fitted with a $5\frac{1}{2} \times 2\frac{1}{2}$ " Flanged Plate that carries at its sides two $5\frac{1}{2} \times 2\frac{1}{2}$ " Strip Plates. A $12\frac{1}{2}$ " Strip secured horizontally to each of these to form a strengthener, also carries 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.

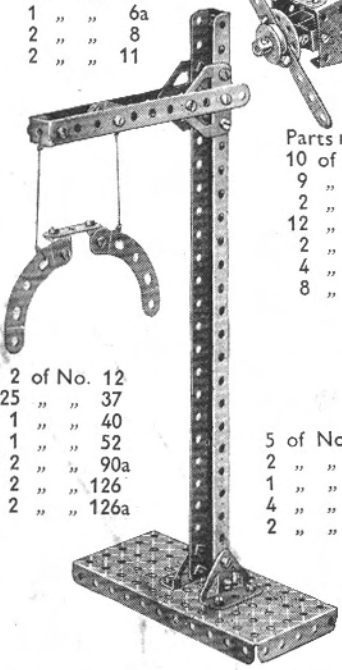
E1. Letter Balance

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



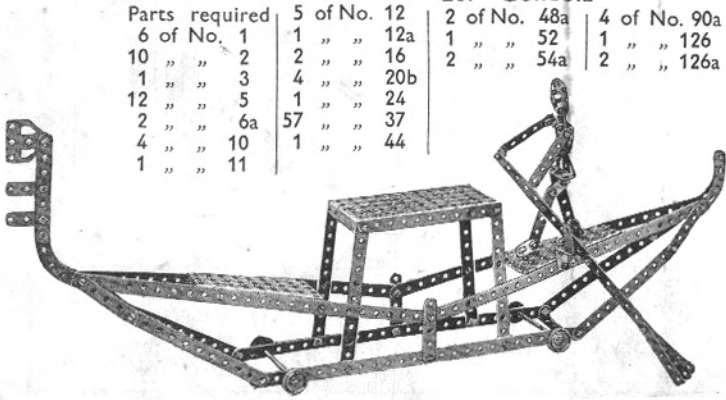
E2. Railway Gauge

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



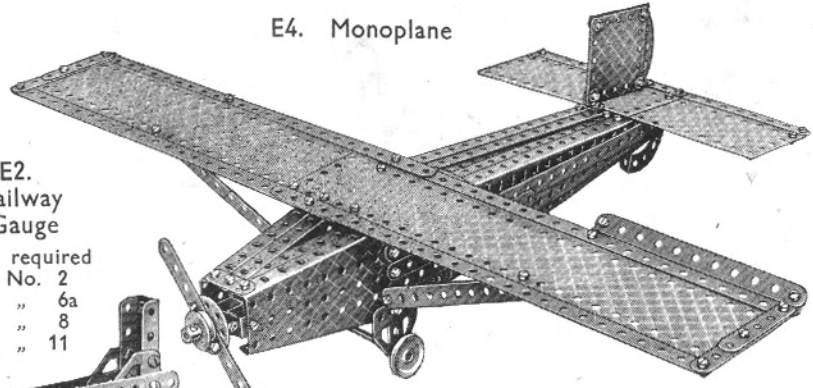
2 of No. 12	37
25 " " 40	40
1 " " 52	52
1 " " 90a	90a
2 " " 126	126
2 " " 126a	126a

E3. Gondola



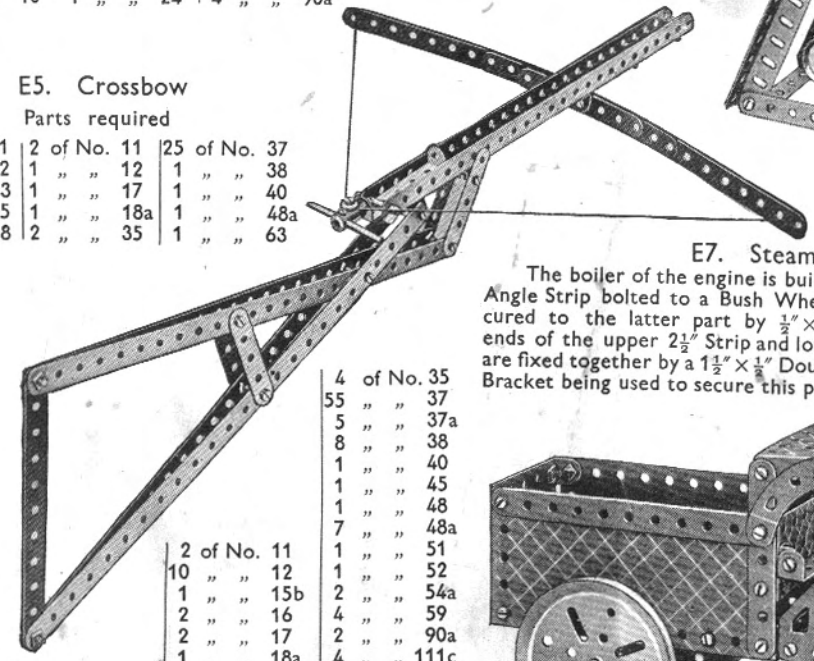
Parts required		
5 of No. 12	48a	4 of No. 90a
2 of No. 12a	52	1 " " 126
1 " " 16	54a	2 " " 126a
2 " " 20b		
1 " " 24		
1 " " 37		
57 " " 44		
1 " " 10		
1 " " 11		

E4. Monoplane



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

E5. Crossbow



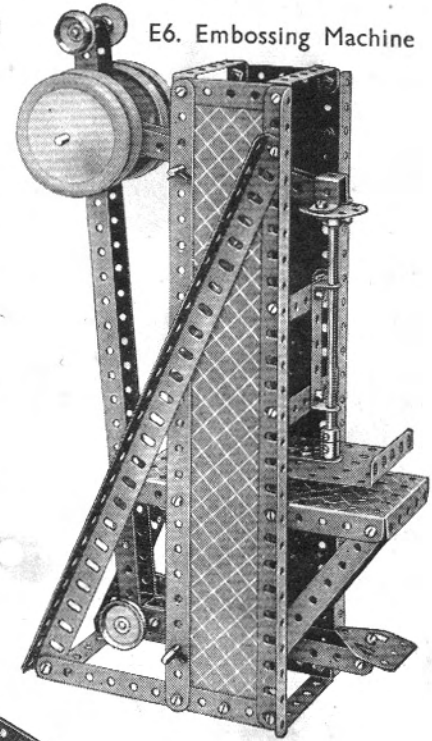
Parts required		
5 of No. 1	2 of No. 11	25 of No. 37
2 " " 2	1 " " 12	1 " " 38
1 " " 3	1 " " 17	1 " " 40
4 " " 5	1 " " 18a	1 " " 48a
2 " " 8	2 " " 35	1 " " 63

Parts required	
2 of No. 2	11
2 " " 3	12
11 " " 5	15b
2 " " 6a	16
2 " " 10	17
	18a
	19b
	20b
	22
	22a
	23
	24

Parts required

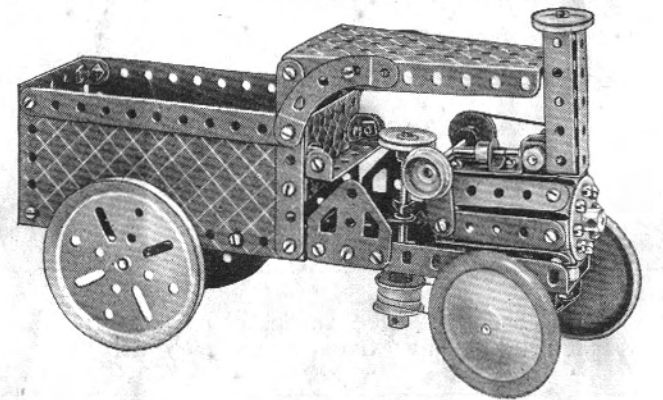
4 of No. 1	2
8 " " 5	5
2 " " 8	8
4 " " 11	11
3 " " 15	15
1 " " 16	16
3 " " 18a	18a
2 " " 20b	20b
2 " " 22	22
1 " " 24	24
8 " " 35	35
37 " " 37	37
6 " " 38	38
1 " " 45	45
7 " " 48a	48a
1 " " 52	52
1 " " 53	53
3 " " 59	59
1 " " 62	62
1 " " 126a	126a
4 " " 187	187
2 " " 197	197

E6. Embossing Machine



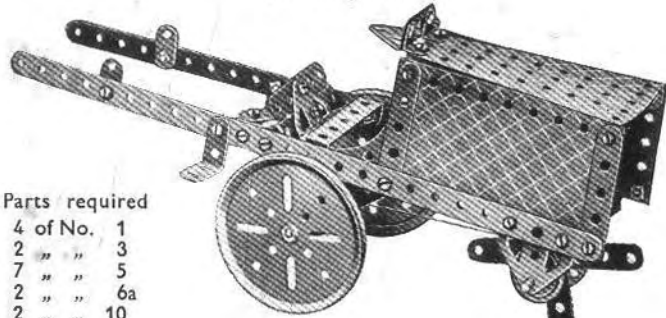
E7. Steam Lorry

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



4 of No. 35	37
55 " " 37a	37a
5 " " 38	38
8 " " 40	40
1 " " 45	45
1 " " 48	48
7 " " 48a	48a
1 " " 51	51
1 " " 52	52
2 " " 54a	54a
2 " " 59	59
4 " " 90a	90a
1 " " 111c	111c
1 " " 125	125
2 " " 126a	126a
1 " " 186	186
2 " " 187	187
1 " " 190	190
2 " " 195	195

