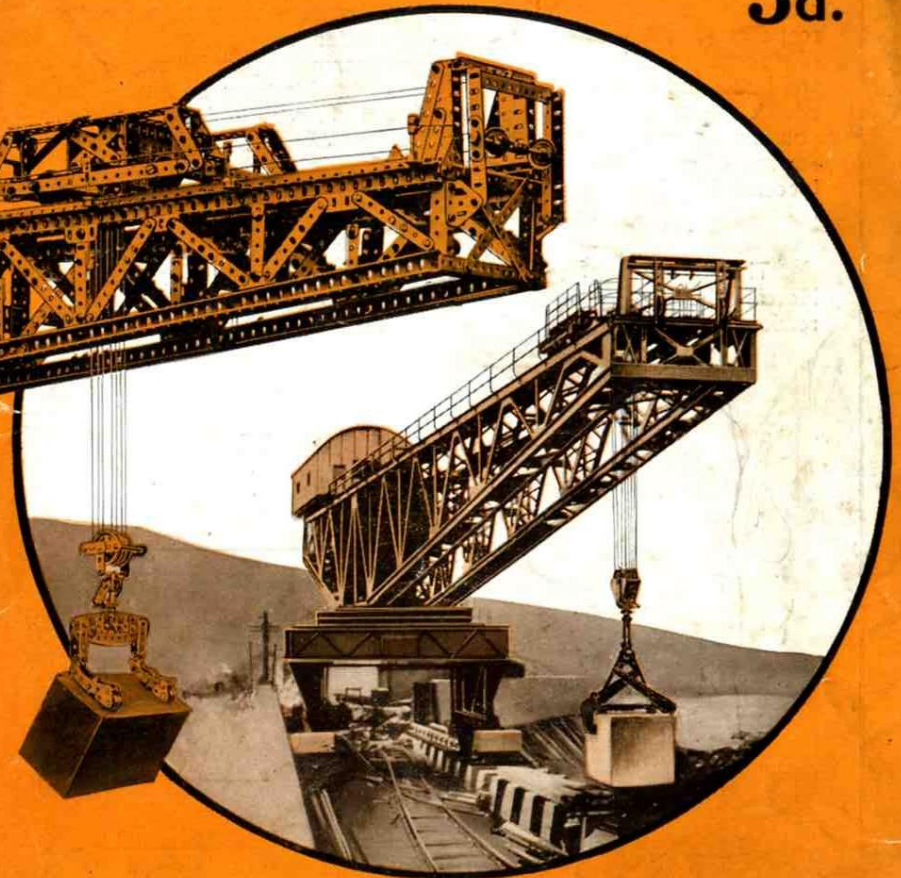
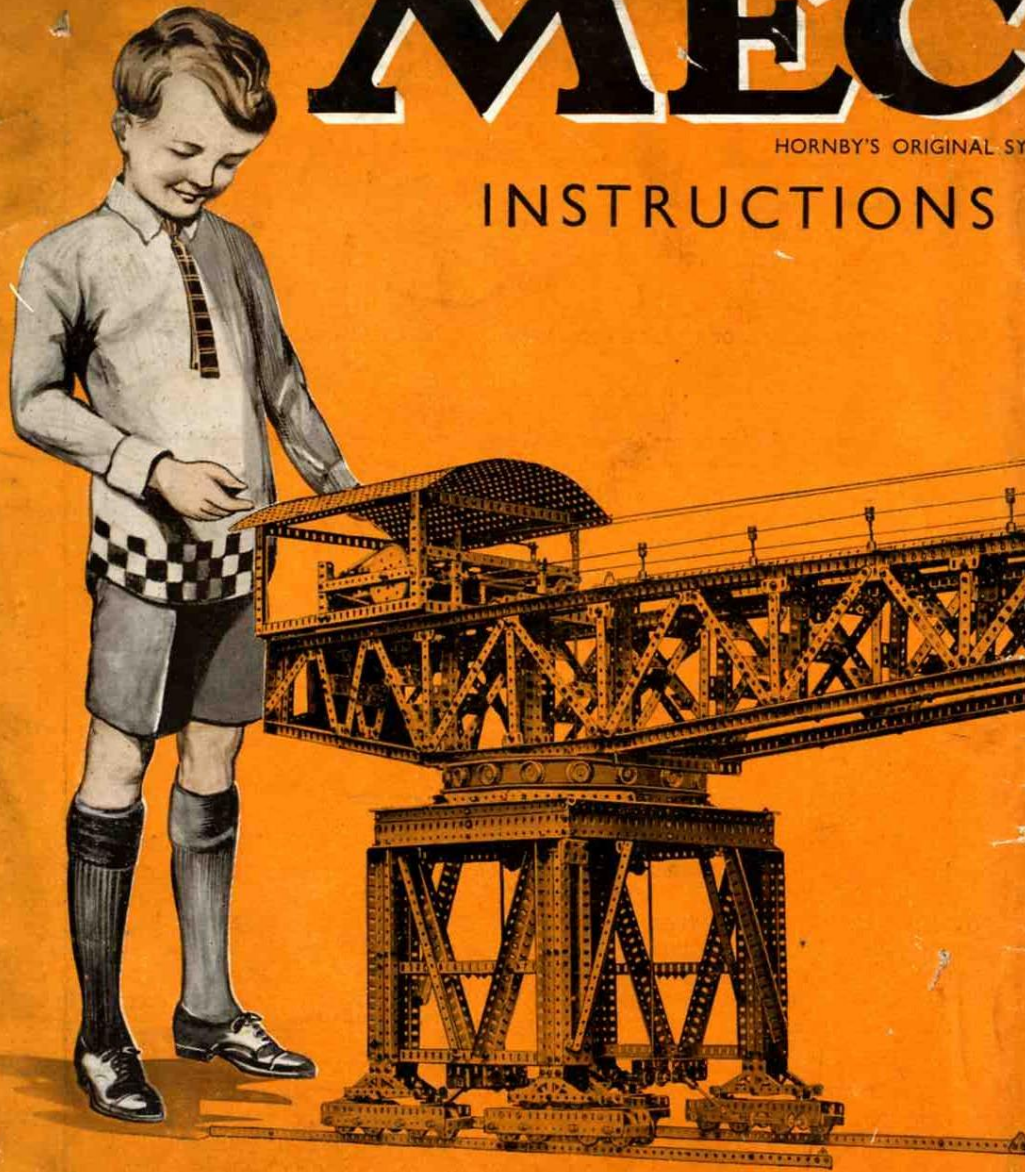


MECCANO

HORNBY'S ORIGINAL SYSTEM — FIRST PATENTED 1901

INSTRUCTIONS FOR OUTFIT Ba

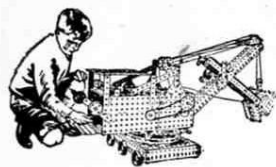
PRICE
3d.



34Ba

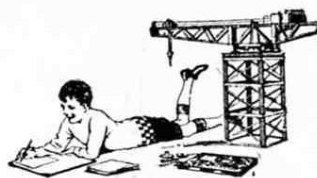
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MECCANO

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 an E, and so you go on, until finally your ambition is realised and you are the proud possessor of an L Outfit.

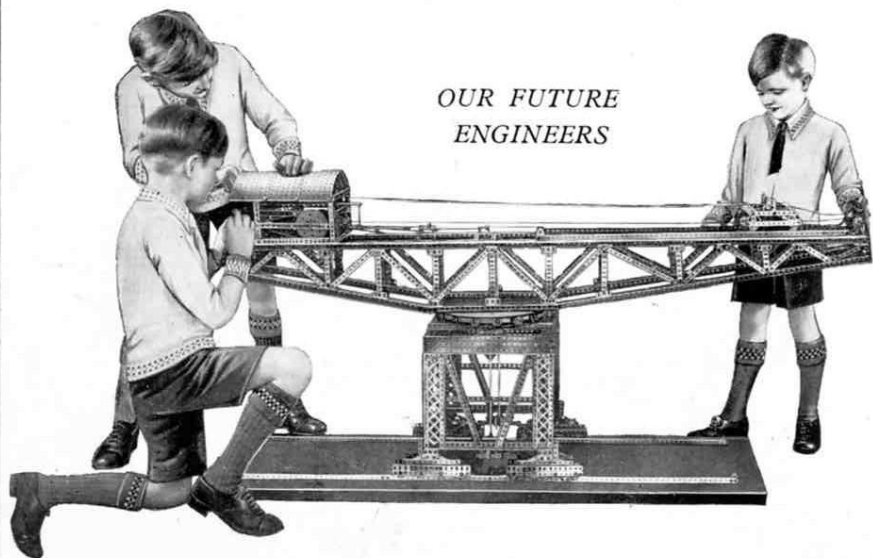
As a keen and inventive Meccano model-builder you should possess copies of the special Manuals "How to use Meccano Parts" and "Meccano Standard Mechanisms." In the former the principal uses of Meccano parts are outlined, while the latter shows a large number of real engineering mechanisms, built of Meccano 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.

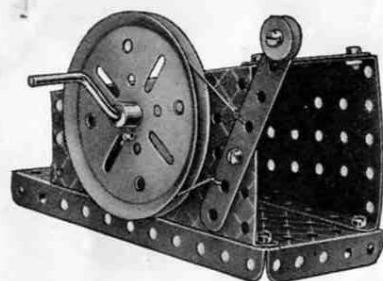
Although all kinds of queries are put to us on all manner of subjects, the main interest is, of course, engineering. The wonderful knowledge of engineering matters possessed by our staff of experts is unique. This vast store of knowledge, gained only by many years of hard-earned experience, is at your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

OUR FUTURE ENGINEERS



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

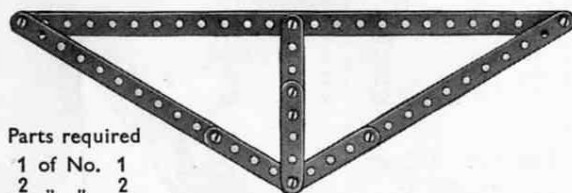
C1. Band Brake



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

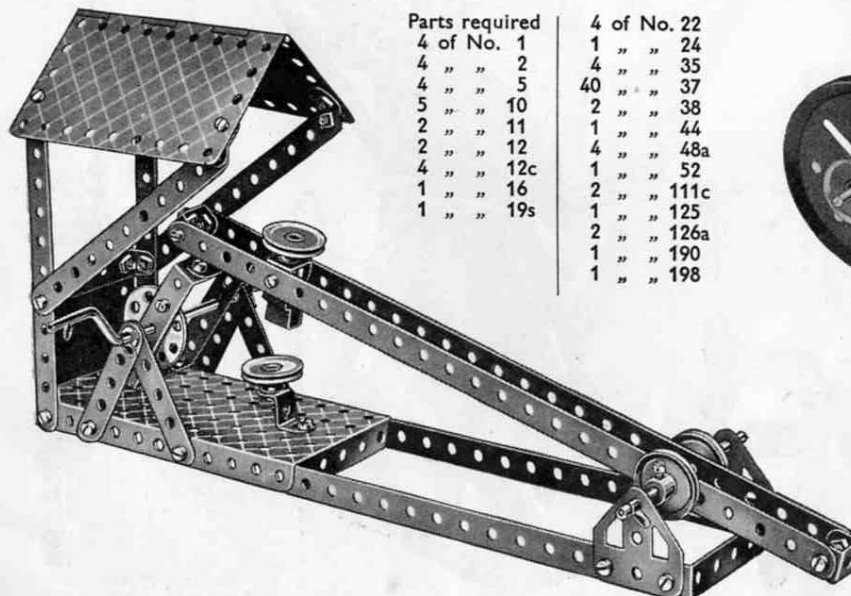
C2. Triangulated Truss



Parts required

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

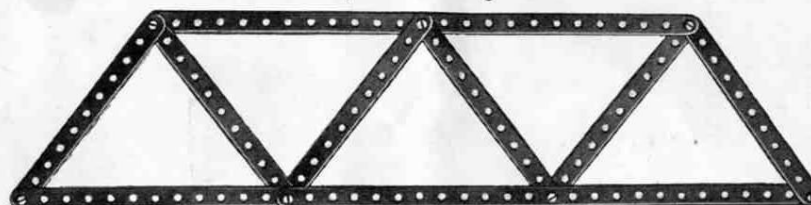
C3. Helve Hammer



Parts required

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

C4. Compound Triangulated Truss



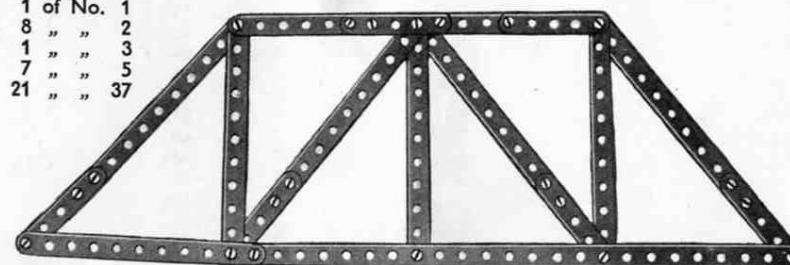
Parts required

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

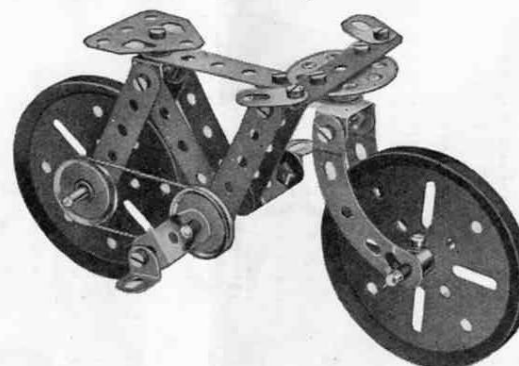
C5. Howe Truss

Parts required

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



C6. Bicycle



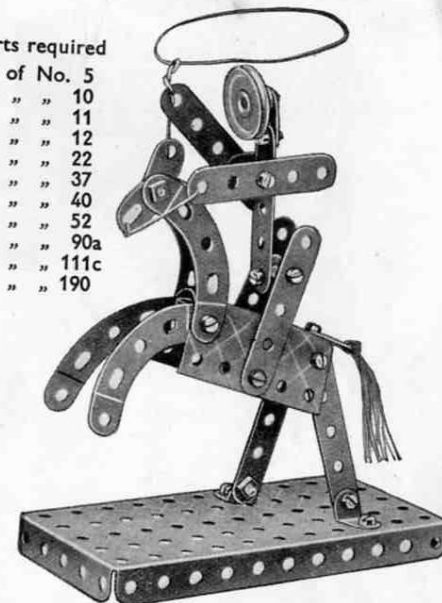
Parts required

1 of No. 3
7 " " 5
2 " " 10
2 " " 11
4 " " 12
1 " " 17
2 " " 18a
2 " " 19b
2 " " 22
1 of No. 24
4 " " 35
14 " " 37
4 " " 37a
3 " " 38
2 " " 90a
1 " " 111c
2 " " 125
1 " " 126a
1 " " 186

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

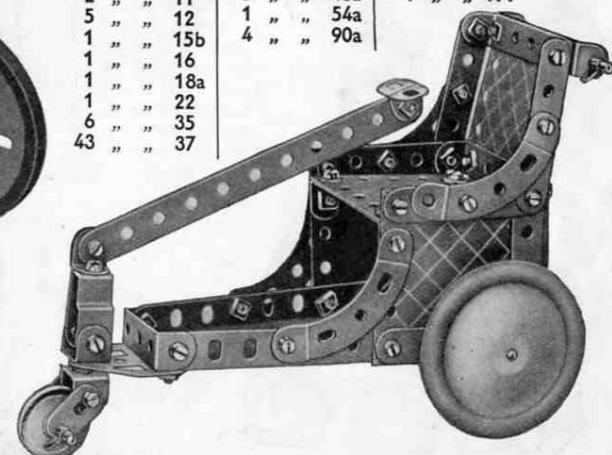
1 of No. 2
9 " " 5
4 " " 10
2 " " 11
5 " " 12
1 " " 15b
1 " " 16
1 " " 18a
1 " " 22
6 " " 35
43 " " 37

4 of No. 37a

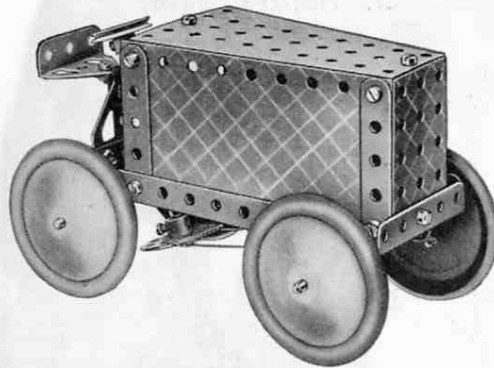
8 " " 38
1 " " 44
1 " " 48
5 " " 48a
1 " " 54a
4 " " 90a

1 of No. 111c

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

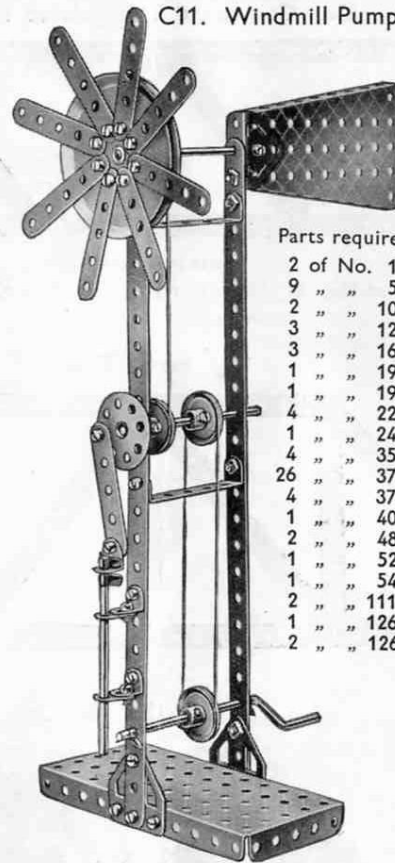


C9. Motor Tractor



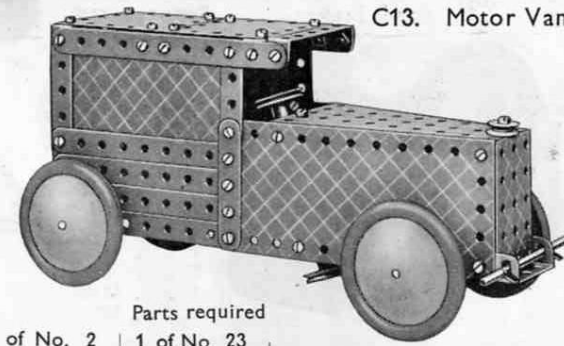
Parts required	
4 of No. 5	
1 " " 10	
2 " " 12	
2 " " 15b	
1 " " 16	
1 " " 22	
1 " " 24	
1 " " 35	
18 " " 37	
2 " " 37a	
1 " " 40	
3 " " 48a	
1 " " 51	
1 " " 52	
1 " " 54a	
1 " " 111c	
1 " " 126	
1 " " 126a	
4 " " 187	
2 " " 191	

