

MECCANO

HORNBY'S ORIGINAL SYSTEM — FIRST PATENTED 1901

INSTRUCTIONS FOR OUTFIT Ba

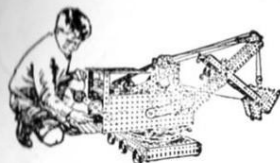
PRICE
3d.



35Ba

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MECCANO

HORNBY'S ORIGINAL SYSTEM—FIRST PATENTED 1901



REAL ENGINEERING IN MINIATURE

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

THE "MECCANO MAGAZINE"

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

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

HOW TO PROGRESS

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

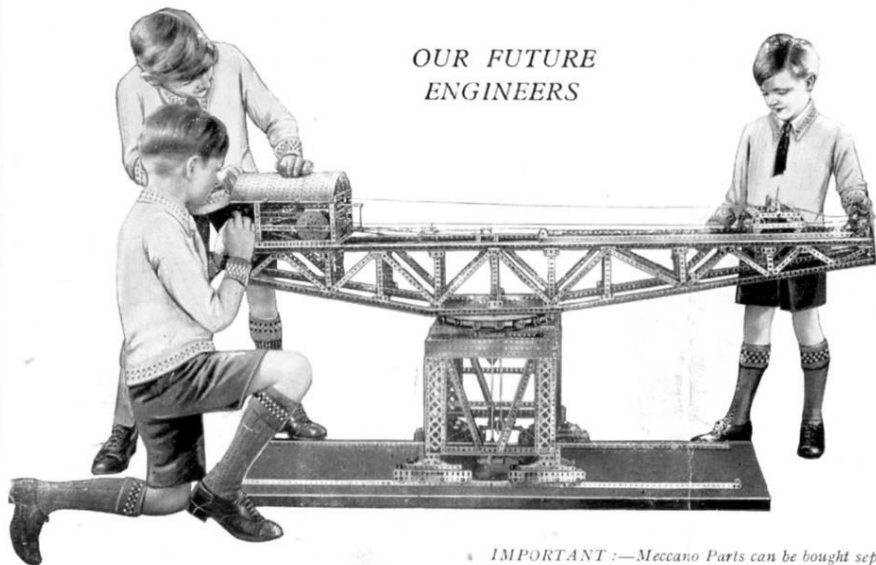
As a keen and inventive Meccano model-builder you should possess copies of the special Manuals "How to use Meccano Parts" and "Meccano Standard Mechanisms." In the former the principal uses of Meccano parts are outlined, while the latter shows a large number of real engineering mechanisms, built of Meccano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

MECCANO SERVICE

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

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

OUR FUTURE ENGINEERS

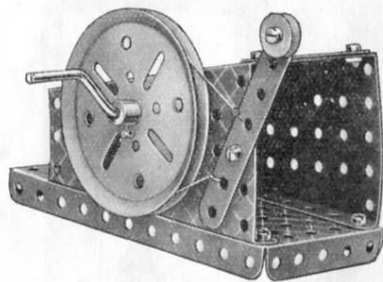


IMPORTANT:—Meccano Parts can be bought separately at any time in any quantity from your Meccano dealer

These Models can be built with **MECCANO Outfit C** (or Outfits B and Ba)

1

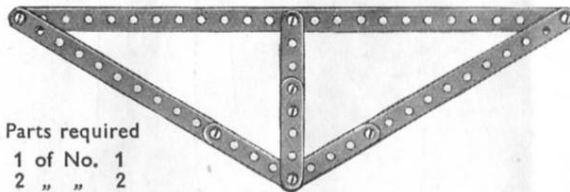
C1. Band Brake



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

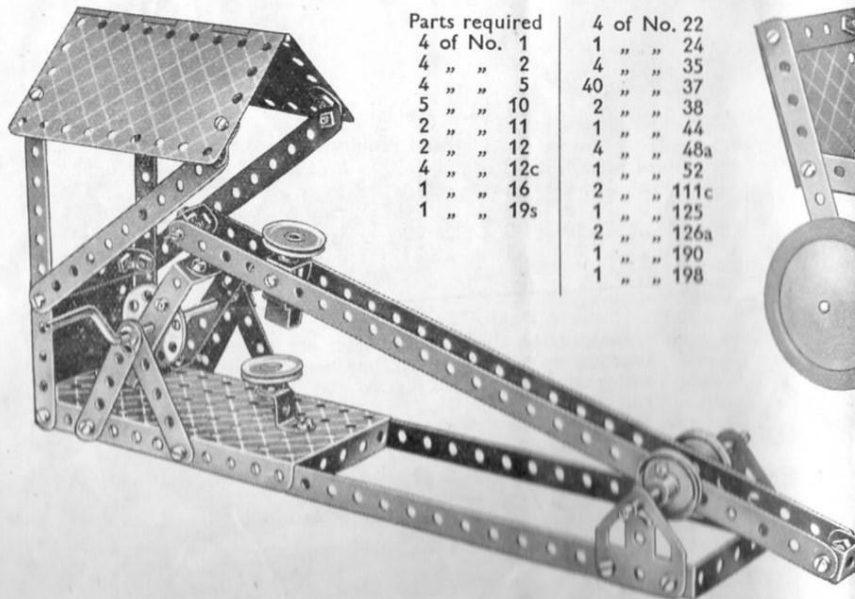
C2. Triangulated Truss



Parts required

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

C3. Helve Hammer

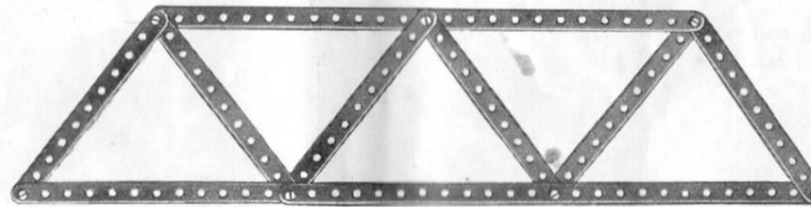


Parts required

4	of	No. 22
4	"	1
4	"	2
4	"	5
5	"	10
2	"	11
2	"	12
4	"	12c
1	"	16
1	"	19s

4	"	24
4	"	35
40	"	37
2	"	38
1	"	44
4	"	48a
1	"	52
2	"	111c
1	"	125
2	"	126a
1	"	190
1	"	198

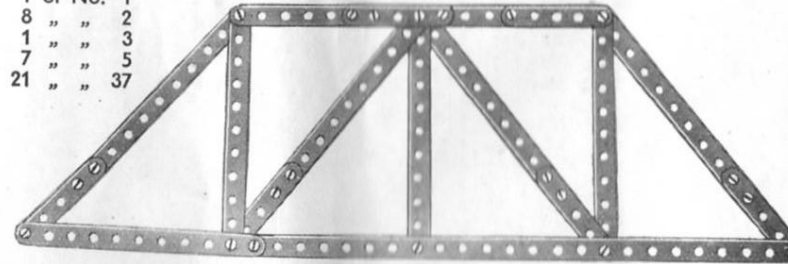
C4. Compound Triangulated Truss



Parts required

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

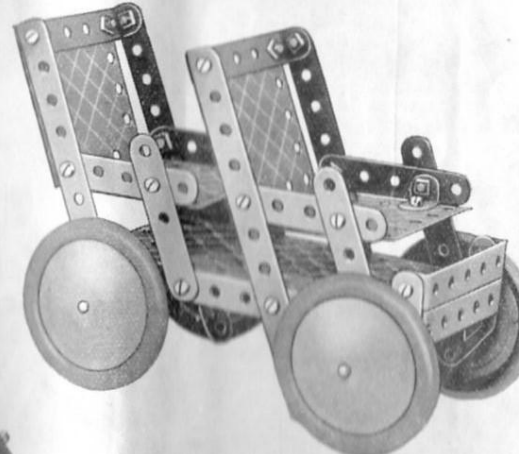
C5. Howe Truss



Parts required

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

C6. Tandem Car



Parts required

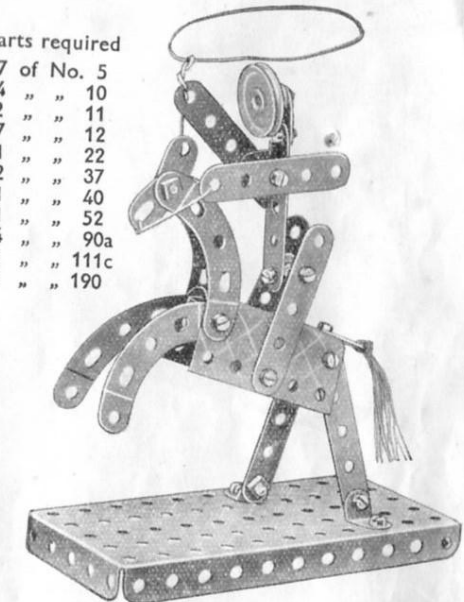
4	of	No. 2
8	"	5
4	"	12
2	"	15b
34	"	37

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

C7. Mounted Cowboy

Parts required

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



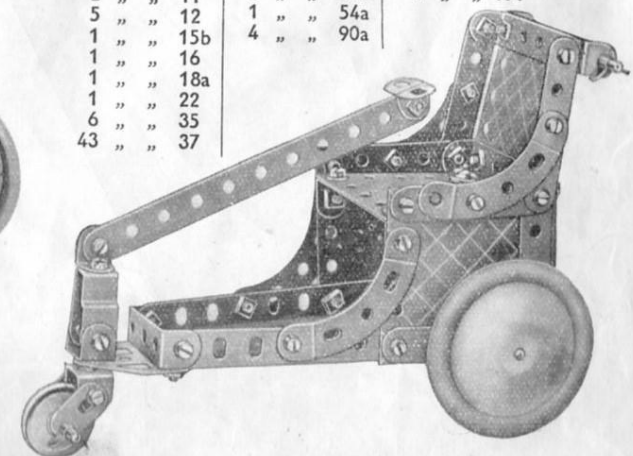
C8. Bath Chair

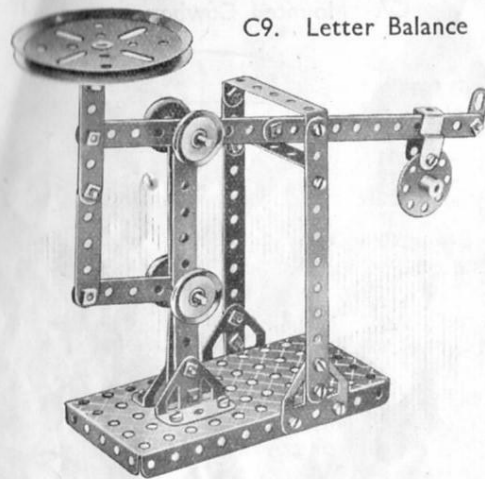
Parts required

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

4	of	No. 37a
8	"	38
1	"	44
1	"	48
5	"	48a
1	"	54a
4	"	90a

1	of	No. 111c
1	"	126a
2	"	187
3	"	190
1	"	191

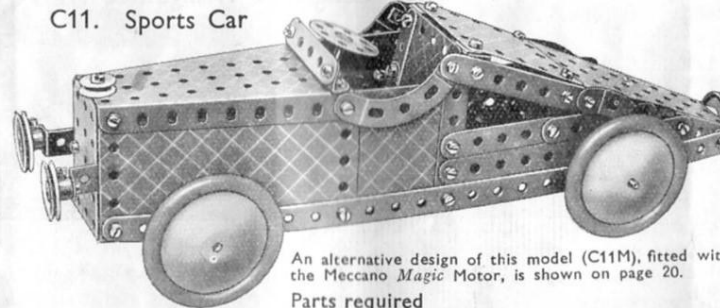




C9. Letter Balance

Parts required

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



C11. Sports Car

An alternative design of this model (C11M), fitted with the Meccano Magic Motor, is shown on page 20.

Parts required

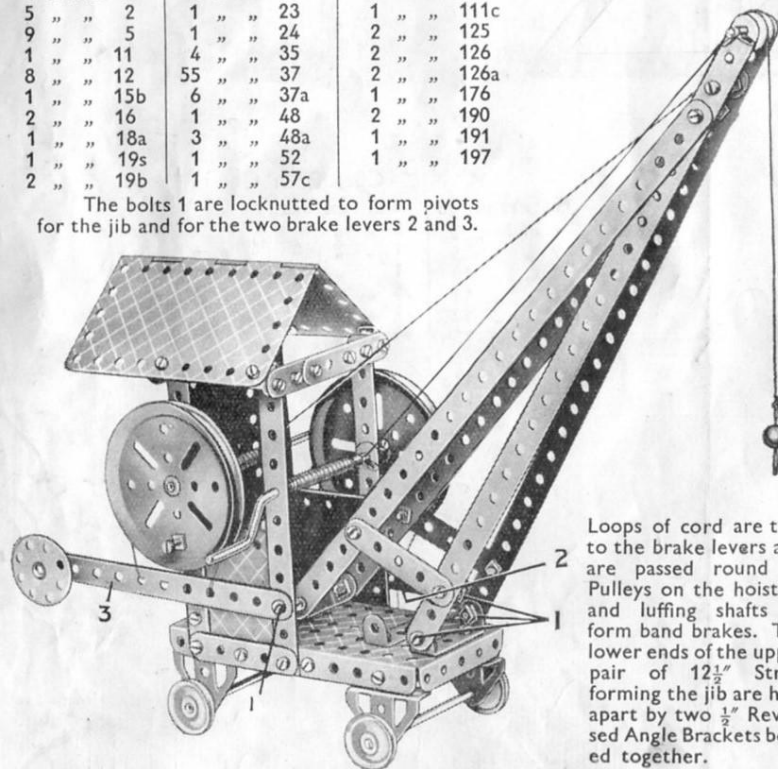
2 of No. 1	4 of No. 22	1 of No. 48	4 of No. 111c
4 " " 2	1 " " 23	2 " " 48a	2 " " 125
9 " " 5	1 " " 24	1 " " 51	2 " " 126a
2 " " 10	2 " " 35	1 " " 52	4 " " 187
8 " " 12	55 " " 37	2 " " 54a	4 " " 190
2 " " 15b	1 " " 37a	4 " " 90a	2 " " 191
1 " " 16	2 " " 38		

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	

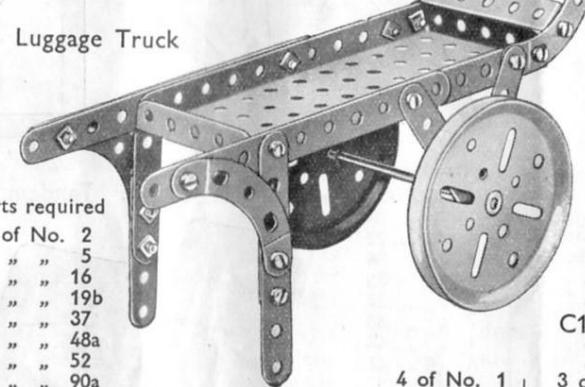
The bolts 1 are locknuttied to form pivots for the jib and for the two brake levers 2 and 3.



C12. Luggage Truck

Parts required

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

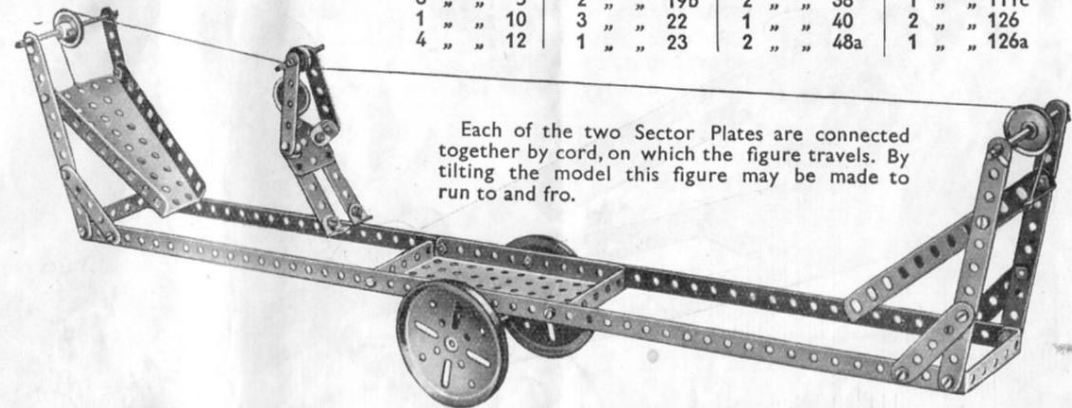


C14. Aerial Flight

Parts required

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

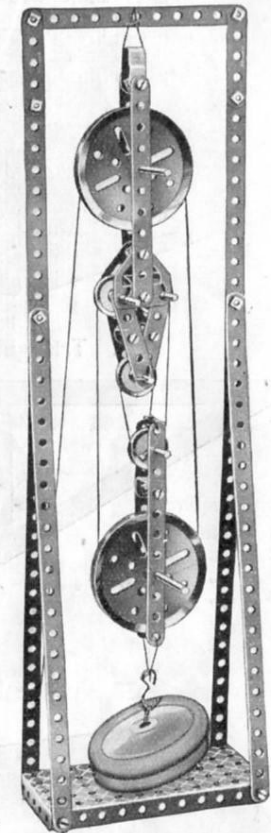
Each of the two Sector Plates are connected together by cord, on which the figure travels. By tilting the model this figure may be made to run to and fro.



