

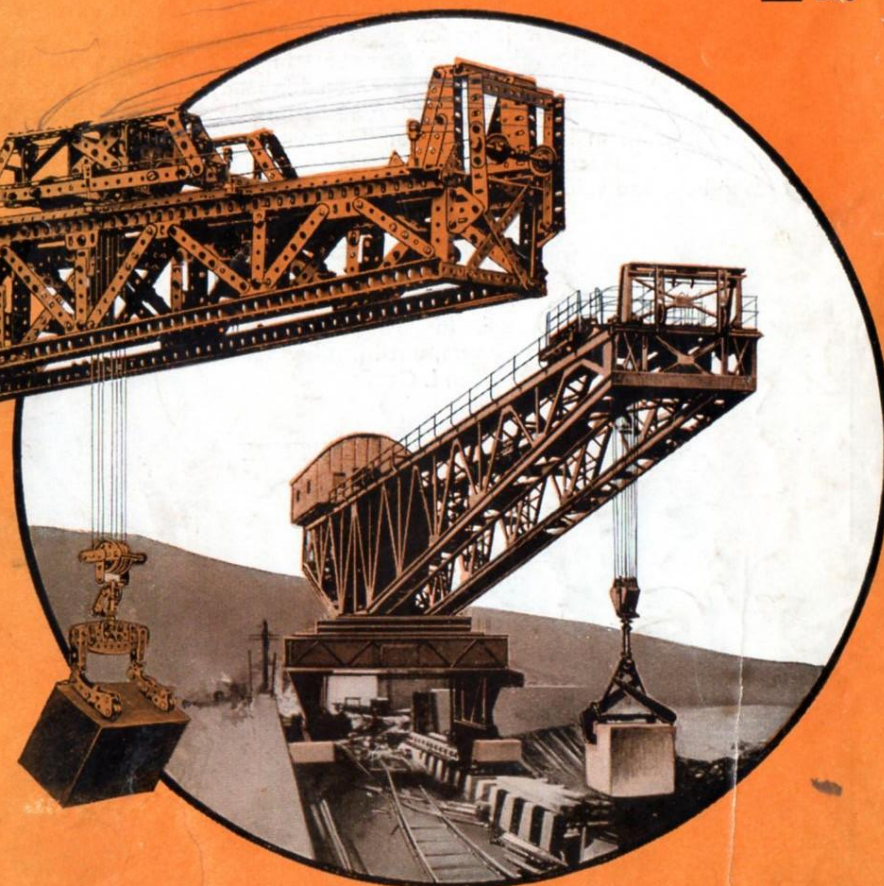
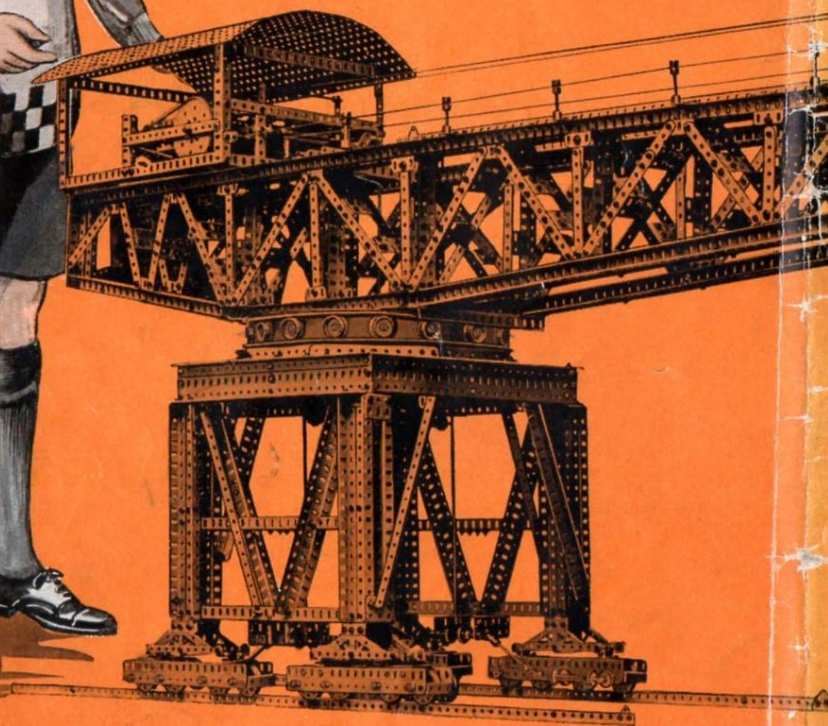
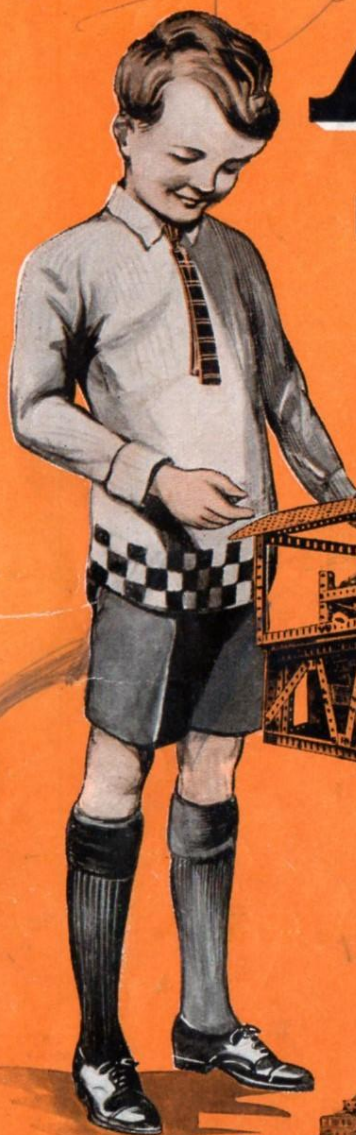
MECCANO

HORNBY'S ORIGINAL SYSTEM — FIRST PATENTED 1901

INSTRUCTIONS FOR ACCESSORY OUTFIT Ca

PRICE

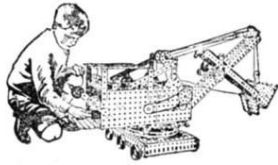
2d.



35Ca

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13/635/3 (U.K.)



MECCANO

HORNBY'S ORIGINAL SYSTEM — FIRST PATENTED 1901



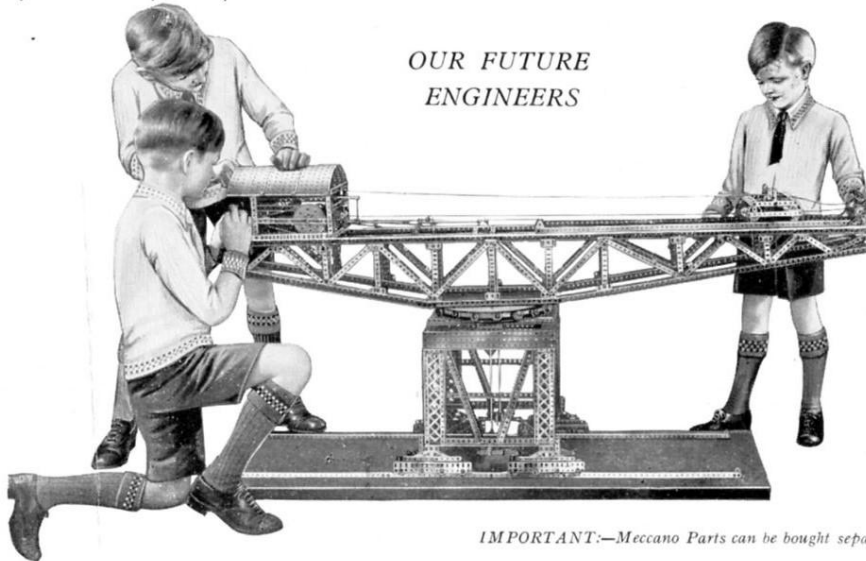
REAL ENGINEERING IN MINIATURE

The Meccano Accessory Outfit Ca converts your Outfit C into a D, 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.

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 Da which will convert your D into an E. In turn, an Accessory Outfit Ea will convert your E into a F, and so you go on, until finally your ambition is realised and you are the proud possessor of an L Outfit.

OUR FUTURE ENGINEERS



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

ELECTRIC LIGHTING OF MECCANO MODELS

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

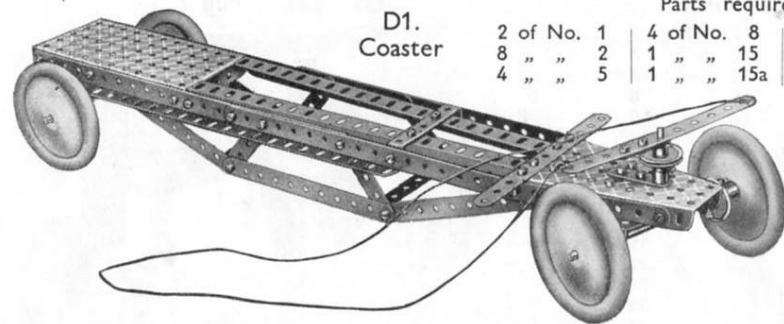
THE "MECCANO MAGAZINE"

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.