E8. Hay Tedder

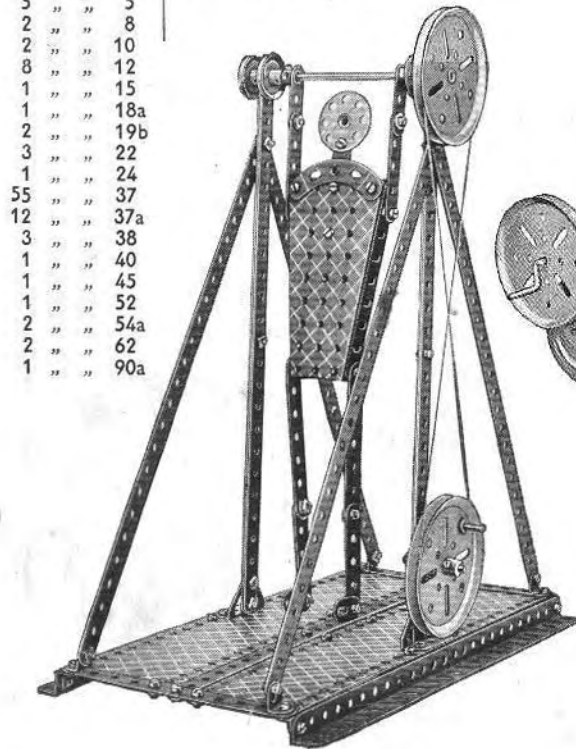


Parts required

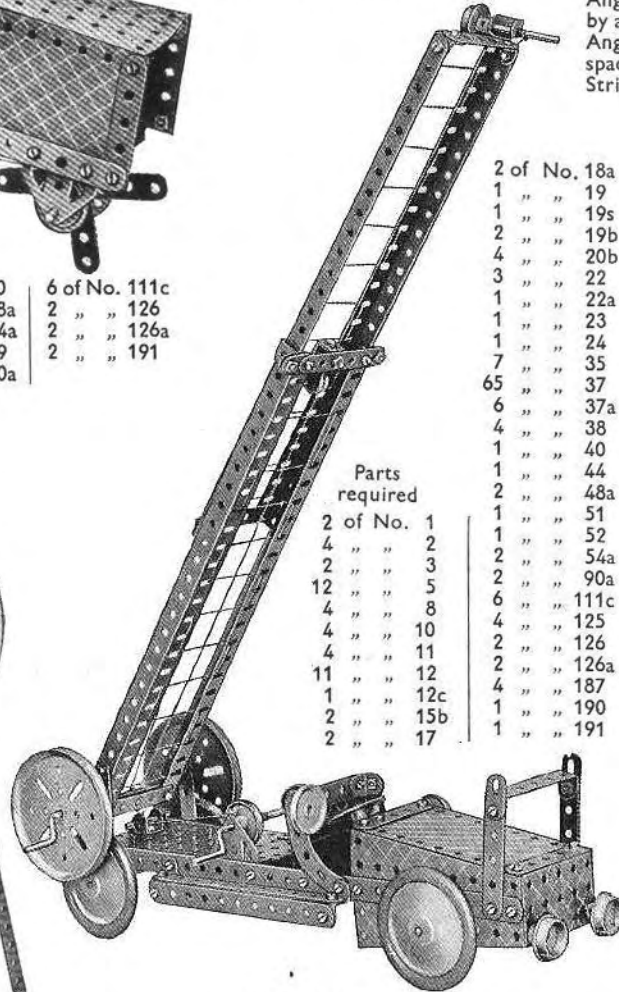
4 of No. 1	3 of No. 22	1 of No. 40	6 of No. 111c
2 " " 3	1 " " 24	3 " " 48a	2 " " 126
7 " " 5	30 " " 37	1 " " 54a	2 " " 126a
2 " " 6a	6 " " 37a	4 " " 59	2 " " 191
2 " " 10	8 " " 38	3 " " 90a	
4 " " 12			
2 " " 12a			
1 " " 15d			
1 " " 16			
2 " " 19b			
1 " " 20b			

E9. Acrobat

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

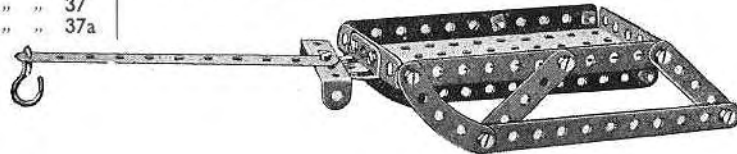


Parts required

2 of No. 1	2 of No. 18a
4 " " 2	1 " " 19
2 " " 3	1 " " 19s
12 " " 5	2 " " 19b
4 " " 8	4 " " 20b
4 " " 10	3 " " 22
4 " " 11	1 " " 22a
4 " " 12	1 " " 23
1 " " 12c	1 " " 24
2 " " 15b	7 " " 35
2 " " 17	7 " " 37
	6 " " 37a
	4 " " 38
	1 " " 40
	1 " " 44
	2 " " 48a
	1 " " 51
	1 " " 52
	2 " " 54a
	2 " " 90a
	6 " " 111c
	4 " " 125
	2 " " 126
	2 " " 126a
	4 " " 187
	1 " " 190
	1 " " 191

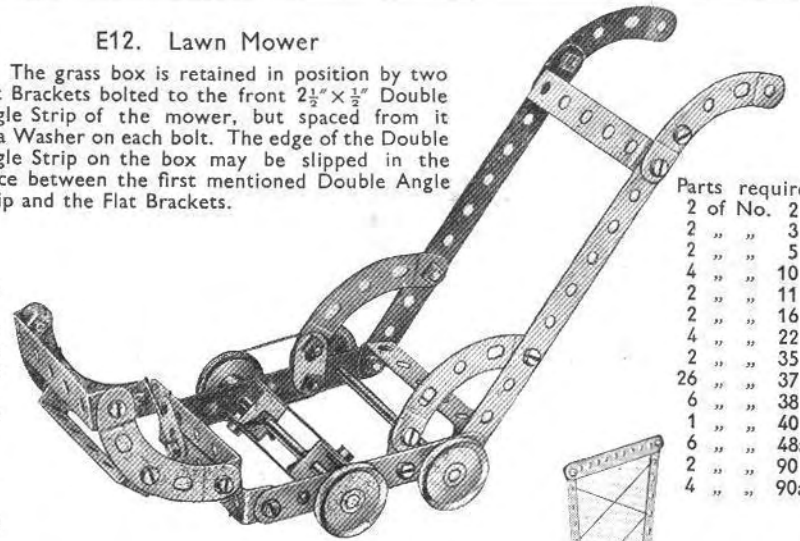
E11. Horse Sleigh

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



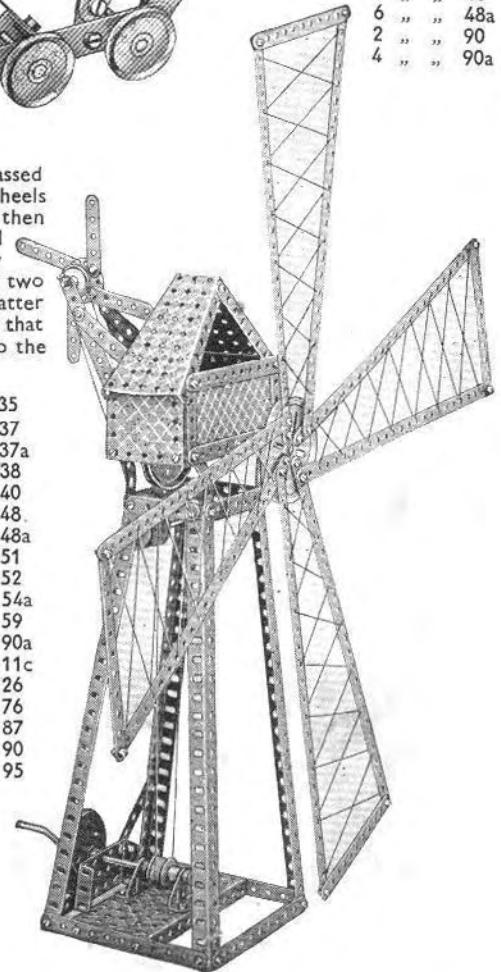
Parts required

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

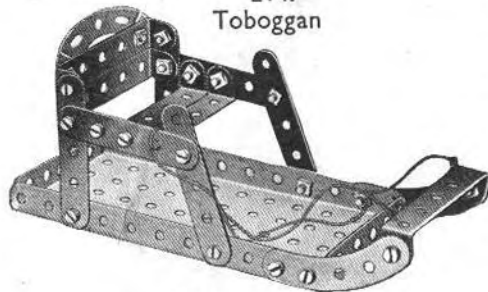
E13. Windmill

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

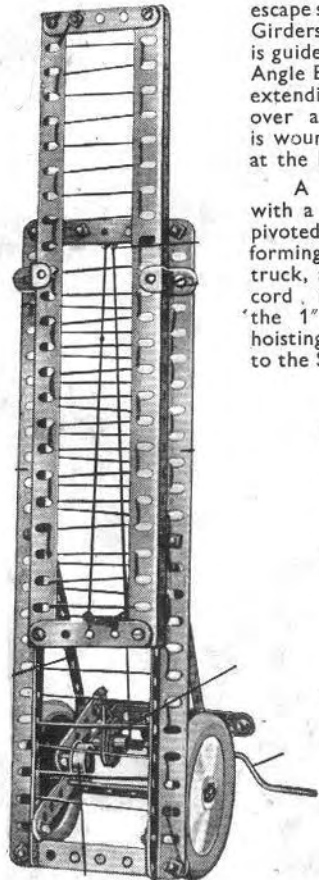


Parts required		
6 of No. 5	5 of No. 48a	2 of No. 90
22 " " 37	1 " " 52	1 " " 90a
1 " " 40		

E15. Fire Escape

The moving portion of the escape slides on the 12½" Angle Girders of the fixed ladder and is guided by two ½" Reversed Angle Brackets. The cord for extending the ladder passes over a ½" loose Pulley and is wound on the Crank Handle at the base of the model.