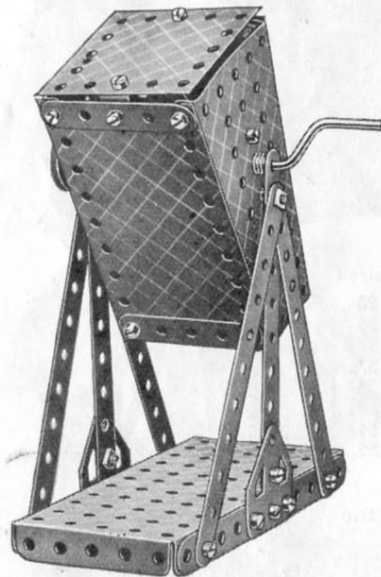
C13. Pulley Block, 5:1

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



C15. Butter Churn

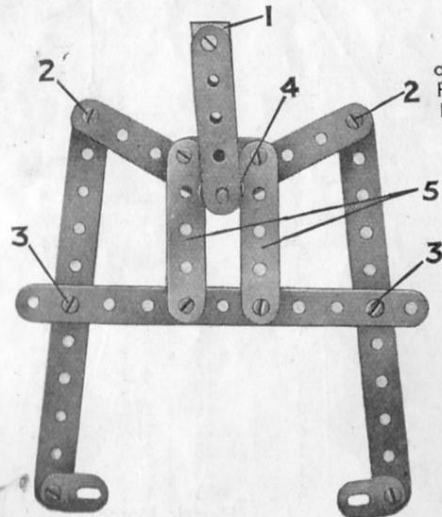


Parts required

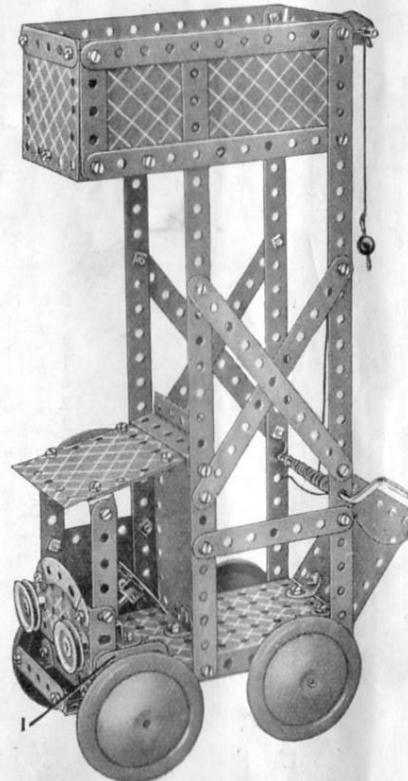
4 of No. 1	
8 " " 2	
1 " " 3	
9 " " 5	
2 " " 11	
7 " " 12	
2 " " 12c	
1 " " 15b	
1 " " 16	
2 " " 18a	
1 " " 19s	
2 " " 22	
1 " " 23	
1 " " 24	
6 " " 35	
61 " " 37	
3 " " 38	
1 " " 40	
1 " " 44	
6 " " 48a	
1 " " 51	
1 " " 52	
1 " " 57c	
2 " " 90a	
2 " " 111c	
1 " " 125	
2 " " 126	
2 " " 126a	
4 " " 187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

Parts required

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



C16. Tower Wagon



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

C17.

Friction Grip Tongs

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

Parts required

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

C18. Pneumatic Hammer

Parts required

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

A 3" Pulley Wheel is driven from a 1" Pulley on the Crank Handle and is fitted to a Rod journalled in a $2\frac{1}{2}$ " Strip and Double Bent Strip 2 that are bolted to a $2\frac{1}{2}$ " x $2\frac{1}{2}$ " 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.

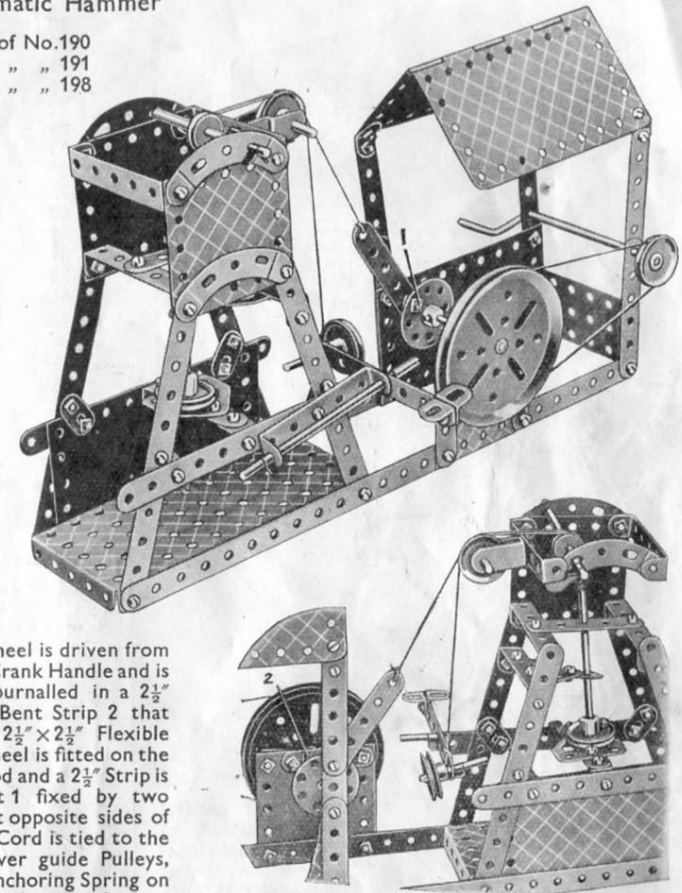
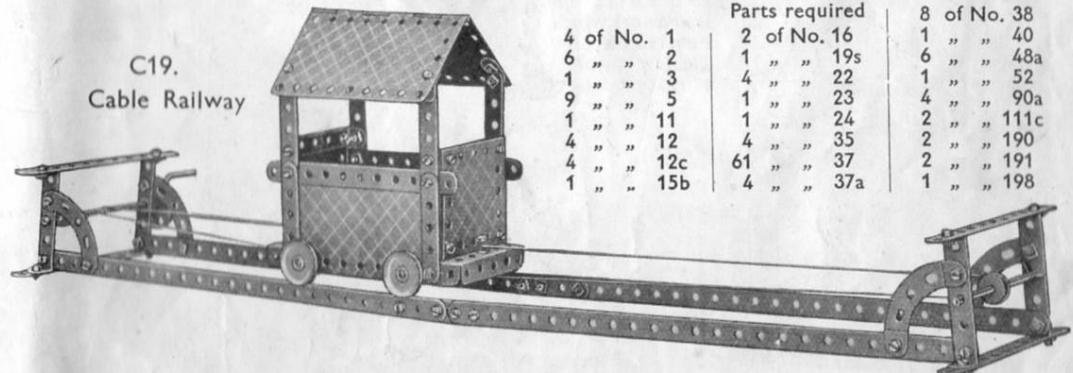


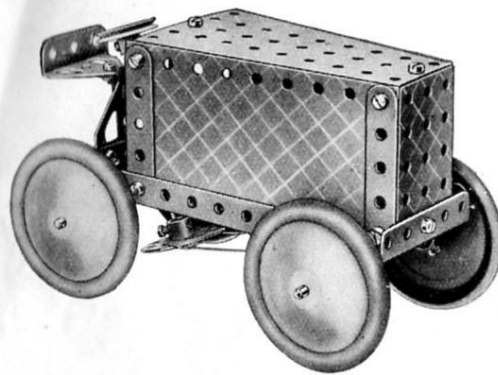
Fig. C18a

C19.
Cable Railway

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

These Models can be built with **MECCANO Outfit C** (or Outfits B and Ba)

C20. Motor Tractor



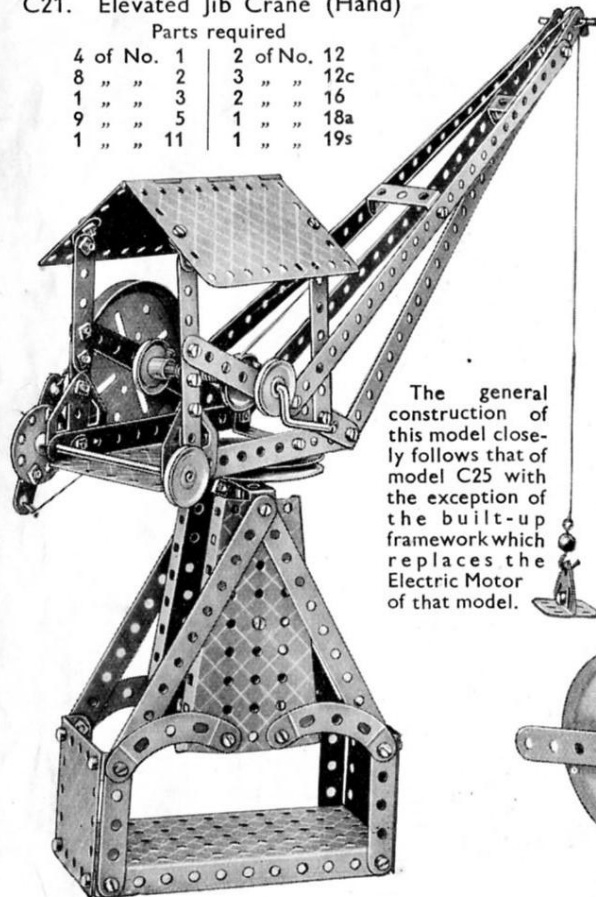
Parts required

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
4	" " 126a
1	" " 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

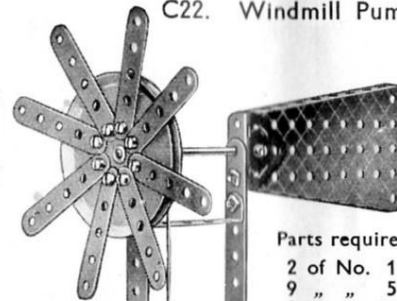


The general construction of this model closely follows that of model C25 with the exception of the built-up framework which replaces the Electric Motor of that model.

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

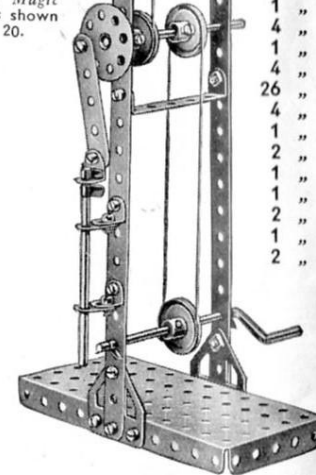
C22. Windmill Pump



Parts required

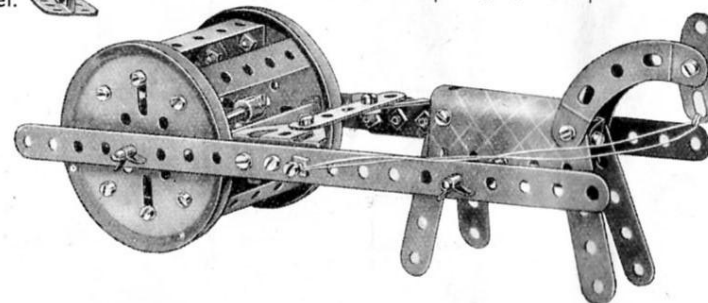
2	of No. 1
9	" " 5
2	" " 10
3	" " 12
3	" " 16
1	" " 19s
1	" " 19b
4	" " 22
1	" " 24
4	" " 35
26	" " 37
4	" " 37a
1	" " 40
2	" " 48a
1	" " 52
1	" " 54a
2	" " 111c
1	" " 126
2	" " 126a

An alternative design of this model (C22M), fitted with the Meccano Magic Motor, is shown on page 20.

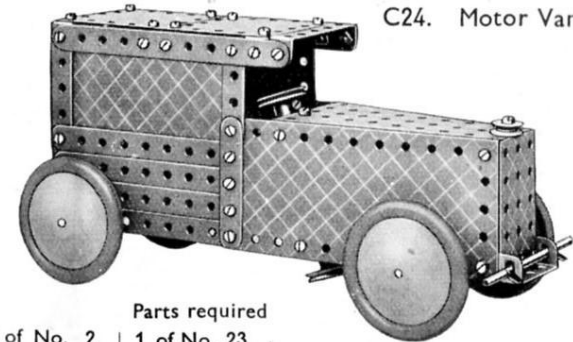


C23. Field Roller

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



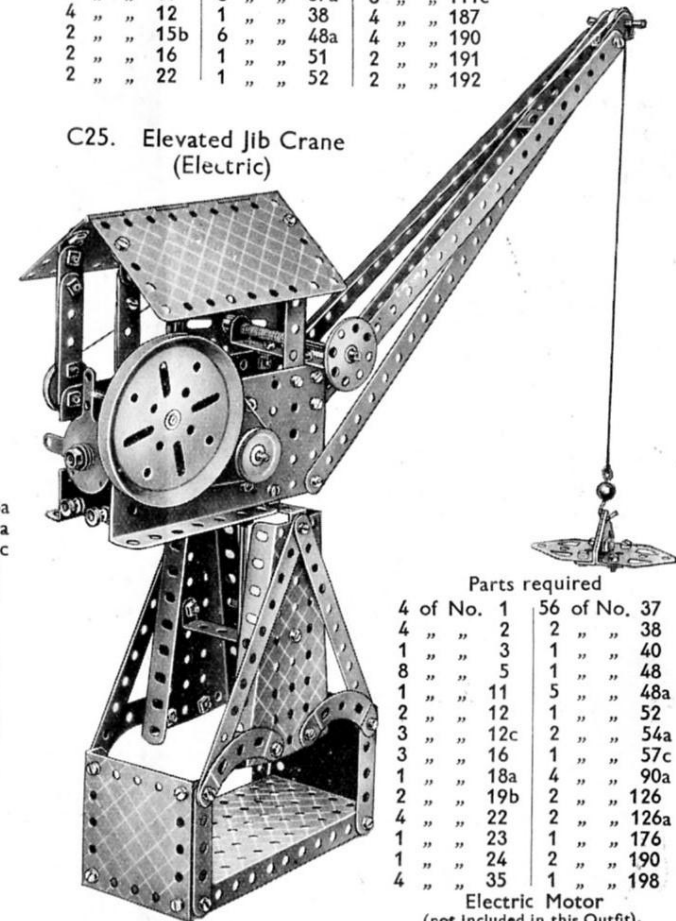
C24. Motor Van



Parts required

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

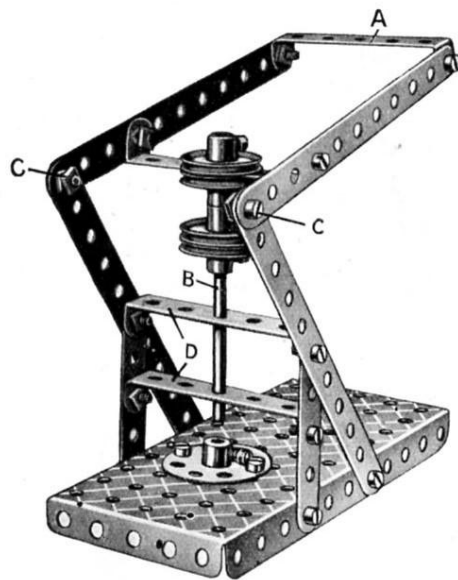
C25. Elevated Jib Crane (Electric)



Parts required

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

Electric Motor
(not included in this Outfit).

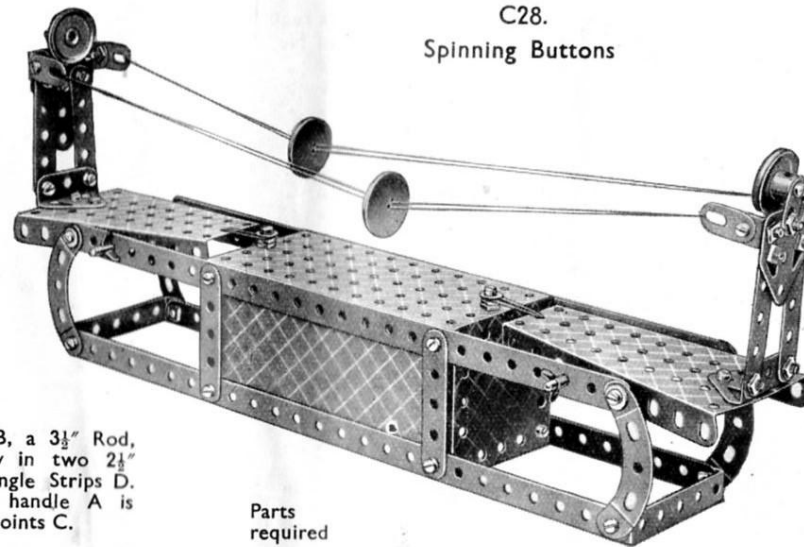


C26.
Punching
Machine

Parts required

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

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



C28.
Spinning Buttons

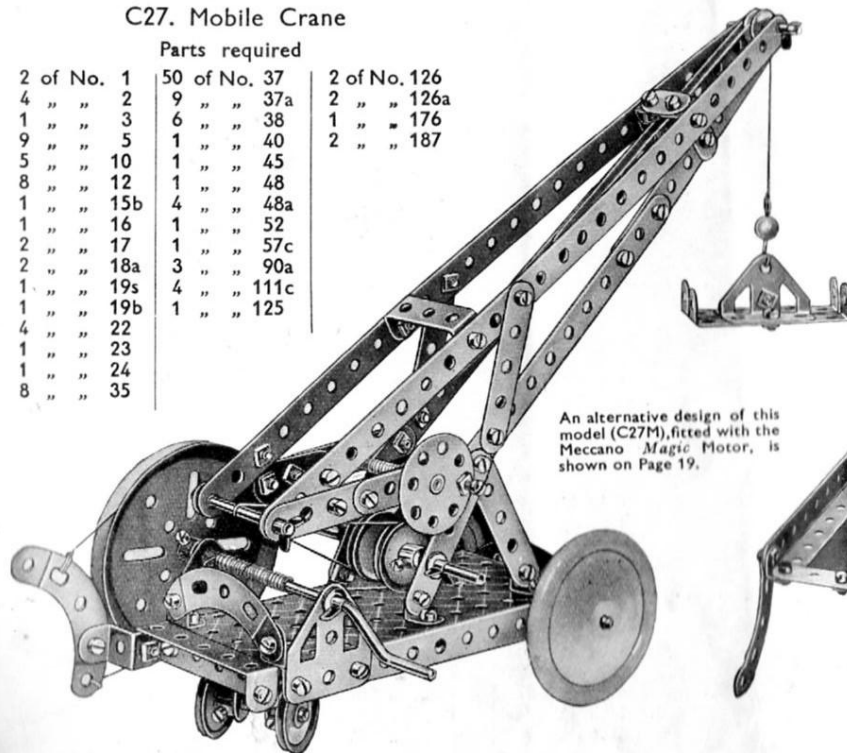
Parts
required

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

C27. Mobile Crane

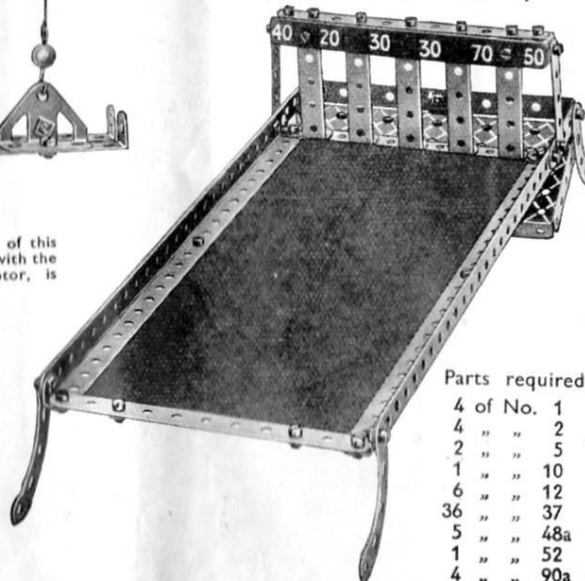
Parts required

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



An alternative design of this model (C27M), fitted with the Meccano Magic Motor, is shown on Page 19.