C11. 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	

C13. Motor Van

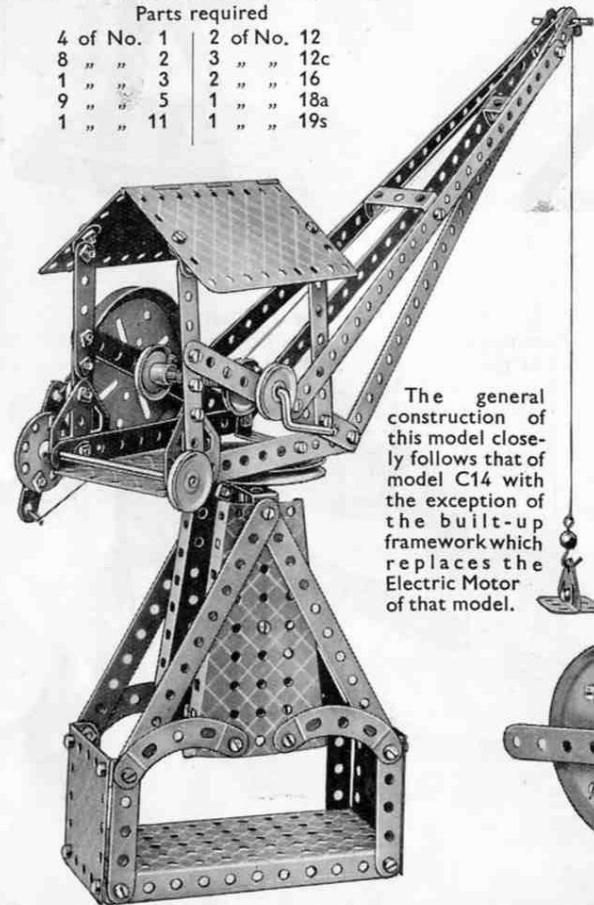


Parts required	
8 of No. 2	1 of No. 23
1 " " 3	4 " " 35
9 " " 5	51 " " 37
1 " " 10	3 " " 37a
4 " " 12	1 " " 38
2 " " 15b	6 " " 48a
2 " " 16	1 " " 51
2 " " 22	1 " " 52
	2 of No. 54a
	3 " " 111c
	4 " " 187
	4 " " 190
	2 " " 191
	2 " " 192

C10. 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

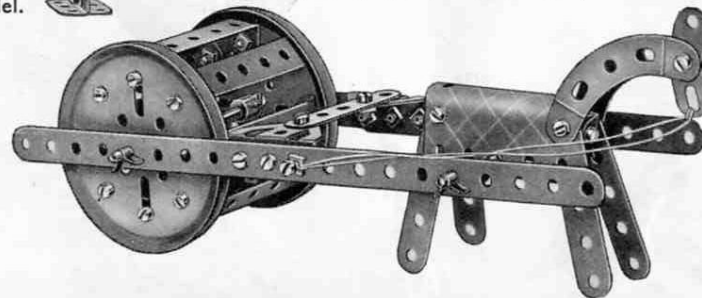


Parts required for C10 (continued)

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	

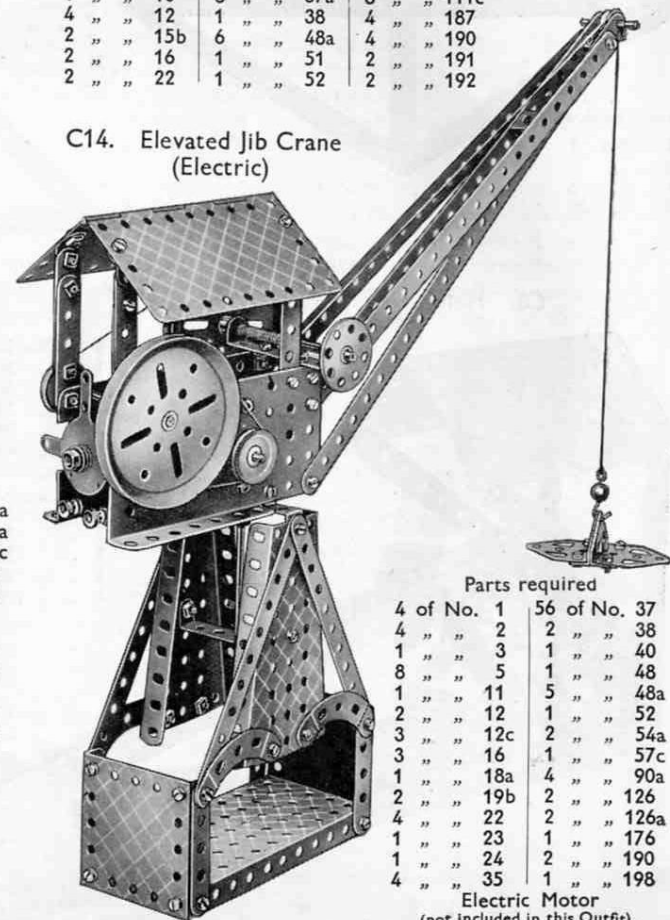
The general construction of this model closely follows that of model C14 with the exception of the built-up framework which replaces the Electric Motor of that model.

C12. Field Roller



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

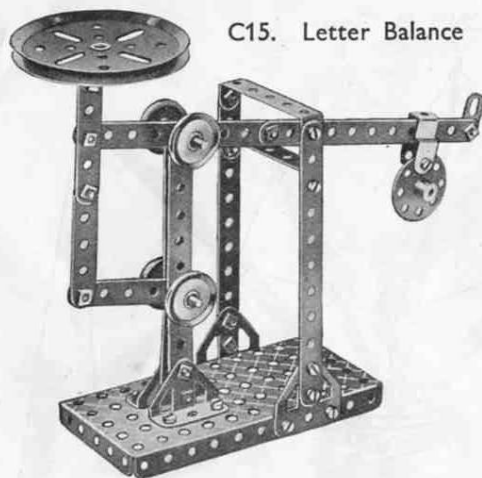
C14. Elevated Jib Crane (Electric)



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

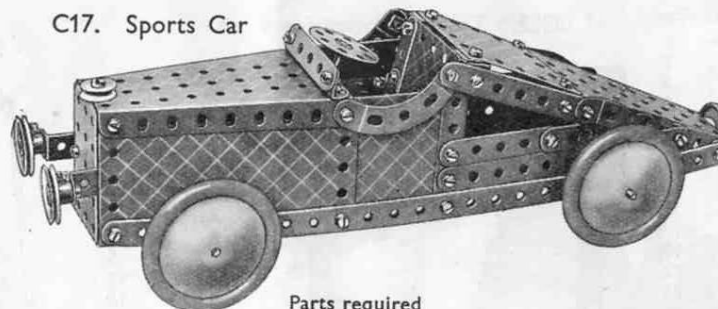
Electric Motor
(not included in this Outfit).



C15. 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



C17. Sports Car

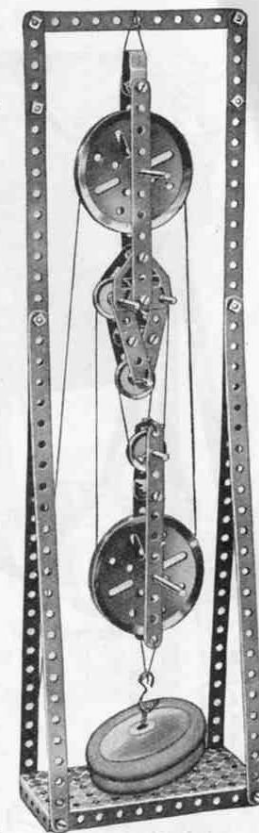
Parts required

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

C19.
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



C16. Travelling Crane

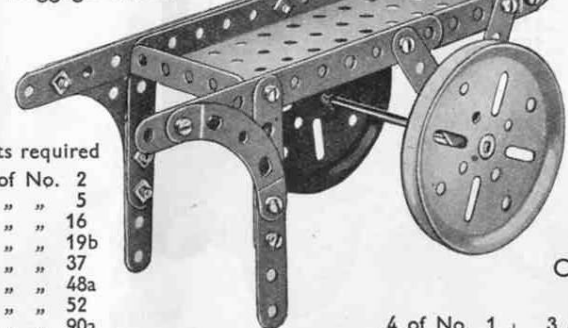
Parts required

2	of No.	1	2	of No.	19b	1	of No.	48
6	" "	2	4	" "	22	1	" "	48a
6	" "	5	1	" "	23	1	" "	52
1	" "	11	1	" "	24	1	" "	57c
8	" "	12	3	" "	35	4	" "	111c
3	" "	16	34	" "	37	2	" "	126a
1	" "	18a	9	" "	37a	1	" "	176
1	" "	19s	1	" "	40	1	" "	198

C18. Luggage Truck

Parts required

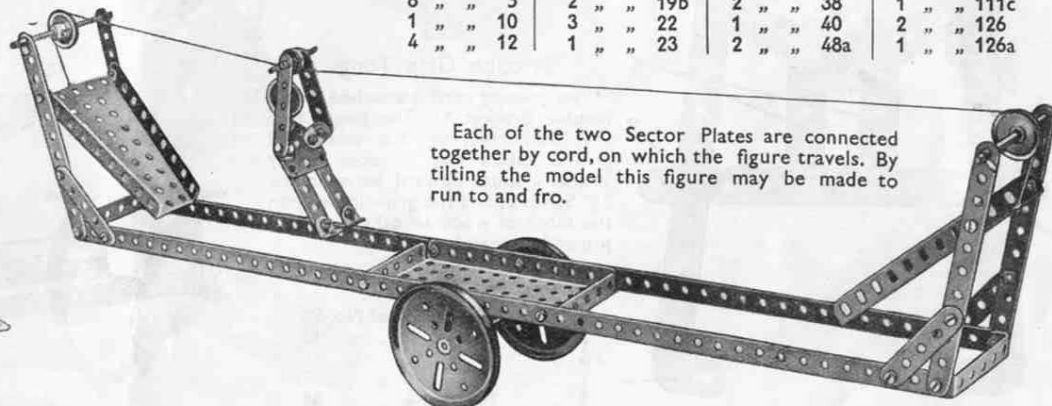
2	of No.	2
8	" "	5
1	" "	16
2	" "	19b
18	" "	37
2	" "	48a
1	" "	52
4	" "	90a



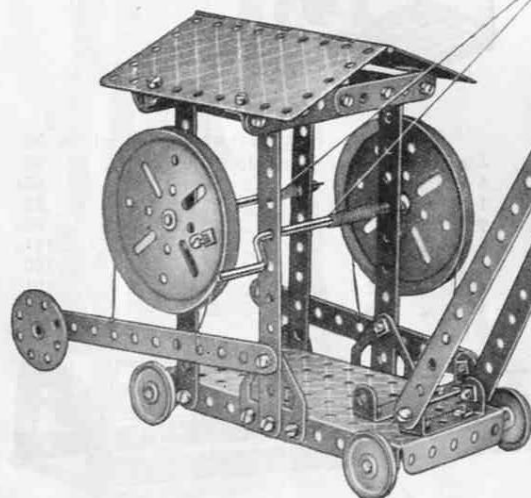
C20. Aerial Flight

Parts required

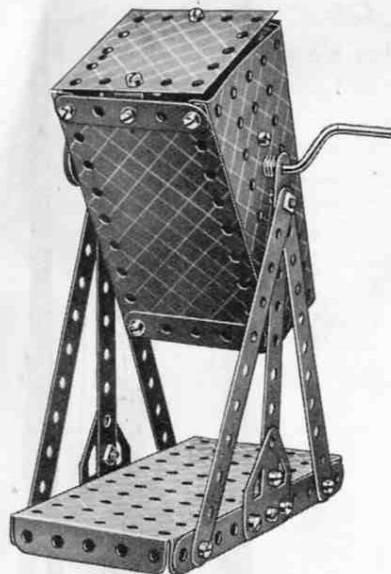
4	of No.	1	3	of No.	16	6	of No.	35	1	of No.	52
4	" "	2	1	" "	18a	33	" "	37	2	" "	54a
8	" "	5	2	" "	19b	2	" "	38	1	" "	111c
1	" "	10	3	" "	22	1	" "	40	2	" "	126
4	" "	12	1	" "	23	2	" "	48a	1	" "	126a



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.



C21. Butter Churn



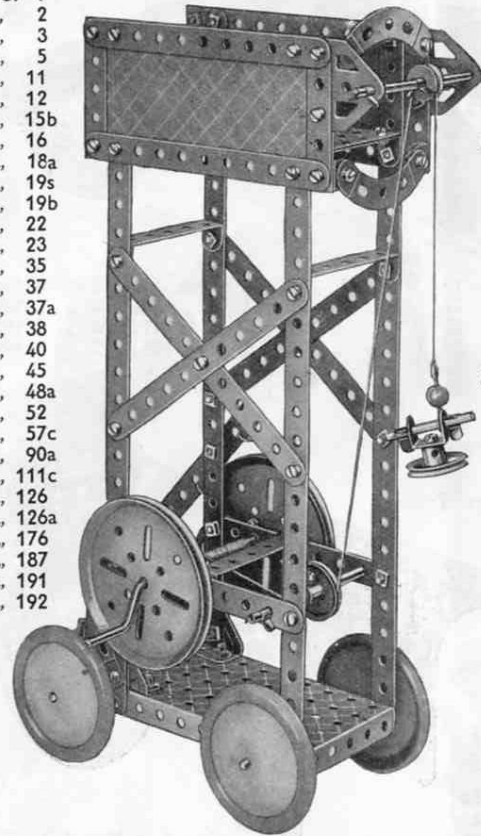
Parts required

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

Parts required

4 of No. 1	
8 " " 2	
1 " " 3	
8 " " 5	
1 " " 11	
4 " " 12	
2 " " 15b	
2 " " 16	
2 " " 18a	
1 " " 19s	
2 " " 19b	
2 " " 22	
1 " " 23	
8 " " 35	
52 " " 37	
2 " " 37a	
3 " " 38	
1 " " 40	
1 " " 45	
5 " " 48a	
1 " " 52	
1 " " 57c	
4 " " 90a	
2 " " 111c	
2 " " 126	
2 " " 126a	
1 " " 176	
4 " " 187	
1 " " 191	
2 " " 192	

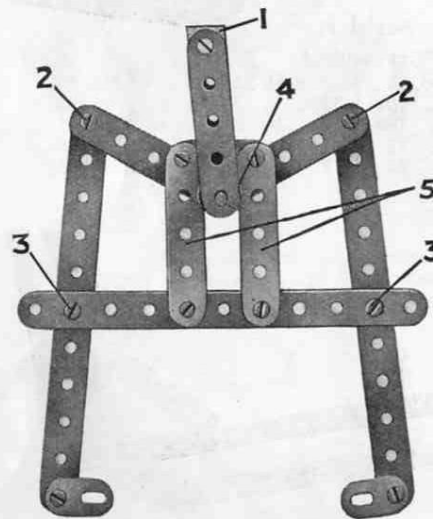
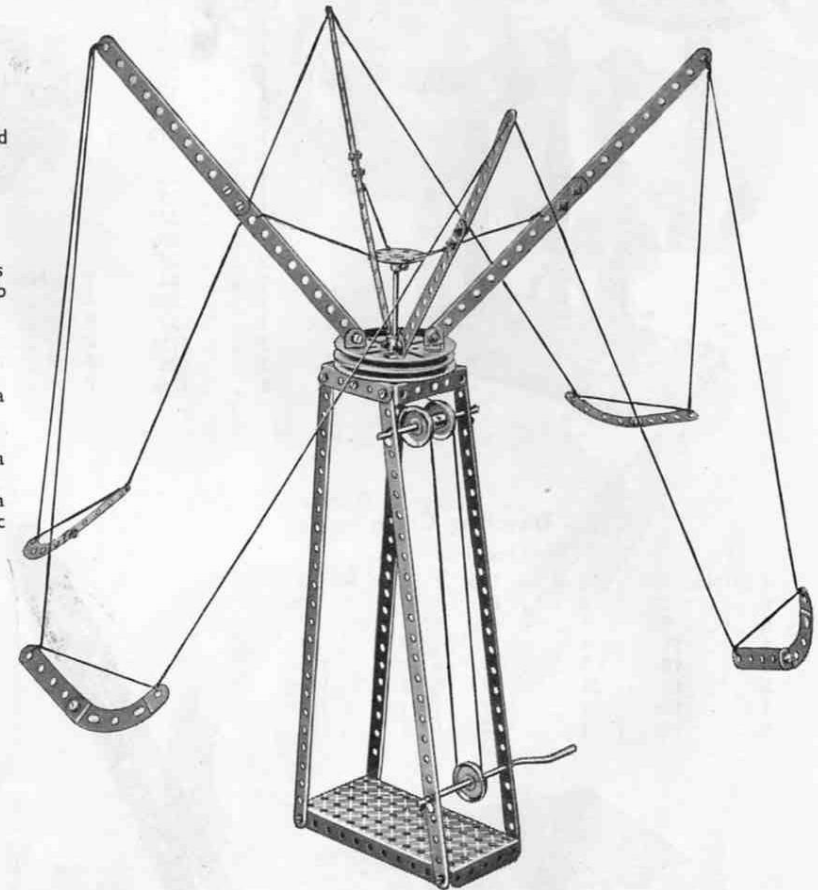
C22. Tower Wagon



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	

C24. Fly Boats



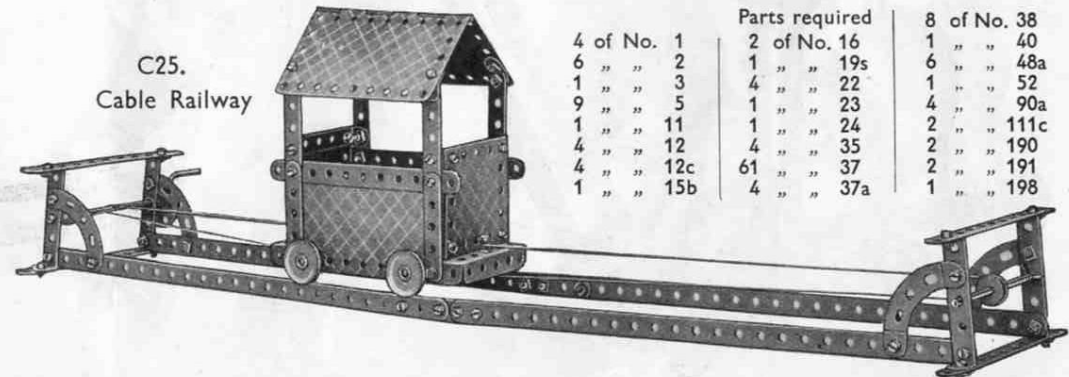
C23.

Friction Grip Tong

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

Parts required

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

C25.
Cable Railway

4 of No. 1	
6 " " 2	
1 " " 3	
9 " " 5	
1 " " 11	
4 " " 12	
4 " " 12c	
1 " " 15b	

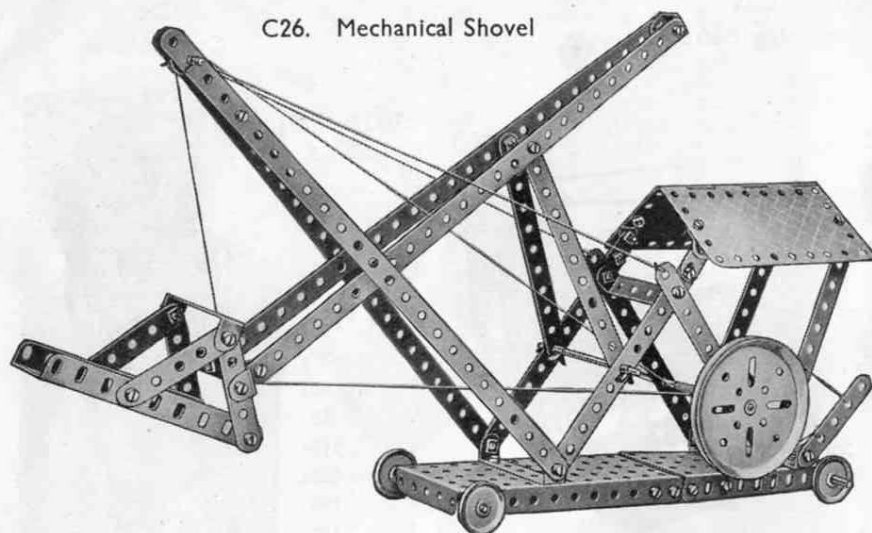
Parts required

2 of No. 16	
1 " " 19s	
4 " " 22	
1 " " 23	
1 " " 24	
4 " " 35	
61 " " 37	
4 " " 37a	

8 of No. 38

1 " " 40	
6 " " 48a	
1 " " 52	
4 " " 90a	
2 " " 111c	
2 " " 190	
2 " " 191	
1 " " 198	

C26. Mechanical Shovel

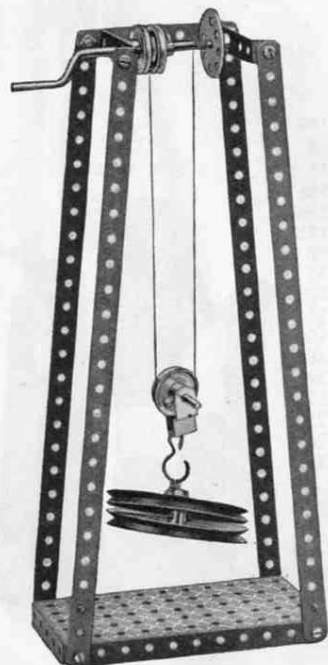


Parts required

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

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 secured at its inner end to a Crank Handle that is controlled by the hand brake shown in the photograph.