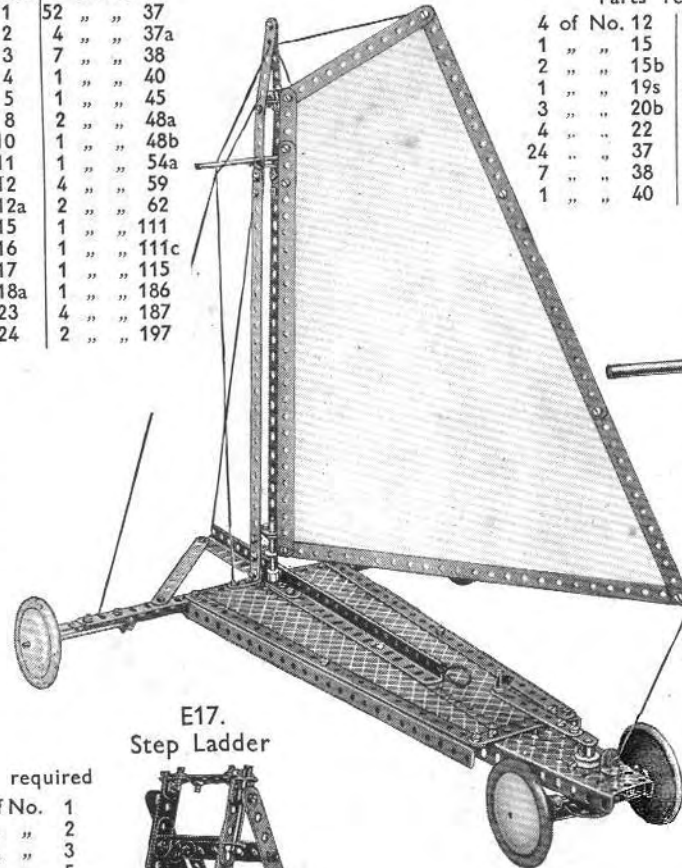
A 3" Strip, weighted with a ¾" Flanged Wheel, is pivoted to the 5½" Strip forming one side of the escape truck, and a short length of cord is passed round the 1" Pulley on the hoisting shaft, and tied to the Strip.



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	
2 " " 59	
5 " " 111c	
2 " " 125	
1 " " 126a	
2 " " 187	

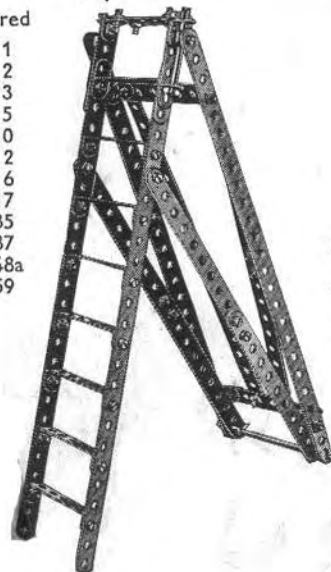
E16. Land Yacht

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



E17. Step Ladder

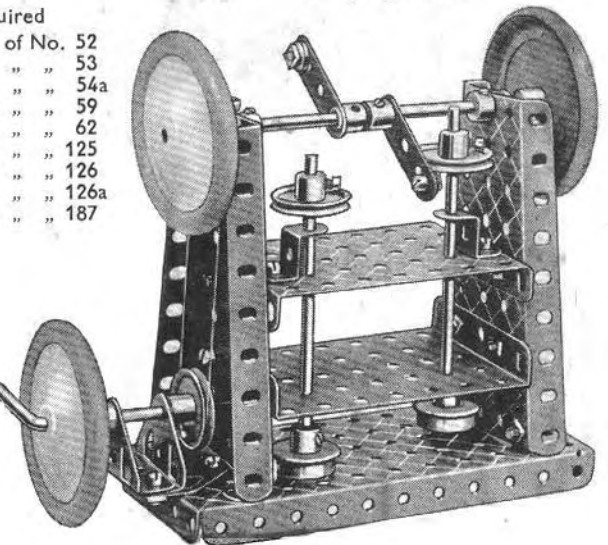
Parts required	
4 of No. 1	
8 " " 2	
2 " " 3	
3 " " 5	
2 " " 10	
10 " " 12	
1 " " 16	
2 " " 17	
10 " " 35	
38 " " 37	
8 " " 48a	
2 " " 59	



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

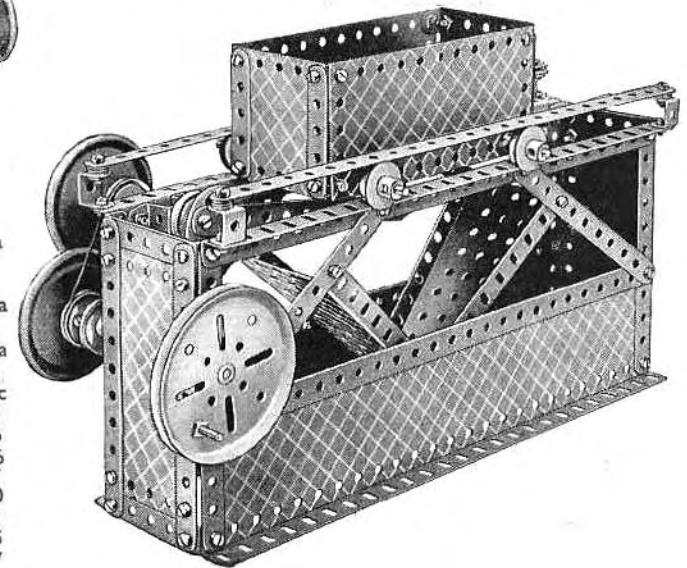
E18. Stamping Mill

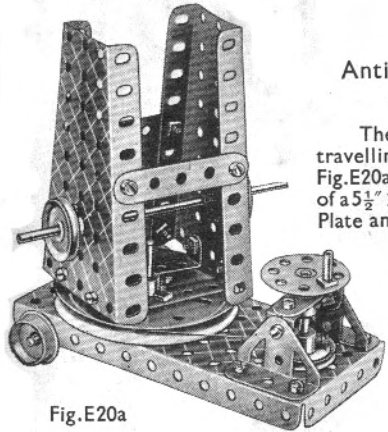
Parts required		1 of No. 52	
4 of No. 12	1	" "	53
1 " " 15	2	" "	54a
2 " " 15b	3	" "	59
1 " " 19s	2	" "	62
3 " " 20b	2	" "	125
4 " " 22	2	" "	126
24 " " 37	2	" "	126a
7 " " 38	1	" "	187
1 " " 40	3	" "	



E19. Sifter

The truck is vibrated by a 5½" 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.





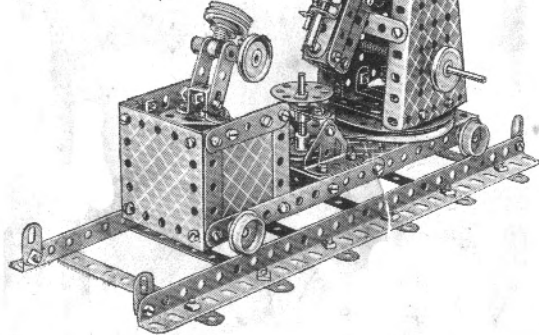
E20.
Anti Aircraft Gun

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

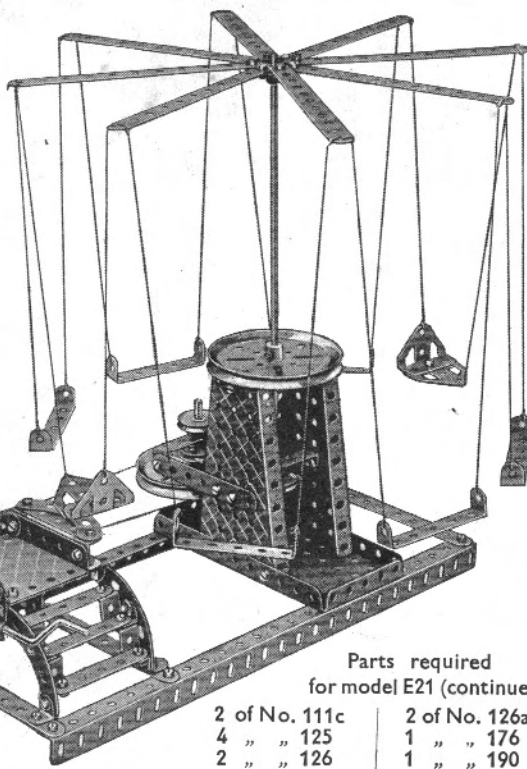
11 of No. 2	1 of No. 44	1 of No. 126a
9 " " 5	1 " " 45	1 " " 176
1 " " 6a	1 " " 48	4 " " 190
4 " " 8	3 " " 48a	
8 " " 10	1 " " 51	
4 " " 11	1 " " 52	
6 " " 12	1 " " 53	
1 " " 15a	2 " " 54a	
4 " " 16	3 " " 59	
2 " " 17	2 " " 62	
1 " " 18a	4 " " 90a	
1 " " 19b	1 " " 111	
4 " " 20b	3 " " 111c	
4 " " 22	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
2 " " 3	2
12 " " 5	2
2 " " 8	2
2 " " 10	4
4 " " 11	1
12 " " 12	1
1 " " 13	1
1 " " 16	1
1 " " 19	2
2 " " 19b	2
2 " " 20b	3
3 " " 22	1
1 " " 24	62
2 " " 37	2
2 " " 37a	3
3 " " 38	2
2 " " 40	8
8 " " 48a	1
2 " " 51	1
1 " " 52	2
2 " " 54a	4
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