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.*

D1.
Coaster

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

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

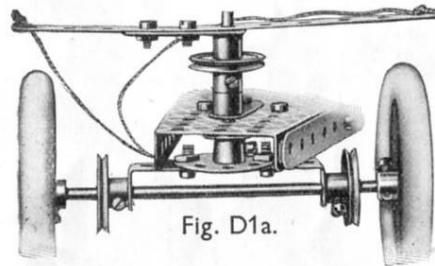
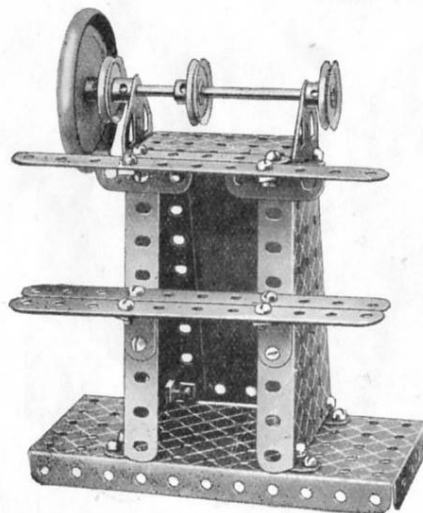


Fig. D1a.

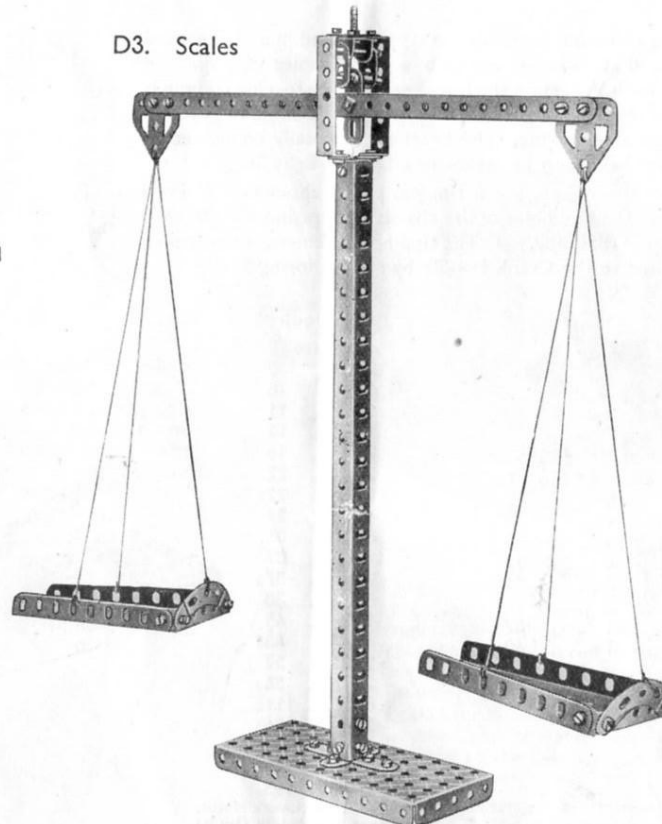
D2. Polishing Spindle

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



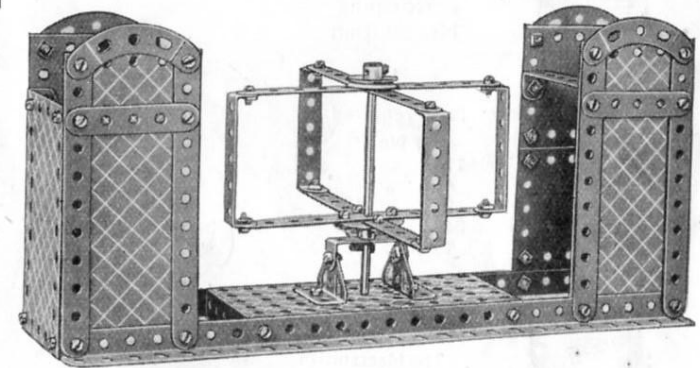
Parts required	
2 of No. 1	
1 " " 6a	
2 " " 8	
2 " " 10	
1 " " 11	
2 " " 12	
2 " " 12a	
2 " " 18a	
2 " " 35	
31 " " 37	
4 " " 38	
1 " " 40	
1 " " 45	
4 " " 48a	
1 " " 52	
2 " " 54a	
2 " " 62	
2 " " 90a	
1 " " 115	
2 " " 126a	

D3. Scales



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

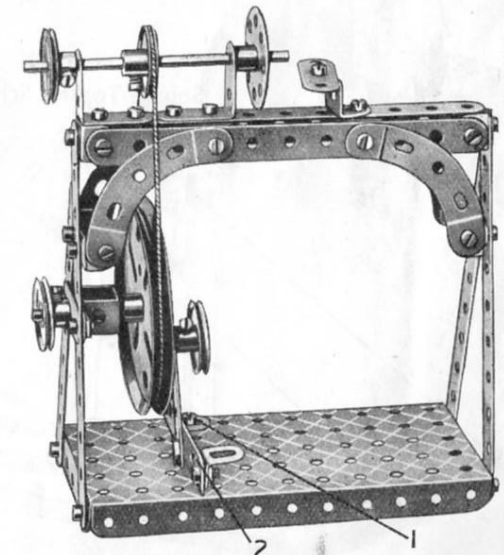
D4. Turnstile

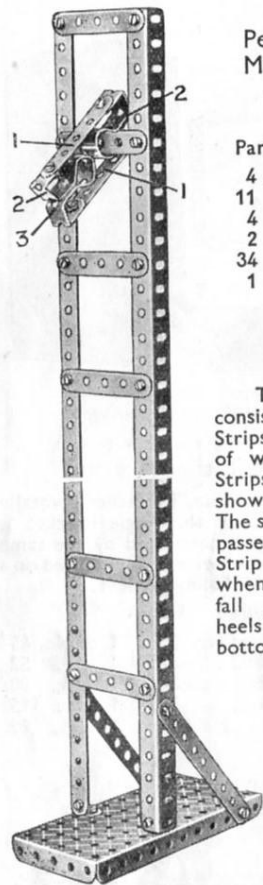


D5. Treadle Lathe

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

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

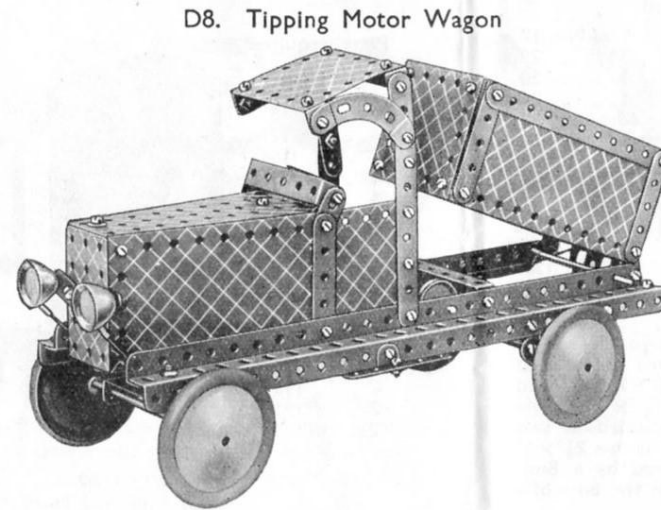




D6.
Performing
Meccanitian

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

The Meccanitian consists of two 2½" Strips 1 to the ends of which two 5½" Strips 2, bent as shown, are bolted. The slot 3 should be passed over the top Strip of the ladder, when the device will fall "head over heels" to the bottom.



D8. Tipping Motor Wagon

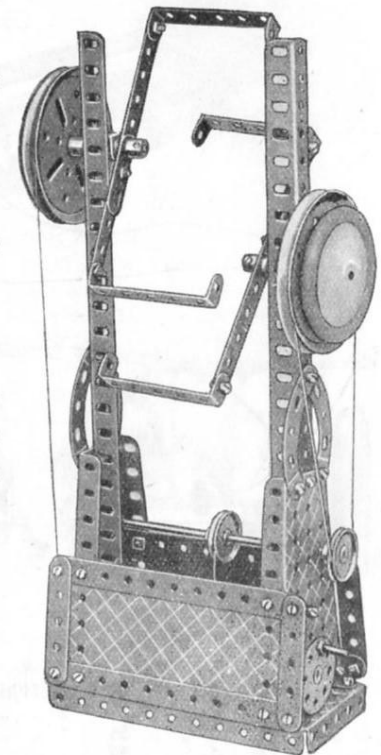
The steering column is journaled at its upper end in a ½" Reversed Angle Bracket, and at its lower end in one of the holes of a Flanged Sector Plate. A Bush Wheel on the lower end of the steering column is attached by two short lengths of cord to a 2½" x ½" Double Angle Strip forming the front axle bearing. This bearing is pivotally connected to the underside of the wagon by means of a Double Bent Strip.