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

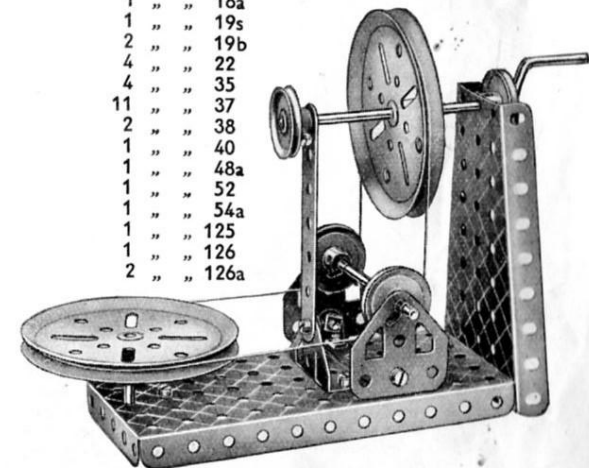
4 of No. 2
5 " " 5
2 " " 10
4 " " 12
1 " " 23
1 " " 24
29 " " 37
5 " " 37a
5 " " 48a
1 " " 52
4 " " 111c
2 " " 126a
2 " " 190
2 " " 191



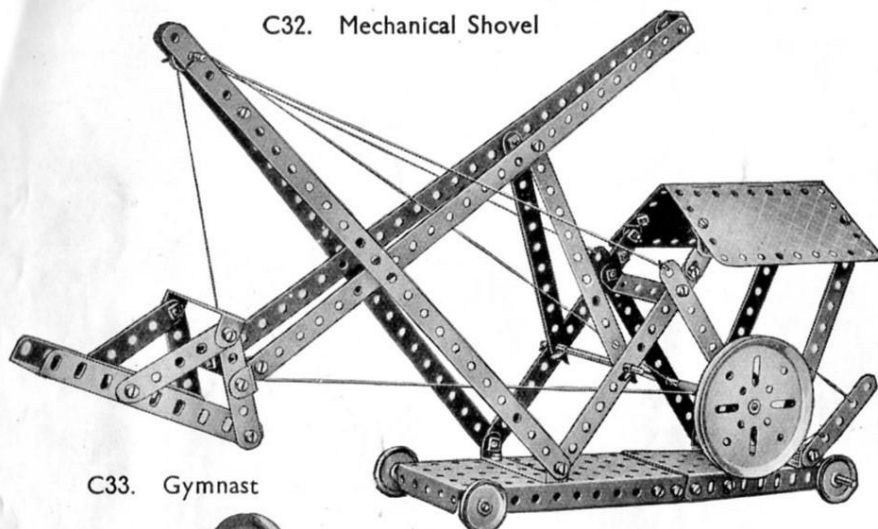
Parts required

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

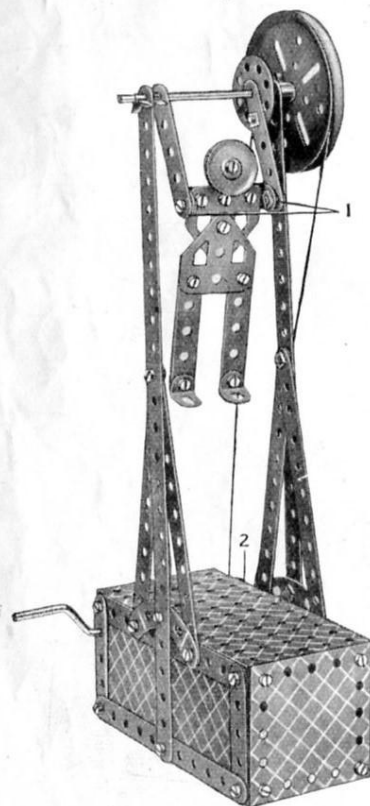
C31.
Belt Gear



C32. Mechanical Shovel



C33. Gymnast



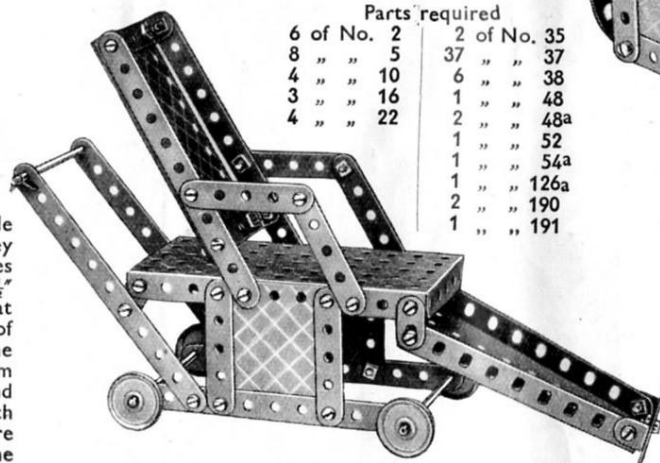
Parts required

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

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

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

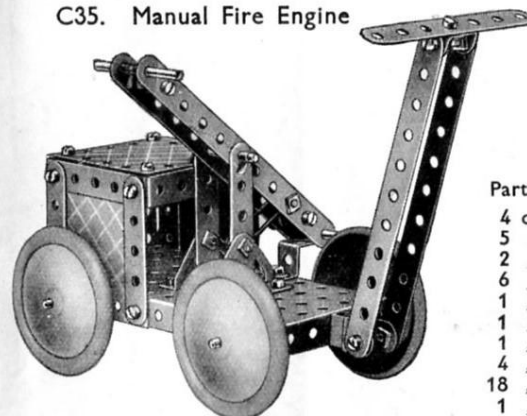
C34. Invalid Chair



Parts required

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

C35. Manual Fire Engine



Parts required

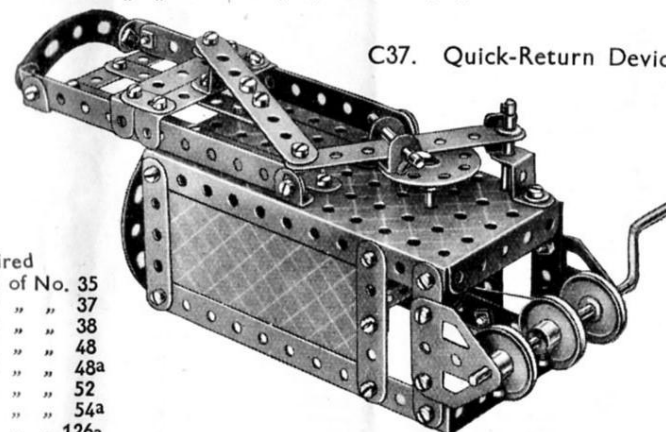
4 of No. 2	1 of No. 18a	1 of No. 52
1 " " 3	6 " " 35	2 " " 111c
8 " " 5	34 " " 37	1 " " 125
2 " " 11	6 " " 37a	2 " " 126
6 " " 12	1 " " 38	1 " " 186
2 " " 15b	1 " " 45	4 " " 187
2 " " 17	2 " " 48a	4 " " 190

C36. Telescopic Mast

Parts required

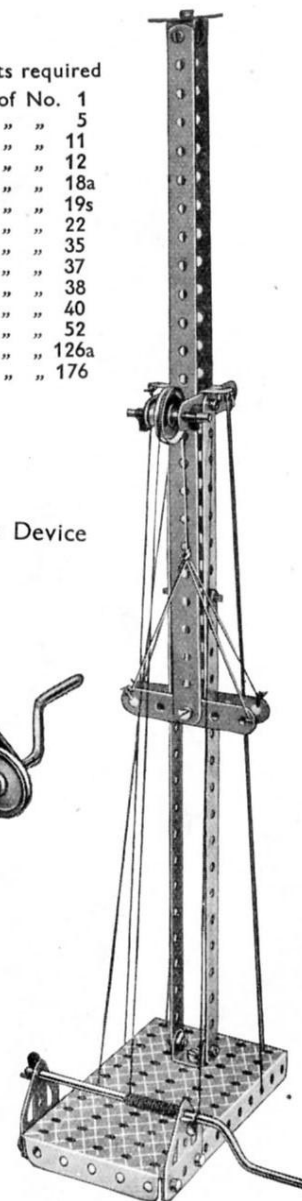
4 of No. 1
5 " " 5
2 " " 11
6 " " 12
1 " " 18a
1 " " 19s
1 " " 22
4 " " 35
18 " " 37
1 " " 38
1 " " 40
1 " " 52
2 " " 126a
1 " " 176

C37. Quick-Return Device

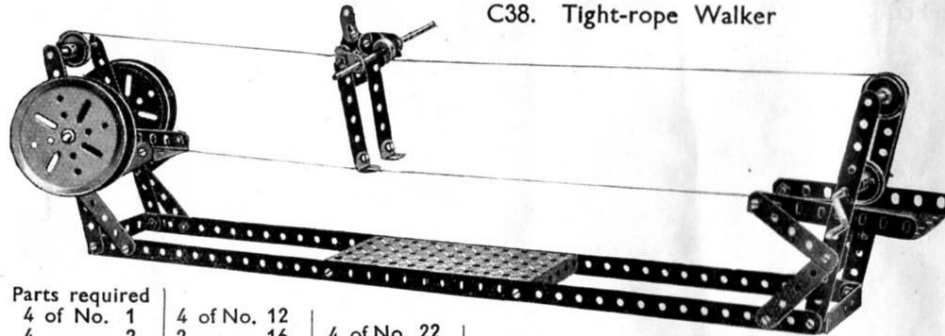


Parts required

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



C38. Tight-rope Walker



Parts required

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

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

4 of No. 1	4 of No. 22
7 " " 2	1 " " 23
1 " " 3	1 " " 24
9 " " 5	8 " " 35
5 " " 10	66 " " 37
2 " " 11	5 " " 37a
6 " " 12	3 " " 38
2 " " 12c	1 " " 40
1 " " 15b	5 " " 48a
2 " " 16	1 " " 52
2 " " 17	
1 " " 18a	
1 " " 19s	
2 " " 19b	

C42. Extended Ash Tip

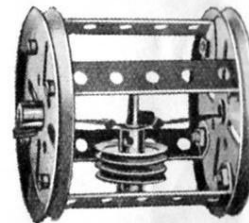
4 of No. 22	4 of No. 90a
3 " " 111c	2 " " 125
2 " " 126a	1 " " 176
3 " " 190	2 " " 192
1 " " 198	

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

C39. Guillotine

Parts required

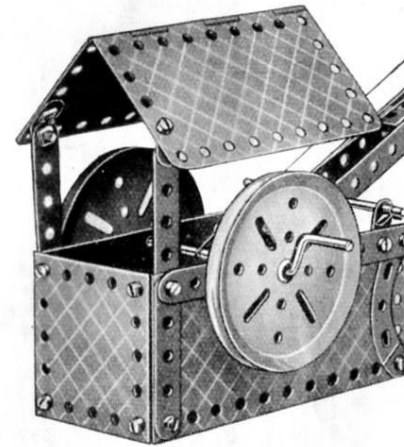
2 of No. 1
1 " " 3
9 " " 5
2 " " 10
2 " " 11
1 " " 16
1 " " 22
2 " " 35
24 " " 37
6 " " 38
1 " " 40
3 " " 48a
1 " " 52



C40. Cum Bak

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

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



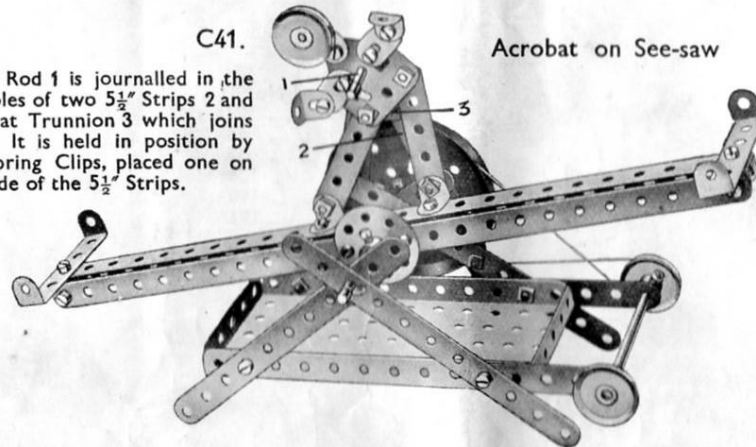
C43. Telephone

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.

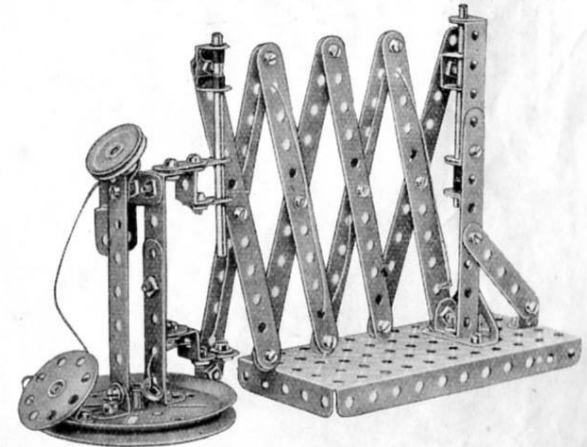
Acrobat on See-saw

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



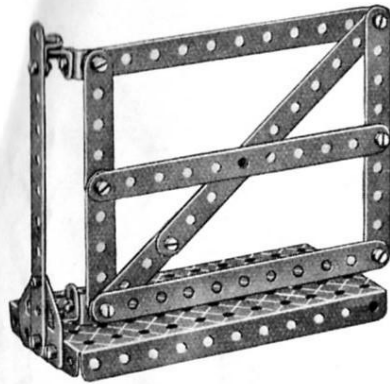
Parts required

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



These Models can be built with MECCANO Outfit C (or Outfits B and Ba)

C44. Gate



Parts required

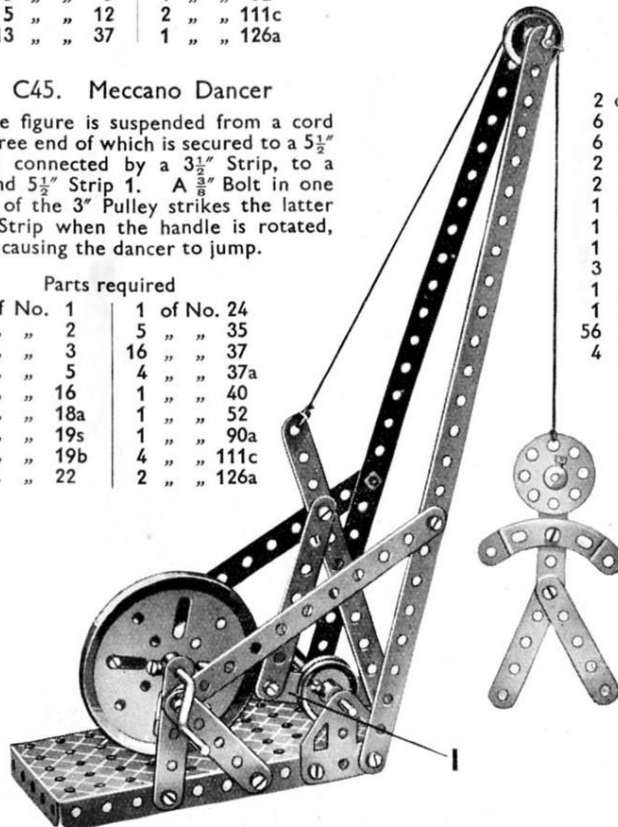
5 of No. 2	4 of No. 37a
5 " " 5	1 " " 52
5 " " 12	2 " " 111c
13 " " 37	1 " " 126a

C45. Meccano Dancer

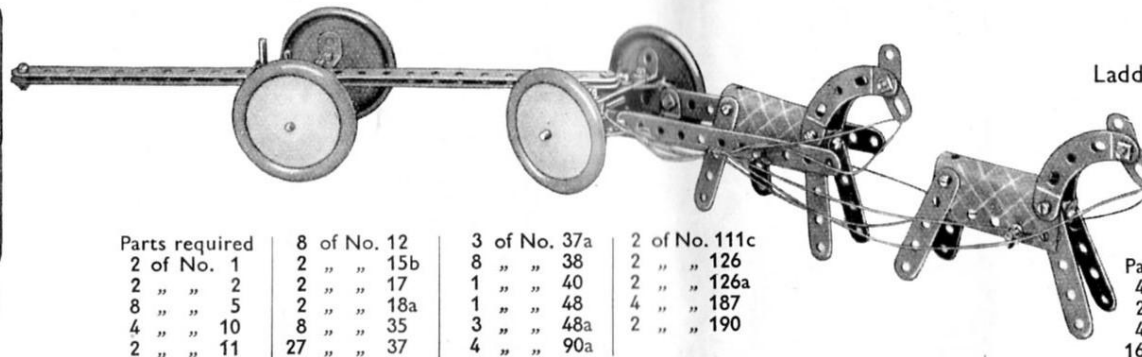
The figure is suspended from a cord the free end of which is secured to a $5\frac{1}{2}$ " Strip connected by a $3\frac{1}{2}$ " Strip, to a second $5\frac{1}{2}$ " Strip 1. A $\frac{3}{8}$ " Bolt in one hole of the 3" Pulley strikes the latter $5\frac{1}{2}$ " Strip when the handle is rotated, thus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