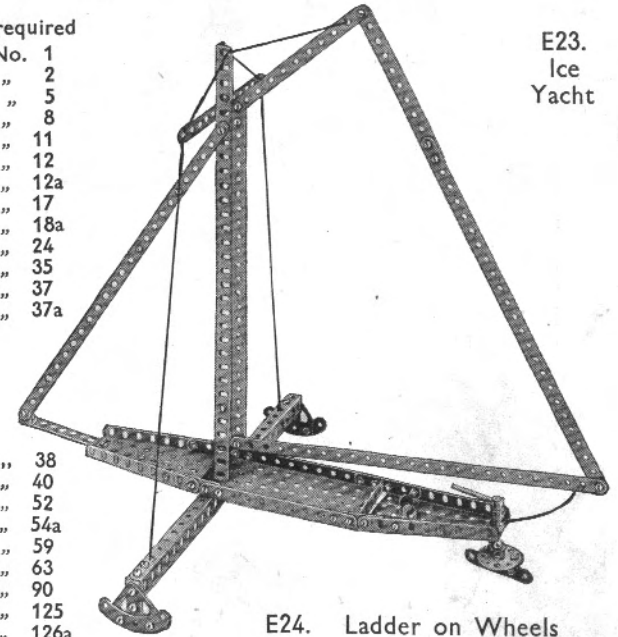
Parts required

6 of No. 1	4 of No. 90a	2 of No. 126
2 " " 2	2 " " 111c	1 " " 176
2 " " 3	1 " " 115	2 " " 197
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		

Parts required

4 of No. 1	2 " " 38
5 " " 2	1 " " 40
5 " " 5	1 " " 52
4 " " 8	2 " " 54a
1 " " 11	1 " " 59
3 " " 12	1 " " 63
2 " " 12a	2 " " 90
2 " " 17	1 " " 125
1 " " 18a	2 " " 126a
1 " " 24	
2 " " 35	
54 " " 37	
1 " " 37a	

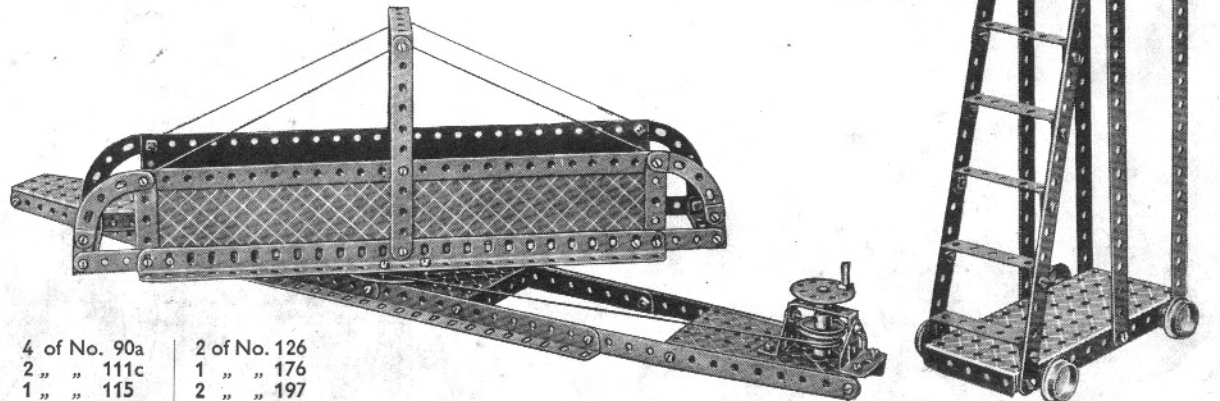
E23.
Ice Yacht



E24. Ladder on Wheels

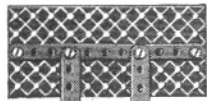
Parts required

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



E22. Turntable

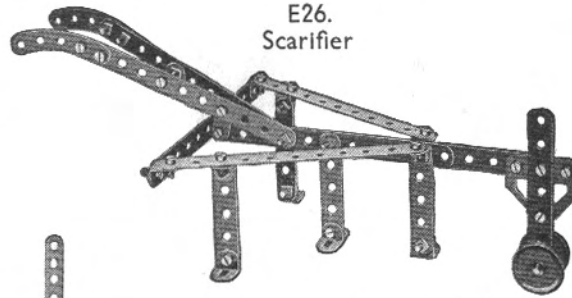
The turning section of the model is mounted on a 3" Pulley carried on a 2" Rod that is held in place by a 1" fast Pulley secured below the base of the model. Turning is effected from a $\frac{3}{8}''$ Flanged Wheel and 1" fast Pulley as shown.



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.
Scarfier

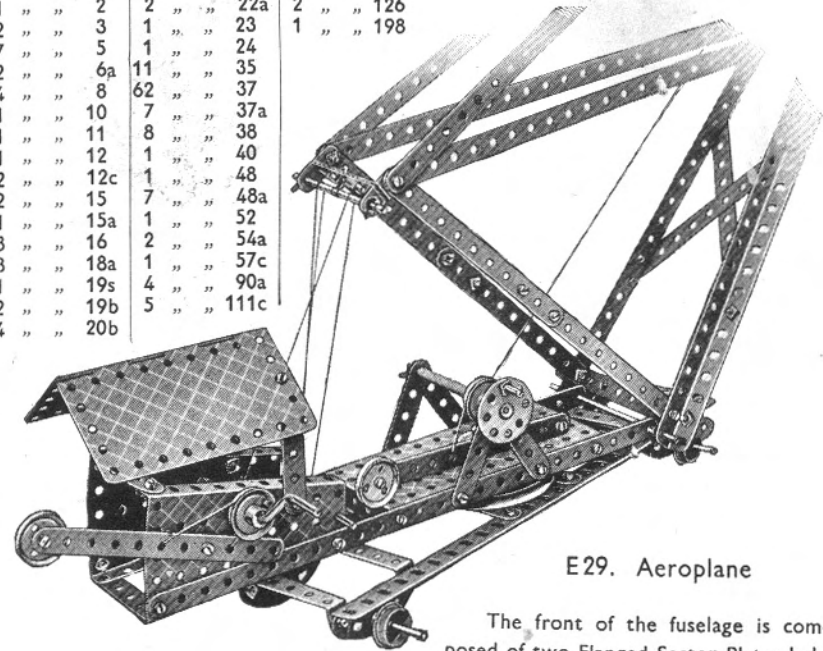
Parts required

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

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		

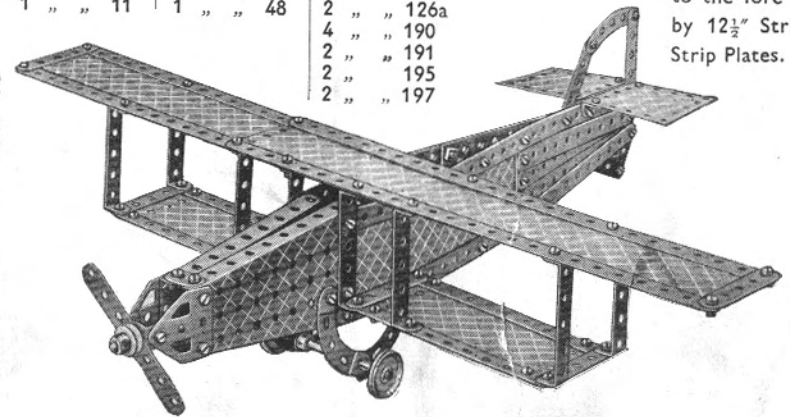


E29. Aeroplane

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

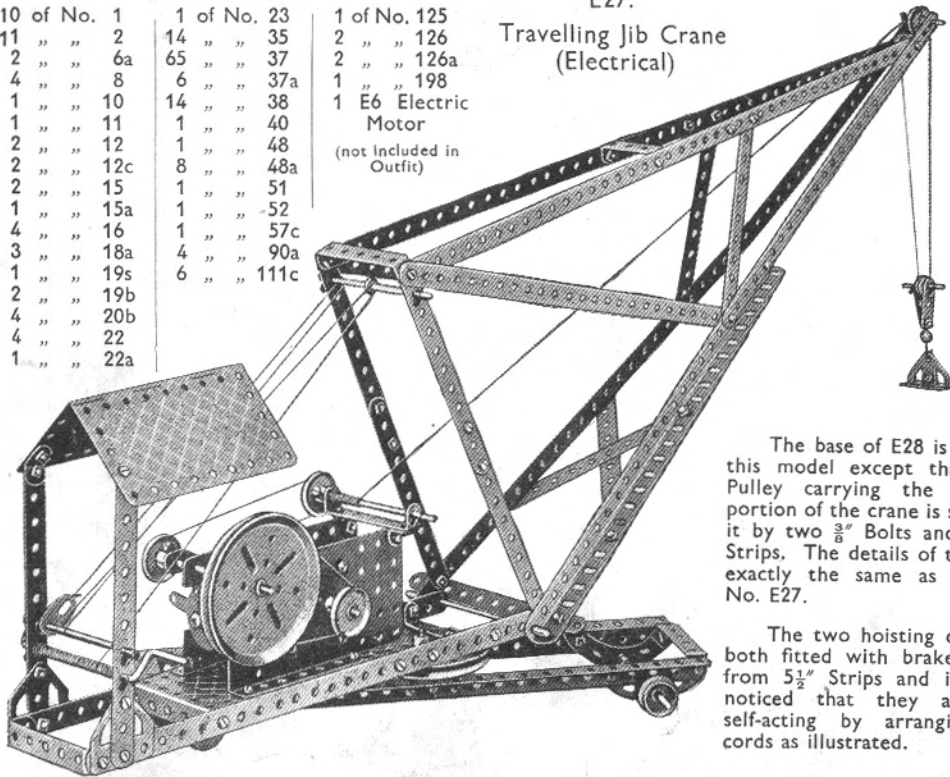
6 of No. 1	6 of No. 12	8 of No. 48a
14 " " 2	1 " " 16	2 " " 54a
2 " " 3	2 " " 22	3 " " 59
2 " " 4	1 " " 23	2 " " 90
12 " " 5	2 " " 35	4 " " 90a
1 " " 6a	76 " " 37	1 " " 111
3 " " 10	8 " " 37a	6 " " 111c
1 " " 11	1 " " 48	2 " " 126a
		4 " " 190
		2 " " 191
		2 " " 195
		2 " " 197