The body of the wagon, when tipping, pivots about two ⅜" Bolts that pass through the end holes of the chassis girders and are attached to Flat Brackets on the body. The tipping movement is controlled by a cord attached to the Crank Handle by an Anchoring Spring.

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

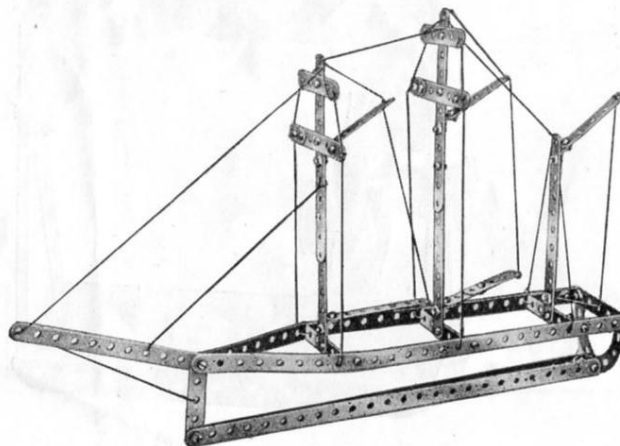
(1 Lighting Set not included in Outfit)

D9. Candy Puller



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

D7.
Square-Topsail Schooner

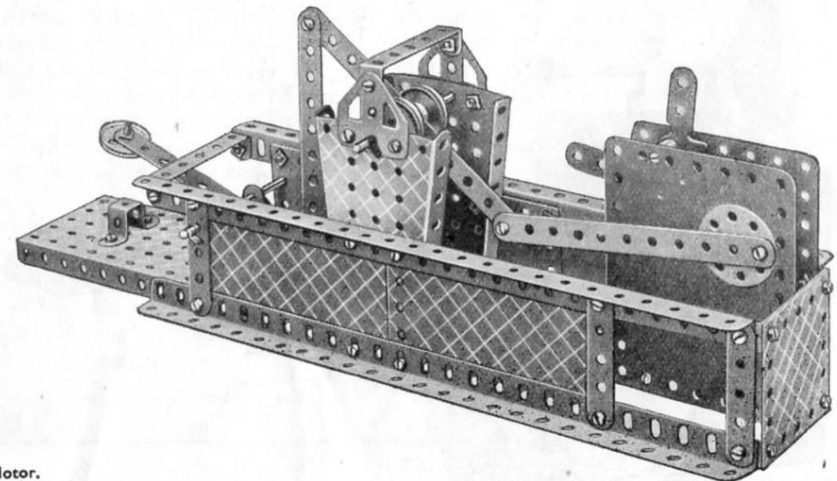


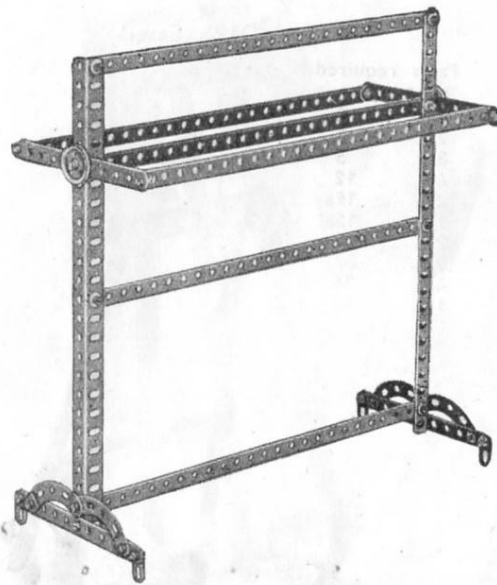
Parts required	
4 of No.	1
6 " "	2
1 " "	3
10 " "	5
4 " "	10
1 " "	11
5 " "	12
41 " "	37
1 " "	40
4 " "	48a
2 " "	90a

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

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

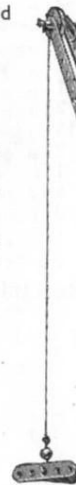
D10. Mechanical Hammer



D11.
Towel Horse

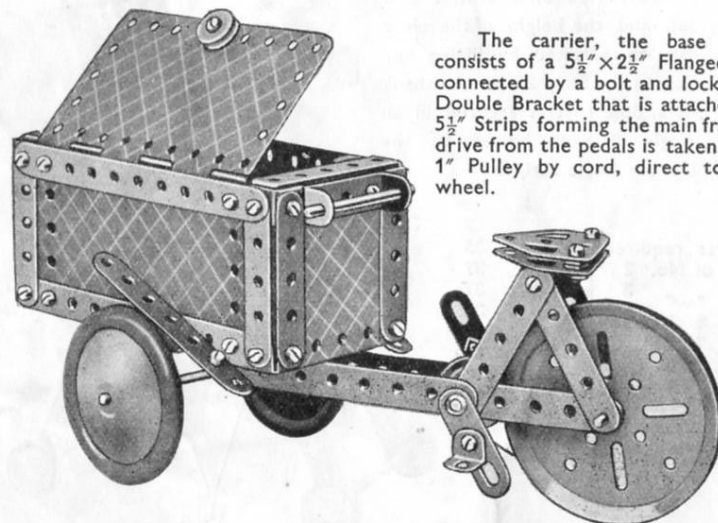
Parts required

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



D12. Carrier Tricycle

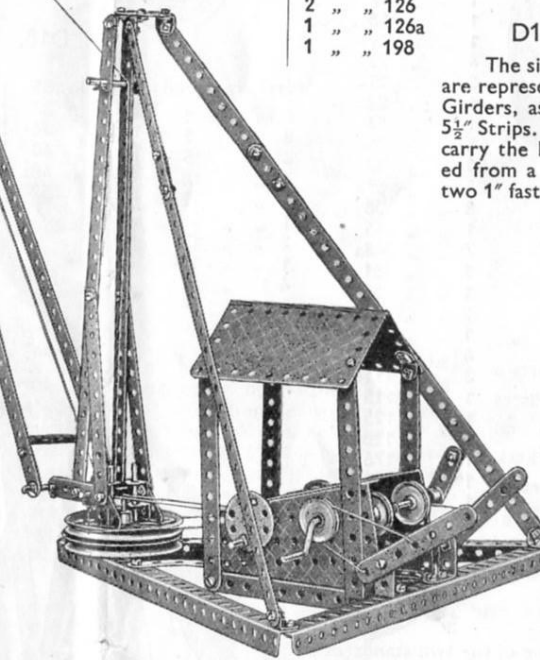
Parts required					
4 of No. 2	1 of No. 15b	1 of No. 23	1 of No. 40	3 of No. 111c	
2 " " 3	1 " " 17	4 " " 35	1 " " 48	2 " " 126	
12 " " 5	2 " " 18a	40 " " 37	4 " " 48a	2 " " 126a	
2 " " 11	1 " " 19b	10 " " 37a	1 " " 52	2 " " 187	
6 " " 12	1 " " 22	9 " " 38	2 " " 62	2 " " 190	
		1 of No. 191	1 of No.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



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

D13. Derrick

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



D14. Revolving Truck

Parts required

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

D15. Elevator

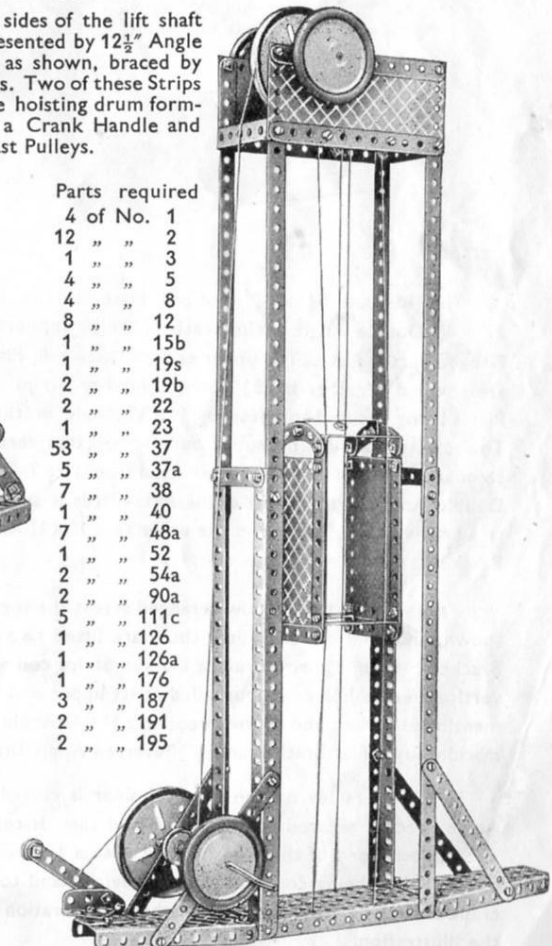
The sides of the lift shaft are represented by $12\frac{1}{2}$ " Angle Girders, as shown, braced by $5\frac{1}{2}$ " Strips. Two of these Strips carry the hoisting drum formed from a Crank Handle and two 1" fast Pulleys.