Parts required

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

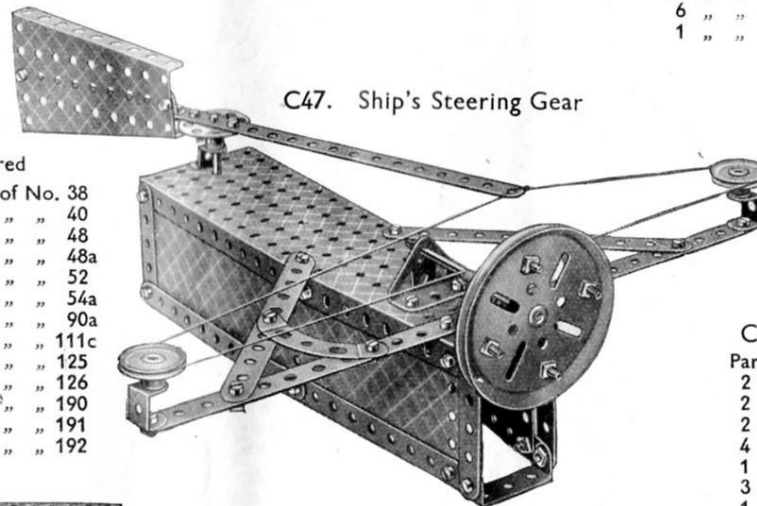


C46. Timber Drag



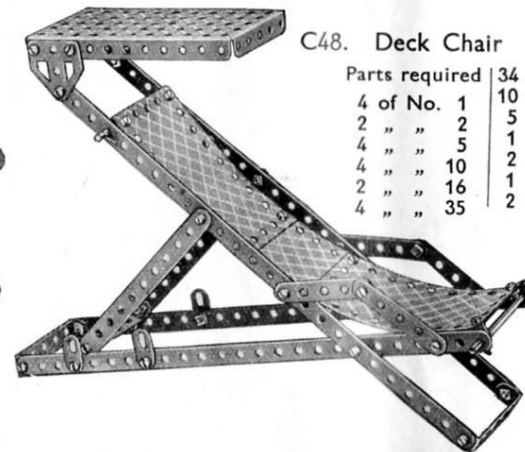
Parts required	8 of No. 12	3 of No. 37a	2 of No. 111c
2 of No. 1	2 " " 15b	8 " " 38	2 " " 126
2 " " 2	2 " " 17	1 " " 40	2 " " 126a
8 " " 5	2 " " 18a	1 " " 48	4 " " 187
4 " " 10	8 " " 35	3 " " 48a	2 " " 190
2 " " 11	27 " " 37	4 " " 90a	

C47. Ship's Steering Gear



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

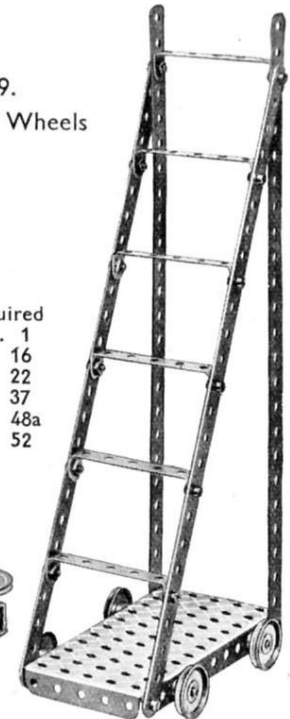
C48. Deck Chair



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

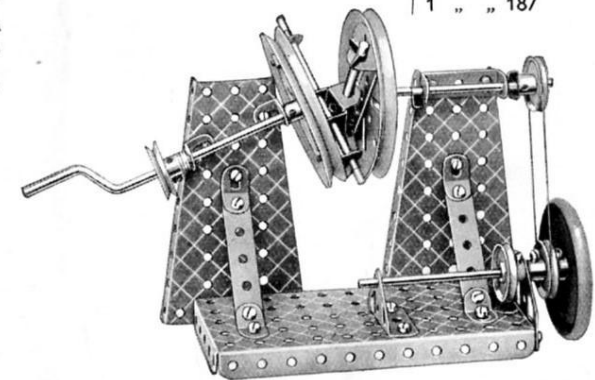
C49. Ladder on Wheels

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

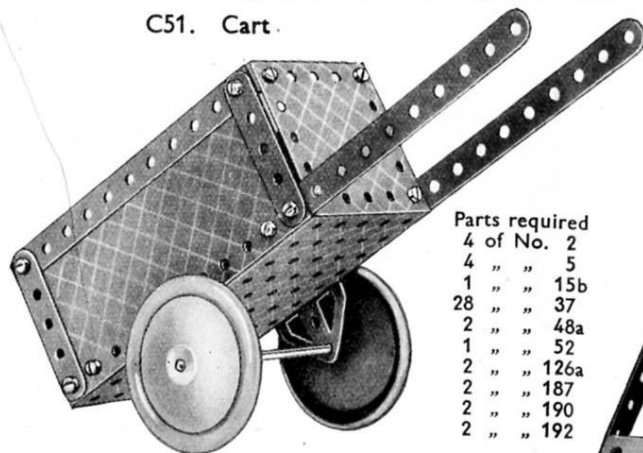


C50. Hooke's Coupling

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



C51. Cart.



Parts required

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

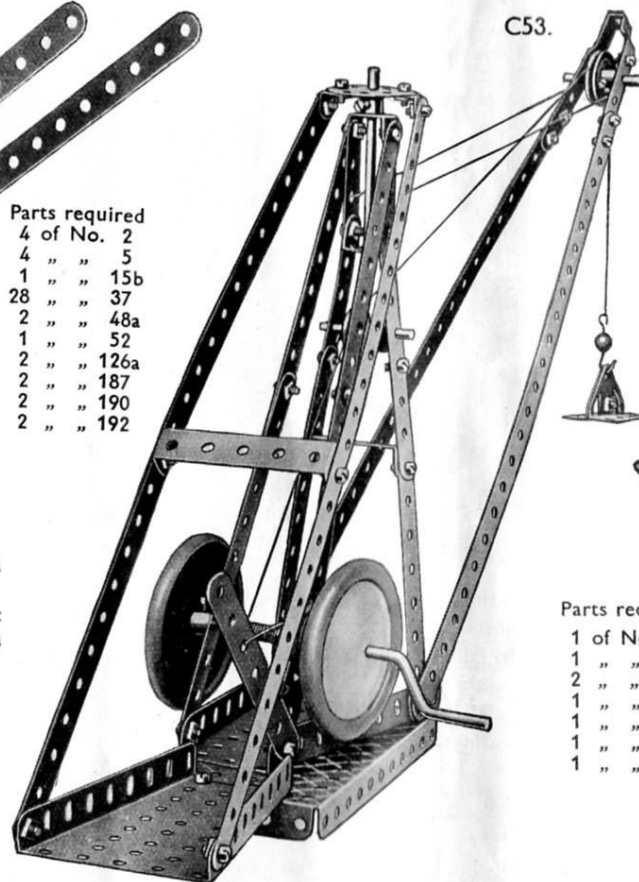
C52. Wrestlers

Parts required

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



C53. Jib Crane



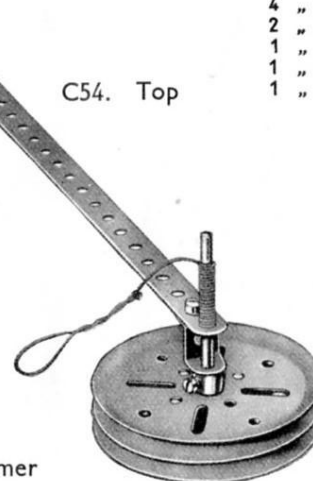
Parts required

4 of No. 1	32 of 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	1 " " 52
2 " " 18a	2 " " 54a
1 " " 19s	1 " " 57c
4 " " 22	1 " " 111c
1 " " 23	2 " " 126
1 " " 24	1 " " 176
3 " " 35	2 " " 187

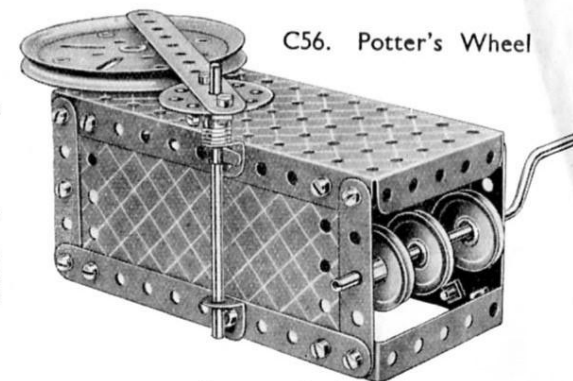
C54. Top

Parts required

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



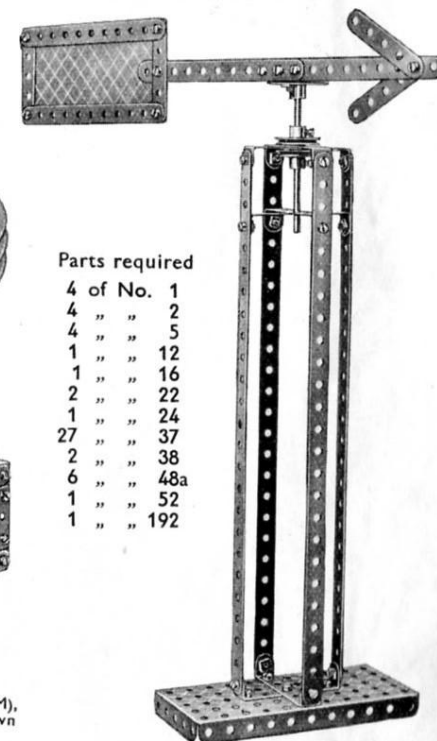
C56. Potter's Wheel



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	

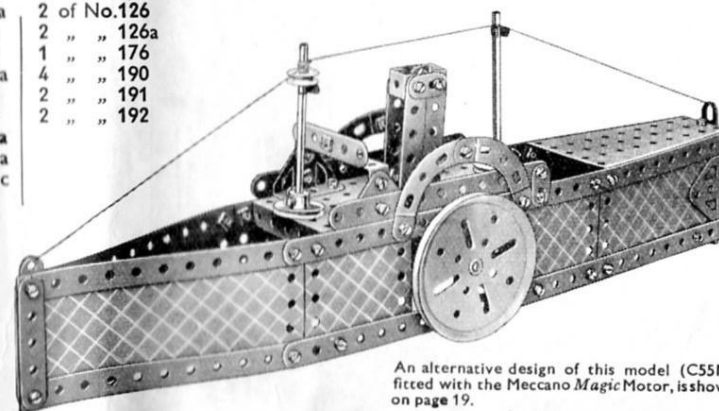
C57. Weather Vane



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

C55. Paddle Steamer

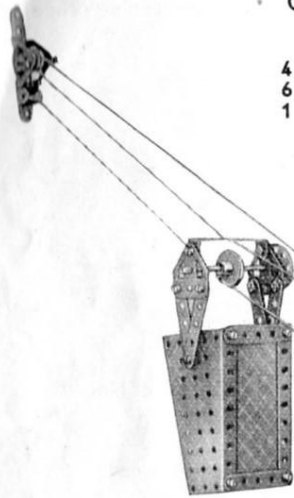


An alternative design of this model (C55M), fitted with the Meccano Magic Motor, is shown on page 19.

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		

C58. Telfer Span (Electric)



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

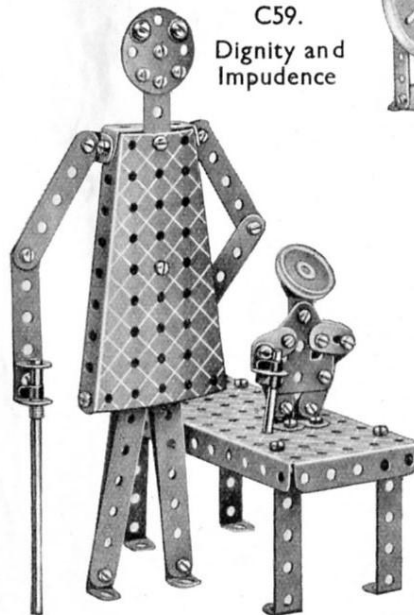
Parts required

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.

C59.

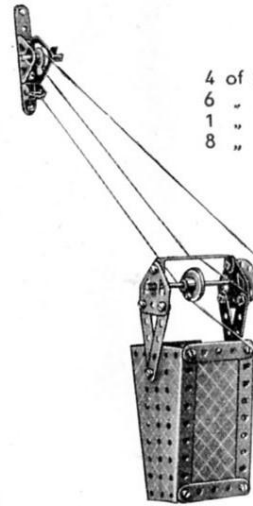
Dignity and Impudence



Parts required

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

C60. Telfer Span (Hand)

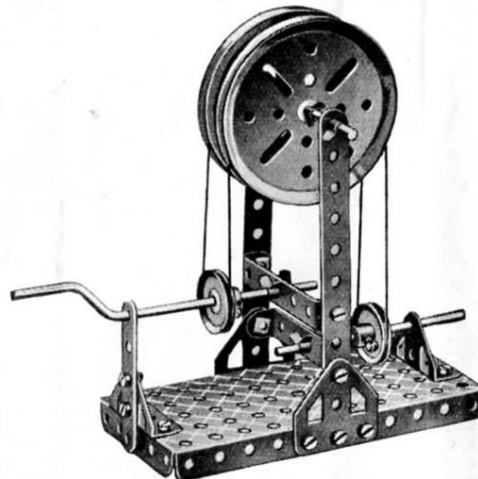


4 of No. 1
6 " " 2
1 " " 3
8 " " 5

Parts required

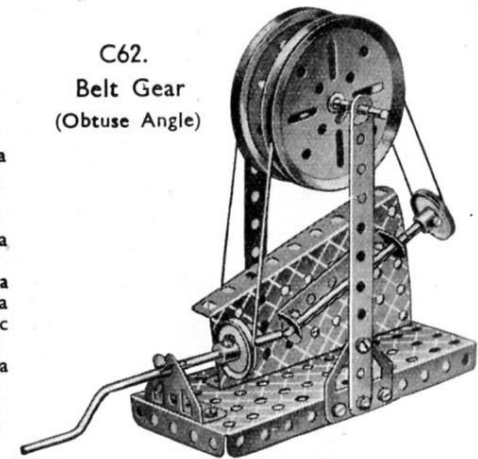
2 of No. 11	1 of No. 23
8 " " 12	1 " " 24
2 " " 12c	6 " " 35
2 " " 16	53 " " 37
1 " " 17	4 " " 37a
1 " " 18a	5 " " 38
1 " " 19s	1 " " 40
2 " " 19b	1 " " 48
4 " " 22	3 " " 48a
	1 " " 52
	2 " " 54a
	2 " " 90a
	2 " " 111c
	2 " " 126
	2 " " 126a
	1 " " 176
	2 " " 191
	1 " " 198

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.

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

C62.
Belt Gear
(Obtuse Angle)

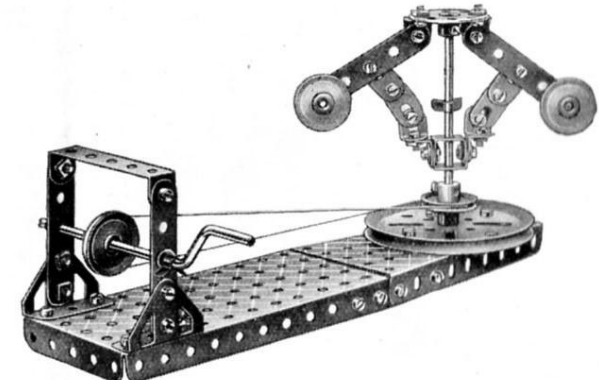
Parts required

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	

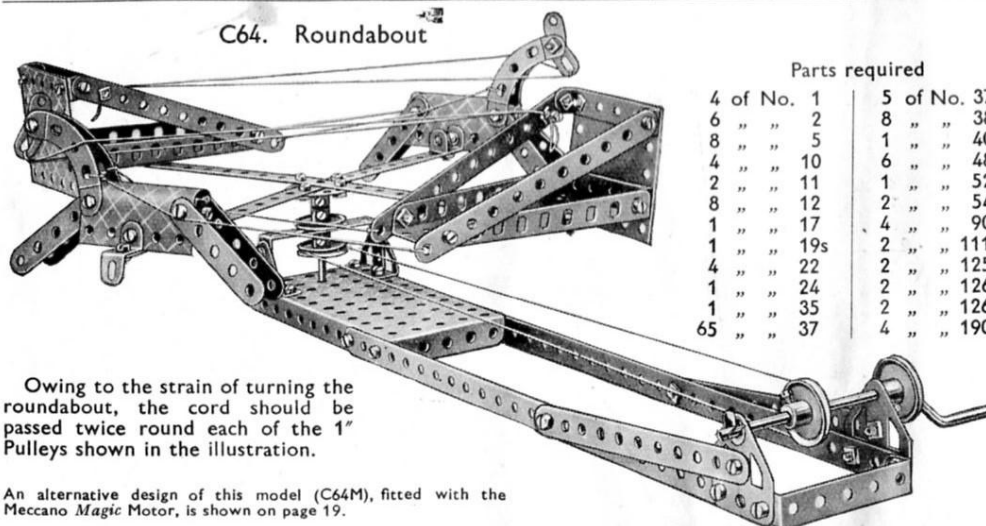
C63. Centrifugal Governor

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



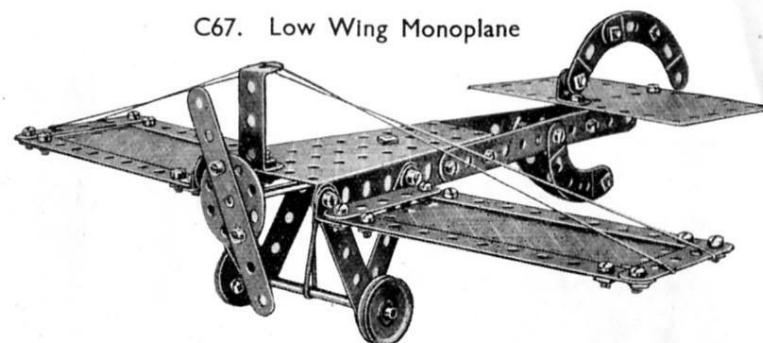
Parts required

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

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 19.