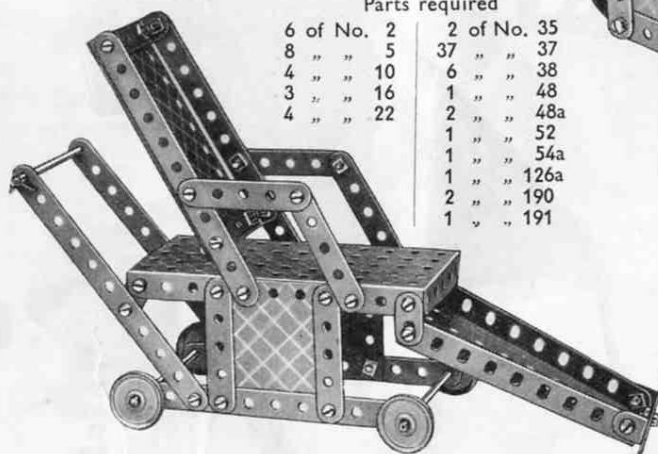
C27. Chinese Windlass



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

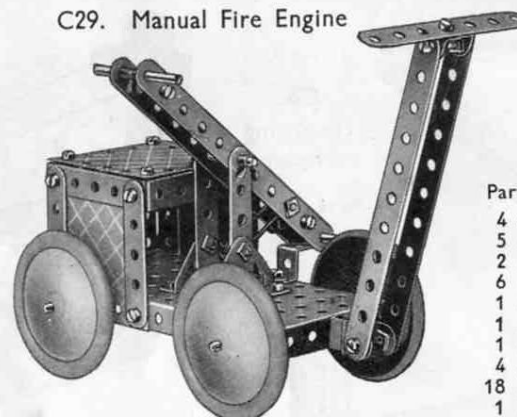
C28. Invalid Chair



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

C29. Manual Fire Engine



Parts required

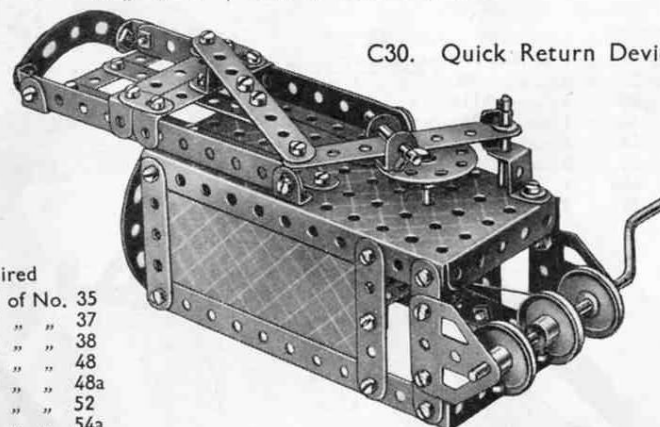
4 of No. 2	1 of No. 18a	1 of No. 52
1 " " 3	6 " " 35	2 " " 111c
8 " " 5	34 " " 37	1 " " 125
2 " " 11	6 " " 37a	2 " " 126
6 " " 12	1 " " 38	1 " " 186
2 " " 15b	1 " " 45	4 " " 187
2 " " 17	2 " " 48a	4 " " 190

C31. Telescopic Mast

Parts required

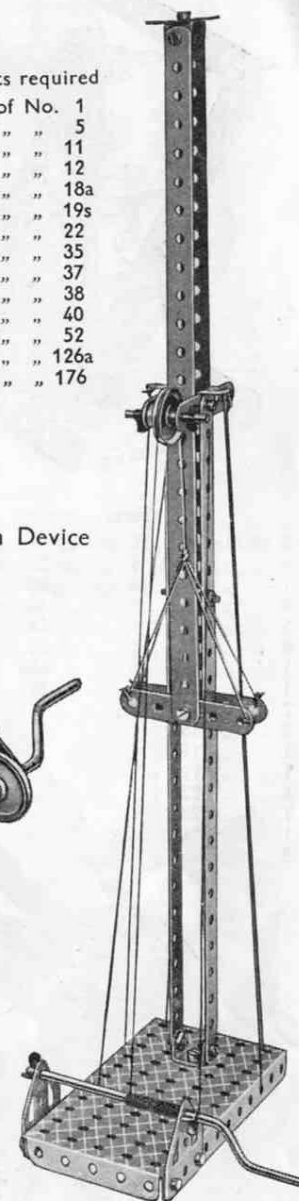
4 of No. 1
5 " " 5
2 " " 11
6 " " 12
1 " " 18a
1 " " 19s
1 " " 22
4 " " 35
18 " " 37
1 " " 38
1 " " 40
1 " " 52
2 " " 126a
1 " " 176

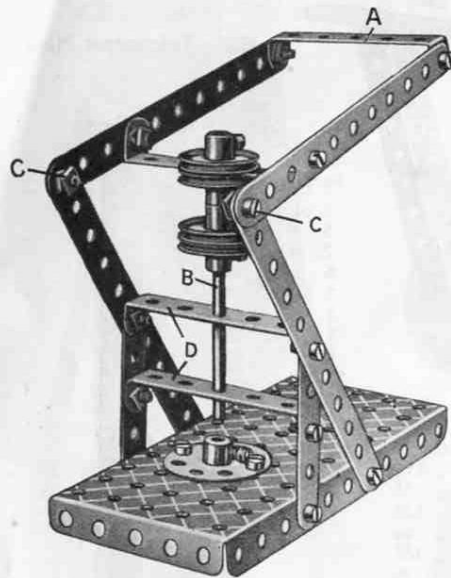
C30. Quick Return Device



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





C32.
Punching
Machine

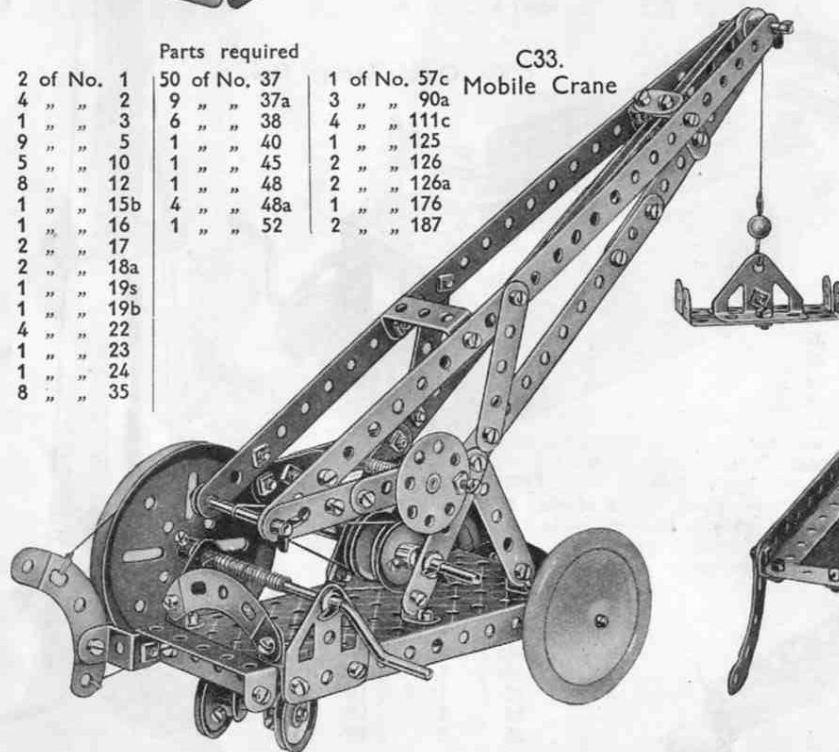
Parts required

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

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

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

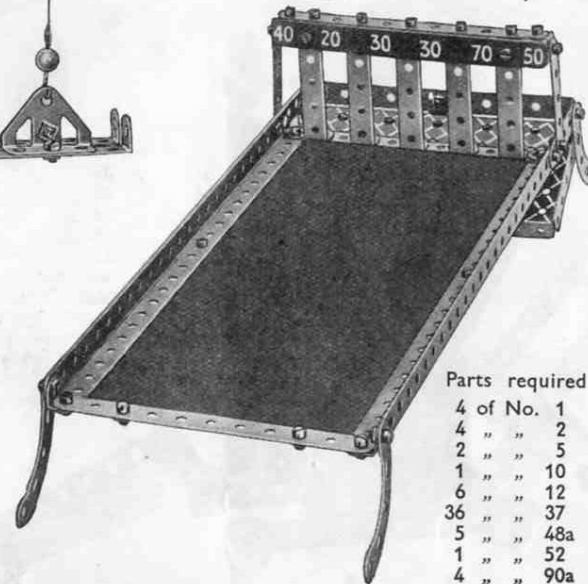
C33.
Mobile Crane



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 " " 54	2 " " 192
4 " " 35		

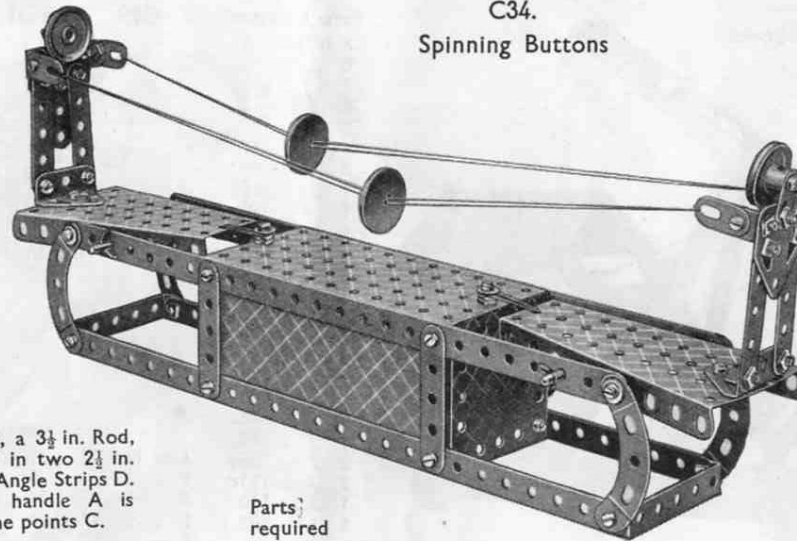
C35. Box Ball Alley



Parts required

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

C34.
Spinning Buttons



C36.
Gramophone

Parts
required

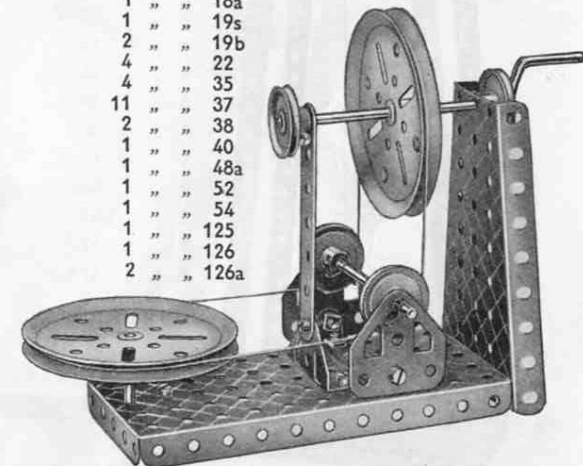
4 of No. 2
5 " " 5
2 " " 10
4 " " 12
1 " " 23
1 " " 24
29 " " 37
5 " " 37a
5 " " 48a
1 " " 52
4 " " 111c
2 " " 126a
2 " " 190
2 " " 191



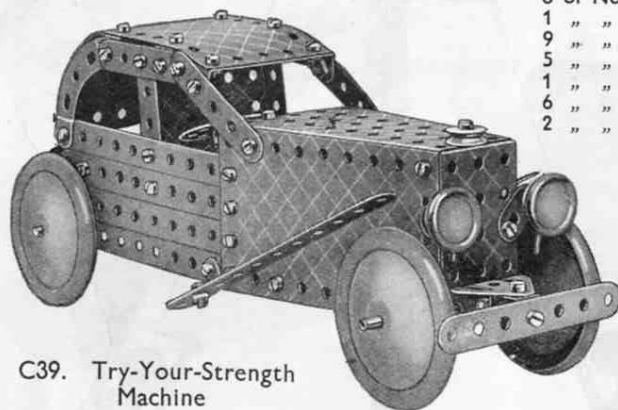
Parts
required

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 " " 54
1 " " 125
1 " " 126
2 " " 126a

C37.
Belt Gear



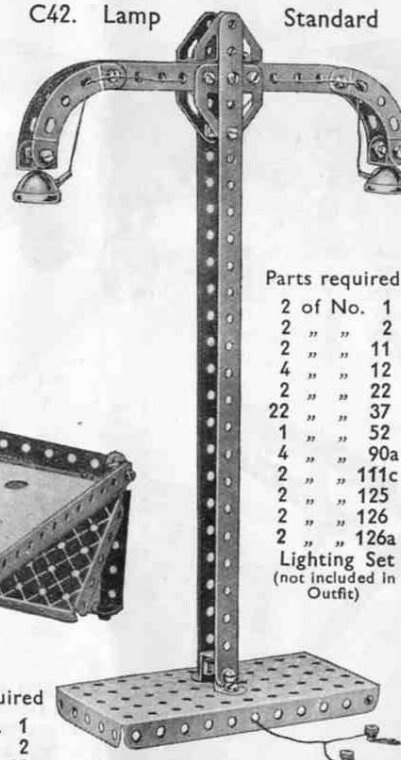
C38. Sports Coupé



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

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

C42. Lamp



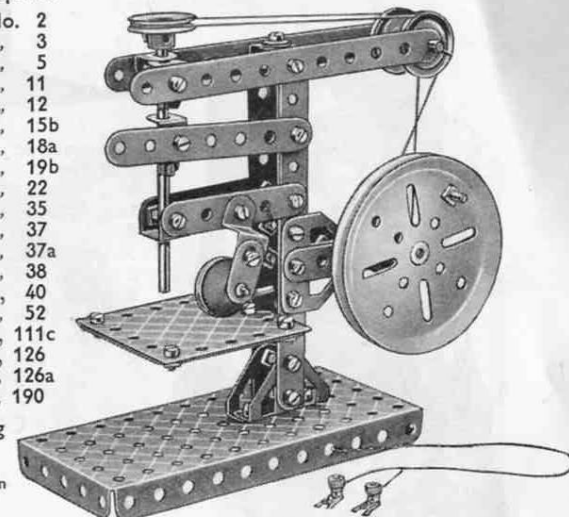
Parts required	
2 of No. 1	
2 " " 2	
2 " " 11	
4 " " 12	
2 " " 22	
22 " " 37	
1 " " 52	
4 " " 90a	
2 " " 111c	
2 " " 125	
2 " " 126	
2 " " 126a	
Lighting Set (not included in Outfit)	

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)

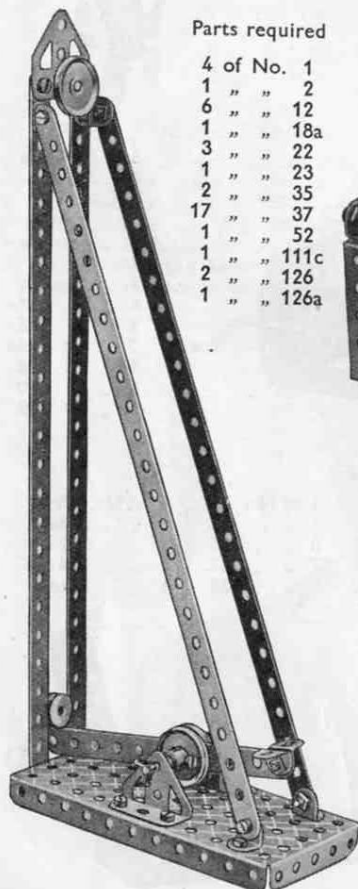
C43. Drill



MECCANO LIGHTING SET

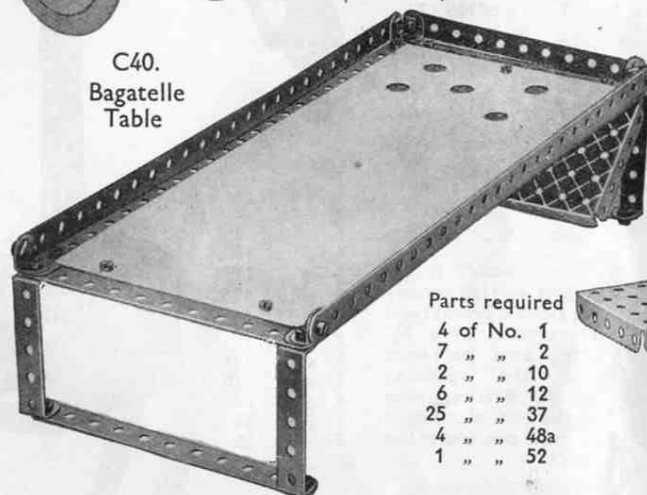
The appearance of many Meccano models, especially those built with Outfit A, B, C, may be vastly improved by the addition of suitably disposed lights. For this purpose a special set of lighting equipment has been introduced. This consists of two pea-lamps, two spot lights, and a fancy lamp shade, the appearance and uses of which are shown in models C38, C42, C43 and C44.