Parts required

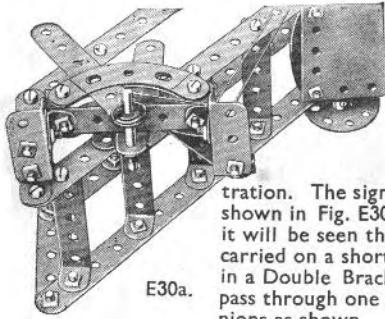
10 of No. 1	1 of No. 23	1 of No. 125
11 " " 2	14 " " 35	2 " " 126
2 " " 6a	65 " " 37	2 " " 126a
4 " " 8	6 " " 37a	1 " " 198
1 " " 10	14 " " 38	1 E6 Electric Motor
1 " " 11	1 " " 40	(not included in Outfit)
2 " " 12	1 " " 48	
2 " " 12c	8 " " 48a	
2 " " 15	1 " " 51	
1 " " 15a	1 " " 52	
4 " " 16	1 " " 57c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

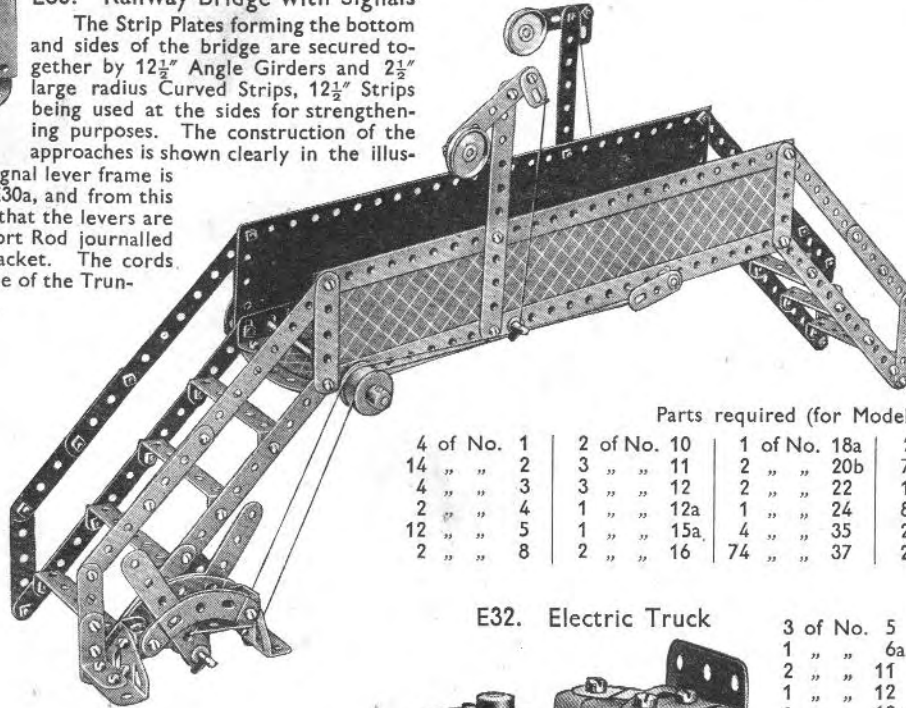


E30a.

E30. Railway Bridge with Signals

The Strip Plates forming the bottom and sides of the bridge are secured together by $1\frac{1}{2}$ " Angle Girders and $2\frac{1}{2}$ " large radius Curved Strips, $12\frac{1}{2}$ " Strips being used at the sides for strengthening purposes. The construction of the approaches is shown clearly in the illustration.

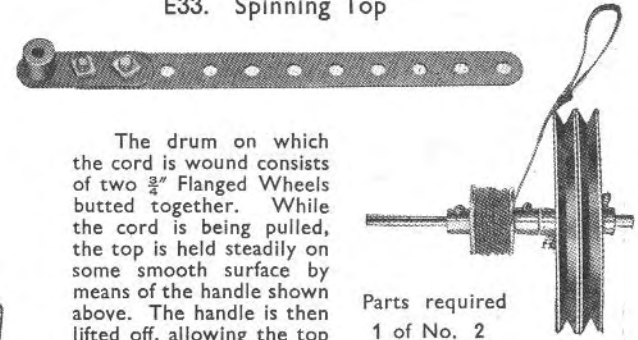
The signal lever frame is shown in Fig. E30a, and from this it will be seen that the levers are carried on a short Rod journalled in a Double Bracket. The cords pass through one of the Trunnions as shown.



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

E33. Spinning Top

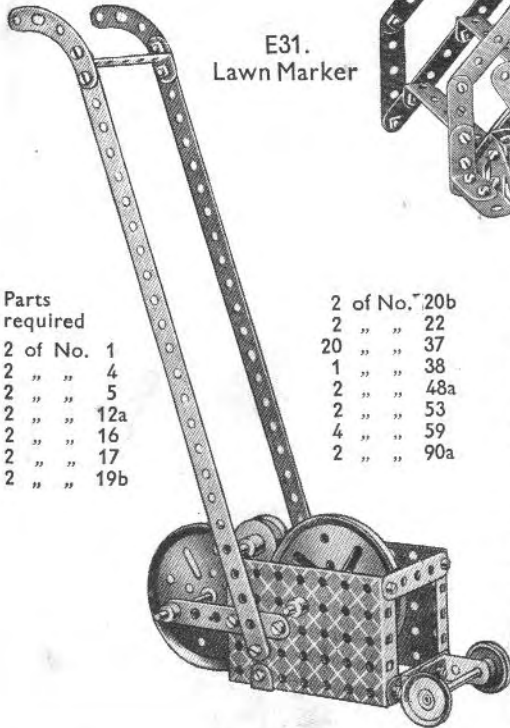


The drum on which the cord is wound consists of two $\frac{3}{4}$ " Flanged Wheels butted together. While the cord is being pulled, the top is held steadily on some smooth surface by means of the handle shown above. The handle is then lifted off, allowing the top to spin freely.

Parts required

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

E31. Lawn Marker



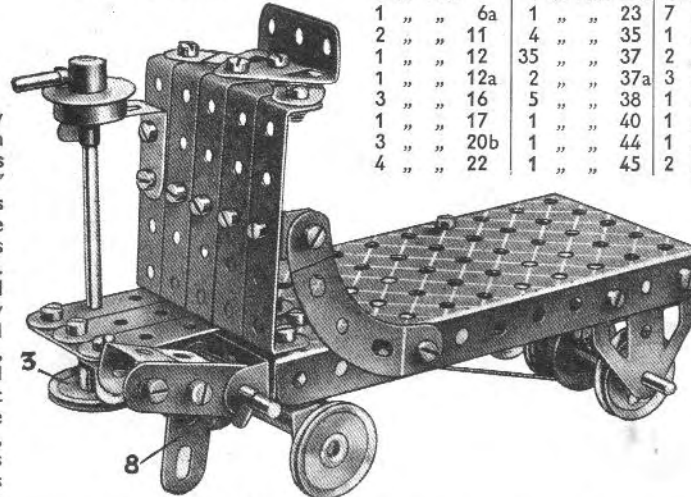
Parts required

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

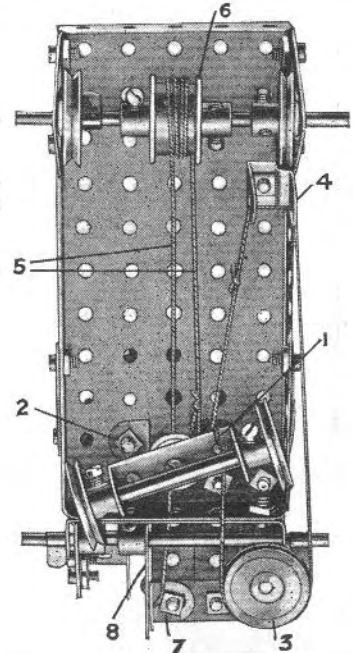
An underneath view of the truck is shown in Fig. E32a. The front axle is journalled in a $1\frac{1}{2}$ " x $\frac{1}{2}$ " Double Angle Strip that is free to turn on a Double Bent Strip, from which it is spaced by a $\frac{1}{2}$ " loose Pulley. A length of cord is wrapped round the 1" Pulley that is 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 $\frac{3}{4}$ " 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



Parts required

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

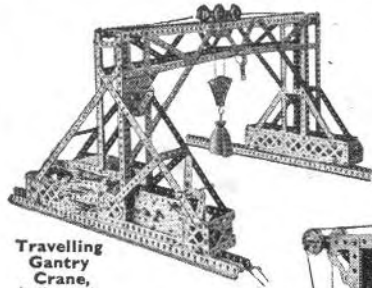


E32a.