Parts required

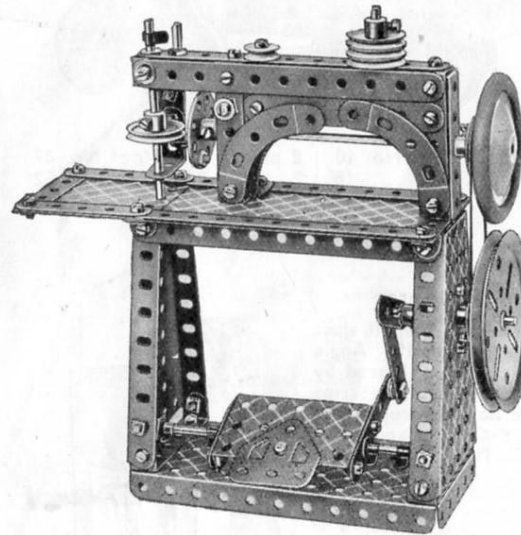
4 of No. 1
12 " " 2
1 " " 3
4 " " 5
4 " " 8
8 " " 12
1 " " 15b
1 " " 19s
2 " " 19b
2 " " 22
1 " " 23
53 " " 37
5 " " 37a
7 " " 38
1 " " 40
7 " " 48a
1 " " 52
2 " " 54a
2 " " 90a
5 " " 111c
1 " " 126
1 " " 126a
1 " " 176
3 " " 187
2 " " 191
2 " " 195

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

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



D16. Sewing Machine

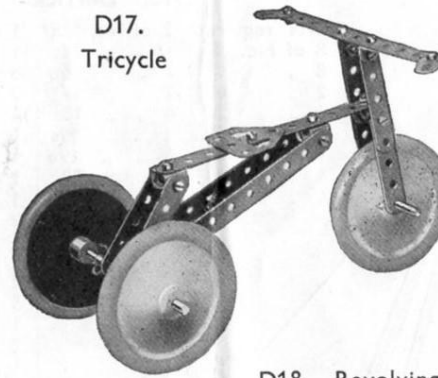


Parts required	
7 of No. 2	
2 " " 3	
6 " " 5	
1 " " 6a	
3 " " 10	
1 " " 11	
10 " " 12	
2 " " 12a	
2 " " 15	
1 " " 16	
1 " " 17	
1 " " 18a	
1 " " 19b	
4 " " 22	
2 " " 22a	
1 " " 23	
1 " " 24	
5 " " 35	
50 " " 37	
8 " " 37a	
8 " " 38	
1 " " 45	
7 " " 48a	
1 " " 51	
1 " " 52	
2 " " 54a	
1 " " 62	
4 " "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

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

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

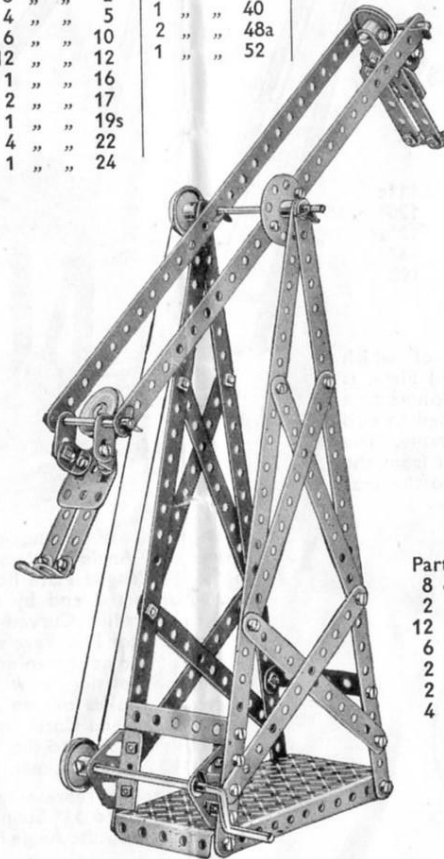
A $1''$ fast Pulley on the needle holder is caused to vibrate by a $\frac{1}{2}'' \times \frac{1}{2}''$ Angle Bracket secured to a Bush Wheel that is carried on a $5''$ Axle Rod. The opposite end of this Rod is fitted with a $1''$ fast Pulley and Road Wheel, the $1''$ Pulley being connected by a Driving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

D17.
Tricycle

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

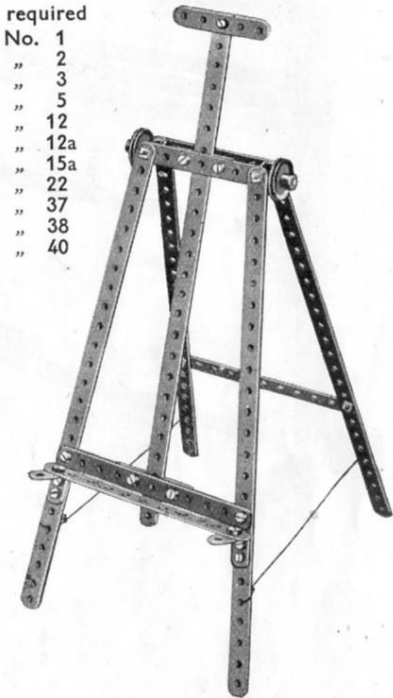
D18. Revolving Meccanicians

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



D19. Easel

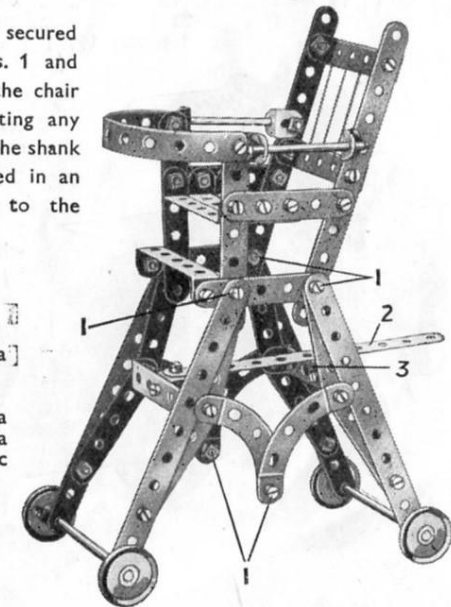
Parts required	
5 of No. 1	
3 " " 2	
2 " " 3	
3 " " 5	
4 " " 12	
2 " " 12a	
1 " " 15a	
2 " " 22	
19 " " 37	
4 " " 38	
1 " " 40	