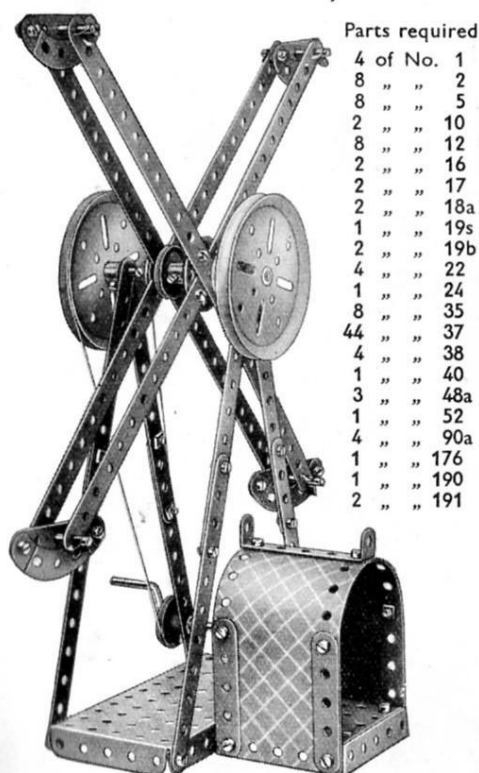
C67. Low Wing Monoplane



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

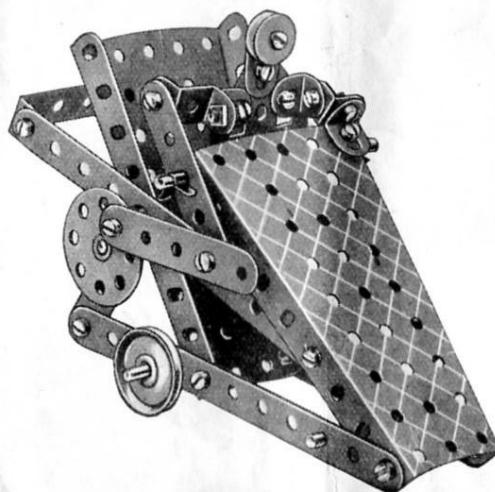


Parts required

4 of No. 1
8 " " 2
8 " " 5
2 " " 10
2 " " 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 journaled through its centre hole is again pivoted to the invalid's hands.



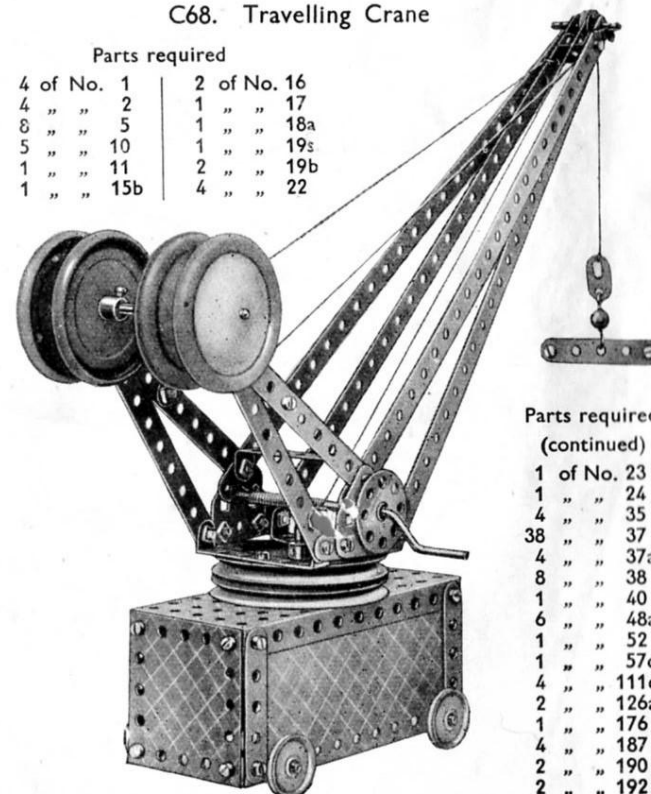
Parts required

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

C68. Travelling Crane

Parts required

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

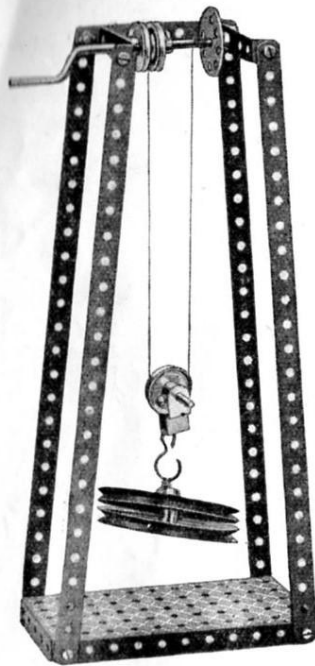
Parts required
(continued)

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

An alternative design of this model (C65M), fitted with the Meccano Magic Motor, is shown on page 20.

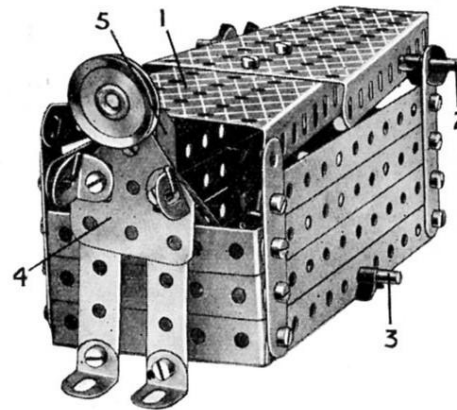
These Models can be built with **MECCANO Outfit C** (or Outfits B and Ba)

C69. Chinese Windlass



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

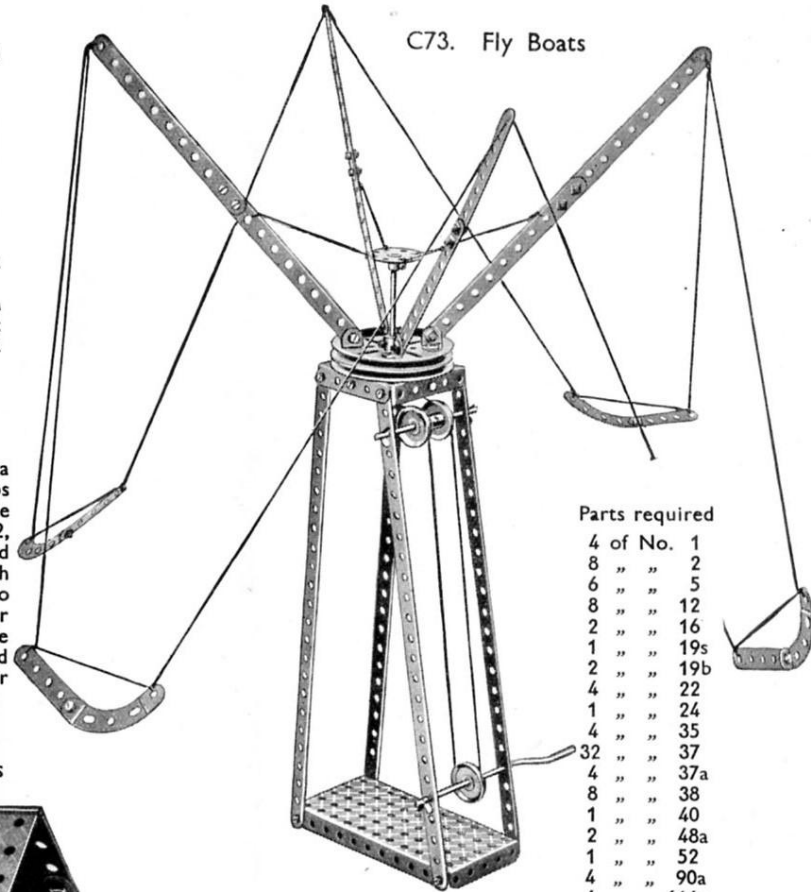
C71. Disappearing Meccanitian



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

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

C73. Fly Boats

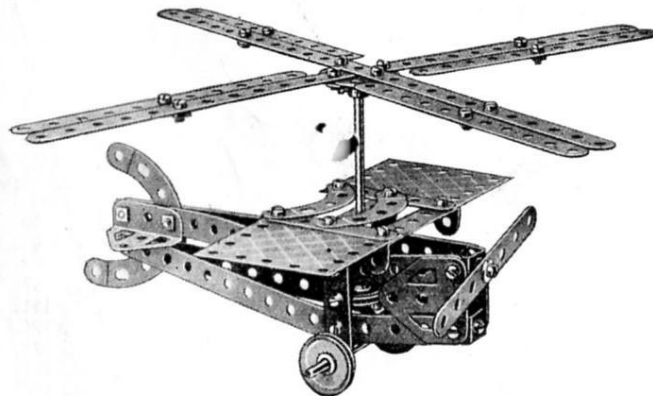


Parts required	
4 of No. 1	
8 " " 2	
6 " " 5	
8 " " 12	
2 " " 16	
1 " " 19s	
2 " " 19b	
4 " " 22	
1 " " 24	
4 " " 35	
32 " " 37	
4 " " 37a	
8 " " 38	
1 " " 40	
2 " " 48a	
1 " " 52	
4 " " 90a	
4 " " 111c	

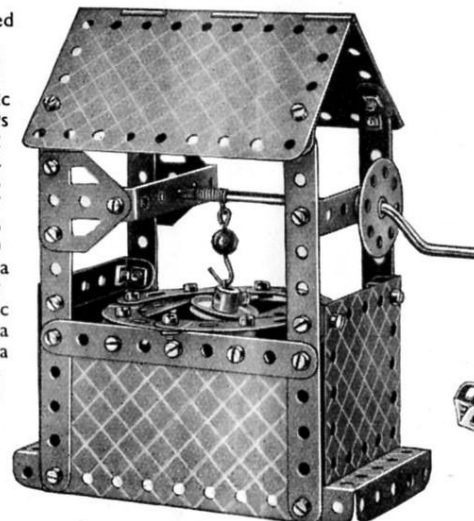
C70. Autogiro

Parts required

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



C72. Well Windlass

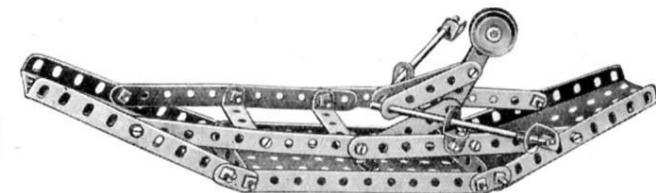


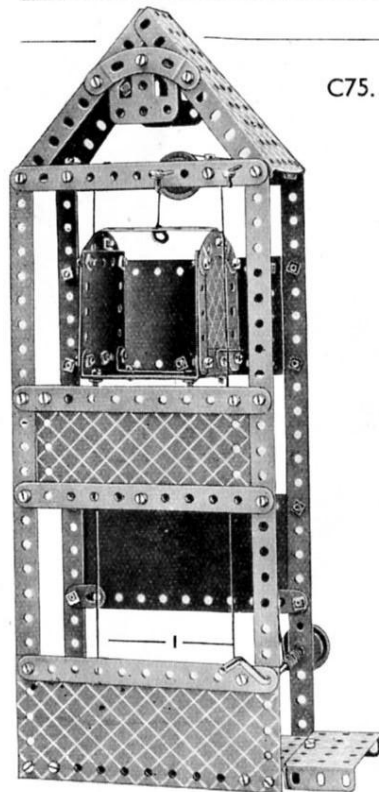
Parts required	
4 of No. 2	
4 " " 5	
4 " " 12c	
1 " " 19s	
1 " " 22	
1 " " 24	
1 " " 35	
46 " " 37	
1 " " 38	
1 " " 40	
6 " " 48a	
1 " " 52	
1 " " 57c	
4 " " 90a	
2 " " 126a	
1 " " 176	
2 " " 190	
2 " " 191	
1 " " 198	

C74. Rowing Boat

Parts required

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





C75. Elevator

Parts required

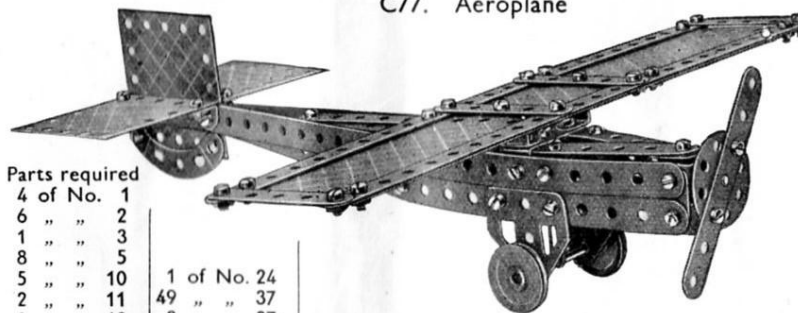
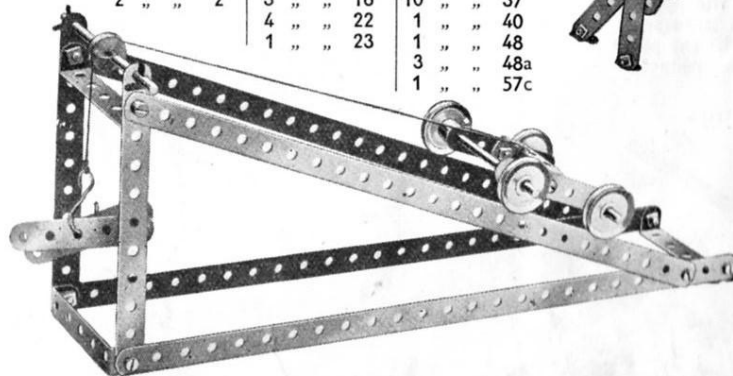
4 of No. 1
8 " " 2
8 " " 5
2 " " 10
6 " " 12
2 " " 16
1 " " 19s
2 " " 22
1 " " 23
6 " " 35
63 " " 37
2 " " 37a
8 " " 38
1 " " 40
3 " " 48a
1 " " 51
1 " " 52
2 " " 54a
4 " " 90a
1 " " 126
2 " " 126a
1 " " 176
3 " " 190
2 " " 191
2 " " 192

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

C76. Inclined Plane

Parts required

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



C77. Aeroplane

Parts required

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

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

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

C78. Revolving Gymnasts

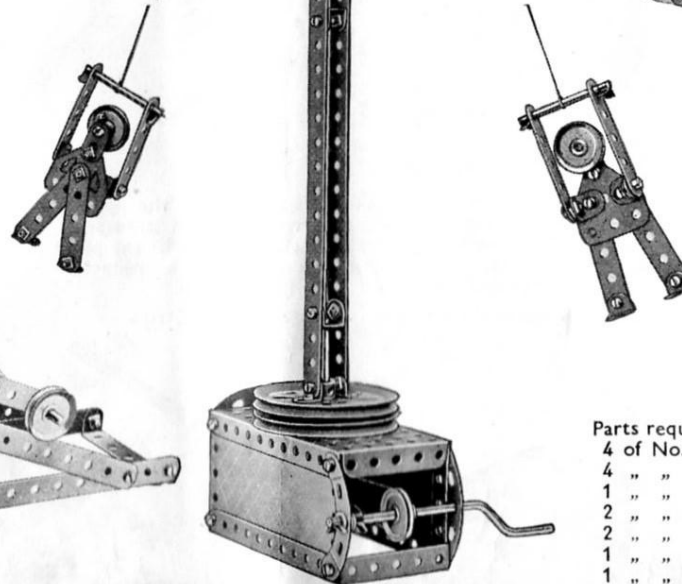
Parts required

2 of No. 1
3 " " 2
8 " " 5
4 " " 10
2 " " 11
2 " " 12
1 " " 16

2 of No. 17
1 " " 19s
2 " " 19b
4 " " 22
1 " " 24
7 " " 35
40 " " 37

6 of No. 37a
8 " " 38
1 " " 40
1 " " 48
6 " " 48a
1 " " 52
4 " " 90a

4 of No. 111c
1 " " 125
2 " " 126a
1 " " 186
1 " " 190
2 " " 192

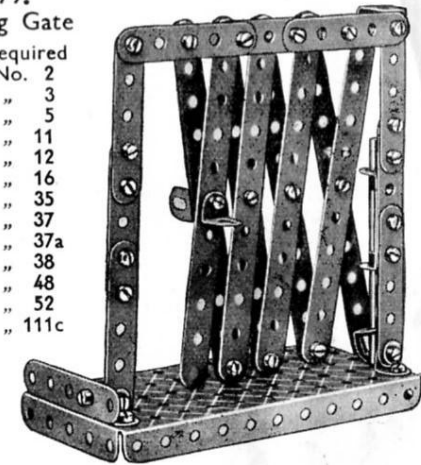


An alternative design of this model (C77M), fitted with the Meccano Magic Motor, is illustrated on page 20.