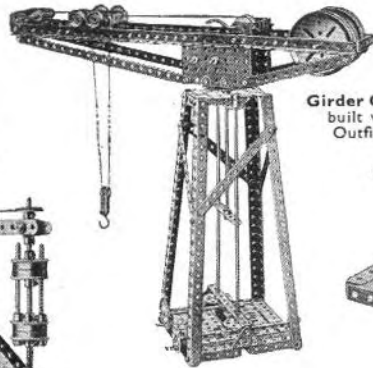
HOW TO CONTINUE

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.

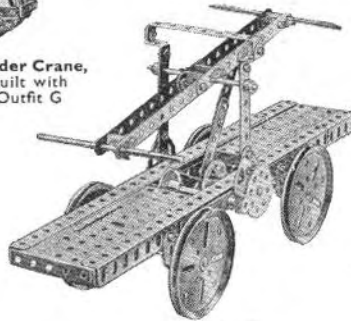
Build Bigger and Better Models



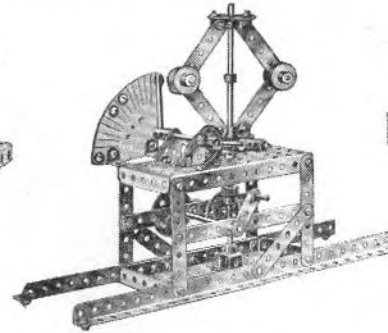
Travelling Gantry Crane, built with Outfit L



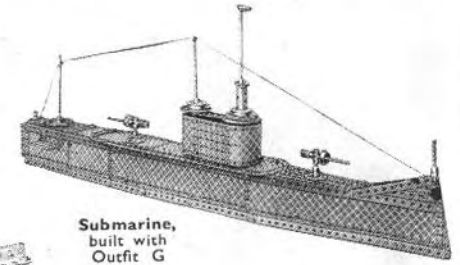
Girder Crane, built with Outfit G



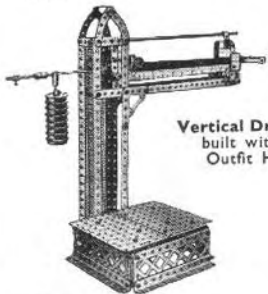
Hand Trolley, built with Outfit F



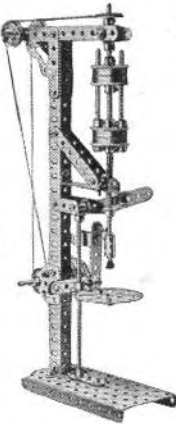
Speed Indicator, built with Outfit G



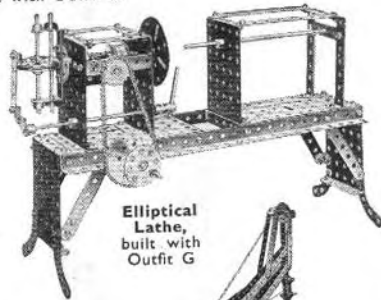
Submarine, built with Outfit G



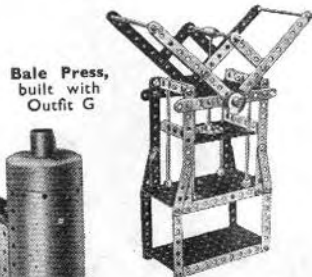
Vertical Drill, built with Outfit H



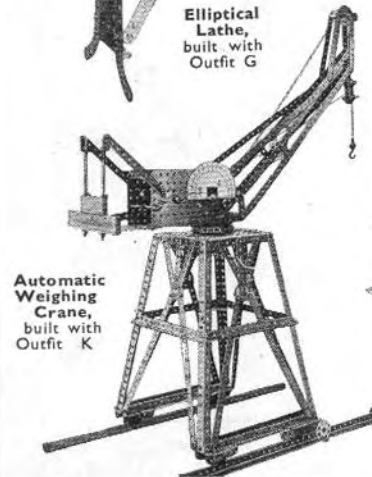
Platform Scales, built with Outfit K



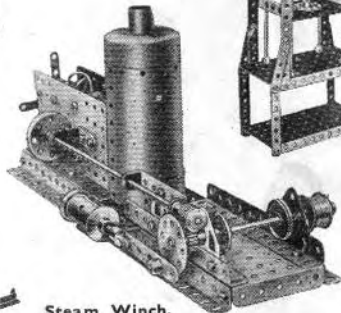
Elliptical Lathe, built with Outfit G



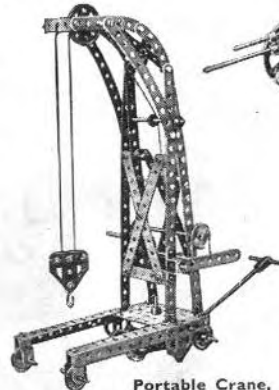
Bale Press, built with Outfit G



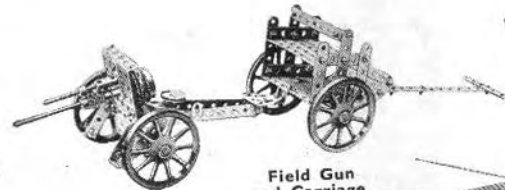
Automatic Weighing Crane, built with Outfit K



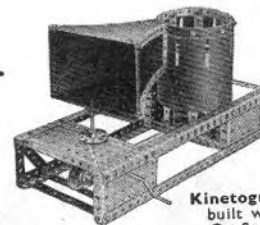
Steam Winch, built with Outfit G



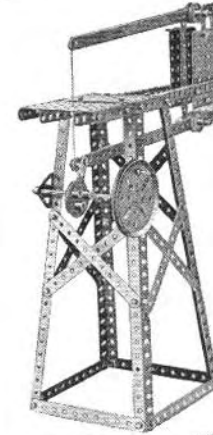
Portable Crane, built with Outfit K



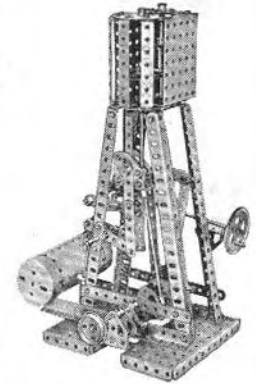
Field Gun and Carriage, built with Outfit H



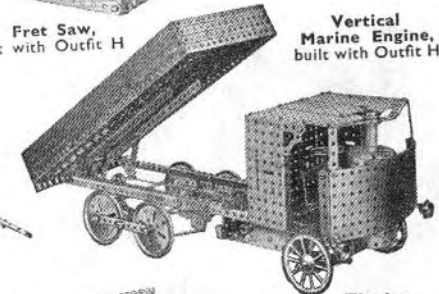
Kinetograph, built with Outfit F



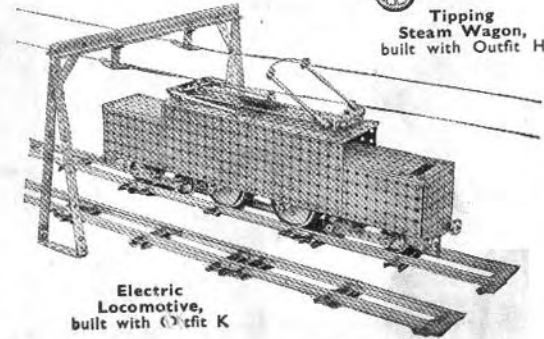
Fret Saw, built with Outfit H



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

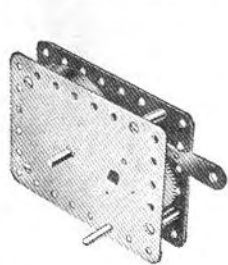
If you want to obtain the fullest enjoyment from the Meccano hobby you should operate your models by means of one of the Meccano power units described on this page. You push over the control lever of the clockwork or electric

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

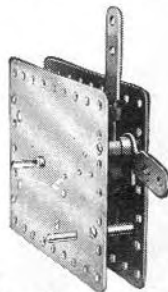
These are the finest Clockwork motors obtainable for model driving. They have exceptional power and length of run and their gears are cut with such precision as to make them perfectly smooth and steady in operation.

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.



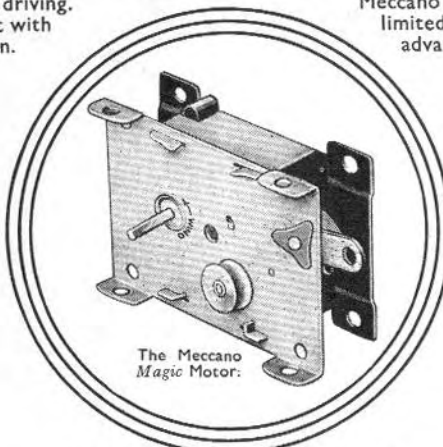
No. 1 Clockwork Motor

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

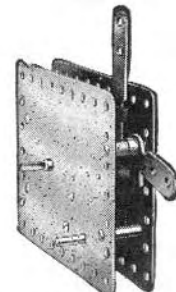
This Motor is more powerful than the No. 1 Motor and is fitted with reversing motion. It has brake and reverse levers.



The Meccano Magic Motor:

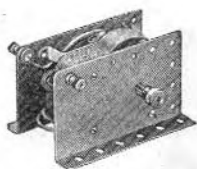
The Meccano Magic Motor

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.