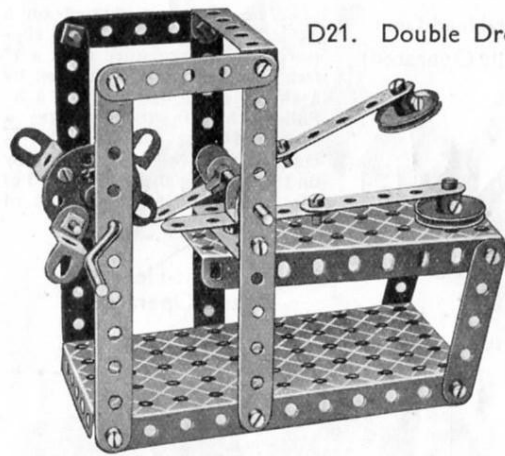


D20. Baby Chair

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

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





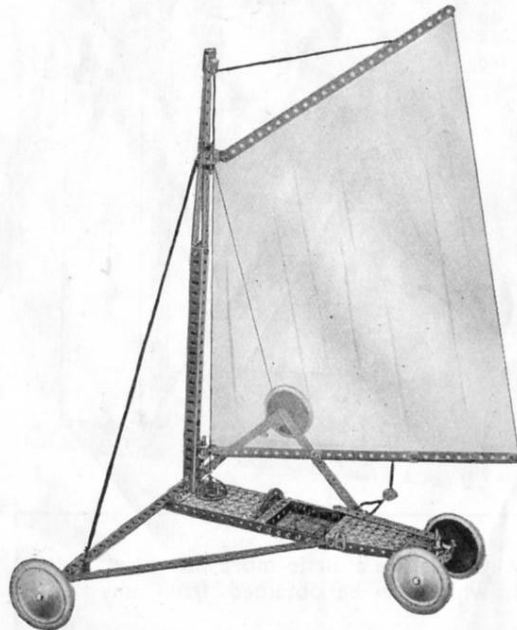
D21. Double Drop Hammer

Parts required

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

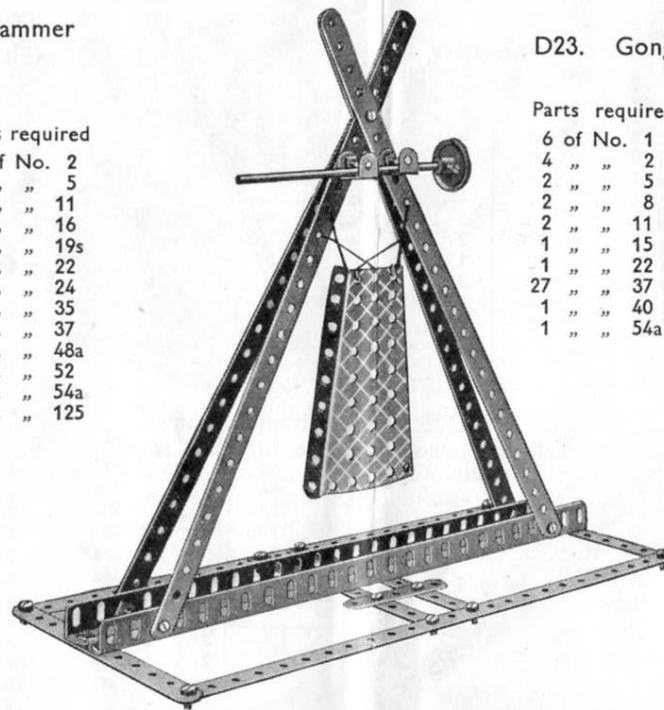
D22. Land Yacht

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



Parts required

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



D23. Gong

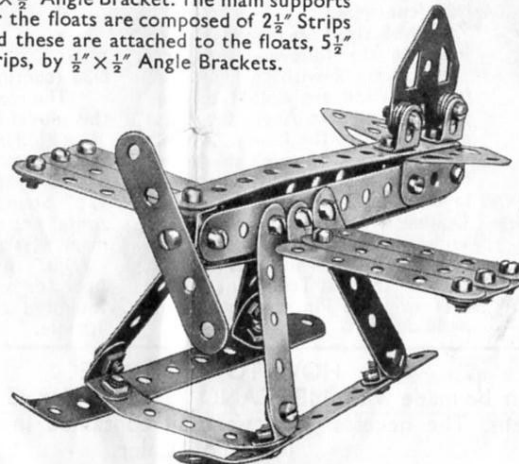
Parts required

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

D24. Schneider Trophy Seaplane

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

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



Parts required

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

D25. "Try-Your-Strength" Machine

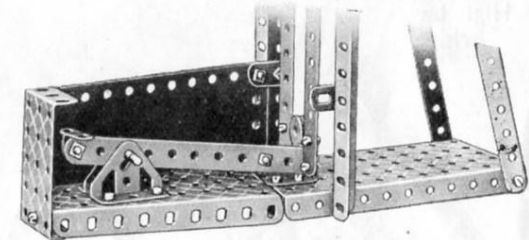


Fig. D25a

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

Parts required

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

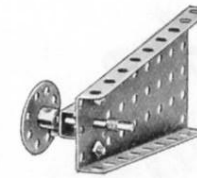
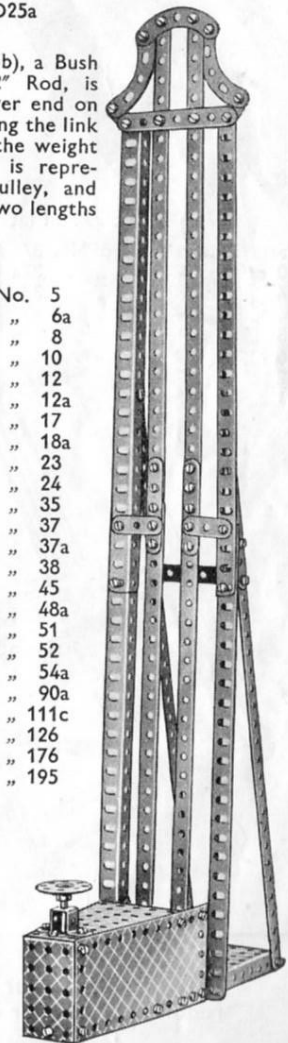
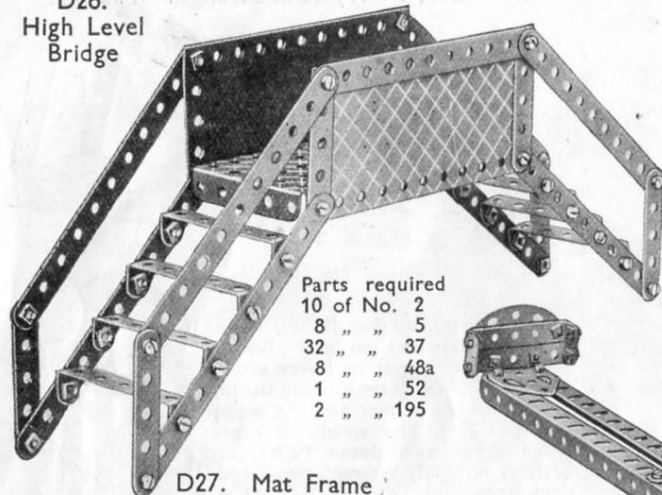


Fig. D25b

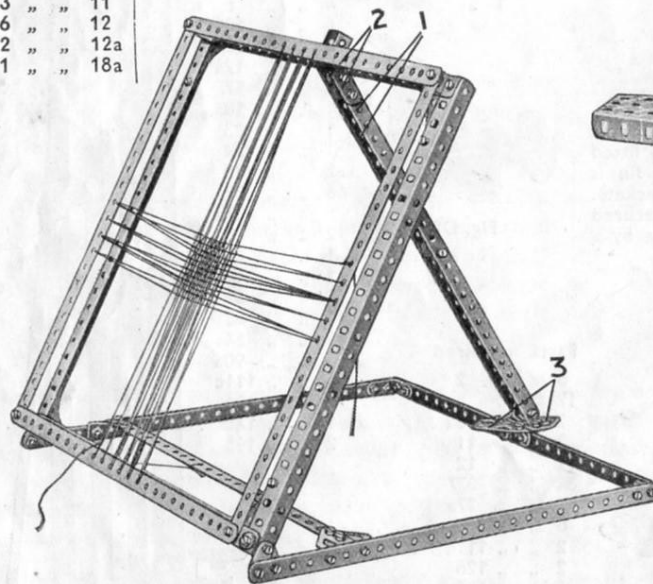


D26.
High Level
Bridge

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

D27. Mat Frame

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



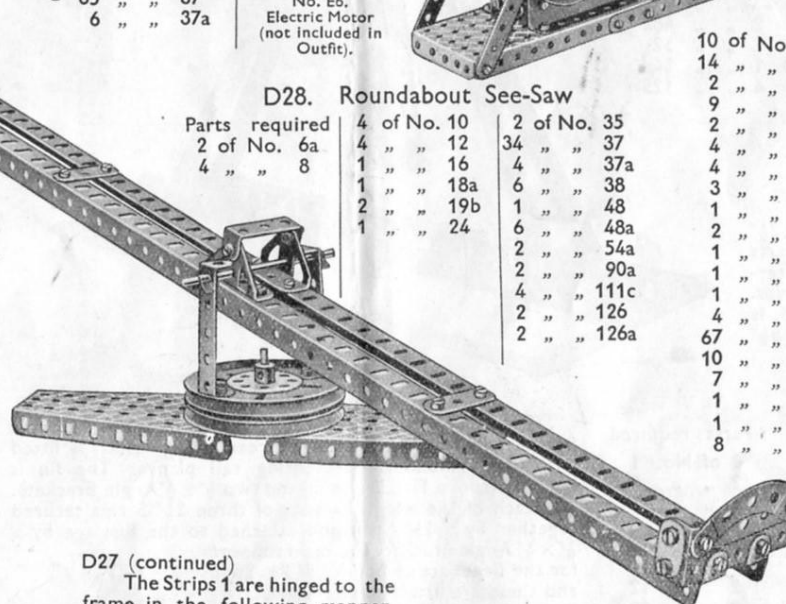
Parts required
8 of No. 1
14 " " 2
2 " " 3
8 " " 5
2 " " 6a
4 " " 8
6 " " 12
4 " " 16
2 " " 19b
3 " " 22
1 " " 24
5 " " 35
65 " " 37
6 " " 37a

6 of No. 38
1 " " 40
1 " " 44
8 " " 48a
1 " " 52
2 " " 54a
4 " " 90a
5 " " 111c
2 " " 126a
1 " " 176
3 " " 190
2 " " 191

No. E6.
Electric Motor
(not included in
Outfit).