C39. 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	

C40. Bagatelle Table

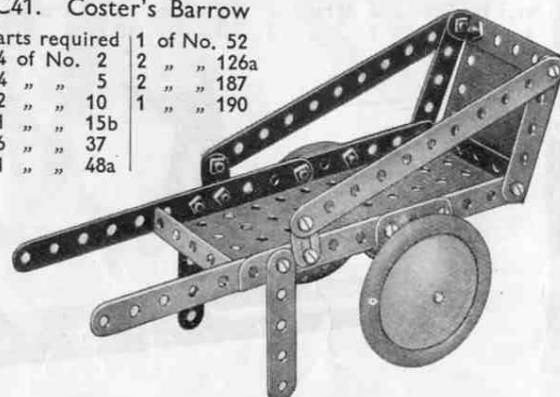


Parts required	
4 of No. 1	
7 " " 2	
2 " " 10	
6 " " 12	
25 " " 37	
4 " " 48a	
1 " " 52	

C41. Coster's Barrow

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

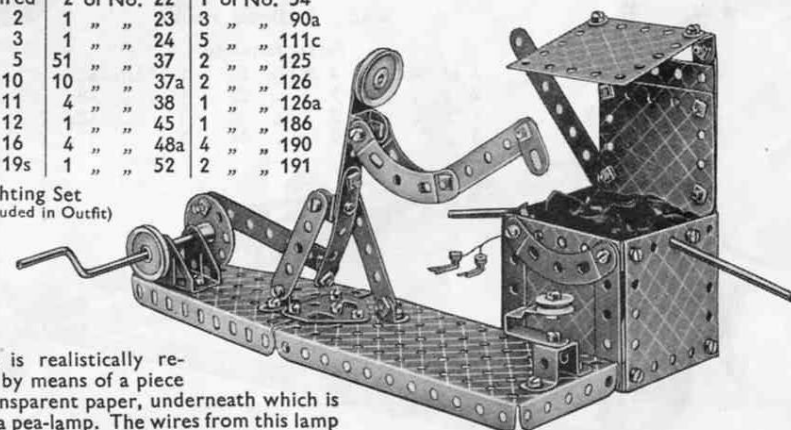
1 of No. 52	
2 " " 126a	
2 " " 187	
1 " " 190	



C44. Blacksmith

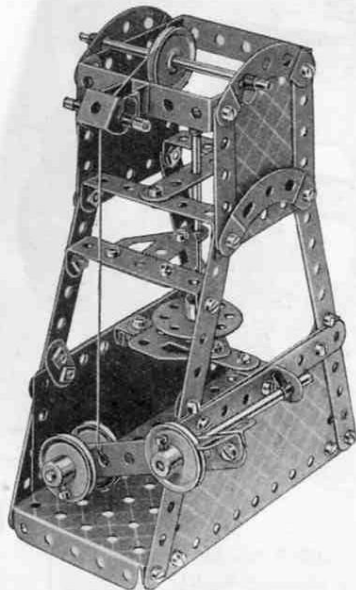
Parts required	
3 of No. 2	
1 " " 3	
7 " " 5	
2 " " 10	
2 " " 11	
7 " " 12	
2 " " 16	
1 " " 19s	
2 of No. 22	
1 " " 23	
1 " " 24	
5 " " 37	
10 " " 37a	
4 " " 38	
1 " " 45	
4 " " 48a	
1 " " 52	
1 of No. 54	
3 " " 90a	
5 " " 111c	
2 " " 125	
2 " " 126	
1 " " 126a	
1 " " 186	
4 " " 190	
2 " " 191	

Lighting Set
(not included in Outfit)



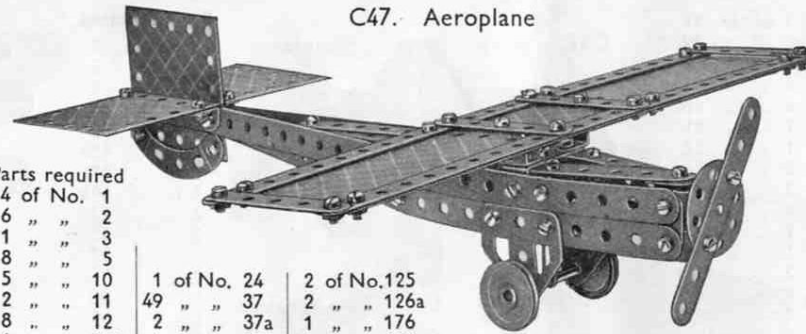
The fire is realistically represented by means of a piece of red transparent paper, underneath which is concealed a pea-lamp. The wires from this lamp are shown at the back of the model.

C45. Pneumatic Hammer



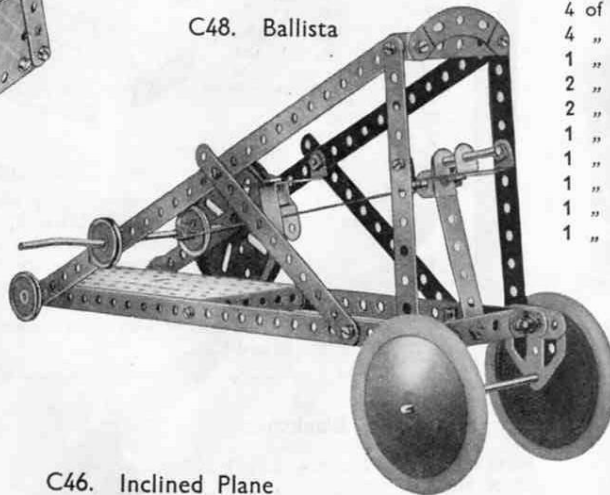
Parts required		
4 of No. 2	39 of No. 37	
1 " " 3	8 " " 38	
9 " " 5	1 " " 40	
5 " " 10	1 " " 45	
1 " " 11	6 " " 48a	
4 " " 12	1 " " 52	
3 " " 16	4 " " 90a	
2 " " 18a	2 " " 126a	
4 " " 22	1 " " 176	
1 " " 23	2 " " 190	
1 " " 24	2 " " 191	
6 " " 35		

C47. Aeroplane



Parts required		
4 of No. 1		
6 " " 2		
1 " " 3		
8 " " 5		
5 " " 10		
2 " " 11	1 of No. 24	2 of No. 125
8 " " 12	49 " " 37	2 " " 126a
1 " " 15b	2 " " 37a	1 " " 176
1 " " 17	1 " " 48	1 " " 186
2 " " 22	2 " " 90a	4 " " 190
	2 " " 111c	2 " " 191

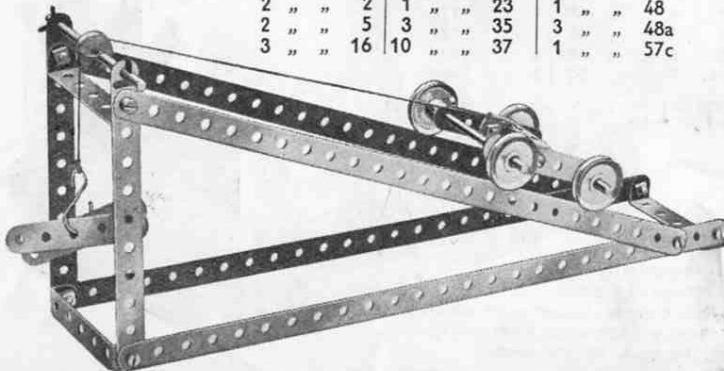
C48. Ballista



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

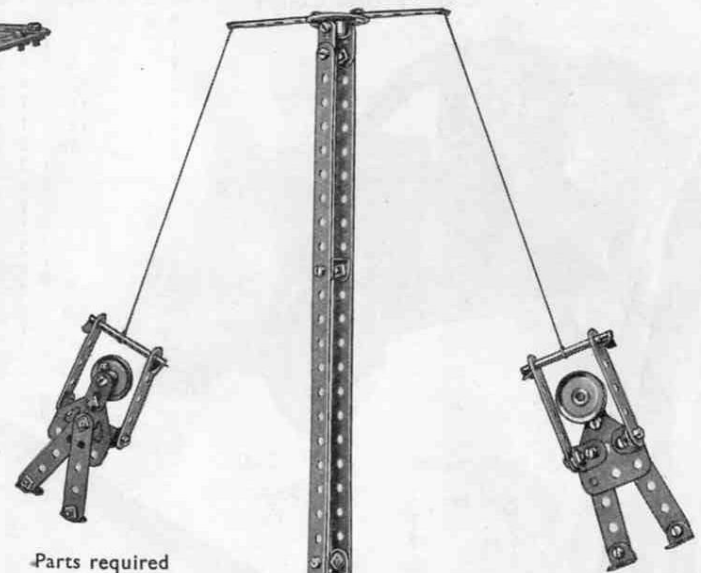
The "bolt," a $1\frac{1}{2}$ " Rod, is carried loosely in a Double Bracket and is projected by a $3\frac{1}{2}$ " Strip, bent backward until the retaining Double Bracket slips off the end, allowing it to strike one end of the "bolt."

C46. Inclined Plane



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

C49. Revolving Gymnasts



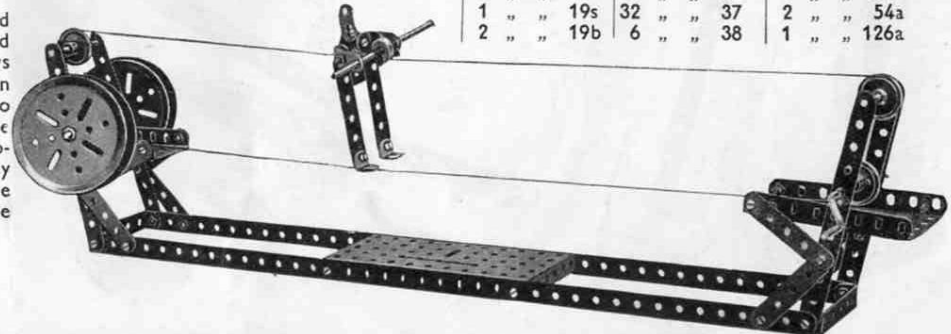
Parts required

2 of No. 1	
3 " " 2	
8 " " 5	
4 " " 10	
2 " " 11	
8 " " 12	
1 " " 16	
2 " " 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 " " 111c	
1 " " 125	
2 " " 126a	
1 " " 186	
1 " " 190	
2 " " 192	

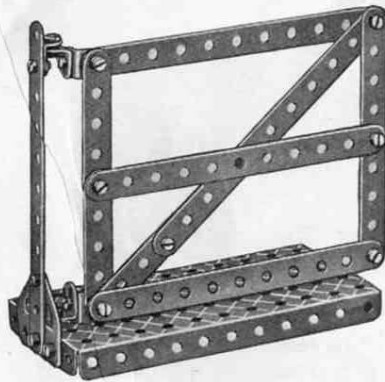
C50. Tight-rope Walker

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



The endless cord is first passed round four $1\frac{1}{2}$ " 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.

C51. Gate



Parts required

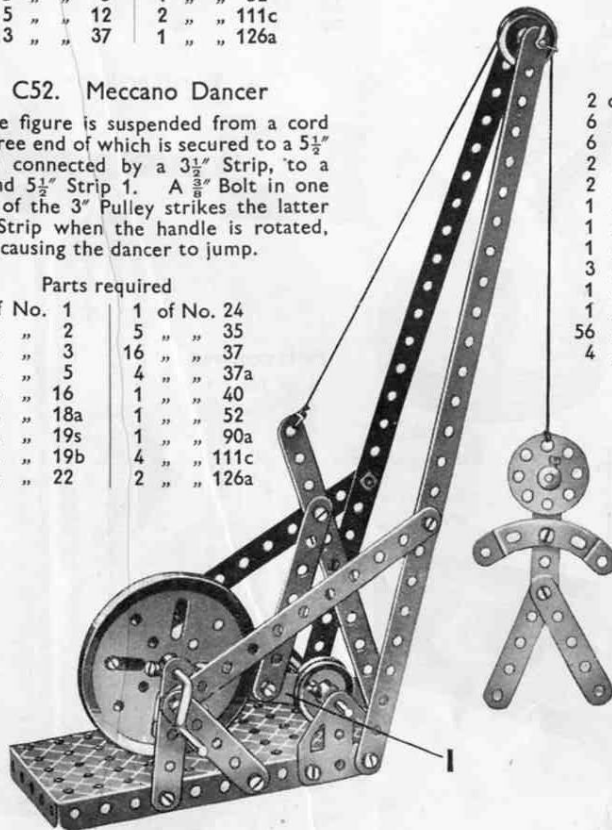
5 of No. 2	4 of No. 37a
5 " " 5	1 " " 52
5 " " 12	2 " " 111c
13 " " 37	1 " " 126a

C52. Meccano Dancer

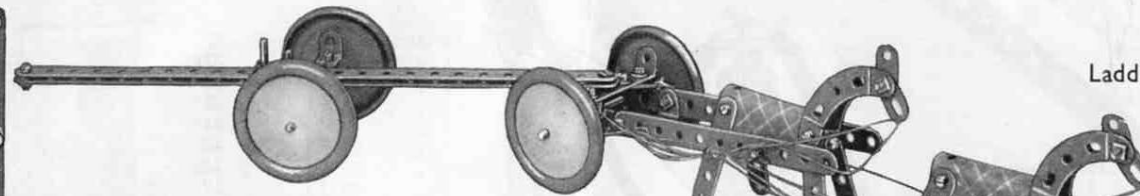
The figure is suspended from a cord the free end of which is secured to a $5\frac{1}{2}$ " Strip connected by a $3\frac{1}{2}$ " Strip, to a second $5\frac{1}{2}$ " Strip 1. A $\frac{3}{8}$ " Bolt in one hole of the 3" Pulley strikes the latter $5\frac{1}{2}$ " Strip when the handle is rotated, thus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

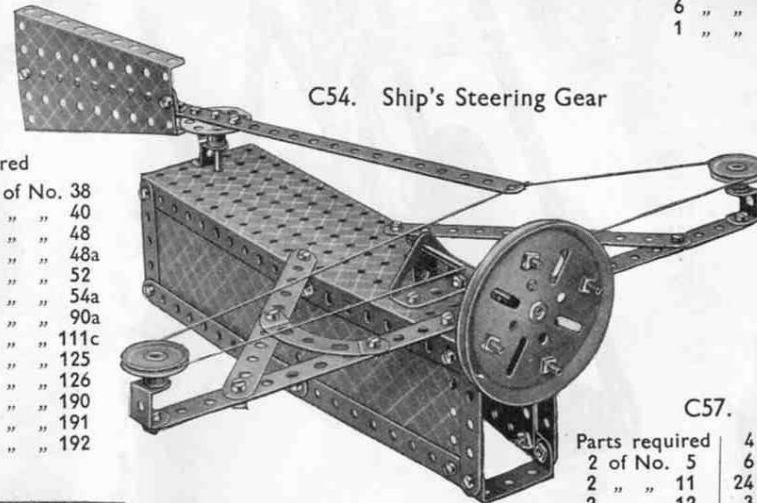


C53. Timber Drag



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	

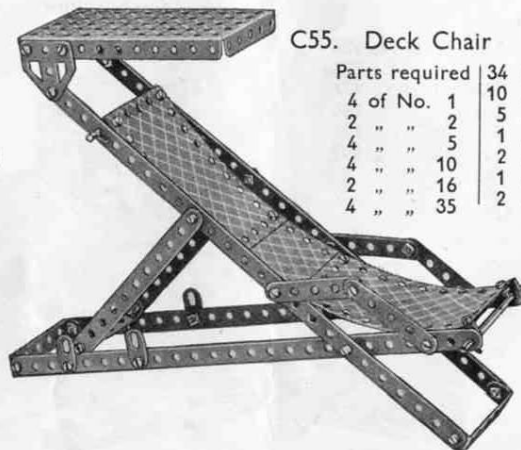
C54. Ship's Steering Gear



Parts required

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

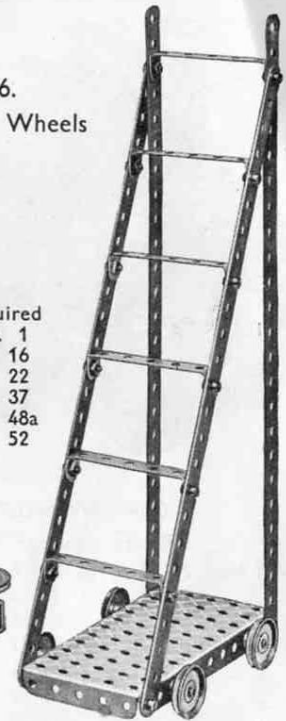
C55. Deck Chair



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

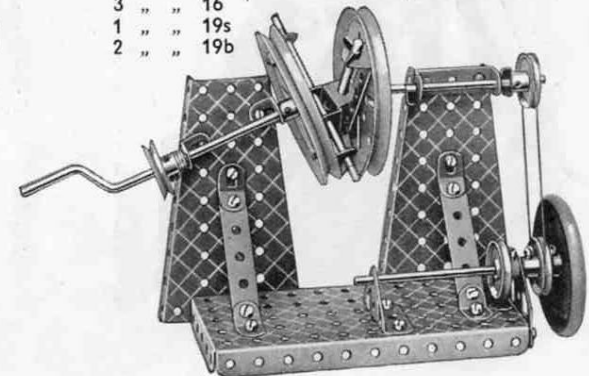
C56. Ladder on Wheels

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

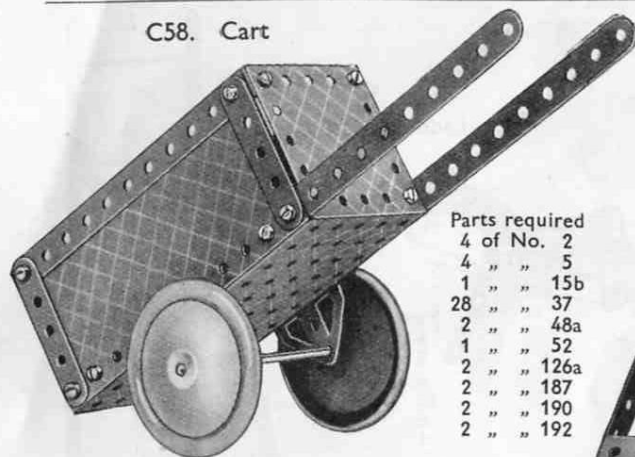


C57. Hooke's Coupling

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



C58. Cart



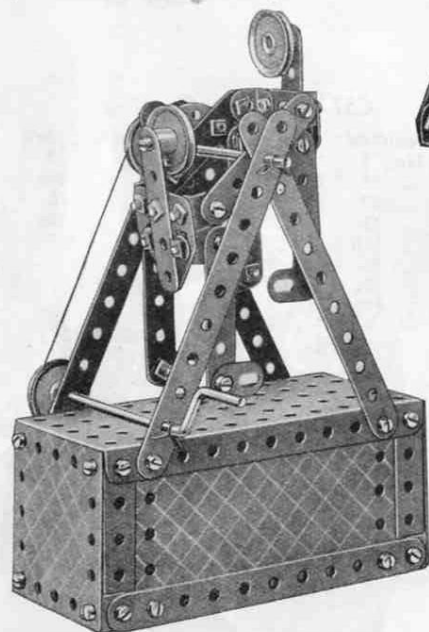
Parts required

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

C59. Wrestlers

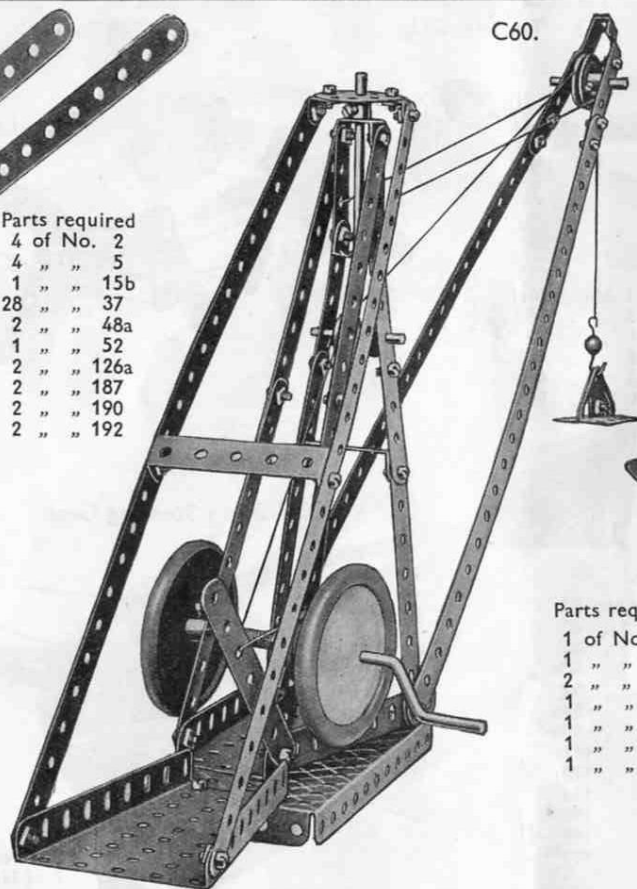
Parts required

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	



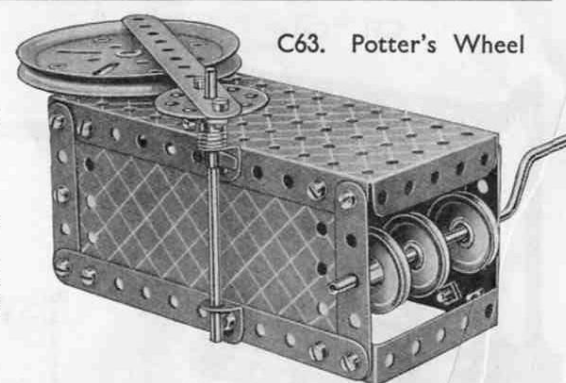
C60.