C79. Sliding Gate

Parts required

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



C80. Rotary Linisher

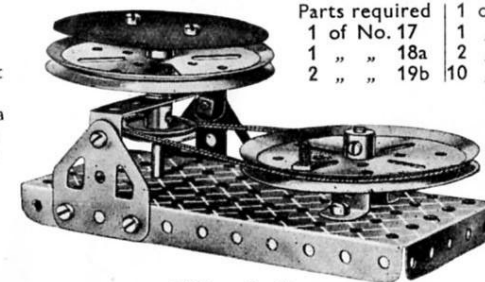
Parts required

1 of No. 17
1 " " 18a
2 " " 19b

1 of No. 22
1 " " 24
2 " " 35
10 " " 37

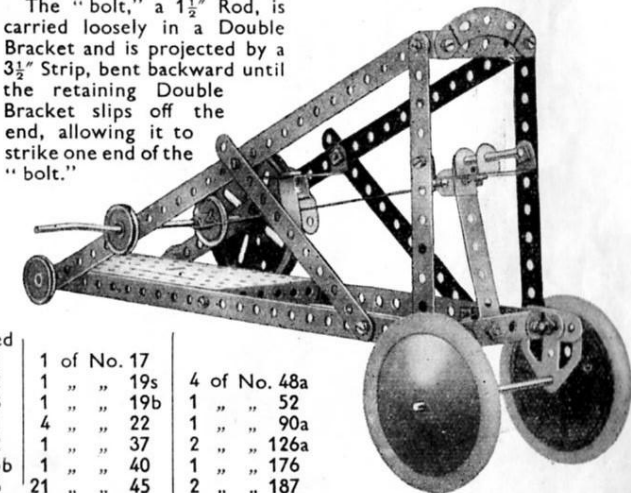
1 of No. 37a
2 " " 38
1 " " 40
1 " " 48a
1 " " 52
1 " " 111c
2 " " 125
1 " " 126a

Disc of Emery Cloth (not included in Outfit)



C81. Ballista

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



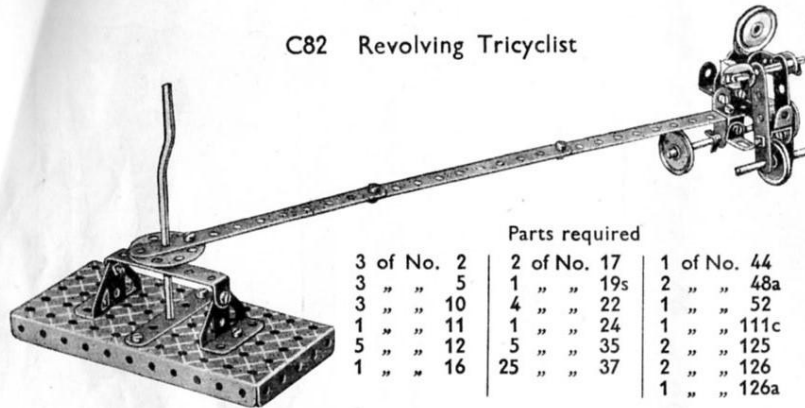
Parts required

4 of No. 1
4 " " 2
1 " " 3
2 " " 11
2 " " 12
1 " " 15b
1 " " 16

1 of No. 17
1 " " 19s
1 " " 19b
4 " " 22
1 " " 37
1 " " 40
21 " " 45

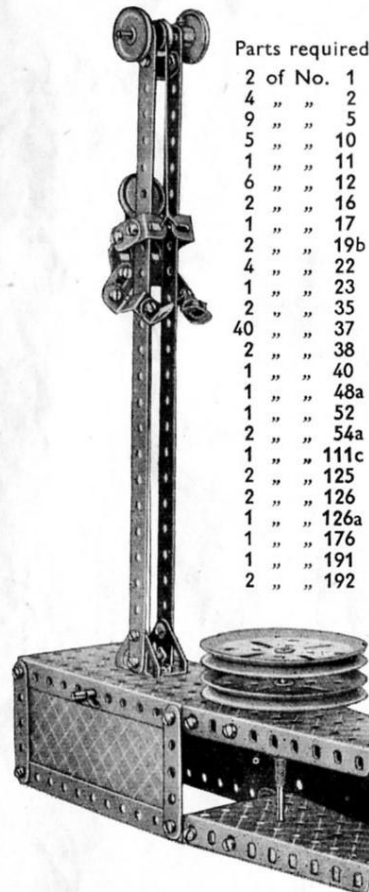
4 of No. 48a
1 " " 52
1 " " 90a
2 " " 126a
1 " " 176
2 " " 187

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	2
4 " " 2	5
9 " " 5	10
5 " " 10	11
1 " " 11	12
6 " " 12	16
2 " " 16	17
1 " " 17	19b
2 " " 19b	22
4 " " 22	23
1 " " 23	35
2 " " 35	37
40 " " 37	38
2 " " 38	40
1 " " 40	48a
1 " " 48a	52
2 " " 52	54a
1 " " 54a	111c
1 " " 111c	125
2 " " 125	126
2 " " 126	126a
1 " " 126a	176
1 " " 176	191
2 " " 191	192

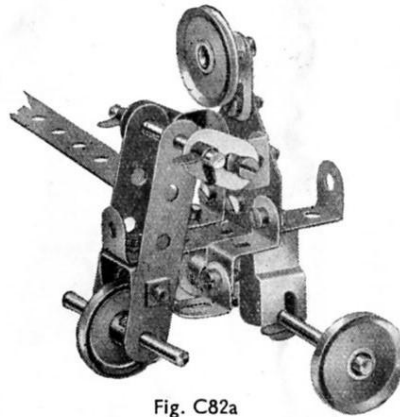
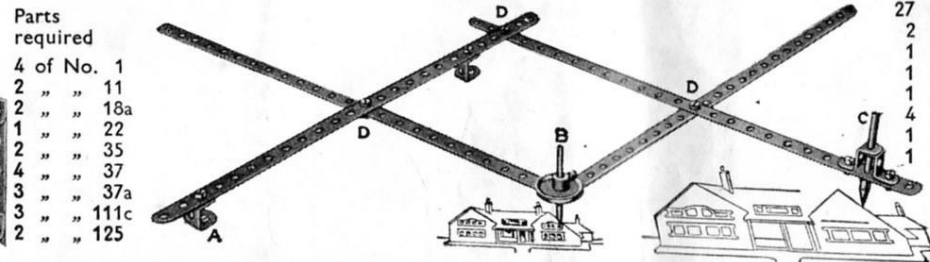


Fig. C82a

C85. Pantograph

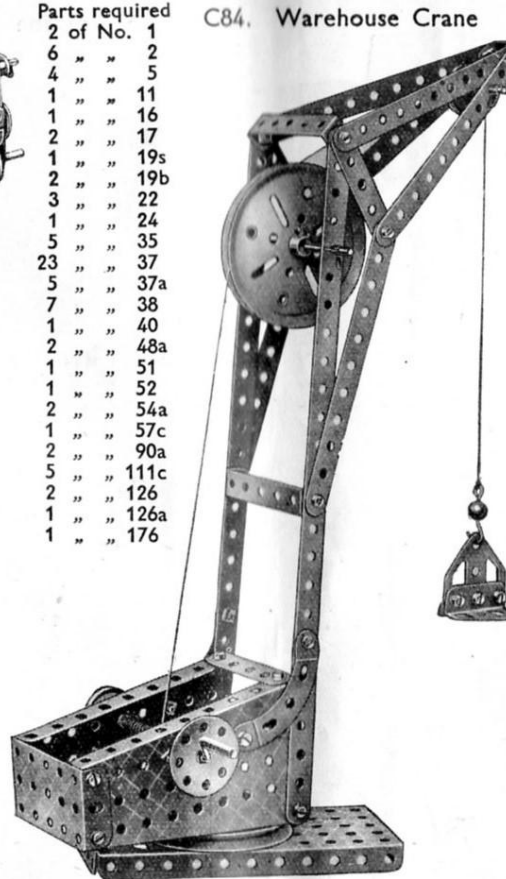
The apparatus is fixed at the point A. If an enlarged sketch is to be made the point B is traced round the outlines, the writing point C reproducing the sketch on a large scale. When a reduced drawing is to be made, the point C traces the outline, whilst the point B reproduces the sketch on a smaller 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	11
2 " " 11	18a
2 " " 18a	22
1 " " 22	35
2 " " 35	37
4 " " 37	37a
3 " " 37a	111c
2 " " 111c	125

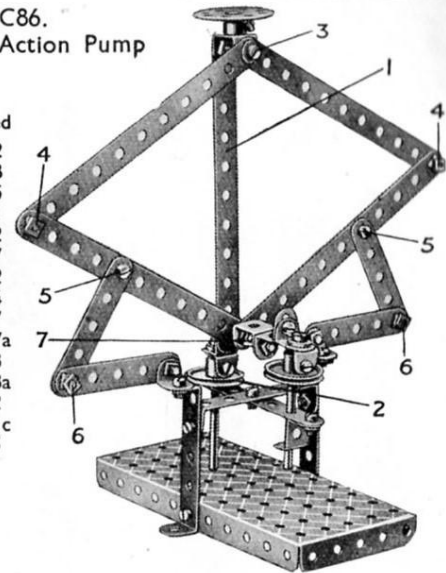
C84. Warehouse Crane



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

C86. Double Action Pump

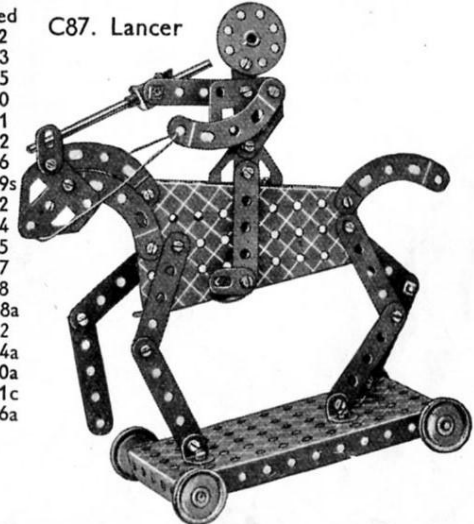
Parts required	
5 of No. 2	2
1 " " 3	5
4 " " 5	11
2 " " 11	12
6 " " 12	17
2 " " 17	22
2 " " 22	24
1 " " 24	37
24 " " 37	37a
9 " " 37a	38
7 " " 38	48a
3 " " 48a	52
1 " " 52	111c
3 " " 111c	125
2 " " 125	



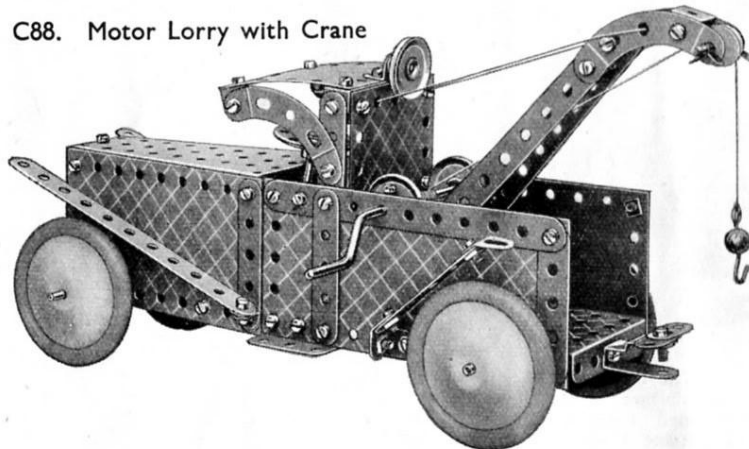
The 5½" Strip 1 is attached to the 1" Pulley Wheel 2 by means of two Angle Brackets, through the lower one of which passes the Set-Screw that secures the Pulley to its 2" Rod. Two Washers are placed beneath the head of the bolt joining the Angle Brackets in order to prevent its shank from binding on the boss of the Pulley 2. The joints 3, 4, 5, 6, 7, are all locknotted, 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	3
1 " " 3	5
9 " " 5	10
2 " " 10	11
2 " " 11	12
5 " " 12	16
2 " " 16	19s
1 " " 19s	22
4 " " 22	24
1 " " 24	35
1 " " 35	37
27 " " 37	38
2 " " 38	48a
1 " " 48a	52
1 " " 52	54a
1 " " 54a	90a
4 " " 90a	111c
1 " " 111c	126a
1 " " 126a	

C87. Lancer



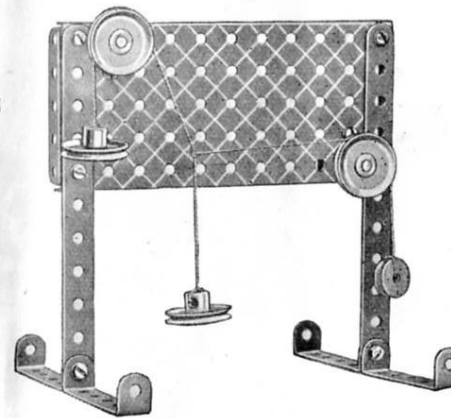
C88. Motor Lorry with Crane



Parts required

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

C90. Triangle of Forces

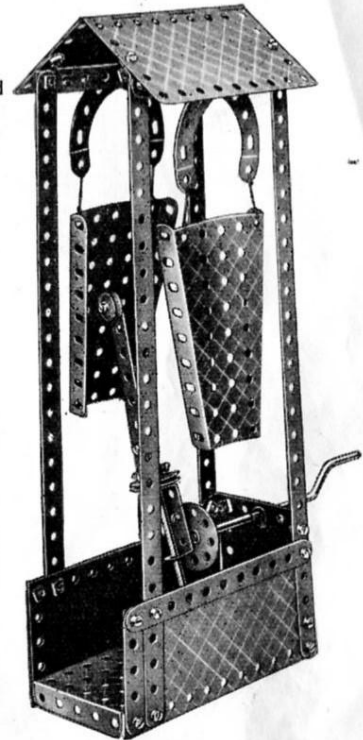


The suspended weights represent three forces acting on a central point. If a triangle is drawn with its sides respectively parallel to the three converging cords, i.e., parallel to the directions of the three forces, the lengths of the sides will be found to be proportional to the respective magnitudes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

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



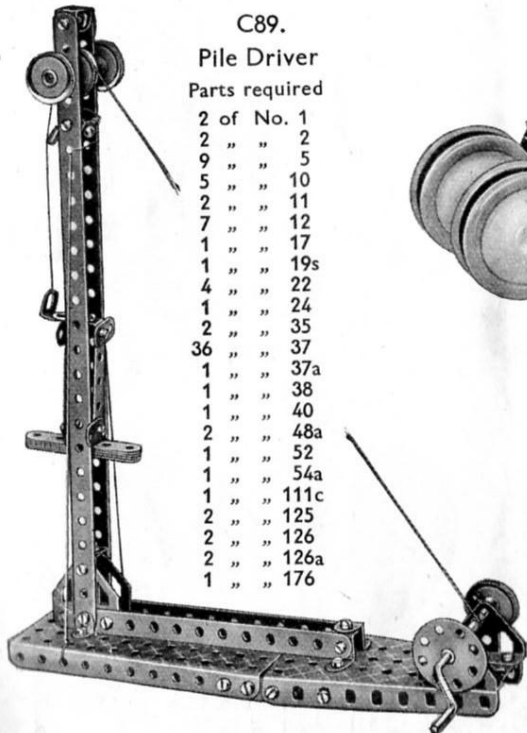
Parts required	4 of No. 12c	1 of No. 24	5 of No. 48a	2 of No. 126
8 of No. 2	2 " " 15b	4 " " 35	1 " " 51	2 " " 126a
1 " " 3	1 " " 16	66 " " 37	1 " " 52	1 " " 176
9 " " 5	2 " " 17	1 " " 37a	2 " " 54a	4 " " 187
4 " " 10	1 " " 19s	2 " " 38	1 " " 57c	3 " " 190
1 " " 11	4 " " 22	1 " " 40	4 " " 90a	2 " " 191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

C89.

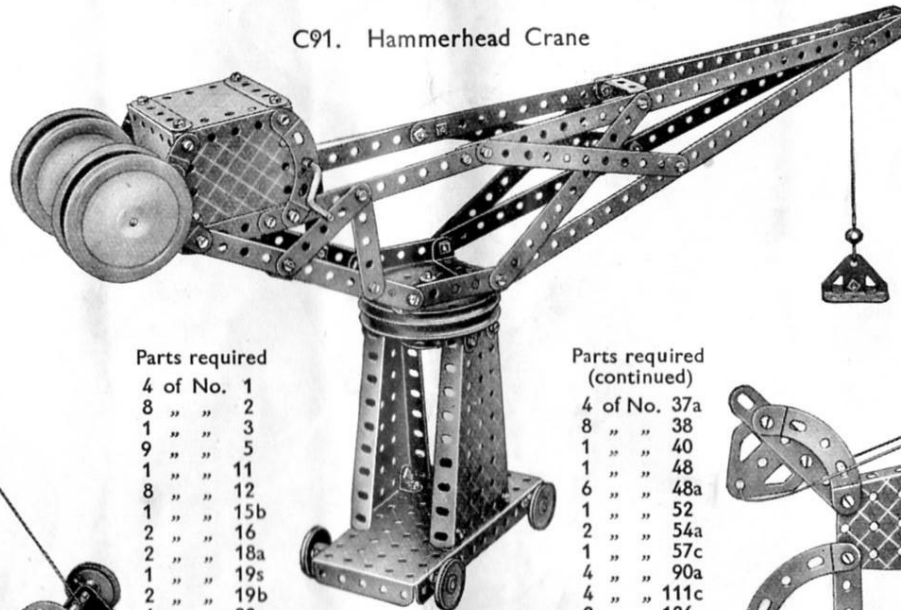
Pile Driver

Parts required

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



C91. Hammerhead Crane



Parts required

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
9 " " 5
3 " " 10
2 " " 11
3 " " 12
2 " " 12c
1 " " 15b
1 " " 16

2 of No. 18a

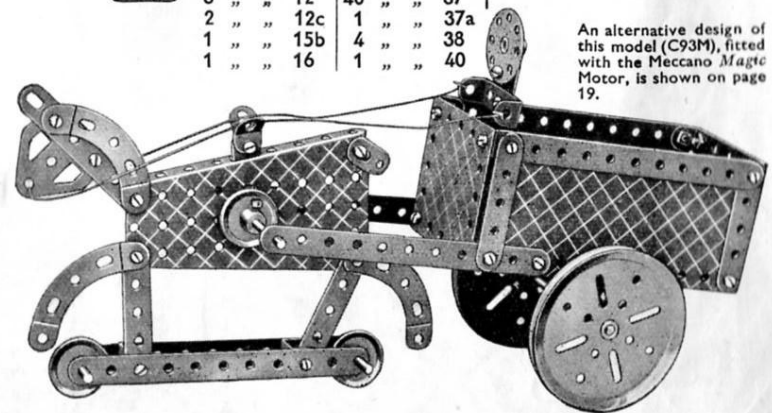
2 " " 19b
4 " " 22
1 " " 24
2 " " 35
40 " " 37
1 " " 37a
4 " " 38
1 " " 40

1 of No. 48

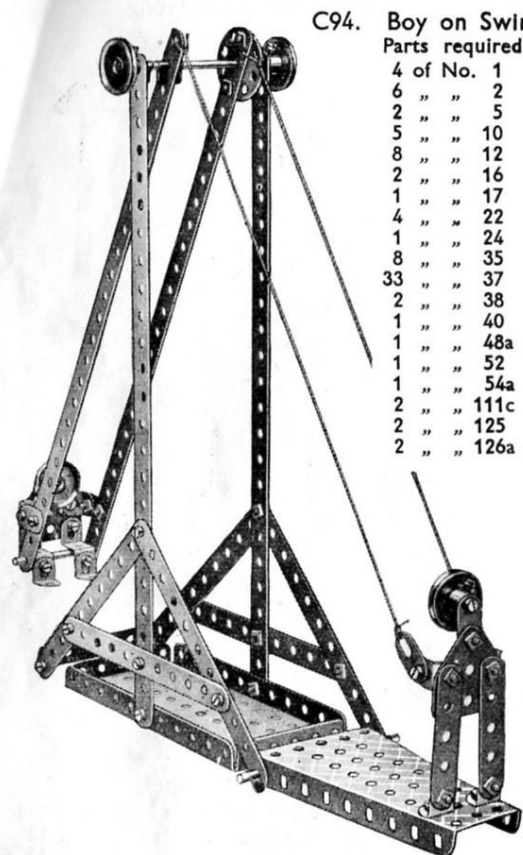
2 " " 48a
1 " " 52
1 " " 54a
3 " " 90

1 of No. 111c

2 " " 126
2 " " 126a
2 " " 190
2 " " 192



An alternative design of this model (C93M), fitted with the Meccano Magic Motor, is shown on page 19.