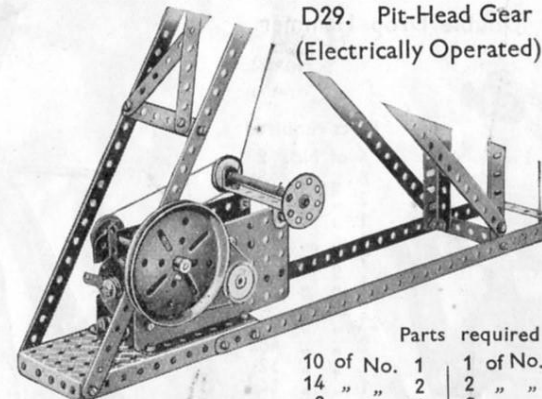
D28. Roundabout See-Saw

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



D27 (continued)

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

D29. Pit-Head Gear
(Electrically Operated).

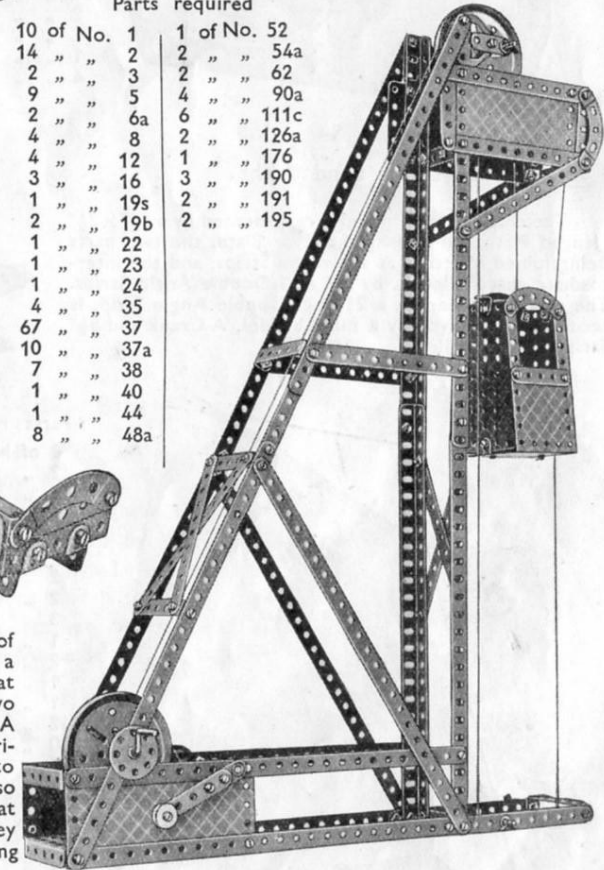
The Motor is carried on a $5\frac{1}{2} \times 2\frac{1}{2}$ " Flanged Plate, and supports on its armature shaft a 1" fast Pulley. This is connected by a short length of cord to a 3" Pulley that in turn rotates a second 1" fast Pulley. This is coupled to a third similar Pulley on the hoisting shaft.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

D30. Pit-Head Gear
(Hand Operated)

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

D30 (continued)

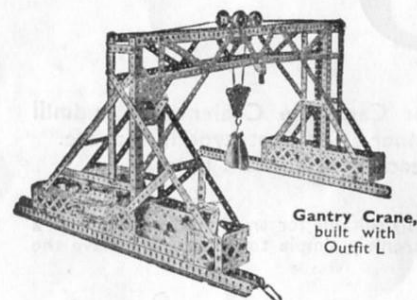
The rear of the base of this model is fitted with a $5\frac{1}{2} \times 2\frac{1}{2}$ " Flanged Plate that carries at its sides two $5\frac{1}{2} \times 2\frac{1}{2}$ " Strip Plates. A $12\frac{1}{2}$ " Strip secured horizontally to each of these to form a strengthener, also carries the brake that operates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



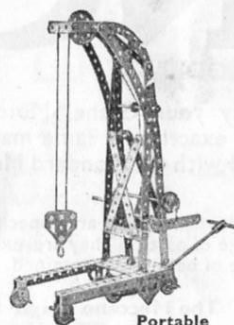
HOW TO CONTINUE

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

Build Bigger and Better Models



Gantry Crane,
built with
Outfit L



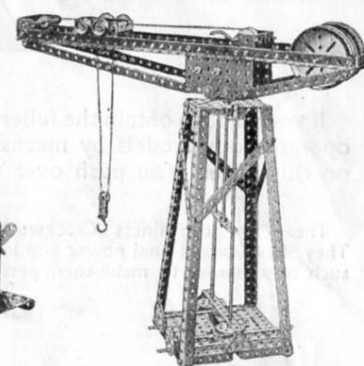
**Portable
Crane,**
built with
Outfit K



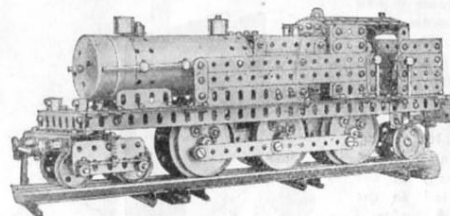
Gantry Crane,
built with
Outfit H



**Stone Sawing
Machine,**
built with Outfit K



Girder Crane,
built with
Outfit G



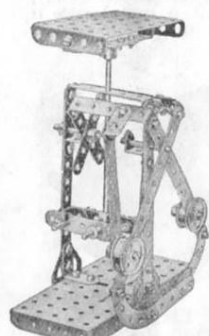
**Clockwork Pacific
Tank Locomotive,**
built with Outfit L

Keep adding to your Outfit

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

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

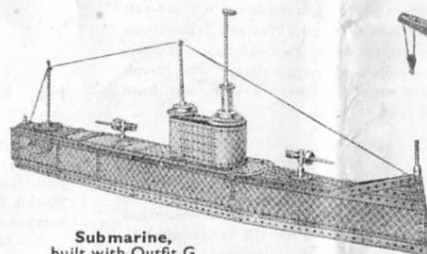
You can purchase separate Meccano parts as you require them or, if you prefer, you can purchase Accessory Outfits that connect all the main Outfits.



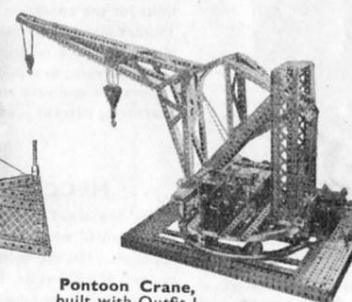
**Letter
Balance,**
built with
Outfit E



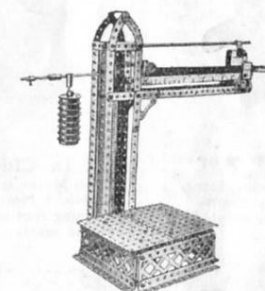
Kinetograph,
built with Outfit F



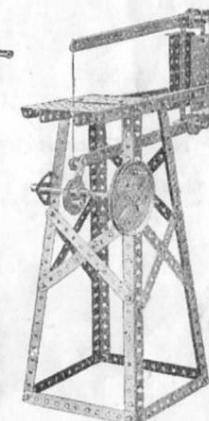
Submarine,
built with Outfit G



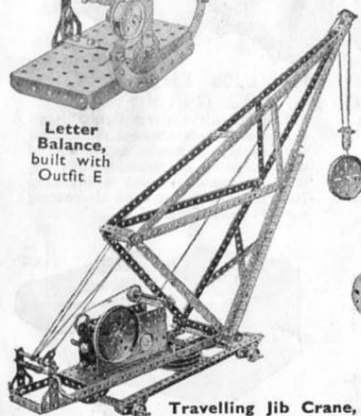
Pontoon Crane,
built with Outfit L



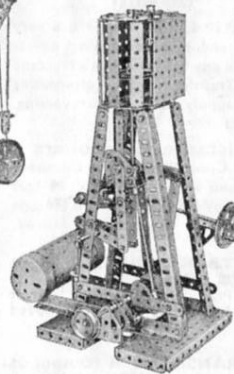
Platform Scales,
built with Outfit K



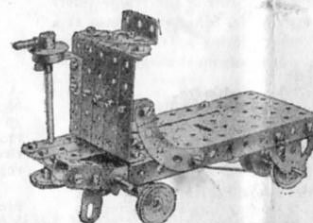
Fret Saw,
built with Outfit H



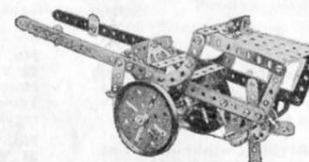
Travelling Jib Crane,
built with Outfit E



**Vertical
Marine Engine,**
built with Outfit H



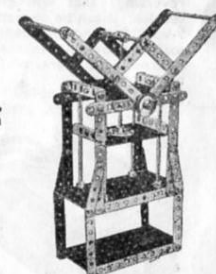
Electric Truck,
built with Outfit E



Hay Tedder,
built with Outfit E



Windmill,
built with
Outfit E



Bale Press,
built with Outfit G

MECCANO

POWER UNITS FOR OPERATING MECCANO MODELS

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

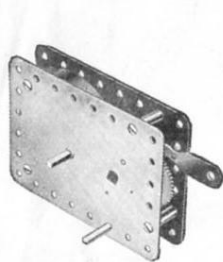
motor and immediately your Crane, Motor Car, Ship Coaler or Windmill commences to work in exactly the same manner as its prototype in real life.