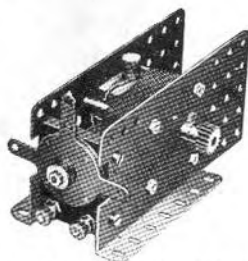
No. 2 Clockwork Motor

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.

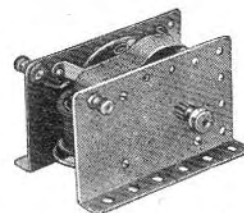


No. E6 Electric Motor (6-volt)

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.

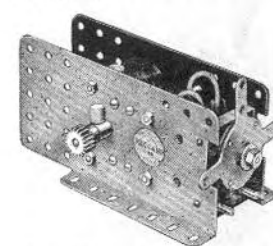
MECCANO ELECTRIC MOTORS

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. 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.

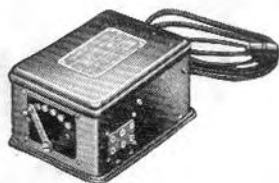
No. T6 TRANSFORMER (Output 25 VA at 9 volts) for 6-volt Electric Motors. Provided with one 9-volt circuit controlled by a 5-stud speed regulator.

No. T20A TRANSFORMER (Output 35 VA at 20/3½ 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 3½ volts for lighting up to 14 lamps.

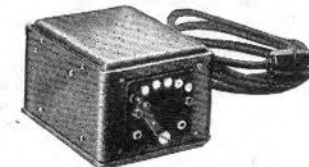
No. T6A TRANSFORMER (Output 40 VA at 9/3½ volts) for 6-volt Electric Motors. Has two separate circuits at 9 volts, one controlled by a 5-stud speed regulator; and a third circuit at 3½ volts for lighting up to 18 lamps.

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. T20a Transformer



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.

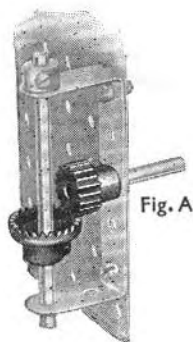


Fig. A

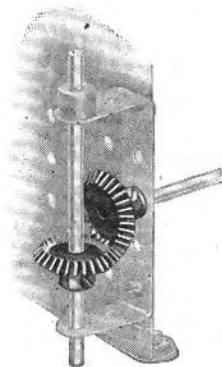


Fig. C

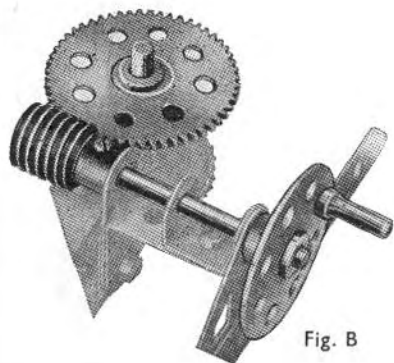


Fig. B

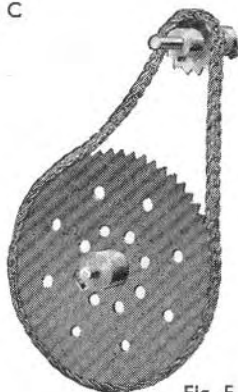


Fig. E

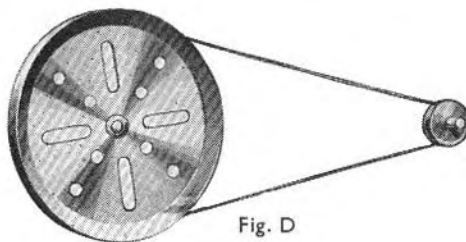


Fig. D

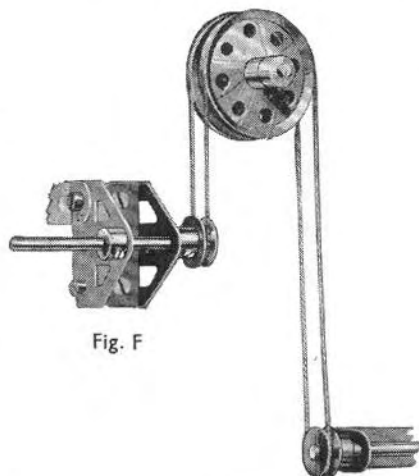


Fig. F

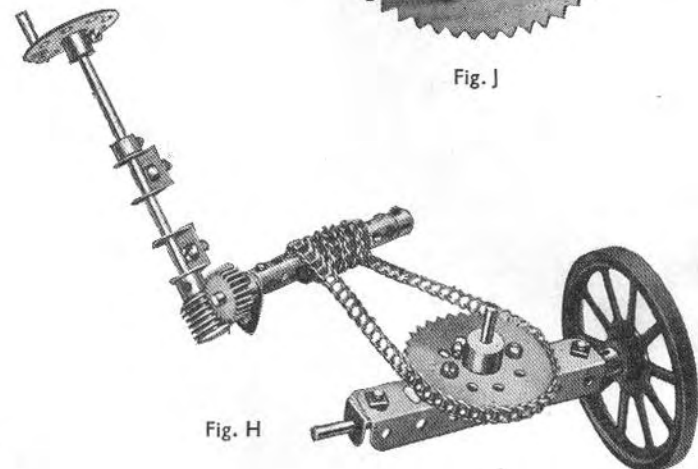


Fig. H

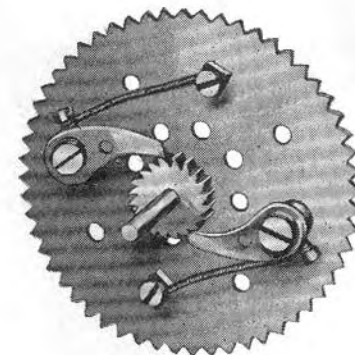


Fig. J

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.

(continued)

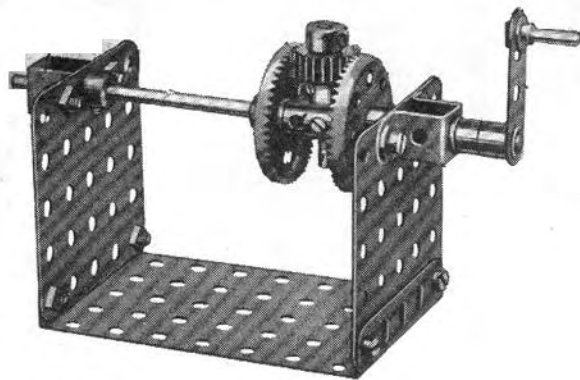


Fig. K

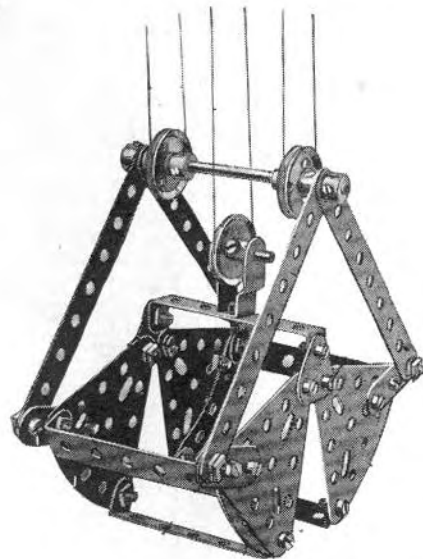


Fig. M

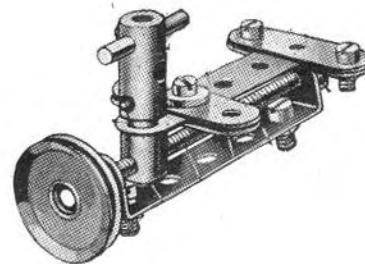


Fig. N

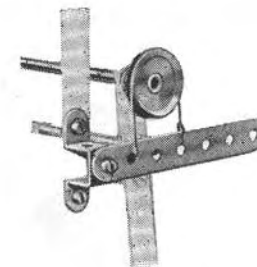


Fig. O

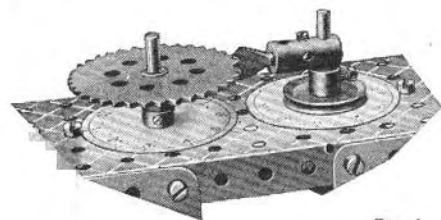


Fig. L

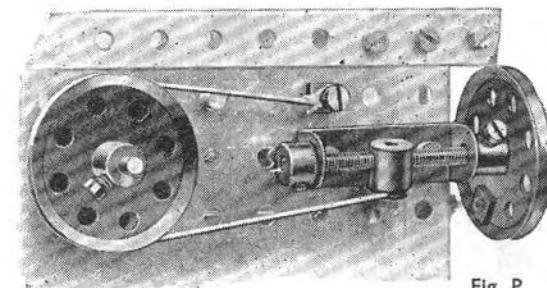


Fig. P

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.

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.