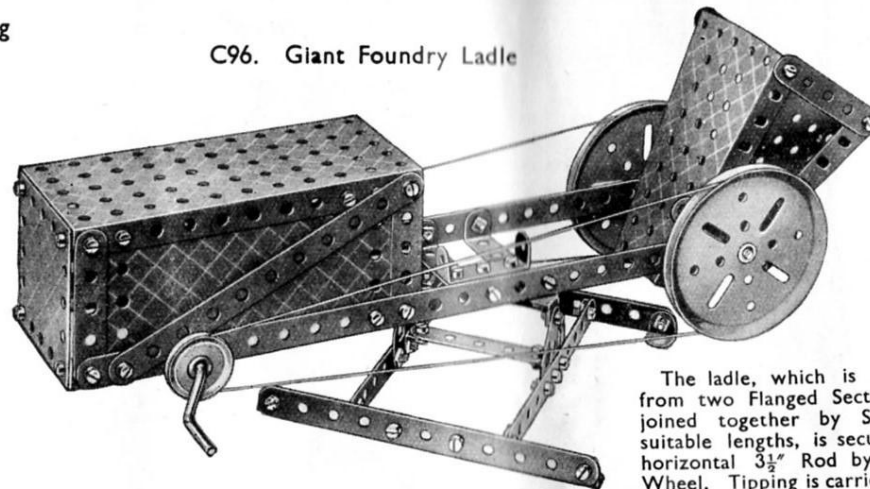


C94. Boy on Swing

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

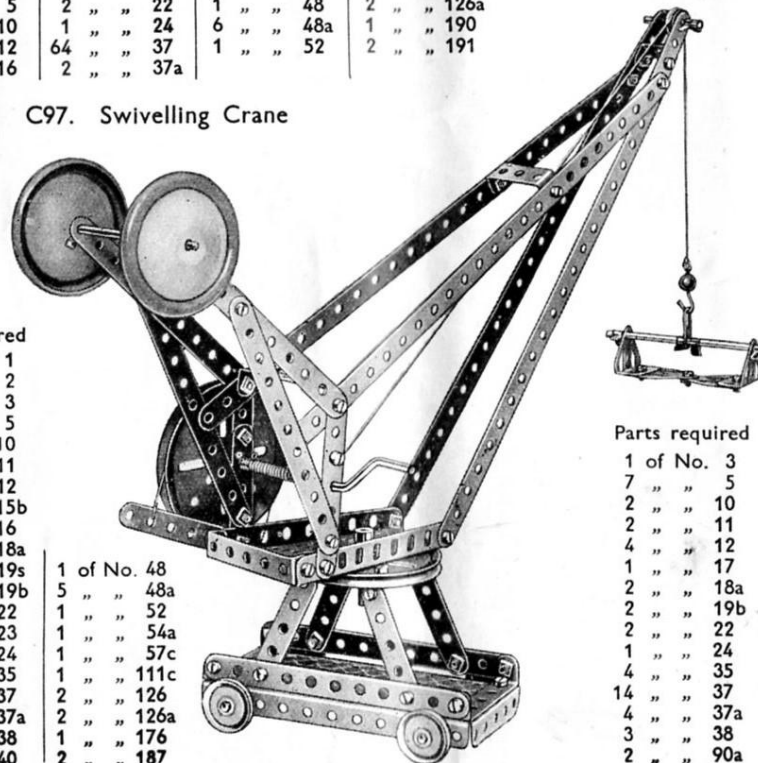


The ladle, which is built up from two Flanged Sector Plates joined together by Strips or suitable lengths, is secured to a horizontal $3\frac{1}{2}$ " Rod by a Bush Wheel. Tipping is carried out by two cords as shown.

Parts required

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

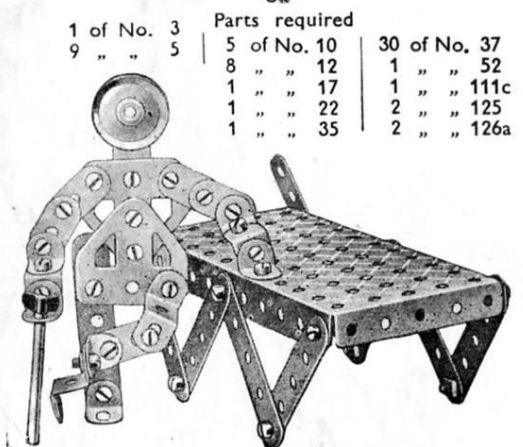
C97. Swivelling Crane



Parts required

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

C95. King Meccano



Parts required

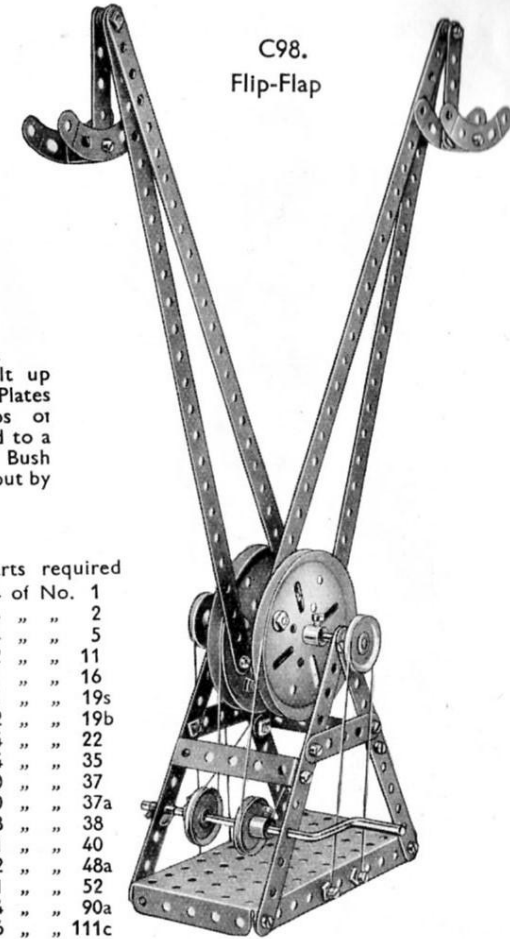
1 of No. 3	5 of No. 10	30 of No. 37
9 " " 5	8 " " 12	1 " " 52
	1 " " 17	1 " " 111c
	1 " " 22	2 " " 125
	1 " " 35	2 " " 126a

Parts required

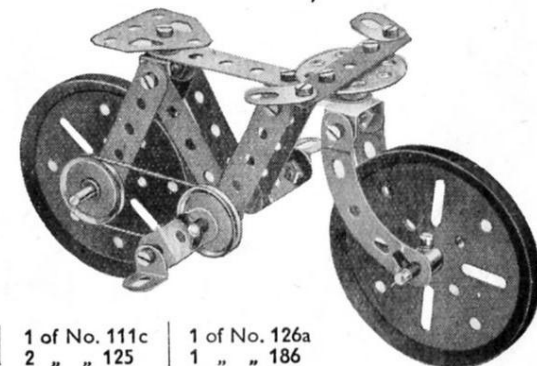
4 of No. 1
8 " " 2
1 " " 3
8 " " 5
1 " " 10
1 " " 11
4 " " 12
1 " " 15b
3 " " 16
2 " " 18a
1 " " 19s
2 " " 19b
4 " " 22
1 " " 23
1 " " 24
6 " " 35
46 " " 37
2 " " 37a
6 " " 38
1 " " 40

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

C98. Flip-Flap



C99. Bicycle

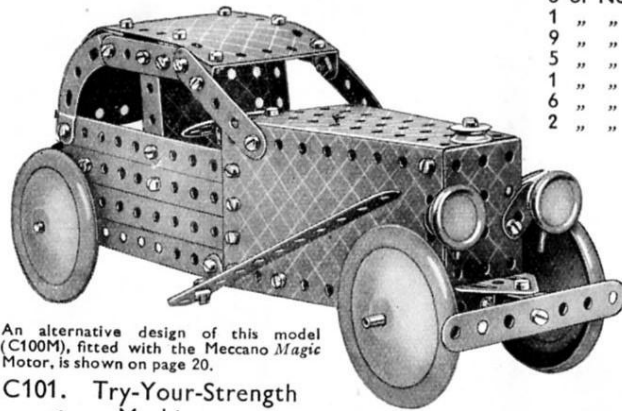


Parts required

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

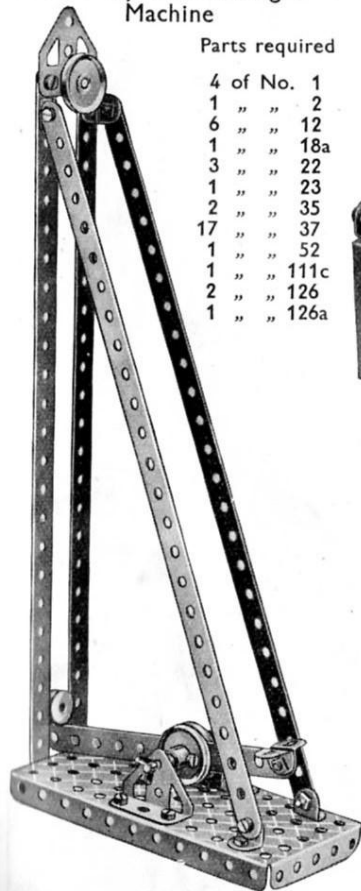
1 of No. 111c	1 of No. 126a
2 " " 125	1 " " 186

C100. Sports Coupé



An alternative design of this model (C100M), fitted with the Meccano Magic Motor, is shown on page 20.

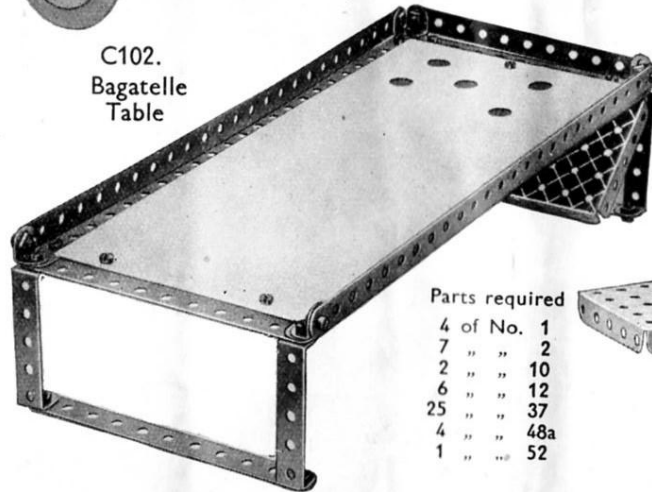
C101. Try-Your-Strength Machine



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

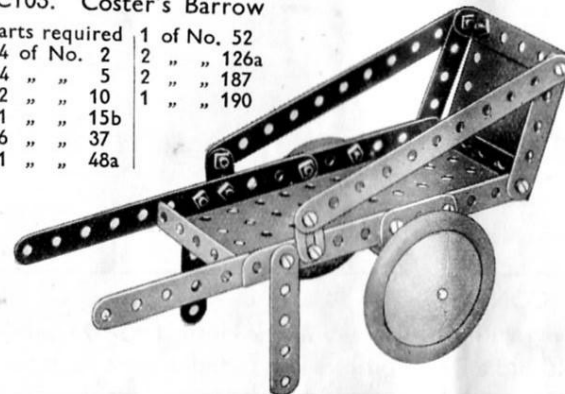


Parts required

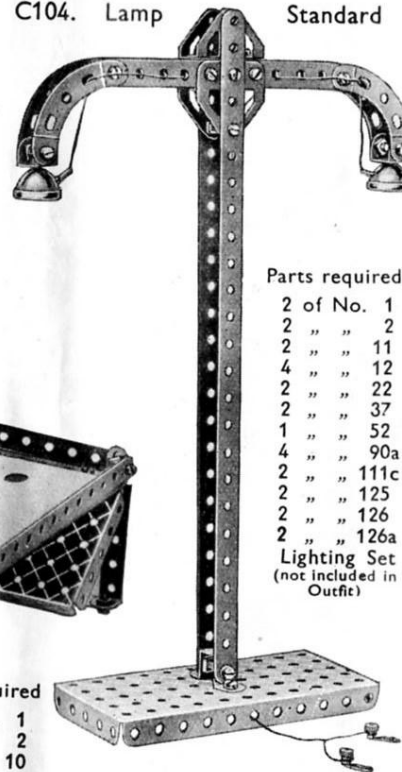
4 of No. 1
7 " " 2
2 " " 10
6 " " 12
25 " " 37
4 " " 48a
1 " " 52

C103. Coster's Barrow

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



C104. Lamp Standard



Parts required

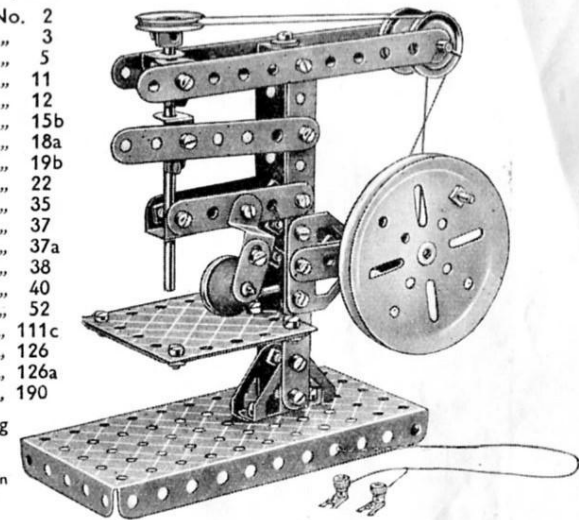
2 of No. 1
2 " " 2
2 " " 11
4 " " 12
2 " " 22
2 " " 37
1 " " 52
4 " " 90a
2 " " 111c
2 " " 125
2 " " 126
2 " " 126a
Lighting Set (not included in Outfit)

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
1 " " 52
2 " " 111c
2 " " 126
2 " " 126a
1 " " 190

Lighting Set (not included in Outfit)

C105. Drill



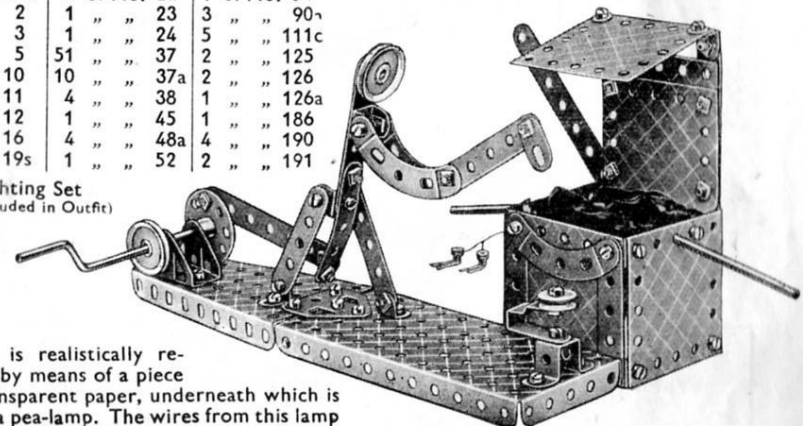
MECCANO LIGHTING SET

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

C106. Blacksmith

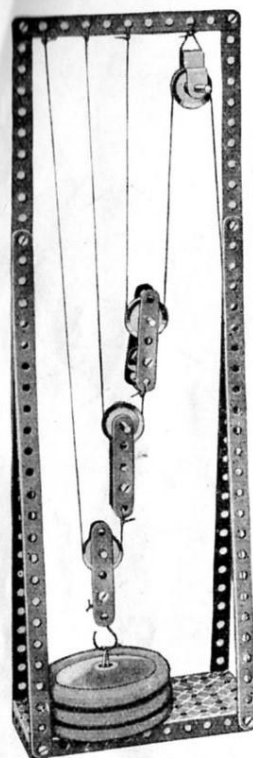
Parts required	2 of No. 22	1 of No. 54
3 of No. 2	1 " " 23	3 " " 90a
1 " " 3	1 " " 24	5 " " 111c
7 " " 5	51 " " 37	2 " " 125
2 " " 10	10 " " 37a	2 " " 126
2 " " 11	4 " " 38	1 " " 126a
7 " " 12	1 " " 45	1 " " 186
2 " " 16	4 " " 48a	4 " " 190
1 " " 19s	1 " " 52	2 " " 191

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.