Each motor is pierced with the standard Meccano equidistant holes.

MECCANO CLOCKWORK MOTORS

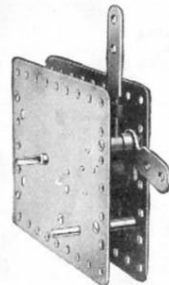
These are the finest Clockwork motors obtainable for model driving. They have exceptional power and length of run and their gears are cut with such precision as to make them perfectly smooth and steady in operation.

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



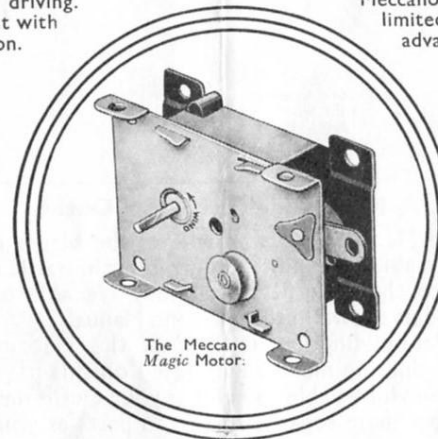
No. 1 Clockwork Motor

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



No. 1a Clockwork Motor

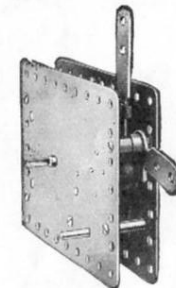
This Motor is more powerful than the No. 1 Motor and is fitted with reversing motion. It has brake and reverse levers.



The Meccano Magic Motor.

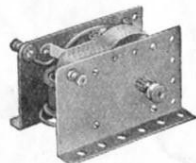
The Meccano Magic Motor

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



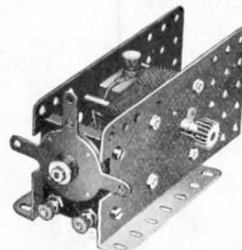
No. 2 Clockwork Motor

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



No. E1 Electric Motor (6-volt)

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

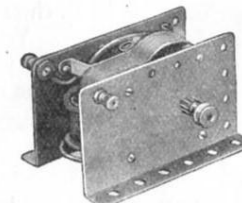


No. E6 Electric Motor (6-volt)

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

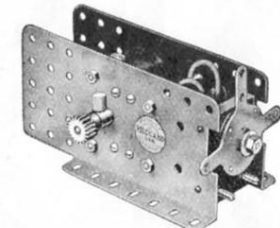
MECCANO ELECTRIC MOTORS

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



No. E120 Electric Motor (20-volt)

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



No. E20b Electric Motor (20-volt)

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

MECCANO TRANSFORMERS

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

Resistance Controllers

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



No. T20a Transformer

No. T20A TRANSFORMER (Output 35 VA at 20/3½ volts) for 20-volt Electric Motors. Has two separate circuits at 20 volts, one controlled by a 5-stud speed regulator; and a third circuit at 3½ volts for lighting up to 14 lamps.

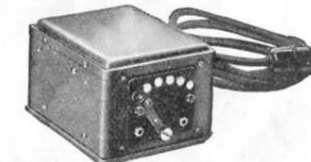
No. T6A TRANSFORMER (Output 40 VA at 9/3½ volts) for 6-volt Electric Motors. Has two separate circuits at 9 volts, one controlled by a 5-stud speed regulator; and a third circuit at 3½ volts for lighting up to 18 lamps.

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

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

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

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



No. T20 Transformer

Ask your dealer for a complete price list.