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



C63. Potter's Wheel

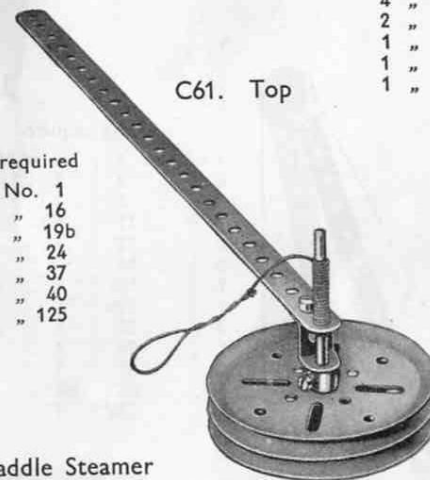
Parts required

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	2 " " 37	
1 " " 19s	5 " " 38	

C61. Top

Parts required

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

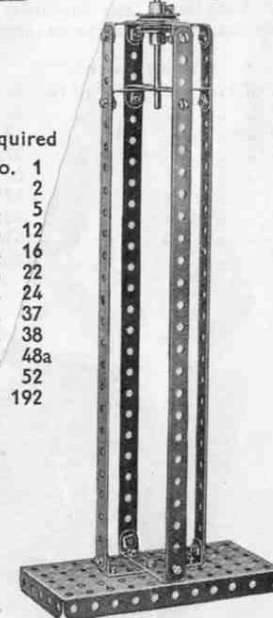


C64. Weather Vane

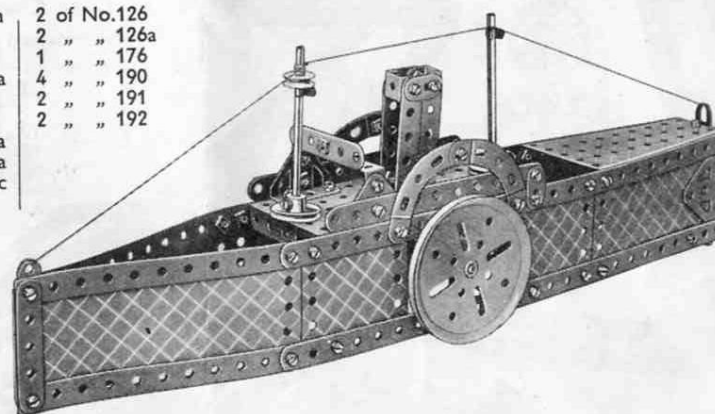


Parts required

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



C62. Paddle Steamer



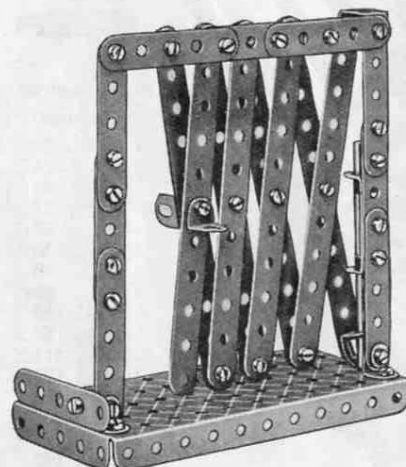
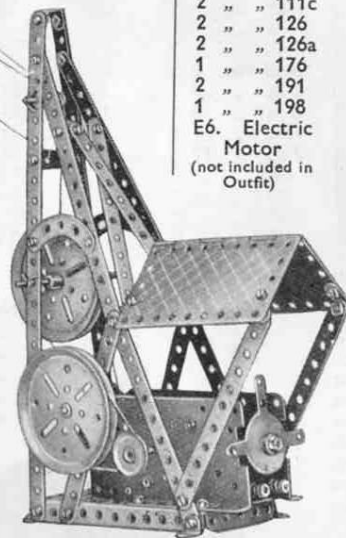
Parts required

4 of No. 1	2 of No. 37a	2 of No. 126
6 " " 2	1 " " 40	2 " " 126a
1 " " 5	1 " " 48	1 " " 176
9 " " 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		

C65. Telpher Span (Electric)

Parts required		
4 of No. 1	8 of No. 5	1 of No. 24
6 " " 2	2 " " 11	8 " " 35
1 " " 3	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.



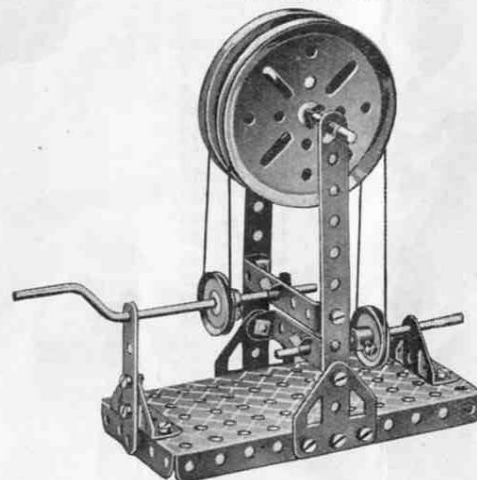
C66. Sliding Gate

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

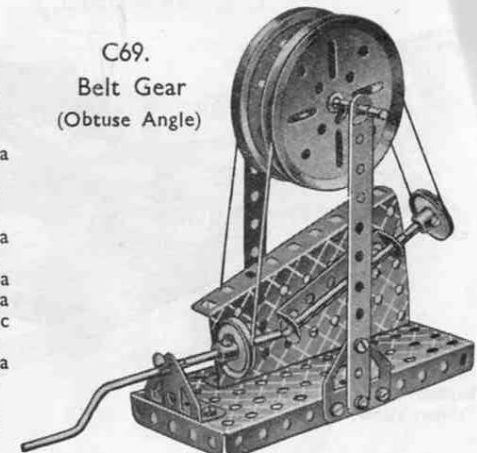
C67. Telpher Span (Hand)

Parts required		
4 of No. 1	2 of No. 11	1 of No. 23
6 " " 2	8 " " 12	1 " " 24
1 " " 3	2 " " 12c	6 " " 35
8 " " 5	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

C68. Belt Gear
(Shafts not in Line)

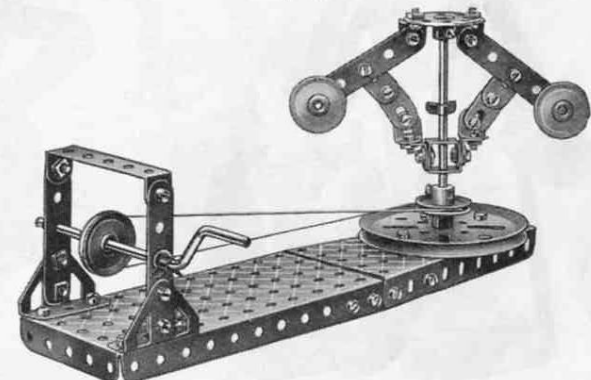
Parts required	
2 of No. 2	32 of No. 37
1 " " 5	10 " " 37a
2 " " 16	8 " " 38
1 " " 19s	1 " " 40
2 " " 19b	1 " " 48a
2 " " 22	1 " " 52
8 " " 35	1 " " 54a
16 " " 37	4 " " 111c
1 " " 40	2 " " 126
2 " " 48a	
1 " " 52	
2 " " 126	
2 " " 126a	

C69. Belt Gear
(Obtuse Angle)

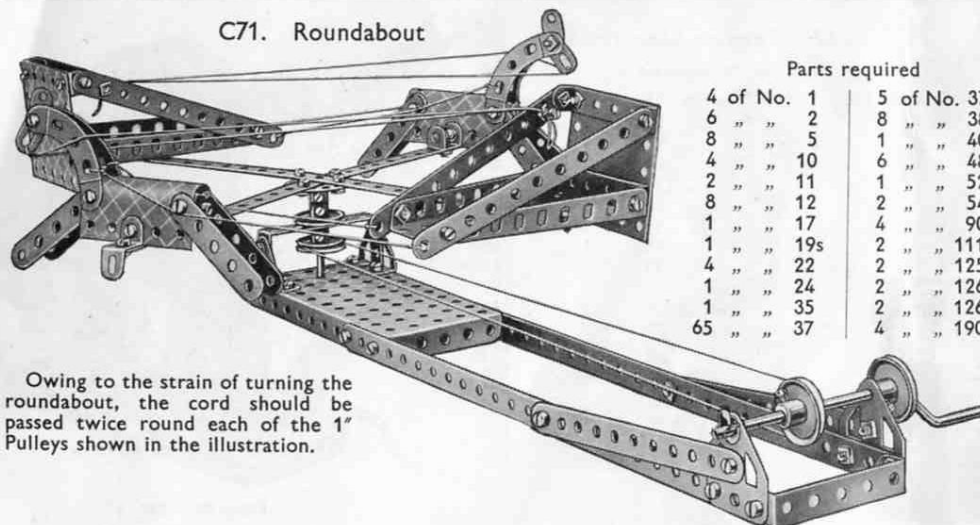
Parts required	
2 of No. 2	2 of No. 38
1 " " 12	1 " " 40
2 " " 16	1 " " 48a
1 " " 19s	1 " " 52
2 " " 19b	1 " " 54a
2 " " 22	1 " " 126
8 " " 35	2 " " 126a
15 " " 37	

C70. 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	



C71. Roundabout

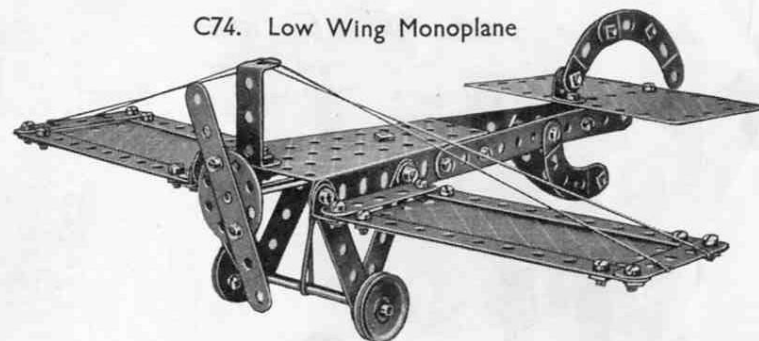


Parts required

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.

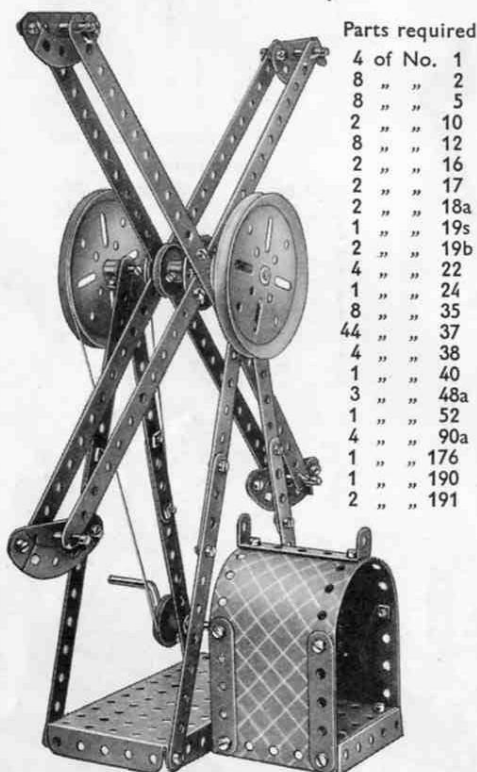
C74. Low Wing Monoplane



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

C72. Fly Boats

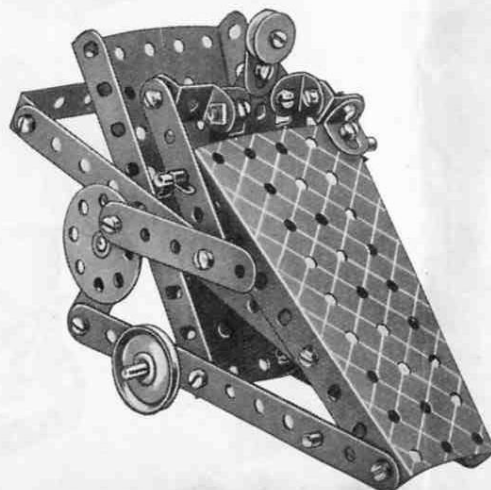


Parts required

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

C73. 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 also carries a BushWheel 1. As will be seen, a $2\frac{1}{2}$ " Strip is pivoted at one end to this BushWheel and at the other end to a second $2\frac{1}{2}$ " Strip 2, which, rocking about an axle journaled through its centre hole is again pivoted to the invalid's hands.



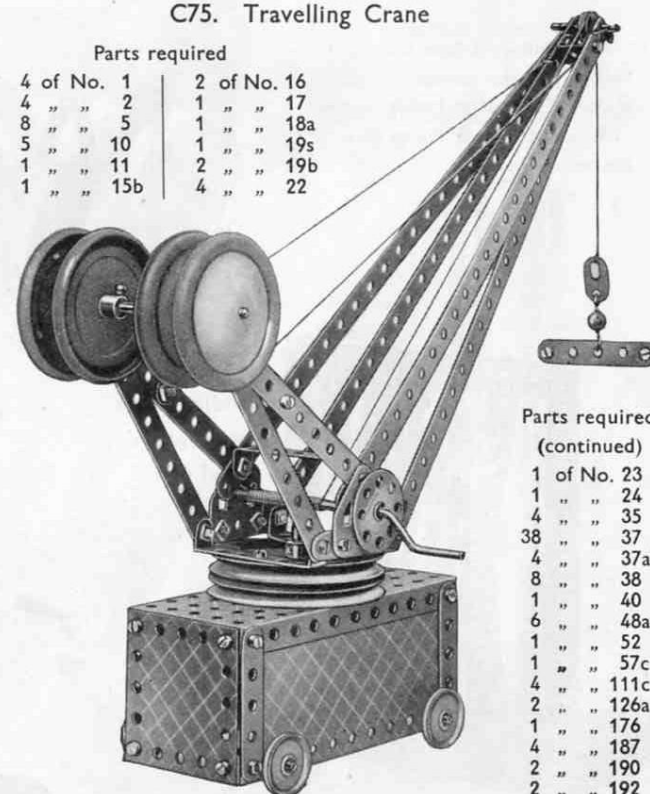
Parts required

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

C75. Travelling Crane

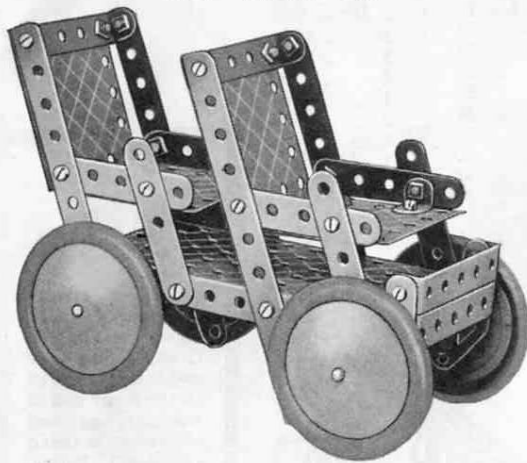
Parts required

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

C76. Tandem Car



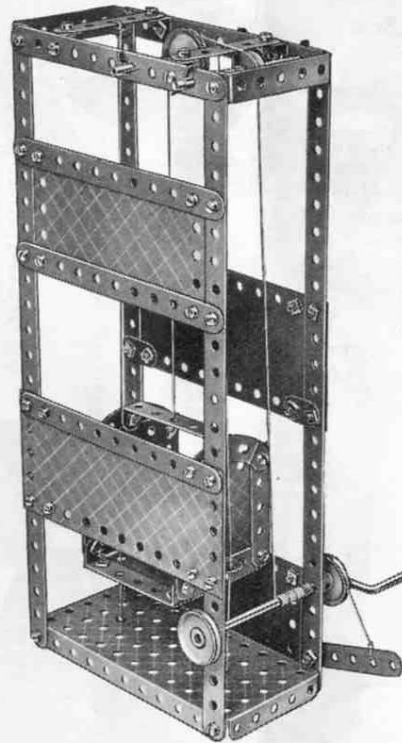
Parts required

4 of No. 2	4 of No. 48a
8 " " 5	1 " " 52
4 " " 12	2 " " 126a
2 " " 15b	4 " " 187
34 " " 37	4 " " 190

C78. Elevator

Parts required

4 of No. 1	
7 " " 2	
1 " " 3	
8 " " 5	
4 " " 10	
6 " " 12	
2 " " 16	
1 " " 19s	
3 " " 22	
1 " " 23	
6 " " 35	
61 " " 37	
2 " " 37a	
7 " " 38	
1 " " 40	
5 " " 48a	
1 " " 52	
2 " " 90a	
1 " " 111c	
1 " " 176	
3 " " 190	
2 " " 191	
2 " " 192	

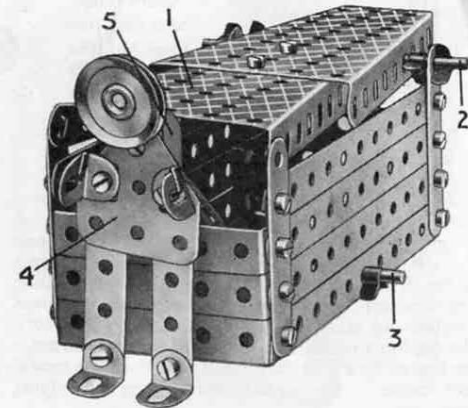


C80. Disappearing Meccanitian

Parts required

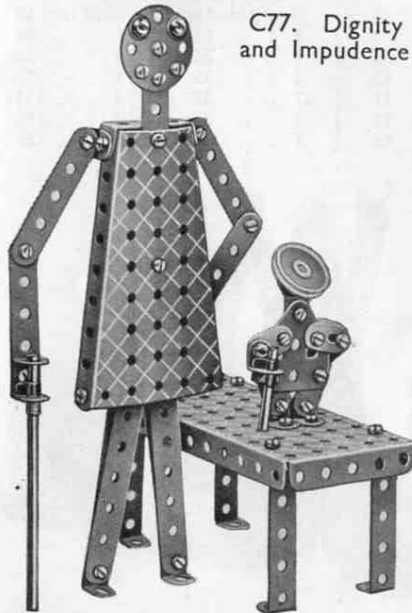
6 of No. 2	23 of No. 37
6 " " 5	1 " " 45
1 " " 10	6 " " 48a
4 " " 12	1 " " 52
2 " " 16	2 " " 54a
1 " " 22	1 " " 111c
6 " " 35	1 " " 126a

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 three $2\frac{1}{2} \times \frac{1}{2}$ 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.