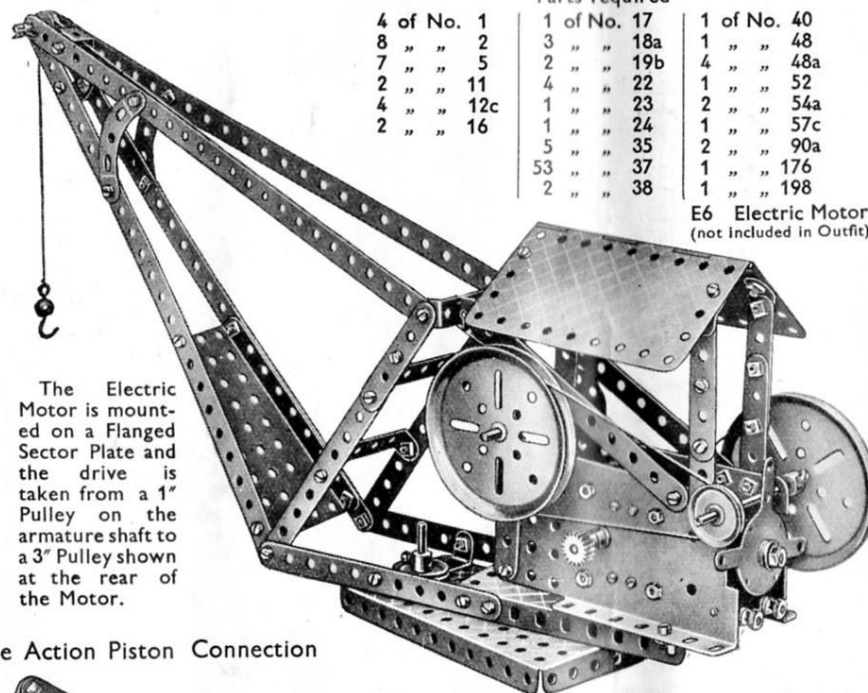
These Models can be built with **MECCANO Outfit C** (or Outfits B and Ba)



C107.
Pulley Block
8:1

Parts required

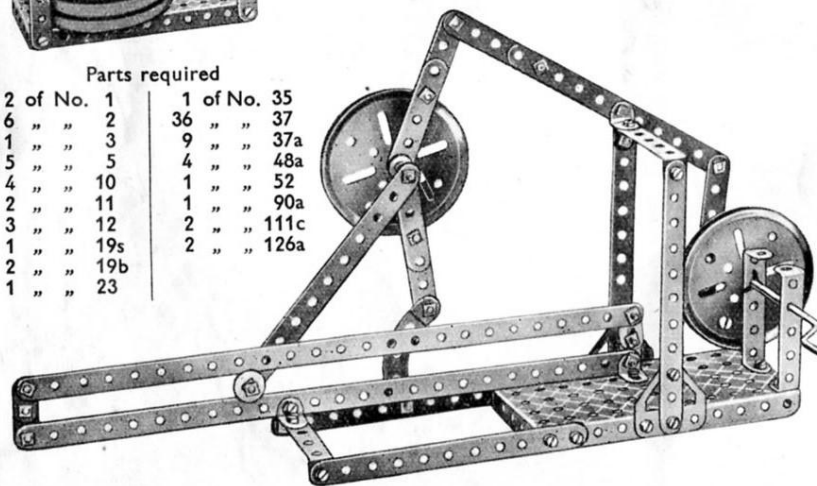
4 of No. 1	
3 " " 2	
6 " " 5	
2 " " 11	
2 " " 12	
2 " " 17	
2 " " 18a	
4 " " 22	
15 " " 37	
2 " " 38	
1 " " 40	
1 " " 45	
1 " " 52	
1 " " 57c	
3 " " 187	



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	



C109. Swivelling Jib Crane (Electric)

Parts required

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

E6 Electric Motor
(not Included in Outfit)

C110.
Overhead
Crane

Parts required

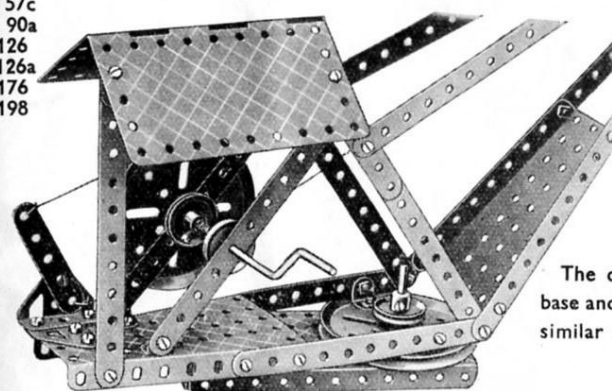
4 of No. 1	
4 " " 2	
8 " " 5	
2 " " 10	
8 " " 12	
2 " " 16	
1 " " 18a	
1 " " 19s	
4 " " 22	
1 " " 23	
4 " " 35	
48 " " 37	
2 " " 37a	
1 " " 40	
6 " " 48a	
1 " " 57c	
4 " " 90a	
1 " " 111c	
2 " " 126a	
1 " " 176	
2 " " 191	



C111. Swivelling Jib Crane
(Hand)

Parts required

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



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

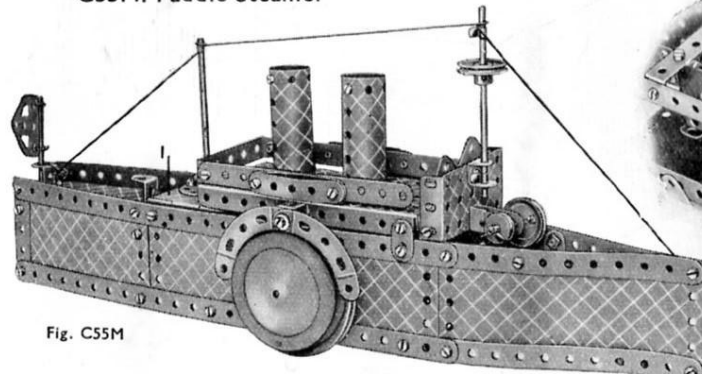
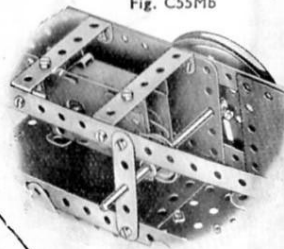


Fig. C55M

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. 48a	
6 " " 2	1 " " 51	1 " " 52	
8 " " 5	1 " " 54a	2 " " 90a	
4 " " 10	1 " " 111c	4 " " 125	
2 " " 11	2 " " 126	2 " " 187	
8 " " 12	4 " " 190	2 " " 191	
1 " " 15b	6 " " 191	2 " " 195	
1 " " 19b	2 " " 195		
1 " " 22			
1 " " 24			
66 " " 37			
6 " " 37a			
5 " " 38			

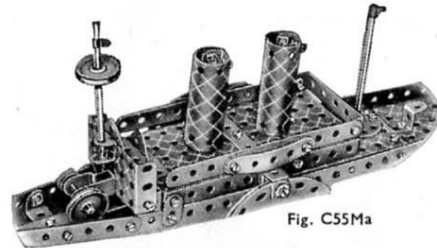


Fig. C55Ma

Parts required		Parts required		Parts required	
4 of No. 1	1 of No. 16	7 of No. 38	2 of No. 125		
7 " " 2	1 " " 17	1 " " 40	2 " " 126		
1 " " 3	1 " " 18a	1 " " 44	1 " " 126a		
9 " " 5	2 " " 19b	1 " " 48	1 " " 176		
2 " " 10	4 " " 22	5 " " 48a	2 " " 187		
2 " " 11	1 " " 23	1 " " 51	4 " " 190		
7 " " 12	1 " " 24	1 " " 52	2 " " 191		
4 " " 12c	8 " " 35	1 " " 54a	2 " " 192		
2 " " 15b	66 " " 37	4 " " 90a	1 " " 198		
	6 " " 37a	6 " " 111c			

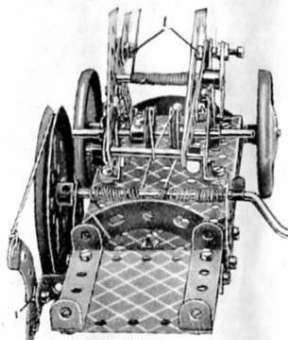


Fig. C27Ma

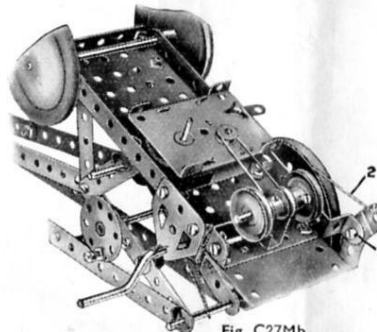


Fig. C27Mb

C27M. Mobile Crane

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

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

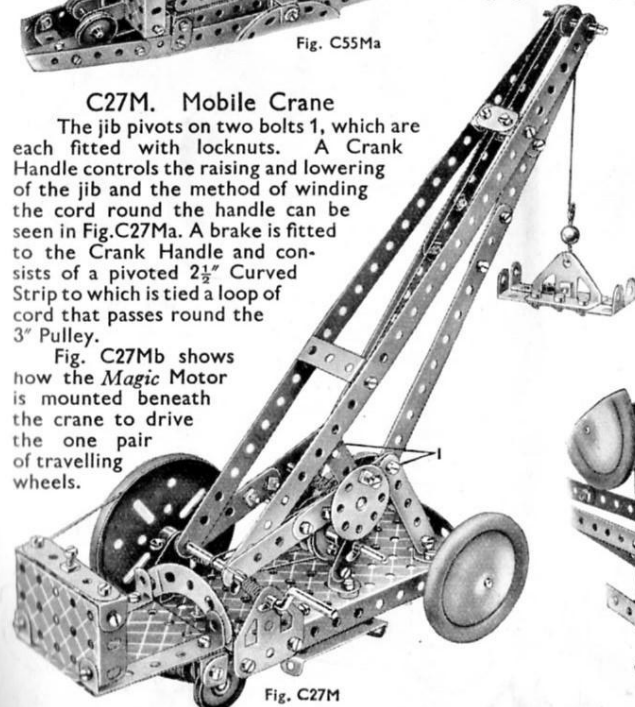


Fig. C27M

C64M. Roundabout

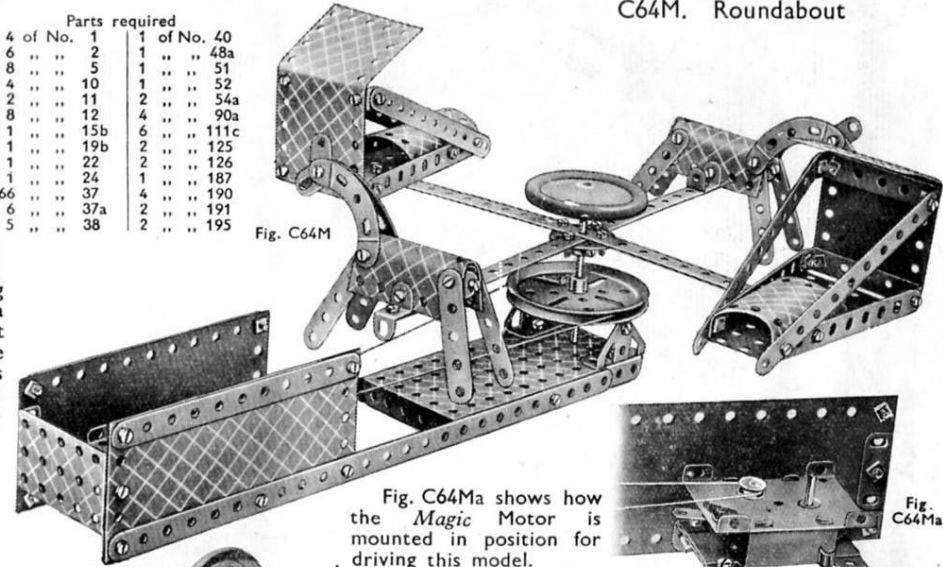


Fig. C64M

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

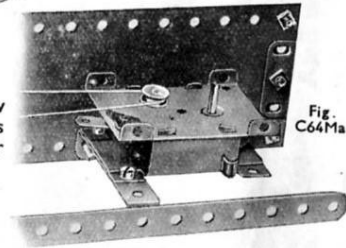


Fig. C64Ma

Parts required

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

Fig. C93Ma

Parts required		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					

C93M. Horse and Cart

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

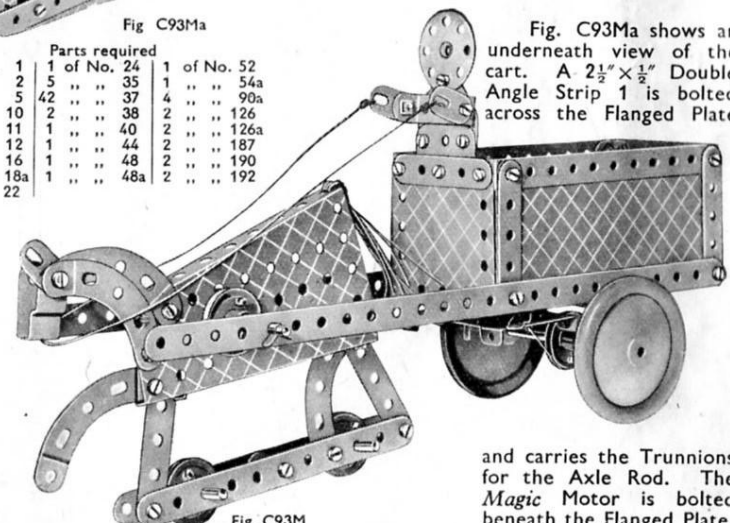


Fig. C93M

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

Outfit C Models fitted with Meccano Magic Motor

C11M. Sports Car

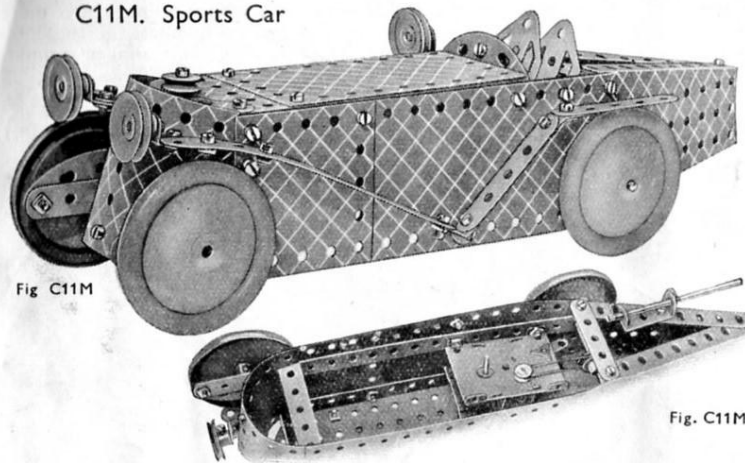


Fig. C11M

Fig. C11Ma

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

Parts required

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

C77M. Aeroplane

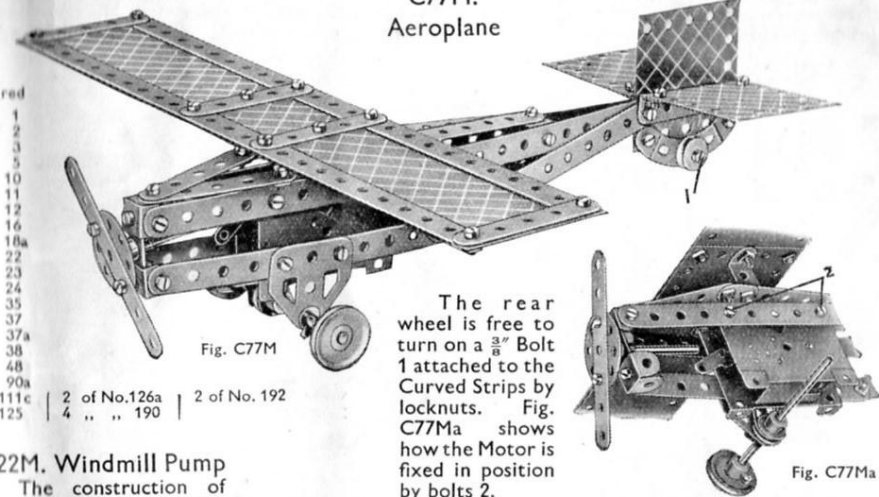


Fig. C77M

Fig. C77Ma

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.

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.

Parts required

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

Fig. C22M

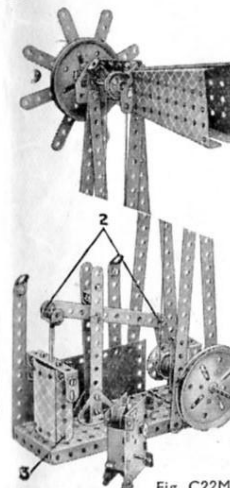


Fig. C22Ma

C65M. Flyboats

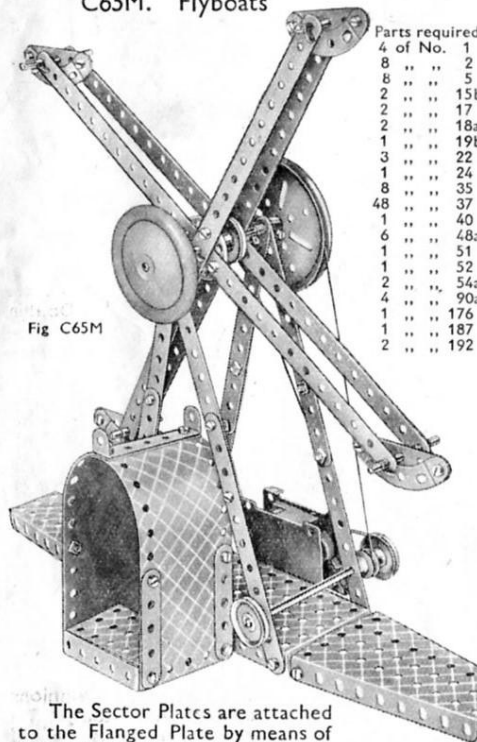


Fig. C65M

4	of No.	1
8	"	2
2	"	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

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

C100M. Sports Coupé

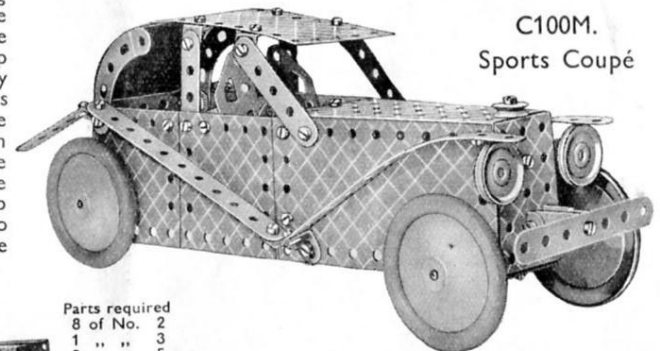


Fig. C100Ma

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 Trunnion and held in place by Spring Clips.

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

PLATES, STRIPS, GIRDERS & BRACKETS