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

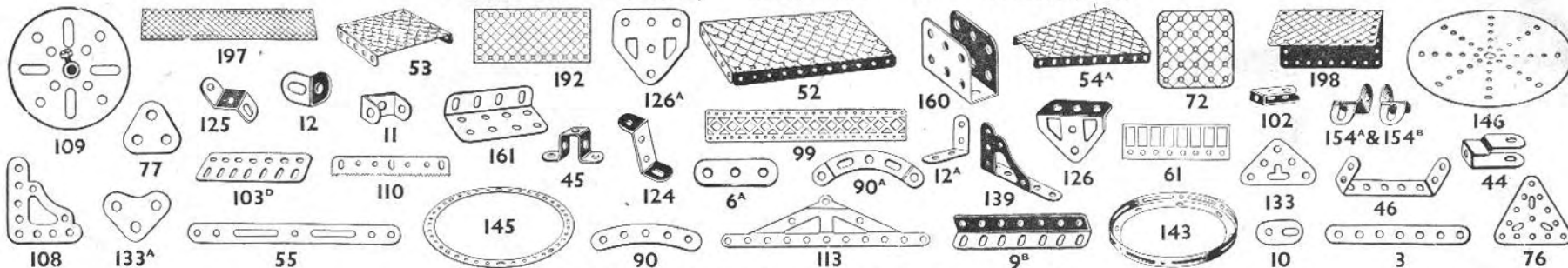
The type of brake shown in Fig. P is used to apply a constant retarding effect to a rotating shaft. It can thus be utilised in a crane to prevent the load from falling back when the winding spindle is released. An advantage of the brake is that the speed of the shaft to which it is applied can be varied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

CONTENTS OF OUTFITS AND COMPLETE LIST OF MECCANO PARTS

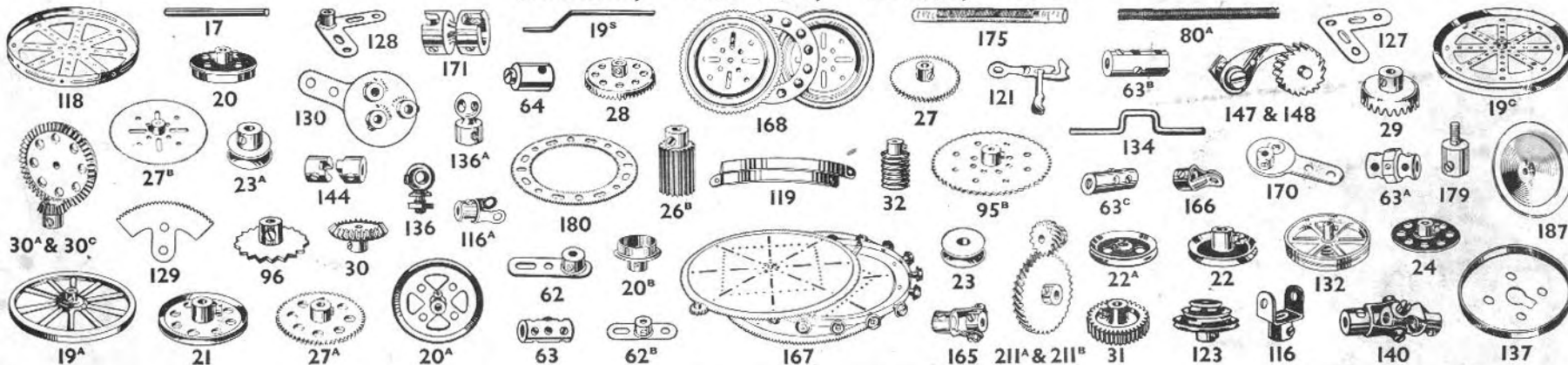
No.	Description.	A	Aa	B	Ba	C	Ca	D	Da	E	Ea	F	Fa	G	Ga	H	Ha	K	Ka	L
1	Perforated Strips, 12 3/4"		2	2	2	4	6	10		10		10		10	6	16	14	30	8	38
1a	" 9"																		10	13
1b	" 7 1/2"																		10	13
2	" 5 1/2"	4	2	6	2	8	6	14		14		18		21	2	2	2	40	3	10
2a	" 4 1/2"																	28	16	12
3	" 3 1/2"				1	1	1	2		4		6		6	6	12	12	24	12	24
3a	" 2 1/2"																	12	12	24
4	" 2"	6	3	9		9	3	12		12		12		18	2	4	20	36	84	120
5	" 1 3/4"																	24	6	30
6	" 1 1/2"					2	2	2		2		2		2	4	4	8	14	12	12
6a	" 1 1/8"																	6	6	6
7	" 10 3/8"					4	4	4		4		8		9	5	14	12	26	9	27
7a	" 12 3/8"																	9	17	17
8	" 9 3/8"																	6	6	6
8a	" 7 3/8"																	6	6	6
8b	" 5 3/8"																	18	6	24
9	" 4 3/8"																	2	13	17
9a	" 3 3/8"																	2	3	7
9b	" 2 3/8"																	2	3	7
9c	" 2 1/8"																	6	2	7
9d	" 1 7/8"																	6	2	7
9e	" 1 5/8"																	6	2	7
9f	" 1 3/8"																	4	4	30
10	Flat Brackets	4	1	5	2	5	3	8		8		8		9	3	12	4	16	14	30
11	Double Brackets		2	8		8	2	12		4		14		14	14	8	12	48	28	12
12	Angle Brackets, 1" X 1 1/2"	8								2		2		6	6	6	4	6	6	12
12a	" 1" X 1"																	4	4	6
12b	" 1" X 3/4"																	4	4	6
12c	Obtuse Angle Bracket, 3/4" X 3/8"				4	4	4	4		4		4		4	4	4	4	4	4	12
13	Axle Rods, 11 1/2"									1		1		2	2	2	3	3	3	7
13a	" 8"																	3	3	7
14	" 6 1/2"									2		2		3	3	3	3	4	4	13
15	" 5 1/2"									2		2		3	3	3	3	4	4	13
15a	" 4 1/2"									2		2		3	3	3	3	4	4	13
15b	" 4"									2		2		3	3	3	3	4	4	13
16	" 3 1/2"	2	1	2	1	3	1	4		2		4		5	3	5	2	7	7	12
16a	" 2 1/2"									2		4		5	3	5	2	7	7	12
16b	" 2"	2		2	2	2	2	4		2		4		5	3	5	2	7	7	12
17	" 1 3/4"									2		4		5	3	5	2	7	7	12
18	" 1 1/2"									2		4		5	3	5	2	7	7	12
18a	" 1"									2		4		5	3	5	2	7	7	12
18b	" 3/4"									2		4		5	3	5	2	7	7	12
19	Crank Handles, 5" Shaft	1		1	2	2	2	2		1		1		1	4	4	2	1	1	4
19a	Wheels, 3", with set screws									1		1		1	4	4	2	1	1	4
19b	Pulley Wheels, 3", with set screws									2		2		2	4	4	2	1	1	4
19c	Pulley Wheels, 6"									4		4		4	4	4	4	4	4	12
20	Flanged Wheels, 1 1/2" diam.									4		4		4	4	4	4	4	4	10
20a	Pulley Wheels, 2", with set screws									4		4		4	4	4	4	4	4	10
20b	Flanged Wheels, 3" diam.									4		4		4	4	4	4	4	4	10
21	Pulley Wheels, 1 1/2" with set screws	4		4		4	2	4		4		4		4	4	4	4	4	4	19
22	" 1" without,									4		4		4	4	4	4	4	4	19
22a	" 1" with									4		4		4	4	4	4	4	4	19
23	" 3/4" with									4		4		4	4	4	4	4	4	19
23a	" 1/2" wide									4		4		4	4	4	4	4	4	19
24	Bush Wheels									1		1		1	2	2	2	2	2	11
25	Pinton Wheels									1		1		1	2	2	2	2	2	11
25a	" 1 1/2" diam.									1		1		1	2	2	2	2	2	11
25b	" 1 1/4" diam.									1		1		1	2	2	2	2	2	11
26	" 1" diam.									1		1		1	2	2	2	2	2	11
26a	" 3/4" diam.									1		1		1	2	2	2	2	2	11
26b	" 5/8" diam.									1		1		1	2	2	2	2	2	11
27	Gear Wheels, 50 teeth									2		2		2	1	3	2	5	4	9
27a	" 133 3/8" diam.									2		2		2	1	3	2	5	4	9
27b	" 95 3/8" diam.									2		2		2	1	3	2	5	4	9
27c	" 79 3/8" diam.									2		2		2	1	3	2	5	4	9
28	Contrate Wheels, 1 1/2" diam.									1		1		1	2	2	1	2	2	2
29	Bevel Gears, 26 teeth									1		1		1	2	2	1	2	2	2
30	" 16 1/2" diam.									1		1		1	2	2	1	2	2	2
30a	" 16 1/8" diam. (Can only be used together)									1		1		1	2	2	1	2	2	2
30c	" 16 1/4" diam.									1		1		1	2	2	1	2	2	2
31	Gear Wheels, 1 1/2", 38									1		1		1	2	2	1	2	2	2
32	Worms									1		1		1	2	2	1	2	2	2
34	Spanners									1		1		1	2	2	1	2	2	2
34b	Box Spanners									1		1		1	2	2	1	2	2	2
35	Spring Clips	4	2	6	2	8	6	14		14		14		19	5	19	5	24	12	36
36	Screwdrivers	1		1		1		1		1		1		1	1	1	1	1	1	1
36a	extra long									1		1		1	1	1	1	1	1	1
36b	Special									1		1		1	1	1	1	1	1	1
37	Nuts and Bolts, 7/32"	36	4	40	30	66	24	66	24	90	46	124	32	156	68	200	144	344	283	624
37a	" 5/16"									6		6		6	6	6	6	6	6	6
37b	" 3/16"									6		6		6	6	6	6	6	6	6
38	Washers	1		6	1	8	6	14		14		14		24	2	24	12	36	164	200
40	Hanks of Cord									1		1		1	4	4	4	4	4	4
41	Propeller Blades									1		1		1	4	4	4	4	4	4
43	Springs									1		1		1	4	4	4	4	4	4
44	Cranked Bent Strips	1		1		1		1												

MECCANO PARTS & ACCESSORIES

PLATES, STRIPS, GIRDERS & BRACKETS



WHEELS, PULLEYS, GEARS, ETC.



MISCELLANEOUS