C77. Dignity and Impudence



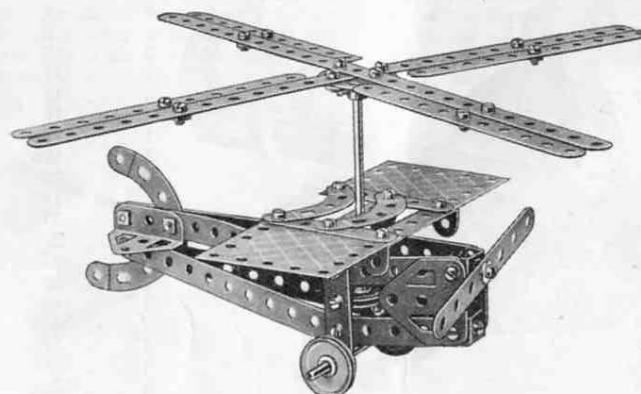
Parts required

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	

C79. Autogiro

Parts required

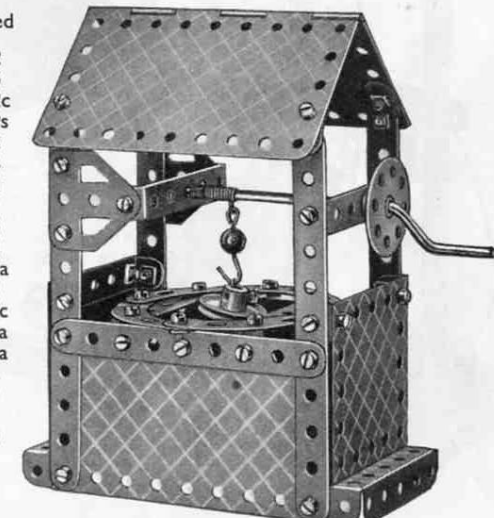
2 of No. 1	2 of No. 11	33 of No. 37	4 of No. 90a
8 " " 2	2 " " 12	3 " " 37a	2 " " 111c
1 " " 3	2 " " 16	7 " " 38	2 " " 126
9 " " 5	4 " " 22	1 " " 48	2 " " 126a
5 " " 10	1 " " 24	1 " " 48a	2 " " 190

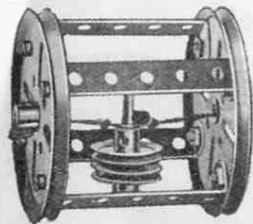


C81. Well Windlass

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	

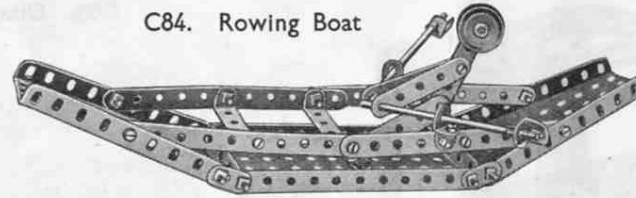




C82. Cum Bak
Parts required
1 of No. 18a
2 " " 19b
2 " " 22
1 " " 35
1 " " 37
8 " " 48a
4 " " 186
1 " " 186

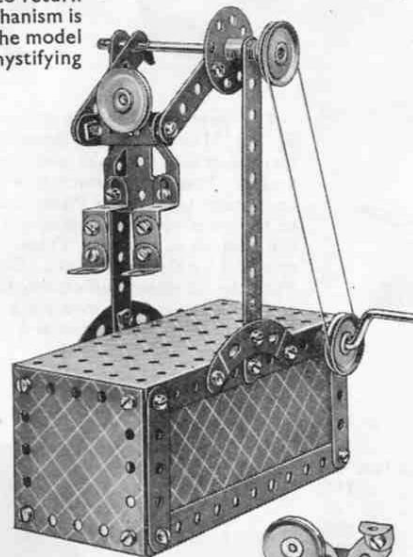
A Driving Band is doubled and stretched between the centres of the 3" Pulley Wheels. A weight, consisting of two 1" fast Pulley Wheels and a 1½" Rod, is suspended from it in the middle of the drum. When the Cum Bak is rolled along any smooth level surface, the elastic becomes twisted and stores up sufficient 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.

C84. Rowing Boat

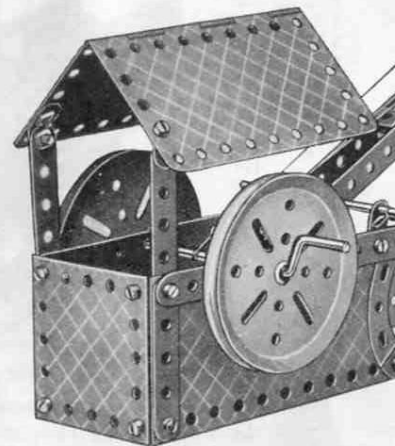


Parts required		
4 of No. 2	2 of No. 16	3 of No. 48a
4 " " 5	1 " " 22	1 " " 52
4 " " 10	6 " " 35	2 " " 54a
7 " " 12	25 " " 37	1 " " 111c

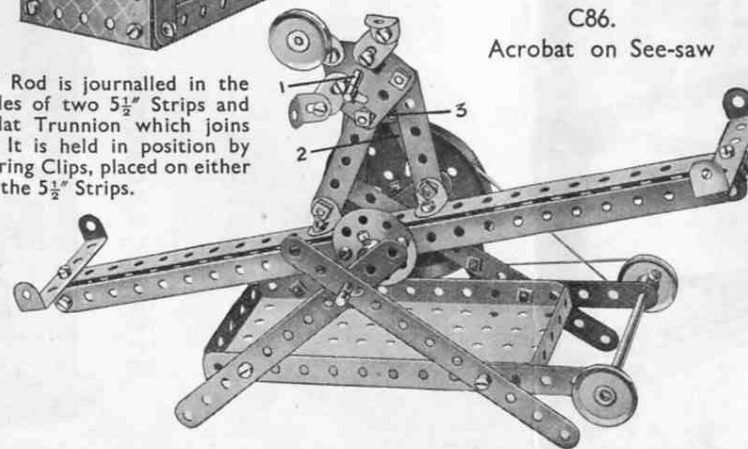
C85. Gymnast



Parts required		
4 of No. 2	6 " " 5	3 " " 10
3 " " 12	2 " " 16	1 " " 19s
1 " " 19s	3 " " 22	1 " " 24
1 " " 24	4 " " 35	32 " " 37
4 " " 37a	8 " " 38	1 " " 40
1 " " 40	1 " " 48	2 " " 48a
1 " " 48a	1 " " 52	2 " " 90a
3 " " 111c	2 " " 125	2 " " 126a
2 " " 125	2 " " 190	2 " " 192



C86. Acrobat on See-saw

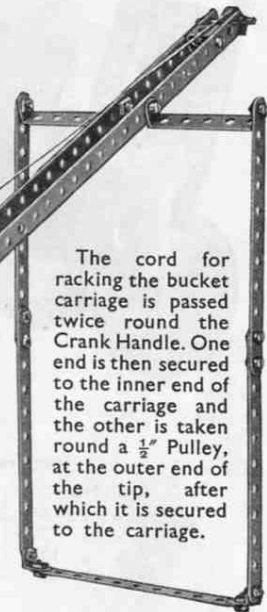


A 1" Rod is journaled in the end holes of two 5½" Strips and in a Flat Trunnion which joins them. It is held in position by two Spring Clips, placed on either side of the 5½" Strips.

Parts required		
4 of No. 22	1 " " 23	1 " " 24
1 " " 23	8 " " 35	66 " " 37
1 " " 24	5 " " 37a	3 " " 38
1 " " 35	1 " " 40	5 " " 48a
1 " " 37	1 " " 52	

C87. Extended Ash Tip

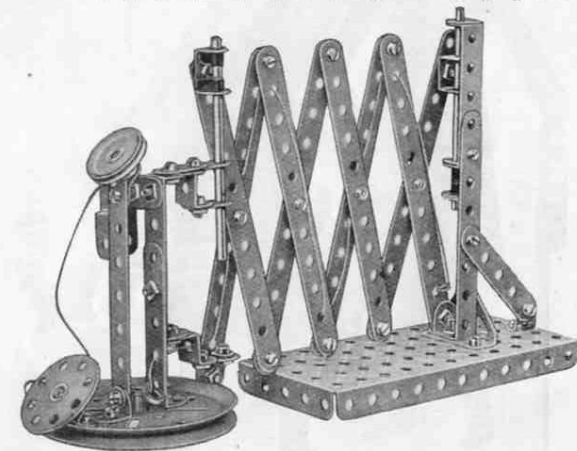
Parts required		
4 of No. 90a	3 " " 111c	2 " " 125
2 " " 125	2 " " 126a	1 " " 176
1 " " 176	3 " " 190	2 " " 192
1 " " 190	1 " " 198	



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 ½" Pulley, at the outer end of the tip, after which it is secured to the carriage.

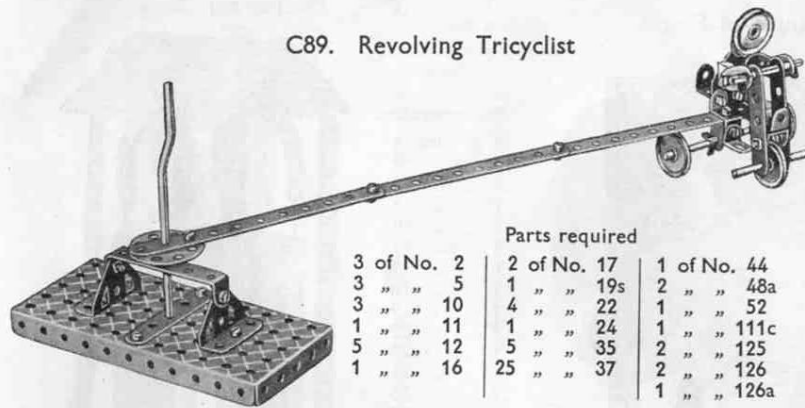
C88. Telephone

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



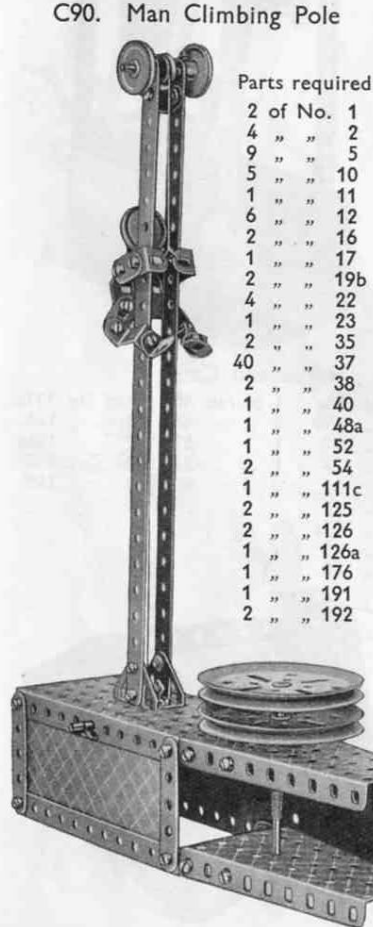
Parts required		
3 of No. 1	6 " " 2	4 " " 5
1 " " 2	3 " " 10	2 " " 11
1 " " 11	4 " " 12	2 " " 16
1 " " 16	1 " " 18a	1 " " 19b
1 " " 19b	3 " " 22	1 " " 24
1 " " 24	5 " " 35	25 " " 37
1 " " 35	4 " " 37a	2 " " 38
1 " " 37	1 " " 40	2 " " 48a
1 " " 40	1 " " 52	1 " " 111c
1 " " 48a	1 " " 126a	

C89. Revolving Tricyclist



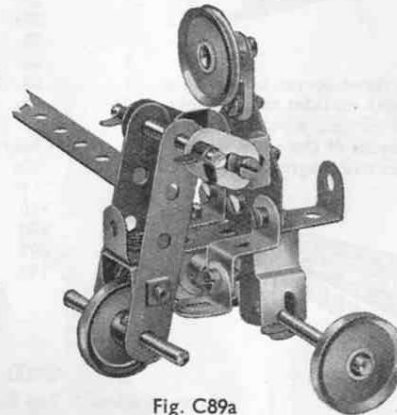
Parts required		
3 of No. 2	2 of No. 17	1 of No. 44
3 " " 5	1 " " 19s	2 " " 48a
3 " " 10	4 " " 22	1 " " 52
1 " " 11	1 " " 24	1 " " 111c
5 " " 12	5 " " 35	2 " " 125
1 " " 16	25 " " 37	2 " " 126
		1 " " 126a

C90. Man Climbing Pole



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

Fig. C89a



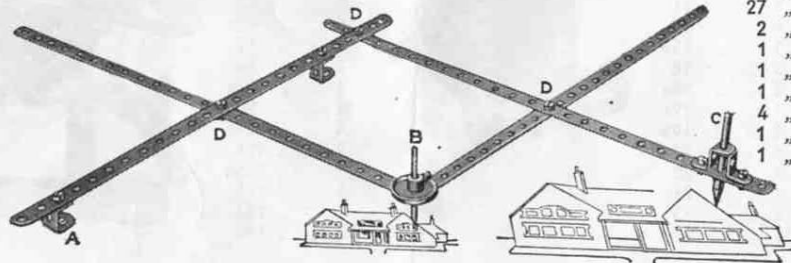
C92. Pantograph

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

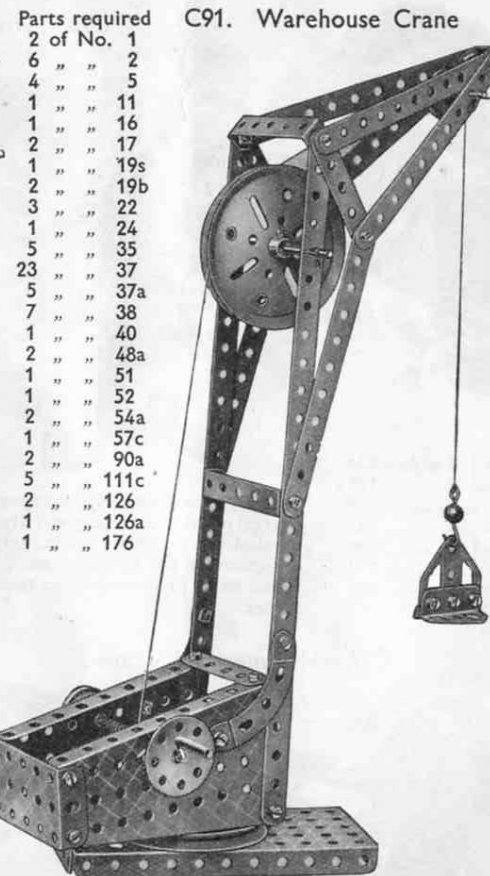
The Bolts at D are fitted with locknuts to allow free movement of the $12\frac{1}{2}$ " Strips.

Parts required

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



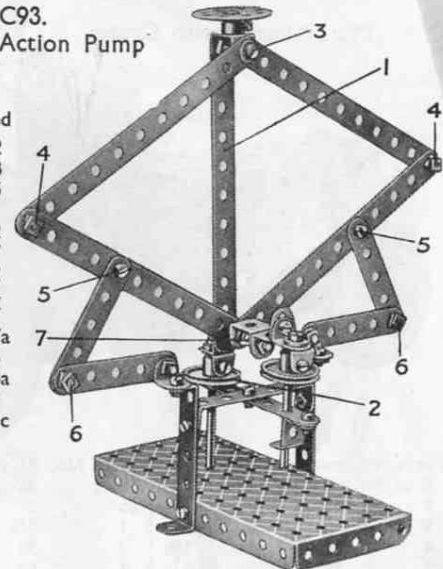
C91. Warehouse Crane



Parts required	
2 of No. 1	2
6 " " 2	5
4 " " 5	11
1 " " 11	16
1 " " 16	17
2 " " 17	19s
1 " " 19s	19b
2 " " 19b	22
3 " " 22	24
1 " " 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
1 " " 176	

C93. Double Action Pump

Parts required	
5 of No. 2	3
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	



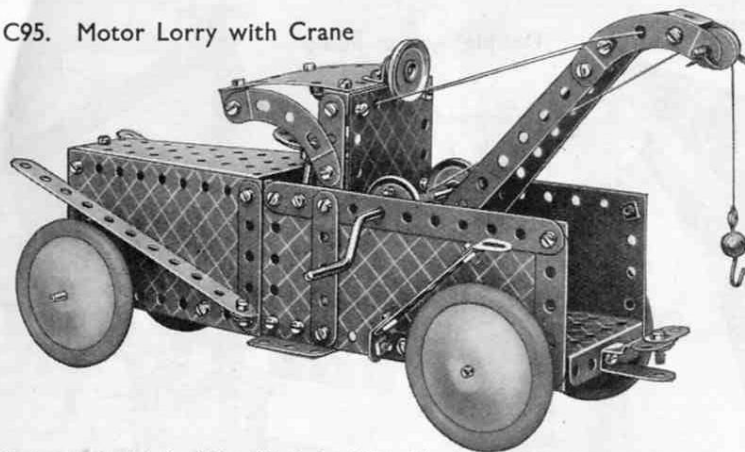
The $5\frac{1}{2}$ " Strip 1 is attached to the 1" Pulley Wheel 2 by means of two Angle Brackets, through the lower of which passes the Set-Screw that secures the Pulley to its 2" Rod. Two Washers are placed beneath the head of the Bolt joining the Angle Brackets in order to prevent its shank from binding on the boss of the Pulley 2. The joints 3, 4, 5, 6, 7, are all locknutt, 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
4 " " 54a	90a
1 " " 90a	111c
1 " " 111c	126a
1 " " 126a	

C94. Lancer



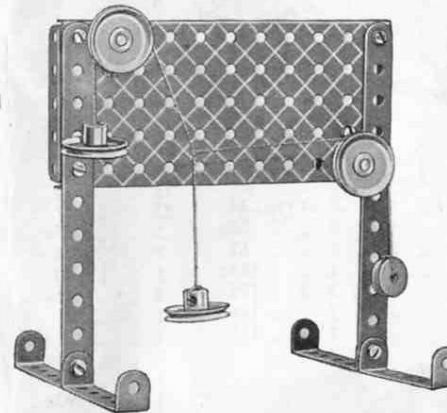
C95. Motor Lorry with Crane



Parts required

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

C98. Triangle of Forces

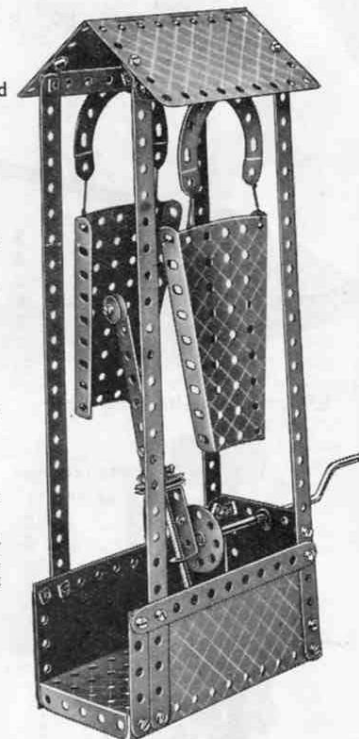


The suspended weights represent three forces acting on a central point. If a triangle is drawn with its sides respectively parallel to the three converging cords, i.e., parallel to the directions of the three forces, the lengths of the sides will be found to be proportional to the respective magnitudes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

C99. 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

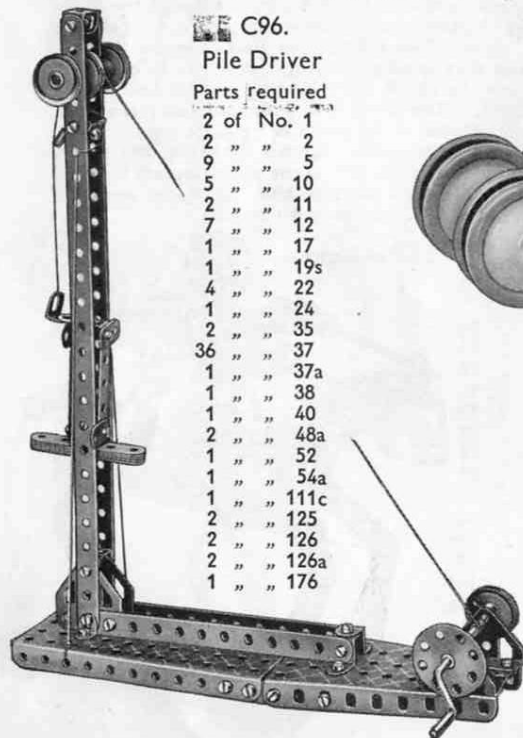


Parts required	4 of No. 12c	1 of No. 24	5 of No. 48a	2 of No. 126
8 of No. 2	2 " 15b	4 " 35	1 " 51	2 " 126a
1 " 3	1 " 16	66 " 37	1 " 52	1 " 176
9 " 5	2 " 17	1 " 37a	2 " 54a	4 " 187
4 " 10	1 " 19s	2 " 38	1 " 57c	3 " 190
1 " 11	4 " 22	1 " 40	4 " 90a	2 " 191
7 " 12	1 " 23	1 " 44	2 " 111c	1 " 192