LIST OF MECCANO PARTS

No.	Description.	No.	Description.	No.	Description.	No.	Description.	No.	Description.
1	Perforated Strips, 12 $\frac{1}{2}$ "	28	Contrate Wheels, 1 $\frac{1}{2}$ " diam.	73	Flat Plates, 3" x 1 $\frac{1}{2}$ "	120	Buffers	164	Chimney Adaptors
1a	" " " 9 $\frac{1}{2}$ "	29	" " " 26 teeth	76	Triangular Plates, 2 $\frac{1}{2}$ "	120a	Spring Buffers	165	Swivel Bearings
1b	" " " 7 $\frac{1}{2}$ "	30	Bevel Gears, 26 teeth	77	" " " 2 $\frac{1}{2}$ "	120b	Compression Springs	166	End
2	" " " 5 $\frac{1}{2}$ "	30a	" " " 16 (Can only be used together)	78	Screwed Rods, 11 $\frac{1}{2}$ "	121	Train Couplings	167	Geared Roller Bearings
2a	" " " 4 $\frac{1}{2}$ "	30c	" " " 14 $\frac{1}{2}$ "	79	" " " 8 $\frac{1}{2}$ "	122	Miniature Loaded Sacks	167a	Roller Races, geared, 192 teeth
3	" " " 3 $\frac{1}{2}$ "	31	Gear Wheels, 1", 38 teeth	79a	" " " 5 $\frac{1}{2}$ "	123	Cone Pulley	167b	Ring Frames for Rollers
4	" " " 3"	32	Worms	80	" " " 3 $\frac{1}{2}$ "	124	Reversed Angle Brackets, 1"	167c	Pinions for Roller Bearings, 16 teeth
5	" " " 2 $\frac{1}{2}$ "	34	Spanners	80a	" " " 4 $\frac{1}{2}$ "	125	" " " 1 $\frac{1}{2}$ "	168	Ball Bearing, 4" diam.
6	" " " 2"	34b	Box Spanners	81	" " " 2"	126	Trunnions	168a	" Races, flanged disc
6a	" " " 1 $\frac{1}{2}$ "	35	Spring Clips	82	" " " 1"	126a	Flat Trunnions	168b	" " toothed
7	Angle Girders, 24"	36	Screwdrivers	89	5 $\frac{1}{2}$ " Curved Strips, 10" radius	127	Simple Bell Cranks	169	Casing, complete with balls
7a	" " " 18"	36a	" Extra Long	89a	3 $\frac{1}{2}$ " " " " cranked, 1 $\frac{1}{2}$ "	128	Boss Bell Cranks	169	Digger Buckets
8	" " " 12"	36b	" Special	89b	4" Curved Strips, cranked, 4 $\frac{1}{2}$ "	129	Rack Segments, 3" diam.	170	Eccentrics, 1" throw
8a	" " " 9"	37	Nuts and Bolts, 7/32"	90	2 $\frac{1}{2}$ " Curved Strips, 2 $\frac{1}{2}$ " radius	130	Eccentrics, Triple Throw	171	Socket Couplings
8b	" " " 7"	37a	Nuts	90a	2 $\frac{1}{2}$ " " " " cranked, 1 $\frac{1}{2}$ "	131	Dredger Buckets	172	Pendulum Connections
9	" " " 5"	37b	Bolts, 7/32"	94	Sprocket Chain, 40" length	132	Flywheels, 2 $\frac{1}{2}$ " diam.	173	Rail Adaptors
9a	" " " 4"	38	Washers	95	" " " " " 36 teeth, 2" diam.	133	Corner Brackets, 1 $\frac{1}{2}$ "	174	Grease Cups
9b	" " " 3"	40	Hanks of Cord	95a	" " " " " 28 " 1 $\frac{1}{2}$ "	133a	" " " " " 1"	175	Flexible Coupling Units
9c	" " " 3"	41	Propeller Blades	95b	" " " " " 26 " 3"	134	Crank Shanks, 1" stroke	176	Anchoring Springs for Cord
9d	" " " 2 $\frac{1}{2}$ "	43	Springs	96	" " " " " 18 " 1"	135	Theodolite Protractors	177	Shafting Standards, large
9e	" " " 2"	44	Cranked Bent Strips	96a	" " " " " 14 " 1"	136	Handrail Supports	178	" " small
9f	" " " 1 $\frac{1}{2}$ "	45	Double	97	Braced Girders, 3 $\frac{1}{2}$ " long	136a	" " Couplings	179	Rod Sockets
10	Flat Brackets	46	Double Angle Strips, 2 $\frac{1}{2}$ " x 1"	97a	" " " " " 3"	137	Wheel Flanges	180	Toothed Gear Rings, 3 $\frac{1}{2}$ " diam. (133 external teeth; 95 internal teeth)
11	Double Brackets	47	" " " " " 3" x 1"	98	" " " " " 2 $\frac{1}{2}$ "	138	Ships' Funnels		
12	Angle Brackets, 1" x 1"	47a	" " " " " 3" x 1"	99	" " " " " 12"	*138a-z	" " Raked	181	Bobbins
12a	" " " " " 1" x 1"	48	" " " " " 1" x 1"	99a	" " " " " 9"	139	Flanged Brackets (right)	182	Insulating Bushes, 6BA
12b	" " " " " 1" x 1"	48a	" " " " " 2" x 1"	99b	" " " " " 7"	139a	" " (left)	183	Lamp Holders
12c	Obtuse Angle Brackets, 1" x 1"	48b	" " " " " 3" x 1"	100	" " " " " 5"	140	Universal Couplings	184	Lamps, 2 $\frac{1}{2}$ " volt
13	Axle Rods, 11 $\frac{1}{2}$ "	48c	" " " " " 4" x 1"	100a	" " " " " 4"	141	Wire Lines (for suspending clock weights)	184b	" " 3"
13a	" " " " " 8"	48d	" " " " " 5" x 1"	101	Heads, for looms	142	Rubber Rings, 3" rim	184c	" " 6"
14	" " " " " 6"	50a	Eye Pieces, with boss	102	Single Bent Strips	142a	Motor Tyres (to fit 2" diam. rims)	184d	" " 10"
15	" " " " " 5"	51	Flanged Plates, 2 $\frac{1}{2}$ " x 1"	103	Flat Girders, 5 $\frac{1}{2}$ " long	142b	" " " " " 3"	184e	" " 20"
15a	" " " " " 4"	52	" " " " " 2 $\frac{1}{2}$ " x 1"	103a	" " " " " 4 $\frac{1}{2}$ "	142c	" " " " " 1 $\frac{1}{2}$ "	185	Steering Wheels, 1 $\frac{1}{2}$ " diam.
15b	" " " " " 4"	52a	Flat Plates, 5 $\frac{1}{2}$ " x 3 $\frac{1}{2}$ "	103b	" " " " " 4 $\frac{1}{2}$ "	142d	" " " " " 1 $\frac{1}{2}$ "	186	Driving Bands
16	" " " " " 3"	53	Perforated Flanged Plates, 3 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "	103c	" " " " " 4 $\frac{1}{2}$ "	143	Circular Girders, 5 $\frac{1}{2}$ " diam.	187	Road Wheels
16a	" " " " " 2 $\frac{1}{2}$ "	53a	Flat Plates, 4 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "	103d	" " " " " 3 $\frac{1}{2}$ "	144	Dog Clutches	188	Flexible Plates, 2 $\frac{1}{2}$ " x 1 $\frac{1}{2}$ "
16b	" " " " " 3"	54	Flanged Sector Plates, 4 $\frac{1}{2}$ " long	103e	" " " " " 3"	145	Circular Strips, 7 $\frac{1}{2}$ " diam. overall	189	" " " 5 $\frac{1}{2}$ " x 1 $\frac{1}{2}$ "
17	" " " " " 2"	55	Perforated Strips, slotted, 5 $\frac{1}{2}$ " long	103f	" " " " " 2 $\frac{1}{2}$ "	146	" " Plates, 6"	190	" " " 2 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "
18a	" " " " " 1 $\frac{1}{2}$ "	55a	" " " " " 2"	103h	" " " " " 1 $\frac{1}{2}$ "	146a	" " " 4"	191	" " " 4 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "
18b	" " " " " 1"	57	Hooks	103i	" " " " " 7"	147	Pawls, with Pivot Bolt and nuts	192	" " " 5 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "
19	Crank Handles, large, 5"	57a	" Scientific	104	Shuttles, for looms	147a	Pawls	193	Strip Plates, 2 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "
19a	Wheels, 3" diam., with set screws	57b	" Loaded, large	105	Reed Hooks, for looms	147b	Pivot Bolt with 2 nuts	194	" " " 3 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "
20	Flanged Wheels, 1 $\frac{1}{2}$ " diam.	57c	" small	106	Wood Rollers	147c	Pawl without boss	195	" " " 5 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "
20b	" " " " " " "	58	Spring Cord	106a	Sand Rollers	148	Ratchet Wheels	196	" " " 9 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "
19b	3" dia., with centre boss & set screw	58a	Coupling Screws for Spring Cord	107	Tables for designing machines	149	Collecting Shoes for Electric Locos	197	" " " 12 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "
19c	6" " " " " " "	58b	Hooks for Spring Cord	108	Architraves	150	Crane Grabs	198	Hinged Flat Plates, 4 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "
20a	2" " " " " " "	59	Collars with Grub Screws	109	Face Plates, 2 $\frac{1}{2}$ " diam.	151	Pulley Blocks, Single Sheave	201	Lamps with Flex
20a	2" " " " " " "	61	Windmill Sails	110	Rack Strips, 3 $\frac{1}{2}$ "	152	" " Two	202	Angle Brackets (for Headlamps)
21	1 $\frac{1}{2}$ " " " " " " "	62	Cranks	110a	" " " 6 $\frac{1}{2}$ "	153	" " Three	203	Headlamps
22	1" " " " " " "	62a	Double Arm Cranks	111	Bolts, 2 $\frac{1}{2}$ "	154a	Corner Angle Brackets, 1 $\frac{1}{2}$ " (right hand)	204	Headlamp Nuts
23a	" " " " " " "	62b	Couplings	111a	" " " " "	154b	Corner Angle Brackets, 1 $\frac{1}{2}$ " (left hand)	205	Glasses (Green, Plain or Red)
23a	" " " " " " "	63	Octagonal Couplings	111c	" " " " "	155	Rubber Rings, 1 $\frac{1}{2}$ " (for 1" Pulleys)	206	Lampshades
22a	1" " " " " " "	63a	Strip Couplings	112	Girder Frames	156	Pointers, (with boss) 2 $\frac{1}{2}$ " overall	207	Lamp Bases
23	" " " " " " "	63b	Threaded Couplings	113	Hinges	157	Fans, 2" diam.	208	Battery Tags and Studs
24	Bush Wheels	64	" Bosses	114	Threaded Pins	158a	Signal Arms, Home	208a	Washers for Battery Studs
25a	Pinion Wheels, 1 $\frac{1}{2}$ " diam., face	65	Centre Forks	115	Fork Pieces, large	158b	" " Distan.	210	Nuts
25a	" " " " " " "	66	Weights, 50 grammes	116	" " " small	160	Channel Bearings, 1 $\frac{1}{2}$ " x 1" x 1 $\frac{1}{2}$ "	211a	Helical Gear, 1 $\frac{1}{2}$ " (Can only be used together)
25b	" " " " " " "	67	" 25	117	Steel Balls, 1 $\frac{1}{2}$ " diam.	161	Girder Brackets, 2" x 1" x 1 $\frac{1}{2}$ "	211b	" " " 1 $\frac{1}{2}$ "
26	" " " " " " "	68	Wood screws, 1 $\frac{1}{2}$ "	118	Hub Discs, 5 $\frac{1}{2}$ "	162	Boiler, complete, with ends		
26a	" " " " " " "	69	Set Screws			162a	" " ends		
26b	" " " " " " "	69a	Grub Screws, 5/32"			162b	" " without ends		
27	50 teeth to gear with 1 pinion	69b	" 7/32"			163	Sleeve Pieces		
27a	57 " " " " " " "	70	Flat Plates, 5 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "						
27b	133 " " " " " " "	72	" " " 2 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "						
27c	95 " " " " " " "								

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

For illustrations of Meccano Parts, refer to back page

109 197 53 192 126^A 52 160 54^A 72 198 145

125 12 11 161 45 99 6^A 90^A 12^A 126 61 102 154^A & 154^B 145

77 103^D 110 145 124 90 113 9^B 139 126 61 143 10 3 76

108 133^A 55 145 90 113 9^B 139 126 61 143 10 3 76

This diagram illustrates the exploded view of a mechanical assembly, likely a pump or engine component. The parts are numbered as follows:

- 118, 17, 20, 128, 171, 19^s, 64, 28, 168, 175, 121, 80^a, 63^b, 147 & 148, 127, 19^c
- 30^a & 30^c, 27^b, 23^a, 130, 144, 136^a, 180, 119, 32, 95^b, 63^c, 166, 170, 63^a, 179, 187
- 129, 96, 30, 136, 116^a, 167, 26^b, 119, 32, 95^b, 63^c, 166, 170, 63^a, 179, 187
- 19^a, 21, 27^a, 20^a, 62, 20^b, 63, 62^b, 165, 211^a & 211^b, 31, 22^a, 22, 123, 116, 140, 137, 24, 132

35 41 106 94 105 156 149 174 131

57^B 104 120^B 122 173 172 162 65 142^A 151 185 50^A 34^B

163 114 120 169 58 43 181 68 101 106^A 138^A 158^A 147^B 176 120^A 66 & 67 182 150

177 115 58^B 183 138 57 68 101 106^A 138^A 158^A 147^B 176 120^A 66 & 67 182 150