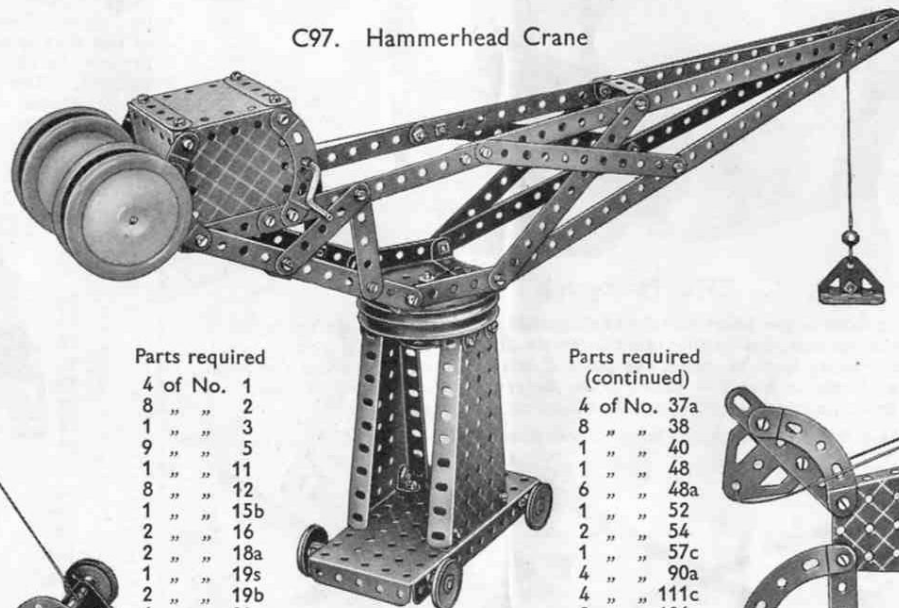
C96. Pile Driver

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



C97. 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 " 54
1 " 57c
4 " 90a
4 " 111c
2 " 126
2 " 126a
1 " 176
4 " 187
4 " 190

C100. 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

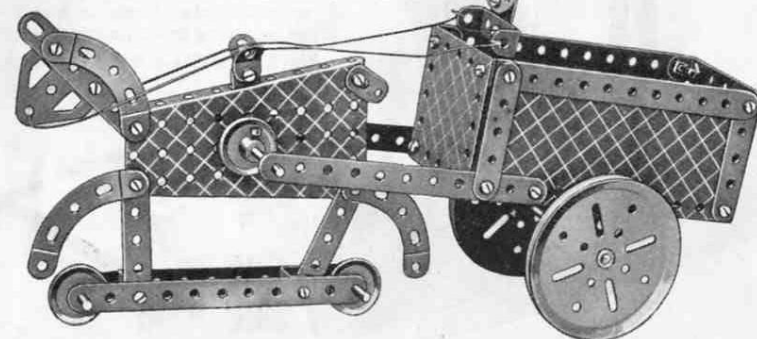
2 " 19b
4 " 22
1 " 24
2 " 35
40 " 37
1 " 37a
4 " 38
1 " 40

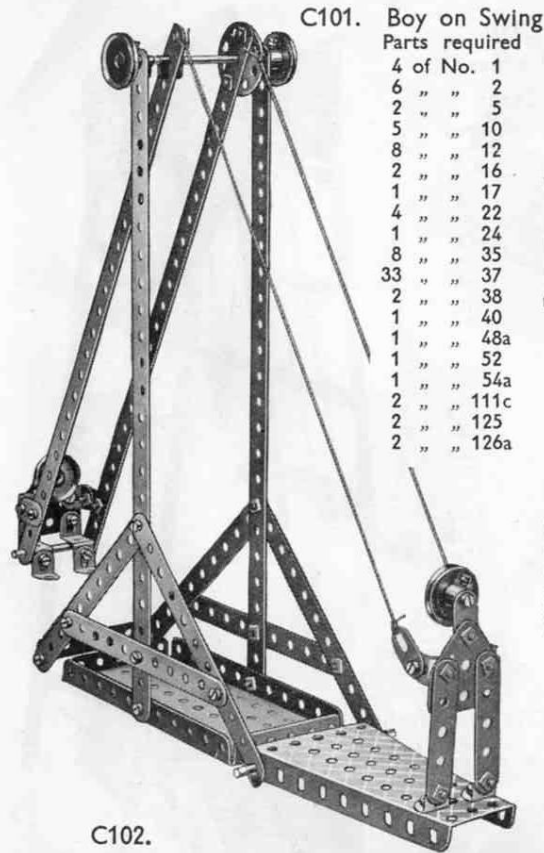
1 of No. 48

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

1 of No. 111c

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

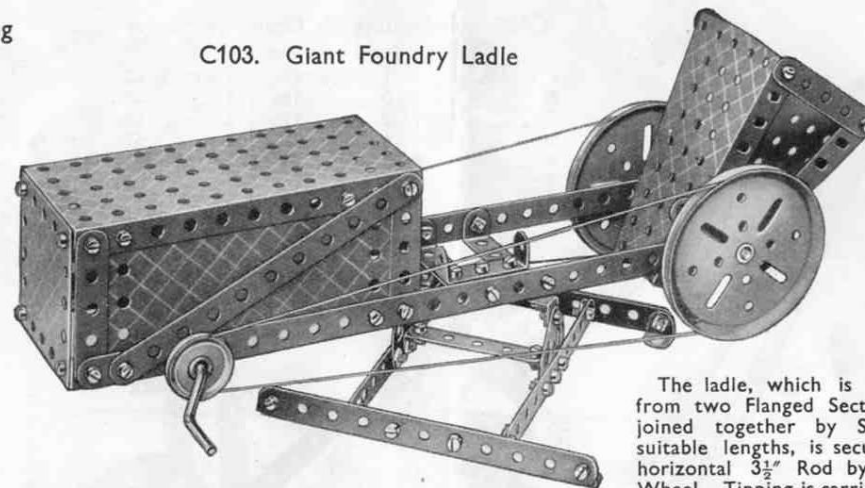




C101. Boy on Swing

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



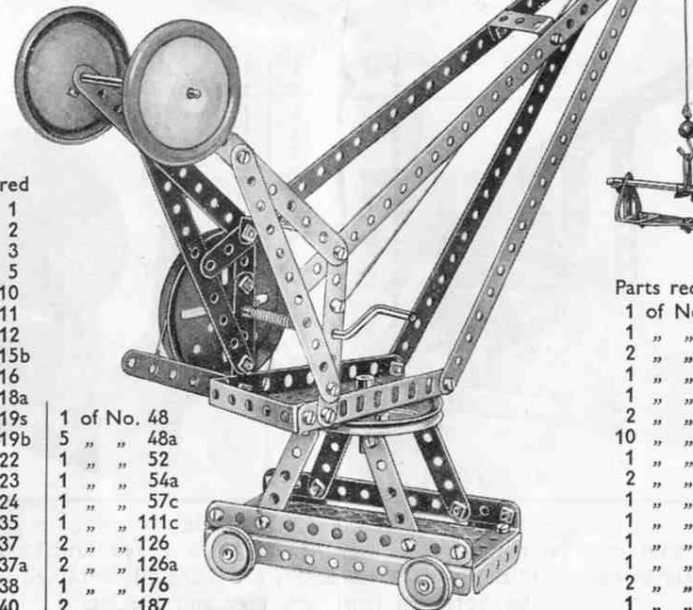
C103. Giant Foundry Ladle

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		

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.

C104. Swivelling Crane

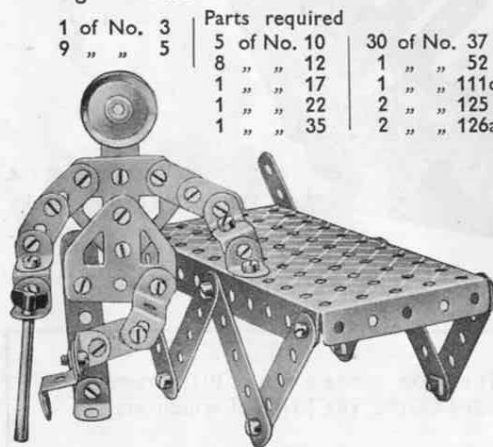


Parts required

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

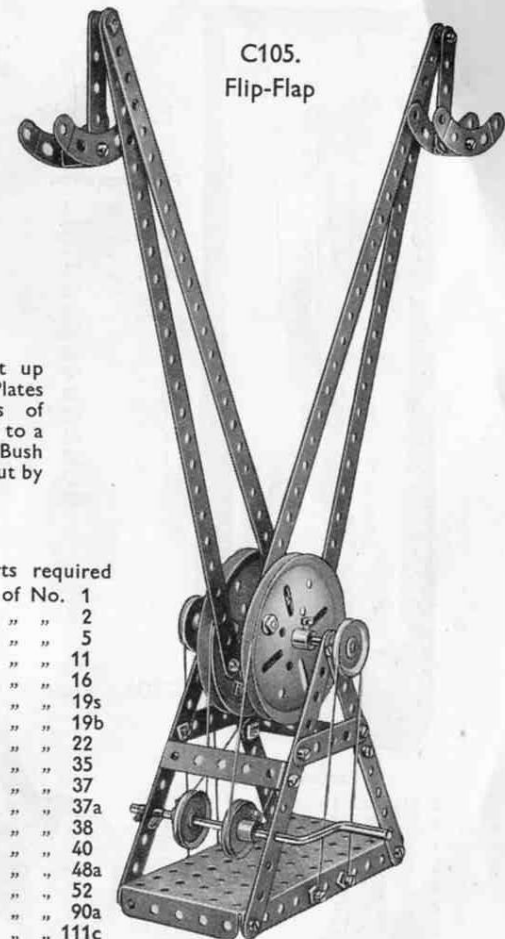
1 of No. 48
5 " " 48a
1 " " 52
1 " " 54a
1 " " 57c
1 " " 111c
2 " " 126
2 " " 126a
1 " " 176
2 " " 187

C102. 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



C105. Flip-Flap

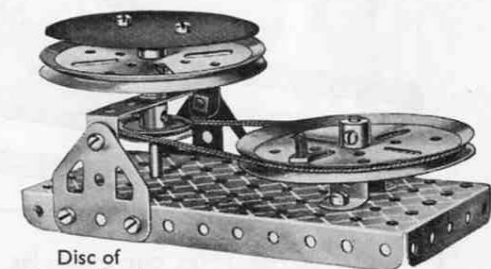
Parts required

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

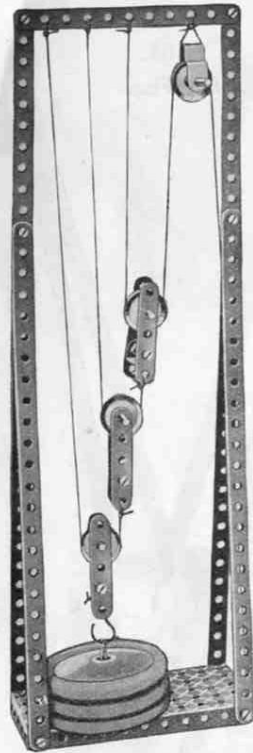
C106. Rotary Linisher

Parts required

1 of No. 17
1 " " 18a
2 " " 19b
1 " " 22
1 " " 24
2 " " 35
10 " " 37
1 " " 37a
2 " " 38
1 " " 40
1 " " 48a
1 " " 52
1 " " 111c
2 " " 125
1 " " 126a



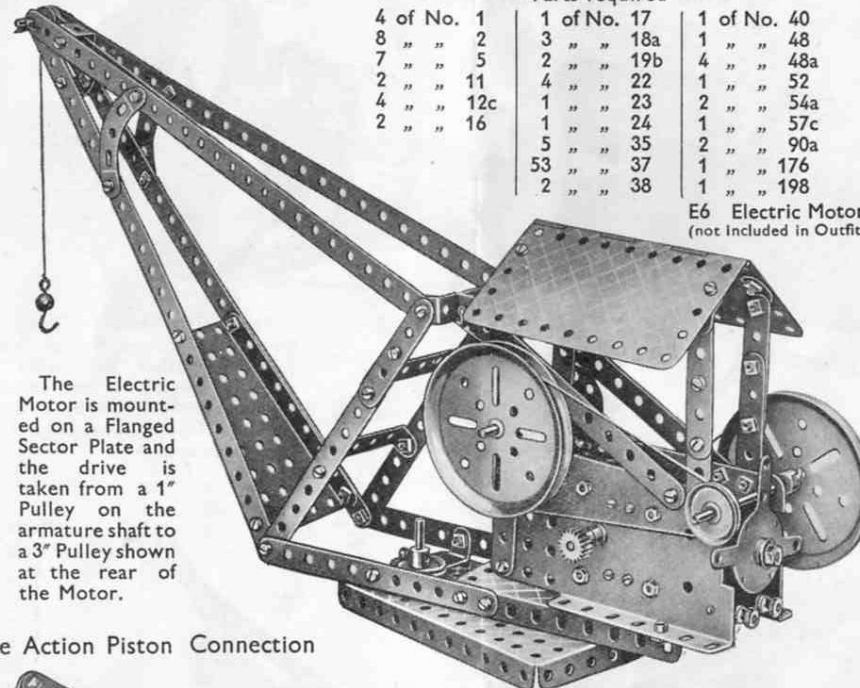
Disc of Emery Cloth (not included in Outfit)



C107.
Pulley Block
8:1

Parts required

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



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

C109. Swivelling Jib Crane (Electric)

Parts required

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

E6 Electric Motor
(not included in Outfit)

C110.
Overhead
Crane

Parts required

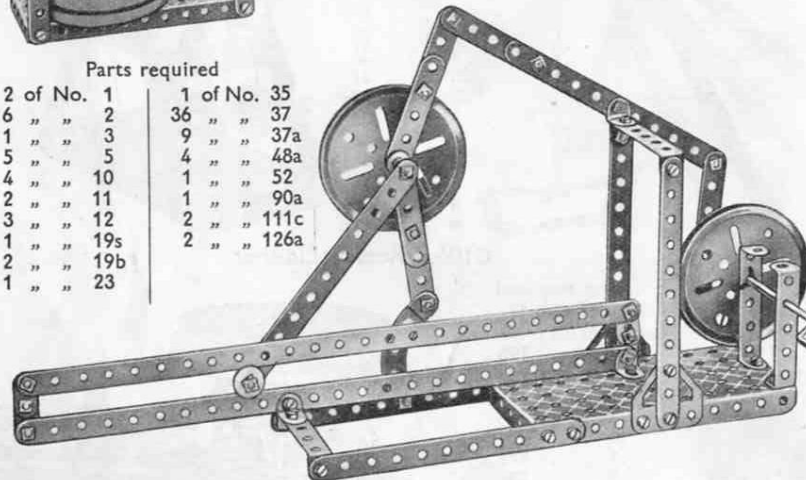
4 of No.	1
4 "	2
8 "	5
2 "	10
8 "	12
2 "	16
1 "	18a
1 "	19s
4 "	22
1 "	23
4 "	35
48 "	37
2 "	37a
1 "	40
6 "	48a
1 "	57c
4 "	90a
1 "	111c
2 "	126a
1 "	176
2 "	191



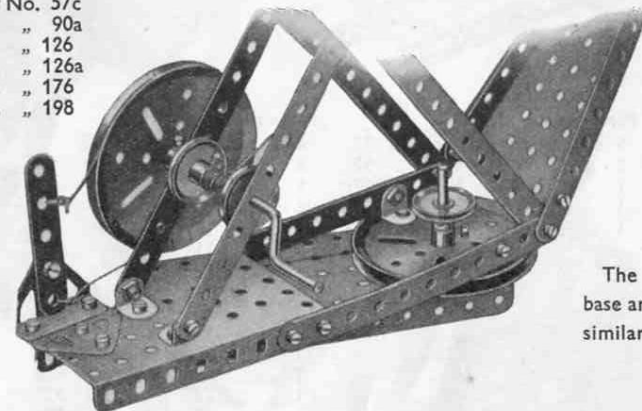
C108. Double Action Piston Connection

Parts required

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



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		
3 "	37		
1 "	38		
1 "	40		
1 "	48		
1 "	48a		
1 "	52		
2 "	54a		



C111. Swivelling Jib Crane
(Hand)

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

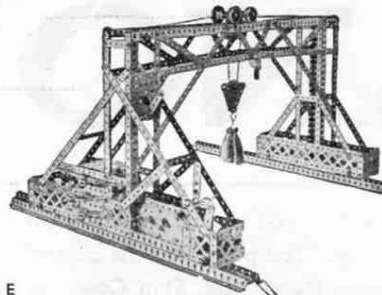
HOW TO CONTINUE

This completes our examples of models that may be made with MECCANO Outfit C (or Outfits B and Ba). 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 Ca Accessory Outfit, the price of which may be obtained from any Meccano Dealer.

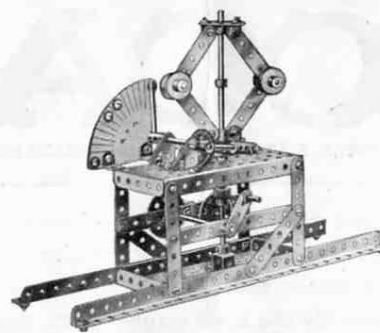
Build Bigger and Better Models



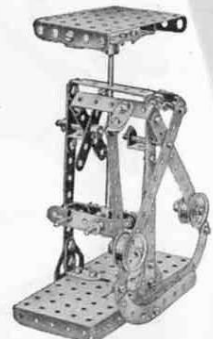
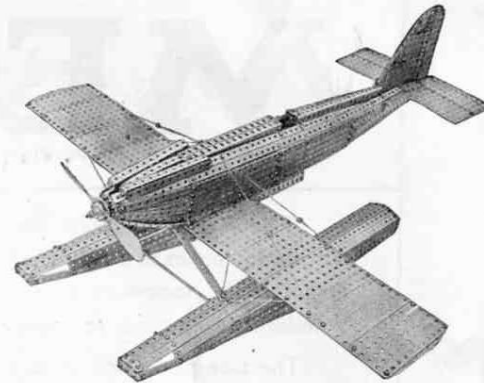
Windmill,
built with Outfit E



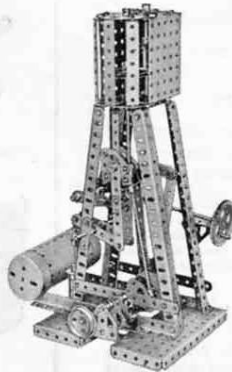
Travelling Gantry Crane,
built with Outfit L



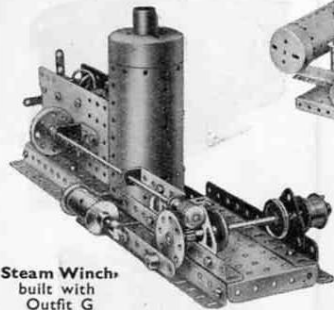
Speed Indicator,
built with Outfit G



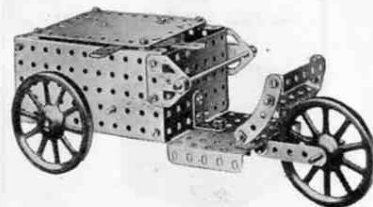
Letter Balance,
built with Outfit E



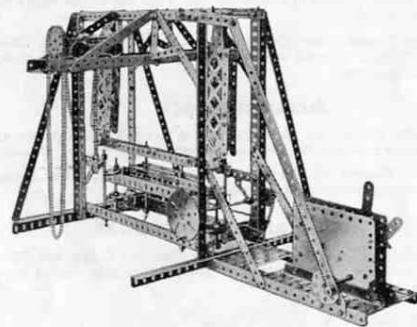
Vertical Marine Engine,
built with Outfit H



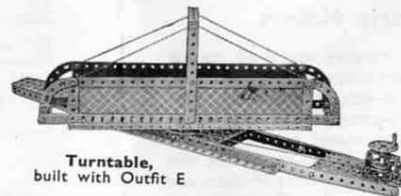
Steam Winch,
built with Outfit G



Delivery Van,
built with Outfit H



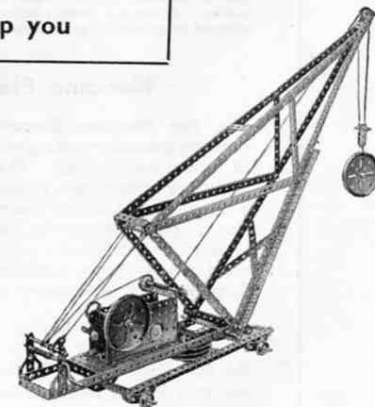
Stone Sawing Machine,
built with Outfit K



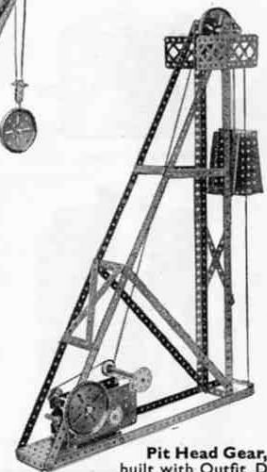
Turntable,
built with Outfit E



Hay Tedder,
built with Outfit E



Travelling Jib Crane,
built with Outfit E



Pit Head Gear,
built with Outfit D

Keep Adding to your Outfit

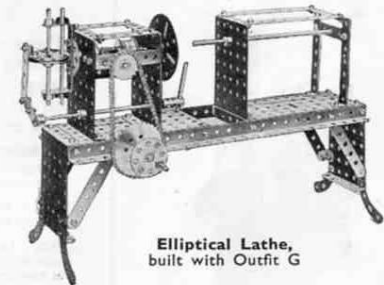
The more Meccano parts you have, the bigger and better the models you are able to build. Keen and enthusiastic model-builders keep adding to their Outfits, until they are able to build all the fine models shown in the Meccano Manuals.

The model-building possibilities of the Meccano System are limitless. All the fine models illustrated on this 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.

Make friends with your Dealer — he can help you

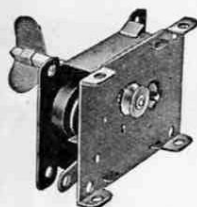
Racing Seaplane,
built with Outfit L



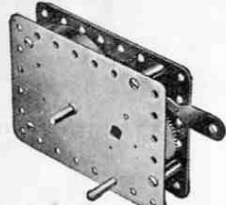
Elliptical Lathe,
built with Outfit G

MECCANO

POWER UNITS FOR OPERATING MECCANO MODELS



X Clockwork Motor



No. 1 Clockwork Motor



No. 2 Clockwork Motor



Resistance Controller



6-volt 20-amp. hr. Accumulator

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.

The side plates and bases of each motor are pierced with the standard Meccano equidistant holes, which enables the motor to be built into any Meccano model in the exact position required.

Meccano Clockwork Motors

These are the finest clockwork Motors obtainable for driving models. 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.

X SERIES CLOCKWORK MOTOR. A fine Motor specially designed to drive with ease any of the X Series models. It is non-reversing.

No. 1 CLOCKWORK MOTOR. An efficient and long-running Motor fitted with a brake lever. 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 start, stop and reverse levers.

No. 2 CLOCKWORK MOTOR. This is a Motor of super quality. Brake and reverse levers enable the Motor to be started stopped or reversed, as required.

Meccano Electric Motors

The five Meccano Electric Motors detailed below provide smooth-running power units for the operation of Meccano models. The 6-volt Motors may be operated either from a 6-volt Accumulator, or through a Transformer direct from the mains providing that the supply is alternating current. They cannot be run satisfactorily from dry cells. The 20-volt Motors are most conveniently operated through a 20-volt Transformer from alternating current supply mains.

No. E1 Electric Motor (6-volt). Non-reversing.

No. E6 Electric Motor (6-volt). Reversing.

No. E120 Electric Motor (20-volt). Non-reversing.

No. E20A Electric Motor (20-volt). Non-reversing.

No. E20B Electric Motor (20-volt). Reversing.

Meccano Transformers

A Meccano Transformer provides a convenient and safe means of driving a Meccano Electric Motor from the mains supply where this is alternating current.

There are six Transformers in the series, 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.

No. T6 Transformer (Output 25 VA at 9 volts) for 6-volt Electric Motors. Fitted with speed regulator.

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

No. T6A Transformer (Output 40 VA at 9/3½ volts) for 6-volt Electric Motors. Fitted with speed regulator and separate circuit for supplying current for eighteen 3½-volt lamps.

No. T20 Transformer (Output 20 VA at 20 volts) for 20-volt Electric Motors. Fitted with 5-stud speed regulator.

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

No. T20A Transformer (Output 35 VA at 20/3½ volts) for 20-volt Electric Motors. Fitted with speed regulator and output sockets for lighting lamps.

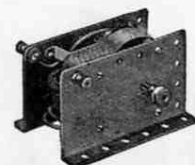
Accumulators

The 6-volt 20-amp. hr. Accumulator is specially suitable for running Meccano 6-volt Motors and Hornby 6-volt Electric Trains.

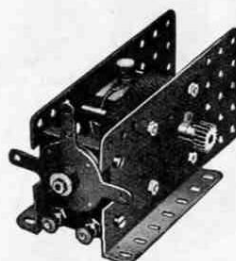
The 2-volt 20-amp. hr. Meccano Accumulator is supplied for converting 4-volt Accumulators to 6-volt.

Resistance Controller

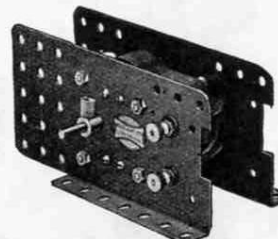
This Controller enables the speed of Meccano 6-volt and 20-volt Motors and Hornby 6-volt and 20-volt Electric Trains to be regulated as desired.



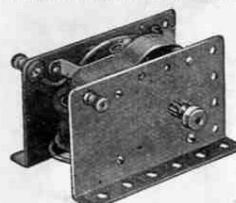
No. E1 Electric Motor (6-volt)



No. E6 Electric Motor (6-volt)



No. E20a Electric Motor (20-volt)



No. E1/20 Electric Motor (20-volt)



No. T20 Transformer

Ask your dealer for a complete price list

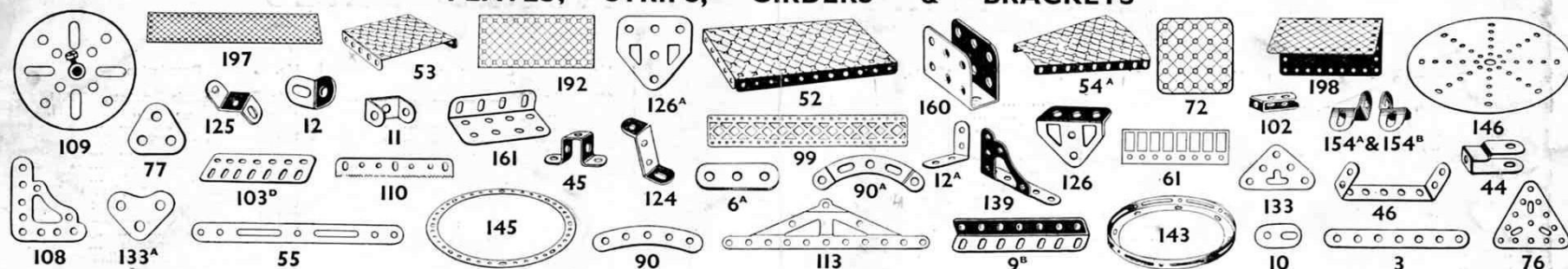
MECCANO PARTS AND ACCESSORIES

No.	Description.	No.	Description.	No.	Description.	No.	Description.	No.	Description.
1	Perforated Strips, 12"	27	Gear Wheels 50 teeth	64	Threaded Bosses	111	Bolts, 3/8"	154a	Corner Angle Brackets, R.H.
1a	" " 9"	27a	" " 57	65	Centre Forks	111a	" " 1/2"	154b	" " " " L.H.
1b	" " 7"	27b	Gear Wheels, 133 teeth 3 1/2" diam.	66	Weights 50-gramme	111c	" " 1/4"	155	Rubber Rings, 3/8"
2	" " 5"	27c	" " 95	67	" " 25	113	Girder Frames	156	Pointers, 2 1/2", with boss
2a	" " 4"	28	Contrate Wheels, 1 1/2" diam.	68	Woodscrews, 1/4"	114	Hinges	157	Fans 2" diam.
3	" " 3"	29	" " " "	69	Set Screws	115	Threaded Pins	158a	Signal Arms, Home
4	" " 3"	30	Bevel Gears, 26 teeth	69a	Grub Screws, 5/32"	116	Fork Pieces, Large	158b	" " Distant
5	" " 2 1/2"	30a	" " " 16	69b	" " 7/32"	116a	" " Small	160	Channel Bearings, 1 1/2" x 1" x 3/4"
6	" " 2"	30c	" " " 48	70	Flat Plates, 5" x 2 1/2"	117	Steel Balls, 3/8" diam.	161	Girder Brackets, 2" x 1" x 3/4"
6a	" " 1 1/2"	31	Gear Wheels, 1", 38 teeth	72	" " 2" x 2 1/2"	118	Hub Discs, 5 1/2" diam.	162	Boiler with ends, complete
7	Angle Girders, 24"	32	" " " 16	73	" " 3" x 1 1/2"	119	Channel Segments (8 to circle)	162a	Boiler Ends
7a	" " 18"	34	Spanners	76	Triangular Plates 2 1/2"	120	Buffers	162b	Boilers without Ends
8	" " 12"	34b	Box Spanners	77	" " 1"	120a	Spring Buffers	163	Sleeve Pieces for Cylinder
8a	" " 9"	35	Spring Clips	78	Screwed Rods, 11"	120b	Compression Springs	164	Chimney Adaptors
8b	" " 7"	36	Screwdrivers	79	" " 8"	121	Train Couplings	165	Swivel Bearings
9	" " 5"	36a	" " extra long	79a	" " 6"	122	Miniature Loaded Sacks	166	End Bearings
9a	" " 4"	36b	Screwdrivers Special	80	" " 5"	123	Cone Pulleys	167	Geared Roller Bearings
9b	" " 3"	37	Nuts and Bolts, 7/32"	80a	" " 3 1/2"	124	Reversed Angle Brackets, 1"	167a	Roller Races, Geared, 192 teeth
9c	" " 3"	37a	Nuts	80b	" " 3"	125	" " 1/2"	167b	Ring Frames for Rollers
9d	" " 2 1/2"	37b	Bolts, 7/32"	81	" " 2"	126	Trunnions	167c	Pinions, 15 teeth
9e	" " 2"	38	Washers	82	" " 1"	126a	Flat Trunnions	168	Ball Bearings, 4" diam.
9f	" " 1 1/2"	40	Hanks of Cord	89	Curved Strips 5 1/2"	127	Simple Bell Cranks	168a	" " Races, Flanged Disc
10	Flat Brackets	41	Propeller Blades	89a	" " 3 1/2"	128	Boss Bell Cranks	168b	" " Toothed
11	Double Brackets	43	Springs	89b	" " 3"	129	Rack Segments, 3" diam.	168c	Ball Casings complete with Balls
12	Angle Brackets, 1" x 1"	44	Cranked Bent Strips	90	" " 2"	130	Triple Throw Eccentrics	169	Digger Buckets
12a	" " 1" x 1"	45	Double Bent Strips	90a	" " 2 1/2"	131	Dredger Buckets	170	Eccentrics 1/2" throw
12b	" " 1" x 1 1/2"	46	Double Angle Strips, 2" x 1"	94	Sprocket Chain 40" length	132	Flywheels, 2 1/2" diam.	171	Socket Couplings
12c	Obtuse Angle Bracket 1 1/2" x 1 1/2"	47	" " " 2" x 1"	95	" " Wheels, 2"	133	Corner Brackets, 1 1/2"	172	Pendulum Connections
13	Axle Rods, 11 1/2"	47a	" " " 3" x 1"	95a	" " 1 1/2"	133a	" " 1"	173	Rail Adaptors
13a	" " 8"	48	" " " 1" x 1"	95b	" " 3"	134	Crank Shafts, 1" stroke	174	Grease Cups
14	" " 6"	48a	" " " 2" x 1"	96	" " 1"	135	Theodolite Protractors	175	Flexible Coupling Units
15	" " 5"	48b	" " " 3" x 1"	96a	" " 1"	136	Handrail Supports	176	Anchoring Springs for Cord
15a	" " 4"	48c	" " " 4" x 1"	97	Braced Girders, 3"	136a	" " Coupling	177	Shafting Standard, Large
15b	" " 4"	48d	" " " 5" x 1"	97a	" " 3"	137	Wheel Flanges	178	" " Small
16	" " 3 1/2"	50a	Eye Pieces with Boss	98	" " 2"	138	Ship's Funnels	179	Rod Socket
16a	" " 2 1/2"	51	Perf. Flanged Plates, 2 1/2" x 1"	99	" " 1 1/2"	138a	" " Raked, Cunard	180	Gear Ring 3 1/2", 133 teeth ext.
16b	" " 3"	52	" " " 5 1/2" x 2 1/2"	99a	" " 9"	139	Flanged Brackets, Right		95 teeth int.
17	" " 2"	52a	Flat Plates, 5 1/2" x 3 1/2"	99b	" " 7"	139a	" " Left	181	Bobbin
18a	" " 1 1/2"	53	Perf. Flanged Plates, 3 1/2" x 2 1/2"	100	" " 5"	140	Universal Couplings	182	Insulating Bush, 6 BA
18b	" " 1"	53a	Flat Plates, 4 1/2" x 2 1/2"	100a	" " 4"	141	Wire Lines (for clock-weight)	183	Lamp Holders
19	Crank Handles, 5" Shaft	54	Perf. Flanged Sector Plates, 4"	101	Healds for Loom	142	Rubber Rings, 3"	184a	Lamps, 2 1/2" volt
19a	" " 3 1/2"	54a	" " " 4 1/2"	102	Single Bent Strips	142a	Motor Tyres, 2"	184b	" " 3"
19b	Pulley Wheels, 3" with set screws	55	Perf. Strips, Slotted, 5 1/2"	103	Flat Girders, 5"	142b	" " 3"	184c	" " 6"
19c	" " 6"	55a	" " " 2"	103a	" " 9"	142c	" " 1"	184d	" " 10"
20	Flanged Wheels 1 1/2" diam.	57	Hooks	103b	" " 12"	142d	" " 1 1/2"	184e	" " 20"
20a	Pulley Wheels 2" with set screws	57a	" " Scientific	103c	" " 3"	143	Circular Girders, 5 1/2" diam.	185	Steering Wheel 1 1/2" diam.
20b	Flanged Wheels 1 1/2" diam.	57b	" " Loaded	103d	" " 3"	144	Dog Clutches	186	Driving Bands
21	Pulley Wheels 1 1/2" with set screws	57c	" " Small	103e	" " 3"	145	Circular Strips, 7 1/2" diam.	187	Road Wheels
22	" " " " without	58	Spring Cord	103f	" " 2"	146	" " Plates, 6" diam.	188	Flexible Plates, 2 1/2" x 1 1/2"
22a	" " " " with	58a	Coupling Screws for Spring Cord	103g	" " 2"	146a	Circular Plates, 4" diam.	189	" " 5 1/2" x 1 1/2"
23	" " " " " "	58b	" " Hooks	103h	" " 1"	147	Pawls with pivot bolt and nuts	190	" " 2 1/2" x 2 1/2"
23a	" " " " " "	59	Collars with Grub Screws	103k	" " 7"	147a	Pawls	191	" " 4 1/2" x 2 1/2"
24	Bush Wheels	61	Windmill Sails	104	Shuttles for Looms	147b	Pivot Bolt with 2 Nuts	192	" " 5 1/2" x 2 1/2"
25	Pinion Wheels, 1" diam., 1" wide	62	Cranks	105	Reed Hooks	147c	Pawl, without Boss	193	Strip
25a	" " " " " "	62a	" " Threaded	106	Rollers for Looms, Wood	148	Ratchet Wheels	194	" " 3 1/2" x 2 1/2"
25b	" " " " " "	62b	Double Arm Cranks	106a	" " Sand	149	Collector Shoes for Locos	195	" " 5 1/2" x 2 1/2"
26	" " " " " "	63	Couplings	107	Tables for Designing Machines	150	Crane Grabs	196	" " 9 1/2" x 2 1/2"
26a	" " " " " "	63a	" " Octagonal	108	Architraves	151	Pulley Blocks, 1 Sheave	197	" " 12 1/2" x 2 1/2"
26b	" " " " " "	63b	" " Strip	109	Face Plates, 2 1/2" diam.	152	" " 2 Sheaves	198	Hinged Flat Plates 4 1/2" x 2 1/2"
		63c	" " Threaded	110	Rack Strips, 3"	153	" " 3 Sheaves		
				110a	" " 6"				

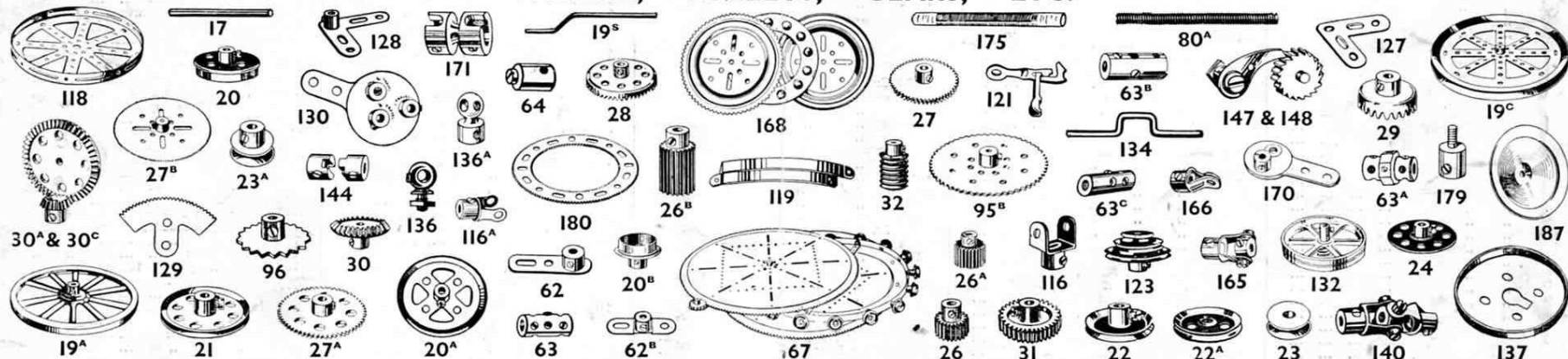
Ask your dealer for an illustrated price list of Meccano Parts and Accessories

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